Public Policies and Economic Diversification in West Malaysia 1957 – 1970

Lee Hock Lock

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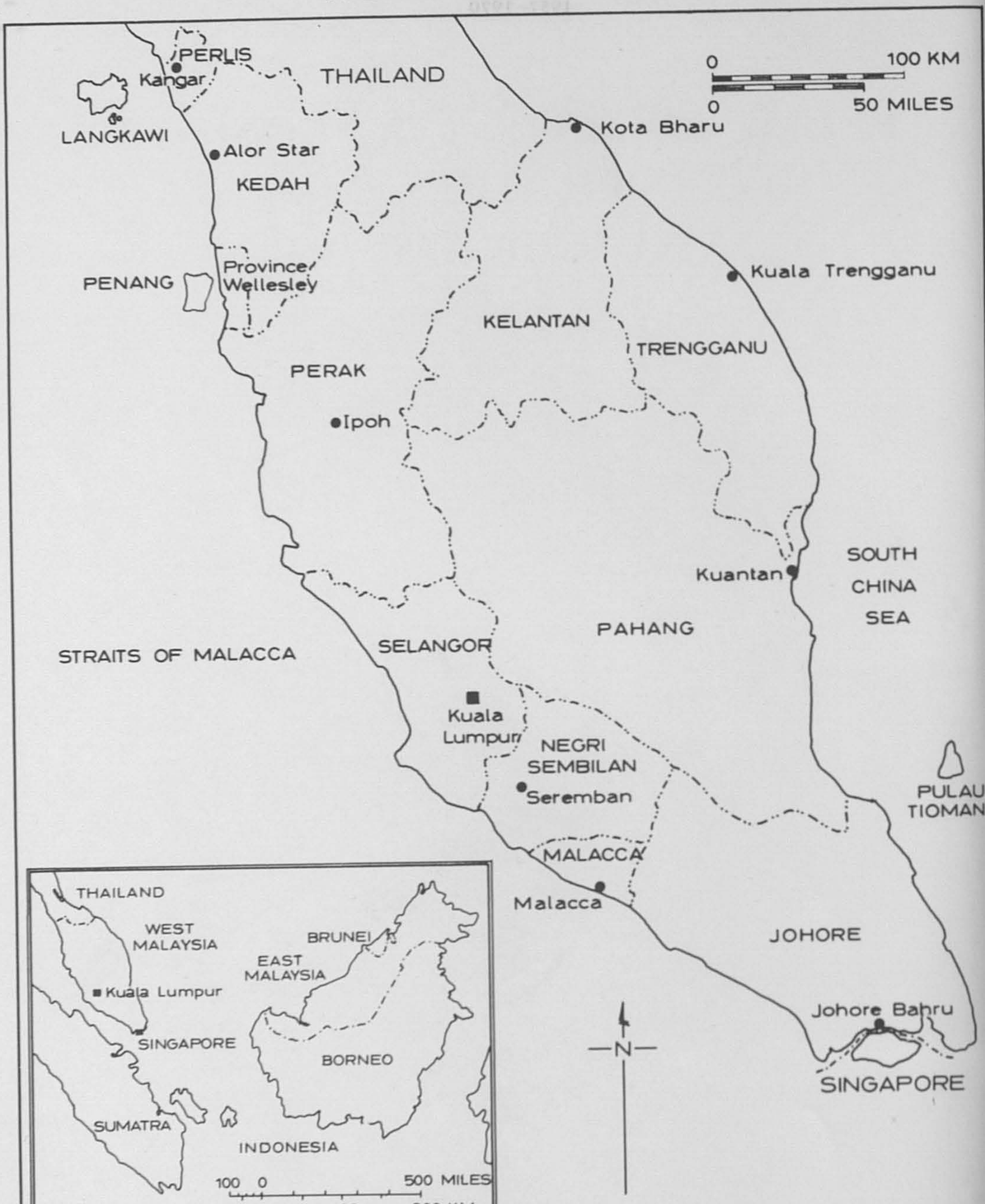
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DIVERSIFICATION IN WEST MALAYSIA,
1957–1970

WEST MALAYSIA



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to the memory of
my parents

PREFACE

Discussions and analyses of public policy in Malaysia often fall into either of two categories, those undertaken by the Government or those by politicians of the Opposition. Studies of public policy undertaken without the biases of these two interest groups are rare. This book hopes to help fill this important gap.

In the post-war years, and particularly from the 1960's, economic diversification has become a prominent objective of economic policy in West Malaysia. This followed serious problems faced by the two key industries of the economy, the rubber and tin industries. This book is an attempt to examine critically the policies and measures of the public sector aimed at assisting the achievement of this objective. The study was confined to the three major sectors of the economy: agriculture and forestry, manufacturing, and mining. The period covered was basically 1957–70, but considerable reference was made to developments in the years before and after this period.

The study revealed the emergence of encouraging evidence of economic diversification in the spheres of production, employment, and foreign trade. A large measure of this achievement could be attributed to the policies and actions of the public sector. However, in certain other ways, the efforts of the private sector have made important contributions, especially where private interests happily coincided with the diversification objective. On the efforts of the public sector, many shortcomings were noted and these were seen to have marred the performance of its policies and actions. Although some corrective measures have been taken with some success, the overall impression gained was that a higher degree of economic diversification could have been achieved during the review period if these shortcomings have been more effectively dealt with or forestalled.

I undertook this study originally as a doctoral dissertation, researched and written in 1970–73 and submitted to the University of Malaya in 1974. The form it now appears in maintains its substance. The many changes and revisions are merely of an editorial nature required to make an academic exercise readable to the public at large.

A satisfactory treatment of the subject of the book requires wide coverage as well as detailed examination into its many aspects as set out in the individual chapters. It is hoped that the discussions have been of sufficient depth that even specialists in the various areas of the Malaysian economy will find much of interest in the book. For these, the first twelve chapters of the book are specially though not exclusively intended. At the same time, a book of this type must also cater for the needs of those who merely wish to have a perspective view without having to be bothered by details. Thus, a rather lengthy summary of the findings of the study has been prepared as the final chapter of the book.

I have received considerable assistance and co-operation from officials of several ministries, Government departments, and statutory bodies in getting materials for this study and have also benefited a great deal from discussions with them. Without their help, there would have been important gaps. I must, however, stress that these officials are in no way responsible for the views and evaluation presented. These are all my own. Of these officials, I would like to

thank especially the following: Mr. Shamsuddin bin Yub Ahmad, Chairman, Boards of Administrators of the Government Rubber Replanting Schemes; Mr. S. Selvadurai, Senior Agricultural Economist, Ministry of Agriculture; Mr. Abu Bakar Osman Merican, Deputy Director of Fisheries, Fisheries Division, Ministry of Agriculture; Dr. S. Thuraisingham, Deputy Director-General, Veterinary Division, Ministry of Agriculture; Mr. Othman bin Mohd. Lela, Chief Coconut Replanting Officer, Ministry of Agriculture; Mr. K. Sargent, Director, United Nations Development Programme Special Fund Project on Forestry; Mr. Philip Khoo, Director, International Trade Division, Ministry of Trade and Industry; Mr. N. Sivarajah and Mr. Mohd. Harith Mahmood, Assistant Directors, International Trade Division, Ministry of Trade and Industry; Mr. Geh Sim Hong, Head, Planning and Research Section, Federal Industrial Development Authority; Haji Mokty bin Mahmood, Deputy Chief Inspector of Mines, Malaysia; Mr. Ahmad bin Sidek, Director, Special Projects Section, Economic Planning Unit, Prime Minister's Department; Mr. Liew Khay Fatt, Senior Statistician, Miss Dorothy Fernandez, Senior Statistician, Mr. Sulaiman bin Bongkit, Senior Statistical Officer and Miss Jean Paul, Statistical Officer, all of the Department of Statistics; and, the Librarian and staff of the Library of the Ministry of Agriculture.

I must also record my thanks to the many friends and former colleagues in the Economic Research Department of the Central Bank of Malaysia for the many insights that I have gained on the problems of the Malaysian economy. Several of my colleagues among the teaching staff of the University of Malaya have also been helpful in this regard. In particular, I must mention Dr. Syed Waseem Ahmad for his encouragement and guidance.

Lee Hock Lock
University of Malaya
1975.

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MAP AND CHART

Map of West Malaysia — Frontispiece

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PART I

CONCEPTS, RATIONALE AND IMPACT OF ECONOMIC DIVERSIFICATION

CHAPTER I

ECONOMIC DIVERSIFICATION AS AN ISSUE AND OBJECTIVE IN MALAYSIAN ECONOMIC POLICY

1. SCOPE AND NATURE OF STUDY

West Malaysia[1] represents a typical case of a developing economy largely dependent on a very limited number of primary export products which are subject not only to large fluctuations in prices but which also face prospects of long-term decline. Both of Malaysia's major products, rubber and tin, were confronted with these problems. Other developments enhanced the seriousness of the problem of long-term decline. Most important of these were the persistently high rates of population growth which had remained at more than 3 per cent per annum and the increasingly articulate expressions of rising expectations and the demand for faster economic development. One solution generally considered as basic for dealing with these problems was the diversification of output of the economy. Thus, over the post-war years and particularly, in the period of self-government and subsequently, political independence (Merdeka) from 1957, economic diversification remained an important objective of Malaysian economic development. To serve this objective, the Government had, from the start, assumed a leading role which in the course of time, it further enlarged.

In recent years, there was growing evidence to indicate the achievement of a more diversified economy. While there were many obvious instances of success of Government policies in assisting this development, there were also some conspicuous cases where output diversification originated largely from private initiative. Much less obvious to the public were policies and measures that proved to be inappropriate, ineffective or ill-timed. Even more inconspicuous but of importance were instances of opportunities let-passed, which if seized, could have facilitated the diversification process. Therefore, a question

[1] West Malaysia was an official designation given to the Federation of Malaya. After the formation of Malaysia on 31 August 1963, it was first called the States of Malaya. East Malaysia officially covered Sabah and Sarawak. (Singapore separated from Malaysia on 9 August 1965). Very recently, West Malaysia has been renamed Peninsular Malaysia. But this book retains the earlier designation throughout.

that has often been raised is how effective has been the role of the Government in promoting and assisting the diversification process.

The key role that had been and continues to be assumed by the Government to promote and assist economic diversification makes it desirable that the performance of its policies and measures be critically appraised. This book will attempt such an appraisal. It is hoped that the findings will lead to a better understanding of the problems involved and will result in more effective public policies for the years to come.

The study covers only West Malaysia. This is largely governed by considerations of availability of data. Sources of materials and statistics for West Malaysia are reasonably comprehensive and are easily accessible. For Sabah and Sarawak, important gaps of information exist. In any case, the West Malaysian economy is a substantial component of the Malaysian economy. In 1967–70, the gross domestic product of West Malaysia accounted for an average of 84 per cent of the gross domestic product of Malaysia.

Public policies and measures to promote economic diversification were directed at several sectors of the economy. This study however, limits the appraisal of these policies and measures to three important sectors. They are the agriculture and forestry sector, the manufacturing sector and the mining sector. Two practical considerations prompted the limitation of this study to these sectors. Most important is that the diversification policies had concentrated largely on these sectors. In focussing attention on them, therefore, a very substantial part of the efforts of the Government would have been covered. Secondly, the limitation was imposed by the necessity to keep the study within manageable limits. The need for detailed investigation in a study of this nature requires some sacrifice of comprehensiveness but as mentioned above, the omission should not materially affect the objective of the study.

The period selected for the study covers basically 1957 to 1970. The selection of 1957 as the initial year is significant because being the year when the country became politically independent of British rule, it marks a very appropriate starting point from which to view the policies and measures put forth by the Federation of Malaya (and later Malaysia) as an independent state. However, policies that may be regarded as Malaya-oriented may be considered to have commenced earlier, that is, July 1955 when the first Federal Elections brought into being a partially-elected Federal Legislative Council in which all except one of the candidates of the Alliance Party gained seats.[2] It should be noted that some of the key ministerial positions were then held by appointed

[2] Prior to the Malayan Parliament, the Federal Legislative Council was the body authorizing public policies. Initially, all its members were appointed by the Colonial Government. As a result of political developments in the early 1950's, the Colonial Government then allowed 52 of the 98 seats in the Council to be contested in the first Federal Elections. The Alliance Party, comprising a partnership of the United Malays National Organization (UMNO), the Malayan Chinese Association (MCA) and the Malayan Indian Congress (MIC), won 51 of the 52 seats. See J. Kennedy, *A History of Malaya*, London, MacMillan, 1967, p. 278.

British officials until Merdeka (Independence) Day on 31 August 1957.[3] But to all intents and purposes, the policies that emerged during this brief spell of self-government were basically Malayan in objective and this was further enhanced by the successful outcome of the London Conference of January–February 1956 on the political future of the Federation of Malaya. The Conference was attended by the Malayan Chief Minister and three other leaders of the Alliance Party, the representatives of the Sultans and officials of the Colonial Office. It was agreed at the Conference that Malaya would be granted Independence by 31 August 1957. In this study, it is thus not only necessary to refer to some of the important policies within this transitional period to Merdeka Day but also to those formulated and implemented by the Colonial Government in Malaya, insofar as these were continued by the new nation or had a bearing on its strategy of economic diversification.

The terminal year for the period of this study is generally 1970, selected to coincide with the last year of the First Malaysia Plan, 1966–70. It is a convenient point to end the study. However, the last few years of the 1960's were years of active policy formulation and review of past policies, particularly for the manufacturing sector and these continued into the early years of the 1970's. Where the resultant policies and measures are deemed to have important implications for the pace and pattern of the diversification process, the time period covered is extended beyond 1970.

Taking account of the extensions to the initial and terminal years as set out above, the period covered by this study is in effect more than 13 years. But the primary focus is still on these 13 years of 1957–70.

Short as this review period may be in terms of the time needed for the structural transformation of an economy, the policies and measures adopted nevertheless possessed interesting features of experiment and purpose in relation to a formidable objective. Furthermore, the process of economic diversification in West Malaysia was not a mere exercise of transferring factors of production from producing a commodity with declining prospects to alternative uses. The success of the process hinged upon the rejuvenation of the traditional sectors facing declining prospects through replanting with high-yielding trees in the case of the rubber industry and the search for new sources of minerals in the case of the mining industry. In the process, time was purchased for the develop-

[3]When this partially-elected legislature met on 30 August 1955, the posts of the Chief Secretary, the Attorney-General, the Financial Secretary, the Minister for Economic Affairs and the Secretary for Defence, were held by the British. See Federation of Malaya, *Legislative Council Debates – Official Reports of the Second Legislative Council (30 August 1955 – September 1956)*, Kuala Lumpur, Government Printer, 1958, col. 7. After the London Conference at which the date for Independence was agreed, the post of Financial Secretary was abolished and a Malayan took over as Minister of Finance. Likewise, a Malayan Minister for Commerce and Industry replaced the Minister for Economic Affairs. Furthermore, it was also agreed in London that an Economic Committee was to be established under the Chairmanship of the Malayan Chief Minister to co-ordinate economic projects. See report of the London Conference to the Legislative Council by the Chief Minister, *ibid*,, cols. 893–94.

ment of the other productive sectors and resources became available to assist these efforts. Another interesting aspect that should come to light is that the process of diversification for Malaysia was fraught with difficulties. Alternatives were not only limited but for a number of cases, being not naturally endowed opportunities, they were surrounded by obstacles which would have to be removed before they could become viable.

2. ECONOMIC DIVERSIFICATION: CONCEPTS, APPROACH AND PROBLEMS

The internationally-accepted concept of diversification is that it involves a widening of the range of economic activities with the objective of reducing a country's dependence on one or more commodities which are subject to price fluctuations and/or slow growth in demand.[4] However, it is also conceivable that a country may broaden its range of production without being motivated by the position and prospects of the commodity the country is largely dependent on. For example, if the petroleum sector of countries like Saudi Arabia (in which petroleum accounted for 100 per cent of its exports in 1965) gives rise to allied industries producing and exporting chemical products, this process of development is conceptually also diversification but such is very rare in practice.

Two broad types of diversification have been identified, namely, horizontal diversification and vertical diversification.[5] Horizontal diversification refers to commodity-oriented diversification and involves increasing the range of products within the primary sector. Possible lines of action under this category are increasing the output of foodstuffs currently imported and broadening the structure of production and exports of those commodities with relatively more dynamic world demand.

Vertical diversification covers all activities involving the processing and manufacturing of local and imported raw materials and foodstuffs. For a number of primary producing countries, the most convenient approach here is to initiate or intensify the processing of commodities that have hitherto been exported in their raw form and the development of the less sophisticated types of manufacturing industries.

The diversification process in West Malaysia, as will be seen in this study, involves both horizontal and vertical diversification. Agricultural diversification

[4]See, United Nations Conference on Trade and Development (UNCTAD), "Commodity Problems and Policies – the Development of International Commodity Policy", a study by the UNCTAD Secretariat for the Second Session of UNCTAD in New Delhi, Document No. TD/8/Suppl. 1 (14 November 1967), pp. 160–162; also, International Monetary Fund (IMF) and International Bank for Reconstruction and Development (IBRD), *The Problem of Stabilization of Prices of Primary Products*, Part I of a Staff Study, Washington D.C., 1968, Chap. 7.

[5]IMF and IBRD, *ibid.*, p. 136. This distinction is also made elsewhere. See, Ford Foundation Survey Team, *Policies and Measures Leading Towards Greater Diversification of the Agricultural Economy of Malaya* (A Report submitted to the Federation Government), Kuala Lumpur, Government Printer, February 1963, p. 3. Hereafter, this Report is referred to as Ford Foundation Team Report on Agricultural Diversification.

had been an objective of West Malaysia for a long time;[6] the policy of self-sufficiency in foodstuffs implemented since the Alliance Party came into power in 1955 and the growing emphasis being placed on oil palm as an alternative export crop, being two notable manifestations of this objective. In respect of vertical diversification, the Government had also taken steps to promote industrial development and this was one of the tasks set for the newly-independent nation. The important point, however, is not so much whether the scope for diversification is sufficiently broad but that given the constraints, the maximum possible diversification had been pursued in relation to its objective. In terms of objective, Malaysia's diversification policy was essentially to reduce the overwhelming dependence of the economy on tin and rubber and, particularly, the latter, which while experiencing large price fluctuations as well as declining price trends in the long term, was nevertheless still a viable product for a number of years.

Another important aspect of economic diversification is the extent of dislocation of the factors of production involved in the output of the commodity the dependence on which is to be reduced. Two situations are conceivable where withdrawal of factors of production from the output of the commodity in question is necessary. Firstly, if the commodity in question is in a state of persistent surplus, then the solution is to phase out its production by withdrawing factors and applying them to other uses. This is typical of the problem facing the coffee-producing countries.[7] The other situation would arise irrespective of the position of the commodity in question. Here, given diversification as a goal, the economy may already be in a state of full employment so that any expansion of output in other lines must necessitate a transfer of factors from the commodity concerned. However, most developing countries do not lack unemployed factors and, provided that complementary factors are available, the productive capacity can usually be expanded.[8] In such a situation, unless there is a need to move out of the production of any particular commodity, no displacement of factors will have to occur. Diversification will involve the establishment of new activities while restraint and disincentives are applied to factors intending to move into the production of the commodity which is to be discouraged. There may not even have to be a curtailment of the output of this commodity.

In Malaysia's case, there were large untapped resources and factors which could be directed to the expansion of new activities besides rubber. Furthermore, because the position of rubber was not hopeless but that considerable

[6]Indeed, it has been noted that agricultural diversification has been urged even during the days of British rule. The Director of Agriculture has stressed its necessity in the foreword to his Annual Reports since the early 1950's.

[7]IMF and IBRD, *The Problem of Stabilization of Prices of Primary Products, op. cit.*, pp. 145–46.

[8]For a discussion of the importance of co-operant factors, see P.T. Bauer and B.S. Yamey, *The Economics of Underdeveloped Countries*, Cambridge University Press, 1959, pp. 52–54.

benefits could still be derived by making it competitive with synthetic rubber, substantial investments had been and are being made to the replanting and new planting of areas with high-yielding trees. The approach of Malaysian economic diversification was, therefore, one in which widening of the range of productive activities was being conducted simultaneously with the rejuvenation of an industry with declining prospects. Any assessment of Malaysia's efforts at economic diversification must be looked at in the light of this two-pronged attack on the problem.

Another interesting issue is the relationship between economic diversification and the economy's growth rate. A conflict between diversification and considerations of growth is conceivable depending upon the assessment of the export prospects of the commodity concerned. If the assessment indicates good prospects, resources will tend to be applied to further expand the output of this commodity, resulting in the further concentration of this commodity in the production and export structures of the country. This, of course, implies that the considered returns from alternative lines of production would be less favourable than for further investment in this commodity. While it may be argued that the question of diversification should not arise in such a situation, this need not be altogether true as a decision would still have to be made when a country is bent on a policy of extending the range of its economic activities as early as possible to spread the risk of overdependence on one or few commodities or, more commonly, when the growth prospects of the commodity in question are only good in relation to those of other alternatives. On the other hand, if the growth prospects of a major commodity are generally regarded as unfavourable, diversification becomes consistent with more rapid growth and the former becomes the means for the pursuit of the latter. However, the crucial factor in determining whether diversification will result in a higher or lower growth rate rests on the correctness of the expectation on export growth of the commodity. There is no certainty that diversification will or will not lead to a higher growth rate. Favourable expectations of export growth of the commodity concerned may turn out to be wrong and consequently much valuable time would have been lost in not diversifying the economy earlier. It is also possible that a pessimistic outlook for a commodity may not turn out to be so as new elements are introduced in the market situation which could change its export demand. In this case, the country would have missed a higher growth rate when it has transferred resources out of the commodity or has restrained new resources from entering into its production.

Fortunately for a number of primary producing countries where there are substantial unemployed resources, the negative effects on the growth rates from diversification need only be minimal. Diversification will not entail a switching of factors from the output of one commodity the export prospects of which are suspect to other more promising lines except in the situation discussed earlier in which the problem of a commodity in persistent surplus can only be met by a withdrawal of factors for use elsewhere. Other than this exception, diversification will mean the mobilization and application of unemployed resources to the establishment of new lines of production in the economy. The success of

this will, of course, depend on the availability of complementary factors. In this sense, the diversification process becomes part of the overall development process. The Malaysian case belongs to this category.

While diversification can possibly bring about a higher or a lower growth rate, as indicated earlier, it has been pointed out that the magnitude of the growth rate also has a bearing on the pace of diversification.[9] For example, a high growth rate would facilitate the diversification process through the stimulating effects it would provide on the expansion of demand. The reverse is true of a low growth rate.

However, this seems to simplify the problem somewhat. The experience of Malaysia and those of the other primary producing countries engaged in diversifying their economies reveal the existence of more fundamental constraints on the success of the diversification process, namely, that feasible alternative lines of production of significance are limited, that they require considerable time to be identified and that substantial effort is needed to overcome the obstacles that inhibit the establishment of these alternatives.

Some amplification of these and other fundamental problems of diversification is relevant here. Firstly, it is obvious that a country forced to diversify is, in fact, being compelled to seek new lines of production in which it also has a comparative advantage. The commodity facing declining export prospects has not by mere accident developed into an important support for the economy. Basic factors like appropriate climate, favourable soil conditions, access to and availability of the necessary labour and capital resources, and promising markets at the earlier stages, among other things, accorded a high degree of comparative advantage to the country producing the commodity. With technological developments elsewhere resulting in synthetic substitutes or more economic use of a commodity as an input, and so on, the commodity-producing country is now faced with the prospect of having to search for feasible alternatives. The problem is further complicated by a number of factors. Alternatives that will enjoy a high degree of comparative advantage are likely to be limited and most developing countries find the expansion of primary products for export the most convenient no matter how uncertain or volatile the market. A ready market for primary commodities could be more easily found whereas in the case of industrial products, the market at home is not only narrow but has to be penetrated with concerted effort on a broad front; access to export markets for industrial products is even more difficult and is hindered by a number of obstacles. This broad approach is not new and had been recommended for Malaysia in the form of agricultural diversification. One study, for example, stressed that the process should not just involve substituting an export crop for rubber but that there should be a "gradual development of multiple crop farming."[10]

[9] IMF and IBRD, *The Problem of Stabilization of Prices of Primary Products, op. cit.*, p. 152

[10] Clifton R. Wharton, Jr., "Rubber Supply Conditions: Some Policy Implications" in T.H.

An important and related point raised was to what extent non-economic and non-technical criteria should decide the selection of crops.[11] The views of the International Monetary Fund and the World Bank are that in principle where alternatives offer higher returns compared with that on the problem commodity, diversification should take place, although it is recognized that such a principle is difficult to implement because of the unreliability of the price mechanism.[12] There is, however, no simple answer to this question as some cases of diversification are motivated by other considerations such as self-sufficiency in foodstuffs, as for expanding rice production in Malaysia. But by and large, diversification activities based on non-economic considerations cannot be undertaken without limit and in the final analysis, the principle of comparative advantage will determine the success or otherwise of the diversification policies in meeting the basic problems of declining export growth.

In the long run, vertical diversification offers a major solution to the problem of export growth of the primary-producing countries, provided that the main obstacles associated with it can be overcome. Progress in manufacturing activities in the initial stages tends to be limited owing to a number of problems such as lack of financing, absence of appropriate supporting facilities, inadequate supply of skills and entrepreneurship, limited size of markets and competition from established products. These take time to overcome. With these problems, effective competition with the output of the developed countries is circumscribed so that production comprising largely of consumer goods within a protected domestic market provides a way out of the difficulty. However, this can only be a limited and temporary solution. The pace of industrial development will falter and the emergence of self-sustaining industrial growth frustrated unless the industrial process is extended backwards to the production of intermediate goods, capital goods and raw materials or that sufficient of the manufactures can be exported or that a combination of these can be achieved.[13]

It has been argued that since intermediate goods, capital goods and, raw materials are essential for a growing manufacturing sector, they are freely imported and, consequently, the domestic production of these is discouraged.[14] However, for particularly the smaller countries, the more fundamental problem lies rather with their immediate inability to produce most of these goods.[15] The

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Silcock and E.K. Fisk, (ed.), *The Political Economy of Independent Malaya*, Singapore, Eastern Universities Press, 1963, p. 161.

[11] *Ibid.*

[12] IMF and IBRD, *The Problem of Stabilization of Prices of Primary Products, op. cit.*, p. 149.

[13] John Power, "Import Substitution: Barrier to Subsequent Growth" in H.W. Singer, N. de Kun and A. Ordoobadi (ed.), *International Development, 1966*, New York, Oceana Publications Inc., 1967, p. 176.

[14] *Ibid.*, pp. 178–79.

[15] United Nations, *Import Substitution and Export Diversification in ECAFE Countries,*

domestic market for these goods will remain for some time to be too small for their production to be near optimum capacity or to derive economies of scale and furthermore, the level of technique required of these industries may still be beyond the capability of the countries concerned. Consistent and co-ordinated efforts will, therefore, have to be applied to reduce these obstacles.

The significance of the other approach to break out of the constraints of the home market for manufacturers will depend on a liberalization of the commercial policies of the developed countries towards the exports of the developing countries. A recent staff study[16] of the World Bank indicated that the existing system of tariff protection in the developed countries has two major features that operated against the aspirations of the developing countries. These are: (i) the effective tariffs imposed by the industrial countries on the manufactures of developing countries averaged 22 per cent while those imposed by the developing countries on their manufactured imports in general averaged 11 per cent; (ii) the effective tariffs of the developed countries escalated from low rates in respect of imports in the early stages of processing to higher rates for more finished products. Apart from tariffs, there were also quantitative and other trade barriers to trading in goods of interest to the developing countries.

A major problem associated with accelerated diversification is finance. Clearly, its availability determines the pace of diversification. By and large, the funds required are substantial if diversification activities defined in the broad sense are to be implemented. International commodity agreements could be a means for raising finance to assist part of an agreed programme of diversification but so far the only such example is the Coffee Diversification Fund, the objective of which was to provide financial assistance to member countries engaged in shifting factors of production from coffee.[17] In a recent policy decision of the World Bank in the field of commodity price stabilization, the Bank pledged to intensify its lending activities in diversification of production[18] but this was not a new operation for the Bank. In the final analysis, therefore, the financing of diversification has to be based largely on domestic resources mobilized to finance the development plan. How much is allocated to projects which directly promote diversification is crucial but equally important, if not

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ECAFE Growth Studies Series No. 1 [Reprinted from United Nations (ECAFE), *Economic Survey of Asia and the Far East, 1963*], p. 23.

[16] International Bank for Reconstruction and Development (IBRD), "Market Access and Utilization of Import Levies in relation to the Commodity Problem", Action Evaluation Paper No. 7 (April 1969), prepared by the staff for the Bank's Seminar on the Stabilization of the Prices of Primary Products (unpublished).

[17] Article 54 of the International Coffee Agreement of 1968 provides for the establishment of the Coffee Diversification Fund. See Attachment A to International Bank for Reconstruction and Development (IBRD), "Co-operation with Commodity Diversification Funds", a staff paper prepared for the World Bank Seminar on the Stabilization of the Prices of Primary Products (March 1969) (unpublished).

[18] IBRD, *Stabilization of Prices of Primary Products – Report of the Executive Directors of the IBRD*, Washington D.C., 1969.

more so, are the Government's non-financial policies and measures directed at accelerated diversification. In a system of free enterprise, the private sector has a major role in investment. These policies and measures, if effective, should direct private financing towards the establishment of a more diversified economy and thereby complement the direct financing role of the Government. The policies and measures of the Government, both financial and non-financial, in the final analysis, determine the sum total of the diversification activities to be financed.

One of the more difficult problems connected with the process of diversification often arises from a lack of foresight and sense of direction and urgency on the part of the Government in the development of human resources. Diversification, as is evident from the concept, involves a structural change in the economy. Manpower, being the most important element in the process, must be developed to enable it to participate effectively. If diversification is to be accelerated, there must be a growing pool of skilled and adaptable manpower resources and this implies the need to ensure the adequacy of facilities geared towards the production of these. As this takes time, and the actual training and educational process requires even more time, the Government must, in the first place, have much more than a broad statement of objectives towards diversification. It should have a fairly well-defined plan for manpower development.[19] The need for serious attention to be paid to the human factor for successful diversification of Malaysian agriculture had been stressed.[20] This need is equally urgent in respect of manpower for industry and is possibly even more difficult to meet.

Another major problem associated with economic diversification is the current absence of any framework for co-ordinating efforts in diversification at the international levels, other than for the coffee-producing countries. Diversification in each country is, therefore, by and large being undertaken in isolation of similar efforts elsewhere, the rationale being that national considerations come first and that most countries are not quite ready yet politically to subsume these considerations within the framework of wider and longer term interests. The staff study of the International Monetary Fund and the World Bank has, however, warned that unless national diversification programmes are co-ordinated internationally, the original objective of diversification may be self-defeating.[21] In moving to other lines of production, without any guidance of an overall view of prospects, the countries concerned could find themselves facing a

[19] Techniques of manpower planning have been fairly well-developed in recent years, these ranging from simple to rather sophisticated methods. For a good discussion see, M.M. Mehta, *Techniques of Forecasting the Manpower and Educational Requirements of Development Planning,* Institute Monograph No. 10, Bangkok, United Nations Asian Institute for Economic Development and Planning, 1968.

[20] Ford Foundation Team Report on Agricultural Diversification, *op. cit.*, p. 149 and Clifton R. Wharton, Jr., *op. cit.*, pp. 161–62.

[21] IMF and IBRD, *The Problem of Stabilization of Prices of Primary Products, op. cit.*, p. 149.

persistent surplus situation[22] in respect of the alternative lines of production while, on the other hand, there could be excessive withdrawals of factors from the production of a particular commodity which may result in future shortages of that commodity. This is indeed a serious problem for which there appears no immediate solution. Superimposed upon this problem is that of limited options open to the countries concerned in terms of alternative lines of activities.

Finally, as the more diversified output must generally be geared to the export market, survival and success in the process of diversification will rest on efficiency in production. This is possibly the hardest task of all but there is no other way.

3. ECONOMIC DIVERSIFICATION AS AN OBJECTIVE OF MALAYSIAN ECONOMIC DEVELOPMENT

An examination of the development plans of West Malaysia since planning first begun in 1950, will show that economic diversification has always been one of the objectives of economic policy. In the first development plan, the so-called 'Yellow Book' or the Draft Development Plan of the Federation of Malaya covering 1950–55, the following points were stressed:

> "(a) that Malaya in the past has been too dependent on a limited range of products. It would be prudent to broaden the basis of its economy;
> (b) that the emphasis should be on promoting those types of economic activity, whether primary or industrial production, in which Malaya by reason of its climate, soil, geographical situation, and technical abilities of its inhabitants is best fitted to engage . . .
> (c) that Malaya should produce more of that it consumes."[23]

Under the General Plan of Development adopted by the Government in October 1956 for the period 1956–60, economic diversification was listed among the objectives of first priority:

> ". . . . . .
> (b) General Agriculture: so that the dependence of the country on imported foodstuffs may be reduced and the income and output of the small farmer, fisherman or forester raised – by providing more land, by diversifying and intensifying production, by supplying better planting material, encouraging the use of fertilizers and off-season cropping, by improving cultivation techniques, extending co-

[22] A recent study on the exports of the main overseas sterling area countries also pointed out the dangers of " 'unconsciously planned' over-supply" that could emerge in the absence of some form of international co-ordination. It warned that the plans of Ceylon, India and the East African states to increase their shares of the tea market and those of India and Pakistan to expand their output of jute manufactures could lead to downward pressure on the prices of these commodities. See Alfred Maizels, *Exports and Economic Growth of Developing Countries*, Cambridge, 1968, p. 266.

[23] Federation of Malaya, *Draft Development Plan of the Federation of Malaya*, Kuala Lumpur, Government Printer, 1950, p. 22.

operation and fisheries and the practice of poultry rearing and animal husbandry.

. . . . . .

(d) The stimulation of industrial development."[24]

Under the Second Five-Year Plan, 1961–65, the objective of diversification was less elaborately stated but it was nevertheless one of the five broad objectives of the Plan:

". . . . . .

(4) To widen the variety of Malayan production, emphasizing the development of other suitable agricultural products in addition to rubber, and giving every reasonable encouragement to industrial expansion which in the long term offers the greatest promise for sustained development and diversification of the Federation economy."[25]

There were ten main objectives in the First Malaysia Plan, 1966–70. Of these, two had a bearing on economic diversification:

". . . . . .

(iv) To generate employment opportunities at a rate sufficient to provide productive work for new entrants to the labour force and lower the rate of unemployment.

(v) To stimulate new kinds of economic activity, both agricultural and industrial, so as to reduce the nation's dependence on rubber and tin."[26]

The objective of economic diversification continued to be maintained in the Second Malaysia Plan, 1971–75. Incorporated into this Plan was a twin-objective New Economic Policy for development. The first objective was to reduce and eventually eradicate poverty while the second was to correct economic imbalance among the races and eventually to eliminate the identification of race with economic function.[27] The objective of diversification found expression in the goal of eradicating poverty. In this connection, the Plan stressed:

"Development will be directed towards increased production for export, including new industrial and agricultural items, greater local processing of domestic raw materials, and further substitution of domestic production for imports."[28]

[24] Federation of Malaya, *Report on Economic Planning in the Federation of Malaya in 1956 and on the Outcome of the Financial Talks held in London from December the 21st 1956 to January the 10th, 1957,* Kuala Lumpur, Government Printer, 1957, p. 4.

[25] Federation of Malaya, *Second Five-Year Plan, 1961–1965,* Kuala Lumpur, Government Printer, 1961, p. 16.

[26] Malaysia, *First Malaysia Plan, 1966–1970,* Kuala Lumpur, Government Printer, 1965, p. 2.

[27] Malaysia, *Second Malaysia Plan, 1971–1975,* Kuala Lumpur, Government Printer, 1971, p. 1.

[28] *Ibid.*, p. 6.

It also had a part in the objective of correcting economic imbalance among the races, as will be seen later.

The most obvious point from this brief excursion into all of the development plans of West Malaysia is that economic diversification had consistently been pursued in every development plan. What is not so obvious is that this objective had been motivated by an evolving set of rationale. It is necessary to find out about the character of this evolution as it must have an important bearing on the pace, manner and sense of urgency with which the objective of economic diversification had been pursued.

In the years before political independence, particularly 1950–55, the objective of economic diversification was in effect not much more than a declaration of intent. The arguments[29] for lessening the dependence on rubber were weak when measured against those of recent years. The pre-war years saw three major depressions in the rubber industry in 1917, 1920–21 and 1929. The fear of a recurrence of such a depression provided the rationale underlying the first argument for diversification. Another argument was the need to forestall loss of revenue arising from a possible change in consumers' demand for rubber or a mortal disease attacking the rubber tree. Finally, in view of the wide variety of Malayan soils, it was considered sound agricultural policy to introduce other crops to take advantage of this.

But in terms of allocation of financial resources, the Plan concentrated on infrastructural development. Public works (covering roads, bridges, water supplies) and telecommunications already accounted for $97.3 million or 45.3 per cent of the $214.6 million of total capital expenditure. The approach adopted for a more diversified production pattern centred on increased rice production, the rationale being that the country should not be caught again with its food supplies cut off as during the Second World War for being dependent on outside sources and also in view of the inability of rice producers in South East Asia to meet the expected demand.[30] To this end, a substantial amount or 13.4 per cent of the total capital expenditure was allocated for drainage and irrigation. The policies towards the industrial sector provided a sharp contrast to efforts in later years. No financial allocation was provided for the industrial sector; protective tariffs were considered out of the question as it would not be "in the interest of the community as a consumer that it should be shut off from the cheapest sources of supply";[31] and while the usefulness of setting up industrial estates was recognized, on the basis of experience elsewhere, no steps were taken in this direction.[32]

Much of the negative attitude during this period, 1950–55, towards industrial

[29] Federation of Malaya, *Draft Development Plan of the Federation of Malaya, op. cit.*, p. 140.

[30] *Ibid.*, p. 38.

[31] *Ibid.*, p. 163.

[32] *Ibid.*, p. 154.

development undoubtedly had much to do with the colonial relationship between the United Kingdom and West Malaysia. Efforts at agricultural diversification except for rice were insignificant. Even the growing problems of the rubber industry arising from a combination of ageing trees and the developing competition from synthetic rubber were not fully grasped. The Plan had originally set aside merely $0.8 million for the provision of planting material for the rubber industry and it was only at a subsequent reconsideration of this Plan in response to a general invitation to all Colombo Plan countries to prepare a six-year development plan for 1951–57 that $25 million were allocated for the replanting of rubber smallholdings.[33] The initial lack of recognition of the precarious state of the rubber industry on the part of the Government was possibly the other major reason for the limited effort in pushing the diversification objective.

The General Plan of Development for the period 1956–60 was drafted at a time when West Malaysia was on the threshold of political independence. It was also a Plan which was to reflect broadly the election manifesto of the Alliance Party which won the election to the partially-elected legislature. More significant, the drafters of the Plan had the benefit of two very important studies, a very comprehensive economic survey[34] of the problems and prospects of West Malaysia undertaken by a mission of the World Bank in 1954 and the findings of a mission of enquiry into the rubber industry.[35] Both of these had far-reaching consequences on the shape and direction of public policies in the years to come. The basic philosophy of the General Plan was that "there are no industries existing or in prospect which can take the place of rubber and tin as the pillars of the Malayan economy . . ."[36] These were the country's principal sources of employment, revenue and foreign exchange. There cannot be any dispute about this premise which was a practical and sober assessment of the realities of the situation. Past capital expenditures had not sought to develop alternative sectors on a scale comparable to rubber and tin, both of which having been developed by many decades of investment. Reference was, of course, made to rice production, considered to be the next major industry, but its inefficiency was noted.[37] Replanting of old rubber trees with high-yielding clones in both estates and smallholdings, was allocated a sum of more than 10 per cent of the total development expenditure,[38] the largest amount for any single item of

[33] Federation of Malaya, *Progress Report on the Development Plan of the Federation of Malaya, 1950–1952,* Kuala Lumpur, Government Printer, 1953, p. 4.

[34] International Bank for Reconstruction and Development, *The Economic Development of Malaya,* Singapore, Government Printer, 1955.

[35] *Report of the Mission of Enquiry into the Rubber Industry of Malaya,* Kuala Lumpur, Government Printer, 1954.

[36] Federation of Malaya, *A Plan for the Development of Malaya,* Kuala Lumpur, Economic Secretariat, September 1956 (mimeographed), p. 32.

[37] *Ibid.*, p. 32.

[38] This was $160 million out of a total of $1,009.5 million under the Plan. See Federation

expenditure. Drainage and irrigation which would increase rice production also had a large allocation. By and large, the balance of planned public development expenditure was directed at the further development of the economic and social infrastructure. Little was devoted directly to the development of new lines of production. The growth of industries was considered a matter for private financing and Government's role was largely to be concerned with the creation of a conducive environment for industrial investment.

The Second Five-Year Plan was drafted in a state of confidence in the prospects of natural rubber.[39] The rubber replanting programme undertaken in the previous Plan period (1956–60) was considered the outstanding achievement of the past five years[40] and with the continuation of this programme, the industry was considered sufficiently equipped to maintain its position in the face of technological developments in synthetic rubber. The emphasis on diversification then was not a reflection of any concern about the future of natural rubber.[41] Rather, it was the very same motivation as in the 1950's to lessen the disturbing influence of over-specialization in rubber. In this Plan, however, more tangible and concrete measures were evident.[42] Within the agricultural sector, the promotion of diversification was to be effected through sharp increases in development expenditure for the irrigation of rice and other crops, oil palm, rehabilitation of coconut areas, forestry, fisheries and livestock. In the industrial sector, the Government intended to pursue a vigorous policy to promote private investment. But great importance continued to be attached to the extension of the rubber replanting programme. The limitations to the possible expansion of the other lines of production were recognized namely, that the development of new crops and new agricultural activities were subject to constraints like suitability of environment, the need for extensive research in soils, fertilizer requirements and the time required for the development of human skills and enterprise.[43] The last operates in the case of industrial expansion. Considerable public development expenditure was again planned for the growth of infrastructure but a significant feature of this Plan was the emphasis given to social services, especially health and education.[44]

Within two years or so after the implementation of the Second Five-Year Plan, the optimism about the future of natural rubber was quite shaken when it became quite evident that "excellent synthetics can now be produced at low

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of Malaya, *Report on Economic Planning in the Federation of Malaya in 1956 and on the Outcome of the Financial Talks held in London from December the 21st 1956 to January the 10th 1957, op. cit.*, Appendix 1.,

[39] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 15.

[40] *Ibid.*, p. 2.

[41] *Ibid.*, p. 15.

[42] *Ibid.*, p. 26.

[43] *Ibid.*, p. 26.

[44] *Ibid.*, pp. 28–29.

cost, and the rubber consuming countries are building synthetic rubber factories so fast that world rubber surpluses are likely for the remainder of the 1960's."[45] In the face of price decline for natural rubber, the first serious step to facilitate agricultural diversification was taken when the Government invited the Ford Foundation to finance an expert survey of the problems of promoting agricultural diversification.[46] Another important development around this time was the formation of Malaysia, a federation comprising the former Federation of Malaya, the British colonies of Sabah and Sarawak and the self-governing state of Singapore. A significant aspect of this new Federation was the intention to establish a common market and to pursue a more vigorous approach to industrialization based on a study by a mission of the World Bank.[47] Although the common market and its promise of industrial growth failed to materialize with the political separation of Singapore from Malaysia in 1965, certain attitudes and institutions remained which undeniably had favourable effects on the pace of development of the industrial sector in subsequent years.

Under the First Malaysia Plan, 1966–70, the policy was still to provide substantial support to the replanting of rubber particularly on smallholdings and new planting on land development schemes on which soils would not be suitable for oil palms.[48] It was felt that "for some years to come" the economy would continue to depend on rubber and to a lesser extent, tin. The only way for rubber to meet the ever-growing threat of its synthetic counterpart was to reduce its cost of production and this the industry had been doing through the replacement of low-yield stands with high-yielding trees. The five years preceding the Plan period saw the price of natural rubber falling from an average of 95 cents per pound for 1956–60 to an average of 74 cents per pound in 1961–65.[49] Further decline was envisaged until a price of 55 cents per pound was reached in 1970.[50] The problem with tin was not price but the growing prospect of reserves exhaustion.[51] For the first time in the country's development plan, there was admission that these traditional sectors could no longer provide the motivating force for rapid development[52] and that over the five years of the Plan period, the anticipated export growth would be

[45] Federation of Malaya, *Interim Review of Development in Malaya under the Second Five-Year Plan,* Kuala Lumpur, Government Printer, December 1963, p. 38.

[46] A number of important recommendations emerged from the survey. See Ford Foundation Team Report on Agricultural Diversification, *op. cit.,* especially Chap. 6.

[47] International Bank for Reconstruction and Development, *Report on the Economic Aspects of Malaysia,* Kuala Lumpur, Government Printer, July 1963.

[48] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.,* p. 6.

[49] *Ibid.,* p. 22.

[50] *Ibid.,* p. 43.

[51] *Ibid.,,* p. 7.

[52] *Ibid.,* p. 6.

insufficient to pay for imports, even after account had been taken of expansion of other exports.[53]

Under the circumstances, the objective of diversification assumed a new degree of importance. The directions sought to achieve this objective were possibly the most explicitly stated among all the development plans drawn up so far. Agricultural diversification was considered an important possibility for assisting the sagging export sector, although its contributions would yet be small. Apart from oil palm which was becoming a possible alternative to rubber, it was thought that a number of other crops might become export products of some importance, e.g. banana, sago, tapioca, cashew nut, pineapple, citrus fruit, abaca, etc.[54] Production for the domestic market was considered the other approach to meet the problem of sluggish export proceeds from the traditional exports. In this area, the production of food crops, particularly rice, was given emphasis and so also measures to promote a faster growth of the industrial sector (both for production for the domestic and export markets where possible.)[55]

Although the terminal year for this study is essentially 1970, it is nevertheless useful to touch briefly on possible developments in the following five years in order to achieve better perspective. So far as the diversification objective is concerned, its position was considerably enhanced in the Second Malaysia Plan. Successful diversification programmes have two common characteristics: (a) high productivity and (b) new economic opportunities. As both of these are among the major prerequisites for anti-poverty programmes, projects with the diversification objective could thus easily assume a common identity with those aimed at the larger objective of anti-poverty, which as pointed out earlier, was one of the two major goals of the Second Malaysia Plan. The other major goal of the Plan namely, the correction of economic imbalance among the races, would also assist the diversification process. During the Plan period, the Government intended to participate directly in the establishment and operation of a wide range of productive enterprises.[56] As a result, new economic opportunities would be created, which the private sector would have avoided because of the lack of immediate or tangible benefits. The Government would in turn use these enterprises to create a Bumiputra[57] commercial and industrial community.

From this broad survey, it is clear that the objective of economic diversification had occupied a prominent place in all the development plans of the country. Its significance in all these development plans had, however, been changing. In particular, the decline in the fortunes of the rubber industry in the 1960's gave the objective a strength of purpose which it never possessed before.

[53] *Ibid.*, p. 8.

[54] *Ibid.*, p. 8.

[55] *Ibid.*, p. 9.

[56] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 7.

[57] The term 'Bumiputra' covers the Malays and the other indigenous peoples of the country.

As will become obvious in due course in this study, this exercised considerable influence on the pace and direction of the diversification process as a whole.

CHAPTER II
THE RUBBER AND TIN INDUSTRIES IN WEST MALAYSIA — POSITION AND PROBLEMS

1. THE POSITION OF THE RUBBER AND TIN INDUSTRIES IN THE WEST MALAYSIAN ECONOMY

An examination of the issue of economic diversification for the West Malaysian economy must have for its starting point a discussion of the position of the key sectors of the economy, the rubber and tin industries, on which excessive dependence had become the source of disturbance to and uncertainty for the adequate growth of the economy. How important these industries were and how serious the problems affecting them are matters having a bearing on the character of the approach applied in dealing with the situation.

The West Malaysian economy is an almost perfect model of the modern raw material export economy.[1] Like its counterparts elsewhere, its beginnings came about from the sudden entry of international trade which resulted in the creation of a dual economy, one modern in terms of application of resources, technology and, orientation to an export market and the other a subsistence economy characterized by traditional methods of production, low productivity and high indebtedness.[2]

The emergence of the modern raw material export sector in West Malaysia was the result of a conglomeration of factors. The rapid pace of industrialization in the United States and Europe in the latter part of the nineteenth century and the early decades of the twentieth century created a demand for a variety of raw materials. For West Malaysia, there was the growing demand for tin in the tin plate industry. Rich deposits of tin had already been discovered in the Malay

[1] For one of the most comprehensive discussions of the raw material export economy, see Jonathan V. Levin, *The Export Economies*, Cambridge, Massachusetts, Harvard University Press, 1960. A more specific study of an export economy can be found in Donald R. Snodgrass, *Ceylon: An Export Economy in Transition*, Illinois, R.D. Irwin Inc., 1966.

[2] T.H. Silcock, *The Economy of Malaya*, Singapore, Donald Moore, 1956, pp. 2–7. It is also interesting to note that Silcock made a further distinction between the export raw material producing sector and the entrepot centre for processing, grading, transhipment and, credit associated with the former sector, *ibid.*, pp. 8–12.

States, especially in Perak but the industry was not extensively developed before 1850.[3] Keen rivalry between groups of immigrant Chinese miners for the possession and control of mining land on the one hand, and disputes, on the other, among rival Malay chieftains on questions of succession to the throne and the collection of tin revenue created a very unstable environment for the development of the industry. Stability and law and order were soon established following the British intervention in the Malay States in 1874. With the growing demand for tin in the closing decades of the nineteenth century, the industry expanded, first with the financing provided by the Chinese capitalists[4] in the Straits Settlements and subsequently, with the influx of western capital and enterprise.[5] Another favourable factor for the growth of the tin mining industry was the availability of a continuous flow of cheap labour from China.[6] The indigenous group, the Malays, was more interested in its traditional activities of padi planting and fishing.

Natural rubber was the other major raw material the demand for which rose substantially with the rapid industrialization of the West during the early years of the twentieth century.[7] In particular, the growth of the automobile industry was the basic cause. Underlying this were innovations such as the development of the process of vulcanization of rubber and the pneumatic tyre which occurred in 1839 and 1888 respectively.[8] There were also a number of technical developments during this period which made it possible for a wide range of products to be manufactured from rubber, thereby stimulating further demand for the commodity.[9] Five factors have been identified as being largely responsible for the emergence of Malaysia as a major producer of natural rubber.[10] Firstly, as in

[3]For a very comprehensive study of the tin mining industry, see Yip Yat Hoong, *The Development of the Tin Mining Industry in Malaya,* Kuala Lumpur/Singapore, University of Malaya Press, 1969. Also, Wong Lin Ken, *The Malayan Tin Industry to 1914*, Tucson, The Association for Asian Studies, 1965, and Lim Chong Yah, *Economic Development of Modern Malaya*, Kuala Lumpur, Oxford University Press, 1967, Chap. 2.

[4]Yip Yat Hoong, *op. cit.*, pp. 89–94.

[5]Yip Yat Hoong, *op. cit.*, pp. 95–109.

[6]R.N. Jackson, *Immigrant Labour and the Development of Malaya, 1786–1920,* Kuala Lumpur, Government Printer, 1961, Chaps. VII and XIII; also, Yip Yat Hoong, *op. cit.*, pp. 65–82.

[7]For a good review of the development of the rubber industry, see Lim Chong Yah, *op. cit.*, Chaps. 3 and 4; also T.R. McHale, *Rubber and the Malaysian Economy*, Singapore, M.P.H. Publications Sendirian Berhad, 1967, University Handbook Series on Malaysia and Singapore No. 3.

[8]Lim Chong Yah, *op. cit.*, p. 72 and T.R. McHale, *op. cit.*, p. 14.

[9]Lim Chong Yah, *op. cit.*, pp. 73–74 and T.R. McHale, *op. cit.*, pp. 13–14. Some of the products are rubber footwear, tyres, hose, water-proof garments, mattresses, belts, elastic fabrics, etc.

[10]T.R. McHale, *op. cit.*, p. 63 and R.N. Jackson, *op. cit.*, especially Chaps. VIII, XII and XIV.

the case of tin, the establishment of colonial rule in the country with its attendant stability was a conducive factor for investment in the rubber industry. Secondly, capital from the London money market was readily available. Thirdly, land was in abundance and the climate suitable for rubber. Fourthly, the Colonial Government took an active interest in fostering the industry. Fifthly, as in the tin industry, there was the availability of immigrant Indian and Chinese labour, particularly the former.

Unlike most of the typical raw material export economies which Levin observed as having little development,[11] the growth of the tin and rubber industries in West Malaysia had on the contrary financed largely the development of the social and economic infrastructures so that the country is now endowed with a good system of transport and communications, power facilities and, education and health services.[12]

Exports constituted a very important factor in the Malaysian economy. In the years after the Second World War, exports accounted for 30 to 60 per cent of the gross domestic product as can be seen in Table 2.1. For the period 1947–70, the proportion of gross export proceeds to the gross domestic product averaged 48 per cent, possibly the highest in South-East Asia.

The importance of exports becomes even clearer when their share of the gross domestic product is compared with those of public and private investments. This is shown in Table 2.2. It can be seen that although the proportion of exports to the gross domestic product had a generally declining trend from 1955, it was still substantial and far exceeded the combined proportions of public and private investments to the gross domestic product. This disparity continued despite a trend of marked increases in total investments during the period observed.

Another interesting feature is that earnings from rubber and tin made up the bulk of the export proceeds. This is evident in Table 2.3. Over the period 1947–70, total exports averaged 48 per cent of the gross domestic product but exports of rubber and tin taken together averaged 37 per cent of the gross domestic product. During the period, the latter fluctuated within a range of 26 per cent to nearly 55 per cent of the gross domestic product. However, they also showed a declining trend, especially from 1955. On the other hand, the proportions accounted for by other exports showed a clearly rising trend over the years. [This can be seen from Table 2.3 by taking the difference between the proportion of earnings from total exports to the gross domestic product and the proportion accounted for by rubber and tin each year.] These other exports averaged 6.2 per cent of the gross domestic product in the 1950's but 12.4 per cent in the 1960's.

[11] "First, despite decades or even centuries of participation in international trade, most of the export economies have remained at low levels of economic development . . .", Jonathan V. Levin, *op. cit.*, p. 4.

[12] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, p. 9; also pp. 13–14.

Table 2.1

West Malaysia – Gross Domestic Product and Gross Exports

Year	Gross Domestic Product at Factor Cost ($ million)	Gross Exports ($ million)	Gross Exports as Percentage of Gross Domestic Product at Factor Cost (%)
1947	2,654	835	31.5
1948	2,494	1,116	44.7
1949	2,391	1,179	49.3
1950	4,137	2,608	63.0
1951	5,550	3,379	60.9
1952	4,693	2,134	45.5
1953	4,271	1,598	37.4
1954	4,208	1,625	38.6
1955	4,270*	2,370	55.5
1956	4,396*	2,262	51.4
1957	4,508*	2,179	48.3
1958	4,528*	1,882	41.6
1959	4,731*	2,473	52.3
1960	4,962	2,924	58.9
1961	5,027	2,626	52.2
1962	5,302	2,626	49.5
1963	5,643	2,705	47.9
1964	6,066	2,781	45.9
1965	6,574	3,103	47.2
1966	6,879	3,120	45.4
1967	7,066	2,919	41.3
1968	7,270	3,217	44.3
1969	8,077	4,076	50.5
1970	8,466	4,192	49.5
1947–50	(average)		47.1
1951–55	(average)		47.6
1956–60	(average)		50.5
1961–65	(average)		48.5
1966–70	(average)		46.2
1947–70	(average)		48.0

Sources:

1. Lim Chong Yah, *Economic Development of Modern Malaya, op. cit.*, Appendix 1.
2. Department of Statistics, *National Accounts of the States of Malaya, 1955–1962.*
3. Department of Statistics, *National Accounts of West Malaysia, 1960–1968.*
4. Department of Statistics, unpublished data.
5. Department of Statistics, *Monthly Bulletin of Statistics*, various issues.

*In constant 1960 dollars.

Table 2.2

West Malaysia – Gross Exports and Public and Private Investment as Percentage of Gross Domestic Product

Year	Gross Exports	Public Investment[a]	Private Investment[b]	Total Investment
	(As % of Gross Domestic Product at Factor Cost)			
1955	55.5	n.a.	n.a.	11.1
1956	51.4	n.a.	n.a.	13.2
1957	48.3	n.a.	n.a.	14.7
1958	41.6	n.a.	n.a.	14.3
1959	52.3	n.a.	n.a.	10.9
1960	58.9	3.8	10.4	14.2
1961	52.2	6.4	9.5	15.9
1962	49.5	9.4	9.9	19.3
1963	47.9	8.6	9.8	18.4
1964	45.9	7.7	10.0	17.7
1965	47.2	8.0	9.4	17.4
1966	45.4	7.4	10.1	17.5
1967	41.3	7.4	11.1	18.5
1968	44.3	7.0	11.4	18.4
1969	50.5	6.0	9.1	15.1
1970	49.5	6.2	12.7	18.9
1956–60 (average)	50.5	n.a.	n.a.	13.5
1961–65 (average)	48.5	8.0	9.7	17.7
1966–70 (average)	46.2	6.8	10.9	17.7

Sources:
1. Table 2.1
2. Department of Statistics, *National Accounts of the States of Malaya, 1955–1962.*
3. Department of Statistics, *National Accounts of West Malaysia, 1960–1968.*
4. The Treasury, Government of Malaysia, *Economic Report 1972–73.*

[a]Only gross fixed capital formation.
[b]All changes in stocks included with gross fixed capital formation of private sector.
n.a. = not available.

Table 2.3

West Malaysia – Gross Exports of Rubber and Tin and
Total Gross Exports as Percentage of the Gross Domestic Product

Year	Total Gross Exports	Gross Exports of Rubber	Gross Exports of Tin	Total Gross Exports of Rubber and Tin
	(As % of Gross Domestic Product at Factor Cost)			
1947	31.5	22.1	4.3	26.4
1948	44.7	27.3	8.8	36.1
1949	49.3	24.7	12.2	36.9
1950	63.0	43.8	10.7	54.5
1951	60.9	44.1	10.2	54.3
1952	45.5	27.4	10.9	38.3
1953	37.4	21.0	9.0	30.0
1954	38.6	21.5	9.6	31.1
1955	55.5	37.1	10.2	47.3
1956	51.4	31.4	10.7	42.1
1957	48.3	28.9	9.7	38.6
1958	41.6	26.4	6.1	32.5
1959	52.3	36.4	6.3	42.7
1960	58.9	36.9	10.2	47.1
1961	52.2	28.7	11.0	39.7
1962	49.5	25.8	11.7	37.5
1963	47.9	24.3	11.4	35.7
1964	45.9	21.5	12.0	33.5
1965	47.2	20.8	13.3	34.1
1966	45.4	20.3	11.5	31.8
1967	41.3	17.2	10.7	27.9
1968	44.3	17.9	11.4	29.3
1969	50.5	24.0	11.6	35.6
1970	49.5	19.6	12.0	31.6
1947–50 (average)	47.1	29.5	9.0	38.5
1951–55 (average)	47.6	30.2	10.0	40.2
1956–60 (average)	50.5	32.0	8.6	40.6
1961–65 (average)	48.5	24.2	11.9	36.1
1966–70 (average)	37.3	19.8	11.4	31.2
1947–70 (average)	48.0	27.0	10.2	37.2

Sources: Same as for Table 2.1.

The importance of rubber and tin to the economy is shown in Table 2.4. Since 1956, the gross domestic product attributable to rubber and tin (including other minerals and quarrying)[13] had a rising trend although their share of the gross domestic product fell from an average of about 30 per cent in 1956–60 to 20 per cent in 1966–70. The cause for this structural change will be examined later but the point to note here is the important contribution of these two industries to the gross domestic product. Gross exports of rubber and tin have earlier been viewed at in relation to the gross domestic product. In this table, the importance of rubber and tin in total exports is very obvious, the share of these to total exports ranging from nearly 70 per cent to over 80 per cent. Another notable feature is that while the export proceeds from these two commodities actually increased during 1947–70, their share, however, had declined, reflecting the emergence of export growth in other directions. This will be discussed in Chapter IV. With the predominant position of rubber and tin in the export structure, Government revenue from export duties on these commodities was thus substantial, the average receipts in 1947–50 very nearly accounted for all the export duties collected while in recent years they still accounted for well over 80 per cent.[14]

Another direct contribution of the rubber and tin industries to Government revenue was via income tax. In the absence of published data on income tax derived from these sources, the data on assessed income for income tax purposes were used to provide some rough indications of the importance of these sectors with respect to income tax. The assessed income from rubber and tin constituted a fairly substantial share of the total assessed income. It was about one-third of total assessed income in 1957 but by 1969, it fell to about 11½ per cent (Table 2.5). These figures, however, did not include the assessed income of those in employment in the rubber and tin industries. This means that the income tax contributions of the rubber and tin industries would be considerably more than what could be reflected in these figures alone. This point becomes clearer when it is realized that the assessed income from employment made up a substantial share of the total assessed income, this share being 42 per cent of the total assessed income in 1960 and 48 per cent in 1969.

[13] Official data on the industrial origin of the gross domestic product do not provide a breakdown of the contribution of the mining and quarrying sector.

[14] With the growth of other sources of Federal Government revenue, the share of export duties had declined as can be seen below:

	1947	*1957*	*1956*	*1961*	*1966*	*1970*
a) Total Export Duties ($ million)	48.0	302.6	217.0	192.0	214.1	250.3
b) Total Federal Government Revenue ($ million)	265.9	735.5	803.0	1,081.0	1,497.4	2,159.4
c) Percentage of Export Duties to Federal Government Revenue	18.1	41.1	27.0	17.6	14.3	11.6

Table 2.4

West Malaysia – Contributions of the Rubber and Tin Industries to the Gross Domestic Product, Total Exports, Export Duties and Employment

Average Annual during Period	Contributions of the Rubber and Tin Industries to							
	Gross Domestic Product[a]		Total Gross Exports		Total Export Duties		Total Employment	
	$ million	% of Total	$ million	% of Total	$ million	% of Total	Number Employed	% of Total
1947–50	n.a.	n.a.	1,184	81.5	83.2	99.1	552,754 (1947 Census)	29.5
1951–55	n.a.	n.a.	1,882	83.7	184.7	96.3	n.a.	n.a.
1956–60	1,400[b,c]	30.3	1,884	80.3	197.5	96.6	665,754 (1957 Census)	31.3
1961–65	1,465[c]	25.7	2,054	74.2	171.7	88.5	n.a.	n.a.
1966–70	1,515[c]	20.1	2,369	67.7	188.0	84.4	721,715 (1970 Census)	26.8

Sources:
1. Computed from sources used in Table 2.1.
2. Department of Statistics, *1957 Population Census of the Federation of Malaya,* Report No. 14.
3. Department of Statistics, labour force data from the 1970 Population Census (not yet published).

[a]At Factor Cost.
[b]For 1956–59, the percentages are based on constant 1960 dollars data since detailed composition of the gross domestic product at current prices are not available prior to 1960.
[c]Includes contributions from other mining activities and quarrying.
n.a. = not available.

Another point of interest from Table 2.5 is that between 1957 and 1969, there was a clear decline in the assessed income from rubber. The drop was nearly $60 million or 32 per cent. For the same period, the assessed income from tin rose by $11.5 million or nearly 12 per cent, but hardly enough to offset the decline in the rubber sector. In contrast, assessed incomes from other sources, including employment, rose by $1,244.1 million between 1957 and 1969, or 144 per cent.

From the viewpoint of employment, the two industries provided direct employment for about 30 per cent of the total number of the employed population in 1947 and 1957. But in 1970, the percentage fell to 27.

Of the two commodities, rubber was by far the more important. In terms of its contribution to the gross domestic product, rubber production accounted for a substantial though declining percentage.[15] Table 2.6 indicates that the contribution of rubber to the gross domestic product averaged nearly 25 per cent in 1956–60, 18 per cent in 1961–65 and only 13 per cent in 1966–70. A significant point to note is that over these respective periods, even the value of the average annual contribution of rubber to the gross domestic product had also fallen. The share of rubber exports to total exports had likewise declined: from an average of over 60 per cent of total exports in 1947–50, 1951–55 and 1956–60 to nearly 50 per cent in 1961–65 and further down to 43 per cent in 1966–70. Export duties from rubber which constituted 60 per cent of total export duties in 1947–50 and 1951–55 and 73 per cent in 1956–60, had consequently fallen to about 30 per cent in 1966–70.

In terms of direct employment, Table 2.7 shows that over half a million workers were employed on rubber estates and smallholdings. Between 1957 and 1970, such employment rose by nearly 10 per cent. However, in relation to total employment, the direct employment in the rubber industry fell from 29 per cent in 1957 to 25 per cent in 1970.

Data on the contribution of tin to the gross domestic product were not available but the contribution of tin together with the other minerals made up 5.6 per cent of the gross domestic product in 1956–60, 7.9 per cent in 1961–65 and, 6.9 per cent in 1966–70. The share of tin exports had increased in relation to total exports and for the 1960's, it averaged around 25 per cent. This can be seen in Table 2.8. Another feature is that the average annual value of tin exports had risen rapidly, the average for 1966–70 being $183 million higher than the average for the previous five years, 1961–65, and $468 million higher than the average for 1956–60. Revenue collected from tin exports consequently rose substantially and in 1966–70, accounted for 54 per cent of the total export duties collected compared with about 30 per cent in the case of rubber during the period. While the average annual receipts of duties on tin exports were a little more than half of the receipts of duties on rubber in 1951–55 and less

[15] Rubber production as discussed in this section in relation to its contribution to the gross domestic product, excludes the value added from the processing of its product. This is regarded as part of manufacturing.

Table 2.5

West Malaysia – Assessed Income for Purposes of Income Tax from Rubber Planting and Tin Mining

Year of Assessment	Total[a]	Assessed Income					
		Rubber[b]		Tin[b]		Rubber and Tin	
	$ million	$ million	% of Total	$ million	% of Total	$ million	% of Total
1957	830.8	180.9	21.8	98.3	11.8	279.2	33.6
1960	1,120.0	219.5	19.6	37.2	3.3	256.7	22.9
1964	1,481.4	152.1	10.3	116.1	7.8	268.2	18.1
1969	2,028.0	122.5	6.0	109.8	5.4	232.3	11.4

Sources:
1. Federation of Malaya, *Annual Report of Department of Inland Revenue,* 1958 and 1961.
2. West Malaysia, *Annual Report of Department of Inland Revenue, 1965.*
3. Malaysia, *Annual Report of the Department of Inland Revenue, 1969.*

[a]Of the total assessed income, the assessed income from employment (including pensioners) are 22.6 per cent in 1957, 42.3 per cent in 1960, 44.6 per cent in 1964, and 48.0 per cent in 1969.
[b]Excludes assessed income from employment.

Table 2.6

West Malaysia – Contributions of the Rubber Industry to the Gross Domestic Product, Total Exports and Export Duties

Average Annual during Period	Contributions of the Rubber Industry to					
	Gross Domestic Product at Factor Cost		Total Gross Exports		Total Export Duties	
	$ million	% of Total	$ million	% of Total	$ million	% of Total
1947–50	n.a.	n.a.	917	62.7	50	60.1
1951–55	n.a.	n.a.	1,423	62.2	123	60.5
1956–60	1,140*	24.6*	1,486	63.3	151	73.3
1961–65	1,007	17.8	1,371	49.7	88	46.0
1966–70	994	13.2	1,503	42.8	69	30.4

Sources: Same as for Table 2.1.

*For 1956–59, the percentages are based on constant 1960 dollars data since detailed composition of the gross domestic product at current prices are not available prior to 1960.

n.a. = not available.

Table 2.7

West Malaysia – Employment in the Rubber Industry

	1947	1957	1970
Total number in employment	1,875,345	2,126,182	2,692,526
Number employed in rubber estates and smallholdings	509,436	614,487	673,994
Percentage of employment in rubber estates and smallholdings	27.2	28.9	25.0

Sources:
1. Department of Statistics, *1957 Population Census of the Federation of Malaya,* Report No. 14.
2. Department of Statistics, labour force data from the 1970 Population Census (not yet published).

than one-third in 1956–60, by 1961–65, the receipts of duties on tin had increased to about the amount of duties collected on rubber and, by 1966–70, had surpassed the amount by 78 per cent.

However, the employment effect of the tin mining industry was modest and was only a fraction of the employment provided by the rubber industry. According to Table 2.9, tin mining activities provided employment for about 40,000 to 50,000 persons. In 1947 and 1957, employment in tin mining accounted for about 2½ per cent of the employed population. But it fell to less than 2 per cent in 1970. Indeed, between 1957 and 1970, the number of persons employed in the industry declined by 6 per cent.

These indicators showed very clearly the state of the two major industries in West Malaysia. There was evidence of declining support being given to the economy by the rubber industry, whether as a source of growth of the domestic product, exports, government revenue or employment. Such a trend has emerged despite the large efforts that had been made in the renewal of the rubber industry.[16] Of course, the situation would definitely have been more serious without these efforts. Nevertheless, the indications were clear that economic diversification would have to be an abiding policy objective for West Malaysia for a long time to come.

A final point to consider is the position of West Malaysia as a producer of rubber and tin at the international level. Such a view should give a better perspective to the discussions that follow. Table 2.10 shows the major rubber-producing countries in the world in the post-war period. Except for 1947, West Malaysia accounted for an increasing share of total world production, these

[16] These efforts are discussed in Chapter V.

Table 2.8

West Malaysia – Contributions of the Tin Industry to the Gross Domestic Product, Total Exports and Export Duties

Average Annual during Period	Contributions of the Tin Industry to					
	Gross Domestic Product at Factor Cost		Total Gross Exports		Total Export Duties	
	$ million	% of Total	$ million	% of Total	$ million	% of Total
1947–50	n.a.	n.a.	267	18.8	33.7	39.0
1951–55	n.a.	n.a.	459	21.5	61.6	35.8
1956–60	260[a,b]	5.6	398	17.0	47.0	23.3
1961–65	457[b]	7.9	683	24.5	83.4	42.5
1966–70	521[b]	6.9	866	24.9	119.0	54.0

Sources: Same as for Table 2.1.

[a]For 1956–59, the percentages are based on constant 1960 dollars data since detailed composition of the gross domestic product at current prices are not available prior to 1960.

[b]Includes contribution from the other minerals and quarrying.

n.a. = not available.

Table 2.9

West Malaysia – Employment in the Tin Industry

	1947	1957	1970
Total number in employment	1,875,345	2,126,182	2,692,526
Number employed in tin mining industry	43,318	50,737	47,721
Percentage of employment in tin mining industry	2.3	2.4	1.8

Sources: Same as for Table 2.7.

ranging from about one-third in 1951 to 42 per cent in 1970. Other than for the 1950's,[17] West Malaysia was and still is the world's largest rubber-producing country. It achieved this position very largely through the substantial efforts it made in rejuvenating its rubber industry.

Table 2.11 shows the major tin-producing countries in the world. Apart from 1947 to around 1950, during which the tin mining industry was undergoing rehabilitation necessitated by the extensive damages to the mines during the war,[18] West Malaysia had always been the world's leading producer of tin.[19] In recent years, West Malaysia produced about 40 per cent of the world's output of tin.

2. PROBLEMS OF THE RUBBER AND TIN INDUSTRIES

The objective of economic diversification arose in the first instance because the two major export products of the economy, rubber and tin, had unstable export earnings. But a far more compelling reason for it was that by the early 1960's, trends were becoming evident that gave rise to considerable uncertainties about the ability of these two products to support the sustained growth of the economy. It would, therefore, be appropriate to examine the problems of the rubber and tin industries in this connection.

2.1 *The Rubber Industry*

Table 2.12 shows the extent of the year-to-year fluctuations in the prices (export unit values), proceeds and volume of rubber exports for 1948–70. A

[17] Indonesia was the world's largest producer during 1950–59. See Department of Statistics, *Rubber Statistics Handbook, Malaya 1960*, p. 64.

[18] The damages to the tin mines arose from the scorched earth policy pursued by the retreating British forces on the mines and mining equipment. See Yip Yat Hoong, *op. cit.*, p. 286.

[19] See International Tin Council, *Statistical Year Book, 1959*.

Table 2.10

Production of Natural Rubber by Major Producing Countries

Country	1947	1951	1956	1961	1966	1970
	(Percentage of Total)					
West Malaysia	51.4	32.2	32.4	35.2	37.9	42.1
Indonesia	22.0	43.2	36.4	32.0	29.7	26.9
Thailand	n.a.	5.8	7.1	8.7	8.6	9.9
Ceylon	7.1	5.6	5.1	4.5	5.4	5.5
Rest of the world	19.5*	13.2	19.0	19.6	18.4	15.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
World Total ('000 tons)	1,260	1,885	1,888	2,095	2,412	2,888

Sources: 1. Department of Statistics, *Rubber Statistics Handbook, Malaya,* 1960 and 1965.
2. Department of Statistics, *Rubber Statistics Handbook, West Malaysia, 1970.*

*Includes production of Thailand.

Table 2.11

Production of Tin-in-Concentrates by Major Producing Countries

Country	1947	1951	1956	1961	1966	1970
	(Percentage of Total)					
West Malaysia	23.9	33.9	34.3	34.8	41.2	39.7
Indonesia	14.2	18.5	16.6	11.8	7.5	10.3
Bolivia	29.2	19.6	14.9	13.0	15.3	16.2
Rest of the world	32.7	28.0	34.2	40.4[a]	36.0	33.8[b]
Total	100.0	100.0	100.0	100.0	100.0	100.0
World Total ('000 tons)	113	168	181	161	167	186

Sources: International Tin Council, *Statistical Year Book, 1959.*
International Tin Council, *Statistical Bulletin,* various issues to January 1972.

[a]China accounted for about 15 per cent out of the 40.4 per cent.
[b]Thailand accounted for 11.7 per cent out of the 33.8 per cent.

Table 2.12

West Malaysia – Year-to-Year Fluctuations of Export Unit Values, Export Proceeds and Export Volume of Rubber, 1948–70[a]

Year	Export Unit Value ($ per ton)	Export Proceeds ($ million)	Export Volume (tons)	Year-to-Year Fluctuations[b] (plus or minus in percentages)		
				Export Unit Value	Export Proceeds	Export Volume
1947	825	586.8	711,591			
1948	929	680.0	731,878	11.3	13.7	2.8
1949	830	589.6	709,980	10.7	12.0	3.0
1950	2,320	1,810.0	780,039	64.2	66.9	9.0
1951	3,535	2,444.6	691,640	34.4	26.0	11.3
1952	2,114	1,287.1	608,847	40.2	47.4	12.0
1953	1,503	896.0	596,244	28.9	30.4	2.1
1954	1,476	903.2	612,059	1.8	0.8	2.6
1955	2,402	1,584.0	659,461	38.6	43.0	7.2
1956	2,122	1,377.9	649,428	11.7	13.0	1.5
1957	1,991	1,304.1	655,139	6.2	5.4	0.9
1958	1,735	1,197.2	690,172	12.9	8.2	5.1
1959	2,199	1,721.8	782,875	21.1	30.5	11.8
1960	2,385	1,829.1	766,797	7.8	5.9	2.1
1961	1,824	1,442.4	790,562	23.5	21.1	3.0
1962	1,729	1,367.6	791,016	5.2	5.2	0.1
1963	1,633	1,373.9	841,483	5.6	0.5	6.0
1964	1,537	1,303.4	847,804	5.9	5.1	0.7
1965	1,543	1,368.3	886,915	0.4	4.7	4.4
1966	1,485	1,395.8	939,778	3.8	2.0	5.6
1967	1,248	1,216.0	974,632	16.0	12.9	3.6
1968	1,177	1,300.9	1,104,780	5.7	6.5	11.8
1969	1,534	1,940.1	1,264,857	23.3	33.0	12.7
1970	1,308	1,663.3	1,271,281	14.7	14.3	0.5

Sources: Computed from Department of Statistics, *Monthly Statistical Bulletin*, August 1955, February 1965, December 1969 and July 1972.

[a]Based on gross exports data.

[b]A year-to-year fluctuation is the change from the quantity for one year to that for the subsequent year, expressed (for statistical reasons) as a percentage of the higher of the two.

year-to-year fluctuation was measured as a change from the quantity concerned for one year to that for the subsequent year expressed as a percentage of the higher of the two quantities.[20] These individual year-to-year fluctuations were then averaged out over longer periods, mainly of five years, to show the development of any tendencies from one period to another as well as to provide a more

[20]This technique of measuring fluctuation is accepted internationally and was used, for example, in Table 65 of United Nations, *Economic Survey of Asia and the Far East, 1957.*

Table 2.13

West Malaysia – Year-to-Year Fluctuations of Export Unit Values, Export Proceeds and Export Volume of Tin, 1948–70[a]

Year	Export Unit Value ($ per ton)	Export Proceeds ($ million)	Export Volume (tons)	Year-to-Year Fluctuations[b] (plus or minus in percentages)		
				Export Unit Value	Export Proceeds	Export Volume
1947	3,900	113.8	29,177			
1948	5,204	220.7	42,407	25.1	48.4	31.2
1949	5,020	291.5	58,066	3.5	24.3	27.0
1950	5,865	441.9	75,344	14.4	34.0	22.9
1951	8,680	563.8	64,956	32.4	21.6	13.8
1952	7,960	510.8	64,169	8.3	9.4	1.2
1953	6,153	382.8	62,213	22.7	25.1	3.0
1954	5,869	403.9	68,818	4.6	5.2	9.6
1955	6,034	433.7	71,872	2.7	6.9	4.3
1956	6,462	471.7	72,996	6.6	8.1	1.5
1957	6,298	439.4	69,772	2.5	6.8	4.4
1958	6,121	274.5	44,843	2.8	37.5	35.7
1959	6,665	298.9	44,847	8.1	8.2	*
1960	6,621	507.3	76,616	0.7	41.1	41.5
1961	7,411	553.1	74,631	10.7	8.3	2.6
1962	7,574	620.3	81,896	2.1	10.8	8.9
1963	7,549	642.4	85,102	0.3	3.4	3.8
1964	9,378	728.3	77,663	19.5	11.8	8.7
1965	11,799	871.8	73,889	20.5	16.5	4.9
1966	10,943	792.0	72,372	7.3	9.2	2.1
1967	10,151	755.4	74,415	7.2	4.6	2.7
1968	9,562	829.7	86,773	5.8	9.0	14.2
1969	10,397	939.7	90,383	8.0	11.7	4.0
1970	11,135	1,013.3	90,999	6.6	7.3	*

Sources: Computed from Department of Statistics, *Monthly Statistical Bulletin*, August 1955, February 1965, December 1969 and July 1972.

[a]Based on gross exports data.
[b]A year-to-year fluctuation is the change from the quantity for one year to that for the subsequent year expressed (for statistical reasons) as a percentage of the higher of the two.
*Negligible.

digestible form of Table 2.12. These are presented for rubber and tin in Table 2.14.

Over the period 1948–70, fluctuations in the export unit values of rubber had been considerable from one year to another, these ranging from slightly less than 0.5 per cent (in 1965) to over 64 per cent (in 1950). Another notable feature is that the year-to-year fluctuations in export unit values had been very substantial up to about the first half of the 1950's. Table 2.14 shows that the

average year-to-year fluctuations was nearly 29 per cent in 1948–55, 12 per cent in 1956–60, 8 per cent in 1961–65 and 13 per cent in 1966–70. In terms of the largest year-to-year fluctuations during each of these five-year periods, almost the same pattern was evident, these being 64 per cent in 1948–50, 40 per cent in 1951–55, 21 per cent in 1956–60, and 23 per cent in 1961–70. Being a strategic as well as an industrial raw material, the violent price fluctuations (reflected in the export unit values) in the early fifties were in the first instance due to the substantial purchases for strategic stockpiling by the United States following the Korean War in 1951. This was reinforced by strong industrial demand together with commercial stockpiling in the expectation of an extension of the Korean conflict. On the other hand, the elasticity of supply of natural rubber has always been low.[21] This was reflected in the relatively much smaller fluctuations in the volume of exports during the period reviewed. With a short-run supply schedule which was virtually price inelastic, a given change in the demand for rubber and hence its price, would result in a less than proportionate change in the supply available. Therefore, against such a supply situation, a shift in demand would bring about a larger change in price. Other subsequent large changes in the export unit values were mainly due to fluctuating industrial demand[22] (which reached their peaks in 1955–56, 1959–60 and 1969) coupled with the low elasticity of supply.

The relatively lower year-to-year fluctuations in export volume (as can be seen in Table 2.12) have been referred to. These varied from 0.1 per cent (in 1962) to nearly 13 per cent (in 1969) during 1948–70. Unlike export unit values, there appeared no tendency for any consistent increase or decrease in the year-to-year fluctuations.

Year-to-year fluctuations in export proceeds from rubber during 1948–70 were even wider in range than those observed for export unit values. These varied from 0.5 per cent (in 1963) to 67 per cent (in 1950). Where the fluctuations in export proceeds were larger than the fluctuations in both export unit values and volume, it was because fluctuations in both export unit values and volume had moved in the same direction. If, on the other hand, the changes in the export unit values and volume each moved in a different direction, their effects on export proceeds would be mitigated and consequently a smaller

[21] Some preliminary estimates of elasticities have been made using annual and monthly data covering 1948–51. The conclusion was that price did not appear to have influenced output significantly for estates. For smallholdings, while price responsiveness was less rigid than for estates, it was still inelastic. See Clifton R. Wharton, Jr., "Rubber Supply Conditions: Some Policy Implications", *op. cit.*, especially pp. 142–47.

[22] For a more detailed discussion of the relationship between the demand for rubber and developments in the industrial economies, see United Nations, *Economic Survey of Asia and the Far East, 1957,* Chap. 5, especially the section on rubber; also Lim Chong Yah, *op. cit.*, pp. 14–18. A comprehensive study of the causes of fluctuations in rubber prices for the period 1954–56 was prepared for the Government by an official of the Ministry of Commerce and Industry. See P.F. Adams, *Memorandum on the Fluctuations in the Price of Natural Rubber,* Kuala Lumpur, Government Printer, 1958.

Table 2.14

West Malaysia – Average Year-to-Year Fluctuations of Export Unit Values, Export Proceeds and Export Volume of Rubber[a] and Tin[a]

	Average Year-to-Year Fluctuations[b] (Plus or Minus in Percentages) in Export			Largest Year-toYear Fluctuations[b] (Plus or Minus in Percentages) in Export		
	Unit Value	Proceeds	Volume	Unit Value	Proceeds	Volume
Rubber						
1948–50	28.7	30.9	4.9	64.2	66.9	9.0
1951–55	28.8	29.5	7.0	40.2	47.4	12.0
1956–60	11.9	12.6	4.3	21.1	30.5	11.8
1961–65	8.1	7.3	2.8	23.5	21.1	6.0
1966–70	12.7	13.7	6.8	23.3	33.0	12.7
Tin						
1948–50	14.3	35.6	27.0	25.1	48.4	31.2
1951–55	14.1	13.6	6.4	32.4	25.1	13.8
1956–60	4.2	20.3	16.6	8.2	41.1	41.5
1961–65	10.6	10.2	5.8	20.5	16.5	8.9
1966–70	7.0	8.4	4.6	8.0	11.7	14.2

Sources: Tables 2.12 and 2.13

[a] Based on gross exports data.

[b] A year-to-year fluctuation is the change from the quantity for one year to that for the subsequent year, expressed (for statistical reasons) as a percentage of the higher of the two.

fluctuation in export proceeds would result compared with the magnitude of the larger of the fluctuation in either export unit value or volume. An analysis of Table 2.12 shows that for the 23 years of data observed, export proceeds fluctuated more than both export unit values and volume for 11 years[23] and less for 12 years. It is also interesting to note that of the 12 years when fluctuations in export proceeds were smaller than the fluctuations of either export unit values or volume, 10 of these years were after 1956, and for nine out of these 10 years, the smaller fluctuations in export proceeds were the outcome of falling export unit values as against rising export volume. Over the period, the magnitude of fluctuations in export proceeds had decreased, this becoming particularly marked in the 1960's. From Table 2.14, it can be seen that export proceeds fluctuated on the average by 31 per cent a year in 1948–50, 30 per cent in 1951–55, 12½ per cent in 1956–60, 7½ per cent in 1961–65 and 13½ per cent in 1966–70.

A number of points emerged from this brief review of rubber as an export commodity. These are:

i) The export prices were subject to large movements but the magnitudes of these movements were considerably reduced in the 1960's. They were nevertheless still significant.
ii) The export prices showed a tendency to decline over the years.
iii) The trend in export volume was generally rising, particularly from the mid-1950's.
iv) In about half of the number of observations, fluctuations in export prices were reinforced by fluctuations in export volume to give rise to even larger fluctuations in export proceeds. These occurred mainly before 1956. After 1956, the effects of lower rubber prices (as reflected in the export unit values) reduced the fluctuations in export proceeds.

However, the year-to-year fluctuations in prices and export proceeds of rubber were not considered by the authorities to be a very serious problem. It can be said that the country had largely learned to live with the problem most of the time. It was only when these characteristic fluctuations had been accentuated by abnormal factors that the authorities felt bound to act to reduce their effects. One notable example in the post-war period was during the Korean War Boom of the early 1950's. During this period, the Government found it necessary to introduce various measures to dampen the inflationary tendencies transmitted by the excessively high commodity prices. These measures included the introduction of an anti-inflationary element in the export duties on rubber, an increase in company tax, an intensive savings campaign to mop up liquid funds, a relaxation of import controls over imports from the hard currency areas, and the imposition of price controls and rationing on certain essential commodities.[24]

[23] However, in one of these years, 1962, the year-to-year fluctuation in export unit value was the same as that for export proceeds.

[24] Paul Meek, "Malaya: A Study of Governmental Response to the Korean War Boom" in

Other than for this occasion, there were no other notable stabilization measures. This is not surprising. Two recent empirical studies observed that export-based economies were generally able to absorb much of the impact of export instability through their system of built-in stabilizers.[25] Such stabilizers include the practice of expatriate-owned firms repatriating their profits, the responsiveness of savings to income changes and the generally high marginal propensity to import. The first study, which examined the experience of a number of export-based countries, noted that available evidence at most indicated "rather weak and uncertain relationships between export instability and fluctuations in domestic income, investment and prices"[26] and that for most underdeveloped countries, export fluctuations had not proved to be an important obstacle to growth.[27] The second study which covered post-war West Malaysia, similarly concluded: "Contrary to a priori expectations, the primary and secondary effects of export instability on the domestic economy [of West Malaysia] have been rather weak and unimpressive. . . . . The insensitivity of the domestic economy to export swings can be largely elucidated by the built-in stabilizers, peculiar to the West Malaysian economy, which give rise to an extremely feeble export multiplier mechanism."[28]

Nevertheless, fluctuations in export commodity prices and earnings have always been a source of irritation and anxiety to the Government. Thus, the Government has maintained a definite and long-standing preference for more stable export prices and proceeds. The advantages[29] it sees in such are that the greater price and earnings stability will:

(i) allow for more *orderly* economic development;
(ii) reduce fluctuations in Government revenue and foreign exchange earnings; and
(iii) reduce the risk of externally-transmitted inflationary or deflationary tendencies, especially via excessively large changes in commodity prices.[30]

T.H. Silcock (ed.), *Readings in Malayan Economics*, Singapore, Eastern Universities Press Ltd., 1961, pp. 209–10.

[25] The two studies: (i) Alasdair I. Macbean, *Export Instability and Economic Development*, London, Allen & Unwin, 1966; and (ii) K.A. Mohamed Ariff, *Export Trade and the West Malaysian Economy – An Enquiry into the Economic Implications of Export Instability*, Kuala Lumpur, Faculty of Economics and Administration, University of Malaya, 1972.

[26] Alasdair I. Macbean, *op. cit.*, Chap. 3.

[27] *Ibid.*, Chap. 4.

[28] K.A. Mohamed Ariff, *op. cit.*, p. 178.

[29] Wharton has listed out a number of other arguments for more stable prices and proceeds: i) Adverse effects of export instability on expectations of investors; ii) Random and sometimes unjust changes caused by instability on the distribution of income and wealth; iii) Risks and uncertainty in the conduct of economic activities would be reduced; iv) Undesirable influence of export instability on asset structure and resource allocation. See Clifton R. Wharton Jr., "Rubber Supply Conditions: Some Policy Implications", *op. cit.*, pp. 155–56.

[30] Some studies on this aspect have been made. See i) United Nations (ECAFE), *Economic*

The attainment of greater stability hinges very largely on concerted action and co-operation by all interested parties. But efforts at the international level except for tin, have so far been limited. The recent attempt by the International Monetary Fund and the World Bank in 1969 to assist member countries to achieve more stable commodity prices and export earnings proved disappointing to Malaysia and the other primary-producing countries.[31] Thus, Malaysia and these countries have continued to urge for more effective measures.

It would appear that the real aversion to export instability does not lie so much with fluctuations within an upward trend but rather in the sharp price declines that rubber prices have been prone to experience from time to time. In particular, three periods of severe price declines in the pre-war years provided considerable grounds for this. Their severity prompted the establishment of control schemes[32] to regulate prices in the industry. These control schemes were:

i) A voluntary restriction programme covering the London-based estates and established in 1917 to counter the price depression arising from accumulation of rubber stocks in Malaya and the shipping shortage caused by World War I;

ii) The Stevenson Restriction Scheme[33] introduced after the drastic price drop of the 1920–21 recession. The scheme operated in 1922–28 and involved the compulsory restriction of output. It was successful in boosting prices;

iii) The International Rubber Regulation Agreement[34] introduced as a result of the severe price decline following the Great Depression of 1929. The Agreement, which covered countries producing 98 per cent of the world's output of rubber, commenced in 1934 and continued until 1943. It involved the limitation of exports, prohibition of new planting and restriction on replanting of rubber.

It is important to note that the price declines (some very severe) which led to

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Survey of Asia and the Far East, 1953, Chap. 14, which outlined the inflationary and deflationary situation in West Malaysia in 1950–53; ii) A more comprehensive study of the 1950–51 Boom may be found in Paul Meek, "Malaya: A Study of Governmental Response to the Korean War Boom", *op. cit.*, iii) For a good study of a pre-war deflation, see P.T. Bauer, "Some Aspects of the Malayan Rubber Slump, 1929–33" in *Economica*, Vol. XI, (November 1944).

[31] For a summary and appraisal of the various measures made available by the International Monetary Fund and the World Bank, see Lee Hock Lock, "Stabilization of the Prices of Primary Commodities – An Appraisal of the Measures Taken by the International Monetary Fund and the World Bank" in *Ekonomi*, Vol. 11 No. 1, 1970.

[32] For a good summary of these Schemes, see T.R. McHale, *op. cit.*, Chap. 4; also, Lim Chong Yah, *op. cit.*, Chap. 3, especially pp. 74–83.

[33] Possibly the most comprehensive study of the Scheme is Charles R. Whittlesey, *Government Control of Crude Rubber*, Princeton, N.J., Princeton University Press, 1931.

[34] There is considerable literature on this Scheme but the major works are Andrew McFadyean (ed.), *The History of Rubber Regulation, 1934–43*, London, Allen & Unwin, 1944 and P.T. Bauer, *The Rubber Industry*, London, Longman Green, 1948.

these control measures were of a different character compared with the price declines that confronted the natural rubber industry after World War II. These pre-war price declines arose basically from a temporary fall in demand. The curtailment of supply (a common feature of all the control measures) was sufficient to provide for some recovery in prices. In turn, this was then assisted at a later stage by the recovery of demand arising from factors such as the upswing of the industrial economies.

On the other hand, the post-war years saw the emergence of a new kind of price problem for the rubber industry. While prices continued to bear the characteristic fluctuations, there was underlying these a trend of long-term decline which became discernible in the 1960's. Some indication of this was revealed in the analyses of Table 2.12 and Table 2.14. But Table 2.15 shows this even more clearly.

Taking the base year at 1956, Table 2.15 shows that 1960 roughly marks the position of the rubber industry into two fairly distinct phases. From 1947 to 1959, rubber prices (whether just R.S.S. No. 1 or the export unit value) exhibited a wide range of fluctuations. These varied from a period of low prices in the late 1940's to a peak in 1951. Over this 13-year period, the general pattern was one of price swings with high prices around 1951, 1955 and 1959 and price slumps in 1947–49, 1953–54 and 1958. In the case of export volume, there were also variations, for example, from a low of about 92 per cent (of the 1956 export volume) in 1953 to a high of about 121 per cent in 1959. The export proceeds of rubber which reflected the net effect of the price pattern and changes in export volume, in turn also showed swings, but the pattern of these swings followed closely that of prices. In short, the problem of the 1950's was one of having to accommodate these swings in prices.

From 1960 onwards, a new price pattern emerged. Prices took on a generally consistent downward trend. On the other hand, the trend in export quantum was consistently upwards. In 1960, the export quantum was 18 per cent higher than in 1956, in 1965 it was 37 per cent higher and in 1970, it was 96 per cent higher. These increases in export volume were, however, inadequate to offset fully the declining price trend. Thus, in 6 of the 10 years beginning with 1960, export proceeds were even below those of 1956.

A number of factors ruled out the use of output regulation as a basic solution to this persistently declining price trend of the 1960's. Firstly, the emergence of synthetic substitutes for natural rubber, particularly in the 1950's and 1960's, reduced the possibility and feasibility of the type of concerted action undertaken by the natural rubber producing countries in the pre-war years to restrict supply. Any concerted action to arrest the long-term price decline would, in the first place, require the participation of synthetic producers in order to be effective. But this comprehensive form of co-operation was hardly conceivable in view of the divergence of interest between the producers of natural rubber and the producers of synthetic rubber. The second factor was the large strategic stockpile of natural rubber maintained by the United States Government. The stockpile could easily be used to frustrate any attempt at restriction of rubber supply. The influence of the stockpile on the rubber market had already been

Table 2.15

West Malaysia – Indices of Prices, Export Volume and Export Proceeds of Rubber
(1956 = 100)

Year	R.S.S. No. 1 Singapore Price	Export Unit Value	Export Volume	Export Proceeds
1947	38.6	38.9	109.6	42.6
1948	43.6	43.8	112.7	49.4
1949	39.5	39.1	109.3	42.8
1950	111.8	109.3	120.1	131.4
1951	175.3	166.6	106.5	177.4
1952	99.3	99.6	93.8	93.4
1953	69.7	70.8	91.8	65.0
1954	69.6	69.6	94.3	65.6
1955	118.0	113.2	101.5	115.0
1956	100.0	100.0	100.0	100.0
1957	91.7	93.8	100.9	94.6
1958	82.9	81.8	106.3	86.9
1959	105.0	103.6	120.6	125.0
1960	111.7	112.4	118.1	132.8
1961	86.3	86.0	121.7	104.7
1962	80.8	81.5	121.8	99.3
1963	74.8	77.0	129.6	99.7
1964	70.4	72.4	130.6	94.6
1965	72.4	72.7	136.6	99.3
1966	67.6	70.0	144.7	101.3
1967	55.9	58.8	150.1	88.3
1968	54.9	55.5	170.1	94.4
1969	72.2	72.3	194.8	140.8
1970	58.3	61.6	195.8	120.7

Sources: Computed from Department of Statistics, *Monthly Statistical Bulletin*, August 1955, February 1965, December 1969 and July 1972.

felt on a number of occasions. For example, prices were significantly affected on the three occasions the United States Government altered its stockpile objective for natural rubber.[35] Indeed, even a mere threat of disposal from the stockpile had been sufficient to affect prices. The third factor was the widely different levels of replanting of old rubber trees with high-yielding clones among the major natural rubber producing countries. Malaysia, having undertaken extensive replanting since the early 1950's, considered that any international restriction agreement would not be to its advantage. With such an agreement it would then not be able to sell all the rubber it was capable of producing. This would also mean the need to divert financing from development and other projects to the financing of a national stockpile of the excess rubber in the short run and reduction of its rubber capacity with the attendant disruption of factors in the long run. On the other hand, Malaysia considered that the rapid increase in its annual production could provide some offset to the price decline.

The most logical approach to meeting the post-war problem of long-term decline was thus to improve the productivity of the industry and, at the same time, to diversify the economy. There appeared no other credible alternative.

No discussion of the problems of the natural rubber industry is complete without an examination of the developments that undermined the position of rubber as the mainstay of the Malaysian economy. The starting point of these developments was the swift occupation of South-East Asia by Japan in 1941, which cut off about 90 per cent of the world's supply of natural rubber to the industrial countries in the West. This event provided a compelling reason for the western countries to turn to synthetic rubber for a substitute.[36] In the war years, the United States made spectacular efforts to develop its synthetic plants and by 1945, was producing synthetic rubber at 820,352 tons,[37] or slightly more than 800 times its output in 1941. The other important achievement in the synthetic rubber industry was the technical adequacy of its product as a substitute for natural rubber in many uses. Low cost in production was, however, not attained initially and after the war when natural rubber became available again, there was heavy demand for the latter, an outcome of its technical and cost advantages for large users.[38] To ensure that the synthetic production capacity built up during the war would be utilized, the United States Congress

[35] The changes in the stockpile objective are as follows: In 1959, the stockpile objective for natural rubber was 750,000 tons and it was decided to dispose of the surplus stock of 670,000 tons over a 9-year period. This objective was further reduced in March 1964 to 130,000 tons but this was subsequently raised to 385,000 tons in March 1969. See Bank Negara Malaysia, *Annual Report and Statement of Accounts*, 1965 and 1969, p. 24 and p. 76 respectively.

[36] For a very readable summary of developments in the synthetic rubber industry in the United States in 1940–54, see Charles Gamba, *Synthetic Rubber and Malaya*, Singapore, Eastern Universities Press Ltd., 1959, especially pp. 5–28.

[37] Lim Chong Yah, *op. cit.*, p. 85.

[38] T.R. McHale, *op. cit.*, p. 22.

passed the Rubber Act of 1948. This legislation required users of rubber to include a certain percentage of synthetic in their manufactures so as to maintain a demand for synthetic at a specified level. This legislation, however, proved unnecessary with the further development of synthetic rubber.

Up to this time, the most important category of synthetic rubber was the budadiene-styrene co-polymers or SBR.[39] As a general-purpose rubber, it became a substitute for natural rubber in some uses. In these years, however, SBR did not seem capable of giving natural rubber much competition. There were, of course, synthetics with special technical properties such as CR, IIR and NBR and these had shown their ability to hold and expand their relatively small markets. Three major developments in the 1950's added considerable technical and cost advantages to synthetic rubber:[40]

a) The discovery of techniques of low-temperature polymerization process for SBR which enabled its properties to be improved without an increase in costs. As a result, the improved SBR had abrasion and ageing resistance which were superior to natural rubber, thereby enabling the former to encroach on the market for automobile tyre treads.

b) The development of 'oil extension', i.e., the technique of incorporating low-cost mineral oil additives in substantial quantities with SBR. This reduced the cost of production as well as improved the properties of SBR in many directions.

c) The discovery that micro-particle size carbon black within rubber compounds would dissipate heat more effectively. This was especially relevant for SBR since internal build-up of heat was a major problem for tyres made with it.

These three developments assured the survival and growth of the synthetic rubber industry in the 1950's. Nevertheless, natural rubber was still important for a number of uses, it having certain technical properties which could not yet be imitated by synthetic rubber. Around the late 1950's, therefore, it was considered that roughly, natural rubber had technical superiority over 30 per cent of total consumption, synthetic rubber over the other 30 per cent and, in the remaining 40 per cent, the use of either synthetic or natural rubber would depend upon price.[41]

In the 1960's, the area of usage of natural rubber suffered even more severe encroachment by synthetic rubber. As a result of substantial research, the synthetic rubber industry was able in 1960–61 to commence production in commercial quantities of materials having almost identical properties of natural rubber. These materials were the polybutadiene and the polyisoprene, collectively known as the stereo-regular rubbers.[42]

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[39] Also referred to as S-type or GRS.

[40] For a more comprehensive discussion, see T.R. McHale, *op. cit.*, pp. 22–26.

[41] See T.R. McHale, *op. cit.*, p. 23 and Lim Chong Yah, *op. cit.*, p. 89.

[42] Considerable literature exists on the development of the stereo-regular rubbers but for a

Polybutadiene was developed to have the properties of natural rubber as well as several superior characteristics of its own and it was expected to replace natural rubber in the manufacture of truck tyres and some other uses. The material had many advantages for use in tyre manufacturing, among them were good abrasion resistance, good ageing properties, high resilience and good groove-crack resistance. In time, however, it was found that tyres using polybutadiene possessed a number of defects such as the liability to chunking and chipping, low-skid resistance and poor-tear resistance. Furthermore, there were difficulties involved in factory processing. Following further research, it was found that these defects could be largely overcome and on top of that, new improvements in the final product achieved, if polybutadiene was blended with natural rubber or SBR. Thus, for truck tyre treads, a blend of polybutadiene with natural rubber produced several improvements in the tyres over those using solely natural rubber or a blend of natural rubber and SBR. There were: better ageing properties, better low-temperature performance, better groove-cracking resistance and better wear. For passenger car tyres, SBR had hitherto been normally used but when polybutadiene was blended with SBR, important improvements were again observed such as better groove-cracking resistance, greater resilience, better low-temperature behaviour and improved abrasion resistance. Furthermore, a blending of polybutadiene with natural rubber or SBR was found to have reduced the processing problems met with when polybutadiene was used alone. There were still some disadvantages in polybutadiene such as poor wet adhesion quality when used in passenger car tyres and chipping when used in tyre treads. But on the whole, these developments in the tyre industry have grave implications for the natural rubber industry. For it has been estimated that about half of the world consumption of rubber went into tyre manufacturing.[43] So far, about 90 per cent of polybutadiene consumed in the non-communist countries occurred in the tyre industry.[44]

The other major stereo-regular rubber was polyisoprene. As the closest of synthetic products to a chemical duplication of natural rubber, polyisoprene competed directly with natural rubber. But in its present form, it was not identical to natural rubber in all respects and therefore had not yet been able to enter into certain areas of usage of natural rubber. However, polyisoprene had certain clear advantages over natural rubber such as purity of content, ability to meet quality specifications and, assurance of availability. Moreover, the polyisoprene of the low CIS type had very good flow properties which made it suitable for injection moulding and it had extended rubber usage in this area. Like polybutadiene, polyisoprene had also penetrated the tyre industry. It was blended with natural

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good summary see "Polybutadiene and Polyisoprene – A Market Review" in The Economist Intelligence Unit, *Rubber Trends*, No. 39, September 1968 and "Natural Rubber and Its Problems" in The Economist Intelligence Unit, *Rubber Trends*, No. 52, December 1971.

[43] See "Natural Rubber and Its Problems", *op. cit.*

[44] See "Polybutadiene and Polyisoprene – A Market Review", *op. cit.*

rubber and SBR for tyre carcasses of passenger cars and trucks and with natural rubber and polybutadiene for truck tyre treads. However, there was one important obstacle that had restrained polyisoprene from enroaching further on the natural rubber market namely, the high cost of producing its basic input, the isoprene monomer. As a result, the price of polyisoprene had to be fixed at a level higher than the price of natural rubber. For example, in 1970–71, the quoted price of polyisoprene was about 50 U.S. cents per kilogramme[45] compared with an average price of natural rubber of about 38 U.S. cents per kilogramme. Thus, in 1970, the capacity of polyisoprene was still small, being nearly 4 per cent of total capacity for synthetic rubber in the non-communist countries and 8 per cent of such in the communist countries.[46] But continuing research was being undertaken to produce a cheaper isoprene monomer. In 1971, Japan was reported to have developed a new process which could reduce the cost of producing isoprene monomer so that a price of about 35 U.S. cents per kilogramme of polyisoprene would obtain.[47] The potential of this and other cost reducing advances in isoprene production means an impending threat of further depression of the price of natural rubber in the near future.

Apart from these technical achievements of the synthetic rubber industry, the natural rubber industry had to contend with another element in the competition with synthetic rubber. This relates to the nature of ownership of the synthetic rubber capacity. Towards the end of the 1960's, about 50 per cent of the synthetic rubber capacity in the United States were owned by the tyre industry while a similar pattern of substantial ownership by tyre companies of synthetic rubber capacity also prevailed elsewhere.[48] This factor was found to have exercised an important influence in reinforcing the consumption of synthetic rubber. It also imposed a further limitation to the efforts at reducing costs of production by the natural rubber-producing countries such as Malaysia. For this pattern of integration in the tyre industry obviously had the effect of reducing the importance of price competition between the synthetic rubber produced by its subsidiaries and natural rubber.

Finally, synthetic rubber possessed another important advantage. This was the remarkable price stability of the product compared with natural rubber. Price data for synthetic rubber were scarce but a reasonably long series was available for SBR (which still constituted the bulk of and the cheapest source of synthetic rubber). Table 2.16 made a comparison of the price pattern of SBR with that of natural rubber (R.S.S. No. 1, New York prices). It can be seen that for the 1950's, the average annual year-to-year fluctuations in the prices of R.S.S. No. 1 was 20 per cent while that of SBR was only 3 per cent. In the 1960's, the average year-to-year fluctuations for R.S.S. No. 1 was considerably lower, being

[45] See "Natural Rubber and Its Problems", *op. cit.*

[46] *Ibid.*

[47] *Ibid.*

[48] *Ibid.*

Table 2.16

Prices of Natural and Synthetic Rubbers and Year-to-Year Fluctuations

Year	Natural Rubber		Synthetic Rubber	
	Price of R.S.S. No. 1 (c.i.f. New York, US cents/lb.)	Year-to-Year Fluctuations[a] (plus or minus in %)	Price of SBR (New York, US cents/lb.)	Year-to-Year Fluctuations[a] (plus or minus %)
1947	21.0		18.5	
1948	22.0	4.5	18.5	0
1949	17.6	20.0	18.5	0
1950	41.0	57.1	19.0	2.6
1951	59.1	30.6	25.0	24.0
1952	38.6	34.7	23.5	6.0
1953	24.2	37.3	23.0	2.1
1954	23.6	2.5	23.0	0
1955	39.1	39.6	23.0	0
1956	34.1	12.8	23.0	0
1957	31.2	8.5	23.0	0
1958	28.1	9.9	23.0	0
1959	36.6	23.2	23.0	0
1960	38.2	4.2	23.0	0
1961	29.5	22.8	23.0	0
1962	28.6	3.1	23.0	0
1963	26.3	8.0	23.0	0
1964	25.2	4.2	23.0	0
1965	25.7	1.9	23.0	0
1966	23.6	8.2	n.a.	n.a.
1967	19.9	15.7	n.a.	n.a.
1968	19.8	0.5	n.a.	n.a.
1969	26.2	24.4	n.a.	n.a.
1970	21.0	19.8	n.a.	n.a.
Annual Average				
1947–50	25.4	27.2	18.6	0.7
1951–60	35.3	20.3	23.3	3.2
1961–70	24.6	10.9	23.0[b]	0[b]

Sources: Computed from Department of Statistics, *Rubber Statistics Handbook*, various years to 1970.

[a]A year-to-year fluctuation is the change from the quantity for one year to that for the subsequent year expressed (for statistical reasons) as a percentage of the higher of the two.
[b]For the period 1961–65.
n.a. = not available.

at 11 per cent, but against this, there was zero fluctuation in the price of SBR. It has been pointed out that the large fluctuations in the price of natural rubber "had caused heavy losses to American manufacturers and they welcomed a product with a stable price".[49] Synthetic rubber had price stability which must have enhanced its attractiveness as an industrial input.

[49]See Lennox Mills, *Malaya: A Political and Economic Appraisal*, Minneapolis-London, University of Minnesota – .Oxford University Press, 1958, p. 165.

This brief excursion into the developments of synthetic rubber shows in no uncertain terms the emergence of a very serious threat to the natural rubber industry in the last two decades. It also points to a period of more trying competition ahead for natural rubber.

A question that arises is how have all these developments in the synthetic rubber industry affected rubber usage. Trends in world consumption of natural and synthetic rubber over the post-war years indicated very clearly the significant advance of synthetic rubber. This can be seen in Table 2.17. The following are notable features:

i) Total world consumption of rubber of all types had a rising trend over the period 1947–70. Furthermore, consumption growth accelerated with time. In 1948–50, the rate of growth of consumption was nearly 3 per cent a year but this rose to 5 per cent a year in 1951–60 and to 6.5 per cent a year in 1961–70. Thus, the average annual consumption rose from nearly 2 million tons in 1947–50 to nearly 3 million tons in 1951–60 and to 5.7 million tons in 1961–70.

ii) Over the period 1947–70, *both* the consumption of natural and synthetic rubber followed an upward trend.

iii) However, growth of consumption of natural rubber was much slower than for synthetic rubber.

   a) For natural rubber, consumption growth in 1948–50 averaged 4.5 per cent a year, a reflection of the still predominant position natural rubber enjoyed in rubber usage. On the other hand, there was even some decline in the consumption of synthetic rubber during this period. In 1951–60, growth of consumption of natural rubber fell to only 3 per cent a year and, in the next decade, increased a little to 3.5 per cent a year.

   b) For synthetic rubber, the expansion in consumption was very substantial in 1951–70. In 1951–60, consumption grew at a little over 8 per cent a year and, in 1961–70, the growth rate was slightly over 9 per cent.

iv) These disparate growth rates between natural and synthetic rubber eventually resulted in a reversal of the predominance of natural rubber in total rubber usage to synthetic rubber. In 1948–50, the share of natural rubber in total rubber consumption was around 75 per cent and that of synthetic rubber, the remaining 25 per cent. This large share of natural rubber commenced to shrink from then onwards and from 1963, natural rubber lost to synthetic rubber its position as the principal material in rubber usage. By 1969–70, synthetic rubber accounted for about 60 per cent of total rubber consumption and natural rubber only 40 per cent.

All these discussions then outline the magnitude of the problem confronting Malaysia's major productive sector, the rubber industry. Clearly, the problem is an abiding one which will have to be faced. The earlier analysis of the objectives of the various development plans indicated an awareness of this problem and hence the importance placed on economic diversification for a long time. Policies and measures taken to diversify the economy must be examined.

Table 2.17

Estimated World Consumption of Natural and Synthetic Rubbers

Year	Estimated World Consumption of Rubber						Share of World Rubber Consumption	
	Natural Rubber		Synthetic Rubber		Total Rubber Consumption		Natural Rubber	Synthetic Rubber
	Consumption ('000 tons)	Annual Growth (%)	Consumption ('000 tons)	Annual Growth (%)	Amount ('000 tons)	Annual Growth (%)	(As % of Total Rubber Consumption)	
1947	1,110		625		1,735		64.0	36.0
1948	1,423	28.2	480	-23.2	1,903	9.7	74.8	25.2
1949	1,438	1.1	450	- 6.2	1,888	- 0.8	76.2	23.8
1950	1,723	19.8	580	28.9	2,303	22.0	74.8	25.2
1951	1,515	-12.1	813	40.2	2,328	1.1	65.1	34.9
1952	1,470	- 3.0	885	8.9	2,355	1.2	62.4	37.6
1953	1,655	12.6	873	1.4	2,528	7.4	65.5	34.5
1954	1,780	7.6	740	15.2	2,520	-0.3	70.6	29.4
1955	1,883	5.8	1,063	43.7	2,946	16.9	63.9	36.1
1956	1,910	1.4	1,133	6.6	3,043	3.3	62.8	37.2
1957	1,895	- 0.8	1,260	11.2	3,155	3.7	60.1	39.9
1958	1,988	4.9	1,248	- 0.9	3,236	2.6	61.4	38.6
1959	2,120	6.6	1,573	26.0	3,693	14.1	57.4	42.6
1960	2,035	- 4.0	1,780	13.2	3,815	3.3	53.3	46.7
1961	2,128	4.6	1,920	7.9	4,048	6.1	52.6	47.4
1962	2,220	4.3	2,175	13.3	4,395	8.6	50.5	49.5
1963	2,233	0.6	2,360	8.5	4,593	4.5	48.6	51.4
1964	2,260	1.2	2,743	16.2	5,003	8.9	45.2	54.8
1965	2,380	5.3	2,988	8.9	5,368	7.3	44.3	55.7
1966	2,578	8.3	3,360	12.4	5,938	10.6	43.4	56.6
1967	2,490	- 3.4	3,448	2.6	5,938	-	41.9	58.1
1968	2,848	14.4	3,983	15.5	6,831	15.0	41.7	58.3
1969	2,983	4.7	4,455	11.8	7,438	8.9	40.1	59.9
1970	2,993	0.3	4,625	3.8	7,618	2.4	39.3	60.7
Annual Average								
1947–50	1,423	4.5	534	- 1.8	1,957	2.9	72.7	27.3
1951–60	1,825	3.0	1,137	8.2	2,962	5.1	61.6	38.4
1961–70	2,511	3.5	3,206	9.2	5,717	6.5	43.9	56.1

Sources: Computed from Department of Statistics, *Rubber Statistics Handbook*, various years to 1970.

Malaysia provides an interesting case study of a country where attention and resources have to be divided between improving the competitiveness of an industry subject to the onslaught of a synthetic substitute and the need to reduce the dependence of the economy on this industry. It is not the simple case involving a mere diversion of resources from one sector to another.

2.2 *The Tin Industry*

Just as for the rubber industry, Table 2.13 analyses the amplitude of fluctuations in respect of prices (export unit values), export proceeds and export volume of tin, as measured by year-to-year fluctuations. Five-year averages of these year-to-year fluctuations are given in Table 2.14.

Over the period 1948–70, the year-to-year fluctuations in the export unit values of tin varied from 0.3 per cent (1963) to about 32 per cent (1951). The fluctuations were particularly large in the early 1950's and also in the middle of the 1960's. From Table 2.14, it can be seen that the average year-to-year fluctuations in export unit values was slightly over 14 per cent a year in 1948–50 and 1951–55 while it was about 10½ per cent a year in 1961–65. The average was lower for the periods 1956–60 and 1966–70, these being a little over 4 per cent and 7 per cent respectively.

For export volume, substantial fluctuations occurred during 1948–50, this being due to the recovery in production following the dislocation of the tin mines during the war years[50] coupled with the stimulus provided by the onset of the Korean War. During this period, the average year -to-year fluctuations was 27 per cent a year. Another period of large fluctuations in export volume was 1956–60, the average year-to-year fluctuations being about 16½ per cent. The basic factor behind this was the imposition of export quotas during 1958–59 under the 1956 International Tin Agreement. In the other periods, 1951–55 and 1961–65, the average year-to-year fluctuations in export volume was around 6 per cent a year; for 1966–70, the average fell to about 4½ per cent a year.

There was a greater tendency, particularly up to the end of the 1950's, for fluctuations in both the export unit values and export volume to move in the same direction. It can be seen from Table 2.13 that of the 23 years observed, the export proceeds fluctuated more than both the export unit values and export volume for 14 years and less than either of these for nine years. Of these 14 years, 10 were within the period 1948–60. Table 2.14 shows that for 1948–50, the average year-to-year fluctuations in export proceeds was about 35½ per cent a year, for 1951–55, it was about 13½ per cent a year and for 1956–60, it was slightly over 20 per cent. In the 1960's, the average year-to-year fluctuations in export proceeds was considerably lower, these being a little over 10 per cent a year for 1961–65 and nearly 8½ per cent a year for 1966–70.

While these fluctuations were by no means small, there appeared little that

[50] Destruction of considerable tin mining equipment occurred as a result of the 'scorched earth' policy pursued by the retreating Allied Forces and the years of neglect and flooding of mines during the war. See Lim Chong Yah, *op. cit.*, p. 61.

could further be done at the international level to reduce their amplitude. In the post-war period, the market for tin has been regulated by international agreements since 1956. Indeed, the need to stabiliże the prices of tin by international action was recognized and acted upon even before the Second World War. A total of three international tin agreements operated during 1931–42, these being attempts by the major producing countries (Malaya, Bolivia, the Netherlands East Indies, Nigeria and later Siam) to balance production with demand by means of export controls and buffer stocks.[51] In the post-war years, there were four international tin agreements, the first commencing in 1956, the second in 1961, the third in 1966 and the fourth in 1971.[52] Participants in the agreements included virtually all the producing countries, Bolivia, Congo, Indonesia, Malaysia, Nigeria and Thailand while the membership of consumer countries represented about 50 per cent of world tin consumption.

As in the pre-war agreements, export quotas and the operation of a buffer stock were the instruments for maintaining the price of tin within the agreed price range in the post-war agreements. The International Tin Council (comprising representatives of the producing and consuming countries participating in the tin agreement) determined the export control period and the global export quota based on the expected supply and demand situation for the period. The function of the export quota was to ensure that the price of tin would not fall below the floor price of the agreed price range. The mechanism was operative in 1958–60, resulting in output decline of about 30 per cent and again from September 1968 to the end of 1969.[53] The allocation of export quotas was made on the basis of percentage shares which, in effect, reflected (with some minor modifications) the shares of exports of the member-producing countries in the previous three years.

The operations of the buffer stock followed the agreed rules of intervention. The modus operandi until the fourth tin agreement was as follows. When the London price of tin was within the lower sector of the agreed price range, the Buffer Stock Manager was given the discretion to purchase tin from the market. But if the price touched the floor of the price range, he was required to buy until the exhaustion of the buffer stock's resources. On the other hand, the Buffer Stock Manager had the discretion to sell tin from the buffer stock when the London tin price was in the upper sector of the price range but he must sell when the price was at or above the ceiling of the price range. The maximum range of fluctuations possible under the various agreements, therefore, depended upon the difference between the floor and ceiling prices under each agreement.

From Table 2.18, it can be seen that while prices could be permitted to

[51] For a detailed discussion of these agreements, see Yip Yat Hoong, *op. cit.*, Chaps. 8–11.

[52] A detailed discussion of the agreements of 1956 and 1961 may be found in Yip Yat Hoong, *op. cit.* Chap. 14. Also, Siew Nim Chee, "The International Tin Agreement, 1953" in *The Malayan Economic Review*, Vol. II No. 1 (April 1957).

[53] Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1969*, pp. 78–80.

Table 2.18

Price Range and Intervention Rules of the Tin Buffer Stock

Agreement	Price Range and Intervention Rules (US cents/lb)					% Difference Between Mandatory Buying and Selling Prices+
	Buying		No Action	Selling		
	Mandatory	Optional		Optional	Mandatory	
1956						
July 1956	Under 80	80–90	90–110	100–110	Over 110	27.3
March 1957	Under 91	91–98	98–104	104–110	Over 110	17.3
1961						
January 1962	Under 99	99–106	106–114	114–121	Over 121	18.2
December 1963	Under 106	106–113	113–119	119–125	Over 125	15.2
November 1964	Under 125	125–131	131–144	144–150	Over 150	16.7
1966						
July 1966	Under 137	137–150	150–163	163–175	Over 175	21.7
November 1968*						
October 1970	Under 131	131–142	142–148	148–160	Over 160	18.1

Sources: Computed from i) World Bank, "The International Market for Tin" (24 March 1969), Table V, ii) *The Straits Times*,23 October 1970.

*The sterling prices were raised with the devaluation of the pound (November 1967) to maintain prices in US dollars.

+Based on mandatory selling price.

fluctuate to a maximum of 15 to 27 per cent of the mandatory selling price[54] in each of the agreed price ranges under the three agreements, the actual price (export unit value) fluctuations from one year to another after 1956 were relatively much smaller. In the 15 years observed since then, the year-to-year fluctuations were much less than 15 per cent for 13 of these years; for the other two years, they were about 20 per cent a year (Table 2.13).

By and large, the three international tin agreements enabled tin prices to be maintained within each of the agreed ranges. There were only two occasions when this was not possible, namely, in September 1958, when with the exhaustion of funds, the Buffer Stock Manager had to allow prices to drop below the floor price, therefore necessitating the introduction of export quotas and in 1964–66, when prices remained above the ceiling price owing to shortage of tin and the depletion of tin holdings of the buffer stock.

In the period under review, 1947–70, the problems facing the tin industry were emerging but their impact, however, was not immediate. They were no doubt obscured by a number of factors.

At the level of international demand for tin, a conspicuous feature is the very small growth in consumption. This can be seen in Table 2.19. The average annual consumption of tin in the 1950's was well below the average for 1926–30. It

Table 2.19

World Consumption of Tin

Annual Average	*Total World Consumption of Tin** ('000 long tons)
1926–30	153.2
1931–35	120.4
1951–55	132.1
1956–60	147.0
1961–65	163.9
1966–70	174.8
1966	171.1
1967	169.8
1968	174.2
1969	182.0
1970	177.1
	Rate of Growth (%)
1926–30 and 1951–55	-13.8
1926–30 and 1956–60	- 4.0
1926–30 and 1961–65	7.0
1926–30 and 1966–70	14.1
1951–55 and 1966–70	34.1

Sources: International Tin Council, *Statistical Bulletin*, various issues to January 1973.

*Excludes consumption in most communist countries.

[54] In using the mandatory selling price (which is the higher of the two prices in the range) as the basis for calculating the maximum fluctuation in a price range, this will enable comparison with the year-to-year fluctuations of export unit values as presented by Table 2.13.

was only in the 1960's that average annual consumption had risen above the average for the period. Between 1926–30 and 1966–70, a period covering 44 years, the average annual consumption increased by only 14 per cent. Comparison within the post-war period showed a larger increase in consumption but growth was still unimpressive. Over the two decades (between 1951–55 and 1966–70), the average annual consumption rose by 34 per cent but this represented only about 1.7 per cent of increase a year.

An important factor for this sluggish growth in consumption of tin could be attributed to developments within the tin-plate industry. The tin-plate industry was the largest single consumer of tin, accounting for nearly half of total tin consumption in the early 1950's and 42 per cent in 1968–70. It can be seen from Table 2.20 that while the output of tin plate continued to grow, the

Table 2.20
Inputs of Tin in the Tin-Plate Industry

Annual Average	Output of Tin Plate ('000 long tons)	Amount of Tin Used By Tin-Plate Industry ('000 long tons)	Amount of Tin Per Long Ton of Tin Plate (lbs.)
World			
1954–56	6,830	62.8	20.6
1964–66	10,067	72.6	16.2
1968–70	11,750	75.5	14.4
United States			
1954–56	4,616	33.8	16.4
1964–66	5,048	29.9	13.3
1968–70	5,132	26.9	11.7
Others			
1954–56	2,226	29.0	29.2
1964–66	5,019	42.7	19.1
1968–70	6,618	48.5	16.4

Sources: International Tin Council, *Statistical Bulletin*, various issues to January 1973.

amount of tin used per unit of tin plate produced had fallen markedly. For example, it required an average of 21 lbs. of tin to produce a long ton of tin plate in 1954–56 but by 1968–70, only about 14½ lbs. of tin were required to produce the same amount of tin plate. In the United States (which accounted for about half of the world's tin plate output), the economy achieved in tin usage was due to the change-over from the older method of 'hot dipping' to electrolytic plating. The latter method used only from ¼–¾lb. of tin per 100

lbs. of tin plate compared with about 1½ lbs. of tin per 100 lbs. required under the 'hot dipping' method. In 1966, it was estimated that the electrolytic process had accounted for about 80 per cent of the tin plate output in the United States. Apart from further switch to this process, there were other possibilities in economizing the use of tin such as through a reduction in the average thickness of tin coating and the production of tin-free steel to substitute for the use of tin plate in many areas; progress in the latter was quite marked lately.

Furthermore, the use of tin in other areas was subject to substitution in recent years by aluminium, plastics and other materials as well as replacement of some tinned end products. This had the effect of holding back the expansion of tin consumption in uses outside the tin-plate industry. Table 2.21 shows that over 35 years (between 1935–37 and 1968–70), the consumption of tin in uses outside the tin-plate industry increased by only 11 per cent. Over the 20 years

Table 2.21

World Consumption of Tin by Industry

('000 long tons)

Annual Average	Tin Consumption in Tin-Plate Industry	Other Uses of Tin	Total Tin Consumption
1935–37	58.8	92.2	151.0
1951–53	55.7	79.3	135.0
1964–66	72.6	89.7	162.3
1968–70	75.5	102.3	177.8
Percentage Change			
1968–70 over 1935–37	+28.4	+10.9	+17.7
1968–70 over 1951–53	+35.5	+29.0	+31.7

Sources: International Tin Council, *Statistical Bulletin*, various issues to January 1973.

in the post-war period (between 1951–53 and 1968–70), the increase in average annual consumption of tin in these uses was, however, larger at 29 per cent but in terms of growth per year, it averaged out to only less than 1½ per cent.

The significance of these developments for the future of the tin mining industry receded into the background because of a number of factors, the more important of which were the continuous stockpiling of tin by the United States from 1948 to 1956 and a shortage of supply of tin relative to demand from 1960 to 1966. Both these factors resulted in price bouyancy. Indeed, as can be seen from Table 2.18, the floor prices of the agreed price ranges for the operation of the international tin buffer stock had a very clear rising trend since the commencement of the first post-war international tin agreement.

Table 2.22 shows that the prices of tin increased generally since 1956 and that by 1970, were 72 per cent higher. Likewise, the export proceeds of tin also rose but much more sharply so that by 1970, these were 115 per cent higher.

Table 2.22

West Malaysia – Indices of Prices, Export Volume and Export Proceeds of Tin (1956 = 100)

Year	Average Price of Tin Metal (Straits Ex-works)	Export Unit Value	Export Volume	Export Proceeds
1947	n.a.	60.4	40.0	24.1
1948	n.a.	80.5	58.1	46.8
1949	n.a.	77.7	79.6	61.8
1950	94.4	90.8	103.2	93.7
1951	136.1	134.3	89.0	119.5
1952	124.0	123.2	87.9	108.3
1953	94.0	95.2	85.2	81.2
1954	91.4	90.8	94.3	85.6
1955	94.4	93.4	98.5	91.9
1956	100.0	100.0	100.0	100.0
1957	96.4	97.5	95.6	93.2
1958	95.4	94.7	61.4	58.2
1959	102.6	103.1	61.4	63.4
1960	101.7	102.5	105.0	107.6
1961	115.5	114.7	102.2	117.3
1962	115.7	117.2	112.2	131.5
1963	117.7	116.8	116.6	136.2
1964	160.0	145.1	106.4	154.4
1965	181.6	182.6	101.2	184.8
1966	166.7	169.3	99.2	167.9
1967	155.1	157.1	101.9	160.1
1968	146.1	148.0	118.9	175.9
1969	161.8	160.9	123.8	199.2
1970	171.8	172.3	124.7	214.8

Sources: Computed from Department of Statistics, *Monthly Statistical Bulletin*, August 1955, February 1965, December 1969 and July 1972.

n.a. = not available.

As early as 1954, the World Bank mission to Malaya had warned of the prospect of a slow growth in world tin consumption in the light of the progress being made in electrolytic tinning and the increasing use of substitutes in other areas.[55] With time, these developments became clearer. The Second Five-Year Plan, 1961–65, acknowledged that the slow growth in world requirements for tin would be one of the factors that would limit increase in output and employment in the tin sector to modest proportions during the next several decades.[56] In assessing the prospects of the Malaysian economy, another World Bank mission observed in 1963 that "competitions from substitutes" would be one of the factors that would keep tin export earnings from further growth.[57] But owing to the generally short supply situation in the post-war years and coupled with the rather diffused and slow impact of economies in tin consumption and growth of substitutes, prices remained bouyant. To the Malaysian authorities, therefore, a more immediate problem facing the industry was the gradual decline in the known tin deposits. This was considered an important constraint on the support the tin sector could give to further economic growth under both the Second Five-Year Plan, 1961–65 and the First Malaysia Plan, 1966–70.[58]

The problem of reserves exhaustion was certainly not one that emerged in recent years. Prospecting for new tin-bearing areas had been limited in the past decades due to many factors, these being the controls under the pre-war international tin agreements, the Japanese occupation of the country, the post-war rehabilitation of the tin mines, and the state of Emergency following the communist insurrection in 1948 which made prospecting difficult for a large part of the period to 1960.[59] Added to these, there were further difficulties inherent in the tin mining process. Land permitted for mining would become virtually useless for agricultural purposes after the tin ore had been extracted unless it had been properly rehabilitated. State Governments, therefore, had not been too eager to issue permits for prospecting and, mining leases had been granted "only after long delay".[60] The important role of the State Governments had always been recognized. In the debate on the Supply (1959) Bill, the then Minister of Commerce and Industry, Mr. Tan Siew Sin, pointed out that "progress again is only possible with the full and active co-operation of the State Governments in whose hands lie the powers for providing the facilities which

[55] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, pp. 251–52.

[56] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 18.

[57] International Bank for Reconstruction and Development, *Report on the Economic Aspects of Malaysia, op. cit.*, p. 6.

[58] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 18 and Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 7.

[59] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, p. 69.

[60] *Ibid.*

will make such (new) prospecting possible."[61] To an important extent, this problem was aggravated by a lack of knowledge of land capability for mining, agricultural and forestry purposes. A systematic land capability survey was undertaken only in 1965[62] and was completed in 1969. This survey should help resolve the conflicting interests between agriculture and mining.

Quite unlike the rubber industry, the tin industry had not exerted much pressure on the economy to hasten its programme of economic diversification. Growth in consumption demand for tin had been sluggish in the long run but the general shortage of supply in the 1960's obscured the situation and accorded the industry with the attributes of prosperity in the form of rising prices and export receipts. Furthermore, Malaysia's industry so far appeared capable of expanding to meet the bouyant situation. For the present and, immediate future at least, the prospect of reserves exhaustion thus appeared quite distant and unreal. The realities of the situation, however, remained unaltered namely, that another major industry was slowly but surely being undermined.

[61] See Federation of Malaya, *Legislative Council Debates – Official Report of the Second Legislative Council (December 1958–June 1959)*, Kuala Lumpur, Government Printer, 1959, Col. 5796.

[62] Malaysia, *Mid-Term Review of the First Malaysia Plan, 1966–1970*, Kuala Lumpur, Government Printer, 1969, p. 39.

CHAPTER III

EVIDENCE OF ECONOMIC DIVERSIFICATION IN PRODUCTION AND EMPLOYMENT

1. INTRODUCTION

The position of economic diversification in Malaysian economic development has been reviewed in Chapter I. It was found that the objective of attaining a more diversified economy was an important aspect of public policy, although the emphasis and urgency with which it had been pursued varied over time. By 1970, there were indications that this objective had met with some measure of success.

This chapter will present some quantitative evidence that the West Malaysian economy had become more diversified from the standpoint of output and employment. The next chapter will deal with evidence of diversification in the foreign trade sector. It is in these areas that the impact of diversification policies and measures as well as the response of the private sector to these policies largely found expression. However, diversification policies and measures also affected other areas of the economy. But no attempt was made to examine these for reasons that statistical data were not available (as in respect of allocation of capital by sectors) or that some of these changes should be more appropriately discussed elsewhere since they were part of the policy instruments themselves (e.g. the change in the character and composition of Government expenditures).

Based on his observations of the historical experience of the major industrial economies, Simon Kuznets pointed out that as these countries advanced from a largely agricultural base, certain common tendencies could be observed in the behaviour of the sectoral origin of their aggregate output and the sectoral allocation of their labour force.[1] On the output side, there would be: "a decline in the share of agriculture and related industries; rises in the shares of manufacturing and public utilities; shifts within manufacturing from less to more durable products, and to a limited extent from consumer to producer goods; increases in the shares of some service groups (personal, professional, govern-

[1] For a major work on this see Simon Kuznets, *Modern Economic Growth — Rate, Structure and Spread*, New Haven, Conn., Yale University Press, 1966.

ment) and declines in the shares of others (domestic service)."[2] With respect to the sectoral allocation of the labour force, there would be: "a somewhat greater decline in the share of agriculture and related industries, a somewhat lesser rise in the share of industry, and a distinct rise in the share of services (whose share in output showed rather mixed trends)."[3] This chapter will attempt to examine the existence of these trends in the output and labour force of West Malaysia.

2. THE STRUCTURE OF PRODUCTION

2.1 *Overall View and International Comparison*

The most appropriate data for viewing changes in the sectoral origin of aggregate output were those on the gross domestic product prepared by the Department of Statistics. The series provided a fairly detailed breakdown of total product into its industrial origin. The series for 1960 onwards was available only in current prices. On the other hand, for 1955–59, the series was compiled only in 1960 prices. Thus, this exercise had to be limited to an examination of the changes within 1960–70, rather than for a longer period. However, this limitation may even be considered desirable from another standpoint. The figures for 1955–59 lacked the refinement in estimation, the close scrutiny, extensive revisions, and the generally greater reliability that the 1960–70 series possessed.

Due to the nature of the available data for 1960–70, the following analysis had to be carried out in terms of current prices. Ideally, shifts in the sectoral origin of total product would be better viewed in terms of constant prices. However, the lack of this ideal situation should not affect the broad conclusions of this exercise. In his observation of countries which had the relevant statistics in both current and constant prices, Kuznets found that the trends shown by these two sets of data had not differed significantly.[4] Thus, he had without hesitation made use of data in current prices for his analysis of sectoral shifts in production.[5]

One other point should perhaps also be made about the series used. The statistics for 1969 and 1970 were the latest revised estimates available but these were not as firm as those for 1960–68.[6] In this exercise, these figures have been used with this in mind and wherever necessary, comparisons have also been made involving the shorter period of 1960–68.

Table 3.1 shows the gross domestic product of West Malaysia at factor cost valued in current prices for 1960–70. The gross domestic product grew at an

[2] *Ibid.*, p. 492.

[3] *Ibid.*

[4] The countries observed were Denmark, the United States, Canada and Australia. See *ibid.*, pp. 95–96.

[5] *Ibid.*, Chap 3.

[6] The statistics for 1960–68 were obtained from Department of Statistics, *National Accounts of West Malaysia, 1960–1968*, Kuala Lumpur, August 1972. Estimates for 1969 and 1970 were also available from this document but these were not used here as the revised estimates had been made available to the writer by the Department of Statistics.

Table 3.1

West Malaysia – Gross Domestic Product at Factor Cost and Annual Growth Rate

Year	Gross Domestic Product at Factor Cost	
	Amount ($ million)	Annual Growth Rate (%)
1960	4,962	
1961	5,027	1.3
1962	5,302	5.5
1963	5,643	6.4
1964	6,066	7.5
1965	6,574	8.4
1966	6,879	4.6
1967	7,066	2.7
1968	7,270	2.9
1969*	8,077	11.1
1970*	8,466	4.8
1960–65		5.8
1965–70		5.2
1960–70		5.5

Sources: 1. Department of Statistics, unpublished data.
2. Department of Statistics, *National Accounts of West Malaysia, 1960–1968.*

*Revised Estimate.

average annual rate of 5½ per cent during the period. Growth was, however, somewhat faster during the first half of the period compared with the latter half. In terms of annual growth rates, the magnitudes differed quite substantially – these fell within a range of nearly 1½ per cent to slightly over 11 per cent a year.

In the following discussions, the economy was divided into three major sectors, agriculture and forestry, industry and, services. Within the agriculture and forestry sector were sub-sectors as agriculture, related activities such as livestock rearing, fishing and, forestry and logging. In view of the importance of the rubber industry in West Malaysia, it was presented as a sub-sector separate from other agricultural activities. The industry sector comprised manufacturing; construction; electricity, water and sanitary services; transportation, storage and communications; and, mining and quarrying. The services sector covered wholesale and retail trade; banking, insurance and real estate; ownership of dwellings; public administration and defence; and, other services.

Table 3.2 shows the percentage share of the gross domestic product originating from these three sectors for West Malaysia and selected groups of

Table 3.2

Distribution of the Gross Domestic Product by Major Sectors – West Malaysia and Groups of Other Countries

	Percentage Share of the Gross Domestic Product		
	Agriculture and Forestry	Industry	Services
West Malaysia			
1960–61 (average)	39.3	24.2	36.5
1967–68 (average)	29.8	30.3	39.9
1969–70 (average)	30.6	31.1	38.3
16 Developing Countries with per capita GDP of US$100–199 in 1958	32.7	28.6	38.7
16 Industrialized Countries with per capita GDP of US$1,000 and above in 1958	14.0	50.9	35.0

Sources: Compiled from

1. Department of Statistics, *National Accounts of West Malaysia, 1960–1968.*
2. Department of Statistics, unpublished data.
3. Simon Kuznets, *Modern Economic Growth – Rate, Structure and Spread, op. cit,* Table 8.1, p. 402.

developed and developing countries. Two significant points emerged from this table.

Firstly, the pattern of sectoral shares of the gross domestic product in West Malaysia was very similar to that of the group of developing countries observed. The agriculture and forestry sector accounted for a substantial portion of the gross domestic product while the industry sector accounted for the smallest share of total product compared with the other two sectors. In contrast, for the group of industrialized countries, the industry sector was responsible for a major portion of the gross domestic product. The share of the services sector in total product for both the industrialized and developing countries did not differ markedly one from another.

The second feature to emerge from Table 3.2 is that in 1960–70, the West Malaysian economy experienced some structural change, although the sectoral distribution of the gross domestic product still reflected the pattern typical of the developing countries. The share of the agriculture and forestry sector in the gross domestic product fell by over 8½ percentage points between 1960/61 and

1969/70. On the other hand, the share of the industry sector in total product increased by about 7 percentage points during the same period. The services sector also increased its share of the total product but by a much smaller amount.

The question that arises is how significant are these shifts in sectoral shares compared with the experience of the modern industrial economies. Kuznets had undertaken a comprehensive study of the changing shares of the three major sectors of the economy for a number of developed countries during the period of their modernization.[7] Table 3.3 selects some countries for comparison with West Malaysia at those periods of their development when their patterns of sectoral shares in total product were broadly similar to that of West Malaysia. The limitations in this comparison must be borne in mind at the outset. Firstly, the quality of the data used was not uniform, this being the case not only from one country to another but also between data of one period and another in any one country. Furthermore, not all the country data were available on a uniform basis. The data for some countries were on a 'national' basis while those of a number of other countries including West Malaysia were on a 'domestic' basis.[8] All these were in gross terms but the data of one country were even net of depreciation. Kuznets had, however, ignored these differences in his study. More problematic is that such a comparison would have to cover different periods in time, different stages of technological development and, widely varying economic and social milieu. All these have a bearing on the pace at which the structural change had developed. Another limitation is that the periods available for comparison varied in length from country to country. It is conceivable for shifts in sectoral shares to be faster in some decades than in others. This limitation is particularly relevant when attempts are made to average out the rate of structural change per year. Provided that these limitations are recognized, some interesting observations may be made.

Among the developed countries, those with a sectoral distribution of total product broadly similar to that of West Malaysia in 1960 were: England and Wales in 1688, France in 1872/82, Sweden in 1861/65 and Italy in 1896/1900. Canada and Japan in 1870 and 1878/82 respectively were less so but nevertheless could also be broadly compared.

In 1960–70, the share of agriculture and forestry in the total product of West Malaysia declined by 11 percentage points or an average decrease of 1.1 percentage points a year. The rate of decline of product accounted for by the agriculture and forestry sector was considerably slower for the developed countries listed above. Among the countries having some of the faster rates of decline were Japan and Canada, both of which started with a much larger share of total product accounted for by the agriculture and forestry sector compared with West Malaysia. In Japan, the share of the agriculture and forestry sector in total product fell by 37 percentage points over 49 years or an average decline of

[7] Simon Kuznets, *op. cit.*, Chap. 3.

[8] For details, see the footnotes to Table 3.3.

Table 3.3

Rates of Change of Share of Agriculture and Forestry Sector, Industry Sector and Services Sector in Total Product (at Current Prices) of Selected Countries

Country/Period		Share in Total Product at Beginning of Period (%)			Change in Share in Total Product at End of Period (in percentage points)			Average Annual Change in Share in Total Product during Period (in percentage points)		
		Agriculture and Forestry	Industry	Services	Agriculture and Forestry	Industry	Services	Agriculture and Forestry	Industry	Services
I. *Developed Countries*										
Great Britain:	82 years (1688–1770)[a, b]	40	21[c]	39[c]	+ 5	+ 3[c]	− 8[c]	+0.06	+0.04	−0.10
	40 years (1801–1841)[b]	32	23[c]	45[c]	−10	+11[c]	− 1[c]	−0.25	+0.28	−0.03
	60 years (1841–1901)[b]	22	34[c]	44[c]	−16	+ 6[c]	+10[c]	−0.27	+0.10	+0.17
France:	57 years (1825/35–1872/82)[b]	50	25[c]	25[c]	− 8	+ 5[c]	+ 3[c]	−0.14	+0.09	+0.05
	38 years (1872/82–1908/10)[b]	42	30[c]	28[c]	− 7	+ 7[c]	−	−0.18	+0.18	−
Sweden:	44 years (1861/65–1901/05)[d]	39	17	44	− 4	+21	−17	−0.09	+0.48	−0.39
	52 years (1901/05–1949/53)[d]	35	38	27	−25	+17	+ 8	−0.48	+0.33	+0.15
Italy:	59 years (1896/1900–1951/55)[b]	47	22	31	−22	+26	− 4	−0.37	+0.44	−0.07
Canada:	50 years (1870–1920)[e]	50	26[c]	24[c]	−24	+ 9[c]	+15[c]	−0.48	+0.18	+0.30
Japan:	49 years (1878/82–1923/27)[f]	63	16	21	−37	+22	+15	−0.76	+0.45	+0.31
II. *Developing Countries*										
West Malaysia:	8 years (1960–1968)[d]	41	23	36	−11	+ 7	+ 4	−1.38	+0.88	+0.50
	10 years (1960–1970)[d]	41	23	36	−11	+ 8	+ 3	−1.10	+0.80	+0.30
Singapore:	10 years (1959–1969)[d]	6	13[c]	81	− 3	+11[c]	− 8[c]	−0.30	+1.10	−0.80
Ceylon:	10 years (1950–1960)[d]	50	19	31	− 5	+ 2	+ 3	−0.50	+0.20	+0.30
Philippines	16 years (1950–1966)[d]	40	15	45	− 8	+ 9	− 1	−0.50	†0.56	−0.06
Taiwan:[d]	14 years (1952–1966)[d]	36	17	47	−10	+ 8	+ 2	−0.71	+0.57	+0.14
India:	16 years (1950–1966)[d]	51	16	33	− 2	+ 4	− 2	−0.13	+0.26	−0.13

Sources: 1. Same as for Table 3.1
2. Department of Statistics, unpublished data.
3. Simon Kuznets, *Modern Economic Growth-Rate, Structure and Spread, op. cit.*, Table 3.1, pp. 88–89.
4. H.D. Fong, *Strategy of Economic Development in Singapore,* Singapore, Institute of Business Studies, Nanyang University, Occasional Papers 1, 1970, Table 2, p. 8.
5. Donald R. Snodgrass, *Ceylon: An Export Economy in Transition, op. cit.*, Table 6.3, p. 128.
6. I. Little, T. Scitovsky and M. Scott, *Industry and Trade in Some Developing Countries,* London, Oxford University Press, 1970, Table 2.10, p. 70.

[a] England and Wales only
[b] National income
[c] Transport and communications are included under 'services'.
[d] Gross domestic product
[e] Gross national product
[f] Net domestic product.

0.8 of one percentage point a year. For Canada, the decline was 24 percentage points over 50 years or an average fall of 0.5 of one percentage point a year. At the other extreme were Sweden and France. In Sweden, the share of agriculture and forestry in total product fell by only 4 percentage points over 44 years or an average of 0.1 of one percentage point a year from 1861/65. In France, it took 57 years from 1825/35 for a fall of 8 percentage points or an average decline of also about 0.1 of one percentage point a year. On the other hand, the share of agriculture and forestry in total product for Great Britain increased by 5 percentage points during 1688–1770 but from 1801, it had been declining consistently.

On the growth of the share of the industry sector, West Malaysia achieved a rise of 8 percentage points between 1960 and 1970 or an average of 0.8 of one percentage point a year. In comparison, the industrial countries had a slower increase in the share of total product of their industry sectors. Among those with the fastest rate of increase were three countries which experienced an increase of nearly 0.5 of one percentage point a year each. These were Sweden (an increase of 21 percentage points over 44 years from 1861/65), Japan (an increase of 22 percentage points over 49 years from 1878/82) and Italy (an increase of 26 percentage points over 59 years from 1896/1900). Those with the smallest rate of increase were Great Britain (an increase of only 3 percentage points over 82 years from 1688) and France (an increase of 5 percentage points over 57 years from 1825/35). The faster progress made by West Malaysia appears to have been greatly assisted by two factors. Firstly, its development was occurring in a period when there was a conscious attempt to expand the manufacturing sector coupled with the ease in drawing on the vast store of accumulated knowledge not possible in earlier times. Secondly, the period examined was one when considerable pressure was also being exerted in West Malaysia to expand and improve the other sub-sectors of the industry sector such as electricity and water, transportation and communications, and construction.

For the services sector of West Malaysia, the gain in its share of total product was only 3 percentage points during 1960–70, or an average increase of 0.3 of one percentage point a year. The same rate of annual increase was also achieved by Japan (an increase of 15 percentage points over 49 years from 1878/82) and Canada (an increase of 15 percentage points over 50 years from 1870). However, in some other countries, Great Britain (1688–1770), Italy (1896/1900 – 1951/55) and Sweden (1861/65 – 1901/05), the share of the services sector in total product declined.

The comparisons above showed that the shifts in the shares of the agriculture and forestry sector and the industry sector for West Malaysia were markedly faster than those for the developed countries. The next question to consider is whether late development and greater government intervention in the economy as are typical for most developing countries, including West Malaysia, could have facilitated the process, as suggested earlier. An examination of the changes in the shares of the three major sectors of the economy of the developing countries would provide some indication. For this purpose, five developing countries in

Asia were selected and analysed in Table 3.3. They were Singapore, Ceylon, the Philippines, Taiwan and India. Except for Singapore, all these countries have large agriculture sectors similar to that of West Malaysia, at the beginning of the period examined.

Like West Malaysia, the share of the agriculture and forestry sector in total product in each of these five countries declined. The annual rate of decline varied from 0.7 of one percentage point a year (in Taiwan) to only 0.1 of one percentage point a year (in India). These rates of decline were fairly similar in magnitude to those seen earlier for the developed countries. But what is of special significance is that the shifts in the developing countries occurred within a relatively shorter time (10–16 years) than in the developed countries.

All the five developing countries also experienced a substantial increase in the share of the industry sector in total product. Two of these had rates of increase fairly similar to that of West Malaysia which was 0.8 of one percentage point a year. These countries were the Philippines (an increase of 0.6 of one percentage point a year) and Taiwan (also an increase of 0.6 of one percentage point a year). But Singapore had an even faster rate of increase than that of West Malaysia, namely, an increase of 1.1 percentage points a year. For Ceylon and India, the rates of increase were the smallest. Except for these two countries, the share of the industry sector in the total product of the other three developing countries increased at a faster rate than for the developed countries during the periods observed earlier. But even the relatively slower growth of the industry sector in Ceylon and India could be considered fast when compared to the shifts achieved by some of the developed countries such as Great Britain (1688–1770), France (1825/35–1872/82 and 1872/82–1908/10) and Canada (1870–1920). Also of importance is that the shift towards a larger industry sector took a shorter time in the developing countries when compared with the experience of the developed countries during the periods observed. Two points are suggested by these indications. Firstly, countries that develop late can experience a faster shift in product towards the industry sector. Secondly, such a shift as has occurred in the West Malaysian economy during 1960–70 can be considered to be outstanding in the light of experiences elsewhere.

Manufacturing is an important component of the industry sector. In West Malaysia, of the increase of 8 percentage points in the share of the industry sector in total product during 1960–70, 6 percentage points could be attributed to the manufacturing sub-sector. A closer examination of this sub-sector is therefore appropriate here. As no breakdown of the industry sector was available for the developed countries examined earlier, this exercise had to be confined to West Malaysia and five developing countries.[9] Table 3.4 shows the shares of manufacturing in the gross domestic product of these countries as well as the rates of change. In all the six countries, the share of manufacturing in total product increased during the periods observed. However, the rates of increase

[9] India was left out because it had no breakdown of the industry sector into manufacturing and other activities for the initial year. Pakistan was put in its place.

Table 3.4

Rates of Change of the Share of Manufacturing in Gross Domestic Product of Selected Developing Countries

Country	Share of Manufacturing in Gross Domestic Product (%)		Increase in Percentage Points during Period	Average Increase Per Year in Percentage Points
	At Initial Year	At Terminal Year		
West Malaysia				
1960–68	9	13	4	0.5
1960–70	9	15	6	0.6
Ceylon (1950–60)	4	5	1	0.1
Pakistan (1950–66)	8	10	2	0.1
Philippines (1950–66)	10	18	8	0.5
Singapore 1959–69)	9	17	8	0.8
Taiwan (1952–66)	11	19	8	0.6

Sources: Computed from:

1. Department of Statistics, *National Accounts of West Malaysia; 1960–1968.*
2. Department of Statistics, unpublished data.
3. H.D. Fong, *Strategy of Economic Development in Singapore, op. cit.*, Table 2, p. 8.
4. Donald R. Snodgrass, *Ceylon: An Export Economy in Transition, op. cit.*, Table 6.3, p. 128.
5. I. Little, T. Scitovsky and M. Scott, *Industry and Trade in Some Developing Countries, op. cit.*, Table 2.10, p. 70.

varied quite widely. As to be expected, the share of manufacturing in total product increased most for Singapore, this being 0.8 of one percentage point a year during 1959–69. The increase for West Malaysia was 0.6 of one percentage point a year in 1960–70. Taiwan had the same rate of increase during 1952–66 while the Philippines had a slightly smaller increase during 1950–66. On the other hand, the increase for both Ceylon and Pakistan was only 0.1 of one percentage point a year. The expansion of the Malaysian manufacturing sector can thus be considered to be among the fastest within this fairly representative group of industrializing countries in Asia.

Coming back to the services sector, it can be seen from Table 3.3 that the changes were small compared with those for the other sectors, except for Singapore. In Singapore's case, the share of the services sector in total product declined by 0.8 of one percentage point a year during 1959–69, an important reason being the declining contribution of its entrepot trade to total product. Two other countries, the Philippines (1950–66) and India (1950–66),also experienced a decline in the share of the services sector in total product but this was relatively very small. On the other hand, the share of the services sector in total product rose by 0.3 of one percentage point a year for West Malaysia (1960–70), the same as for Ceylon (1950–60). The rate of shift in Taiwan (1952–66) was only about half as fast.

Certain broad conclusions may now be drawn from the comparison with the experience of the selected developed and developing countries. Firstly, although the structure of the West Malaysian economy by 1970 was still basically similar to those of developing countries (Tables 3.2 and 3.3), the past decade had seen shifts in the shares of particularly its agriculture and forestry sector and industry sector in total product which could be considered fast by standards achieved by the developed countries at stages of their development when their economic structures were broadly similar to that of West Malaysia. A similar pattern was also observed when a comparison was made with some of the developing countries in Asia. Secondly, the expansion of the manufacturing sector in West Malaysia played a principal role in expanding the share of product of the industry sector. The rate of increase in the share of manufacturing in total product in West Malaysia was among the largest compared with the group of industrializing countries in Asia during appropriate stages of their industrialization. Finally, on the whole, there were clear indications that the West Malaysian economy was fast developing a more diversified economic structure. The agriculture sector was becoming proportionately smaller in relation to total output while growth was substantially concentrated in the industry sector and, to a smaller extent, in the services sector.

Table 3.5 shows the gross domestic product by major sectors in alternate years as well as their growth rates. There was a consistent growth in the value added of the industry sector and the services sector over the years of the review period. On the other hand, the value added originating from the agriculture and forestry sector fluctuated, no doubt the result of changes in commodity prices, especially of rubber. In terms of growth rates, those of the industry sector and the services sector were well above the growth rate for the economy as a whole.

Table 3.5

West Malaysia – Gross Domestic Product at Factor Cost
by Major Sectors and their Growth Rates

	Agriculture and Forestry	Industry	Services	Total
Value Added at Factor Cost ($ million)				
1960	2,013	1,162	1,787	4,962
1962	1,935	1,382	1,985	5,302
1964	1,998	1,754	2,314	6,066
1966	2,183	2,032	2,664	6,879
1968	2,157	2,186	2,927	7,270
1970*	2,517	2,673	3,276	8,466
Percentage Share of the Gross Domestic Product at Factor Cost				
1960	40.6	23.4	36.0	100
1962	36.5	26.1	37.4	100
1964	32.9	28.9	38.2	100
1966	31.7	29.5	38.8	100
1968	29.7	30.0	40.3	100
1970	29.7	31.6	38.7	100
Average Annual Rate of Growth of Value Added of Sector during Period (per cent)				
1960–62	-2.0	9.1	5.3	3.4
1960–64	-0.2	10.8	6.7	5.2
1960–66	1.4	9.8	6.7	5.6
1960–68	0.9	8.2	6.4	4.9
1960–70	2.3	8.7	6.2	5.5

Sources: Compiled from sources cited in Table 3.1

*Revised estimate used.

The industry sector had the highest growth rate of all the three sectors. In contrast, the growth rate of the agriculture and forestry sector was consistently small (in some periods, even negative) and remained much below the overall rate for the economy. Over the years, the share of the industry sector in total product showed a consistently upward trend and that of the services sector a generally upward trend. On the other hand, the share of the agriculture and forestry sector in total product had a well-defined declining trend.

Within each of the three major sectors, it can be seen that the different sub-sectors behaved differently. Furthermore, the importance of the various sub-sectors varied. It is now proposed to examine the sub-sectors in each of the three major sectors.

2.2 *The Agriculture and Forestry Sector*

The national accounts statistics of West Malaysia provided a breakdown of the agriculture and forestry sector into only four sub-sectors, these being rubber planting, other agriculture and livestock production, fishing and, forestry and logging. Table 3.6 shows the changing shares of these four sub-sectors in relation to total product as well as their annual rates of growth. Rubber planting was the most important of the four sub-sectors and indeed, the decline in the share of the agriculture and forestry sector by 11 percentage points during 1960–70 was wholly due to the decline in product originating from the rubber industry. In fact, during the period, the share of rubber planting in total product fell by about 12½ percentage points. That the share of the agriculture and forestry sector in total product did not fall by the same number of percentage points was the result of the expansion in output from fishing and, other agriculture and livestock production. In 1960, rubber planting accounted for as much as one-quarter of the gross domestic product. But owing to the continuous declining prices of rubber, as discussed in the last chapter, the share of this sub-sector dwindled to only slightly more than 12½ per cent of the gross domestic product in 1970. Looking at the trend from 1960, it can be seen that the percentage share of value added from rubber planting to total output declined consistently year by year until 1969. In 1969, as a result of the substantial improvement in rubber prices, the contribution of rubber planting to total product rose to nearly 15 per cent but this declined again the following year. On the average, the value added accounted for by rubber had been declining by 1½ per cent a year during 1960–70.

The next largest sub-sector covered other agriculture and livestock production. It accounted for 12–13½ per cent of total product during 1960–70. But the year-to-year changes in these percentages were generally small. These figures suggest that whatever efforts had been made in the area of agricultural diversification, the results so far had not been remarkable when viewed as offsets against the declining contributions of rubber. The growth of output of this sub-sector was, in fact, not much larger than that of the total product.

More striking progress was, however, achieved by the fishing sub-sector. In 1960–70, it increased its share of the gross domestic product by nearly 1 per-

Table 3.6

West Malaysia – Share of Major Sub-Sectors of the Agriculture and Forestry Sector in Total Product and their Growth Rates

Year	Major Sub-Sectors of the Agriculture and Forestry Sector					Gross Domestic Product at Factor Cost
	Rubber Planting	Other Agriculture and Livestock Production	Fishing	Forestry and Logging	Total	
	(As % of Gross Domestic Product at Factor Cost)					($ million)
1960	25.1	12.2	1.9	1.4	40.6	4,962
1961	21.2	13.1	2.2	1.4	37.9	5,027
1962	19.0	13.4	2.4	1.7	36.5	5,302
1963	17.8	13.5	2.2	1.5	35.0	5,643
1964	16.1	13.1	2.1	1.6	32.9	6,066
1965	15.0	13.4	2.1	1.3	31.8	6,574
1966	14.5	13.5	2.4	1.3	31.7	6,879
1967	12.1	13.4	3.1	1.4	30.0	7,066
1968	11.7	13.4	3.1	1.5	29.7	7,270
1969*	14.8	12.6	2.8	1.4	31.6	8,077
1970*	12.7	12.7	2.8	1.5	29.7	8,466
	(Average Annual Rate of Growth/Decline [%] of Value Added during Period)					
1960–64	-5.9	7.1	8.4	7.6	-0.2	5.2
1960–68	-1.6	6.2	11.5	5.0	0.9	4.9
1960–70	-1.5	5.9	9.8	6.1	2.3	5.5

Sources: Same as for Table 3.1.

* Revised estimate used.

centage point, an achievement which was all the more remarkable because the sub-sector accounted for only 2 per cent of the total product in 1960. Its growth rate averaged nearly 10 per cent a year in 1960–70.

The smallest of the four sub-sectors covered forestry and logging. During 1960–70, it increased its share in total product only marginally. Its growth rate was only a little larger than that of the total product.

On the whole, growth of these three sub-sectors other than rubber planting was able to more than offset the decline in the product from rubber planting. As a result, output accounted for by the agriculture and forestry sector increased on the average by nearly 2½ per cent a year during 1960–70. It will be recalled that over the same period, output from rubber planting was declining by an average of 1½ per cent a year. While the efforts at agricultural diversification had not prevented a decline in the share of the agriculture and forestry sector in the gross domestic product, the fact that they at least succeeded in decelerating the pace of the decline (as implied in a positive growth rate for the agriculture and forestry sector as a whole, which was lower than overall growth rate) justifies further examination of the achievements of agricultural diversification.

An interesting measure of agricultural diversification using output data was recently applied in a paper to four South–East Asian countries: Burma, Indonesia, the Philippines and Thailand.[10] This measure, which is based on the least square method, is shown by the equation $Y = a + bX$. The output of each crop in value terms is expressed as a percentage of the total output of the agriculture sector. This is done firstly for the base period and then for the period to be compared with it. On a graph, data for a crop relating to the base period provides the X-coordinate of the point for that crop and the corresponding data for the period to be compared provides the Y-coordinate. When completed, there will be a scatter of points, each representing a crop. A straight line, $Y = a + bX$, will be fitted through these points and it will provide a measure of the diversification of the agriculture sector. It is clear that if there has been no change in the output structure (that is, no diversification), all the points will fall on the line $Y = X$, which means that the regression coefficient b will be equal to unity. But if there are changes in the structure of output in the second period compared with the base period, the fitted line will be different from $Y = X$, that is, it will be $Y = a + bX$. If there is a significant difference of the regression coefficient b from 1, then diversification is deemed to have occurred. In the following exercise, this technique of measurement was used with two modifications. Firstly, it was applied not only to crop output as was done by the above-mentioned study but also to the output of the livestock industry, fishing and forestry. With this, the technique should reflect more adequately agricultural diversification in the sense used in this book. Secondly, it was felt that this technique could be profitably extended to measure the progress of agricultural diversification at intervals over a period of time. Taking the changes in the output structure at selected periods and relating these to the position in the base period, different regression coefficients for each of these could be derived. A comparison of these coefficients should provide some indications of the progress of agricultural diversification over time. In the following exercise, three periods were selected (1960–62, 1964–66 and 1968–70) for comparing the changes in the output structure with that of the base period (1956–58).

A number of problems were encountered in the exercise which should be noted. Firstly, there were gaps in the output data relating to the agriculture and forestry sector. No statistics were available for copra production by smallholdings (an important component in the coconut industry),[11] food crops other than rice, fruits and fresh water fish production. Although these items were small compared with those for which statistics were available, their absence nevertheless made it impossible to take account of any notable developments occurring to these. Another important point to note is that the available output data did not represent production at a uniform stage. For some commodities,

[10] V.D. Deshpande, "Diversification of Agricultural Production in Some South-East Asian Countries", in *The Developing Economies*, Vol. V No. 2 (June 1967).

[11] In 1960, smallholdings accounted for 85 per cent of the total area under coconuts. The percentage increased to 90 by 1970.

some processing had occurred and hence, the values of these would be larger to the extent of the value added from the processing. For example, forestry products had two components, saw logs and sawn timber. Rice was considered at the stage of milled rice. The livestock data were based largely on meat production rather than the size of the livestock population. Rubber output covered products from latex to the highly-processed rubber. To some extent, therefore, some of the items were affected by contributions from the manufacturing sector (of which the processing industry was a part). However, this was not a serious limitation as each set of data used carried the same characteristics in terms of the stage of production in all the periods compared.

A major problem was the availability of price data for all the commodities considered. Different types of prices had to be used to value the commodities. Export unit values were used as prices for rubber, copra, palm oil and palm kernels and pineapples. The average retail price for Kedah rice No. 2 was taken as the price for all the locally-produced rice. Only retail prices were available for all the livestock products. The value of fish was based on the per ton value of fish landed. An obvious limitation in this attempt to value physical output was that changes in quality were not given weight. But this was in any case impossible as there were no breakdowns of many commodities by grades or categories. However, it was still obvious that this approach used more relevant price data than the Deshpande study mentioned above, in which United States prices were applied to the various commodities.

Prices of some of the items such as rubber moved quite widely over time. To allow for these, the constant price data required for the exercise were based on a five-year average. The period selected was 1961–65, this being central to the period reviewed. The physical output of commodities also moved widely from year to year. To allow for abnormal year-to-year movements, a three-year average of the physical output of each commodity was taken.

Table 3.7 sets out the relevant price and output data prepared for deriving the regression coefficients. From this table, Table 3.8 was prepared to show the share of each commodity during the selected periods and also the change in the value of the commodity compared with the base period. From this, the following regression lines were derived:

i) Output of 1960–62 compared with that of 1956–58:

$$Y = 0.698 + 0.894X$$

ii) Output of 1964–66 compared with that of 1956–58:

$$Y = 1.017 + 0.847X$$

iii) Output of 1968–70 compared with that of 1956–58:

$$Y = 1.194 + 0.820X$$

The statistical test applied to these three regression lines showed that all their respective regression coefficients b were significantly different from 1 at the 0.05 level. This means that diversification of output within the agriculture and forestry sector had occurred compared with 1956–58, even for as early as 1960–62. Another interesting point is that a comparison showed that the value of the regression coefficient became smaller with the passage of time. In other words, the output structure of the agriculture and forestry sector had become progressively more diversified between 1956–58 and 1968–70.

Table 3.7

West Malaysia – Prices, Output and Values of Major Commodities of the Agriculture and Forestry Sector

Product	Average Prices 1961–65 ($ per ton)	Average Physical Output ('000 tons unless stated otherwise)				Average Physical Output Valued by 1961–65 Average Prices ($ million)			
		1956–58	1960–62	1964–66	1968–70	1956–58	1960–62	1964–66	1968–70
Rubber	1653.2[a]	640.3	718.5	843.3	1,137.3	1,058.5	1,187.8	1,394.1	1,880.2
Rice	457.0[b]	499.9	618.8	645.3	853.8	228.5	282.8	294.9	390.2
Copra	516.9[a]	36.5	33.1	29.4	24.8	18.9	17.1	15.2	12.8
Palm Oil	657.2[a]	61.4	96.0	149.9	325.9	40.4	63.1	98.5	214.2
Palm Kernels	381.7[a]	16.0	25.2	35.7	72.6	6.1	9.6	13.6	27.7
Pineapples	59.6[a]	134.3[c]	171.0	242.1	296.1	8.0	10.2	14.4	17.7
Fish (marine)	883.1[d]	111.4	153.4	209.1	310.5	98.4	135.5	184.7	274.2
Buffaloes[e]	3,225.6[f]	5.2	7.9	8.2	7.3	16.8	25.5	26.5	23.5
Oxen[e]	3,326.4[f]	3.8	4.4	5.4	6.0	12.6	14.6	18.0	19.9
Goats[e]	4,586.4[f]	0.7	1.1	1.1	0.9	3.2	5.0	5.0	4.1
Swine[e]	2,536.8[f]	21.3	40.8	46.3	50.6	54.0	103.5	117.5	128.4
Poultry	2,906.4[f]	14.0	27.6	40.9	56.6	40.7	80.2	118.9	164.5
Eggs	12.2 cents each[f]	105.8 million eggs	340.5 million eggs	795.8 million eggs	1,051.3 million eggs	12.7	40.9	95.5	126.2
Logs	55.5[a]	182.6[g]	287.7[g]	614.9[g]	1,039.7[g]	10.1	16.0	34.1	57.7
Sawn Timber	167.6[a]	517.0	732.1	967.1	1,504.6	86.6	122.7	162.1	252.2
Total						1,695.5	2,114.5	2,593.0	3,593.5

Sources: 1. Tables 2.12, 5.8, 6.4, 6.13, 7.1, 7.10, 7.19 and 7.20.
2. Veterinary Division, Ministry of Agriculture and Co-operatives.
3. Department of Statistics, *Monthly Statistical Bulletin,* various issues to July 1972.

[a] Export unit value.
[b] Retail price of local Kedah No. 2.
[c] 1957–58 average.
[d] Average value per ton of landing.
[e] Meat production only.
[f] Retail price.
[g] Volume exported.

Table 3.8

West Malaysia – Major Commodities of the Agriculture and Forestry Sector: Share of Total and Rates of Change

Product	Share of Value of Item in Total (Per Cent) (Based on 1961–65 prices)				Percentage Change in the Value of Output Compared With 1956–58 (Based on 1961–65 prices)		
	1956–58	1960–62	1964–66	1968–70	1960–62	1964–66	1968–70
Rubber	62.4	56.2	53.8	52.3	12.2	31.7	77.6
Rice	13.5	13.4	11.4	10.8	23.8	29.1	70.8
Copra	1.1	0.8	0.6	0.4	-9.3	-19.5	-32.1
Palm Oil	2.4	3.0	3.8	6.0	56.4	144.1	430.8
Palm Kernels	0.4	0.4	0.5	0.8	57.5	123.1	353.7
Pineapples	0.5	0.5	0.5	0.5	27.3	80.3	120.5
Fish (marine)	5.8	6.4	7.1	7.6	37.7	87.7	178.7
Buffaloes*	1.0	1.2	1.0	0.6	51.9	57.7	40.4
Oxen*	0.7	0.7	0.7	0.5	15.8	42.1	57.9
Goats*	0.2	0.2	0.2	0.1	57.2	57.1	28.6
Swine*	3.2	4.9	4.5	3.6	91.5	117.4	137.6
Poultry	2.4	3.8	4.6	4.6	97.1	192.1	304.3
Eggs	0.7	1.9	3.7	3.5	221.8	652.2	893.7
Logs	0.6	0.7	1.3	1.6	57.6	236.7	469.4
Sawn Timber	5.1	5.8	6.2	7.0	41.6	87.1	191.0
Total	100.0	100.00	100.0	100.0	24.7	52.9	111.9

Sources: Table 3.7

*Meat production only.

Tables 3.7, 3.8 and 3.9 provide details to support these conclusions. In Table 3.7, it can be seen that the aggregate value of all the selected items in the agriculture and forestry sector increased substantially or by 112 per cent between 1956–58 and 1968–70.[12] An obvious feature of the output structure, as shown in Table 3.8, was the dominance of rubber. It accounted for 62 per cent in 1956–58 but fell progressively to 52 per cent by 1968–70. In absolute terms, however, the value of output had increased and during the 14 years reviewed, showed a rise of 78 per cent. On the other hand, all the other items accounted for less than 10 per cent each of the total value, except for rice. With an output structure of this type, progress towards diversification would thus tend to be slower than otherwise. This was moreover aggravated by the fact that the strategy of diversification in West Malaysia entailed at the same time the rejuvenation of the rubber industry.[13]

Nevertheless, significant trends towards a greater diversification of output in the agriculture and forestry sector were evident. This can be seen in Table 3.8. The most obvious development was the emerging importance of the oil palm industry. In the 14 years reviewed, output of palm oil increased by 431 per cent, thereby raising its share in aggregate output from 2½ per cent in 1956–58 to 6 per cent in 1968–70. This progress reflected the efforts of the public and private sectors in the 1960's to establish palm oil as an important alternative to rubber. There were four other dynamic items which also contributed to a more diversified output of the sector. These were poultry, eggs, timber products and fish production. During the period, the share of poultry and eggs in the aggregate value of output rose by 5 percentage points, that of timber products by nearly 3 percentage points and, that of fish production by nearly 2 percentage points. Other items that expanded quite fast were pineapple and pork production.

Rice was the second largest item of output in the agriculture and forestry sector. During the 14 years reviewed, rice production increased by about 71 per cent, a respectable rate, although not fast enough to prevent its share in total output from declining. Continued expansion in rice output, even at a faster rate, may be expected in the 1970's with the operation of more irrigation schemes including the Muda and the Kemubu irrigation schemes.

Data on changes in crop acreage could provide another supporting source of information on agricultural diversification. One obvious limitation in the above analysis on output was that the coverage of crops had to be confined to those for which output and price data were available. This meant that only the output of five crops could be examined. Data on crop acreage were, however, more extensive and changes in these could be observed for a total of 15 crops or groups of crops. These are analysed in Table 3.9. Between 1958 and 1970, the total area for these 15 crops or groups of crops increased by 1.6 million acres or 28 per cent to 7.1 million acres. Rubber occupied by far the largest area. In 1970, there were 4.3 million acres of rubber, an increase of slightly more than ½

[12] This is based on 1961–65 average prices.

[13] This is discussed in Chapter V.

Table 3.9

West Malaysia – Cultivated Area Under Crops

Crop	1958		1963		1970		Percentage Change in Crop Area 1958/1970
	Area ('000 acres)	Per Cent of Total	Area ('000 acres)	Per Cent of Total	Area ('000 acres)	Per Cent of Total	
Rubber	3,747	67.10	4,154	67.70	4,275	59.91	14.1
Padi[a]	928	16.61	991	16.15	1,318	18.47	42.0
Coconut	520	9.31	510	8.31	527	7.38	1.3
Oil Palm	120	2.14	185	3.01	693	9.71	477.5
Pineapple	34	0.60	28	0.45	42	0.58	23.5
Fruits[b]	100	1.79	101	1.64	118	1.65	18.0
Tapioca	28	0.50	55	0.89	44	0.61	57.1
Spices	27[c]	0.48	25	0.40	16	0.22	-40.7
Coffee	10	0.17	11	0.17	13	0.18	30.0
Tea	11	0.19	8	0.13	8	0.11	-27.3
Maize	8	0.14	10	0.16	8	0.11	–
Groundnuts	4	0.07	6	0.09	6	0.08	50.0
Sugar Cane	2	0.03	2	0.03	18	0.25	800.0
Cocoa	1	0.01	1	0.01	8	0.11	700.0
Other Food Crops[d]	44	0.78	48	0.78	41	0.57	- 6.8
Total	5,584	100.00	6,135	100.00	7,135	100.00	27.8

Sources: 1. Tables 5.4, 6.2, 7.3, 7.13 and 8.2
2. Department of Statistics, *Monthly Statistical Bulletin*, July 1972.

[a] Wet and dry padi.
[b] Excluding pineapple.
[c] 1959
[d] Vegetables, sweet potato, sago, etc.

million acres. Its share in total crop acreage, however, fell from 67 per cent in 1958 to 60 per cent in 1970. The continuous expansion of the rubber acreage despite the declining prospects of the industry was, of course, related to the nature of the approach used in tackling the problem. As will be seen in Chapter V, public policy on rubber was not only geared to the replanting of existing areas with high-yielding clones but it also involved the expansion of acreage. There was thus a quantitative as well as a qualitative aspect in the development of rubber acreage. If the qualitative changes (which were extensive)[14] were given due weight, the rubber acreage as of 1970 should also be viewed as reflecting part of the efforts of agricultural diversification. For the high-yielding trees could and should, in a sense, be regarded as a new crop.

The crop with the next largest acreage was padi. In 1958–70, padi acreage expanded by 42 per cent, a rate larger than that of most crops. Its share in total acreage rose by nearly 2 percentage points. This acreage expansion reflected more clearly than output performance the efforts made under the Government's policy of self-sufficiency.[15]

With the declining price of rubber in the 1960's, oil palm was considered a major instrument for agricultural diversification.[16] In 1958, oil palm acreage constituted only slightly over 2 per cent of the cultivated area but with the increasing switch-over to oil palm, it attained a share of 9.7 per cent in 1970. This represented a spectacular growth rate of 478 per cent during the 14 years.

A notable feature is the development of coconut acreage. For years, the area under coconut was the third largest after those of rubber and padi. But the industry was having a number of problems on which policy measures seemed to have made little impact.[17] It is not surprising that there was only a marginal increase in coconut acreage between 1958 and 1970. The share of coconut acreage in total crop area fell by nearly 2 percentage points during the period.

These four crops, rubber, padi, oil palm and coconut, accounted for 96 per cent of the cultivated area in 1970. The others were of minor importance.[18] Within the group of minor crops, the area under two crops showed very spectacular increases during 1958–70. These were sugar cane and cocoa. To a lesser extent, the tapioca acreage also expanded. Two of the more prominent minor crops showed only a small increase in acreage during the period, these being pineapple and other fruits. On the other hand, the area of three other minor crops declined. The crops concerned were spices, tea and 'other food crops'.

The pattern as a whole may be summed up as follows. Between 1958 and 1970, substantial increase in acreage occurred for the principal crops, particularly that of oil palm and rice. The predominance of planted acreage

[14] See Chapter V.

[15] See Chapter VI.

[16] See Chapter VII.

[17] See Chapter VII.

[18] See Chapter VIII.

under rubber continued, although it had been lessened by 1970. Taken together, the share of the minor crops fell slightly in 1970 compared with 1958; the total area under these crops showed only a very small increase. However, there were signs of active growth in the acreage of a few of these crops. All the above developments reflected the attainment of some measure of crop diversification but it appeared to be of the type which was fairly narrow.

2.3 *The Industry Sector*

Of the three major sectors of the economy examined in Table 3.5, the industry sector experienced the fastest growth during 1960–70. It is now proposed to examine the contribution of its various sub-sectors. In West Malaysia, five sub-sectors of the industry sector could be identified namely, i) mining and quarrying, ii) manufacturing, iii) construction, iv) electricity, water and sanitary services and, v) transportation, storage and communications. Table 3.10 shows the shares of these sub-sectors during 1960–70 as well as their growth rates.

The most important sub-sector of the industry sector was manufacturing. As the largest of the five sub-sectors, it accounted for about 8½ per cent of the gross domestic product in 1960 and nearly 15 per cent in 1970. It was pointed out earlier that when the industry sector increased its share in the gross domestic product by 8 percentage points during 1960–70, manufacturing was responsible for 6 of these percentage points. During 1960–70, output of manufacturing grew at a rate of 11½ per cent a year. Table 3.11 shows that in terms of the share of manufacturing in the total product of the industry sector, the proportion rose from 37 per cent in 1960 to 47 per cent in 1970. However, this was still smaller than the share of manufacturing in the industry sector of the advanced countries; the latter averaged about 15 percentage points larger. But despite this, the gains made by manufacturing were undeniably substantial and reflected the success of efforts made to increasingly industrialize the economy.

It would be useful at this stage to examine the structure of the manufacturing sub-sector. Table 3.12 presents the structure of manufacturing during 1960–70. A total of 18 industry groups could be identified. A significant feature is that the value added of 17 of these groups showed a rising trend during the period and, in a number of these groups, the growth was very substantial. Only rubber processing showed a decline over the period, the reason being the decline in the price of rubber rather than a decrease in the volume of rubber being processed. The value added from rubber processing accounted for more than one-third of the total value added from manufacturing in 1960 but it fell to slightly more than 8½ per cent by 1970, still one of the larger items nevertheless. Besides rubber processing, there were four other large industry groups with shares in the total for manufacturing exceeding 10 per cent. These were food products, chemicals and chemical products, metal products and machinery and, wood and cork products. By 1970, these four industry groups accounted for about 51 per cent of the value added for manufacturing compared with 38 per cent in 1960.

Table 3.10

West Malaysia — Share of Major Sub-Sectors of the Industry Sector in Total Product and their Growth Rates

Year	Major Sub-Sectors of the Industry Sector						Gross Domestic Product at Factor Cost ($ million)
	Mining & Quarrying	Manufacturing	Construction	Electricity, Water & Sanitary Services	Transportation, Storage & Communications	Total	
	(As % of Gross Domestic Product at Factor Cost)						
1960	6.1	8.6	3.0	1.5	4.3	23.5	4,962
1961	7.4	8.1	3.4	1.6	4.4	24.9	5,027
1962	7.3	8.6	4.0	1.9	4.3	26.1	5,302
1963	7.3	9.2	4.2	2.0	4.2	26.9	5,643
1964	8.7	9.9	4.1	2.1	4.1	28.9	6,066
1965	8.9	10.4	4.1	2.3	4.3	30.0	6,574
1966	7.8	11.0	4.0	2.5	4.2	29.5	6,879
1967	7.4	12.1	4.1	2.7	4.3	30.6	7,066
1968	6.4	12.5	3.7	2.9	4.5	30.0	7,270
1969*	6.5	13.9	3.3	2.7	4.1	30.5	8,077
1970*	6.5	14.8	3.4	2.8	4.1	31.6	8,466
	(Average Annual Rate of Growth [%] of Value Added during Period)						
1960–64	15.1	8.9	13.8	14.9	4.1	10.8	5.2
1960–68	5.6	10.0	7.8	13.8	5.6	8.2	4.9
1960–70	6.2	11.4	6.9	12.2	5.0	8.7	5.5

Sources: Same as for Table 3.1.

*Revised estimate used.

Table 3.11

Relative Importance of Sub-Sectors of the Industry Sector
in Advanced Countries and West Malaysia

Sub-Sector	Share in Total Value Added of the Industry Sector (%)			
	Ten Advanced Countries[a] (Unweighted Average)	West Malaysia		
	1954–56	1960	1968	1970[b]
Mining and Quarrying	5	26	21	20
Manufacturing	62	37	42	47
Construction	12	13	12	11
Electricity, Water and Sanitary Services	4	6	9	9
Transportation, Storage & Communications	17	18	16	13
Total	100	100	100	100

Sources: 1. Same as for Table 3.1.
2. Simon Kuznets, *Modern Economic Growth – Rate, Structure and Spread, op. cit.*, p. 128.

[a]The countries are the United Kingdom, France, Belgium, West Germany, the Netherlands, Denmark, Norway, the United States, Canada and Japan.
[b]Revised estimate used.

Table 3.12

West Malaysia — Output Composition of Manufacturing

Industry Group	Value Added at Factor Cost ($ million)				Share in Total Value Added of Manufacturing Sector (%)			
	1960	1964	1968	1970*	1960	1964	1968	1970*
Food	49	76	157	198	11.5	12.7	17.2	15.8
Beverages	11	20	32	41	2.6	3.4	3.5	3.3
Tobacco	12	29	49	60	2.8	4.9	5.4	4.8
Textiles	2	6	19	30	0.5	1.0	2.1	2.4
Footwear	2	2	2	3	0.5	0.3	0.2	0.2
Wood & Cork Products	33	43	86	136	7.7	7.2	9.4	10.8
Furniture & Fixtures	9	11	18	23	2.1	1.8	2.0	1.8
Paper & Paper Products	1	3	12	15	0.2	0.5	1.3	1.2
Printing, Publishing & Allied Industries	23	33	62	80	5.4	5.5	6.8	6.4
Leather & Leather Products	–	1	1	1	–	0.2	0.1	0.1
Rubber Processing	156	106	60	109	36.7	17.8	6.6	8.7
Rubber Products	15	26	44	55	3.5	4.4	4.8	4.4
Chemicals & Chemical Products	44	81	117	152	10.4	13.6	12.8	12.1
Products of Petroleum & Coal	–	22	35	41	–	3.7	3.8	3.3
Non-metallic Mineral Products	15	35	58	77	3.5	5.9	6.4	6.1
Basic Metal Industries	10	20	42	56	2.4	3.4	4.6	4.5
Metal Products, Machinery, etc.	37	69	100	150	8.7	11.6	11.0	12.0
Miscellaneous	6	14	17	27	1.4	2.3	1.9	2.2
Total	425	597	911	1,254	100.0	100.0	100.0	100.0

Sources: Same as for Table 3.1.

*Revised estimate used.

The quinquennial manufacturing census[19] and the annual surveys[20] of manufacturing activities could provide further information on these industry groups. Under the group 'food products', the major items were milled rice and grains, dairy products, biscuits and bakery products, canned pineapple and fish, coffee powder, mee-hoon and noodles and ice. 'Chemical and chemical products' comprised mainly soaps, washing and cleansing compounds, perfumes, cosmetics and toilet preparations and, paints and associated products. Some of the more prominent items under the group 'metal products and machinery' were metal products for building and construction, tin cans and metal boxes, products of brass, copper, pewter and aluminium, industrial machinery and parts, general engineering and machinery repair work, manufacture of electrical products and, making and repair of motor vehicle bodies and parts. Under the group 'wood and cork products', saw-milling and, production of plywood and particle boards were the dominating items.

All the other industry groups individually accounted for less than 6½ per cent of the total value added for manufacturing. However, the gains of some of these groups in their shares of the total value added for manufacturing during 1960–70 were very substantial. Four industry groups which increased their shares by 2–4 percentage points each during the period were products of petroleum and coal, non-metallic mineral products, basic metal industries and tobacco products. Three other groups each gained by at least 1 percentage point in their shares; these were textiles; paper and paper products; and, printing, publishing and allied industries. Two of these groups came into being and assumed significance only in the 1960's. These were products of petroleum and, paper and paper products.

As pointed out earlier, Kuznets found that with increasing industrialization, it was usual to see some shifts among manufactured products from less to more durable goods and, to a limited extent, from consumer to producer goods. Available data on manufacturing in West Malaysia, however, could not provide information on the durability of the manufactured items. But the breakdowns available as presented in Table 3.12 could give an indication of the situation covering a large part of the consumer goods produced. From the 18 industry groups given in the table, the products of six industry groups could without difficulty be regarded as consumer goods. These were food; beverages; tobacco; footwear; furniture and fixtures; and, printing, publishing and allied industries. It was, however, not possible to associate the remaining industry groups with the producer goods sector as many of them also included a large number of consumer goods e.g. the chemicals and chemical products group, the textiles group, etc. Thus, a practical though limited way of examining West Malaysia's experience in the light of Kuznets' findings was to observe the collective

[19] The Department of Statistics has so far conducted three censuses of manufacturing in 1959, 1963 and 1968.

[20] Annual surveys of the manufacturing industries based on a sample are carried out by the Department of Statistics in each of the inter-census years, the first of which was in 1960.

behaviour of the six industry groups readily identifiable as consumer goods industries. In terms of value added, the output of these six industry groups expanded by nearly 4 times to $405 million during 1960–70. All the six industry groups individually experienced output increase during the period. In terms of their share in the total value added of manufacturing, the proportion expanded from 24.9 per cent in 1960 to 32.3 per cent in 1970, or an increase of 7.4 percentage points. As individual industry groups, four of them increased their shares while the other two groups experienced a decline.[21]

Considering merely these six industry groups, the Malaysian experience of change in the composition of output growth in manufacturing clearly did not conform to the trend observed by Kuznets elsewhere. Some comments are therefore necessary. Malaysia had only a very short period of industrialization, even by 1970. Like all newly-industrializing countries, the efforts tended to concentrate on consumer goods, this being greatly influenced by the existence of a ready market for these goods and the relatively simpler technology and skills required for their production. Apart from these factors, some policies had even encouraged the consumer goods industries as for example, the pioneer industry incentive and the prevailing system of tariffs.[22] Nevertheless, an increasing trend towards producer goods can reasonably be envisaged in the years to come as industrialization gains greater momentum and the available opportunities in the consumer goods industries have been increasingly exploited.

It would be useful at this stage to compare the structure of manufacturing in West Malaysia with those of some industrial and developing countries. An important limitation in a comparison based on mere shares of the various industry groups in the total value added for manufacturing is that it would not reveal the level of technology applied in the production process. Neither would it indicate the difference in quality of the manufactured products, the stage of production entailed (i.e. whether it is processing, semi-manufacturing or manufacturing) or even the types of products produced. However, if these limitations are borne in mind, such a comparison should give rise to some interesting observations. Table 3.13 sets out the shares of the various industry groups for West Malaysia, the Philippines, Taiwan, the United States and Sweden. Both the Philippines and Taiwan are developing countries which have endeavoured to expand their manufacturing sector. Taiwan has the distinction of being among the few in Asia that have done particularly well in industrialization. The United States and Sweden are taken to represent the pattern of the mature industrial economies but their manufacturing structures in their early stages of industrialization have also been included to enlarge the scope of comparison.

A striking feature arising from this comparison is that food, beverages and tobacco accounted for a substantial share of total manufacturing output. These products as a group were among the largest for all the five countries and, in fact,

[21] The industry groups that experienced a decline in their shares were those producing footwear and, furniture and fixtures.

[22] For a discussion of these, see Chapters IX and X.

Table 3.13

Output Composition of Manufacturing – West Malaysia, Philippines, Taiwan. United States and Sweden

Industry Group	Percentage Share in Total Value Added of Manufacturing Sector										
	West Malaysia		Philippines		Taiwan		United States			Sweden[a]	
	1960	1970	1956	1962	1954	1961	1880	1947	1958	1873	1948
Food, Beverages & Tobacco	17	24	43	39	42	36	16	13	13	29	19
Textile Products	1	2	10[b]	9[b]	16[b]	13[b]	22	13	9[b]	11	11
Leather & Rubber	41	13	1	4	1	2	7	4	2	6	7
Wood Products	10	13	6	5	4	5	11	5	4	24	3
Paper & Printing	6	8	5	5	5	4	6	10	10	1	13
Non-metallic Mineral Products	4	6	5	4	6	9	4	3	4	2	4
Chemicals & Petroleum	10	15	10[c]	17	12	14	3	10	11	7	4
Metal Products	11	17	10	16	12	16	23	39	43	20	40
Miscellaneous	1	2	10	1	1	1	8	3	5	–	–
Total	100	100	100	100	100	100	100	100	100	100	100

Sources: 1. Same as for Table 3.1.
2. Simon Kuznets, *Modern Economic Growth – Rate, Structure and Spread, op. cit.*, p. 128.
3. I. Little, T. Scitovsky and M. Scott, *Industry and Trade in Some Developing Countries, op. cit.*, Table 3.2, p. 89.

[a] Based on value of output.
[b] Includes shoes.
[c] Petroleum products have been included under 'miscellaneous'.

the largest for the three developing countries. But there appeared to be a tendency for their share in total manufacturing output to fall with time, especially with the more rapid expansion of other product groups. In West Malaysia, however, the share of this group had increased instead during 1960–70. The reasons for this have been discussed earlier.

Another interesting feature concerns metal products. In Sweden and the United States, the share of value added from metal products in relation to the total for manufacturing was the largest and accounted for around 40 per cent. For the developing countries, the share of this group was considerably smaller, even much less than that of Sweden and the United States in the late 19th century. But for all countries, the share of metal products in the total manufacturing output had a tendency to rise with industrialization.

A rather unexpected feature is that in the developing countries, the shares of the chemicals and petroleum group in the value added for manufacturing were larger than those of Sweden and the United States. It seems likely that what is not revealed by these data is the possible difference in the character of the products manufactured in the developed and the developing countries. As noted earlier, the chemical products of West Malaysia were by and large consumer goods rather than intermediate goods which would form an important part of output for this group in the advanced countries. Furthermore, it can also be expected that there would be greater inter-industry relationship between the chemical industry and the rest of the economy in the advanced countries and also that these countries would be manufacturing more sophisticated types of products involving complex processes.

The structure of manufacturing also appears to be influenced by the nature of the available raw materials. This seems to be one of the reasons for the prominence of the metal industries in Sweden and the United States, in both of which the necessary industrial raw materials were also located. On the other hand, West Malaysia had a large share in the leather and rubber group because of the importance of rubber processing and, to a lesser extent, the growing use of rubber in manufacturing. The relatively greater importance of forest-based products in West Malaysia compared with the Philippines and Taiwan is another example of the close relationship between raw materials and the types of manufacturing activities. Sweden and the United States also had large shares of the total value added in manufacturing for its forest-based products in the late 19th century. A more ambiguous case was the textile products group. Here, the relative simplicity of the production process and the less demanding capital requirements could have played an important role in establishing the prominence of the textile industries in Taiwan and the Philippines. In Sweden and the United States, textile products in the late 19th century accounted for one of the largest shares in the total value added for manufacturing and this was still the case nearly 70 years later. But in the United States, the development of the textile industry was also greatly assisted by its own cotton production. On the other hand, the textile industry was of little importance in West Malaysia but it still remained to be seen whether it could develop into a major industry group.

Finally, certain industry groups had increases in their share of the total value

added for manufacturing but this tendency did not necessarily occur for such industry groups in all the countries observed. In Sweden and the United States, the share of products of paper and printing increased with the passage of time. The industry group producing these in West Malaysia followed a similar trend. However, there was hardly any change in the shares of these in Taiwan and the Philippines. In the case of the non-metallic mineral products, West Malaysia's experience of a rising percentage of contribution by this group to the total value added for manufacturing over time corresponded only to the experience in Taiwan.

Coming back to Table 3.10, it can be seen that the other four sub-sectors of the industry sector accounted for only less than 2 of the increase of 8 percentage points in the share of the industry sector in the gross domestic product of West Malaysia between 1960 and 1970. The sub-sector next in size to manufacturing namely, mining and quarrying, was responsible for only 0.4 of one percentage point of the increase. The construction sub-sector increased likewise. On the other hand, another large sub-sector, transportation, storage and communications, showed a slight decline of 0.2 of one percentage point. But it was the smallest of these four sub-sectors namely, electricity, water and sanitary services, that contributed most to the increase of the 2 percentage points achieved by these four sub-sectors. It accounted for 1.3 percentage points.

Over 1960–70, the share of the mining and quarrying sub-sector varied from a low of 6 per cent in 1960 to nearly 9 per cent in 1965. The performance of the tin mining industry provided the major influence and this was aided to some extent by the iron ore industry. Thus, while the tin mining industry enjoyed unparalleled prosperity in the 1960's, the effects of this on the mining and quarrying sub-sector were reduced by the decline in the iron ore industry especially from 1964 onwards.[23] Growth of this sub-sector averaged 15 per cent a year during 1960–64 but if 1960–70 was considered, the annual growth rate averaged only slightly above 6 per cent. The mining and quarrying sector was about 4 times more important in West Malaysia compared with the advanced countries observed (Table 3.11). In the foreseeable future, the mining sub-sector can be expected to maintain its position of importance, although the problem of reserves exhaustion in the tin industry had become more and more obvious. The recent discovery of petroleum products off the East Coast and the active prospecting currently in progress point to a possible reinvigoration of mining activities in the country.

Output of construction had shifted relatively little in terms of its share in the gross domestic product during 1960–70. In fact, the changes came to only slightly more than 1 percentage point at the largest. During the period, the sub-sector grew at an average of nearly 7 per cent a year. From Table 3.11, it can be seen that the share of this sub-sector at 11 per cent of the value added of the industry sector in 1970 was about the same as for the developed countries observed.

[23] See Chapter XII.

Of about the same size as the construction sub-sector was the sub-sector covering transportation, storage and communications. Besides communications, this sub-sector covered activities in ports, railways and commercial transportation such as by lorries, vans and buses. The growth in value added of this sub-sector during 1960–70 averaged only 5 per cent a year, a little below the overall growth rate of the economy. Table 3.14 shows a breakdown of this sub-sector. During the period under discussion, there was a very rapid expansion in the value added from communications, averaging about 10 per cent a year as well as from port activities (water transportation), averaging about 9 per cent a year. The contributions from rail transportation declined and had since remained virtually stagnant for many years. Undoubtedly, there had been some switch-over of traffic from the railroad to other forms of transportation. The value added in the other forms of transportation together with storage showed a steady though relatively small growth rate of 4 per cent a year.

The last sub-sector, electricity, water and sanitary services, covered products that were very directly related to efforts in economic and social development. They were also products produced by the public sector. With increasing financial provision by the Government in its Second Five-Year Plan and the First Malaysia Plan for the development of public utilities,[24] it is not surprising that it had the highest growth rate, slightly over 12 per cent a year, compared with the other sub-sectors of the industry sector. By 1970, this rapid growth had almost doubled the sub-sectors share in the gross domestic product from 1.5 per cent. Table 3.15 shows the components of the sub-sector. The value added from water supply rose by over 3½ times during 1960–70 while that of electricity and power grew by nearly 3 times.

2.4 *The Services Sector*

The last of the three major sectors examined was the services sector. As the output of the sector is by its nature intangible, there were some difficulties in its measurement. Gaps in data were often present (e.g. the relevant mark-up for some components of the wholesale and retail trade, information on rent paid by the higher income groups, the earnings of domestic servants) and arbitrary means had been used to arrive at what was considered reasonable approximations.[25] Despite these limitations, the data on the services sector could provide helpful indicators and broad orders of magnitude of the change in economic structure.

Too often, the services sector had been regarded as largely demand-following in character and apart from Government efforts in health, education and, public administration and defence, policy measures tended to pay too little attention towards the deliberate development of the other components of the

[24] The estimated development expenditure for utilities in 1961–65 was $535.4 million while that in 1966–70 was $653.6 million.

[25] For a discussion of the weaknesses of the production accounts in the services sector, see Department of Statistics, *National Accounts of West Malaysia, 1960–1966*, pp. 12–14.

Table 3.14

West Malaysia – Output Composition of the "Transportation, Storage and Communications" Sub-Sector

	Water Transportation	Railroad Transportation	Other Transportation and Storage	Communications	Total
Value Added at Factor Cost ($ million)					
1960	23	46	104	40	213
1964	33	39	123	55	250
1968	52	40	146	92	330
1970*	54	40	152	102	348
Average Annual Rate of Growth/Decline of Value Added in Period (Per Cent)					
1960–64	9.4	-4.2	4.3	8.3	4.1
1960–68	10.7	-1.7	4.3	11.0	5.6
1960–70	8.9	-1.4	3.9	9.8	5.0

Sources: Same as for Table 3.1

*Revised estimate used.

Table 3.15

West Malaysia – Output Composition of the "Electricity, Water and Sanitary Services" Sub-Sector

	Electric Light & Power	Water and Sanitary Services	Total
Value Added at Factor Cost ($ million)			
1960	57	17	74
1964	93	36	129
1968	152	56	208
1970*	170	63	233
Average Annual Rate of Growth of Value Added in Period (Per Cent)			
1960–64	13.0	20.0	14.9
1960–68	13.0	16.1	13.8
1960–70	11.5	14.0	12.2

Sources: Same as for Table 3.1.

*Revised estimate used.

sector. The relatively little that was done for the tourist industry until recently is a case in point.

It will be seen from Table 3.5 that since 1962 the services sector had become the largest of the three major sectors. During 1960–70, the sector grew at slightly more than 6 per cent a year, a little larger than the average annual growth rate of the gross domestic product. Between 1960 and 1970, its share of the gross domestic product thus increased by 2.7 percentage points. Table 3.16 shows the breakdown of the services sector into its five sub-sectors. In terms of shares in the gross domestic product, three of these sub-sectors expanded during 1960–70; these were i) banking, insurance and real estate (by 1.2 percentage points), ii) public administration and defence (by 1.4 percentage points) and iii) other services (by 1.8 percentage points). The other two sub-sectors experienced decline in their shares, these being wholesale and retail trade (by 1 percentage point) and, ownership of dwellings (by 0.7 of one percentage point).

Of the three sub-sectors which increased their share of the gross domestic product, the largest was the sub-sector 'other services'. The sub-sector covered services in education and health, in recreation and entertainment, in hotels and restaurants, personal services and services provided by welfare and professional bodies. During 1960–70, the value added from this sub-sector increased at an

Table 3.16

West Malaysia – Share of Major Sub-Sectors of the Services Sector in Total Product and their Growth Rates

Year	Major Sub-Sectors of the Services Sector						Gross Domestic Product at Factor Cost ($ million)
	Wholesale & Retail Trade	Banking, Insurance & Real Estate	Ownership of Dwellings	Public Administration and Defence	Other Services	Total	
	(As % of Gross Domestic Product at Factor Cost)						
1960	15.3	1.0	5.0	5.3	9.4	36.0	4,962
1961	15.7	1.2	5.1	5.1	10.1	37.2	5,027
1962	15.5	1.2	5.0	4.9	10.8	37.4	5,302
1963	15.8	1.3	4.9	5.1	11.0	38.1	5,643
1964	15.6	1.5	4.6	5.6	10.9	38.2	6,066
1965	15.2	1.6	4.4	6.2	10.8	38.2	6,574
1966	15.3	1.8	4.4	6.3	11.0	38.8	6,879
1967	15.0	1.9	4.5	6.6	11.4	39.4	7,066
1968	15.4	2.1	4.5	6.6	11.7	40.3	7,270
1969*	14.3	2.0	4.1	6.5	11.0	37.9	8,077
1970*	14.3	2.2	4.3	6.7	11.2	38.7	8,466
	(Average Annual Rate of Growth [%] of Value Added during Period)						
1960–64	5.5	14.6	3.5	6.4	9.2	6.7	5.2
1960–68	5.0	14.9	3.6	7.7	7.8	6.4	4.9
1960–70	4.8	13.6	3.9	8.0	7.4	6.2	5.5

Sources: Same as for Table 3.1

* Revised estimate used.

average of about 7½ per cent a year, faster than the annual growth rate of the economy. Table 3.17 shows the components of the sub-sector and their growth rates. The growth of this sub-sector could be attributed largely to the growth in education and, medical and health services. These two components together accounted for nearly 70 per cent of the increase in the value added for the sub-sector. Education services of all types constituted the largest component of the sub-sector (44 per cent of its total value added in 1970). These services also had the highest growth rate compared with the other components (more than 10 per cent a year in 1960–70). Medical and health services came next in size (15 per cent of the sub-sector's value added in 1970) and this component also had one of the highest annual growth rates. The sustained and increasing efforts made by the Government to expand and improve education and health facilities throughout the country were no doubt largely responsible for the importance of these two components.[26] In addition, private educational and health facilities had also expanded in the 1960's. Another notable source of growth of the 'other services' sub-sector came from three other components namely, recreation and entertainment services, personal services and, hotels and restaurants. These together accounted for about 17½ per cent of the increase in value added of the sub-sector during 1960–70. The services provided by these components were closely related to income levels. The income growth experienced in the 1960's could thus have stimulated a demand for these services.

The next largest sub-sector that increased its share of the gross domestic product covered services in public administration and defence. These services included 'general administration, police, defence and the administration of health, education, etc., at all levels of government'. The sub-sector expanded at a very fast rate during 1960–70 (8 per cent per annum), surpassed only by the growth rate of the sub-sector covering banking, insurance and real estate. This expansion reflected the response of the Government in meeting the growing needs for its services and the increase in its supervisory and regulatory functions.

The third sub-sector that increased its share of the gross domestic product covered banking, insurance and real estate. This sub-sector, which accounted for only 1 per cent of total product in 1960, increased its share by more than 2 times by 1970. Its growth rate of about 13½ per cent a year was the largest for all the sub-sectors within the services sector. Table 3.18 gives a breakdown of this sub-sector. It can be seen that insurance activities together with banks and other financial institutions accounted for virtually all the growth of the sub-sector. The value added from insurance companies on the average grew by 15 per cent a year during 1960–70 while that of banks and other financial institutions

[26] The expenditures already made under the three development plans reflect these efforts:

	1956–60 ($ million)	1961–66 ($ million)	1966–70 ($ million)
Education and training	60.9	236.5	286.9
Medical and health	12.7	101.9	114.2
Total	73.6	338.4	401.1

Table 3.17

West Malaysia – Output Composition of the "Other Services" Sub-Sector

"Other Services"	Value Added at Factor Cost ($ million)				Average Annual Rate of Growth of Value Added in Period (per cent)		
	1960	1964	1968	1970*	1960–64	1960–68	1960–70
Education	158	261	369	418	13.4	11.2	10.2
Medical & Health	71	92	121	141	6.7	6.1	7.1
Recreation & Entertainment	17	31	37	39	16.2	10.2	8.6
Domestic Services	54	58	61	63	1.8	1.5	1.6
Hotels & Restaurants	61	75	91	100	5.3	5.1	5.1
Laundries, Barber Shops, Other Personal Services	40	48	58	65	4.7	4.8	5.0
Religious Organizations, Welfare Institutions, Legal Services, Trade Associations, etc.	66	98	113	125	10.4	7.0	6.6
Total	467	663	850	951	9.2	7.8	7.4

Sources: Same as for Table 3.1.

*Revised estimate used.

Table 3.18

West Malaysia -- Output Composition of the "Banking, Finance and Real Estate" Sub-Sector

	Banks and Other Financial Institutions	Insurance	Real Estate	Total
Value Added at Factor Cost ($ million)				
1960	32	17	2	51
1964	59	26	3	88
1968	93	59	3	155
1970*	112	68	3	183
Average Annual Rate of Growth of Value Added in Period (Per Cent)				
1960–64	16.5	11.2	10.7	14.6
1960–68	14.3	16.8	5.2	14.9
1960–70	13.3	14.9	4.1	13.6

Sources: Same as for Table 3.1.

*Revised estimate used.

grew by slightly over 13 per cent. An important underlying factor was the very rapid expansion of financial institutions in the 1960's.[27] This, of course, reflected not only the rising incomes experienced during the period but also the increasing complexities in the relationships among the economic units in the country. Less direct but still of importance were the Government's policies of encouraging and regulating both the new and existing financial institutions.[28] The value added from real estate was relatively small as was its growth rate.

The two sub-sectors that experienced a reduction in their share of the gross

[27] For a discussion of developments on financial institutions during this period, see Lee Hock Lock, *Household Saving in West Malaysia and the Problem of Financing Economic Development*, Monograph Series on Malaysian Economic Affairs No. 1, Kuala Lumpur, Faculty of Economics and Administration, University of Malaya, 1971, especially Chapter VI.

[28] For an evaluation of these policies, see *ibid.*, Chapters V and VI.

domestic product were wholesale and retail trade and, ownership of dwellings. The sub-sector covering wholesale and retail trade was the largest of all the sub-sectors in the services sector. Its growth rate was a little less than that of the gross domestic product. The sub-sector, 'ownership of dwellings', was about one-third the size of the wholesale and retail trade sub-sector. It covered the contributions of dwellings to the total product and included the rent paid on dwellings as well as the imputed rent on owner-occupied dwellings. Its growth rate during 1960–70 was also less than that of the economy as a whole and in fact was the lowest among all the sub-sectors in the services sector.

Some general observations may now be made of the services sector. During 1960–70, the sector increased its share of the gross domestic product but the change was relatively small compared with the agriculture and industry sectors. Within the services sector, the changes in the shares of its various components were also small. Government activities were noted to have a major role in causing some of these changes. Finally, the services sector covered a large mixture of different types of services each of which was provided to meet a combination of needs and objectives. However, an examination of the changes in the importance of the items in the mixture did provide further supporting indications that some fundamental alterations had occurred in the structure of the economy's tangible output. The growth of such categories as Government services and the rather stagnant domestic services conformed to Kuznets' observations of the experience of a more diversified economy.

3. THE STRUCTURE OF EMPLOYMENT

3.1 *Introduction*

The process of economic diversification also entails the shift of factors of production between sectors of the economy. But a comprehensive examination of this was hindered by the limited available data. Data on the changing pattern of land use were not available for all sectors of the West Malaysian economy. Estimates of crop acreage were made by the authorities on an annual basis for the agriculture sector. Some discussion on the major changes in agricultural land use was made earlier in this chapter. Indications of changes in the land area under forestry will be discussed in Chapter VII while data on new land developed for manufacturing activities by the authorities will be given in Chapter X. Data on the allocation of capital by sectors were also not available, though some very broad division of gross capital formation data into perennial crops, building and construction, and machinery and equipment could be obtained from the national income statistics.

Of the factors of production, fairly comprehensive data were available on the labour force only. This part of the study will, therefore, have to be focussed on the sectoral shifts in the employed population. The changing structure of employment over time should provide a useful indication of the growth and decline of sectors and in the process, lend further support to the evidence of diversification already seen on the output side.

The data on employment for the period under review were derived from the two censuses of population undertaken by the Department of Statistics in 1957

and 1970 respectively.[29] In addition, use was made of the results of the 1947 census,[30] in order to see more clearly the trends in the shifts.

Before comparing the data derived from these three censuses, it would be useful to note the variations in definitions and coverage of the employed population.[31] In both the 1957 and 1970 censuses, the employed population covered persons of 10 years of age and above. In the 1947 census, there was no minimum age limit. But this difference should not affect comparability as the number of persons of less than 10 years of age in employment could be regarded as unimportant. Other differences are more significant. In the 1947 census, the employed population covered only those persons who were gainfully employed. Likewise, in the 1957 census, housewives and other unpaid home workers were excluded. The 1970 census, however, included in the employed population those unpaid family workers who had put in at least three hours of work a day during the reference week of the census. The other notable difference relates to the reference period of the censuses. The 1947 census had no reference period; thus, the employed persons would cover only those having work during the time of the enumeration. In the 1957 census, persons in employment were defined as those with gainful employment for a minimum period of four months out of the preceding 12 months and such part-time workers as those who averaged three hours of work a day. In the 1970 census, the reference period was only a week before the enumeration date.

In relation to the task at hand, however, these differences in definitions should not affect seriously the comparability of the employment data from the three censuses. On the whole, it seems possible for the 1970 data to have some upward bias in the number of persons employed as a result of the wider definition used and the much shorter reference period applied, compared with 1957. The bias would appear to be smaller, if any, when the 1970 data were compared with the 1947 data since the latter was based on gainful employment at the time of enumeration.[32] But a more important point to stress is that these differences in definitions and coverage presented no difficulties to a sectoral classification of the employed population on a consistent basis.

[29] The results of the 1957 census were tabulated in a series of reports, the most important of which is Department of Statistics, *1957 Population Census of the Federation of Malaya*, Report No. 14. The results of the 1970 census were not yet available in published form as tabulations of only some of the characteristics of the population including employment have been completed. The kindness of the Department of Statistics in making available the data on employment at this stage is gratefully acknowledged.

[30] Malaya, *A Report of the 1947 Census of Population*, London, Crown Agents for the Colonies, 1949.

[31] This discussion is based on a close study of the questionnaires used in the three censuses, the notes in the census reports and, for the 1970 census, the instructions to the tabulators.

[32] The 1947 census would, for example, exclude those with regular employment but were not working at the time of enumeration because they were on vacation or sick leave or for other reasons.

3.2 *Overall View and International Comparison*

Table 3.19 shows the distribution of employed persons among the three major sectors of the economy namely, agriculture and forestry, industry and services as well as their average annual rates of growth. Growth of total employment was rather small. In 1947–57, total employment increased by only a little over 1 per cent a year on the average. In the review period, 1957–70, the average annual growth rate improved by ½ per cent each year. In terms of sectors, the following features are notable: i) The agriculture and forestry sector accounted for the bulk of the employed population. But the proportion declined markedly and between 1957 and 1970, it fell by over 6½ percentage points. ii) Underlying the decline in the share of employment in the agriculture and forestry sector was the very sluggish rate of labour absorption by the sector. Between 1947 and 1957, the rate of absorption was negligible and although it picked up a little after 1957, it remained at an average of less than 1 per cent a year. iii) The shares of the employed population accounted for by the industry and services sectors increased between 1947 and 1970. That of the services sector rose by nearly 4½ percentage points since 1957 and that of the industry sector by slightly over 2 percentage points since 1957. The services sector was thus able to maintain its position as the second largest source of employment. iv) The services sector had been absorbing labour at a rate fastest for all the sectors since 1947. The labour absorption rate of the industry sector was also high and, in fact, was only marginally smaller than the rate for the services sector.

This overall pattern of shifts of the employed population moved in the same direction as the changes in the sectoral origin of output noted in Table 3.2. An interesting point is that these shifts commenced even before 1957, as can be seen for the period 1947–57. But as will be obvious from the subsequent chapters of this study, policies and measures specifically directed to diversify the economy assumed importance only after 1957. The question that arises then is how significant were the contributions of these policies and measures to the sectoral shifts in the employed population.

The Malaysian experience suggests that such sectoral shifts need not be dependent entirely upon diversification policies and measures but certainly these policies and measures have been of importance to the continuation of these shifts. Tables 3.21, 3.22 and 3.25 which present more details of employment in the three major sectors of the economy provide the grounds for this assertion. In 1947–57, the expansion of employment in the industry and services sectors could be attributed to two factors: a) the increase in general Government activities; and b) the expansion of some private sector activities. The first factor largely accounted for the gains made by the services sector in 1947–57. During this period, there was the sharp intake of persons for Government and community services and, to a lesser extent, the education services. The second factor largely led the expansion of employment in the industry sector in 1947–57. A notable development was the increase in labour force in the construction industry which accounted for more than half of the growth of employment in the industry sector. There was also a large increase in employment in the mining industry. On the other hand, the impact of the diversification policies

Table 3.19

West Malaysia – Employment in Major Sectors and their Growth Rates

	Agriculture and Forestry	Industry	Services	Total	Total Including Activities Inadequately Described
Number of Persons Employed					
1947	1,240,608	257,740	370,755	1,869,103	1,875,345
1957	1,244,794	348,339	514,938	2,108,071	2,126,182
1970	1,359,181	484,802	747,229	2,591,212	2,692,526
Percentage Share of Total Employment					
1947	66.4	13.8	19.8	100	
1957	59.1	16.5	24.4	100	
1970	52.5	18.7	28.8	100	
Average Annual Rate of Growth during Period (%)					
1947–57	*	3.1	3.3	1.2	1.3
1957–70	0.7	2.6	2.9	1.6	1.8

Sources: Compiled from:

1. Department of Statistics, labour force data from the 1970 Population Census (not yet published)
2. Department of Statistics, *1957 Population Census of the Federation of Malaya,* Report No. 14, *op. cit.*, p. 31.

*Less than 0.1 per cent.

was most clearly reflected in the expansion of employment in the industry sector in 1957–70. During this period, public policy was of importance in encouraging the growth of manufacturing activities. Of the increase in employment in the industry sector of about 136,000 during 1957–70, 85½ per cent were accounted for by the manufacturing industries. The effects of diversification policies were less obvious in the services sector but they could reasonably be expected to have contributed to growth of employment in its various components, especially the services of various types and in trade and finance. In the agriculture and forestry sector, the diversification policies (which encouraged agricultural diversification) assisted growth of employment in the sector through the activities encouraged. Some important examples, as can be seen in Table 3.21, were in padi planting and oil palm cultivation. However, on the whole, the policies of agricultural diversification were unable to generate even the additional employment necessary to just arrest the decline in the share of the agriculture and forestry sector in total employment.

Table 3.20 compares West Malaysia's experience in the sectoral shift of its employed population with that of some of the major industrial countries, Great Britain, the United States and Japan. In all these advanced countries, employment in the agriculture and forestry sector in relation to total employment showed a consistent decline over the years. On the other hand, the percentage of the employed population in the industry sector rose significantly. The share of the services sector likewise rose with the years. Although the period of observation for West Malaysia was relatively shorter, the sectoral distribution of the employed population also moved in a like manner and thus conformed neatly with the common pattern of sectoral shifts observed by Kuznets to be typical of the diversifying economy. Of course, the rates of change in the pattern of distribution of employment among the three sectors differed from country to country, this being subject to a number of factors, including the techniques of production utilized (whether labour or capital-intensive), resource endowments, labour mobility, market demand, etc.

Each of the three major sectors examined comprised components which did not behave uniformly. An examination of these broad components should throw further light on the behaviour of each of the three sectors.

3.3 *The Agriculture and Forestry Sector*

Table 3.21 shows the distribution of employed persons among the major activities in the agriculture and forestry sector. As mentioned earlier, the strategy for economic diversification adopted by the Malaysian Government was not only to encourage the development of manufacturing industries but also to promote and assist the diversification of the agriculture and forestry sector. A notable consequence of this policy should be a wider range of agricultural output. This had been achieved in some degree, as seen earlier. However, the size of the labour force in the activities encouraged by policy need not necessarily change in the same direction as their output growth. Two major activities experienced substantial output growth during 1957–70 but their capability to absorb additional labour during the period was negligible. These were the fishing

Table 3.20

Distribution of Employment by Major Sectors —
West Malaysia and Selected Countries

Country		Percentage Share of Total Employed Population			
		Agriculture and Forestry	Industry	Services	Total
West Malaysia					
	1947	66	14	20	100
	1957	59	17	24	100
	1970	52	19	29	100
Developed Countries					
Creat Britain	1801	35	29	36	100
	1901	9	54	37	100
	1921	7	55	38	100
	1951	5	57	38	100
United States	1870	51	30	19	100
	1910	32	41	27	100
	1950	12	45	43	100
Japan	1925	52	24	24	100
	1950	48	27	25	100
	1960	33	35	32	100

Sources: Compiled from:

1. Table 3.19
2. Simon Kuznets, *Modern Economic Growth — Rate, Structure and Spread, op. cit.*, Table 3.2

industry and the forestry and logging industries.[33] However, in three other activities encouraged by policies of agricultural diversification, there were notable increases in their rates of labour absorption. These were oil palm cultivation, padi farming and livestock rearing. The average annual rates of labour absorption by these activities in 1957–70 were 7.3 per cent, 0.5 per cent and 3.2 per cent respectively compared with 1.7 per cent, −1.6 per cent and −1.8 per cent respectively in 1947–57. On the other hand, the efforts made to rehabilitate and improve the coconut industry as part of the wider objective to maintain

[33] See the earlier discussions as well as Chapters VI and VII respectively for evidence of output growth.

Table 3.21

West Malaysia – Distribution of Employed Persons in the Agriculture and Forestry Sector by Major Activities

Activity	Number of Persons Employed in the Agriculture and Forestry Sector			Percentage Share of Total Employed in the Agriculture and Forestry Sector			Average Annual Rate of Growth/Decline during Period (%)	
	1947	1957	1970	1947	1957	1970	1947–57	1957–70
Rubber	509,436	614,487	673,994	41.1	49.4	49.6	1.9	0.7
Padi[a]	470,692	398,295	426,486	37.9	32.0	31.4	–1.6	0.5
Oil palm	11,158	13,221	33,221	0.9	1.1	2.4	1.7	7.3
Coconut, copra, etc.	39,519	39,739	29,822	3.2	3.2	2.2	*	–2.2
Tea	n.a	4,558	3,354	n.a.	0.4	0.3	n.a	–2.3
Other crops	126,393	79,835	84,832	10.2	6.4	6.2	–4.5	0.5
Livestock	9,750	8,187	12,297	0.8	0.6	0.9	–1.8	3.2
Forestry & logging	13,372	19,161	18,320	1.1	1.5	1.4	3.7	–0.3
Fishing	60,288	61,431	61,415	4.8	4.9	4.5	0.2	–*
Agriculture services	n.a.	5,860	12,331	n.a	0.5	0.9	n.a.	5.9
Miscellaneous	–	20	3,109	–	*	0.2	–	+
Total	1,240,608	1,244,794	1,359,181	100.0	100.0	100.0	*	0.7

Sources: Compiled from sources cited in Table 3.19.

*Less than 0.1 per cent.
+Rate ignored because components in item during initial and terminal years not comparable.
[a]Includes occupations mainly in padi cultivation.
n.a. = not available

a more diversified agricultural output had little to show for results in terms of output. The decline in employment within the industry during 1957–70 is thus not surprising.

The rubber industry remained the largest single employer of labour in the agriculture and forestry sector. In 1957–70, the industry accounted for nearly half of total employment within this sector. Notwithstanding the large efforts to rejuvenate the industry (Chapter V), the average annual rate of labour absorption by the industry was very small, being at less than 1 per cent a year during 1957–70. It is interesting to note that the rate in 1947–57 was higher when it averaged nearly 2 per cent a year. This sluggish rate of labour absorption by the rubber industry was one of the factors which greatly added to the pressure to diversify the economy.

3.4 *The Industry Sector*

Table 3.22 shows the distribution of employed persons in the industry sector according to its major components. As a whole, the industry sector increased its share of total employment in both the periods 1947–57 and 1957–70. The largest source of employment in the sector was manufacturing which accounted for slightly more than half of the total employment in the sector in 1970. During 1947–57, total employment in manufacturing increased by only 9,548 persons or 1.6 per cent. But in 1957–70, total employment in this sub-sector rose by 116,230 persons or an increase of 85.6 per cent. The dominant role of manufacturing in accounting for the growth of employment in the industry sector during this period has been commented on earlier and needs no further discussion. Of even greater significance, the increase in employment in manufacturing during 1957–70 made up nearly one-quarter of the increase in total employment in West Malaysia during the period. This reflected the emergence of manufacturing activities during the post-Independence period.

In view of the importance of manufacturing as a source of employment, it is appropriate to observe it in greater detail. Table 3.23 shows the distribution of employment in manufacturing in 19 industry groups. It also shows the shares of these groups in total employment in manufacturing as well as their annual rates of absorption of labour. The most obvious feature is that for 1957–70, the volume of employment had increased for all the 19 industry groups. In two of the industry groups, the increase was over 15,000 workers in each case during the period.[34] In eight other groups, the volume of employment in each group rose by 6,000–10,000 persons during 1957–70.[35] In terms of shares in total employment in manufacturing, four industry groups had shares of over 10 per

[34] The two industry groups were: i) food industries and ii) wood and associated products group.

[35] These groups were: i) textiles; ii) footwear, other wearing apparel and made-up textile goods; iii) printing, publishing and allied industries; iv) rubber products; v) chemicals and chemical products; vi) basic metal industries; vii) metal products; and viii) general engineering, machinery and equipment.

Table 3.22

West Malaysia – Distribution of Employed Persons in the Industry Sector by Major Activities

Activity	Number of Persons Employed in the Industry Sector			Percentage Share of Total Employed in the Industry Sector			Average Annual Rate of Growth/Decline during Period (%)	
	1947	1957	1970	1947	1957	1970	1947–57	1957–70
Mining & Quarrying	47,690	58,499	55,276	18.5	16.8	11.4	2.1	–0.4
Manufacturing	126,161	135,709	251,939	48.9	39.0	52.0	0.7	4.9
Construction	13,458	67,807	59,862	5.2	19.4	12.3	17.6	–1.0
Electricity, Water & Sanitary Services	4,561	11,569	19,756	1.8	3.3	4.1	9.8	4.2
Transportation, Storage & Communications	65,870	74,755	97,969	25.6	21.5	20.2	1.3	2.1
Total	257,740	348,339	484,802	100.0	100.0	100.0	3.1	2.6

Sources: Compiled from sources cited in Table 3.19.

cent in 1970 while the shares of the remaining 15 groups did not exceed 5 per cent each. The four industry groups were i) food; ii) footwear, other wearing apparel and made-up textile goods; iii) wood and associated products; and iv) general engineering, machinery and equipment. The same pattern of employment distribution also prevailed in 1957. Nevertheless, during 1957–70, four industry groups emerged, either as new activities (leather and leather products and, products of petroleum and coal), or as activities which showed a large increase in labour utilization compared with an insignificant level in 1957 (paper and paper products and basic metal industries). But other than for the basic metal industries, the other three industry groups made only very limited contributions to employment growth. Finally, another interesting feature in Table 3.23 is the very large number of industry groups having individual rates of labour absorption during 1957–70 which were higher than the rate for manufacturing activities as a whole. Of the 19 industry groups observed, 13 groups fell into this category.[36]

In viewing the broad issue of labour absorption and the development of manufacturing activities, an important question that arises is: What has been the general impact of the Government's industrial policy on this? In general, it can be said that the policy had given considerable assistance and encouragement to the development of the manufacturing sector. A full discussion of the Government's role in this regard is presented in Chapters IX–XI of this study. Public policy can therefore reasonably claim a significant part of the credit for the sharp growth of employment opportunities provided by manufacturing. However, in terms of maximizing employment creation in manufacturing, the contribution of public policy is debatable. As will be seen in Chapter IX, the Government's incentives for manufacturing industries did not include any measure of significance to encourage labour-intensive industries until 1971. On the other hand, its major incentive to encourage industrial investment, the pioneer industries scheme, tended to encourage capital-intensity in the production process.

Coming back to Table 3.22, it can be seen that next to manufacturing, activities concerned with transportation, storage and communications made up the next largest source of employment in the industry sector (20 per cent in 1970). During 1957–70, this group of activities had an average rate of labour absorption of 2 per cent a year compared with a little over 1 per cent a year in 1947–57. A large part of the employment growth here could have arisen in response to the rising importance of manufacturing activities and Government investments, as pointed out in the earlier section.

The next two largest sub-sectors in terms of employment were construction and, mining and quarrying. In both of them, the number of persons employed in

[36] These were i) food; ii) tobacco; iii) textiles; iv) paper and paper products; v) printing, publishing and allied industries; vi) leather and leather products; vii) rubber products; viii) chemicals and chemical products; ix) products of petroleum and coal; x) non-metallic mineral products; xi) basic metal industries; xii) metal products; and xiii) electrical machinery, appliances and supplies.

Table 3.23

West Malaysia – Distribution of Employed Persons in Manufacturing by Industry Groups

Industry Group	Number of Persons Employed in Manufacturing			Percentage Share of Total Employed in Manufacturing			Average Annual Rate of Growth/Decline during Period (%)	
	1947	1957	1970	1947	1957	1970	1947–57	1957–70
Food	17,983	17,596	34,102	14.3	13.0	13.5	-0.2	5.2
Beverages	1,143	1,773	2,729	0.9	1.3	1.1	4.5	3.4
Tobacco	2,791	3,147	7,281	2.2	2.3	2.9	1.2	6.7
Textiles	4,121	2,779	12,710	3.3	2.0	5.0	-3.8	12.4
Footwear,[a] Other Wearing Apparel, and Made-up Textile Goods	14,764	22,788	30,662	11.7	16.8	12.2	-4.4	2.3
Wood and Associated Products[b]	38,145	28,798	46,520	30.2	21.2	18.5	-2.8	3.8
Furniture and Fixtures	3,417	6,583	8,827	2.7	4.9	3.5	6.8	2.3
Paper and Paper Products	305	316	3,122	0.2	0.2	1.2	0.4	19.3
Printing, Publishing and Allied Industries	2,723	4,319	10,775	2.2	3.2	4.3	4.7	7.3
Leather and Leather Products	–	–	704	–	–	0.3	–	*
Rubber Products	2,334	2,102	9,430	1.9	1.6	3.7	-1.1	12.2
Chemicals and Chemical Products	1,393	1,958	8,349	1.1	1.4	3.3	3.5	11.8
Products of Petroleum & Coal	–	–	974	–	–	0.4	–	*
Non-metallic Mineral Products	2,361	4,252	9,349	1.9	3.1	3.7	6.1	6.2
Basic Metal Industries	2,701	873	7,885	2.1	0.6	3.1	-10.7	18.5
Metal Products[c]	3,223	2,738	9,893	2.6	2.0	3.9	-1.6	10.4
General Engineering, Machinery and Equipment[d]	16,934	23,577	31,203	13.4	17.4	12.4	3.4	2.2
Electrical Machinery, Appliances and Supplies	1,223	2,180	5,978	1.0	1.6	2.4	6.0	8.1
Miscellaneous	10,600	9,930	11,446	8.4	7.3	4.5	-0.7	1.1
Total	126,161	135,709	251,939	100.0	100.0	100.0	0.7	4.9

Sources: Compiled from sources cited in Table 3.19.

[a] Excludes rubber footwear.
[b] Includes related products of rattan, mengkuang, attap and cork.
[c] Excludes machinery and transport equipment.
[d] Includes transport equipment but excludes electrical machinery.
* Not calculated because there was no corresponding figure for 1957.

1970 were lower than in 1957. Little was known of developments within the construction industry. Between 1947 and 1957, employment in the industry rose by more than 5 times, a remarkable feature in itself, but there was a large fall during 1957–70. On the basis of available data for 1960–70 (Table 3.10), output of construction showed a generally rising trend. It would seem reasonable, therefore, to rule out fluctuations in output as an important factor and instead to consider that some degree of substitution of labour with capital had taken place. However, even with the decline in 1970, employment in the industry continued to be maintained at a very high level. With respect to mining and quarrying, the underlying causes for the decline in employment were more obvious. An examination made in Chapter XII revealed a rising degree of capital-intensity in the mining industry. Furthermore, by the early 1970's, the mining sector was virtually reduced to only tin mining. In fact, the 1970 census figure on employment did not quite reflect the full decline of the labour force in mining for the year. After the census was taken in August, two major iron ore mines closed down towards the end of 1970, causing a further reduction of employment in mining by about 3,700 persons.

The last group in the industry sector covered workers engaged in providing electricity, water and sanitary services. In any growing economy, the demand for these services is undoubtedly enhanced by a number of factors, the more prominent of which are the expanding manufacturing activities, the continuing process of urbanization and the progress achieved in rural development. The previous part of this chapter has pointed out that the Government had responded with large and increasing investments in the provision of these services. It is, therefore, not surprising for there to be a large increase in employment in these services during 1957–70.

3.5 *The Services Sector*

As seen earlier, the services sector was the second largest of the three major sectors in terms of total employment and it was also the sector that accounted for the largest proportion of the increase in employment during 1957–70. Table 3.24 shows the distribution of employed persons in the services sector by major categories. Between 1957 and 1970, total employment in the sector rose by 232,291 persons or slightly over 1½ times larger than the increase in the industry sector. During this period, two categories of activities accounted for about one-third each of this increase in employment. These categories were activities in trade and finance and, activities providing business, recreation and personal services. Another interesting feature concerning these two categories is that their average annual rates of labour absorption were higher in 1957–70 compared with 1947–57. The expansion of these services usually reflects the growing complexities of an economy and rising income levels. This is true of the situation in West Malaysia.

Employment in the education services accounted for 23 per cent of the total increase in employment in the services sector in 1957–70. Education facilities in West Malaysia had, in fact, been expanding since the end of the war. This expansion was, of course, related to the large and fast-growing population of

Table 3.24

West Malaysia – Distribution of Employed Persons in the Services Sector by Major Activities

Activity	Number of Persons Employed in the Services Sector			Percentage Share of Total Employed in the Services Sector			Average Annual Rate of Growth/Decline during Period (%)	
	1947	1957	1970	1947	1957	1970	1947–57	1957–70
Government & Community Services[a]	82,293	167,320	189,022	22.2	32.5	25.3	7.4	0.9
Education Services[b]	16,207	42,003	95,759	4.4	8.2	12.8	10.0	6.5
Business, Recreation, Personal, etc., Services	99,135	110,423	187,845	26.7	21.4	25.1	1.1	4.2
Trade and Finance	173,120	195,192	274,603	46.7	37.9	36.7	1.2	2.7
Total	370,755	514,938	747,229	100.0	100.0	100.0	3.3	2.9

Sources: Computed from:

1. Sources cited in Table 3.19.
2. Malaya, *A Report on the 1947 Census of Population, op. cit.*, pp. 444–45.

[a] Includes the police and the armed forces.

[b] Covers both the Government and private institutions.

school-going age in the post-war years and the importance given by the Government since the war to providing educational opportunities. Employment in the education services thus increased by about 2½ times between 1947 and 1957 and by about 2¼ times between 1957 and 1970. By 1970, the share of employment in the education services in relation to total employment in the services sector had risen by over 4½ percentage points compared with 1957.

The category of services which had the smallest share of the increase in employment in the services sector (over 9 per cent) comprised Government and community services. But in terms of employment in the sector, the category accounted for about 25 per cent in 1970, or as large a source of employment as the category covering business, recreation and personal services. During 1957–70, growth of employment in this category appeared to be levelling off, the average annual rate of increase being almost 1 per cent. In contrast, the preceding period, 1947–57, saw a very sharp expansion of employment in the Government and community services. But this was virtually caused by the expansion of the police and the armed forces as a result of the Emergency which fell largely within this period.[37]

Growth of employment in the services sector provides supplementary though not conclusive evidence of the trend towards a more diversified economy. It is conceivable for an expansion of employment in the services sector to occur without being accompanied by economic diversification. For example, a flourishing agriculture and forestry sector alone could stimulate an increase in the demand for services in trade and finance as well as business, recreation and personal services. Likewise, factors not directly related to output such as high rates of population growth in the recent past could also increase the size of the services sector via an increase in education services. In West Malaysia's case, however, the indications of diversification established elsewhere suggest that part of the growth of employment in the services sector could be attributed to the diversification process.

[37] The police and armed forces increased by 75,288 during the period, accounting for 88½ per cent of the growth of employment in the Government and community services.

CHAPTER IV

EVIDENCE OF ECONOMIC DIVERSIFICATION IN THE FOREIGN TRADE SECTOR

1. INTRODUCTION

The previous chapter examined the evidence of economic diversification in the spheres of production and employment. The conclusions are clear that over the decade of the 1960's, the production structure had undergone significant changes. The data on employment also reflected the impact of an increasingly diversified economy on the pattern of employment. However, this body of evidence is incomplete without an examination of the effects of diversification on the foreign trade sector. The rationale for a more diversified economy for West Malaysia rests on, among other things, the need to offset the effects of the long-term declining prospects of rubber on export earnings. This has implications for both exports and imports. For exports, the basic issue is whether new lines of exports had developed and, for imports, whether domestic production had replaced some of the imports. It is thus necessary to observe the quantitative changes in the trend towards a more diversified export structure and, in the case of imports, the trend towards import replacement and the development of new imports to support the changing production structure. Furthermore, the qualitative aspects of these changes or their directions need to be noted, as these reflect the strength and deficiencies of the policy framework within which these developments had taken place.

The chapter will thus assess the developments in the foreign trade sector from the standpoint of economic diversification.

2. THE STRUCTURE OF EXPORTS

2.1 *Aggregate Exports and Diversification of Export Components*

In affecting the structure of production, the process of diversification must of necessity also affect the structure of exports. Detailed data on exports of merchandise were available from the annual statistics of external trade published by the Department of Statistics. Data on transactions in services which were less firm, were also compiled by the Department as part of the balance of payments account. But these were only on a Malaysian basis and, furthermore, were presented only in broad categories. In any case, the services balance each year had always been a large negative item.

Table 4.1

Malaysia – Selected Items of Invisible Trade
($ million)

Invisible Trade	1962	1963	1964	1965	1966	1967	1968	1969	1970
Receipts									
Freight and Insurance	5	5	6	6	5	5	5	5	5
Other Transportation	29	30	42	48	57	60	70	71	82
Travel	12	17	20	22	28	42	47	30	32
Other Services	17	16	13	50	52	57	65	67	77
Total	63	68	81	126	142	164	187	173	196
Payments									
Freight and Insurance	150	160	160	168	170	175	191	192	236
Other Transportation	26	27	33	64	68	69	82	83	98
Travel	82	86	94	102	106	111	120	126	137
Other Services	66	71	78	103	126	148	165	163	195
Total	324	344	365	437	470	503	558	564	666
Net Balance	-261	-276	-284	-311	-328	-339	-371	-391	-470

Source: Department of Statistics

Some broad remarks about the export of services are, however, useful in order to provide the necessary perspective. Using the all-Malaysia series prepared by the Department of Statistics, Table 4.1 selects the major services exported and imported during 1962–70. Over these nine years, the value of freight and insurance services sold remained stagnant. Receipts from services under 'other transportation' showed a markedly rising trend – in fact in the nine years under review, receipts from this item expanded by nearly 3 times. Services provided under this item covered a number of things namely, passenger fares, port disbursements, expenditure by ships' crews and coastal services. But no breakdowns were available. Receipts from 'travel' (that is, travel expenditures by tourists, businessmen, officials and students) also increased and in some years to almost 4 times the receipts of 1962. However, these receipts were by no means large, a reflection of the relatively small tourist trade in Malaysia. Another major item was 'other services' which increased by $60 million between 1962 and 1970. These services covered, among other things, non-merchandise insurance, communications, film rentals and management fees.

All these show the range of services Malaysia could export to foreign countries and they constitute one indication of the increasing diversification of the economy. On the other hand, Malaysia's demand for these services was expanding even faster than what it could increasingly earn from such. The result is that Malaysia's net balance on these services exhibited a progressively widening deficit over the years. In a sense, this reflected the deficiency of the country's policies to develop the services sector at an appropriate pace.

The main concern of this part of the exercise is merchandise exports which amounted to over $4,000 million in 1969 compared to the export of services of $173 million. Considering that a number of public policies and measures had been implemented (as will be discussed in subsequent chapters) in the spheres of agricultural, mineral and industrial production, some quantitative assessment must be made as to whether the structure of exports had become more diversified. In other words, the objective is to ascertain whether the pattern of West Malaysian exports is moving away from the classic export patterns of the primary producers characterized by a high degree of concentration on a very small number of commodities.

A single quantitative measure which could be applied to ascertain the degree of concentration of total exports on individual commodity exports is the Gini-Hirschman coefficient of commodity concentration.[1] This coefficient is defined as:

$$Cjx = 100\sqrt{\Sigma\left(\frac{Xij}{Xj}\right)^2}$$

where Cjx is the coefficient of commodity concentration of exports of country j;

Xij is the value of country j's export of commodity i during the reference period;

Xj is the total value of country j's exports.

From the form of the above coefficient, it can be seen that if the exports of a country comprise only a single commodity, the coefficient will take on the value of 100. On the other hand, the coefficient will have lower values as the number of commodities exported increases and the more evenly exports are spread over these commodities. In other words, the value of the coefficient approaches zero as the diversification of exports increases.

Little use has been made of this coefficient to examine the exports of West Malaysia. The earliest use of this technique was by Michael Michaely when he computed the coefficients for 44 countries in respect of their 1954 exports,

[1] The coefficient, as first developed by Corrado Gini, took a slightly different form. Hirschman later developed it independently in the form as used above. See Albert O. Hirschman, *National Power and the Structure of Foreign Trade*, Berkeley, University of California Press, 1945.

including one for West Malaysia and Singapore combined.[2] A recent study by the United Nations Economic Commission for Asia and the Far East (ECAFE) on the economic problems of export-dependent countries calculated the coefficients for West Malaysia for only 1962 and 1965.[3] In the discussion on trends in export diversification, it would be necessary to have a series of these coefficients to cover at least adequate points in the period under review. This study thus calculated the coefficients for eight other years at appropriate intervals between 1955 and 1970.

For purposes of computing the coefficients, commodities were defined as under the three-digit code of the Standard International Trade Classification (SITC). Items of West Malaysia's foreign trade were classified according to this system with some appropriate modifications. The number of 'commodities' exported (as defined) of course increases with the growth of new products and the break-up of some existing 'commodity' groups with the growing importance of some of their components. The number of 'commodities' in the respective years are as follows: 144 (1955), 146 (1957), 146 (1960), 184 (1963), 164 (1966), 164 (1968), 168 (1969) and 185 (1970). The changes in these numbers were considered unlikely to affect the coefficients in a significant way as many of the items concerned were generally very small. On the other hand, a few 'commodities' in the Malaysian export structure have significant influence on the value of the coefficient. The selection of the three-digit commodity code was felt to be the most appropriate. Both the one-digit and the two-digit classifications were obviously too broad. The items in the six-digit classification (next in fineness to the three-digit code) were too numerous to be manageable.

Table 4.2 sets out the coefficients of commodity concentration of exports calculated for the eight years. As the computation of the coefficients for 1962 and 1965 presented in the ECAFE study referred to earlier, was also based on the three-digit classification, these have been included in the table to have a more comprehensive series. From the series of coefficients over time, it can be seen that the values of the coefficients had a clearly declining trend. In 1955, the coefficient was 68.5 but by 1970, it had fallen to 47.3. The implication of this trend is that there had been increasing diversification of the exports of West Malaysia over the past 1½ decades.

One point needs further elaboration. Although the trend of falling values of the coefficient each year was unmistakable, there were years when the coefficient took a sudden jump away from this trend, as in 1960 and 1969. If reference is made to Table 2.15, it can be seen that these were the two years in which the prices of rubber were amongst the highest; and if these were related to the continuous rising trend in rubber export volume, it can be seen that for these

[2]Michael Michaely, *Concentration in International Trade*, Amsterdam, North Holland Publishing Co., 1962, p. 11.

[3]United Nations, *Economic Survey of Asia and the Far East, 1968*, p. 18. In fact, the coefficient for 1965 also appeared in the 1967 Survey. See United Nations, *Economic Survey of Asia and the Far East, 1967*, p. 23.

Table 4.2

West Malaysia – Coefficient of Commodity Concentration of Exports

Year	Coefficient of Commodity Concentration of Exports	% Share in Total Exports		
		Rubber	Tin	Rubber & Tin
1955	68.5	67.1	18.4	85.5
1957	62.1	59.8	20.1	79.9
1960	65.1	62.5	17.3	79.8
1962	57.7*	52.1	23.6	75.7
1963	56.6	50.8	23.7	74.5
1965	52.7*	44.1	28.1	72.2
1966	51.8	44.7	25.4	70.1
1968	48.5	40.4	25.8	66.2
1969	53.4	47.6	23.1	70.7
1970	47.3	39.7	24.2	63.9

Sources: 1. Computed from Department of Statistics, *Annual Statistics of External Trade*, West Malaysia, various years .

2. United Nations, *Economic Survey of Asia and the Far East, 1968*, *op. cit.*, p. 18.

*Computed by ECAFE.

two years there were sharp increases in the share of rubber exports in relation to total exports (Table 4.2). Despite the development of a more diversified export structure, the large influence of rubber on the coefficient of commodity concentration was still obvious. It can be seen from Table 4.2 that there was a very close relationship between the movements in the coefficients and the changes in the share of rubber exports. Deviations of the coefficient from the longer-run trend evident in the series should be expected when there were marked changes in the position of rubber exports. This will continue so long as rubber is accountable for such a large share of total exports.

Over the period 1955–70, substantial progress was made in the development of exports other than rubber and tin. This will become evident in the course of this chapter but some indication in very broad terms can be seen in Table 4.3. With the exception of 1958, total exports excluding rubber and tin (henceforth, designated as residual exports) increased consistently year after year. The growth of these exports each year was also substantial. For seven of the 15 years observed, the annual growth rate exceeded 10 per cent and for another five years during the period, the growth rate was between 5 and 10 per cent a year. Another notable feature is that for most of the time, the residual exports grew faster than total exports. In the 15 years observed, the residual exports in 12 of

Table 4.3

West Malaysia – Year-To-Year Change in Total Exports and Exports Excluding Rubber and Tin

Year	Gross Exports ($ million)	Change during Year (%)	Gross Exports Excluding Rubber and Tin ($ million)	Change during Year (%)
1955	2,370.2		352.5	
1956	2,262.0	- 4.5	412.4	+ 17.0
1957	2,179.5	- 3.6	436.0	+ 5.7
1958	1,882.3	- 13.6	410.6	- 5.8
1959	2,473.4	+ 31.4	452.7	+ 10.3
1960	2,927.4	+ 18.4	591.0	+ 30.6
1961	2,626.1	- 10.3	630.6	+ 6.7
1962	2,625.9	-*	638.0	+ 1.2
1963	2,704.6	+ 3.0	688.3	+ 7.9
1964	2,780.9	+ 2.8	749.2	+ 8.8
1965	3,102.9	+ 11.6	862.8	+ 15.2
1966	3,119.5	+ 0.5	931.7	+ 8.0
1967	2,918.8	- 6.4	947.4	+ 1.7
1968	3,216.7	+ 10.2	1,086.1	+ 14.6
1969	4,075.6	+ 26.7	1,195.8	+ 10.1
1970	4,192.1	+ 2.8	1,515.5	+ 26.7

Sources: Compiled from Department of Statistics, *Monthly Statistical Bulletin*, February 1965 and July 1972.

*Negligible

these years had a larger growth rate than total exports. These residual exports, in fact, became an important source of export growth during the review period. Of the increase in total exports of $1,822 million between 1955 and 1970, 64 per cent of this increase was accounted for by the growth of these residual exports.

2.2 *Growing and Declining Export Items by Size*

The trend of the coefficients of commodity concentration of exports indicated that the export content had become more diversified but it did not reveal in what direction. As a basis for the examination and assessment of public policies and measures to promote diversification, knowledge on the latter would also be essential. A detailed examination was therefore made of the export data to ascertain how the major items of exports have changed in the 1½ decades since 1955/57. At the time this chapter was being prepared the detailed statistics on

external trade for 1970 were not yet available. Thus, 1969 was taken as the terminal year for the following analyses.

This exercise, to be manageable and meaningful, had to be selective. In the selection process, the export items in the three-digit code were examined and those with values of $1 million and above in 1969 were picked out. Care was also taken to ensure that those items of importance in past years which had fallen below this limit were not left out. In many cases, the items as classified under the three-digit system appeared too broad and changes in the components of each item too significant to ignore. In such an event, the items were broken up and presented on the basis of the six-digit classification. Furthermore, the various modifications to the classification system made from time to time by the Department of Statistics meant increased reliance on the six-digit code.

Some indication of the diversification of the export structure of West Malaysia is given in Table 4.4. For this exercise, the export values of the items selected in accordance with the above procedure for 1955 and 1957 were averaged and the values of these items in 1960, 1963, 1966, 1968 and 1969 compared with these averages. The items included in this table were those which were increasingly becoming larger in the selected years 1960, 1963, 1966, 1968 and 1969 compared with the 1955/57 average. A total of 101 such items was identified for these years.

Some interesting features may be seen from a close examination of the table. Firstly, the number of export items with growth tendencies had increased; indeed, in the 10 years (1960–69), the number rose by 56 per cent. Apart from this numerical increase, another important change had also taken place. With the passage of time, increasing percentages of the export items were expanding by larger amounts over their 1955/57 averages. This was especially marked for items which increased by amounts of up to $15 million above their 1955/57 average. There was a drastic decline in the percentage of items which were up to $1 million above their 1955/57 average; in 1960 there were 48 such items or 75 per cent of the total number of items but by 1969, the number of such items fell to only 10 or, 10 per cent of the total. On the other hand, the percentages of items with values above their 1955/57 levels of over $1 million but under $15 million have increased markedly. Especially notable were items with increases over their 1955/57 levels of the following ranges: $1.1–2 million (1960:9.4 per cent of total; 1969: 34 per cent), $2.1–3 million (1969:3.1 per cent of total; 1969: 13 per cent), $3.1–4 million (1960:1.6 per cent of total; 1969:8 per cent) and $7.1–10 million (1960: 1.6 per cent of total; 1969: 9 per cent). Less markedly, but nevertheless following this general pattern of more and more items having larger increases over their 1955/57 averages were most of the remaining items observed.

These trends are important for they reflected not only an increasing number of export items with growing foreign demand but also that for a number of these items, their contributions to total export proceeds were increasing.

However, one other feature must be noted. As much as 70 per cent of the items which expanded in 1969 did so within a range of up to $5 million above their 1955/57 levels. Another 21 per cent of the total number of items had increases of $5.1–15 million.

Table 4.4

West Malaysia – Distribution of Export Items with Generally Rising Trend by Size of Increase Above 1955/57 Average

Size of Export Value Above 1955/57 Average ($ million)	Number of Export Items					Percentage of Total				
	1960	1963	1966	1968	1969	1960	1963	1966	1968	1969
1 and below	48	42	29	20	10	75.0	51.9	31.5	20.2	10.0
1.1 – 2	6	15	19	24	34	9.4	18.5	20.7	24.2	34.0
2.1 – 3	2	14	10	21	13	3.1	17.3	10.9	21.2	13.0
3.1 – 4	1	2	7	4	8	1.6	2.5	7.6	4.0	8.0
4.1 – 5	–	–	5	3	5	–	–	5.4	3.0	5.0
5.1 – 7	3	1	4	9	7	4.6	1.2	4.3	9.1	7.0
7.1 – 10	1	1	6	5	9	1.6	1.2	6.5	5.1	9.0
10.1 – 15	–	3	3	5	5	–	3.7	3.3	5.1	5.0
15.1 – 20	1	–	1	–	–	1.6	–	1.1	–	–
20.1 – 30	1	2	4	3	2	1.6	2.5	4.3	3.0	2.0
30.1 – 50	–	–	2	1	2	–	–	2.2	1.0	2.0
50.1 – 100	–	–	1	3	1	–	–	1.1	3.0	1.0
100.1 and above	1	1	1	1	4	1.6	1.2	1.1	1.0	4.0
Total	64	81	92	99	100	100.0	100.0	100.0	100.0	100.0
Number of Items with Same or Lower Export Values compared with 1955/57 Average	37	20	9	1	1					
Number of Items Not Identified	–	–	–	1	–					
Grand Total	101	101	101	101	101					

Sources: Computed from Department of Statistics, *Annual Statistics of External Trade*, West Malaysia, various years.

There was another category of export items which were larger than their 1955/57 levels but their excesses, instead of growing as in the above items, were declining with the years. There were only four such items and they are shown in Table 4.5. In 1960, there were four items with export values above their 1955/57 levels. But by 1969, there were only two such items while the other two items had fallen below their 1955/57 average. Over the period, it can also be seen that the size of the items over their 1955/57 values declined generally.

For completeness, it is necessary to look at a third category of export items. These were items with values persistently below their 1955/57 levels. They represented exports which were clearly declining towards relative insignificance or disappearance. Table 4.6 shows a total of 16 such items which have been identified. After 1960, there was an increase in the number of export items with persistently lower export values compared with 1955/57. The number of items which declined by up to $1 million below their 1955/57 levels showed little change. The number of those having declined by $1.1–2 million rose by two in some years. But more significant were those items that declined by even larger amounts in the selected years compared to their 1955/57 average, e.g. those with export values which were $4 million or more lower than their 1955/57 levels, totalled three in 1960 but rose to six in 1968 and five in 1969.

Export items which have declining trends are familiar features in changing export structures and indeed, it is due to some of these, especially if they are of great significance like rubber, that efforts are made to develop new lines of exports. Most important is that on balance, there should be a net increase in total exports, after taking into consideration those items with growth tendencies and those with declining trends. West Malaysia was in this fortunate position.

2.3 *Growing and Declining Export Items by Size and Commodity Groups*

Having examined the distribution of the major and more dynamic items of exports, whether those with growth or declining trends, the next task is to identify these items.

Table 4.7 shows the export items with generally rising trend. These were classified into three broad groups: i) crude materials, ii) foodstuffs, beverages and tobacco, and iii) manufactures. In addition, the first two groups were sub-divided into unprocessed (and those with little processing) and processed (including manufactures in the case of foodstuffs, beverages and tobacco). The years 1960 and 1969 were selected for comparison. The most obvious feature is that about two-thirds of the total export items in 1960 and 1969 which were above their 1955/57 averages, were in the form of manufactures. Exports of crude materials accounted for 11 per cent of the total number of items in 1960 but their share rose to nearly 14 per cent in 1969. Items within the category of foodstuffs, beverages and tobacco accounted for 23 per cent of the total number of items in 1960 and 19 per cent in 1969. Secondly, between 1960 and 1969, there was a substantial increase in the number of manufactured exports which weré above their 1955/57 levels, that is, an increase of 24 items to make a total of 67 in 1969. A third significant feature is that by 1969, there were more items of manufactured exports in the range of larger increases over their 1955/57

Table 4.5

West Malaysia – Distribution of Export Items with Generally Falling Trend (But with Values Still Above 1955/57 Average) by Size of Increase

Size of Export Value Above 1955/57 Average ($ million)	Number of Export Items				
	1960	1963	1966	1968	1969
1 and below	–	–	1	1	–
1.1 – 2	–	–	1	–	1
2.1 – 3	1	1	–	–	–
3.1 – 4	–	–	1	1	–
4.1 – 5	–	1	–	–	–
5.1 – 7	1	–	–	–	–
7.1 – 10	–	1	–	–	–
10.1 – 15	–	–	–	–	–
15.1 – 20	–	–	–	–	–
20.1 – 30	1	–	–	–	–
30.1 – 50	–	–	–	–	–
50.1 – 100	1	–	1	1	1
100.1 and above	–	1	–	–	–
Total	4	4	4	3	2
Number with Lower Export Values compared with 1955/57 Average	–	–	–	1	2
Grand Total	4	4	4	4	4

Sources: Same as for Table 4.4

averages. In 1960, there were 38 items (out of 43) of manufactured exports which were up to $1 million above their 1955/57 values and another four items which were $1.1–2 million above. But in 1969, the number of items which were $1.1–2 million above their 1955/57 levels rose to 24, those which were $2.1–3 million above rose to nine (as against one in 1960), those which were $3.1–10 million above totalled 21 (none in 1960) and those which were $10.1–50 million above totalled four (none in 1960).

In the 10 years reviewed, the number of items of crude materials with increasing trend doubled from seven in 1960 to 14 in 1969. The number of items of processed crude materials increased from four in 1960 to six in 1969. On the other hand, the unprocessed (or little processed) items of crude materials which numbered three in 1960 rose to eight in 1969.

Table 4.6

West Malaysia – Distribution of Export Items with Generally Lower Values than in 1955/57 by Size of Deficiencies of These Values

Size of Export Value Below 1955/57 Average ($ million)	Number of Export Items					Percentage of Total				
	1960	1963	1966	1968	1969	1960	1963	1966	1968	1969
0 – 1	5	5	4	5	4	45.5	33.3	25.0	31.3	28.6
1.1 – 2	3	4	5	5	4	27.3	26.7	31.3	31.3	28.6
2.1 – 3	–	1	1	–	1	–	6.7	6.3	–	7.1
3.1 – 4	–	–	–	–	–	–	–	–	–	–
4.1 – 5	–	–	1	1	–	–	–	6.3	6.3	–
5.1 – 7	–	1	–	–	1	–	6.7	–	–	7.1
7.1 – 10	–	–	–	–	–	–	–	–	–	–
10.1 – 15	1	1	–	1	–	9.1	6.7	–	6.3	–
15.1 – 20	–	–	1	1	1	1	–	6.3	6.3	7.1
20.1 – 30	1	1	2	–	1	9.1	6.7	12.6	–	7.1
30.1 – 50	–	–	1	–	–	–	–	6.3	–	–
50.1 – 100	–	1	1	2	1	–	6.7	6.3	12.3	7.1
100.1 and above	1	1	–	1	1	9.1	6.7	–	6.3	7.1
Total	11	15	16	16	14	100.0	100.0	100.0	100.0	100.0
Number with Higher Export Values compared with 1955/57 Average	5	1	–	–	2					
Grand Total	16	16	16	16	16					

Sources: Same as for Table 4.4.

Table 4.7

West Malaysia – Distribution of Export Items with Generally Rising Trend
by Size of Increase Above 1955/57 Average and Broad Commodity Groups, 1960 and 1969

Size of Export Value Above 1955/57 Average ($ million)	1960								1969							
	Total Number of Items with Values Above 1955/57 Average	Crude Materials			Foodstuffs, Beverages and Tobacco			Manufactures	Total Number of Items with Values Above 1955/57 Average	Crude Materials			Foodstuffs, Beverages and Tobacco			Manufactures
		Unprocessed, Little Processing	Processed	Total	Unprocessed	Processed, Manufactured	Total			Unprocessed, Little Processing	Processed	Total	Unprocessed	Processed, Manufactured	Total	
1 and below	48	–	1	1	1	8	9	38	10	–	–	–	1	–	1	9
1.1 – 2	6	–	–	–	1	1	2	4	34	4	–	4	1	5	6	24
2.1 – 3	2	1	–	1	–	–	–	1	13	–	–	–	–	4	4	9
3.1 – 4	1	–	–	–	1	–	1	–	8	–	–	–	–	–	–	8
4.1 – 5	–	–	–	–	–	–	–	–	5	–	–	–	2	1	3	2
5.1 – 7	3	2	–	2	1	–	1	–	7	–	–	–	–	1	1	6
7.1 – 10	1	–	–	–	–	1	1	–	9	2	1	3	–	1	1	5
10.1 – 15	–	–	–	–	–	–	–	–	5	1	1	2	–	–	–	3
15.1 – 20	1	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
20.1 – 30	1	–	1	1	–	–	–	–	2	–	–	–	–	2	2	–
30.1 – 50	–	–	–	–	–	–	–	–	2	–	–	–	1	–	1	1
50.1 – 100	–	–	–	–	–	–	–	–	1	1	–	1	–	–	–	–
100.1 and above	1	–	1	1	–	–	–	–	4	–	4	4	–	–	–	–
Total	64	3	4	7	4	10	14	43	100	8	6	14	5	14	19	67
Number of Items with Same or Lower Values than 1955/57 Average	37	5	2	7	1	4	5	25	1	–	–	–	–	–	–	1
Grand Total	101	8	6	14	5	14	19	68	101	8	6	14	5	14	19	68

Source: Same as for Table 4.4

Between 1960 and 1969, the number of growing export items in the category of foodstuffs, beverages and tobacco increased by 14 to 19. Of the increase of five items, one was in the unprocessed group and the other four in the processed/manufactured group. A notable feature is that in 1969, more of the items of foodstuffs, beverages and tobacco had larger excesses over their 1955/57 averages compared with the position in 1960. In 1960, nine of the 14 items were larger by up to $1 million than their 1955/57 averages and another two were larger by $1.1–2 million. In 1969, there were six items which were $1.1–2 million above their 1955/57 averages and 12 items which were more than $2 million above.

In brief then, the picture presented is that a number of new export items had emerged and most of these were in the form of manufactures. The number of export items of crude materials with growth tendencies had also increased and to a lesser extent, that in the category of foodstuffs, beverages and tobacco. An important and common feature among all the three groups is that the size of many items had increased between 1960 and 1969.

Table 4.8 examines the distribution of export items with persistently lower values than in 1955/57 in terms of the three broad groups, crude materials; foodstuffs, beverages and tobacco; and, manufactures. There were 11 items in 1960 with values lower than in 1955/57 but their number increased to 14 in 1969. In both these years, these items were fairly evenly distributed among the three groups. In respect of crude materials, there was a clear trend that by 1969, all of the items had fallen by larger amounts below their 1955/57 averages, when compared with 1960. Items of foodstuffs and beverages were all of the unprocessed category and for these, more items in 1969 had larger values below their 1955/57 averages, compared with 1960. As for manufactures, no clear pattern emerged but there was an additional item with decrease of up to $1 million in 1969.

The four items with declining though larger export values than in 1955/57 are not shown in any table. Two of these items were in the crude materials category, the third in the foodstuffs group and the fourth, an item of manufacture (Table 4.12).

2.4 *Identification of Growing and Declining Export Items*

The earlier discussion has broadly set out the directions towards which the export structure of West Malaysia had moved since 1955/57. It now remains for a more specific discussion of these directions both in terms of individual items and amounts. Table 4.9 sets out the changes in the values of export items of crude materials with a generally rising trend. Tables 4.10 and 4.11 cover such changes in the foodstuffs, beverages and tobacco group and the manufactures group respectively. The items of manufactures are further broken down in Tables 4.11(a)–(e). Table 4.12 sets out those export items with declining trends. All the 121 items selected on the basis discussed earlier are covered by these tables.

From these tables, a fairly clear picture can be derived of the relative importance of the three broad groups of exports. Table 4.13 attempts to show

Table 4.8

West Malaysia – Distribution of Export Items with Generally Lower Values than in 1955/57 by Size of Deficiencies of these Values and Broad Commodity Groups, 1960 and 1969

Size of Export Value Below 1955/57 Average ($million)	1960								1969							
	Total Number of Items with Value Below 1955/57 Average	Crude Materials			Foodstuffs, Beverages and Tobacco			Manufactures	Total Number of Items with Value Below 1955/57 Average	Crude Materials			Foodstuffs, Beverages and Tobacco			Manufactures
		Unprocessed, Little Processing	Processed	Total	Unprocessed	Processed, Manufactured	Total			Unprocessed, Little Processing	Processed	Total	Unprocessed	Processed, Manufactured	Total	
0 – 1	5	1	–	1	2	–	2	2	4	–	–	–	1	–	1	3
1.1 – 2	3	–	–	–	1	–	1	2	4	–	1	1	1	–	1	2
2.1 – 3	–	–	–	–	–	–	–	–	1	–	–	–	1	–	1	–
3.1 – 4	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
4.1 – 5	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
5.1 – 7	–	–	–	–	–	–	–	–	1	–	–	–	1	–	1	–
7.1 – 10	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
10.1 – 15	1	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–
15.1 – 20	–	–	–	–	–	–	–	–	1	–	–	–	1	–	1	–
20.1 – 30	1	–	1	1	–	–	–	–	1	–	1	1	–	–	–	–
30.1 – 50	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
50.1 – 100	–	–	–	–	–	–	–	–	1	1	–	1	–	–	–	–
100.1 and above	1	1	–	1	–	–	–	–	1	1	–	1	–	–	–	–
Total	11	2	1	3	4	–	4	4	14	2	2	4	5	–	5	5
Number of Items with Export Values Above 1955/57 Average	5	2	1	3	1	–	1	1	2	2	–	2	–	–	–	–
Grand Total	16	4	2	6	5	–	5	5	16	4	2	6	5	–	5	5

Sources: Same as for Table 4.4.

Table 4.9

West Malaysia – Exports of Crude Materials with Generally Rising Trend in Values
($ million)

Item	Average Exports 1955/57	Size of Export Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
I. Agriculture and Forestry						
a) Unprocessed, little processing						
Wood in the rough	9.8	6.1	14.7	34.1	67.4	76.4
Oil palm nuts & kernels	5.2	5.9	2.1	3.9	9.0	7.2
	15.0	12.0	16.8	38.0	76.4	83.6
b) Processed						
Palm oil	40.9	19.7	28.1	77.1	75.9	101.9
Wood – Shaped or worked	18.5	21.3	22.9	37.6	92.6	109.7
Superior processed rubber	–	–	13.1	23.5	25.9	11.8
Standard Malaysian Rubber (SMR)	–	–	–	*	n.a.	168.9
	59.4	41.0	64.1.	138.2	194.4	392.3
Sub-total for I	74.4	53.0	80.9	176.2	270.8	475.9
II. *Mining and Quarrying*						
a) Unprocessed, little processing						
Crude petroleum	–	–	2.0	7.3	13.6	11.8
Bauxite	5.6	2.4	2.3	11.5	7.5	9.0
Manganese ore	–	–	0.3	2.9	1.4	1.5
Ilmenite	2.6	–2.6	1.4	1.0	1.4	1.7
Naturally radio-active metal ores	–	–	0.3	2.1	1.5	1.3
Stone and dolomite	0.1	–0.1	0.4	0.4	1.8	1.5
	8.3	–0.3	6.7	25.2	27.2	26.8
b) Processed						
Tin – unwrought	275.1	230.8	363.2	504.4	545.4	657.0
Metal scraping excluding iron	2.2	0.6	2.5	7.8	6.7	8.9
	277.3	231.4	365.7	512.2	552.1	665.9
Sub-total for II	285.6	231.1	372.4	537.4	579.3	692,7
Grand total for crude materials	360.0	284.1	453.3	713.6	850.1	1,168.6

Sources: Same as for Table 4.4

n.a. = not available
*negligible
Note: (–) before a figure means it is below the 1955/57 average.

Table 4.10

West Malaysia – Exports of Foodstuffs, Beverages and Tobacco with Generally Rising Trend in Values
($ million)

Item	Average Exports 1955/57	Size of Export Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
I. *Unprocessed*						
Fresh fish and prawns	12.8	3.1	5.6	28.7	39.5	47.0
Fresh vegetables	3.0	1.8	2.2	2.2	3.6	5.0
Rice	1.8	5.8	2.5	12.2	−0.6	1.6
Cocoa	*	0.1	0.2	0.4	1.0	0.9
Animal feedstuffs	0.4	−0.2	0.3	5.8	4.5	4.4
Sub-total	18.0	10.6	10.8	49.3	48.0	58.9
II. *Processed or Manufactured*						
Canned pineapple & juice	18.8	7.4	10.6	25.4	29.6	25.7
Condensed milk	0.6	0.1	0.5	11.2	13.8	9.8
Powdered milk for infants	+	–	0.3	1.6	2.3	2.8
Full cream powdered milk	*	0.2	0.2	0.7	0.8	1.1
Preserved vegetables	2.8	0.5	3.5	2.4	2.5	2.1
Canned fish & preparations	1.5	1.5	0.7	1.1	2.0	2.1
Milled wheat	0.2	0.1	0.2	0.2	5.3	1.2
Cereals & flour preparations	0.6	0.9	1.6	1.9	1.2	4.4
Sugar confectionery	0.1	0.2	0.2	0.8	1.2	2.0
Margarine, shortenings	1.7	0.5	0.9	2.1	2.1	1.9
Beer and ale	*	–	–	1.1	2.2	2.6
Stout and porter	+	0.1	0.1	6.1	6.3	5.6
Non-alcoholic beverages	–	–	–	–	0.5	1.3
Manufactured tobacco	0.3	–	–	–	11.3	27.9
Sub-total	26.6	11.5	18.8	54.6	81.1	90.5
Grand total for foodstuffs, beverages and tobacco	44.6	22.1	29.6	103.9	129.1	149.4

Sources: Same as for Table 4.4
Note: (–) before a figure means it is below the 1955/57 average.

*Less than $0.1 million.
+No breakdown available; value regarded as negligible.

this by summarizing Tables 4.9, 4.10, 4.11 and 4.12. It is interesting to note from Table 4.14 that the 121 export items examined accounted for between 96 and 98 per cent of total exports.

2.4(i) *Crude Materials*

Exports of crude materials were by far the most important of the three groups of exports: these made up 92 per cent of total exports in 1960 and although their share was declining, it nevertheless was still substantial at 84 per cent of

Table 4.11

West Malaysia – Exports of Manufactures with Generally Rising Trend in Values: All Categories
($ million)

Item	Average Exports 1955/57	Size of Export Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Textiles and articles of textiles	2.8	4.2	5.3	15.4	10.8	13.1
Articles of clothing	0.8	0.3	-0.1	4.6	10.4	19.2
Articles of footwear	5.1	1.0	2.2	0.4	2.6	1.8
Chemicals and chemical products	9.1	3.5	18.8	32.4	37.8	41.4
Petroleum products	15.3	-7.3	-4.3	31.7	36.2	26.3
Gas	–	–	–	1.2	3.0	0.7
Wood and wood products	0.5	–	1.2	8.4	23.6	40.6
Paper and paper products	0.4	0.7	1.2	1.7	3.6	5.3
Products of printing and publishing	1.0	0.5	2.0	4.2	4.9	5.5
Rubber products	7.1	2.4	7.4	12.9	14.3	17.7
Articles of plastics	*	0.2	0.3	1.0	1.0	2.4
Non-metallic mineral products	0.7	0.3	0.3	4.9	11.9	19.6
Machinery and equipment	8.6	0.9	9.2	23.4	20.9	28.1
Transport equipment	5.1	4.1	11.3	16.4	19.1	9.6
Metal products (excluding machinery)	2.3	-0.2	1.1	8.3	12.0	22.3
Miscellaneous manufactured goods	0.7	–	0.2	1.0	3.3	5.1
Total	59.5	10.6	56.1	167.9	215.4	258.7

Sources: Same as for Table 4.4
Note: (–) before a figure means it is below the 1955/57 average
*Less than $0.1 million.

Table 4.11(a)

West Malaysia – Exports of Manufactures with Generally Rising Trend in Values: Textiles, Clothings and Footwear
($ million)

Item	Average Exports 1955/57	Size of Export Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Textiles and Articles of Textiles						
Textile yarn and thread	0.12	0.7	0.6	1.3	2.3	2.9
Articles of textiles (sack, linen, etc.)	0.44	0.4	1.4	5.9	1.4	1.4
Bleached cotton woven fabric	0.40	0.3	−0.2	−0.3	0.6	1.3
Unbleached cotton (excluding unbleached cotton duck)	*	0.3	3.2	8.2	5.1	6.2
Dyed woven cotton fabric	0.72	2.3	0.3	0.3	0.3	0.5
Printed woven cotton fabric	1.16	0.2	–	–	1.1	0.8
Total	2.84	4.2	5.3	15.4	10.8	13.1
Articles of Clothing						
Shirts	*	–	0.2	3.2	5.7	8.6
Other outergarments for men & women (not knit or crocheted)	0.03	–	–	0.7	2.4	3.3
Kain sarong batek	–	–	–	–	0.9	1.8
Others (excluding sarong)	0.74	0.3	−0.3	0.7	1.4	5.5
Total	0.77	0.3	−0.1	4.6	10.4	19.2
Articles of Footwear						
Footwear – all types	5.12	1.0	2.2	0.4	2.6	1.8

Sources: Same as for Table 4.4
Note: (–) before a figure means it is below the 1955/57 average.
*Negligible.

Table 4.11(b)

West Malaysia – Exports of Manufactures with Generally Rising Trend in Values: Chemical and Petroleum Products
($ million)

Item	Average Exports 1955/57	Size of Export Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Chemicals and Chemical Products						
Inorganic chemicals	0.76	0.1	– 0.6	–0.6	0.2	1.6
Organic chemicals	1.05	0.6	0.1	1.6	2.7	2.6
Paints and enamels	0.17	0.3	1.4	4.8	6.8	6.3
Other paint products, varnishes	0.05	1.1	2.3	3.0	2.7	1.3
Medicinal and pharmaceutical products	2.51	0.9	2.9	3.5	4.6	7.0
Cosmetics, toilet preparations (excluding dental paste), perfumery	0.56	0.7	1.2	1.8	2.0	2.1
Dental paste	0.32	– 0.2	3.0	1.3	1.2	1.3
Soap and cleansing preparations	3.67	– 0.1	8.0	15.1	13.6	11.6
Manufactured fertilizers	0.03	0.1	0.1	1.4	3.3	5.6
Plastic materials	–	–	0.4	0.5	0.7	2.0
Total	9.12	3.5	18.8	32.4	37.8	41.4
Petroleum products						
Refined motor spirit	3.46	– 0.3	– 0.4	8.1	14.0	7.8
High speed diesel oil	1.40	– 0.2	0.8	3.4	6.3	9.6
Kerosene	2.46	– 1.9	· 0.1	– 1.3	9.8	8.8
Other petroleum products	7.98	– 4.9	– 4.8	21.5	6.1	0.1
Total	15.30	– 7.3	– 4.3	31.7	36.2	26.3
Gas						
Natural and manufactured gas	–	–	–	1.2	3.0	0.7

Sources: Same as for Table 4.4
Note: (–) before a figure means it is below the 1955/57 average.

total exports in 1969 (Table 4.14). The slow growth of exports of crude materials is obvious from Table 4.13. In 1960, the value of the 121 export items surveyed increased by $679.4 million over their 1955/57 average and of this increase, crude materials accounted for 97 per cent. Measured against their 1955/57 level, these 121 items increased by $455.9 million in 1963, $850.1 million in 1966, $950.2 million in 1968 and $1,796.8 million in 1969. But the share of these accounted for by crude materials showed marked decline, these being 84 per cent, 71 per cent, 66 per cent and 79 per cent respectively. The crude materials group fluctuated considerably, largely due to the frequently changing fortunes of natural rubber exports. In 1963, 1966 and 1968, the items of crude materials grouped under unprocessed and little processed agricultural and forestry products fell below their 1955/57 level (to the extent of $35–92 million) while in the good years for rubber, 1960 and 1969, the export value of this group rose to nearly $400 million above the 1955/57 level. The total export level each year was affected inevitably and indeed, very substantially.

Table 4.11(c)

West Malaysia – Exports of Manufactures with Generally Rising Trend in Values: Products of Wood, Paper, Rubber, Plastics and Non-Metallic Minerals
($ million)

Item	Average Exports 1955/57	Size of Export Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Wood and Wood Products						
Simply-shaped wood (plywood, veneer, etc.)	0.30	-0.2	0.9	7.1	22.3	38.7
Manufactures of wood	0.18	0.2	0.3	1.3	1.3	1.9
Total	0.5	–	1.2	8.4	23.6	40.6
Paper and Paper Products						
Paper and paper board	0.07	0.5	0.4	0.1	0.9	1.5
Articles of paper (boxes, bags, etc.)	0.30	0.2	0.8	1.6	2.7	3.8
Total	0.4	0.7	1.2	1.7	3.6	5.3
Products of Printing, Publishing						
Printed matter	1.00	0.5	2.0	4.2	4.9	5.5
Rubber Products						
Fabricated rubber manufactures						
– sheets and strips	2.81	0.5	1.6	2.8	2.6	2.5
-- others	0.12	1.0	1.9	3.8	3.0	3.8
Motor car tyres – pneumatic	0.31	-0.2	1.2	0.9	1.7	1.9
Lorry and bus tyres – pneumatic	1.11	-0.7	0.8	1.4	2.9	3.8
Manufactures of rubber excluding pneumatic tyres & fabricated articles	2.46	0.3	-0.8	0.5	1.9	3.4
Foam rubber mattresses	0.25	1.5	1.5	2.3	1.7	1.8
Foam rubber cushions, pouffe, pillows	–	–	1.2	1.2	0.5	0.5
Total	7.1	2.4	7.4	12.9	14.3	17.7
Articles of Plastics						
Plastic products	0.04	0.2	0.3	1.0	1.0	2.4
Non-metallic Mineral Products						
Cement	0.20	0.4	0.1	4.2	9.8	14.4
Building materials of asbestos cement	0.10	–	0.1	0.4	1.3	4.4
Manufactures of clay materials	0.37	-0.1	0.1	0.3	0.8	0.8
Total	0.7	0.3	0.3	4.9	11.9	19.6

Sources: Same as for Table 4.4
Note: (–) before a figure means it is below the 1955/57 average.

Table 4.11(d)

West Malaysia – Exports of Manufactures with Generally Rising Trend in Values: Machinery and Equipment and Transport Equipment
($ million)

Item	Average Exports 1955/57	Size of Export Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Machinery and Equipment						
Agricultural machinery & appliances	0.16	0.1	1.0	1.1	1.3	1.2
Metal working machinery	0.06	0.5	0.3	0.3	1.2	0.5
Machinery for special industries	3.28	0.1	1.3	1.7	2.8	4.6
Other machines & parts	2.41	–1.1	2.9	8.7	6.6	11.0
Electric power machinery, switch gear	0.06	0.3	1.1	2.3	1.3	2.6
Electricity distribution equipment	0.12	0.3	0.7	1.9	1.3	2.3
Domestic electricity equipment	0.07	0.2	0.3	0.4	1.0	1.3
Non-electric power generating equipment	2.04	0.2	1.2	6.3	4.0	3.4
Scientific, medical, optical and photo appliances	0.32	0.3	0.4	0.7	1.4	1.2
Total	8.5	0.9	9.2	23.4	20.9	28.1
Transport Equipment						
a) *Land Transport*						
New vehicles for carrying goods	0.46	1.1	2.5	1.6	2.9	2.7
Tractors – all types	1.02	0.2	2.8	4.9	2.6	1.1
Parts for motor vehicles, tractors	2.08	1.1	0.4	0.7	0.4	1.7
Used passenger cars	1.23	1.0	3.0	3.6	2.6	1.9
Used vehicles for carrying goods	0.30	0.7	2.6	1.7	2.3	2.2
	5.1	4.1	11.3	12.5	10.8	9.6
b) *Sea Transport*						
Special purpose vessels	–	–	–	3.9	8.3	–
Total	5.1	4.1	11.3	16.4	19.1	9.6

Sources: Same as for Table 4.4.
Note: (–) before a figure means it is below the 1955/57 average.

Table 4.11(e)

West Malaysia — Exports of Manufactures with Generally Rising Trend in Values: Metal Products (Excluding Machinery) and Miscellaneous Goods
($ million)

Item	Average Exports 1955/57	Size of Export Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Metal Products (excluding machinery)						
Steel bars, shapes	0.70	-0.3	-0.2	-0.1	0.4	8.5
Tin plate	0.01	0.1	0.4	0.3	2.5	2.0
Galvanized sheets	0.62	0.1	-0.6	4.1	3.4	3.1
Iron pipes and fittings	0.42	-0.4	0.2	0.6	2.2	3.8
Structural parts	0.20	—	0.5	2.4	1.9	2.0
Metal containers	0.23	0.2	0.8	0.8	0.7	1.8
Wire, bars, rods etc. of copper	0.10	0.1	—	0.2	0.9	1.1
Total	2.3	-0.2	1.1	8.3	12.0	22.3
Miscellaneous Manufactured Goods						
Glassware	0.20	-0.3	—	—	0.1	0.8
Household equipment	0.46	—	-0.1	0.2	1.0	1.0
Musical instruments, etc.	0.07	0.3	0.2	0.7	2.0	1.6
Works of antique	—	—	0.1	0.1	0.2	1.7
Total	0.7	—	0.2	1.0	3.3	5.1

Sources: Same as for Table 4.4
Note: (—) before a figure means it is below the 1955/57 average.

Table 4.12

West Malaysia – Exports with Declining Trend in Values: All Groups
($ million)

Item	Average Exports 1955/57	Change in Export Values Compared with 1955/57 Average				
		1960	1963	1966	1968	1969
Export Items With Generally Falling Trend But Still Above 1955/57 Average						
a) *Crude Materials – Agriculture* *Processed* – Copra	5.7	28.8	7.3	1.4	– 3.6	– 4.3
b) *Crude Materials – Mining* *Unprocessed* – Iron ore	49.1	91.1	127.2	87.1	61.7	66.6
c) *Foodstuffs and Beverages* *Unprocessed* – Spices	2.8	2.2	2.5	0.6	0.7	1.6
d) *Manufactures* New passenger cars	2.1	5.8	4.4	3.1	3.2	– 0.2
Exports With Persistently Lower Values Than 1955/57 Average						
a) *Crude Materials – Agriculture* *Unprocessed, Little Processing:*						
Rubber – sheets and crepe	1,159.0	369.2	– 5.3	– 28.8	–101.6	308.6
Rubber – latex	285.4	15.8	– 68.3	– 43.3	– 67.9	6.3
Wood for fuel	1.9	–0.9	– 1.1	– 1.2	0.9	0.8
	1,446.3	384.1	– 74.7	– 73.3	–168.6	315.7
Processed:						
Coconut oil	48.9	–24.9	– 26.9	– 29.2	– 11.2	–28.1
Total for Agriculture	1,495.2	359.2	–101.6	–102.5	–179.8	287.6
b) *Crude Materials – Mining* *Unprocessed:*						
Tin ore	106.0	–104.2	–101.7	– 93.4	– 96.8	–98.3
Processed:						
Iron and steel scrap	3.8	0.2	– 1.1	– 1.1	– 1.6	– 1.6
Total for Mining and Mineral Products	109.8	–104.0	–102.8	–94.5	– 98.4	–99.9
Grand Total for Crude Materials	1,605.0	255.2	–204.4	–197.0	–278.2	187.7
c) *Foodstuffs and Beverages* *Unprocessed:*						
Live animals for food	2.7	– 1.8	– 1.6	– 0.4	– 0.7	– 0.2
Birds' eggs	2.0	– 0.7	– 0.7	– 1.5	– 1.5	– 1.3
Fresh fruits and nuts	26.4	– 14.1	– 13.2	– 16.9	– 15.6	–17.5
Coffee	6.9	0.8	1.8	– 4.7	– 4.1	– 5.3
Tea and mate	7.3	– 0.1	– 1.3	– 0.3	– 1.5	– 2.7
Total for Foodstuffs & Beverages	45.3	– 15.9	– 15.0	– 23.8	– 23.4	–27.0
d) *Manufactures*						
Textiles and Articles of Textiles						
Textile fabric of standard type	2.4	– 1.5	– 2.2	– 2.1	– 1.8	– 1.0
Articles of special fabrics (nets, ropes, etc.)	2.6	– 2.0	– 2.0	– 1.9	– 1.6	– 1.4
	5.0	– 3.5	– 4.2	– 4.0	– 3.4	– 2.4
Articles of Clothing						
Sarong	2.1	– 0.7	– 0.7	– 0.9	– 1.0	– 1.1
Rubber Products						
Cycle tyres – pneumatic	0.4	0.1	– 0.1	– 0.2	–	– 0.1
Chemicals & Chemical Products						
Essential oils	3.0	– 0.5	– 0.1	– 1.6	– 0.4	– 0.7
Total for Manufactures	10.5	– 4.6	– 5.1	– 6.7	– 4.8	– 4.3

Sources: Same as for Table 4.4

Note: (–) before a figure means it is below the 1955/57 average. All other figures in colums 2–6 represent values above the 1955/57 average.

Table 4.13

West Malaysia – Exports of (I) Crude Materials, (II) Foodstuffs, Beverages and Tobacco and, (III) Manufactures ($ million)

Category	Average Exports 1955/57	Size of Export Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
I. *Crude Materials:*						
Agriculture and Forestry						
Unprocessed, little processing	1,461.3	396.1	−57.9	−35.3	−92.2	399.3
Processed	114.0	44.9	44.5	110.4	179.6	359.9
Sub-total	1,575.3	441.0	−13.4	75.1	87.4	759.2
Mining and Quarrying						
Unprocessed, little processing	163.4	−13.4	32.2	18.9	− 7.9	− 4.9
Processed	281.1	231.6	364.6	511.1	550.5	664.3
Sub-total	444.5	218.2	396.8	530.0	542.6	659.4
Total for Crude Materials	2,019.8	659.2	383.4	605.1	630.0	1,418.6
II. *Foodstuffs, Beverages and Tobacco*						
Unprocessed, little processing	66.1	− 3.1	− 1.7	26.1	25.3	33.5
Processed, manufactured	26.6	11.5	18.8	54.6	81.1	90.5
Total for Foodstuffs, Beverages and Tobacco	92.7	8.4	17.1	80.7	106.4	124.0
III. *Manufactures*	72.1	11.8	55.4	164.3	213.8	254.2
Grand Total	2,184.6	679.4	455.9	850.1	950.2	1,796.8
IV. *Total Gross Exports*	2,274.9	652.5	429.7	844.6	941.8	1,800.7

Sources: Tables 4.9, 4.10, 4.11 and 4.12.

Note: (−) a figure means it is below the 1955/57 average.

The sluggishness of exports of crude materials was due to the substantial decline in unprocessed (or little processed) agricultural and forestry products as mentioned earlier. In 1969, despite some recovery in rubber prices and the substantial increase in export volume, the export level of the unprocessed and little processed agricultural and forestry products was only slightly above that of 1960. Table 4.12 shows that rubber sheets and crepe and, latex were important commodities that influenced the crude materials group. In three of the five years observed, the export values of rubber sheets and crepe and, latex fell substantially below their 1955/57 levels; furthermore, in 1969, both the export values of rubber sheets and crepe and, latex were considerably below those of 1960. As can be seen from Table 4.15, the share of rubber sheets and crepe which was 51 per cent of total gross exports in 1955/57 had progressively declined to 33 per cent in 1968 and 36 per cent in 1969. Likewise, export of latex declined from 12½ per cent of total exports in 1955/57 to about 7 per cent in 1968 and 1969.

Table 4.14

West Malaysia – Share of Exports of (I) Crude Materials, (II) Foodstuffs, Beverages and Tobacco and, (III) Manufactures in Total Gross Exports

Year	All Categories	Crude Materials	Foodstuffs, Beverages & Tobacco	Manufactures	
				I[a]	II[b]
	(As Percentage of Total Gross Exports)				
1955/57	96.0	88.8	4.1	3.1	4.3
1960	97.8	91.5	3.4	2.9	4.2
1963	97.6	88.8	4.1	4.7	6.4
1966	97.3	84.1	5.6	7.6	10.2
1968	97.5	82.4	6.2	8.9	12.2
1969	97.7	84.4	5.3	8.0	10.9

Sources: Computed from Table 4.13

[a]Excludes manufactured or processed items of foodstuffs, beverages and tobacco.
[b]Includes manufactured or processed items of foodstuffs, beverages and tobacco.

Two items, unprocessed timber (wood in the rough) and to a lesser extent, oil palm nuts and kernels, had increased but not sufficiently to offset the decline of rubber. Between 1955/57 and 1969, the share of unprocessed timber increased by 1.7 percentage points to 2.1 per cent (Table 4.15).

Exports of processed agricultural and forestry products increased quite markedly, especially from 1966 (Table 4.9). In 1966, the export value of these was about 3 times that of 1955/57 but by 1969, it was 7½ times larger. These were due to four dynamic items under this category namely, processed timber (wood – shaped or worked), palm oil, superior processed rubber and Standard Malaysian Rubber. The first was processed timber which in 1969 expanded by 7 times its 1955/57 average. (In 1968, it was 6 times larger). Between 1955/57 and 1969, processed timber increased from 0.8 per cent of total exports to slightly over 3 per cent (3½ per cent in 1968). In 1969, the value of palm oil exports was 3½ times its 1955/57 average. Its share in total exports thus rose from 1.8 per cent in 1955/57 to about 3½ per cent in 1969 (Table 4.15). From 1963, superior processed rubber became an important export item and from 1968, the Standard Malaysian Rubber. The latter amounted to nearly $170 million in 1969. Offsetting these fast growing items to a small extent was coconut oil which, in the five years studied, showed that it failed even to be anywhere near to its 1955/57 export level; it was $11–30 million below this level during these years. Exports of copra had also declined markedly and by 1969 were less than 25 per cent of the 1955/57 level.

Table 4.15

West Malaysia – Share of Selected Items of Crude Materials in Total Gross Exports

Item	Percentage Share in Total Gross Exports					
	1955/ 1957	1960	1963	1966	1968	1969
Agriculture and Forestry						
a) *Unprocessed, little processing*						
Rubber – sheets and crepe	50.9	52.2	42.7	36.2	32.9	36.0
Rubber – latex	12.5	10.3	8.0	7.8	6.8	7.2
Wood in the rough	0.4	0.5	0.9	1.4	2.4	2.1
Oil palm nuts and kernels	0.2	0.4	0.3	0.3	0.4	0.3
b) *Processed*						
Palm oil	1.8	2.1	2.6	3.8	3.6	3.5
Wood–shaped or worked	0.8	1.4	1.5	1.8	3.5	3.2
Superior processed rubber	–	–	0.5	0.8	0.8	0.3
Standard Malaysian Rubber (SMR)	–	–	–	–	n.a.	4.1
Copra	0.3	1.2	0.5	0.2	0.1	*
Coconut oil	2.1	0.8	0.8	0.6	1.2	0.5
Mining and Quarrying						
a) *Unprocessed, little processing*						
Iron ore	2.2	4.8	6.5	4.4	3.4	2.8
Bauxite	0.2	0.3	0.3	0.5	0.4	0.4
Tin ore	4.7	0.1	0.2	0.4	0.3	0.2
b) *Processed*						
Tin metal	12.1	17.3	23.6	25.0	25.5	22.9
Total Gross Exports ($million)	2,274.9	2,927.4	2,704.6	3,119.5	3,216.7	4,075.6

Sources: Computed from Tables 4.9 and 4.12.

*Less than 0.1 per cent.
n.a. = not available.

The emergence of the new process rubbers represented a notable development in the use of further processing to promote exports. These new process rubbers were introduced in 1965 under the Standard Malaysian Rubber (SMR or ESEMAR) Scheme. Under the Scheme, natural rubber was presented in block form, which incorporated the consumers' demand for technical uniformity of the product. As a result, the new process rubbers were taken up by the market as soon as they were produced. This component of rubber thus had a distinctly rising trend.[4] However, these together with other superior processed rubber constituted only slightly more than 9 per cent of total rubber exports in 1969. But a substantial expansion in the years to come could be expected. Nevertheless, it would be well to remember that this development of rubber exports could not be a fundamental solution to the problem of long-term demand for natural rubber.

The main source of growth of the crude materials group was, however, from the mining and quarrying sector (Table 4.13). In 1963, 1966 and 1968, exports of the selected items in the mining and quarrying group rose by about 2 times over their 1955/57 level and by 1969, they were about 2½ times larger. Exports of mining and quarrying in fact replaced exports of agricultural and forestry products as the main source of growth of the crude materials category in 1963, 1966 and 1968. In 1966 and 1968, the exports of mining and quarrying products were responsible for 86–87 per cent of the increase of crude materials exports in these years over their level in 1955/57; in 1963, exports of mining and quarrying products accounted for more than such increase (this was possible because the exports of the agricultural and forestry products that year were below their 1955/57 level). In 1969, however, the share of mining and quarrying in the increase in exports of crude materials over their 1955/57 level declined to 46½ per cent due to the bouyant rubber prices. In contrast, exports of the mining and quarrying group in 1960 accounted for only 33 per cent of the increase in exports of crude materials over their 1955/57 level.

It can be seen from Table 4.9 that export of tin metal (unwrought tin) was by far the most important growth factor. Compared with 1955/57, this item increased by 84 per cent in 1960, 132 per cent in 1963, 183 per cent in 1966 and 239 per cent in 1969. Its share in total exports rose from 12 per cent in 1955/57 to 23 per cent in 1969 (25½ per cent in 1968), an increase of 11 percentage points (Table 4.15). Against this spectacular increase was the virtual disappearance of tin ore as an export item; in 1955/57, the export of tin ore accounted for 4.7 per cent of total exports but from 1960 onwards, it accounted for scarcely ½ per cent. Iron ore was the other item of consequence. Its export values increased substantially over the 1955/57 level, these increases ranging from $127 million in 1963 to $67 million in 1969 (Table 4.12). Unlike tin

[4]Shipments of new process rubbers under the SMR Scheme were as follows (in thousand tons): 1965: 0.4; 1966: 6.0; 1967: 19.0; 1968: 76.6; 1969: 133.7. See Sekaran Nair (and others), "New Presentation Rubbers: SMR Market Reaction and Future Requirements", a paper presented at the Rubber Research Institute of Malaya Planters' Conference, Kuala Lumpur, July 1970.

metal, this was a rapidly declining export commodity – its share of total exports had fallen from a high of 6½ per cent in 1963, to about 4½ per cent in 1966 and to less than 3 per cent in 1969 (Table 4.15). Bauxite showed some signs of growth but its share in total exports was still small, only approaching ½ per cent of total exports in recent years.

2.4(ii) *Foodstuffs, Beverages and Tobacco*

The second broad group into which exports have been classified in this exercise covered foodstuffs, beverages and tobacco. Table 4.14 shows that items in this group comprised a small but growing component of total exports. The share of this group in total exports was around 4 per cent until about the first half of the 1960's but this increased to 5½ per cent in 1966, to slightly over 6 per cent in 1968 and nearly 5½ per cent in 1969. This growth appeared more impressive in absolute terms. Compared with 1955/57, exports in this group in 1960 were $8½ million higher but by 1969, the increase was $124 million (Table 4.13).

Within this group of exports, the larger component until recent years comprised items in *unprocessed* forms. The most dynamic among the unprocessed items in this group was the export of fresh fish and prawns (Table 4.10). This item also accounted for the bulk of the export value of the group. Exports of fresh fish and prawns increased very substantially in the second half of the 1960's. In 1966, the export value of this item was nearly $30 million above the average for 1955/57, in 1968, it was nearly $40 million above this average and in 1969, it further expanded to $47 million above this average. Two other items of unprocessed foodstuffs with steady growth tendencies were fresh vegetables and animal feedstuffs. But these were relatively small compared with the exports of fresh fish and prawns. The values of rice exports showed no consistent direction and they fluctuated widely. Against these, there were five items of unprocessed foodstuffs and beverages which persistently remained below their 1955/57 levels (Table 4.12). These were fresh fruits and nuts, live animals for food, birds' eggs, coffee, tea and mate. Of these, exports of fresh fruits and nuts showed by far the largest declines from the 1955/57 average.

Processed or manufactured foodstuffs, beverages and tobacco consisted of many items, some of them small and a number of them established only recently as exports (Table 4.10). One notable feature is that the export value of this group increased substantially in the 1960's. In 1960, it accounted for only 38 per cent of all the selected items of exported foodstuffs, beverages and tobacco but since then its share had steadily increased and by 1968/69, it reached 54 per cent.[5] This was part of the wider development of manufactured exports achieved during the 1960's, as will be seen shortly.

[5]The shares of *processed or manufactured* foodstuffs, beverages and tobacco to the total selected items in the group are:

1955/57	*1960*	*1963*	*1966*	*1968*	*1969*
28.7%	37.7%	41.4%	46.8%	54.1%	54.0%

In 1966, exports of sweetened condensed milk rose sharply from insignificant amounts earlier, the value of these in 1966–69 ranging from about $10½–14½ million. On a smaller scale was the increase in exports of powdered milk for infants. Exports of milled wheat totalled $5½ million in 1968 but fell to $1½ million in 1969, compared with insignificant exports earlier, an outcome of the setting up of the flour mills. Preserved vegetables showed increases ranging from $2–3½ million over the 1955/57 level. Exports of cereals and flour preparations rose by more than $1 million above the 1955/57 level since 1963 but in 1969, this excess shot up to nearly $4½ million. Those with increases of $1–2 million over their 1955/57 levels were canned fish and preparations (a large part being output of the tuna canning industry), margarine and shortenings, and sugar confectionery; all these gained significance as exports from 1963 except sugar confectionery which was a late starter (1968). In respect of beverages, exports of beer and ale exceeded $1 million in 1966 and reached $2½ million in 1969, compared with virtually zero exports earlier. Stout and porter performed even better with exports averaging $6 million each year in 1966, 1968 and 1969; negligible exports of these were recorded earlier. Manufactured tobacco was an even later and more dynamic new comer with exports of slightly over $11 million in 1968 and rising to nearly $28 million in 1969.

Dominating the changes in the processed and manufactured group of foodstuffs, beverages and tobacco was one of the few long established manufactured exports namely, canned pineapple and juice. Its growth had been very rapid in the 1960's, from an increase of $7½ million in 1960 (compared with 1955/57) to an increase of $25–30 million in 1966–69 (also in relation to the 1955/57 average).

The above group of items represented the growing impact of industrialization on the country's exports. Their individual contributions were as yet small compared with the items in the crude materials group but collectively, they constituted a factor of increasing significance towards a more diversified export structure.

2.4(iii) *Manufactures (Excluding Manufactured Foodstuffs, Beverages and Tobacco)*

Growing even faster than the group of items under foodstuffs, beverages and tobacco were exports of other manufactured goods. In 1955/57 and even in 1960, exports of manufactures (covering items selected for this exercise) made up only 3 per cent of the total exports (Table 4.14). Since then, the share of these manufactured exports in total exports had increased very rapidly, this being 4.7 per cent in 1963, 7½ per cent in 1966, 9 per cent in 1968 and 8 per cent in 1969. Thus, between 1955/57 and 1968/69, the share of these manufactured exports rose by 5–6 percentage points compared with an increase of only 1–2 percentage points for the group comprising foodstuffs, beverages and tobacco and a decline of about 4½–6½ percentage points for the crude materials group. In absolute terms, if the values of these manufactured exports were compared with their level in 1955/57, there was an increase of $12 million in 1960 but by 1969, the increase was $254 million (Table 4.13).

Over the review period, there had no doubt been a notable achievement in the development of manufactured exports. If all the manufactured exports were viewed as a group (i.e., including also those items of manufactured or processed foodstuffs, beverages and tobacco discussed earlier), it can be seen that the share of manufactured goods in total exports had increased markedly (Table 4.14). It was slightly over 4 per cent of total exports in 1955/57 but rose to 11–12 per cent towards the end of the 1960's. In terms of value, exports of manufactured goods totalled $443½ million in 1969 or, 4½ times their value in 1955/57.

Tables 4.11(a)–(e) and 4.12 attempt a detailed breakdown of these manufactured exports. By and large, manufactured exports with declining trends were few and their effects on the overall growth of manufactured exports were only marginal (Table 4.12).

Two of the most important groups of manufactured exports were petroleum products and, chemicals and chemical products. By 1966, both of these increased by over $30 million compared to their levels in 1955/57 (Table 4.11). In the case of petroleum products, the more important items were refined motor spirit, high speed diesel oil and kerosene [Table 4.11(b)]. Up to 1963, at least, the statistical evidence suggested that trade in petroleum products was substantially below 1955/57 levels, this trade being based on re-exports; by 1966, exports of petroleum products had increased markedly, indicating therefore, the positive role of refineries that were established.[6] In 1968, the gross value of sales of petroleum products was $175.3 million.[7] The rapid expansion of exports of chemicals and chemical products occurred earlier and was quite evident by 1963 [Table 4.11(b)]. A notable item was soap and cleansing preparations which expanded by $11½–15 million a year in 1966, 1968 and 1969 over the value exported in 1955/57; in 1963, it was $8 million higher. Five items of chemicals and chemical products emerged as significant exports from negligible amounts exported in 1955/57. Paints and enamels attained levels of $5–7 million in 1966–69. Gradual but smaller progress was made in respect of other paint products and varnishes (average of $2 million in 1966–69). Exports of manufactured fertilizers amounted to $1½ million in 1966, nearly $3½ million in 1968 and $5½ million in 1969. The fourth item was dental paste, the export of which was maintained at slightly over $1 million a year in 1966–69 although as much as $3 million worth were exported in 1963. The fifth product, plastic materials, rose to $2 million in 1969 compared with around $½ million in 1963–68. Other items which increased significantly over their 1955/57 levels were medicinal and pharmaceutical products ($3–7 million), organic chemicals ($1½–2½ million) and inorganic chemicals ($1½ million in 1969).

Five groups of manufactures rose by around $20–40 million in 1969, compared with 1955/57. These were i) wood and wood products, ii) machinery

[6]The refineries are the Esso Standard Malaya Ltd. and the Shell Refining Co. Ltd., both of which are located in Port Dickson.

[7]Department of Statistics, *Census of Manufacturing Industries, West Malaysia, 1968*, Kuala Lumpur, p. 24.

and equipment, iii) non-metallic mineral products, iv) metal products (excluding machinery) and v) articles of clothing. Exports of wood and wood products were recent developments; these were only up to $½ million in 1955/57 and 1960 but by 1968, they amounted to $24 million, with an even more spectacular rise to $41 million in 1969. The bulk of items in this group comprised plywood and veneer while other manufactures of wood constituted only a minor proportion [Table 4.11(c)].

The export of machinery and equipment rose from $8½ million in 1955/57 to $29½ million in 1968 and $36.7 million in 1969 [Table 4.11(d)]. Within the group, two items which increased more markedly than others (compared with 1955/57) were non-electric power generating equipment ($3.4–6.3 million) and machinery for special industries ($1.3–4.6 million).[8] Changes in the export values of the other items compared with 1955/57 were in the region of slightly over $1 million especially in 1968–69.

Exports of non-metallic mineral products, being virtually cement exports, amounted to a little over $4 million in 1966 compared with a relatively insignificant amount in 1955/57. Exports rose to nearly $10 million in 1968 and $14½ million in 1969 [Table 4.11(c)]. Cement was one of the major import substitutes which had found a substantial export market.

Exports of metal products other than machinery gained prominence from 1966 when these reached about $10½ million and then rose to $24½ million in 1969 [Table 4.11(e)]. The substantial increase in 1969 was due to the export of $9.2 million of steel bars and shapes compared with about $1 million in the previous year and $0.7 million in 1955/57. Tin plate was virtually non-existent as an export in 1955/57 and 1960 but in 1968 and 1969, it accounted for over $2 million a year. Likewise, three other items had emerged as exports exceeding $1 million in 1969, from insignificant levels in 1955/57 and 1960. These were structural parts (exports exceeding $2–2½ million a year in 1966, 1968 and 1969), metal containers (reaching slightly more than $2 million in 1969) and products of copper [wire, bars, rods, etc.] (averaging $1 million a year in 1968–69). Two items which started off as exports of about $½ million each in 1955/57 performed even better. Exports of iron pipes and fittings reached $2½ million in 1968 and slightly over $4 million in 1969 while galvanized sheets exported varied from $3½–4½ million a year after 1966.

The fifth group of items, articles of clothing, represented the recent successful penetration of the garments industry into the export markets [Table 4.11(a)]. Until 1963, exports scarcely reached $1 million but these expanded to nearly $5½ million in 1966, $11 million in 1968 and $20 million in 1969. The bulk was accounted for by the export of shirts; other outer garments also increased substantially. The export of these two items amounted to $8 million in 1968 and $12 million in 1969.

[8]The item 'Other machines and parts' which showed even larger increases is disregarded because it is nothing more than a collection of numerous small items.

Three industry groups exported between $10–20 million higher in 1969 compared with 1955/57. These were i) rubber products, ii) textiles and articles of textiles, and iii) transport equipment. In respect of rubber products [Table 4.11(e)], exports of rubber tyres for all types of vehicles in 1969 were $5.7 million higher than for 1955/57; exports in 1963 and 1966 were about $2 million higher for each year. Viewed against the marked decline in imported tyres (as will be seen later), this growing item represented one of the more successful cases of import substituting industries penetrating the export market. Increases of fabricated rubber manufactures of all types over their levels in 1955/57 were even more marked, particularly in 1966–69 ($5½–6½ million). Foam rubber mattresses, cushions, pouffes and pillows comprised another notable group of exports; from insignificant export values in 1955/57, these rose to $1½ million to nearly $4 million in the 1960's.

The other group of items, textiles and articles of textiles, averaged nearly $3 million in 1955/57; there was a sharp increase to $18 million in 1966 after which there was some decline but the level was still high at $16 million in 1969 [Table 4.11(a)]. Among the items in the group, unbleached cotton was a new export product developed in the 1960's, the export value varying from $3–8 million a year. Two other new exports were textile yarn and thread and articles of textiles, both of which had exceeded $1 million a year.

Exports of transport equipment in 1969 were $14.7 million, compared with $24 million in the previous year [Table 4.11(d)]. Exports in this category comprised largely road motor vehicles, vehicles for carrying goods and, tractors. Although there was some decline in the export level of these since 1966, the sharp change in 1969 was due to the decline from about $8 million of special purpose vessels (sea) in 1968 to zero level in 1969. This group of items covering transport equipment was in fact not quite comparable to other groups. Its contribution to the Malaysian economy was very small. In recent years, this contribution arose largely from the local assembly of imported component parts into completed vehicles while the local production of parts was still relatively insignificant. In years prior to the establishment of the local assembly plants, exports of these items merely represented re-exports of the imported vehicles. A more significant item in this group was the export of special purpose vessels, the construction of which entailed more use of local raw materials and skills. But this item had still to develop a stable export market.

Among the remaining industry groups, the increases compared with 1955/57 were relatively smaller. Two of these groups represented new exports which emerged only in the 1960's. These were paper and paper products and articles of plastics [Table 4.11(c)]. In respect of paper and paper products, articles of paper (e.g. boxes, bags, etc.) made up the more important component compared with paper and paper board. From average exports of less than $½ million in 1955/57, the export value of both components taken together rose to $4 million in 1968 and to over $5½ million in 1969. The plastics industry expanded considerably in the 1960's and in 1966 and 1968, exports reached $1 million and with a sharp rise in 1969 to nearly $2½ million.

An export item which had made some headway was the output of the printing and publishing industry. While exports of the output of this industry had been rising since 1960, a marked increase occurred from 1966 when export level exceeded $5 million a year. Footwear of all kinds had a fairly large export market even in 1955/57, with an average of $5 million; in the 1960's, increases in this item were however irregular, these ranging from $½–2½ million above the 1955/57 level. The last group (other than miscellaneous items) was gas. This item became prominent only from 1966, rising to $3 million in 1968 but declining to only $0.7 million in 1969.

2.4(iv) *Summary*

The evidence presented indicated an export structure that was reducing its dependence on rubber. Exports of other crude materials had also emerged, particularly timber and palm oil. But an important source of export growth in the 1960's was provided by tin metal exports, the production of which faced the prospect of reserves exhaustion in due course. However, small though they were, many new lines of exports in the field of manufacturing had emerged in the 1960's. These introduced a dynamic component in the export structure which should further reduce the dependence of the economy on rubber and tin. But significant gains in this respect would still be a future event, the realization of which would hinge on the pursuit of appropriate policies and measures early enough and with sufficient vigour.

3. STRUCTURE OF IMPORTS

3.1. *Introduction*

In changing the character domestic production, the process of economic diversification exercises a profound influence on the structure of imports. This influence grows to be more pronounced, as the process becomes more deeply entrenched. Its effects on the import structure may be observed in three major directions. Firstly, the imports of certain raw materials and other finished inputs will increase to feed the production units that have been established to produce, process or assemble for domestic consumption and/or for exports. This is most common for imports for the manufacturing sector. Secondly, there will be a marked rise in imports of consumption and capital goods. In the case of consumption goods, this can be attributed to rising incomes, the consequence of successful development efforts. At the same time, continuous development efforts also induce a significant rise in imports of capital goods. As suggested earlier, economic diversification in the Malaysian context cannot be clearly separated from the development process; consequently, the change in import structure in this respect must also in part be attributed to the diversification process. Thirdly, many items of traditional imports will decline, some to the point of disappearing altogether from the import structure. This is the consequence of the well-known process of import substitution, also an important approach underlying Malaysia's diversification strategy.

This part of the chapter will attempt to indicate the development of the import structure in the three directions outlined above. As for the export

analysis, the source of data was the annual statistics of external trade compiled by the Department of Statistics. Analysis of the imports of West Malaysia was a more burdensome task than the study of exports because it involved many more items. The need to be selective was, therefore, more imperative here. The study covered only the following selected years: 1955, 1957, 1960, 1963, 1966, 1968 and 1969 (as for the export analysis) but they appeared sufficient for observing import behaviour during the period. For many of the import items, the three-digit classification of the SITC was not fine enough for developments to be meaningfully traced so that it was necessary to refer frequently to the six-digit code of the SITC. As a further measure to keep the exercise within manageable limits, only those import items with values of $1 million and above in any of the selected years were examined. This ensured that both expanding and declining import items of significance remained within the purview of the study.

Just as in the export analysis, the import values of the selected items for 1955 and 1957 were averaged; these averages formed the basis for comparison with the corresponding import items for 1960, 1963, 1966, 1968 and 1969.

3.2. *Import Growth and Import Substitution at Aggregate Level*

Table 4.16 shows imports for the period 1955–70 and the year-to-year change. Over the period, total imports grew at an average of 5.1 per cent per annum. However, the year-to-year change in imports could be quite marked. An interesting comparison is with the year-to-year change in exports. Firstly, it can be seen that the year-to-year change in imports could be large as for exports though on the whole, less so. Secondly, allowing for a time lag of one year, the changes in imports from year to year followed broadly the direction and magnitude of the year-to-year changes in exports. A correlation coefficient of 0.59 was observed for the period 1955–70.[9] This suggests the existence of a fairly close link between export growth and change in import values. Obviously, this had something to do with the income effect of export earnings on the propensity to import. However, forces were already in operation as will become evident, which were weakening this link. The most important of these forces were the process of import substitution and demand for development imports motivated by policies autonomous of export position.

A very simple measure can be used at the aggregate level to indicate the degree of import substitution achieved.[10] The ratio of the level of imports at the base year (M_o) to the gross domestic product of that year (Y_o) is taken as the starting point. For the year under observation, this ratio (M_o/Y_o) is then applied to its gross domestic product (Y_1) in order to derive the value of imports (M^*)

[9] If no time lag was allowed, the correlation coefficient fell to a very low of 0.27.

[10] This technique was also used in a paper by a Colombo Plan adviser to the Federal Industrial Development Authority to examine the extent of import substitution in 1966. See D.S. Pearson, "A Strategy for Industrial Development in West Malaysia" (unpublished discussion paper), Kuala Lumpur, 1968.

Table 4.16

West Malaysia – Imports and Year-to-Year Change in Imports and Exports

Year	Gross Imports ($ million)	Year-to-Year Change in Imports (%)	Year-to-Year Change in Exports (%)
1955	1,542.9		
1956	1,751.0	+13.5	- 4.5
1957	1,806.7	+ 3.2	- 3.6
1958	1,657.5	- 8.3	-13.6
1959	1,739.3	+ 4.9	+31.4
1960	2,150.6	+23.6	+18.4
1961	2,230.5	+ 3.7	-10.3
1962	2,447.4	+ 9.7	—*
1963	2,516.9	+ 2.8	+ 3.0
1964	2,521.4	+ 0.2	+ 2.8
1965	2,608.3	+ 3.4	+11.6
1966	2,632.6	+ 0.9	+ 0.5
1967	2,585.9	- 1.8	- 6.4
1968	2,771.1	+ 7.2	+10.2
1969	2,802.5	+ 1.1	+26.7
1970	3,402.2	+21.4	+ 2.8

Sources: 1. Department of Statistics, *Imports and Exports During the Fourth Quarter*, 1957 and 1960 (with Cumulative Totals for the Year).
2. Department of Statistics, *Monthly Statistical Bulletin*, September 1962 and July 1972.
3. Table 4.3.

*Negligible.

that would be consistent with this ratio. In other words,

$$M^* = \frac{M_0 Y_1}{Y_0}$$

But the actual value of imports of this year is known (i.e. M_1). The degree of import substitution (s) can, therefore, be obtained by relating the difference between M^* and M_1 to M^* and expressing the result as a percentage. Thus,

$$s = 100 \left(\frac{M^* - M_1}{M^*}\right)$$

An attempt was made to estimate the extent of import substitution in Table 4.17 using the above approach. In view of the importance of the ratio of imports to the gross domestic product in the base year, the average imports and gross domestic product for 1960 and 1961 were taken instead of using data from just a single year. This was to minimize possible abnormalities. While it would be useful to have taken an earlier base period say, 1957/58, the absence of a revised set of data on the gross domestic product ruled this out. In any case, the 1960/61 period provided a good base period since the effects of the industrial efforts were yet to be significantly felt at this time and furthermore, it was fairly close to the initial period of this study. Three years were selected as observation points from the base period: 1964, 1967 and 1969. The selection of 1969 as the last observation point was made in order to have a uniform terminal year with the rest of this chapter.

Two observations may be made from the results presented in Table 4.17. Firstly, West Malaysia had achieved an increasing degree of import substitution during the 1960's. By 1969, import substitution had reached as high as 21 per cent. Secondly, the rate of import substitution rose markedly after 1964. However, the rate appeared to have slowed down a little after 1967. This caused a slight decline in the average annual rate of import substitution for the period 1960/61–1969 compared with that for 1960/61–1967.

While this aggregate measure showed that for West Malaysia, the process of import substitution had entailed some "saving" in imports on the whole, it did not reveal in what directions the process had taken place. A proper measure of the latter would however, present considerable difficulties largely because complete output data on many items were not available and for many of those available, these data were not comparable between one time period and another. The generally-accepted formula for deriving the coefficient of import substitution is as follows:[11]

$$S_i = \frac{O_i - X_i}{O_i + M_i - X_i}$$

where S_i = coefficient of import substition for product i,
O_i = domestic output of product i,
X_i = exports of domestically-produced product i,
M_i = imports of product i for domestic consumption.

Indeed, this basic problem and others compelled a recent study on imports to estimate the import substitution coefficients for only a very limited number of items.[12] This book thus did not attempt to measure precisely the extent of

[11] See United Nations, *World Economic Survey, 1961.*

[12] See K.A. Mohamed Ariff, *Post War Imports of West Malaysia* (thesis submitted to the University of Malaya for the degree of M.Ec. in March 1968). In this study, import substitution coefficients were estimated for eight items (on volume basis): rice, tea, copra cake, cigarettes, aerated water and cordials, biscuits, cement and, cycle tubes and eight groups of items (on value basis): food manufactures, beverages, manufactured tobacco, chemicals, manufactures of non-metallic minerals, metal products, machinery and, transport equipment.

Table 4.17

West Malaysia – Estimation of the Extent of Import Substitution at the Aggregate Level

Period	Extent of Import Substitution	
	Over the Period (Per Cent)	Annual Average During Period (Per Cent)
1964 compared with 1960/61	5.22	1.74
1967 compared with 1960/61	16.56	2.76
1969 compared with 1960/61	20.89	2.61

Sources: Computed from:

1. Table 4.16
2. Department of Statistics, *National Accounts of West Malaysia, 1960–1968.*
3. Treasury, Government of Malaysia, *Economic Report, 1972–73.*

import substitution for the various import items but an attempt was made in the subsequent sections to show that import substitution was in fact taking place in various directions. With this, one of the basic purposes of this chapter will have been served.

3.3 *Growing and Declining Import Items by Size*

As a basis for analysing the import structure, all the selected import items were classified into one of the following three categories: i) those which showed a clear general rising trend over the review period; ii) those which were above their levels in the base period, 1955–57 but were showing a generally falling trend; and iii) those that were clearly showing a generally falling trend compared with levels in the base period. The first category covered those imports needed to expand production and those arising from income growth and expanded consumption horizons. The remaining two categories covered items which were being import-substituted. The third category obviously covered items in the more advanced stage of being replaced by domestic output than the second.

Table 4.18 sets out the distribution of those import items with a generally rising trend (compared with the base period) on the basis of the size of the increase. Over the decade 1960–69, the number of import items which rose above their 1955/57 levels increased by 26 or, about 23 per cent. Indeed, a substantial portion of the change occurred between 1960 and 1963, after which the increase was slower. This pattern would most likely have been different if import substitution had been less rapid. The sustained emphasis on import

Table 4.18

West Malaysia — Distribution of Import Items with Generally Rising Trend by Size of Increase Above 1955/57 Average

Size of Import Value Above 1955/57 Average ($ million)	Number of Import Items					Percentage of Total				
	1960	1963	1966	1968	1969	1960	1963	1966	1968	1969
1 and below	54	35	21	17	18	47.8	26.7	15.4	12.1	12.9
1.1 — 2	21	29	20	19	18	18.6	22.1	14.7	13.6	12.9
2.1 — 3	12	16	19	13	17	10.6	12.2	14.0	9.3	12.2
3.1 — 4	7	10	7	12	10	6.2	7.6	5.1	8.6	7.2
4.1 — 5	3	6	7	14	10	2.7	4.6	5.1	10.0	7.2
5.1 — 7	2	11	15	14	15	1.8	8.4	11.0	10.0	10.8
7.1 — 10	7	6	15	12	12	6.2	4.6	11.0	8.6	8.6
10.1 — 15	3	5	10	12	11	2.7	3.8	7.4	8.6	7.9
15.1 — 20	1	4	9	8	5	0.9	3.1	6.6	5.7	3.6
20.1 — 30	2	6	4	9	13	1.8	4.6	2.9	6.4	9.4
30.1 — 50	—	2	6	5	3	—	1.5	4.4	3.6	2.2
50.1 — 100	1	1	2	4	6	0.9	0.8	1.5	2.9	4.3
100.1 and above	—	—	1	1	1	—	—	0.7	0.7	0.7
Total	113	131	136	140	139	100.0	100.0	100.0	100.0	100.0
Number of Items with Same or Lower Import Values compared with 1955/57 Average	27	11	6	2	3					
Number of Items Not Identified	2	—	—	—	—					
Grand Total	142	142	142	142	142					

Sources: Computed from Department of Statistics, *Annual Statistics of External Trade,* West Malaysia, various years.

substitution in domestic production appeared to be an important constraint on the expansion of the range of imports with growth tendencies. Consequently, imports in this category had a tendency by and large to concentrate on items which were beyond the technical capability of the domestic producers to produce or on those which could only be produced locally at uncompetitive prices. This point will become clearer in due course.

During 1960–69, these import items also developed in another direction. Many of them grew in size over the years. In 1960, there were 54 import items which were up to $1 million higher than in 1955/57 (or slightly less than half of the total number of items which were above their 1955/57 levels in 1960) but by 1969, the number of these items fell to only 18 (or nearly 13 per cent of the total in 1969). Much less spectacular was the decline between 1960 and 1969 in the number (and also the share to total) of those items which were $1.1–2 million above their 1955/57 levels. On the other hand, there were increases during 1969, in both the number and shares of all the import items which were over $2 million above their 1955/57 levels. Sharp increases were noted in the number of items falling within the following groups (classified according to the extent their values exceeded their 1955/57 averages): $4.1–5 million, $5.1–7 million, $10.1–15 million, $15.1–20 million, $20.1–30 million and $50.1–100 million.

Table 4.19 analyses the import items with values that were declining but were generally yet above their 1955/57 levels. There were signs that for some items, the excess of their values over the 1955/57 levels had reduced during 1960–69. Of a total of 16 items, there were six items in 1960 which were over $3 million above their 1955/57 averages but by 1969, there was only one left. Furthermore, by 1969, two items had even fallen below their 1955/57 levels compared with none in 1960.

The third group of imports represented items which were in an even more advanced stage of losing their markets in West Malaysia (Table 4.20). Some of these were virtually disappearing from the import structure while others were dropping to levels increasingly lower than their 1955/57 averages.

In 1960, there were 31 import items which were below their 1955/57 levels while another 46 items remained above. Within the 10-year period to 1969, the import values of an increasing number of items fell below their 1955/57 averages until the total number of such items reached 74, more than double the number at the beginning of the decade. Of the 46 items observed to be above their 1955/57 averages in 1960, only four items remained by 1969. An equally significant feature is that over the decade, there was a tangible increase in the number of items falling within the upper ranges of decline from the 1955/57 averages. In 1960, there were only six items which were $1.1–2 million below their 1955/57 averages but by 1969, there were 16 such items. The change was even more marked for items which were over $2 million below their 1955/57 levels. The number of such was 42 in 1969 compared with only 10 in 1960. Furthermore, the furthest extent to which an item was noted to have fallen below its 1955/57 average was also increased during the decade. In 1960, the largest range of decline

Table 4.19

West Malaysia – Distribution of Import Items with Generally Falling Trend (But Still Mostly Above 1955/57 Average) by Size of Increase

Size of Import Value Above 1955/57 Average ($ million)	Number of Import Items				
	1960	1963	1966	1968	1969
1 and below	7	4	4	8	8
1.1 – 2	3	3	3	3	4
2.1 – 3	–	3	4	1	1
3.1 – 4	1	1	1	–	–
4.1 – 5	3	–	–	1	–
5.1 – 7	1	–	–	1	–
7.1 – 10	–	2	1	1	–
10.1 – 15	–	1	–	–	–
15.1 – 20	–	2	–	–	1
20.1 – 30	–	–	2	–	–
30.1 – 50	–	–	–	–	–
50.1 – 100	1	–	–	–	–
100.1 and above	–	–	–	–	–
Total	16	16	15	15	14
Number of Items with Import Values Below 1955/57 Average	–	–	1	1	2
Grand Total	16	16	16	16	16

Sources: Same as for Table 4.18.

for an item from its base year average was $10.1–15 million but in 1969, items declining by $50.1–100 million have been observed.

The important point that emerged from the analyses of Tables 4.18, 4.19 and 4.20 is that while many of the import items were increasing in value, stimulated no doubt by income growth, public and private development programmes and the increasing demand of domestic producers for inputs, there were also many other import items that were fast losing their hold in the Malaysian market. This latter category constituted a major and tangible evidence of the impact of economic diversification on imports. As for the first category, to the extent that they arose from the increasingly domestic-oriented production structure or deliberate public policies to induce a more diversified economy, they must be regarded as further supporting evidence. This should become clearer when the imports are examined on a product basis.

Table 4.20

West Malaysia – Distribution of Import Items with Generally Lower Values than in 1955/57 by Size of Deficiencies of these Values

Size of Import Value Below 1955/57 Average ($ million)	Number of Import Items					Percentage of Total				
	1960	1963	1966	1968	1969	1960	1963	1966	1968	1969
0 – 1	15	18	15	22	16	48.4	37.5	23.4	29.3	21.6
1.1 – 2	6	10	16	18	16	19.3	20.8	25.0	24.0	21.6
2.1 – 3	2	6	7	4	8	6.5	12.5	10.9	5.3	10.8
3.1 – 4	2	4	3	5	6	6.5	8.3	4.7	6.7	8.1
4.1 – 5	3	4	3	5	5	9.7	8.3	4.7	6.7	6.8
5.1 – 7	–	1	3	6	5	–	2.0	4.7	8.0	6.8
7.1 – 10	2	3	5	5	6	6.5	6.3	7.8	6.7	8.1
10.1 – 15	1	–	4	3	4	3.2	–	6.3	4.0	5.4
15.1 – 20	–	1	3	1	1	–	2.0	4.7	1.3	1.4
20.1 – 30	–	–	3	3	4	–	–	4.7	4.0	5.4
30.1 – 50	–	1	2	1	1	–	2.0	3.1	1.3	1.4
50.1 – 100	–	–	–	2	2	–	–	–	2.7	2.7
100.1 and above	–	–	–	–	–	–	–	–	–	–
Total	31	48	64	75	74	100.0	100.0	100.0	100.0	100.0
Number of Items with Import Values Above 1955/57 Average	46	30	14	3	4					
Number with Unspecified Values	1	–	–	–	–					
Grand Total	78	78	78	78	78					

Sources: Same as for Table 4.18.

3.4 *Growing and Declining Import Items by Size and Commodity Groups*

Table 4.21 attempts to show the broad directions, apart from the broad quantitative changes, that import items with clear growth tendencies were moving towards. For this purpose, the imports were categorized into three broad groups, namely, consumer goods, intermediate goods and, investment and related goods.[13] It must be borne in mind at the outset that the quantities arising from this classification represented broad orders of magnitudes. The Malaysian trade statistics did not and still do not present commodity items on the basis of end-uses. Many of the items so classified in this exercise might not turn out to be used in the manner categorized; many were arbitrarily grouped for lack of information, e.g. motor cars, motor cycles were grouped as consumer goods thereby underestimating imports of investment and related goods to the extent that some of these items were later used as taxis or as means of transportation of goods; many other items, because they were too numerous and relatively small, were lumped together with other items and classification was based on the predominant character of the groups concerned. But wherever possible, every effort was made to put the items into the most appropriate classification.

Table 4.21 examines the changes in the import items during 1960–69 which showed a generally rising trend. Between 1960 and 1969, the number of items which were above their 1955/57 levels increased by 26 to 139. Of this increase, eight were imports of investment and related goods, five were imports of intermediate goods and the remaining 13 were imports of consumer goods. This pattern suggested that among the items of import growth, only half were accounted for by consumer goods while the other half were imports that largely expanded the productive capacity. In terms of the share accounted for by consumer items in relation to the total number of items with generally rising trend, consumer goods increased their share only marginally (1.6 percentage points) during the decade at the expense of both intermediate goods and, investment and related goods. This feature is significant considering that Malaysia followed a very liberal import policy coupled with the fact that domestic incomes (gross domestic product) had grown by 63 per cent between 1960 and 1969. It, therefore, suggests the growing strength of two factors: i) the restraint on growth of particularly the imports of consumer goods effected by the process of import substitution, ii) the maintenance of a high level of demand for intermediate and capital goods as a result of development activities.

Table 4.21 further breaks down consumer goods into foodstuffs and beverages (as one group) and 'others'. In the case of intermediate goods, crude materials were identified as a sub-group. Of the 13 additional items in the

[13] Consumer goods covered all foodstuffs, beverages, tobacco and articles of final consumption, e.g. textiles and clothing, plastic articles, etc. Intermediate goods covered crude materials (e.g. oils, mineral ores, largely tin concentrates) and inputs for the manufacture of final goods, e.g. paper, rubber, leather products. Investment and related goods included machinery and equipment, metal products and transport equipment. This manner of classification has been attempted elsewhere. See Stephen R. Lewis, Jr., *Pakistan – Industrialization and Trade Policies,* Oxford University Press, London, 1970, pp. 106–7.

Table 4.21

West Malaysia – Distribution of Import Items with Generally Rising Trend
by Size of Increase Above 1955/57 Average and Broad Commodity Groups, 1960 and 1969

Size of Import Value Above 1955/57 Average ($ million)	1960								1969							
	Total Number of Items with Values Above 1955/57 Average	Consumer Goods			Intermediate Goods			Investment and Related Goods	Total Number of Items with Values Above 1955/57 Average	Consumer Goods			Intermediate Goods			Investment and Related Goods
		Foodstuffs and Beverages	Others	Total	Crude Materials	Others	Total			Foodstuffs and Beverages	Others	Total	Crude Materials	Others	Total	
1 and below	54	7	16	23	4	5	9	22	18	1	5	6	1	–	1	11
1.1 – 2	21	5	2	7	–	5	5	9	18	5	3	8	3	2	5	5
2.1 – 3	12	2	5	7	3	–	3	2	17	5	4	9	1	3	4	4
3.1 – 4	7	1	1	2	1	4	5	–	10	–	5	5	1	1	2	3
4.1 – 5	3	1	2	3	–	–	–	–	10	–	4	4	1	3	4	2
5.1 – 7	2	–	–	–	1	–	1	1	15	2	6	8	2	1	3	4
7.1 – 10	7	1	1	2	1	2	3	2	12	3	1	4	2	2	4	4
10.1 – 15	3	–	2	2	–	1	1	–	11	1	3	4	1	1	2	5
15.1 – 20	1	–	–	–	–	–	–	1	5	1	1	2	–	2	2	1
20.1 – 30	2	–	1	1	–	–	–	1	13	4	1	5	–	2	2	6
30.1 – 50	–	–	–	–	–	–	–	–	3	–	1	1	1	1	2	–
50.1 – 100	1	–	–	–	1	–	1	–	6	2	2	4	1	–	1	1
100.1 and above	–	–	–	–	–	–	–	–	1	–	–	–	1	–	1	–
Total	113	17	30	47	11	17	28	38	139	24	36	60	15	18	33	46
Number of Items with Same or Lower Values than 1955/57 Average	27	7	6	13	3	2	5	9	3	–	–	–	1	1	2	1
Number of Items Not Identified	2	–	–	–	2	–	2	–	–	–	–	–	–	–	–	–
Grand Total	142	24	36	60	16	19	35	47	142	24	36	60	16	19	35	47

Sources: Same as for Table 4.18

consumer goods category that joined the ranks of import items with growth tendencies by 1969, about the same number was distributed between foodstuffs and beverages and 'others'. It is also interesting to note that five of these 13 items were items of unprocessed or little processed foodstuffs; the other eight were manufactures or highly-processed products (Table 4.28). In the case of intermediate goods, four of the five additional items which emerged as imports with growth tendencies during the decade were crude materials. Thus, where import dependence continued, a substantial number of items (nine out of 26) were in fairly unprocessed or crude forms.

Growth had occurred not merely in numerical terms. Between 1960 and 1969, there was a clear trend for more and more import items in all categories to be increasingly larger (over their 1955/57 values) in 1969 compared with 1960. The overall pattern was also repeated in each commodity category.

Table 4.22 attempts a similar analysis for those import items with lower values in 1960 and 1969 compared with 1955/57. Between 1960 and 1969, the number of such items rose by 43 to 74, a tangible indicator of the fast rate of import substitution that was taking place during the decade. A notable feature is that of this increase in the number of declining items, consumer goods accounted for 30 items or about 70 per cent of the total. The shares of intermediate goods and investment and related goods were 14 per cent and 16 per cent respectively. In terms of the share of the number of items in each group to the total number of items which had fallen below their 1955/57 levels, consumer goods gained about 5 percentage points over the decade to raise their share to 66.4 per cent of the total in 1969. Investment goods likewise expanded their share during the period though by nearly 2 percentage points to 14.7 per cent. The share of intermediate goods fell by about 7 percentage points.

These features suggest some interesting conclusions. The expansion of productive capacity in West Malaysia via industrialization and agricultural diversification was in the main felt in the consumer goods sector. Markets formerly enjoyed by many import items were being eroded. Secondly, the import-replacing process was also being felt, though to a lesser extent within the investment and related goods sector. The overall pattern of change thus reflected the productive capability of an increasingly diversified economy. The output of such would generally be characterized by a lower degree of technical complexity, skills and scale. The faster advance achieved in replacing imported consumer goods is therefore not unusual.

In the consumer goods category, foodstuffs and beverages accounted for 12 out of the 30 additional items which fell below their 1955/57 levels during the decade. The rest comprised other consumer goods. Of these 30 items of consumer goods, 80 per cent were manufactures and semi-manufactures or highly-processed output. The balance comprised items of foodstuffs which were unprocessed or little processed. This is not unexpected as there is obviously greater scope for import substitution of manufactures, semi-manufactures and other highly-processed items than for unprocessed or little-processed imports. Among the intermediate goods, a similar pattern was observed in that four of the

Table 4.22

West Malaysia – Distribution of Import Items with Generally Lower Values than in 1955/57 by Size of Deficiencies of these Values and Broad Commodity Groups, 1960 and 1969

Size of Import Value Below 1955/57 Average ($ million)	1960								1969							
	Total Number of Items with Values Below 1955/57 Average	Consumer Goods			Intermediate Goods			Investment and Related Goods	Total Number of Items with Values Below 1955/57 Average	Consumer Goods			Intermediate Goods			Investment and Related Goods
		Foodstuffs and Beverages	Others	Total	Crude Materials	Others	Total			Foodstuffs and Beverages	Others	Total	Crude Materials	Others	Total	
0 – 1	15	3	7	10	1	1	2	3	16	2	7	9	2	2	4	3
1.1 – 2	6	2	3	5	–	1	1	–	16	5	8	13	1	–	1	2
2.1 – 3	2	–	1	1	–	1	1	–	8	1	6	7	–	–	–	1
3.1 – 4	2	1	–	1	1	–	1	–	6	2	1	3	–	2	2	1
4.1 – 5	3	1	–	1	–	2	2	–	5	2	2	4	–	1	1	–
5.1 – 7	–	–	–	–	–	–	–	–	5	–	2	2	–	2	2	1
7.1 – 10	2	–	1	1	–	–	–	1	6	2	3	5	–	–	–	1
10.1 – 15	1	–	–	–	–	1	1	–	4	1	–	1	1	–	1	2
15.1 – 20	–	–	–	–	–	–	–	–	1	–	–	–	–	1	1	–
20.1 – 30	–	–	–	–	–	–	–	–	4	2	–	2	–	2	2	–
30.1 – 50	–	–	–	–	–	–	–	–	1	–	1	1	–	–	–	–
50.1 – 100	–	–	–	–	–	–	–	–	2	2	–	2	–	–	–	–
100.1 and above	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total	31	7	12	19	2	6	8	4	74	19	30	49	4	10	14	11
Number of Items with Values Above 1955/57 Average	46	12	19	31	2	6	8	7	4	–	2	2	–	2	2	–
Number of Items Not Identified	1	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
Grand Total	78	19	32	51	4	12	16	11	78	19	32	51	4	12	16	11

Sources: Same as for Table 4.18

six items which fell to less than their 1955/57 levels were accounted for by goods other than in the crude materials category.

As noted earlier, the number of items in the higher ranges of decline from their 1955/57 levels rose markedly in 1969 compared with 1960. This pattern remained unchanged even when imports have been regrouped as consumer goods, intermediate goods and, investment and related goods.

Table 4.23 analyses those import items with declining trends (compared with their 1955/57 levels) but with values which were still above their 1955/57 averages. Like the previous category, these were also items already subjected to import substitution, though not to as marked a degree. There were 16 of such items. In terms of the number of items that had fallen below their 1955/57 levels since 1960, it can be seen that there had been little change. But it is clear that the values of a number of items had declined markedly by 1969. Given the continuation of the import substitution process, it would be only a matter of time before the import values of these items fall below their 1955/57 averages.

Table 4.23

West Malaysia – Distribution of Import Items with Generally Falling Trend
(But with Values Still Mostly Above 1955/57 Average)
by Broad Import Classes, 1960 and 1969

Size of Import Value Above 1955/57 Average ($ million)	Consumer Goods		Intermediate Goods		Investment & Related Goods		Total	
	1960	1969	1960	1969	1960	1969	1960	1969
	(Number of Items)							
1 and below	1	4	2	3	1	1	4	8
1.1 – 2	1	1	1	–	–	2	2	3
2.1 – 3	–	–	–	–	–	1	–	1
3.1 – 4	–	–	1	–	–	–	1	–
4.1 – 5	1	–	–	–	2	–	3	–
5.1 – 7	1	–	–	–	–	–	1	–
7.1 – 10	–	–	–	–	–	–	–	–
10.1 – 15	–	–	–	–	–	–	–	–
15.1 – 20	–	–	–	1	–	–	–	1
20.1 – 30	–	–	–	–	–	–	–	–
30.1 – 50	–	–	–	–	–	–	–	–
50.1 – 100	–	–	1	–	–	–	1	–
100.1 and above	–	–	–	–	–	–	–	–
Total	4	5	5	4	3	4	12	13
Number of Items with Same or Values Below 1955/57 Average	1	–	1	2	2	1	4	3
Grand Total	5	5	6	6	5	5	16	16

Sources: Same as for Table 4.18.

3.5 Identification of Growing and Declining Import Items by Broad Commodity Groups

So far the discussions have not touched on the direction of change in terms of import values. It is now proposed to deal with this. Table 4.24 shows the changes in the three major categories of imports, consumer goods, intermediate goods and, investment and related goods compared with their 1955/57 levels. A total of 236 items of imports in all the three groups were observed. These represented 92–94 per cent of the total value of imports each year.[14] All the three groups of imports increased over the years. However, the growth rates were different. Between 1955/57 and 1969, growth of consumption imports averaged only 2.4 per cent a year. On the other hand, the annual growth rate for imports of intermediate goods was slightly twice that of consumer goods (i.e. 4.9 per cent) and that for investment and related goods was even more outstanding, namely, 7.6 per cent. Imports of consumption goods constituted the largest component of imports, being 58.6 per cent in 1955/57. But as a result of its relatively slower growth rate compared with intermediate goods and, investment and related goods, its share in 1969 fell to 47.6 per cent. Imports of investment

[14] The shares of the selected items in total imports each year are as follows: 1955/57: 92.6%; 1960: 93.1%; 1963: 93.1%; 1966: 92.3%; 1968: 93.8% and 1969: 92.7%.

Table 4.24

West Malaysia – Changes in Imports Compared with 1955/57 by Commodity Groups
($ million)

Commodity Group	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Consumer Goods						
I) Foodstuffs, Beverages and Tobacco						
a) Unprocessed, little processing	301.40	29.9	95.4	138.2	217.3	163.5
b) Manufactured	222.48	22.9	63.1	-38.0	-87.6	-79.5
II) Others	385.44	97.3	128.1	163.2	212.0	244.7
Sub-total	909.32	150.1	286.6	263.4	341.7	328.7
Sub-total as % of Grand Total	58.6	33.1	36.2	30.0	32.6	31.3
Intermediate Goods						
I) Crude materials	183.61	167.4	166.1	108.5	247.6	263.5
II) Others	226.63	31.7	60.4	72.2	68.7	88.6
Sub-total	410.24	199.1	226.5	180.7	316.3	352.1
Sub-total as % of Grand Total	26.4	44.0	28.6	20.6	30.2	33.6
Investment and Related Goods	231.78	103.4	277.6	434.3	390.0	366.8
As % of Grand Total	14.9	22.8	35.1	49.4	37.2	35.0
Grand Total	1,551.34	452.6	790.7	878.4	1,048.0	1,047.6
Total Gross Imports	1,674.8	475.8	842.1	957.8	1,096.3	1,127.7

Sources: Same as for Table 4.18.
Note: (–) before a figure means it is below the 1955/57 average.

and related goods, on the other hand, increased their share by 8 percentage points to 23 per cent while imports of intermediate goods increased their share by nearly 3 percentage points to 29.3 per cent.

Underlying this change in import structure during 1955/57–1969 were the three factors listed earlier as being the consequence of the diversification process namely, the marked rise in consumption and capital imports, the decline of many traditional imports through import substitution and, the growth in imports of raw materials and other inputs for further processing and manufacture. This will become clearer when the three groups of imports have been further classified into those with a generally growing trend (compared with 1955/57), those which were above their 1955/57 levels but were already declining and those which had fallen below their 1955/57 levels. Tables 4.25, 4.26 and 4.27 show these three categories respectively.

3.5(i) *The Investment and Related Goods Group*

Possibly the most straightforward case was that of the group of items under investment and related goods. Table 4.25 shows that in 1969, the 47 items of investment and related goods with expanding tendencies increased by $407.8 million over their 1955/57 level, thereby raising the total for this group to $555.9 million or, more than 3¾ times the total in 1955/57. As against this, the value of such items which were declining was relatively small. In 1969, the declining items were only $47 million below their 1955/57 level (Table 4.27). Those items that were declining but had not yet fallen below their 1955/57 levels were still nearly $6 million above the 1955/57 average for the group in 1969 (Table 4.26). Two factors appeared to contribute to this pattern. The continuous and growing development efforts during the 1960's in all sectors of the economy had stimulated this large increase in the importation of investment and related goods. Secondly, the limitations of domestic capability in this field of production appeared to have hindered rapid import-replacement.

3.5(ii) *The Consumer Goods Group*

The pattern of change for imports of consumer goods was more complex. In 1969, the 60 items of consumer goods with generally rising trend in values were $655 million above their 1955/57 level (Table 4.25). In other words, imports of these consumer goods at $961.5 million in 1969 were more than 3 times larger than their 1955/57 average. Foodstuffs and beverages made up a substantial and growing portion of the rise in consumer imports. The share of this sub-group was 25 per cent of the increment for the consumer goods group in 1960 (over the 1955/57 average) but this rose to 46 per cent by 1969. The bulk of the items were in unprocessed or little processed forms. The share of unprocessed or little processed items of foodstuffs and beverages was 71 per cent of the total for the sub-group, the same as for 1955/57. The development of local facilities for processing or manufacturing these was important for maintaining a steady growth in their importation. Consumer goods other than foodstuffs and beverages continued to form well over half of the total imports of consumer goods, although their share had been declining in the 1960's. Between 1955/57

Table 4.25

West Malaysia – Imports with Generally Rising Trend in Values by Commodity Groups
($ million)

Commodity Group	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Consumer Goods:						
Foodstuffs and Beverages						
a) Unprocessed, little processing	95.72	18.9	58.5	169.0	227.8	214.4
b) Manufactured	38.89	11.0	40.1	63.1	76.9	87.0
Others	172.31	91.6	154.2	233.6	309.6	353.2
Sub-total	306.92	121.5	252.8	465.7	614.3	654.6
Intermediate Goods:						
Crude Materials	102.02	88.7	158.2	123.0	272.0	264.1
Others	93.58	51.3	92.2	153.6	155.5	176.0
Sub-total	195.60	140.0	250.4	276.6	427.5	440.1
Investment and Related Goods:	148.13	82.1	224.2	397.2	409.5	407.8
Grand Total	650.65	343.6	727.4	1,139.5	1,451.3	1,502.5

Sources: Same as for Table 4.18.

Number of Items Observed: 142

Consumer Goods: 60 Intermediate Goods: 35 Investment and Related Goods: 47

and 1969, the value of these items nevertheless expanded by slightly more than 3 times. The rising incomes of the economy during the period no doubt provided an important stimulus to these developments. Other factors were the widening of consumer tastes and expectations, the superior quality (whether real or imagined) of imported brands of consumer goods and the still limited capability of domestic producers to manufacture these items.

In contrast to these items of consumer imports with a generally rising trend in values, there were 51 other items of consumer goods which suffered substantial loss of markets in West Malaysia (Table 4.27). By and large, this development could be attributed to the growing impact of the domestic facilities which emerged in the 1960's and in many cases, the policy of protection that accompanied these facilities.[15] In 1955/57, imports of these items totalled $575 million but by 1969, their values had dropped to only $245½ million or, a decline of 57 per cent. Most clearly affected were the *manufactured* items of foodstuffs and beverages. In 1955/57, imports of these items totalled $184 million but by 1969, the value of these had fallen to just $17 million, a decline of $167 million or 91 per cent. The decline in the importation of items of foodstuffs and beverages in *unprocessed or little processed* forms was less spectacular but nevertheless substantial, it being $53 million or, more than 27 per cent of the import level in 1955/57. As will be seen later, these were largely

[15] A full discussion of tariff policy is given in Chapter X.

Table 4.26

West Malaysia — Imports with Generally Falling Trend in Values But Still Above 1955/57 Average by Commodity Groups
($ million)

Commodity Group	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Consumer Goods:						
Foodstuffs and Beverages						
a) Unprocessed, little processing	12.94	7.1	3.8	4.4	0.6	2.4
b) Manufactured	–	–	–	–	–	–
Others	14.61	4.5	11.5	11.0	5.1	1.1
Sub-total	27.55	11.6	15.3	15.4	5.7	3.5
Intermediate Goods:						
Crude Materials	58.75	81.9	15.9	2.3	-8.7	15.7
Others	4.77	4.3	7.0	7.9	3.7	0.6
Sub-total	63.52	86.2	22.9	10.2	-5.0	16.3
Investment and Related Goods:	28.09	10.3	43.9	48.7	20.7	6.1
Grand Total	119.16	108.1	82.1	74.3	21.4	25.9

Sources: Same as for Table 4.18.

Number of Items Observed: 16.

Consumer Goods: 5 Intermediate Goods: 6 Investment and Related Goods: 5

Table 4.27

West Malaysia — Imports with Generally Declining Values
from 1955/57 Average by Commodity Groups
($ million)

Commodity Group	Average Imports 1955/57	Change in Import Values Compared With 1955/57 Average				
		1960	1963	1966	1968	1969
Consumer Goods:						
Foodstuffs and Beverages						
a) Unprocessed, little processing	192.74	3.9	33.1	- 35.2	- 11.1	- 53.3
b) Manufactured	183.59	11.9	23.0	-101.1	-164.5	-166.5
Others	198.52	1.2	- 37.6	- 81.4	-102.7	-109.6
Sub-total	574.85	17.0	18.5	-217.7	-278.3	-329.4
Intermediate Goods:						
Crude Materials	22.84	- 3.2	- 8.0	- 16.8	- 15.7	- 16.3
Others	128.28	- 23.9	- 38.8	- 89.3	- 90.5	- 88.0
Sub-total	151.12	- 27.1	- 46.8	-106.1	-106.2	-104.3
Investment and Related Goods	55.56	11.0	9.5	- 11.6	- 40.2	- 47.1
Grand Total	781.53	0.9	- 18.8	-335.4	-424.7	-480.8

Sources: Same as for Table 4.18.
Note: (-) before a figure means it is below the 1955/57 average. All other figures in columns 2—6 represent values above the 1955/57 average.

Number of Items Observed: 78 Consumer Goods: 51 Intermediate Goods: 16 Investment and Related Goods: 11

agricultural and livestock products; output of these expanded significantly during the period. Imported consumer items other than foodstuffs and beverages also lost a substantial part of their markets. The 32 items of such consumer imports observed fell from $198½ million in 1955/57 to less than half this level in 1969.

Table 4.26 shows those five items of consumer goods having values larger than their 1955/57 averages but which were declining during the period. By 1969, their total value was $3½ million above the 1955/57 average compared with $12–15 million during the early years of the decade.

3.5(iii) *The Intermediate Goods Group*

In the case of intermediate goods, 35 items had generally rising trends over their 1955/57 values (Table 4.25). In 1960, the items were $140 million above their 1955/57 level but by 1969, they were $440 million above. Of this difference of $440 million in 1969, crude materials accounted for $264 million. In the 1950's, an important item of crude material imports was tin concentrates but with the growing industrial sector, a more diversified composition of crude material imports had emerged. Notably, there was a substantial shift from imports of refined and processed petroleum products to crude petroleum[16] and from final tobacco products to unmanufactured tobacco. Intermediate goods other than crude materials increased by $176 million between 1955/57 and 1969. The increase comprised two categories of goods: i) chemicals and chemical products and ii) paper and paper products. A number of items in these groups were imports which expanded substantially from previously insignificant levels, e.g. plastic materials and paper boards. These again reflected the emergence of productive facilities having a demand for these.

Of imports of intermediate goods which were declining but with values still above their 1955/57 levels, the principal item was crude rubber (Tables 4.26 and 4.30). Since 1963, this item had fallen well below the previously high levels when Indonesia, the main source of this import, decided to expand its own processing and packing facilities.

For the 16 import items of intermediate goods with values generally below their 1955/57 levels, it can be seen that by 1969, their aggregate value had declined by $104 million to $47 million (Table 4.27). This was due in large part to import substitution. The bulk of this decline (84 per cent) was accounted for by items other than crude materials, namely, refined or processed petroleum products and rubber tyres (Table 4.40). In both cases, the establishment of industrial facilities during the review period enabled the replacement of imports to be made. In the case of refined or processed petroleum products, however, it entailed a substantial switch to imports of crude petroleum because of limited domestic production of such.[17] For rubber tyres, the inputs were largely

[16] For purposes of this exercise, both refined and processed petroleum products and crude petroleum are classified as intermediate goods but the latter item comes under the 'crude materials' sub-group and the former under the 'others' sub-group.

[17] Sarawak in East Malaysia produced some crude oil during the review period.

available locally. As for the decline in crude material imports, this was largely caused by a decline in imports of copra products due to a drying up of the sources of supply rather than import replacement. Like crude natural rubber, sources of copra particularly Indonesia, were taking steps to retain their products for own processing and packing instead of despatching them to Malaysia.

3.6 Identification of Growing and Declining Import Items – Detailed Examination

The discussions so far have been largely in terms of the broad classes of imports. It is now appropriate to have a closer look at the important items under these broad categories in order to have a more specific picture of the direction structural changes were occurring in West Malaysian imports.

3.6(i) *Consumer Goods: Unprocessed, Little Processed Foodstuffs and Beverages*

As pointed out earlier, an important component of imports of consumer goods was the group of foodstuffs, beverages and tobacco. Table 4.28 sets out the changes in those items of foodstuffs and beverages which were unprocessed or little processed and which had generally rising trends over their 1955/57 values. By 1969, these items taken together totalled $310.1 million or an increase of $214.4 million over their 1955/57 level. Expansion of these items occurred generally from 1966 onwards.

Four items accounted for about 77 per cent of the total increase for this group in 1969; these were i) unrefined sugar; ii) unmilled wheat, spelt and meslin; iii) animal feedstuffs; and iv) unmilled maize. The increase in imports of unrefined sugar was very spectacular, particularly from 1966 and it was indeed a response to the establishment of sugar refineries in West Malaysia. Imports of unrefined sugar averaged only $1 million in 1955/57 but the value rose to nearly $62 million in 1969. On the other hand, the importation of refined sugar, particularly after 1966, came to a virtual stop (Table 4.32). The second item, unmilled wheat, spelt and meslin, which rose by $34–73 million a year in 1966, 1968 and 1969 compared with 1955/57, was another item which replaced its processed counterpart – milled wheat (Table 4.32). This change was made possible by the setting up of flour mills. The third major item, animal feedstuffs, increased by about $25 million in 1969 over the 1955/57 level; the increases in the earlier years 1966 and 1968 were even higher. The expansion of the livestock industry in the 1960 s was the underlying reason. In turn, this expansion of the livestock industry reduced the importation of birds' eggs in 1969 to about one-tenth its 1955/57 level and that of live poultry by more than 50 per cent (Table 4.29). The fourth item, unmilled maize, rose from $3 million in 1955/57 to $25 million in 1969, again largely the consequence of the expanding livestock industry.

As for the items accounting for the remaining 23 per cent of the increase in the unprocessed (and little processed) foodstuffs and beverages group, the importation of butter showed a substantial rise of about $15½ million over the 1955/57 level of $4½ million; the increases were especially marked after 1966.

Table 4.28

West Malaysia – Imports of Consumer Goods with Generally Rising Trend: Unprocessed and Little Processed Foodstuffs and Beverages
($ million)

Item	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Meat, Fish, Other Animal Products:						
Fresh, chilled or frozen meat	3.69	2.3	3.6	7.1	5.9	5.2
Butter	4.52	0.4	3.5	14.0	16.3	15.4
Fresh fish	15.48	3.5	7.3	14.3	14.1	9.2
	23.69	6.2	14.4	35.4	36.3	29.8
Vegetables and Fruits						
Fresh vegetables and roots	27.52	−1.6	3.5	9.6	6.9	9.7
Preserved vegetables	9.32	0.4	0.7	1.5	0.9	1.4
Dried fruits	3.10	1.1	1.4	1.7	1.9	0.8
	39.94	−0.1	5.6	12.8	9.7	11.9
Grains and Seeds						
Unmilled wheat, spelt & meslin	4.18	−0.1	0.1	34.4	72.6	53.3
Sesame	—	—	1.6	1.7	1.7	1.3
Unmilled maize	2.99	3.0	11.4	8.7	12.1	24.8
Unmilled cereals	0.05	0.3	0.1	3.6	3.2	2.7
Milled cereals (excluding wheat)	1.08	−0.5	1.3	1.3	2.4	1.8
Soya beans	3.95	1.4	2.0	2.7	3.0	2.8
	12.25	4.1	16.5	52.4	95.0	86.7
Sugar						
Unrefined sugar	1.02	−0.5	−0.7	37.9	49.7	60.7
Animal Feedstuffs						
Animal Feedstuffs	18.82	9.2	22.7	30.5	37.1	25.3
Total	95.72	18.9	58.5	169.0	227.8	214.4

Sources: Same as for Table 4.18.
Note: (−) before a figure means it is below the 1955/57 average.

The large decline in the imports of biscuits and, sugar confectionery and preparations, to the extent of more than 50 per cent the values imported in 1955/57 (Table 4.32), suggested that the large jumps in butter imports were largely for industries producing these items. Two other items which increased by more than $9 million in 1969 over their 1955/57 levels could be attributed to population and income growth; these were fresh fish and fresh vegetables and roots. The same could be said for the importation of fresh, chilled or frozen meat which increased by $2–7 million from the 1955/57 level during the years reviewed. An item which increased quite markedly from an insignificant level in 1955/57 was unmilled cereals (other than wheat), which again was a response to the availability of local milling facilities.

Table 4.29

West Malaysia – Imports of Consumer Goods with Generally Falling Trend: Unprocessed and Little Processed Foodstuffs and Beverages
($ million)

Item	Average Imports 1955/57	Change in Import Values Compared With 1955/57 Average				
		1960	1963	1966	1968	1969
Livestock and Products						
Live poultry	4.78	0.4	2.3	- 1.4	- 2.8	- 2.7
Salted, dried or smoked meat	1.26	−1.2	−0.5	- 0.6	- 0.6	- 0.4
Birds' eggs	10.68	2.6	−3.7	- 7.8	- 8.9	- 9.4
	16.72	1.8	−1.9	- 9.8	−12.3	−12.5
Vegetables and Fruits						
Fresh fruits and nuts	21.95	−4.4	−1.4	1.0	- 1.0	- 1.7
Grains and Seeds						
Groundnuts	5.18	0.9	1.3	3.0	- 0.5	- 1.5
Rice	129.69	5.1	35.1	−24.8	6.5	−29.6
	134.87	6.0	36.4	−21.8	6.0	−31.1
Beverage Materials						
Coffee	10.26	0.2	1.5	- 1.8	- 0.2	- 3.5
Tea and mate	8.94	0.3	−1.5	- 2.8	- 3.6	- 4.5
	19.20	0.5	—	- 4.6	- 3.8	- 8.0
Total	192.74	3.9	33.1	−35.2	−11.1	−53.3

Sources: Same as for Table 4.18.
Note: (–) before a figure means it is below the 1955/57 average. All other figures is columns 2 to 6 represent values above the 1955/57 average.

It could, therefore, be said that for items of foodstuffs and beverages in unprocessed or little processed forms, their substantial increases had been largely stimulated by the development of milling, processing and manufacturing facilities. Furthermore, a number of food and beverages items hitherto imported in finished forms had now been substantially reduced.

Table 4.29 presents those items of unprocessed foodstuffs and beverages group which had fallen below their 1955/57 levels. All of these were agricultural and livestock products which represented some measure of success of the policy of agricultural diversification. Having the most significant impact on imports was the self-sufficiency policy for rice which took effect since 1955.[18] In two years, 1966 and 1969, imports of rice fell by $25 million and $30 million respectively below the level of the 1955/57 imports. The expansion of domestic rice production had not only met the normal growth of consumption but had also

[18] This was one of the objectives of the Alliance Party when it assumed power in 1955. See the 1955 election manifesto of the Party. A full discussion of this is given in Chapter VI.

reduced imports to levels below that of 1955/57. In 1968, however, imports of rice were $6½ million above the 1955/57 level, the outcome of among other things the heavy flooding which damaged a substantial area of padi fields in the 1966/67 season.[19]

The growth of the livestock industry had also made a large impact on imports. In 1955/57, importation of eggs was about $10½ million a year, but growth of domestic production reduced imports from this level from 1963 onwards until by 1969, the value of imported eggs was less than $1½ million. The importation of live poultry was nearly $5 million a year in 1955/57 but with import substitution in the review period, this fell by nearly $3 million from the 1955/57 level in 1968 and 1969. Imports of other live animals for food, while they had not yet fallen below their 1955/57 level, were nevertheless being held down increasingly with the growth of domestic supply (Table 4.30). Other imports showing good progress in being replaced were coffee and tea (Table 4.29). Domestic production of coffee beans, though not spectacular, was able to keep imported coffee down and in 1969, a substantial decline of $3½ million from the 1955/57 level was recorded. Local tea production made even earlier and better progress and from 1963 to 1969, it reduced imports by $1½–4½ million from the 1955/57 level.

3.6(ii) *Consumer Goods: Manufactured Foodstuffs and Beverages*

In the category of manufactured foodstuffs and beverages, a number of items showed increases over their 1955/57 levels but these were basically for two reasons: a) as inputs for domestic industries and b) as imports to meet normal consumption growth. From Table 4.31, three items may be considered as having grown in response to the establishment of domestic industries. Firstly, imports of powdered milk in 1963 increased to over 4 times the 1955/57 level of about $3½ million and by 1969, were 7 times larger. This was a basic raw material for the dairy products industry which sprung to significance in the 1960's. One direct effect of this was that imported condensed milk averaging $54 million a year in 1955/57 had been virtually reduced to nothing by 1968 (Table 4.32). On the other hand, Malaysia even became an exporter of condensed milk from 1966, its exports exceeding $10 million a year (Table 4.10). Associated with the growth of the dairy products industry and other related industries was the importation of skimmed milk which increased markedly, by $8–18 million in 1966–69 over hardly any such imports in 1955/57. The third import item in this group was malt and malt flour, one of the basic ingredients for the breweries industry, which expanded largely after the mid-1960's. In 1955/57, there were no imports of malt and malt flour but for 1966, 1968 and 1969, the value was slightly over $2½ million a year. With the growth of the domestic breweries, imports of beer and ale from 1963 fell to only $4½–6 million a year or, 56–65 per cent lower than in 1955/57 (Table 4.32). The importation of stout and

[19] As a result of the floods, 7 per cent or 107,850 acres of padi fields were damaged in the 1966/67 season and the crop harvested was 2.8 per cent lower than in the previous season. See Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1967*, p. 18.

Table 4.30

West Malaysia – Imports with Generally Falling Trend (But Still Above 1955/57 Average) – All Categories ($ million)

Item	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
I. *Consumer Goods:*						
a) Foodstuffs and Beverages						
Live animals for food (excluding poultry)	4.49	5.3	1.4	2.7	0.3	2.0
Spices	8.45	1.8	2.4	1.7	0.3	0.4
	12.94	7.1	3.8	4.4	0.6	2.4
b) Others						
Television receiving sets	–	–	7.4	8.8	3.0	0.6
Brooms and brushes	1.61	0.2	0.7	-0.1	0.3	0.2
Articles of paper (boxes, bags, stationery, books, etc.)	13.00	4.3	3.4	2.3	1.8	0.3
	14.61	4.5	11.5	11.0	5.1	1.1
Total for Consumer Goods	27.55	11.6	15.3	15.4	5.7	3.5
II. *Intermediate Goods:*						
a) Crude Materials						
Crude natural rubber	58.35	80.7	15.2	1.0	-9.5	15.3
Animal and vegetable oil (excluding unprocessed animal oil and fixed vegetable oil)	0.40	1.2	0.7	1.3	0.8	0.4
	58.75	81.9	15.9	2.3	- 8.7	-15.7
b) Others						
Aviation turbine fuel	–	3.2	2.6	4.0	1.4	0.3
Lubricating grease	0.91	1.0	0.4	0.3	0.1	–
Pneumatic tyres (excluding those for cars, lorries, cycles)	1.56	0.1	2.1	2.1	1.2	-1.4
Floor coverings (carpets, tapestries, etc.)	2.30	–	1.9	1.5	1.0	1.7
	4.77	4.3	7.0	7.9	3.7	0.6
Total for Intermediate Goods	63.52	86.2	22.9	10.2	-5.0	16.3
III. *Investment and Related Goods:*						
Trailer	0.37	–	0.5	0.7	0.6	0.2
Vehicles for carrying goods – used	0.36	1.0	1.7	0.3	0.3	0.1
Steel bars, shapes, etc.	14.44	4.9	16.0	24.7	8.7	1.7
Iron pipes and fittings	9.45	4.6	15.7	20.3	6.9	3.0
Structural parts	3.47	- 0.2	10.0	2.7	4.2	1.1
Total for Investment and Related Goods	28.09	10.3	43.9	48.7	20.7	6.1
Grand Total	119.16	108.1	82.1	74.3	21.4	25.9

Sources: Same as for Table 4.18.
Note: (–) before a figure means it is below the 1955/57 average.

porter was affected even more and imports became negligible from 1968. Stout and porter emerged as new export items from 1966, averaging $6 million while beer and ale also achieved export status with $1–2½ million exported a year since 1966 (Table 4.10).

The second group of growing imports of manufactured foodstuffs and beverages covered those that expanded in response to rising consumption demand (Table 4.31). An important item here was cereals and other preparations (excluding malt and malt flour, macaroni and similar products and, biscuits for human consumption). Between 1963 and 1969, this item increased by $14–30 million above its 1955/57 level of slightly over $3½ million. Canned meat and preparations also showed steady and substantial increases, the level in 1969 reaching 2¾ times the value of $6 million imported in 1955/57. Relatively smaller increases, rising to $3 million above their 1955/57 levels in some years,

Table 4.31

West Malaysia – Imports of Consumer Goods with Generally Rising Trend: Manufactured Foodstuffs and Beverages
($ million)

Item	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Foodstuffs						
Canned meat and preparations	6.02	4.3	3.9	7.7	6.0	10.6
Powdered milk	3.39	1.5	10.8	13.1	18.2	21.0
Skimmed milk (for human)	0.24	0.5	3.1	12.3	17.8	8.3
Canned fish and preparations	8.37	1.0	1.6	0.4	0.2	2.4
Macaroni and similar products	2.72	1.1	0.7	1.6	2.4	1.9
Malt and malt flour	–	–	1.2	2.7	2.6	2.6
Chocolate and cocoa preparations	1.84	0.6	1.5	1.7	3.0	2.5
Other cereals and flour preparations *	3.61	0.9	13.7	16.9	19.5	29.8
Preserved fruits and preparations	5.52	-0.1	1.0	3.0	1.5	1.7
	31.71	9.8	37.5	59.4	71.2	80.8
Beverages						
Brandy, whisky, liquors, etc.	7.18	1.2	2.6	3.7	5.7	6.2
Total	38.89	11.0	40.1	63.1	76.9	87.0

Sources: Same as for Table 4.18

*Excludes malt and malt flour, macaroni and similar products, and biscuits for human beings.

Table 4.32

West Malaysia — Imports of Consumer Goods with Generally Falling Trend: Manufactured Foodstuffs and Beverages
($ million)

Item	Average Imports 1955/57	Change in Import Values Compared With 1955/57 Average				
		1960	1963	1966	1968	1969
Foodstuffs						
Margarine and shortenings	1.35	0.4	- 0.4	- 0.3	0.4	- 1.3
Condensed milk	53.56	4.9	- 0.4	-19.4	-52.7	-53.1
Monosodium glutamate	3.24	0.6	2.3	- 3.0	- 3.2	- 3.1
Sugar confectionery & preparations	3.95	- 0.8	0.3	- 0.1	- 1.9	- 1.7
Refined sugar	56.97	4.1	23.2	-41.0	-54.3	-54.6
Biscuits	8.19	- 3.3	- 4.4	- 4.2	- 4.2	- 4.4
Milled wheat	28.75	7.6	15.9	-12.3	-28.4	-28.1
	156.01	13.5	36.5	-80.3	-144.3	-146.3
Beverages						
Beer and ale	13.16	- 0.2	- 8.6	- 8.1	- 7.4	- 7.7
Stout and porter	11.41	0.5	- 2.6	-10.9	-11.2	-11.2
Samsoo	1.33	- 0.3	- 0.7	- 0.3	- 0.4	- 0.2
Non-alcoholic beverages	1.68	- 1.6	- 1.6	- 1.5	- 1.2	- 1.1
	27.58	- 1.6	-13.5	-20.8	-20.2	-20.2
Total	183.59	11.9	23.0	-101.1	-164.5	-166.5

Sources: Same as for Table 4.18

Note: (—) before a figure means it is below the 1955/57 average. All other figures in columns 2, 3 and 5 represent values above the 1955/57 average.

were recorded for other items: canned fish and preparations, macaroni and similar products, chocolate and cocoa preparations, and preserved fruits and preparations. In respect of beverages, imported liquors (excluding beer, ale, stout, porter and samsoo) rose steadily from slightly over $7 million in 1955/57 to nearly $13½ million in 1969.

Table 4.32 sets out the imports of manufactured foodstuffs and beverages which had declined below their 1955/57 levels. Some of these items, as mentioned earlier, had virtually ceased to be imported as domestic manufacturing facilities enabled them to be produced locally using imported inputs. These were condensed milk, refined sugar and milled wheat which, taken together, fell by about $136 million from the 1955/57 level of $139 million. Likewise, imports of stout and porter had been replaced by domestic production and to a lesser extent, beer and ale. The outcome was a reduction of imports from $24.6 million in 1955/57 to $5.7 million in 1969. Less substantial but nevertheless significant in almost total replacement of imports during the review period were the domestic production of monosodium glutamate ($3.2 million imported in 1955/57), margarine and shortenings ($1.4 million in 1955/57) and non-alcoholic beverages ($1.7 million in 1955/57); in the case of margarine and shortenings, they even developed into a new export group, particularly from 1966 (Table 4.10). Other items which were markedly import-substituted were biscuits (reduced by more than 50 per cent of its 1955/57 import value of $8.2 million since 1963) and, sugar confectionery and preparations (reduced by 43 per cent of its 1955/57 level of $4 million).

3.6(iii) *Consumer Goods: Items Other Than Foodstuffs and Beverages*

Tables 4.33 and 4.35 set out items of consumer goods other than foodstuffs and beverages with generally rising trends. Imports of these items taken together grew very rapidly and by 1969, were 3 times the level of $172.3 million in 1955/57. The most important group of items was transport equipment which made up 29 per cent of the total for this group in 1955/57 and which rose rapidly to 57 per cent of the total in 1969. Among the items in the group, new passenger motor cars were predominant. Imports of these averaged $33 million in 1955/57 but by 1968 and 1969, the value had more than trebled. Parts for motor vehicles (including tractors) also showed a substantial rise; the import values in 1966 and 1968 were also over 3 times the 1955/57 level of $15.8 million and that of 1969, rose to more than 4 times larger. During the review period, motor cycles emerged as an increasingly popular means of transportation. Imports in 1955/57 totalled only $2½ million, by 1960 these reached $13 million and in 1969, they were over $20 million. The importation of parts for motor cycles also showed a rising trend, these reaching around $5 million in 1968 and 1969, compared with relatively insignificant imports in 1955/57. To a large extent, the upsurge in imports of motor cycles reflected the combination of two factors, namely, the increasing availability of models ,which were economically priced and their greater advantages over the bicycle. Some substitution between the two means of transportation had evidently occurred. Table 4.36 shows that there was a marked and growing decline in the importation of

Table 4.33

West Malaysia – Imports of Consumer Goods with Generally Rising Trend: Items other than Foodstuffs and Beverages (I)
($ million)

Item	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Textile Materials, Fabrics						
Grey cotton yarn	0.12	0.1	3.1	6.2	7.8	11.4
Other items of textile yarn & thread	4.51	2.7	0.4	2.9	5.8	6.8
Unbleached cotton duck	0.12	0.5	0.8	0.9	0.8	0.8
Other unbleached cotton	0.16	3.0	6.8	5.1	1.4	2.4
Bleached woven cotton fabric	11.64	0.3	−1.7	4.9	0.8	0.9
Coloured woven cotton fabric	0.10	2.8	2.4	2.7	4.3	4.7
Other woven fabric	27.60	3.7	–	9.9	31.1	51.4
Tulle, lace, ribbons	0.23	1.3	1.5	–	3.1	3.9
Articles of Textiles (sacks, linen, etc.)	6.01	2.9	3.7	7.7	10.8	3.9
	50.49	17.3	17.0	40.3	65.9	86.2
Articles of Clothing						
Outergarments for men and women – not knit or crocheted	2.53	−1.4	0.8	1.8	1.1	0.7
Knitted, crocheted outergarments	0.37	0.5	0.8	1.4	4.1	5.2
Non-cotton undergarments – knitted, crocheted	0.53	−0.1	0.4	0.6	1.4	3.8
Cotton handkerchieves	0.92	–	−0.1	−0.2	0.4	1.0
	4.35	−1.0	1.9	3.6	7.0	10.7
Travel Goods						
Travel goods	1.33	−0.1	0.6	1.3	1.2	1.2
Printed Matter						
Printed matter	11.67	8.8	15.8	16.7	16.3	12.8
Total	67.84	25.0	35.3	61.9	90.4	110.9

Sources: Same as for Table 4.18.
Note: (–) before a figure means it is below the 1955/57 average.

bicycles during the review period from $9 million in 1955/57 to only about $1 million in 1969. As for imports of bicycle parts, the decline was rather marked in the early years of the 1960's – in 1963, to as low as half of the $5 million of 1955/57 but in 1968 and 1969, the decline was only marginal.

One comment should be made here concerning the imports of motor vehicles in recent years. With the establishment of a number of motor vehicles assembly plants coupled with complementary tax policies of the Government, the importation of these items now largely took the form of knocked-down parts instead of completely built-up units as in the past. Available data for 1969

showed that of the imports of new passenger cars of $111 million, 95 per cent were in the form of knocked-down parts while in the case of motor cycles, 55 per cent of the value imported were in this form. Not all the imported motor vehicles were for the domestic market. Re-exports, as may be seen from Table 4.11, were however only a fraction of the total imports, these ranging from nearly 6 to 14 per cent but these percentages had been declining.

The next largest group of non-edible consumer goods consisted of textile materials and fabrics, which were imported for further processing (e.g. printing and dyeing) or as inputs in the garments industry. Imports of textile materials rose by $86 million in 1969 over the 1955/57 level. Woven fabrics (excluding dyed, bleached, printed and coloured materials) made up the largest item and in 1969, accounted for $51½ million of the increase in 1969 for the group; this item commenced to increase substantially only from 1966. Smaller in magnitude but reaching a substantial sum of about $11½ million in 1969 compared with negligible amounts imported in 1955/57, were imported grey cotton yarn. The importation of other yarn and thread also increased particularly in 1968 and 1969 when these averaged $6.3 million above their 1955/57 level of $4½ million. Three other items increased significantly from negligible amounts in 1955/57. These were unbleached cotton (excluding unbleached cotton duck) [about $1½–7 million], coloured woven cotton fabrics (about $2½–4½ million) and tulle, lace and ribbons (about $1½–4 million). Some of these items were exported after being further processed or manufactured or they were re-exported in their original forms. An important example in the former category was unbleached cotton (excluding unbleached cotton duck) [Table 4.11(a)]. Exports of this item in 1966, 1968 and 1969 amounted to $8.2 million, $5.1 million, and $6.2 million respectively, all well above the imports in these years. (Imports in 1966, 1968 and 1969 were $5.3 million, $1.6 million, and $2.6 million respectively.) An obvious item of re-export was textile yarn and thread which commenced to be exported in significant quantities in 1966, 1968 and 1969, these being about $1½ million, $2½ million and $3 million respectively. But imports of these items were larger as reviewed earlier, therefore suggesting some re-exports.

Domestic processing and further manufacturing were obviously undertaken on some of these imports so that they replaced some other imports. This is reflected in Table 4.34 which shows that imports of two dyed items and one printed item had fallen below their 1955/57 levels. Two of these items had even developed export markets [Table 4.11(a)]. In the case of dyed woven cotton fabric, imports in 1966, 1968 and 1969 had fallen by 42–49 per cent from their 1955/57 value of nearly $20 million. Dyed cotton duck decreased only marginally. Imports of printed woven cotton fabric fell by about one-third its 1955/57 level in 1968 and 1969, and by more than half in 1966. On the other hand, there was a large increase in the export of this item by $1.1 million in 1968 over its 1955/57 level [Table 4.11(a)]. The importation of sarongs, the manufacture of which entailed the printing of designs on to plain materials, was reduced by 36–40 per cent of the 1955/57 level in 1966 and 1969 and by more than 60 per cent in 1968 (Table 4.34). Sarongs with batek designs penetrated

Table 4.34

West Malaysia – Imports of Consumer Goods with Generally Falling Trend: Items other than Foodstuffs and Beverages (I)
($ million)

Item	Average Imports 1955/57	Change in Import Values Compared With 1955/57 Average				
		1960	1963	1966	1968	1969
Textiles						
Dyed woven cotton fabric	19.86	-3.0	- 6.1	- 8.4	- 9.2	- 9.8
Printed woven cotton fabric	21.07	-0.7	3.3	-11.1	- 6.7	- 7.2
Dyed cotton duck	1.59	-0.2	- 0.3	- 0.2	- 0.5	- 0.3
	45.52	-3.9	- 3.1	-19.7	-16.4	-17.3
Articles of Clothing						
Sarong	8.39	0.9	0.5	- 3.4	- 5.1	- 3.0
Shirts	7.01*	n.a.	–	- 2.4	- 4.5	- 5.3
Undergarments and nightwear	2.98	3.4	- 1.9	- 1.8	- 1.6	- 2.2
Cotton undergarments – knitted, crocheted	5.55	0.8	0.6	- 1.0	- 1.5	- 2.6
Stockings – not knit, crocheted	1.23	0.1	0.4	- 0.3	- 0.2	–
	25.16	5.2	- 0.4	- 8.9	-12.9	-13.1
Articles of Footwear						
Footwear – all types	5.25	-0.4	- 0.2	- 0.4	- 1.7	- 2.3
Tobacco Products						
Cigarettes	40.55	-8.8	-31.4	-32.7	-33.9	-36.2
Other manufactured tobacco	4.34	-1.0	- 1.6	- 1.3	- 1.5	- 1.4
	44.89	-9.8	-33.0	-34.0	-35.4	-37.6
Total	120.82	-8.9	-36.7	-63.0	-66.4	-70.3

Sources: Same as for Table 4.18.

Note: (–) before a figure means it is below the 1955/57 average. All other figures in columns 2 and 3 represent values above the 1955/57 average.

*Based on 1962 figure as earlier data were not available.

n.a. = not available.

the export market from 1968, with exports of nearly $1 million in 1968 and nearly $2 million in 1969 [Table 4.11(a)].

In the garments industry, two items increased markedly from rather insignificant levels in 1955/57 (Table 4.33). These were imports of knitted and crocheted outergarments which rose to nearly $2 million in 1966 and $5½ million in 1969 and, imports of knitted and crocheted undergarments of non-cotton materials which reached nearly $1 million in 1963 and rising to over $4 million in 1969. But a more prominent feature of the garments industry was import substitution and export expansion rather than import growth. From Table 4.34, it can be seen that the imports of three large items of clothings besides sarongs declined significantly. Imports of shirts declined very markedly – imports in 1966 were only two-thirds of the value of $7 million imported in 1955/57 and those in 1969 declined to less than one-quarter of the 1955/57 imports. Imports of undergarments and nightwear which stood at $3 million in 1955/57 fell to 47 per cent of this in 1968 and 27 per cent of this in 1969. Imported

undergarments of knitted or crocheted cotton started to decline from 1966 compared with their 1955/57 average of $5.6 million, and by 1969, were only 53 per cent of the 1955/57 value.

As for export growth [Table 4.11(a)], exports of shirts jumped to slightly over $3 million in 1966 from insignificant values earlier and by 1969, the value of exports was $8½ million. Likewise, other outergarments for men and women (not knit or crocheted) emerged as one of the new exports in 1968, being about $2½ million and rising to $3½ million in 1969.

Footwear was also being subject to import substitution with the growth of the domestic industry (Table 4.34). Decline in the imports of footwear was particularly large in 1968 and 1969, these being 32 per cent and 43 per cent of the 1955/57 import value respectively. During the review period, the footwear industry had a fairly stable export market and except for 1966, it varied from $6.1–7.7 million [Table 4.11(a)].

Imports of a variety of chemical products also showed a rising trend (Table 4.35). These were i) medicinal and pharmaceutical products, ii) essential oils, perfume and flavour materials and, iii) perfumery, cosmetics and toilet preparations. As a group, these items in 1968 and 1969 rose to about 2 times the amount of $27½ million imported in 1955/57. Although imports of these broad groups had rising trends, it did not mean however, that domestic production in this area had been neglected. Indeed, Table 4.11(b) indicates that a number of items in the group other than these had emerged as important exports.

The machinery and equipment group increased markedly over the review period (Table 4.35). Compared with 1955/57, the value of items in the group increased by $8½ million to nearly $27 million a year. Within this group, imported transistors constituted the largest item; from zero imports in 1955/57, this item varied from $5–10 million a year from 1960. Imports of radiograms rose from less than $1 million in 1955/57 to over $5 million in 1968 and 1969. Within the machinery and equipment group, there was also evidence of increasing domestic activity which resulted in changes in the forms of imports. Three items increased markedly, especially from 1968, these being parts for radio and television sets, parts for electric refrigerators and coolers, and parts for electric fans. In the case of parts for radio and television sets, the import value which was at $1½ million in 1955/57 (the parts here were virtually for radios as television was not yet introduced) shot up by over 4 times in 1968 and over 5 times in 1969. At the same time, imports of television sets which averaged about $8 million a year in 1963/66 fell to $3 million in 1968 and to slightly over $½ million in 1969 (Table 4.30), indicating therefore the switch from importing completely built-up sets to component parts for local assembly. The same trend was evident with electric refrigerators and coolers, and electric fans (Table 4.36). The importation of parts for electric refrigerators and coolers rose to $2–3 million in 1968–69 compared with negligible value in 1955/57 and against this, imported refrigerators fell by over 40 per cent of their import value in 1955/57 (Tables 4.35 and 4.36). As for electric fans, imports in 1969 fell to about 40 per cent of the level in 1955/57 or $0.8 million while imports of fan parts in 1969 totalled $1.4 million compared with zero imports in 1955/57 (Tables 4.35 and 4.36).

Table 4.35

West Malaysia – Imports of Consumer Goods with Generally Rising Trend: Items other than Foodstuffs and Beverages (II)
($ million)

Item	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Chemical Products						
Medicinal and pharmaceutical products	17.70	4.7	7.6	21.3	24.3	23.0
Essential oils, perfume, flavour materials	3.96	0.2	1.9	1.3	3.6	3.5
Perfumery, cosmetics, toilet preparations	5.82	0.6	2.0	2.6	3.8	5.5
	27.48	5.5	11.5	25.2	31.7	32.0
Non-metallic Mineral Products						
Glassware	3.07	0.8	3.0	6.4	9.1	7.0
Pottery	3.21	0.9	1.0	2.0	2.3	3.5
	6.28	1.7	4.0	8.4	11.4	10.5
Articles of Plastics						
Plastic products	0.35	2.0	4.7	4.9	4.9	5.2
Machinery and Equipment						
Radiograms	0.71	1.0	1.4	2.8	4.4	4.4
Parts for radio and television	1.53	1.0	- 0.6	0.2	5.0	6.3
Parts for electric refrigerators, coolers	0.20	–	0.2	0.1	1.9	3.0
Parts for electric fans	–	–	0.1	0.1	1.4	1.4
Electric cooker and heating apparatus	1.15	0.6	0.8	1.4	1.0	0.7
Transistors	–	5.0	10.1	9.0	5.9	8.8
Clocks and watches	4.64	0.9	- 0.5	- 0.5	2.6	2.2
	8.23	8.5	11.5	13.1	22.2	26.8
Land Transport Equipment						
New passenger motor cars	33.01	22.6	42.8	52.0	70.3	77.6[a]
Motor cycles (including side cars)	2.50	10.6	13.5	11.8	14.6	17.7[b]
Parts for motor vehicles (including tractors)	15.82	11.6	22.8	38.4	36.7	48.5
Parts for motor cycles (including accessories)	0.30	0.5	1.5	3.3	4.6	5.0
	51.63	45.3	80.6	105.5	126.2	148.8
Miscellaneous						
Iron and steel stoves	0.66	0.1	1.0	3.4	2.6	2.8
Musical instruments	2.25	2.4	3.0	5.0	9.6	10.3
Toys, games, etc.	5.85	0.1	1.5	4.0	6.3	4.3
Cutlery	1.74	1.0	1.1	2.2	4.3	1.6
	10.50	3.6	6.6	14.6	22.8	19.0
Total	104.47	66.6	118.9	171.7	219.2	242.3

Sources: Same as for Table 4.18.

[a] Of imports of $110.6 million, completely knocked-down components accounted for $105.3 million.
[b] Of imports of $20.2 million, completely knocked-down components accounted for $11.2 million.

Three other groups of consumer goods had large and consistent increases (compared with levels in 1955/57) during the review period. These were imported printed matter, glassware and pottery and, articles of plastics (Tables 4.33 and 4.35). Taken together, the value imported in 1969 was nearly $47 million or 2½ times the value in 1955/57. Some exports of two of these items may be seen in Table 4.11(c) namely, printed matter and articles of plastics; a

Table 4.36

West Malaysia – Imports of Consumer Goods with Generally Falling Trend: Items other than Foodstuffs and Beverages (II)
($ million)

Item	Average Imports 1955/57	Change In Import Values Compared With 1955/57 Average				
		1960	1963	1966	1968	1969
Chemicals and Chemical Products						
Dental paste	2.82	1.3	−2.2	− 2.4	− 2.4	− 2.5
Soap and cleansing preparations	9.46	0.6	−4.9	− 4.0	− 4.1	− 4.7
	12.28	1.9	−7.1	− 6.4	− 6.5	− 7.2
Machinery and Equipment						
Radio-receiving sets – mains & batteries	5.77	−1.9	−3.9	− 5.3	− 5.6	− 5.1
Electric refrigerators	2.89	0.9	1.3	3.0	− 1.3	− 1.2
Electric fans – all types	1.98	0.5	1.8	2.9	− 0.3	− 1.2
Flashlight batteries	2.14	−0.4	0.7	− 1.5	− 1.8	− 2.1
Filament electric bulbs	1.18	−0.1	0.5	− 0.6	− 0.1	− 0.1
Sanitary equipment, lighting, etc.	7.99	0.6	2.1	1.8	− 0.5	− 1.6
	21.95	−0.4	2.5	0.3	− 9.6	−11.3
Transport Equipment						
Used passenger cars	1.87	0.1	1.3	0.2	− 0.2	− 0.3
Bicycles	9.03	3.1	−2.8	− 5.9	− 5.6	− 8.0
Bicycle parts	5.06	−2.0	−2.4	− 1.3	− 0.4	0.7
	15.96	1.2	−3.9	− 7.0	− 6.2	− 7.6
Paper and Paper Products						
Wrapping paper	1.45	0.9	−0.4	− 0.3	− 0.1	1.0
Joss paper	4.12	0.6	1.5	− 3.4	− 4.1	− 4.1
	5.57	1.5	1.1	− 3.7	− 4.2	− 3.1
Wood and Wood Products						
Manufactures of wood	3.13	0.4	−1.1	− 1.3	− 1.7	− 1:4
Joss sticks	1.84	0.2	0.3	− 0.7	− 1.1	− 1.8
Matches	3.22	−2.0	−2.6	− 2.8	− 3.1	− 3.1
	8.19	−1.4	−3.4	− 4.8	− 5.9	− 6.3
Non-metallic Mineral Products						
Precious stones and pearls	5.08	6.4	9.0	5.0	− 1.0	− 0.3
Miscellaneous						
Furniture	3.28	0.5	1.6	0.4	− 0.3	− 0.8
Umbrellas – all types	1.51	0.4	0.2	0.4	− 0.1	–
Non-enamelled household utensils of iron and steel	2.37	−0.2	−0.3	− 1.5	− 1.4	− 1.2
Aluminium household utensils	1.51	0.2	−0.6	− 1.1	− 1.1	− 1.5
	8.67	0.9	0.9	− 1.8	− 2.9	− 3.5
Total	77.70	10.1	−0.9	−18.4	−36.3	−39.3

Sources: Same as for Table 4.18.

Note: (−) before a figure means it is below the 1955/57 average. All other figures in columns 2 to 4 represent values above the 1955/57 average.

part of these might be merely re-exports and the rest from domestic production. The last group was a miscellaneous collection of items which had shown growth tendencies. Most important of these were imports of musical instruments of all types and toys.

In the course of discussion, a number of imports were noted to have fallen below their 1955/57 levels. These were items that had lost their markets following the establishment of domestic facilities to produce them. There were other items which had also disappeared from the Malaysian market, either completely or partially. But the domestic production which caused these led to a corresponding expansion in the imports of inputs, whether as knocked-down parts or in less elaborately manufactured or processed forms.

An important group of items which fell within the last category comprised imported cigarettes and other manufactured tobacco. As a result of the establishment of local facilities to turn raw tobacco into finished products, the imports of cigarettes and other manufactured tobacco experienced a drastic decline (Table 4.34). In 1955/57, imports of cigarettes amounted to $40½ million but by 1969, their value had fallen to only 11 per cent of this. Imports of other manufactured tobacco which were nearly $4½ million in 1955/57 declined to less than two-thirds of this amount in 1969. On the other hand, Malaysia produced only a small amount of raw tobacco. Thus imports of unmanufactured tobacco increased markedly (Table 4.37). In 1955/57, the imports of unmanufactured tobacco averaged only $1.2 million. These rose sharply to an average of $22 million a year in 1963, 1966 and 1968 and to about $33½ million in 1969.

There were, in addition, other declining items of imports in the category of non-edible consumer goods which involved less obvious replacement of one item of imports for another. These can be found in Tables 4.34 and 4.36. Of these, five items of imports could be singled out. These were joss paper, matches, dental paste, joss sticks and aluminium household utensils. The total saving in imports of all these items in 1969 was $13 million (using 1955/57 imports as base level). Another large item of import saving amounting to $4.7 million in 1969 was accounted for by the soap and cleansing preparations group; however, the imports of these still varied from 48–58 per cent of their 1955/57 level during the review period. Two smaller items had also been import-substituted to the extent of 50 per cent of their 1955/57 levels; these were household utensils of iron and steel (non-enamel) and wood manufactures, both together saving about $2.5 million in 1969.

Among this collection of items, it is interesting to note that the locally-produced items sometimes made greater headway in the export market. The soap and cleansing preparations group, for example, was one of the more dynamic groups of exports. Since 1963, the export values of these products were $12–19 million a year compared with about $3½ million a year in 1955/57 [Table 4.11(b)]. As seen above, the import saving during the same period was smaller than the export expansion. Obviously, a preference for imported items was a contributory factor in slowing down the pace of import replacement. Where this preference could be largely overcome, as had happened in the case of

dental paste, domestic production would replace virtually all imports. In the latter part of the 1960's, this process was considerably assisted by a more active use of tariffs, as will be discussed in Chapter X. It also appeared that export markets would often develop for the product at about the same time. The dental paste industry, for example, had been exporting at a rate of $1½–3 million a year since 1963, the year when import replacement became obvious.

3.6(iv) *Intermediate Goods: Crude Materials*

Table 4.37 sets out the growing items of imports of crude materials, an important component of intermediate goods. These items, taken together, increased from $102 million in 1955/57 to $366 million in 1969, or about 3½ times. Dominating the list of crude material imports was crude petroleum, a new import item from 1963 which increased to $120 million in 1969. The rise in imports was the outcome of the setting up of the two oil refineries in the country. The products of the refineries, namely, refined motor spirit, kerosene, diesel fuel (other than high speed), fuel oils, reduced the importation of these items by $70–73 million a year in 1966, 1968 and 1969 (Table 4.40). Furthermore, there was an upsurge in the exports of refined motor spirit, kerosene and other petroleum products in 1968 and 1969 to the extent of $30 million and $17 million respectively, compared with 1955/57 [Table 4.11(b)]. Some relatively small decline in the importation of aviation turbine fuel and lubricating grease was also evident (Table 4.30). Despite the existence of the oil refineries and the large importation of crude petroleum, the importation of two major items of petroleum products rose markedly: high speed diesel fuel and lubricating oil (Table 4.39). In 1955/57, imports of these two items accounted for about $29½ million; from 1960, imports of these had been at $14–20 million above this level. In short, a substantial share of petroleum products hitherto imported had now been replaced by domestic production based on imported crude oil; some items of the locally-refined output were even exported. What was not quite so obvious was that domestic consumption which must have risen markedly in the 1960's, was being accommodated by only modest increases in imports of certain types of petroleum products.

Before the establishment of the oil refineries, tin concentrates made up the major item of crude material imports; it had now become the next largest item. With its smelting facilities, West Malaysia was able to draw tin concentrates from the neighbouring countries, e.g. Thailand, Indonesia and Laos but this item could be expected to decline with the availability of smelting facilities in Thailand and as Indonesia made efforts to process increasingly its own raw materials. Nevertheless, during the review years, imports of tin concentrates were $127–161 million a year except for 1966 when imports fell to $23 million.

Unmanufactured tobacco, another new item of crude material imports, gained prominence with the establishment of manufacturing facilities for cigarettes. This was discussed earlier.

An item that had grown significantly from its import level of 1955/57 was 'other non-metallic minerals'. In 1966, this item rose by nearly $9 million from its 1955/57 level and by $13½ million by 1969. The major components of this

Table 4.37

West Malaysia – Imports of Intermediate Goods with Generally Rising Trend: Crude Materials
($ million)

Item	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Agricultural						
Oil palm nuts and kernels	0.13	0.8	0.1	0.9	- 0.1	- 0.1
Cotton	0.26	–	0.5	6.1	8.2	8.1
Crude vegetable materials – inedible	8.24	5.7	5.1	6.1	4.9	9.0
Unmanufactured tobacco	1.22	8.1	20.4	23.5	22.3	32.2
	9.85	14.6	26.1	36.6	35.3	49.2
Mineral						
Stone and dolomite	0.32	4.0	1.4	1.3	1.6	1.7
Other non-metallic minerals	2.79	n.a.	3.8	8.9	10.8	13.5
Tin concentrates	75.97	61.4	84.8	-53.2	72.4	51.2
Zinc ore	*	n.a.	0.3	0.8	2.2	1.9
Waste and scrap non-ferrous metal	0.05	0.8	4.2	2.9	5.5	6.6
Coal and coke	1.56	0.8	0.4	1.0	0.5	1.0
	80.69	67.0	94.9	-38.3	93.0	75.9
Oils						
Crude petroleum	–	–	26.5	108.2	125.7	120.2
Unprocessed animal oil	2.83	2.1	2.0	0.8	1.2	1.1
Fixed vegetable oil	4.37	2.2	1.3	5.5	9.2	7.0
	7.20	4.3	29.8	114.5	136.1	128.3
Others						
Crude fertilizers	4.28	2.6	5.4	8.0	4.7	4.9
Man-made fibres	–	0.2	0.6	0.6	1.4	3.1
Synthetic reclaimed waste	–	–	1.4	1.6	1.5	2.7
	4.28	2.8	7.4	10.2	7.6	10.7
Total	102.02	88.7	158.2	123.0	272.0	264.1

Sources: Same as for Table 4.18.
Note: (–) before a figure means it is below the 1955/57 average.
*Negligible.
n.a. = not available.

item were asbestos, salts and clays. Another large item that had emerged since 1966 was cotton. Its import value in 1966 was $6 million but rose to slightly over $8 million in 1968 and 1969 – a reflection of the growing need and dependence of the textile industry on overseas sources of supply for raw materials. Imports of non-ferrous waste and scrap became significant from 1963

and by 1969 was about $6½ million. In 1969, this item comprised virtually the imports of ash and residues bearing non-ferrous metals. Two other smaller items that assumed significance in the 1960's were reclaimed waste synthetic rubber and man-made fibres, each of which reached levels of about $3 million in 1969. All these items provided further evidence of the growing industrial activity in the 1960's.

Other notable items were inedible crude vegetable materials, fixed vegetable oil and crude fertilizers. Imports of inedible crude vegetable materials, comprising predominantly of plants and parts for perfumery and medicine, were maintained at a high level above the imports of 1955/57 of $8¼ million, these being $5–6 million except for 1969 when it was $9 million above. Imports of fixed vegetable oil also increased markedly and in 1966, 1968 and 1969, these were as high as $5½–9 million above their 1955/57 level of nearly $4½ million. Crude fertilizer imports, which stood at $4¼ million in 1955/57, were more than double this amount in 1968 and 1969 and, in 1966, even 3 times.

The declining imports of crude materials were relatively fewer. Most important were the two traditional items, crude natural rubber and copra (Table 4.30 and 4.38 respectively). These products were imported from neighbouring countries, particularly Indonesia and were subsequently re-exported after some processing and re-packing. To a large extent, the declining imports of these commodities were the result of Indonesian policy to process increasingly its raw materials for export. For crude natural rubber, import levels varied considerably compared with the average of $58.3 million for 1955/57, these ranging from $81 million above the 1955/57 level in 1960 to $9½ million below that in 1968; but overall imports of these were likely to remain substantial for still some time. The situation was, however, different for copra imports. In 1955/57, copra imports averaged $16 million but declined sharply from 1966; in 1966, imports fell to 5 per cent of the 1955/57 level but rose to an average of 15½ per cent in 1968/69.

3.6 (v) *Intermediate Goods: Items Other Than Crude Materials*

Table 4.39 sets out the growing items of imports of those intermediate goods other than crude materials. These items taken together reached nearly $272 million in 1969, or about 3 times larger than in 1955/57; the expansion was marked particularly from 1966. The most important group of items was 'chemicals and chemical products', it being responsible for about 50–60 per cent of the increase of all the growing items of intermediate goods other than crude materials. Imports of all the items in the chemicals and chemical products group averaged $44.7 million in 1955/57 but from 1966 to 1969, they were about 3 times this level. The largest item in this group was plastic materials which showed rapid increase especially from 1966; the level in 1955/57 was relatively insignificant. Organic chemical products and, synthetic dyestuffs and indigo were two other items of newly-developed imports of the 1960's. The two largest items of the chemicals and chemical products group in 1955/57 averaging slightly over $16 million each, continued to grow during the review period and more than doubled themselves by 1969; these items were inorganic chemical products and manufactured fertilizers.

Table 4.38

West Malaysia – Imports of Intermediate Goods with Generally Declining Trend: Crude Materials
($ million)

Item	Average Imports 1955/57	Change in Import Values Compared with 1955/57 Average				
		1960	1963	1966	1968	1969
Agricultural and Forestry						
Copra	16.01	- 3.2	- 7.7	-15.2	-13.1	-13.8
Wood for fuel	2.29	0.4	0.1	- 1.4	- 1.9	- 1.8
Shaped or worked wood	1.35	- 0.5	- 0.4	- 0.7	- 0.7	- 0.6
Pulp for paper and waste	3.19	0.1	–	0.5	–	- 0.1
Total	22.84	- 3.2	- 8.0	-16.8	-15.7	-16.3

Sources: Same as for Table 4.18.

Note: (–) before a figure means it is below the 1955/57 average. All other figures in colums 2 to 4 represent values above the 1955/57 average.

Table 4.39

West Malaysia – Imports of Intermediate Goods with Generally Rising Trend: Items other than Crude Materials ($ million).

Item	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Petroleum Products						
High speed diesel fuel	18.98	10.6	16.9	11.7	14.5	15.5
Lubricating oil (minimum 73% petroleum)	10.64	3.2	1.3	8.0	3.4	4.7
	29.62	13.8	18.2	19.7	17.9	20.2
Chemicals and Chemical Products						
Organic chemical products (excluding monosodium glutamate & formic acid)	2.42	1.8	4.3	8.1	11.3	10.3
Inorganic chemical products	16.37	7.1	9.4	18.1	13.7	20.8
Synthetic organic dyestuffs, indigo	0.48	0.6	1.3	3.0	4.0	4.7
Pigments, paints, varnishes (excluding paints and enamels)	2.19	3.5	3.0	3.9	4.8	4.2
Manufactured fertilizers	16.01	10.0	17.6	34.2	10.1	17.9
Explosives	2.75	0.6	1.6	4.3	2.4	1.5
Plastic materials	1.94	3.6	9.1	18.2	26.8	36.7
Photographic supplies	2.49	0.9	1.4	2.8	3.9	3.0
	44.65	28.1	47.7	92.6	77.0	99.1
Paper and Paper Products						
Newsprint	0.74	1.7	4.4	5.4	9.2	9.7
Printing paper (excluding newsprint)	3.29	0.5	2.6	6.0	9.5	4.0
Writing paper	0.77	1.1	1.2	0.8	1.8	2.1
Kraft paper	–	–	2.2	5.5	6.6	6.7
Paper board – all types	1.23	1.9	6.9	12.6	17.8	21.8
	6.03	5.2	17.3	30.3	44.9	44.3
Special Fabrics						
Articles of special fabrics (nets, ropes, textile in plastic, etc.)	6.98	3.5	5.0	6.4	11.2	9.3
Rubber Products						
Fabricated manufactures of rubber	0.31	1.1	2.2	2.0	2.8	2.5
Manufactures of rubber (excluding pneumatic tyres and fabricated articles)	4.43	−0.5	−0.3	0.5	0.5	2.0
Pneumatic tyres (excluding those for cars, lorries, buses, motor cycles and bicycles)	1.56	0.1	2.1	2.1	1.2	−1.4
	6.30	0.7	4.0	4.6	4.5	3.1
Total	95.58	51.3	92.2	153.6	155.5	176.0

Sources: Same as for Table 4.18

The next largest group of growing intermediate imports comprised paper and paper products. Imports of these in 1955/57 were relatively small ($6 million) but by 1968–69, they had exceeded $50 million. The most dynamic item was paper board of all types which rose from $1¼ million in 1955/57 to $23 million in 1969. Newsprint was another large item, rising to about $10 million a year in 1968–69 from imports of $¾ million in 1955/57. Imports of kraft paper reached levels of about $5½–6½ million a year in 1966–69 from zero imports in 1955/57. These increases in the imports of inputs were accompanied by some modest exports of paper products and printed matter [Table 4.11(c)].

Articles of special fabrics which included nets, ropes, textiles in plastic, etc., showed progressive increase in the review period. Growth in rubber products was relatively slower – in this area, a fair amount of import substitution had occurred as will be seen shortly. The two expanding items of petroleum products have been discussed.

Among the items of intermediate goods other than crude materials, which had declined below their 1955/57 import levels, the most important group consisted of petroleum products (Table 4.40). The significant contribution of this group to import saving was discussed earlier. Also of great significance was the near replacement of imported pneumatic tyres for cars, lorries and cycles by domestic output. Unlike petroleum products, the bulk of the inputs were also domestically produced. In 1955/57, imports of pneumatic tyres for these types of vehicles averaged $15.4 million but in 1968/69, they had fallen to around $2 million. Among the three categories of tyres, domestic output had virtually taken over the market formerly enjoyed by imported lorry and cycle tyres. Furthermore, domestic production had begun to supply a modest amount to export markets [Table 4.11(c)].

3.6(vi) *Investment and Related Goods*

The efforts at development, both by the public and private sectors, were well reflected in the rising imports of investment and related goods. Tables 4.41 and 4.42 show the items of investment and related goods with a generally rising trend in values. Among the various groups of such goods, the most important was the 'machinery and equipment' group (Table 4.42). This group covered all types of machinery and equipment except those used for transport purposes. In 1955/57, imports of these averaged $81 million but growth had been very rapid; indeed very sharp increases occurred in 1963 and 1966, after which import growth levelled off. In 1963, imports were approximately 3 times the amount in 1955/57 but in 1966, they increased to about 4 times and this was maintained in 1968 and 1969. Some items entered the re-export trade but Table 4.11(d) suggests this to be only a small fraction, especially after allowing for some domestic manufacturing. The various items of machinery and equipment contributed either directly or indirectly to the growth of a more elaborate production structure and it is needless to comment on changes in all the individual items. However, it is interesting to note that a number of the items had one common characteristic namely, their importation expanded very markedly during the review period from relatively small or negligible levels in

Table 4.40

West Malaysia – Imports of Intermediate Goods with Generally Declining Trend: Items other than Crude Materials
($ million)

Item	Average Imports 1955/57	Change in Import Values Compared with 1955/57 Average 1960	1963	1966	1968	1969
Petroleum Products						
Refined motor spirit	38.08	– 4.7	–17.1	–26.2	–25.7	–26.1
Kerosene	14.36	– 4.1	– 4.7	– 8.9	– 8.4	– 5.6
Diesel fuel other than high speed	19.09	– 3.0	– 9.5	–15.1	–15.7	–15.1
Fuel oils	24.49	–14.2	– 2.5	–22.5	–22.5	–22.9
	96.02	–26.0	–33.8	–72.7	–72.3	–69.7
Chemicals and Chemical Products						
Formic acid	1.90	0.9	1.0	– 1.0	– 0.8	0.2
Paints and enamels	5.78	– 1.8	– 3.3	– 4.4	– 4.6	– 4.7
	7.68	– 0.9	– 2.3	– 5.4	– 5.4	– 4.5
Wood and Wood Products						
Simply-shaped wood	3.10	1.0	1.2	– 1.1	–0.4	0.2
Rubber Products						
New motor car tyres – pneumatic	4.47	0.3	– 1.3	– 2.7	– 2.8	– 3.1
New lorry and bus tyres – pneumatic	7.39	1.1	– 3.1	– 6.0	– 6.9	– 7.0
Cycle tyres – pneumatic	3.55	–	– 0.7	– 1.8	– 3.2	– 3.4
	15.41	1.4	– 5.1	–10.5	–12.9	–13.5
Leather Products						
Manufactures of leather	1.42	0.3	0.7	0.8	– 0.2	– 0.2
Miscellaneous						
Office supplies	4.65	0.3	0.5	– 0.4	0.7	– 0.3
Total	128.28	–23.9	–38.8	–89.3	–90.5	–88.0

Sources: Same as for Table 4.18.

Note: (–) before a figure means it is below the 1955/57 average. All other figures in columns 2 to 6 represent values above the 1955/57 average.

1955/57. These items were telecommunications apparatus (excluding radios, transistors and television sets), excavators, levellers, bulldozers (including parts), agricultural machinery and appliances, scientific instruments, electric power machinery and switchgear, metal working machinery, machines associated with printing, food processing machines and cereal working machines.

The next largest group of investment goods comprised materials of iron and steel (Table 4.41). In 1968 and 1969, imports of these items were around $108 million a year compared with $29 million in 1955/57. Two of the largest items in this group were iron and steel plates and sheets and, tin plate. Imports of both of the items increased by more than $20 million each in 1969 over their 1955/57 averages. Three other import items in this group expanded by $5–10 million above their 1955/57 levels in 1969; these were iron and steel hoops and strips; iron and steel wire; and metal containers.

Table 4.41

West Malaysia – Imports of Investment and Related Goods with Generally Rising Trend (I)
($ million)

Item	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Metal Products Excluding Machinery						
Materials of Iron and Steel						
Pig, sponge iron, etc.	0.45	– 0.1	0.5	1.0	0.5	–
Iron and steel ingots	0.15	0.3	0.5	–	4.3	0.1
Plates and sheets of iron and steel	8.07	0.4	9.9	21.5	22.4	27.0
Tin plate	3.70	1.9	4.9	10.4	18.7	21.4
Iron and steel hoops and strips	0.55	0.2	–	0.5	4.6	7.0
Iron and steel wire	2.50	3.0	5.4	7.5	9.5	10.2
Steel casting and forging	0.45	0.1	1.8	1.3	1.0	0.9
Railway track material	1.39	– 0.4	0.6	1.8	0.8	0.4
Metal containers (tanks, cylinders, etc.)	6.55	5.7	7.6	19.6	7.6	6.0
Wire products (excluding wire netting, barbed wire)	2.86	1.2	2.8	4.1	5.6	3.3
Nails, screws, bolts (excluding iron wire nails and staples)	2.62	0.1	1.1	2.1	3.1	2.6
	29.29	12.4	35.1	69.8	78.1	78.9
Materials of Copper						
Wire, bars, rods, etc. of copper	3.04	0.6	2.0	6.7	7.9	8.8
Materials of Aluminium						
Wire, strips, sheets, foil, etc. of aluminium	3.09	1.5	5.7	8.4	8.4	8.9
Materials of Zinc						
Zinc products	1.28	– 1.1	– 0.5	0.3	1.7	2.8
Materials of Tin						
Materials of tin	0.27	0.3	0.7	1.7	0.5	0.8
Non-metallic Mineral Products						
Refractory bricks and similar materials	0.41	0.1	0.2	1.7	4.2	0.7
Floor tiles and wall ceramics	1.73	0.4	2.1	2.3	1.0	1.9
Glass	2.31	0.4	1.9	2.3	3.1	3.9
	4.45	0.9	4.2	6.3	8.3	6.5
Total	41.42	14.6	47.2	93.2	104.9	106.7

Sources: Same as for Table 4.18
Note: (–) before a figure means it is below the 1955/57 average.

The third largest group of investment and related goods comprised 'transport equipment and other motor vehicles' (Table 4.42). In 1955/57, imports of items in this group averaged about $22½ million; by 1969 the value of these had risen to slightly over 3 times. Most important of these items were buses, lorries and special purpose vehicles. These rose very markedly in 1968 and 1969, being $33 million and $41 million respectively, compared to $11 million in 1955/57. Imports of tractors of all types increased very significantly in some years – by $10–20 million above their 1955/57 level in 1960, 1963, 1966 and 1969.

Both the imports of materials of copper and of aluminium grew at about the same pace during the review period (Table 4.41). In 1955/57, the average imports of each group of items were $3 million but by 1969, these were near $12 million each. Among the non-metallic mineral products, glass was a major item of import, this being about $6 million in 1969 or nearly 3 times the amount

Table 4.42

West Malaysia – Imports of Investment and Related Goods with Generally Rising Trend (II)
($ million)

Item	Average Imports 1955/57	Size of Import Values Above 1955/57 Average				
		1960	1963	1966	1968	1969
Machinery and Equipment						
Office machines	3.38	1.8	3.6	6.3	6.2	9.0
Non-electric power generating machinery	12.68	7.8	20.9	29.7	30.3	13.4
Agricultural machinery and appliances	1.33	1.1	6.9	6.6	15.0	13.1
Metal working machinery	1.03	1.7	3.0	16.4	7.3	6.7
Textile and leather machinery	8.28	1.5	1.5	2.8	6.8	5.1
Machines associated with printing	0.93	1.3	3.5	6.1	6.9	9.3
Cereal working machinery	–*	–*	0.7	3.7	1.6	2.0
Food processing machines	–*	–	3.4	2.9	3.6	1.5
Glass working machinery	–*	–	–	–	2.6	0.3
Machinery for crushing, sorting minerals	–*	–	6.2	4.5	4.6	3.9
Excavator, leveller, bulldozer, etc. and parts	2.07	9.2	16.0	19.7	21.7	29.7
Concrete mixer	0.47	0.2	0.8	0.5	0.2	0.3
Road roller and parts	0.16	0.7	2.0	0.5	0.5	0.7
Miscellaneous machinery	25.66	15.8	48.6	81.2	72.8	79.3
Electric power machinery, switchgear	6.35	0.8	21.5	33.4	22.8	18.5
Electricity distributing equipment	7.62	– 1.8	6.2	11.8	6.7	5.0
Telecoms apparatus (excluding radios, TVs and transistors)	4.16	– 1.0	– 0.6	14.2	21.3	28.0
Electro-medical apparatus	0.12	0.4	1.0	1.1	1.4	0.6
Parts for accumulator, primary battery	0.18	0.4	0.8	1.8	1.3	0.6
Electric starting equipment and sparking plug	0.29	0.3	0.5	0.9	3.1	1.8
Electric meters for various purposes	0.91	0.3	1.6	2.1	2.6	2.2
Electric hand tools, cutting, welding machines	0.20	0.3	0.6	2.2	1.8	2.3
Scientific instruments	5.14	1.4	6.1	9.9	13.0	10.8
	80.96	42.2	154.8	258.3	254.1	244.1
Transport Equipment, Other Motor Vehicles						
Buses, lorries, special purpose vehicles	11.00	2.6	3.0	4.3	21.6	30.0[a]
Tractors – all types	6.95	20.1	9.7	19.1	3.3	12.6
Railway locomotives, rail vehicles	3.83	1.0	2.1	5.6	– 1.4	1.9
Ships and boats	0.50	0.3	0.7	0.4	0.9	0.4
Aircraft	0.06	0.3	1.2	7.5	17.3	4.3
	22.34	24.3	16.7	36.9	41.7	49.2
Miscellaneous Manufactures						
Hand tools	3.41	1.0	5.5	8.8	8.8	7.8
Total	106.71	67.5	177.0	304.0	304.6	301.1

Sources: Same as for Table 4.18

*No breakdown available: value assumed negligible.

[a]Of imports of $41 million, completely knocked down parts accounted for $39 million.

imported in 1955/57. Among the miscellaneous manufactures, imports of hand tools increased quite significantly (Table 4.42); after a sharp rise in 1963 and again in 1966, imports levelled off at $11–12 million a year in 1968 and 1969.

Table 4.43 sets out the items of investment and related goods which had declined to levels below their 1955/57 average. The extent of import saving in this category of imports was relatively small compared with the achievements in the consumer goods and intermediate goods sectors, for reasons already discussed (Tables 4.26 and 4.27). A substantial part of the import substitution in investment goods arose from the establishment of domestic productive facilities. However, in respect of the decline in the imports of parts for floating dredges,

Table 4.43

West Malaysia – Imports of Investment and Related Goods with Generally Falling Trend
($ million)

Item	Average Imports 1955/57	Change in Import Values Compared with 1955/57 Average				
		1960	1963	1966	1968	1969
Road Vehicles						
Chassis with engine for other vehicles including tractors	2.98	8.8	14.1	16.9	- 3.0	- 2.9
Machinery and Equipment						
Parts for floating dredge	10.17	7.0	−2.0	2.0	- 1.6	−10.2
Primary batteries	1.86	0.9	−0.4	- 1.6	- 1.9	- 0.7
Accumulators	2.18	−0.2	−0.3	- 0.5	- 0.5	- 0.9
	14.21	7.7	−2.7	- 0.1	- 4.0	−11.8
Non-metallic Mineral Products						
Cement	12.27	−9.3	−0.7	−11.5	−11.3	−11.4
Building materials of asbestos	5.96	0.5	−0.9	- 5.0	- 5.7	- 5.6
Pipes of asbestos	1.16	1.4	8.1	2.1	- 1.1	- 0.9
Roofing tiles of baked clay	1.87	−0.8	−1.3	- 1.8	- 1.9	- 1.9
	21.26	−8.2	5.2	−16.2	−20.0	−19.8
Metal Products Excluding Machinery						
Galvanized sheets	10.72	2.6	−4.2	- 8.0	- 8.2	- 8.0
Iron wire netting for fencing and barbed wire	4.06	−0.1	−2.0	- 2.7	- 3.4	- 3.1
Iron wire nails and staples	2.33	0.2	−0.9	- 1.5	- 1.6	- 1.5
	17.11	2.7	−7.1	−12.2	−13.2	−12.6
Total	55.56	11.0	9.5	−11.6	−40.2	−47.1

Sources: Same as for Table 4.18
Note: (−) before a figure means it is below the 1955/57 average. All other figures in columns 2, 3 and 4 represent values above the 1955/57 average.

one other notable reason besides the domestic production of some of the parts, appeared to be a decline in this form of mining. In 1960–61, there were in operation 69–72 dredges but the number had since fallen to 65 in 1968 and 1969. Imports of parts for dredges averaged $10 million in 1955/57 and from 1963, these declined, with zero imports in 1969.

The most important group of investment goods which achieved a high level of import saving covered building materials of non-metallic minerals. In 1955/57, imports of these items averaged $21 million but with progressive import-replacement by domestic output since 1960, imports in 1968 and 1969 fell to

only slightly more than $1 million. The largest item in this group was cement which had virtually ceased to be imported from 1966. (The 1955/57 imports averaged $12.3 million). The same can be said for imports of building materials of asbestos, which averaged $6 million in 1955/57. Locally-produced output of these two items had found good export markets. [Table 4.11(c)]. In the case of cement, exports starting from negligible amounts reached $10 million in 1968 and $14½ million in 1969. Likewise, exports of building materials of asbestos exceeded $1 million in 1968 and rose to $4½ million in the following year. The other smaller items which also reached a high stage of import substitution were pipes of asbestos and roofing tiles of baked clay.

In the category of metal products, three items had achieved a large measure of import replacement. The imports of galvanized sheets, averaging $10.7 million in 1955/57, were reduced to about $2.7 million from 1966. Exports of this item were $3½–4½ million a year in 1966, 1968 and 1969 [Table 4.11(e)]. Imports of iron wire netting for fencing and barbed wire fell to less than 25 per cent of their 1955/57 level of $4 million. The third item, iron wire nails and staples, was being imported at less than 35 per cent of their 1955/57 level from 1966.

Another group of investment goods had import values showing marked decline especially from 1968 although these were still above their 1955/57 levels (Table 4.30). Two major items in this group were: i) steel bars, shapes, etc. and ii) iron pipes and fittings. In the case of steel bars, shapes, etc., imports in the early 1960's rose considerably compared with 1955/57. In 1963, they were about 2 times higher and in 1966 they were over 2½ times higher but in 1968 and 1969, a clear declining tendency was evident. Imports fell to only slightly above the 1955/57 level of $14.4 million in 1969. Imports of iron pipes and fittings also followed a similar pattern. Imports of these rose from $9½ million in 1955/57 to nearly $30 million in 1966 and then started to decline until the value fell to $12½ million in 1969. Exports of iron pipes and fittings amounting to nearly $3 million commenced in 1968 [Table 4.11(e)].

One conclusion clearly emerges from this examination of the import pattern of investment and related goods. The process of import replacement was by and large confined to relatively simple manufactures. Items of machinery and other equipment entailing a high degree of technical skills and technology still remained beyond the capability of the domestic producers. Imports thus continued to be of great significance here.

PART II

PUBLIC POLICIES AND MEASURES IN THE AGRICULTURE AND FORESTRY SECTOR

PART II

PUBLIC POLICIES AND MEASURES
IN THE AGRICULTURE
AND FORESTRY SECTOR

CHAPTER V
THE AGRICULTURE AND FORESTRY SECTOR– GOVERNMENT POLICY ON RUBBER AND ECONOMIC DIVERSIFICATION

1. INTRODUCTION

The starting point for an appraisal of the Government's policies and measures to promote economic diversification must be an examination of its policy for the natural rubber industry since World War II. In view of the industry's dominant role in the Malaysian economy together with the fact that the situation of the industry pressed for the adoption of the various diversification policies, the character and effects of the Government's rubber policy naturally have important implications for the nature of the diversification policies that followed. In particular, an examination of the rubber policy should reveal, among other things, the following:

i) whether the policy to rejuvenate the rubber industry was a Hobson's choice or that concentrated diversification policies could have been possible as early as the mid-1950's;
ii) the impact of the rubber policy on the state of the industry;
iii) the basic role of the rubber policy;
iv) the direct contributions of the rubber policy to agricultural diversification.

This chapter will attempt to examine the post-war Government policy on rubber and will pay special attention to these four aspects.

2. EARLY DEVELOPMENT OF POST-WAR GOVERNMENT POLICY ON RUBBER

The backbone of the post-war Government policy on rubber is the rejuvenation of the rubber industry. A summary of the post-war replanting and new planting schemes is given in Table 5.1 for smallholdings[1] and Table 5.2 for estates. Government interest in rubber replanting in the post-war period went as far as

[1] In Malaysian rubber terminology, rubber smallholdings cover rubber land of up to 100 acres. Those above 100 acres are classified as estates. References to smallholdings and estates in this study follow these definitions.

Table 5.1

West Malaysia – Summary of Post-War Replanting and New Planting Schemes for Rubber Smallholdings

Scheme and Objective	Duration	Particulars
Replanting Scheme for Smallholders	1 January 1951 – 31 May 1955	Financed by Schedule II Cess based on sliding-scale levy – financing found to be inadequate.
Scheme No 1 under Fund B	1 September 1952 – 30 December 1952	Interim scheme to prepare ground for Scheme No. 2.
Scheme No 2 under Fund B – to replant 500,000 acres in 1953–1959	1 January 1953 – 31 December 1959	1. Finance: Schedule IV Cess of 4½ cents per lb. on exports of smallholder rubber. 2. Grant of $400 per acre for replanting with rubber or approved crops; grant then raised to $500 per acre with retrospective effect to 1 January 1953. 3. Grant available for replanting to 1/3 of holdings; those with less than 15 acres could plant up to 5 acres.
Rubber Industry (Replanting) (Smallholders) Scheme	1 April 1956 – 31 December 1959	1. Finance: $47.5 million from Government grant of $112 million* to smallholders. 2. Grant of $100 per acre for area replanted under Scheme No. 2 of Fund B. 3. Smallholders of less than 30 acres given grant of $600 per acre to assist replanting/new planting of additional area equivalent to that being assisted by grants under Scheme No. 2.
Rubber Industry (Smallholders New Planting) Scheme 1957 – to assist new block planting totalling 75,000 acres	1 January 1958 to completion of target	1. Finance: $30 million allocated from Government grant of $112 million.* 2. Grant of $400 per acre.

(Continued next page)

Table 5.1 *(continued)*

Scheme and Objective	Duration	Particulars
Rubber Industry Smallholders Planting Material Scheme, 1956 – to provide high yielding rubber planting material at cost to smallholders	From 15 August 1956	Operated on $5 million revolving fund allocated from the $112 million* Government grant.
Rubber Industry (Smallholders) (Improved Supply) Planting Material Scheme, 1959 – to increase supply of best available planting material to smallholders	From 14 May 1959	1. Finance: $9 million from the $112 million* Government grant. 2. Grant financed the establishment of 3 seed gardens totalling 5,045 acres.
Scheme No. 3 under Fund B	1 January 1960 – 31 December 1966	1. Finance: a) Schedule IV Cess of 4½ cents per lb. on exports of smallholder rubber. b) Another Government grant of $84 million. 2. a) Grant of $600 per acre until end of 1961; raised to $750 from 1962. b) From 1962, holdings of less than 5 acres given bonus of $50 per acre for successful completion of replanting/new planting. 3. a) Smallholders of 5–15 acres could replant up to 10 acres and with assistance to replant/new plant further 5 acres. b) Smallholders of 15–30 acres given assistance for 2/3 of their holdings plus further assistance to replant/new plant up to 5 acres. c) Replanting on less than 1 acre permitted.
Scheme No. 4 under Fund B – to restrict replanting of smallholders to not more than 45,000 acres a year during 1967–70	1 January 1967 – 31 December 1970	1. Finance: mainly replanting cess of 4½ cents per lb. on exports 2. Grant assistance to smallholder same as for Scheme No. 3.

(Continued next page).

Table 5.1 *(continued)*

Scheme and Objective	Duration	Particulars
		3. a) To implement ceiling on replanting, priority established for those who have not planted to limits provided under previous schemes. b) No assistance for new planting. 4. In 1969, replanting ceiling raised from 45,000 acres a year to 60,000 acres.
Scheme No. 5 under Fund B – to replant 120,000 acres a year	From 1 January 1971 –	1 Finance: Replanting cess of 4½ cents per lb. on exports of smallholder rubber and unutilized balance of Government grants. 2. Grant assistance same as under previous schemes.

*Later increased to $115.3 million.

1948 when a committee, the Rubber Smallholdings Enquiry Committee, was set up by the Federal Legislative Council on 5 October, charged with the task of, among other things, examining the extent to which rubber trees on smallholdings had become uneconomic, how the smallholders could be persuaded to plant or replant with high-yielding trees, whether Government assistance was required and, if so, the forms of such assistance.[2] In its Interim Report tabled before the Legislative Council on 27 September 1950, the Committee pointed out that the bulk of the rubber smallholdings was "already obsolete or will shortly become so".[3] However, it recommended that only *pilot* schemes for replanting be implemented at that time in order to acquire experience since the prevalent high prices of rubber then would render large-scale replanting inopportune.[4]

Nevertheless, the Government saw the need for more positive action than those recommended by the Committee. On 1 January 1951, the Government imposed a cess for the first time, known as the Schedule II Cess, which made a levy on rubber exports on a sliding scale when prices of rubber exceeded 60

[2]Federation of Malaya, *Interim Report of the Rubber Smallholdings Enquiry Committee*, para 1, in Federation of Malaya, *Minutes and Council Papers of the Federal Legislative Council (Third Session), February 1950 – January 1951.*

[3]*Ibid.*, para. 9.

[4]*Ibid.*, paras. 12–13.

Table 5.2

West Malaysia – Summary of Post-War Replanting and New Planting Schemes for Rubber Estates

Scheme and Objective	Duration	Particulars
Replanting Scheme for Estates	1 January 1951 – 31 May 1955	Financed by Schedule II Cess based on sliding-scale levy.
Rubber Industry (Replanting) Scheme for Estates No. 1 – to assist replanting and new planting of 423,808 acres in 1955–1962	1 November 1955[a] – 30 June 1962	1. Finance: Government grant of $168 million.[b] 2. Grant of $400 per acre for replanting/new planting with rubber and approved crops.
Rubber Industry (Replanting) Scheme for Estates No. 2 – to assist replanting and new planting of 290,000 acres	1 January 1962 – 31 December 1967	1. Finance: Government grant of $116 million. 2 Grant of $400 per acre for replanting/new planting with rubber and approved crops.

[a]The Scheme was made retrospective from 1953.
[b]Later raised to $173 million.

cents per pound.[5] The proceeds were solely earmarked for replanting of rubber on both smallholdings and estates and were allocated in accordance with their respective output.[6] The share of smallholders was paid into a smallholders' fund (better known as Fund B) and that of estates into Fund A. From Fund B, grants were made to smallholders undertaking replanting, initially at $400 per acre. For the estates sector, drawings could only be made by individual estates against sums credited to them on provision of proof of replanting expenditure. Significant as this measure was, the collections from the Schedule II Cess were regarded to be inadequate for the purpose. This was the view of the Mudie Mission,

[5]Customs Duty (No. 41) Order.

[6]For a discussion of this Cess, see Federation of Malaya, *Taxation and Replanting in the Rubber Industry* (Statement of the Federal Government on the Report of the Mudie Mission and on Certain Proposals made by the Rubber Producers' Council), Kuala Lumpur, Government Printer, 1955, Part I.

a fact-finding mission of the rubber industry appointed by the Government and the Rubber Producers' Council[7] to enquire into matters of taxation and replanting in the industry, among other things.[8] This view was accepted by the Government[9] and on 31 May 1955, the Cess was waived.

The Final Report of the Rubber Smallholdings Enquiry Committee was tabled in the Legislative Council on 30 January 1952.[10] A major point of the Report was that of a total of 1,402,000 acres of rubber smallholdings in 1952, 1,275,000 acres needed replanting (over 900,000 acres of these were more 30 years of age i.e. past their economic life span).[11] Indeed, this was one of the fundamental considerations for the introduction of an additional cess on 1 March 1952, to finance replanting by smallholders.[12] Another important recommendation of the Committee was that the principle of 'inducement money' in the form of a replanting grant would have to be incorporated in a replanting scheme to persuade the smallholders to replant. The amount recommended was $500 per acre.[13] Thirdly, the Report recommended that the existing replanting cess (Schedule II Cess) be made a permanent source for financing replanting, and that the rate of the cess be made variable and subject to annual review in the light of rubber prices and forecast demands for funds.[14]

In early 1952, the Government felt impelled to take firm measures to ensure replanting by the smallholders. One factor was the obsolete state of the smallholdings sector as revealed by the Final Report of the Rubber Smallholdings Enquiry Committee. The other was the threat posed by synthetic rubber in the form of prospective exports from the United States and the reduction in the price of synthetic to 23 U.S. cents per pound.[15] The Rubber Industry

[7] The Rubber Producers Council was formed in March 1951 "to promote, foster and protect the rubber industry in the Federation". Its members comprised the Rubber Growers' Association, the Malayan Estate Owners' Association, the United Planting Association of Malaya and, after 1956, the Council of Malayan Smallholders' Association.

[8] *Report of the Mission of Enquiry into the Rubber Industry of Malaya* (hereafter, for short, Report of the Mudie Mission), *op. cit.*, p. 14.

[9] Federation of Malaya, *Taxation and Replanting in the Rubber Industry, op. cit.*, p. 9.

[10] See Federation of Malaya, *Minutes and Council Papers of the Federal Legislative Council (Fourth Session), February 1951–February 1952.*

[11] Federation of Malaya, *Final Report of the Rubber Smallholdings Enquiry Committee,* paras. 6–8 in Federation of Malaya, *Minutes and Council Papers of the Federal Legislative Council (Fourth Session), February 1951 – February 1952.*

[12] Speech of Mr. O.A. Spencer, Member for Economic Affairs, introducing the Second Reading of the *Rubber Industry (Replanting) Fund Bill, 1952,* in Federation of Malaya, *Proceedings of the Federal Legislative Council (Fifth Session), February 1952–February 1953,* cols. 88–89.

[13] Federation of Malaya, *Final Report of the Rubber Smallholdings Enquiry Committee, op. cit.*, paras. 32–38.

[14] *Ibid.*, para. 45.

[15] Speech of Mr. O.A. Spencer, Member for Economic Affairs, *op. cit.*

(Replanting) Fund Bill, 1952, was therefore introduced, it being directed primarily at smallholdings. A cess of 4½ cents per pound was levied on all rubber exports with effect from 1 March 1952.[16] (Initially, the cess applied when the price was 75 cents per pound and above but it later applied irrespective of price). This was the Schedule IV Cess.[17] The proceeds, allocated to smallholders on the basis of production, were transferred to Fund B for use by smallholders for replanting. The share of estates from this Cess was transferred to their Fund A and refunded to them unconditionally. The powers to levy the Cess, to establish a rubber replanting fund and to constitute a Board to administer the fund were provided under the Rubber Industry (Replanting) Fund Bill, 1952. The passage of this Bill in the Legislative Council reflected in concrete form the position claimed by the Government that it "cannot be indifferent to or divest itself entirely of responsibility for the maintenance of the country's productive capital where a major industry of the country is concerned".[18] The concentration of replanting efforts solely on smallholdings at this stage was also due to considerable opposition by the estates sector which questioned "the need for any replanting cess where estates were concerned" on the grounds that many estates "have spent or set aside many millions of dollars for replanting".[19]

To give effect to the replanting objective, there was established on 1 September 1952 Scheme No. 1 for smallholders.[20] This was essentially an interim scheme to give time for appropriate legislation to be prepared to put the replanting scheme on a proper basis and to recruit the necessary staff. The first effective scheme was, therefore, Scheme No. 2 which was established under Section 10(3) of the Rubber Industry (Replanting) Fund Ordinance, 1952.[21] This Scheme commenced on 1 January 1953 and it also took over the commitments of Scheme No. 1. Under the Scheme, grants of $400 per acre were provided to smallholders for replanting with high-yielding rubber or approved crops (fruit, coffee, pineapple, coconut, padi, sago and, later, cloves and nutmegs for Penang). The grant was soon found to be inadequate and on 14 October 1954, it was raised to $500 per acre with retrospective effect from 1 January 1953, the date of commencement of the Scheme. Assistance was available to individual smallholders to the extent of replanting one-third of their holdings, subject to the condition that replanting must be on at least one acre and that those owning 15 acres or less could replant up to five acres. The

[16] Customs Duty (No. 45) Order.

[17] The Cess had to be collected from both smallholdings and estates; to derive the share of smallholdings, the share of estates which was known (since production on estates was known) was deducted, leaving the balance which belonged to the smallholdings.

[18] Speech of Mr. O.A. Spencer, Member for Economic Affairs, *op. cit.*

[19] *Ibid.*

[20] The Rubber Industry (Replanting) Board Scheme No. 3 for the Administration of Fund B, *Report on Operations for the Year 1960*, p.4.

[21] For a summary of Scheme No. 2, see *ibid.*, pp. 4–5.

objective of Scheme No. 2 was to replant 500,000 acres between 1953 and 1959.[22]

3. THE RATIONALE FOR A FULL COMMITMENT OF PUBLIC POLICY TO REJUVENATING THE RUBBER INDUSTRY

Ambitious as Scheme No. 2 was, a full commitment of public policy to a rejuvenation of the rubber industry did not emerge until the completion of the work of the Mudie Mission and the World Bank mission of 1954.[23] The enquiry of the Mudie Mission provided comprehensive and convincing evidence of the precarious state of the rubber industry. On the basis of estimates of age of the rubber trees as at the end of 1953, the Mission concluded that more than 50 per cent of the area under ordinary seedlings were of 30 or more years old – both on estates and smallholdings. This may be seen in Table 5.3. Another serious matter revealed by the figures was that 63½ per cent of the total planted acreage for estates and nearly 90 per cent of the smallholdings were under ordinary low-yielding trees. Moreover, the proportion of immature rubber to total planted area (a measure of the rejuvenation of the industry) was very small – only slightly over 11 per cent in 1953 and this occurring mainly in the estates sector. Computations by the Mission indicated that if there were to be no replanting, rubber output from the existing immature area would increase production by 160,000 tons in 1964 but this would be substantially offset by a decline of 140,000 tons from the mature area.[24] By 1973, the decline in production from the existing mature area would have reached 300,000 tons and although this would be partially offset by the 160,000 tons gain from the immature area, the net loss to production would be 140,000 tons.

The threat from synthetic rubber was also forcefully presented by the Mudie Mission.[25] It predicted the likely decline in the price of synthetic rubber to levels below 20–25 U.S. cents per pound and even to about 15 U.S. cents per pound. Whatever the levels reached, it stressed that a large part of the natural rubber industry would have great difficulty in competing "without a drastic reduction in wages unless steps are taken now to reduce other costs".[26] It further urged that "these measures must be taken now while the price for natural rubber is reasonably remunerative" and that "this is probably the last chance that a large part of the natural rubber industry will have of setting its house in order before the storm breaks".

The World Bank mission of 1954 endorsed the analysis of the Mudie Mission

[22] The Rubber Industry (Replanting) Board Scheme No. 3 for the Administration of Fund B, *Report on Operations for the Year 1959*, p. 2.

[23] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*

[24] Report of the Mudie Mission, *op. cit.*, pp. 11–12.

[25] *Ibid.*, p. 3.

[26] *Ibid.*

Table 5.3

West Malaysia – Rubber Acreage by Age
as at End of 1953
('000 acres)

Age/Types of Trees	Estates	Smallholdings	Total
I. *Mature Planted Area Under Ordinary Seedlings*			
7 – 11 years	2	6	8
12 – 22 "	57	165	222
23 – 27 "	270	237	507
28 – 32 "	260	320	580
33 years and more	700	800	1,500
	1,289	1,528	2,817
II. *Mature Planted Area Under Improved Material*			
7 – 11 years	26	20	46
12 – 22 "	282	27	309
23 – 27 "	120	3	123
28 – 32 "	10	–	10
33 years and more	–	–	–
	438	50	488
III. *Immature Area*			
Ordinary seedlings	13	42	55
Improved material	290	78	368
	303	120	423
Total Planted Area	2,030	1,698	3,728

Source: Compiled from *Report of the Mission of Enquiry into the Rubber Industry of Malaya, op. cit.*, Appendix C.

on the state of the rubber industry. In its recommendations, the World Bank mission stressed that "within the agricultural sector, the highest development priority should be given to maintaining the position of the rubber industry in its present outstanding place in the Malayan economy"[27] The rationale underlying

[27] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, p. 33.

this was the conviction of the mission that none of the variety of other crops, singly or in combination, "could compensate for a major decline in rubber production".[28]

With these two Reports, the renewal of the rubber industry took on a new sense of urgency and became entrenched as the basis for future development policies of the Government. All available evidence suggested that the West Malaysian economy had hardly any choice of policy options. Firstly, the need for a renewal of the rubber industry was overwhelming and this offered the most simple and logical approach for a development policy. Secondly, the main preoccupation with rubber in agricultural development in the past left little in terms of resources, attention and pressure in the search for a more diversified agricultural structure, although the latter was often expressed as a desirable objective. Thirdly, the factor endowments were eminently biased towards rubber production, thereby giving the industry immense advantage over other alternatives. Fourthly, the country was still under Colonial rule and as such, it was treated as a source of industrial raw materials, a role that was found to have suited it very well. Furthermore, the concept of widespread industrialization was not accepted as appropriate for the maintenance of a complementary relationship with the highly-industrialized United Kingdom. In any case, the very small and rudimentary industrial sector – described as covering a range of fragmented activities largely tied up with primary production and entrepot activities[29] and which was a consequence of the above policy – could hardly offer itself as a major focal area for countervailing policies to offset the prospective decline of the rubber industry. This was the case even during the early years of political independence when the country was searching for a basis for its development policy. Considerable time and resources would obviously be necessary to sort out and develop this long-neglected industrial sector before it could approach anywhere near the rubber industry as a support for the economy. Finally, a very attractive aspect in having a development policy based on rubber was that the rubber industry was still capable of financing its own renewal programme while making available substantial financing for Government activities. This will be more fully discussed shortly.

In the light of these factors then, the rejuvenation of the rubber industry formed the basis for the country's development policy. Most of these factors remained valid even in the post-Merdeka period, thus accounting for the continuation of the basic rubber policy. However, it was clear even in the early stages, and this was confirmed by the developments of the 1960's, that the renewal of the rubber industry could not offer a permanent and comprehensive solution for the problems posed by the declining contributions of the industry. Policies to diversify the economy had therefore been urged and implemented all along, as pointed out in Chapter I. But the rubber policy remained a basic economic policy and in many respects it influenced the pace, direction and

[28] *Ibid.*

[29] *Ibid.*, p. 301.

nature of these diversification policies, as will become evident in the course of this study.

4. NATURE AND EVOLUTION OF SCHEMES TO REJUVENATE THE RUBBER INDUSTRY UNDER POLICY OF FULL COMMITMENT TO RUBBER

The Reports of the Mudie Mission and the World Bank mission in effect introduced four major principles to the Government policy on rubber. These were i) recognition of the inadequacy of the replanting cess and the need to provide additional finance; ii) inducement for more extensive replanting on estates; iii) the special position of smallholdings and the need for more effective incentives to induce replanting; iv) financial assistance for new planting.

By and large, the recognition given by the Government to the need for financial resources for replanting assistance additional to the proceeds of the Schedule IV Cess could be attributed to the Mudie Mission. Firstly, the Mission's analysis of the state of the rubber industry presented indisputable evidence of the magnitude of the replanting problem. Secondly, while the Mission did not recommend more resources for replanting purposes, it stressed that the burden of taxation on the industry was excessive when prices of rubber were low and, therefore, urged the abolition of export duty when prices were at 60 cents a pound and below. The rationale for this was that on the basis of the cost data examined, the Mission concluded that at a rubber price of 60 cents per pound, a low-yielding estate would find it impossible to pay export duty and at the same time make provision for replanting.[30] It, however, considered that at prices of about 80 cents and above, there was a case for more steeply-rising rates of duty.[31] While accepting the principle underlying this recommendation, the Government was however not prepared to abolish export duty when rubber prices were lower than 60 cents a pound. If this was done, it envisaged an estimated loss of revenue of about $40 million a year which it could not possibly replace by other sources. In place of abolition of export duty as recommended, the Government decided to "offer financial assistance over the next 11 years towards meeting the cost of replanting or new planting in lieu of replanting".[32] It was felt that this arrangement would ensure better results as the financial assistance made available would be more *directly* linked to replanting than the relief from export duty as proposed by the Mudie Mission.[33]

A Government grant of $280 million[34] was therefore approved to assist the

[30] Report of the Mudie Mission, *op. cit.*, p. vi and p. 35.

[31] *Ibid.*, p. vi.

[32] Federation of Malaya, *Taxation and Replanting in the Rubber Industry, op. cit.* pp. 9–10.

[33] *Ibid.*, p. 7.

[34] This sum was later raised to $288.3 million, the additional $8.3 million being divided at 60 per cent for estates and 40 per cent for smallholders. The increase was to provide

renewal of the rubber industry under the Rubber Industry (Replanting) Fund (Amendment) Ordinance, 1955. Of this sum, $168 million were earmarked for the use of estates and $112 million for smallholdings. The significance of this measure was that it constituted an additional source of funds for *direct* assistance to estates and smallholdings. Prior to this measure, replanting in the smallholdings was financed by the Schedule IV Cess. While the money for the grant would not have to be found immediately, this was nevertheless a substantial commitment. It is interesting to note that an important boost to this scheme of assistance came from the British Government itself – a fact not too widely known. The British Government gave a firm undertaking to assist in any losses to the Malayan Government that might arise from the scheme. This was revealed by the Member for Economic Affairs during the debate on the Government's rubber proposals in the Federal Legislative Council on 4 May 1955: ". . . Her Majesty's Government in the United Kingdom have been consulted by the Federation Government at all stages in the negotiation and planning of the present scheme . . . and subject to the Federation making its own maximum contribution from local resources towards meeting any loss to the Government which the scheme may involve, Her Majesty's Government will take the implications of the scheme into account should it be necessary for the Federation Government to seek financial assistance from Her Majesty's Government in the future".[35] Though this undertaking was never called upon, it reflected the deep British interest in preserving West Malaysia as an important source of natural rubber. This factor, as pointed out earlier, was an important one that weighted in favour of a strong rubber policy.

The second major principle introduced into the Government's policy on rubber in 1955 was the provision of a new inducement to estates to replant. As pointed out earlier, part of the proceeds from the Schedule II Cess was available to estates on submission of evidence of replanting. The yield under this Cess was found to be inadequate to meet the replanting problem and for this reason, the Mudie Mission urged its abolition. The Mission nevertheless saw the necessity to place replanting on estates under a more formal arrangement and, therefore, recommended that the existing Schedule IV Cess (4½ cents per pound) for replanting by smallholders be extended to apply to estates.[36] (All that time, the share of the estates collected under this Cess was refunded unconditionally to them.) Strong objections were raised by the Rubber Producers' Council on the grounds that this arrangement would introduce the principle of compulsion which it considered undesirable and that when rubber prices were low, it would

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assistance for replanting started in 1953 and 1954. See speech of the Minister of Commerce and Industry on the *Rubber Industry Replanting Fund (Amendment) Bill, 1965*, in Parliament.

[35] Statement of the attitude of the British Government quoted by Mr. O.A. Spencer, the Member for Economic Affairs, in his speech in the Federal Legislative Council on 4 May 1955 during the debate on taxation and replanting in the rubber industry.

[36] Report of the Mudie Mission, *op. cit.*, p. v.

offset the favourable effects of the abolition of the export duty proposed by the Mudie Mission and would pose too heavy a burden for many estates.[37] The Government's approach was, therefore, to provide direct assistance of $168 million.

Thus, the Rubber Industry (Replanting) Scheme for Estates No. 1 was established with effect from 1 November 1955. However, replanting already undertaken from 1953 was also eligible for assistance under the Scheme. The objective of the Scheme was to replant, between 1 January 1955 and 30 June 1962, a total of 423,808 acres of estates.[38] This target was based on a replanting objective of 21 per cent of estate planted acreage as registered with the Department of Statistics on 31 December 1954 (i.e. 2,018,135 acres). Grants of $400 per acre, covering approximately half the average cost of replanting per acre were issued under the Scheme for replanting or new planting with high-yielding rubber or other approved crops. The actual replanting had to be undertaken within seven years from the commencement of the Scheme.

The third principle took note of the special position of the smallholders and the need for more effective incentives to induce replanting. As noted earlier, a scheme of replanting for smallholders was already in operation (Scheme No. 2) which was financed by the proceeds of the Schedule IV Cess (under Fund B). Replanting grants of $500 per acre were issued under this Scheme. With the allocation of the $112 million of direct Government assistance to smallholders, the inducements to smallholders to renew their holdings were improved.

Firstly, the Rubber Industry (Replanting) (Smallholders) Scheme was established and for this, $47.5 million from the above grant were allocated.[39] The Scheme came into force on 1 April 1956. Under this Scheme, an additional $100 per acre were made available to cover replanting undertaken under Scheme No. 2 of Fund B, thereby raising the total grant receivable to $600 per acre. This compares with only $400 per acre for estates. Furthermore, smallholders who were participating or would be participating in Scheme No. 2 of Fund B and owning less than 30 acres were given assistance to replant or new plant an additional area equivalent to that for which they were receiving grants under Scheme No. 2 of Fund B, subject to a maximum of five acres. The grant was also at $600 per acre. This measure resulted in the planting of a substantial area, 52,173 acres (50,556 acres under rubber and 1,617 acres under approved crops) for the duration of the Scheme.[40]

[37] Federation of Malaya, *Taxation and Replanting in the Rubber Industry, op. cit.*, pp. 7–8.

[38] Rubber Industry (Replanting) Scheme for Estates, *Annual Report for Year Ended 31st December, 1958.*

[39] For details on this Scheme, see Federation of Malaya, "Rubber Industry (Replanting) (Smallholders) Scheme", a paper laid before the Federal Legislative Council by Command of His Majesty the Yang di-Pertuan Agong (Council Paper No. 4 of 1958).

[40] Rubber Industry (Replanting) (Smallholders) Scheme, *Annual Report for Year Ended 31st December 1959.*

Secondly, the $112 million grant enabled $30 million to be used for a block new planting scheme. This scheme, the Rubber Industry (Smallholders New Planting) Scheme, 1957, came into effect on 1 January 1958.[41] Its objective was to assist eligible smallholders in new block planting with high-yielding rubber. The usual area for a single block of new planting was to be at least 250 acres and an individual holding forming this block was between 6–7 acres. With the $30 million allocation, the Scheme could develop to a maximum of 75,000 acres. Grants of $400 per acre were allowed under this Scheme. On the basis of the 1964 annual report on the Scheme (the latest available), there were a total of 85 schemes registered covering 72,291 acres. Eighteen of these were managed jointly by the State Governments and the Federal Land Development Authority while the rest were managed by the State Governments and ad hoc supervisory bodies. A sum of $20 million was set aside for a similar scheme on 1 April 1960 covering 50,000 acres. This Scheme, the Rubber Industry (Smallholders New Planting) Scheme No. 2, 1959 provided for assistance of $400 per acre to single blocks of new planting of a minimum area of 100 acres with individual holdings of not more than seven acres.[42] However, from the start, the Scheme encountered difficulties and in 1966 it was scrapped.[43]

Less obvious but nevertheless of significance to the smallholdings sector were the establishment of two schemes for the provision of planting material. The first was the Rubber Industry Smallholders Planting Material Scheme, 1956, which came into being on 15 August 1956.[44] The objective of the Scheme was to provide high-yielding rubber planting material at cost to smallholders. It operated on a revolving fund of $5 million. The other scheme was the Rubber Industry (Smallholders) (Improved Supply) Planting Material Scheme, 1959, which was established on 14 May 1959.[45] A sum of $9 million was allocated for this Scheme. The aim of the Scheme was to make available increased supply of the best available planting material to smallholders. In the past, the smallholders

[41] For details see, Rubber Industry (Smallholders New Planting) Scheme, 1957, *Annual Report for Year Ended 31st December 1959.*

[42] For details see, Rubber Industry (Smallholders New Planting) Scheme No. 2, 1959, *Annual Report for the Three Years Ended 31st December 1960, 1961 and 1962* (Statute Paper, ST No. 9 of 1965).

[43] On the basis of information provided by the Office of the Chairman, Boards of Administrators of the Government Rubber Replanting Schemes, it appeared that among the difficulties, the availability of land was one. In the early 1960's, the State Governments froze all applications for land. Then, it was felt that this problem might be overcome by placing the Scheme under the Group Settlement Areas Act of 1960; the Scheme, which was then to be supervised by the Ministry of Rural Development, was made to conform with the requirements of this Act. However, the Ministry later found it could not undertake this responsibility because of lack of staff and resources. The Scheme was then scrapped.

[44] See Rubber Industry Smallholders Planting Material Scheme, 1956, *Report for Year Ended 31st December 1956.*

[45] Rubber Industry (Smallholders) (Improved Supply) Planting Material Scheme, 1959, *Annual Report*, various years.

who replanted or new planted had only the Tjir 1 clonal seedlings supplied by the first Scheme since this seed was available in large quantities from commercial sources and at prices within their means. The other types of improved high-yielding clonal seeds were available only in very limited quantities and were very costly for the smallholders. To overcome this situation, three seed gardens strategically located and covering 5,045 acres were established.[46] The first collection of seeds was made in 1965.[47]

Finally, a grant of $75,000 was made to assist the Council of Malayan Smallholders' Association to establish itself as a strong and effective organization to represent smallholder interest in the rubber industry.[48]

In short then, policy measures to induce more extensive replanting by the smallholders took the form of larger grants than for estates, financial assistance for new planting, cheaper and more adequate supplies of planting material and the strengthening of the smallholders' association. All these reflected the Government's recognition of the much smaller resources available to the smallholders in meeting the replanting problem.

The fourth principle, financial assistance to new planting, is also an important one. New planting of rubber estates and smallholdings had been substantially restricted since the period of the Stevenson Scheme (1922–28)[49] and it was not until 1947, that the prohibition on new planting was repealed.[50] The official lack of interest and reluctance to deal with the rubber problem through a policy of new planting was initially justified by the emphasis being given in the post-war years to increasing food production.[51] Another justification for this posture was the hesitation of the authorities to deepen the dependence of the economy on rubber.[52] This unfavourable attitude to new planting was also reflected in

[46] *Ibid.*, 1963 Annual Report.

[47] *Ibid.*, 1965 Annual Report.

[48] Rubber Industry (Smallholders Associations) Scheme, 1956, Annual Reports for Years Ended 31st December 1956 and 31st December 1957.

[49] In 1922–28, hardly any land was alienated for rubber and new planting was permitted though officially discouraged. In 1928–30, there was some alienation of land for rubber, especially to smallholders and new planting was permitted. In 1930–38, no land was alienated for rubber and no new planting permitted except in 1930–34. In 1939–40, producers were permitted new planting only up to 5 per cent of their 1938 acreage. In 1941 and through the Japanese Occupation, no land was alienated for rubber and there was no new planting. For a discussion on planting policy, see P.T. Bauer, *Report on a Visit to the Rubber Growing Smallholdings of Malaya*, London, HMSO, 1948, Chap. II.

[50] P.T. Bauer, "Malayan Rubber Policy" in T.H. Silcock (ed.), *Readings in Malayan Economics*, Eastern Universities Press Ltd., Singapore, 1961, p. 303.

[51] Report of the Mudie Mission, p. 33. In this connection, Bauer argued that a new planting policy would be most unlikely to divert significantly resources from food production and therefore such fears were groundless. See P.T. Bauer, *Report on a Visit to the Rubber Growing Smallholdings of Malaya, op. cit.*, pp. 19–20.

[52] Report of the Mudie Mission, p. 33. Bauer, however, felt that a new planting policy would not constitute an irrevocable commitment to rubber. See P.T. Bauer, *Report on a Visit to the Rubber Growing Smallholdings of Malaya*, p. 21.

the exclusion of reference to new planting in the terms of enquiry of the Mudie Mission. In the immediate measures proposed by the Government in response to the findings of the Mudie Mission, the primary concern was with replanting; new planting, "except in special or marginal cases" was considered to be "in no sense a substitute for replanting".[53] The recommendations of the World Bank mission, however, took a more positive position on new planting.[54] The Bank mission urged that the land policy should be liberalized not only to permit but to encourage new rubber planting. It held the view that the prospective growth of world consumption of rubber could not only accommodate increased output from replanting but also new planting and that the economic advantages of rubber compared favourably with other crops under the current situation. For the smallholders, the Bank mission even suggested specific encouragement – that grants be given to them from the smallholders' replanting fund for new planting carried out"where this is feasible and clearly preferable to replanting on the existing holding".[55]

As seen earlier, the liberalization of Government attitude to new planting took basically two forms. Firstly, smallholders participating in Scheme No. 2 of Fund B (or would be eligible) and owning less than 30 acres were assisted with grants of $600 per acre to *replant* or *new plant* an additional area equivalent to that for which they received grants, subject to a maximum of five acres. Secondly, there was the Rubber Industry (Smallholders New Planting) Scheme, 1957 which had resources allocated to develop a maximum of 75,000 acres, under new block planting with high-yielding rubber and with grants of $400 per acre.

These departures from concentration on replanting represent an important development from the standpoint of discussions on diversification policies. From here on, Government policy on rubber no longer aimed at merely replacing the ageing trees but also the expansion of the industry. This policy modification to intensify dependence on rubber can also be interpreted as a response to the large measure of technical advance achieved in the rubber industry itself. The availability of high-yielding trees with productivity of 2–3 times that of the old trees obviously introduced a new element into the prospects for the rubber industry in Malaya. Equally significant, the policy modification also reflected the continued narrow range of feasible options open to agricultural development.

The next major phase of development in the Government's rubber policy extended over the period 1960–67. Basically, the direction taken indicated a full endorsement of the policy adopted earlier. The replanting/new planting schemes for estates and smallholdings were extended under further arrangements. This period was characterized by growing competition from synthetic

[53] Federation of Malaya, *Taxation and Replanting in the Rubber Industry, op. cit.*, p. 18.

[54] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, pp. 40–41.

[55] *Ibid.*, p. 41.

rubber – not only arising from the spread of synthetic plants to many countries but also the emergence of the stereo-regular rubbers.[56] These developments lent a greater sense of urgency to the objective of renewing the industry. Important improvements, including larger grants, were made to the scheme of replanting and new planting in the smallholdings sector. A notable feature was the greatly-enhanced assistance to smallholders owning up to 30 acres. Another scheme to provide assistance to estates was established. To give a large boost to further replanting and new planting in the industry, a second substantial grant was made to the schemes. In speaking on the legislation to provide this grant on 18 December 1963, the Minister of Commerce and Industry stressed that "the next few years will be the last chance for natural rubber growers to complete the modernization of their industry to achieve reduction in costs before the impact of competition from synthetic rubber is fully felt" and that "the necessity for more and continuing replanting to be carried out as soon as possible is *even more vital* at the present time than when the Government scheme for assistance was instituted in 1955".[57]

Looking first at the schemes for smallholders, the first important aspect was the decision of the Government to establish the existing schemes on a permanent basis. Both Scheme No. 2 under Fund B and the Rubber Industry (Replanting) (Smallholders) Scheme for which allocation of $47.5 million was made, were scheduled to expire by the end of 1959. The Government then decided to establish a new scheme, Scheme No. 3 for the Administration of Fund B, which was an amalgamation of Scheme No. 2 and the Rubber Industry (Replanting) (Smallholders) Scheme.[58] It took effect on 1 January 1960. The Scheme was financed by the replanting cess under Fund B. Grant assistance remained at $600 per acre. In 1962, major improvements were made to the Scheme.[59] These were: i) the replanting grant was raised from $600 per acre to $750 per acre for smallholders with more than five acres; for those with holdings of five acres and less (as at 1 January 1957), a bonus of $50 per acre was payable (over and above the $750) on successful completion of their replanting/new planting; ii) smallholders owning 5–15 acres could replant up to 10 acres and would be given further assistance to replant/new plant an additional five acres. (In effect, financial assistance was available for the renewal of total holdings); iii) smallholders with holdings above 15 acres but not more than 30 acres were given replanting assistance for two-thirds of their holdings plus further assistance to

[56] Speech of Dr. Lim Swee Aun, the Minister of Commerce and Industry on the *Rubber Industry (Replanting) Fund (Amendment) Bill* in Parliament on 18 December 1963.

[57] *Ibid.* Similar sentiments were expressed even earlier by the Rubber Producers' Council. See the Rubber Producers' Council of the Federation of Malaya, *Annual Report, 1960*, p. 14.

[58] Rubber Industry (Replanting) (Smallholders) Scheme, *Annual Report for Year Ended 31st December 1959.*

[59] Rubber Industry (Replanting) Board, Scheme No. 3 for the Administration of Fund B, *Report on Operations for the Year 1963*, pp. 6–8.

replant/new plant an additional area not exceeding five acres; iv) replanting on as small an area as less than one acre was permitted, if the surrounding vegetation would not affect the growth of rubber; v) the range of other crops eligible for replanting assistance was widened.

Clearly, these improvements had a two-fold objective. Firstly, the special problems of the smallholders compared with the estates were given closer attention. Secondly, it was becoming evident that those smallholdings of small acreages needed more inducements to replant/new plant; hence the improvements were focussed largely on the needs of this group.

The next major development was the decision of the Government to make a second substantial grant to the industry, totalling $200 million.[60] Under this grant, an allocation of $84 million was made for transfer to Fund B to help finance Scheme No. 3. The motivating factor for this grant was discussed earlier.

For estates, the Rubber Industry (Replanting) Scheme for Estates No. 1 came to an end in 1962. With the provision of the $200 million grant by the Government to the industry, estates were allocated $116 million, and this enabled the setting up of a second scheme for estates, the Rubber Industry (Replanting) Scheme for Estates No. 2.[61] Although the Scheme was gazetted only on 27 August 1964, it was made retrospective to 1 January 1962 and covered five years from then. An extension of the Scheme by one year to 1967 was later agreed to by the Government in response to submissions made by the Rubber Producers' Council that an extension would give more time to the smaller estates to take advantage of the Scheme.[62] The objective of the Scheme was to provide assistance for replanting/new planting to the extent of 15 per cent of the estate acreage under rubber as at the end of 1961 or a total of approximately 290,000 acres. Grants remained at $400 per acre for replanting/new planting with rubber or other approved crops. The continued maintenance of the grant at $400 per acre since 1951 suggests the relatively higher capability of the estates to make some provisions for their own renewal programmes, compared with the smallholders.

The next phase of the Government's replanting policy was essentially one of consolidation. The success of the replanting schemes among the smallholders was beyond expectations so much so that the Rubber Industry (Replanting) Board, Fund B, became concerned with the depletion of its funds.[63] To ensure that replanting could continue indefinitely, the Government introduced Scheme No. 4 which restricted the replanting of smallholders during 1967–70 to not more than 45,000 acres per year. In 1960–66 when Scheme No. 3 was in operation, the area replanted and new planted annually ranged from around 56,000 acres to

[60] See *Rubber Industry (Replanting) Fund (Amendment) Act, 1964.*

[61] Rubber Industry (Replanting) Scheme for Estates No. 2, 1964, *Annual Report for the Year Ended 31st December, 1964.*

[62] The Rubber Producers' Council of Malaya, *Annual Report, 1966*, p. 16.

[63] Rubber Industry (Replanting) Board, Fund B, *Report on Operations for the Year 1967*, pp.7–8.

112,000 acres.[64] But replanting at these rates could no longer be sustained without further transfers of funds for this purpose. Scheme No. 4 was financed largely by the replanting cess collected on smallholders' rubber supplemented by the Government grant previously earmarked for smallholders.[65] Assistance under the Scheme remained the same as for Scheme No. 3. In implementing the ceiling on replanting, three categories of smallholders were given priority: i) those with holdings of up to five acres – to replant up to the full extent; ii) those who did not replant under the Fund B schemes – to replant up to one-third of their holdings; iii) those who replanted under the Fund B schemes but had not done so to one-third of their holdings. A notable feature was that no assistance was to be given to new planting. In 1969, the Government raised the annual replanting ceiling under the Scheme to 60,000 acres.[66]

For the estates sector, no further financial assistance was available from 1968 following the expiration of the Rubber Industry (Replanting) Scheme for Estates No. 2. The Rubber Producers' Council had, however, been urging the Government to introduce a third scheme for estates and in March 1970, made official representation on this matter.[67] A Government committee of officials was subsequently set up to study the request.

The 1968–70 period did not in fact represent a turning point for the rubber policy. On the contrary, an even more ambitious target was subsequently set for annual replanting/new planting by the smallholders, this being 120,000 acres. From 1 January 1971, Scheme No. 5 was established to take over from Scheme No. 4 to implement the new replanting/new planting target.[68] The Scheme would pay out grants of $750 per acre (plus an additional $50 bonus for successful completion of replanting by smallholders with holdings of up to 5 acres). The Scheme would be financed by Fund B and the unutilized balance of the first Government grant.

5. EVALUATION OF IMPACT OF THE SCHEMES ON THE RUBBER INDUSTRY

The next important part of this appraisal must be an examination of the impact of the replanting/new planting schemes for both estates and smallholdings. Table 5.4 shows the extent of new planting and replanting of rubber achieved since 1951, the year when the first replanting scheme started. In the period 1951–70, a total of 2.07 million acres of rubber were replanted with largely high-yielding rubber; this constituted nearly 48½ per cent of the area planted with rubber in

[64] *Ibid.*, Appendix 'A', Table 11.

[65] The Rubber Producers' Council of Malaya, *Annual Report, 1967*, pp. 16–17.

[66] The Rubber Producers' Council of Malaya, *Annual Report, 1969*, p. 19.

[67] The Rubber Producers' Council of Malaya, *Annual Report*, 1970, p. 20.

[68] For details see, Malaysia, "Rubber Industry (Replanting) Fund Ordinance, 1952 (No. 8 of 1952) – Scheme No. 5 for the Administration of Fund B", published as Legal Notification (B) 208 of 1 July 1971.

Table 5.4

West Malaysia – Extent of New Planting and Replanting with Rubber in Estates and Smallholdings ('000 acres)

Year	Total Area under Rubber	Replanting		New Planting		Replanting and New Planting	
		During Year	Cumulative[a] (As % of Total Area)	During Year	Cumulative[a] (As % of Total Area)	During Year	Cumulative[a] (As % of Total Area)
1951	3,557	62.0		20.3		82.3	
1952	3,597	55.8	3.3	14.0	1.0	69.8	4.2
1953	3,636[b]	59.3	4.9	11.0	1.2	70.3	6.1
1954	3,647	61.7	6.5	10.4	1.5	72.1	8.1
1955	3,665	82.9	8.8	18.1	2.0	101.0	10.8
1956	3,694	124.9	12.1	27.8	2.8	152.7	14.8
1957	3,721	126.1	15.4	27.4	3.5	153.5	18.9
1958	3,747	124.5	18.6	24.7	4.1	149.2	22.7
1959	3,781	137.3	22.1	35.3	5.0	172.6	27.1
1960	3,827	144.7	25.6	46.8	6.2	191.5	31.7
1961	3,972	127.6	27.9	85.1	8.1	212.7	36.0
1962	4,057	132.2	30.5	92.5	10.2	224.7	40.7
1963	4,154	142.1	33.2	109.0	12.6	251.1	45.8
1964	4,218	138.6	36.0	63.6	13.9	202.2	49.9
1965	4,384	144.6	38.0	44.7	14.4	189.3	52.4
1966	4,384	99.3	40.2	30.1	15.1	129.4	55.3
1967	4,350	103.2	42.9	24.2	15.7	127.4	58.6
1968	4,291	52.2	44.7	14.8	16.3	67.0	61.0
1969	4,264	61.3	46.4	17.7	16.8	79.0	63.2
1970	4,275	88.0	48.4	30.0	17.5	118.0	65.9
1951–70		2,068.3		747.5		2,815.8	

Sources: Computed from Department of Statistics, *Rubber Statistics Handbook*, 1960, 1965 and 1970.

[a] Cumulative from 1951.
[b] The estimate made by the Mudie Mission was 92 acres higher.

1970. New planting added another 0.75 million acres of such rubber to the rubber acreage during the same period or 17½ per cent of the total rubber land in 1970. Taken together, replanting and new planting had renewed the industry over these 20 years to the extent of 66 per cent of the rubber acreage in 1970 or, even more dramatically, by nearly 80 per cent of the total acreage as at 1951. In other words, at the end of 1970, a total of 2.8 million acres out of 4.3 million acres of rubber land were virtually under high-yielding rubber trees the ages of which were well spread out under 20 years. This achievement reduced to little significance the problems of ageing trees and the largely low-yielding stands in planted acreages so vehemently urged for solution by the Mudie Mission in 1954.

As to be expected, the process of renewal was more rapid in the estates (Table 5.5). By 1970, a total of 1.2 million acres of estate land were replanted/new planted, or 77 per cent of the 1970 estate land under rubber. Due to the switch from rubber to other crops including oil palm and the fragmentation of estates,[69] the estate land under rubber steadily declined and in 1970, was 366,000 acres less than in 1951, despite an increase of 183,400 acres of new rubber land. Even when related to the 1951 estate acreage under rubber, however, the renewed rubber stands accounted for a substantial proportion, that is, 63 per cent. Of the 1.2 million acres replanted/new planted with high-yielding rubber, slightly over 1 million acres represented replanting while the balance was new planting.

Table 5.6 shows one aspect of the qualitative change that had occurred to the rubber stands in the estates sector. During 1951–70, the estates sector changed from one predominantly based on unselected seedlings (low yielding) to one predominantly of high-yielding material. In 1951, less than one-third of the rubber acreage was under high-yielding material. With replanting/new planting over the next 20 years, the proportion of the area under high-yielding material (including immature rubber) to total rubber on estates rose to nearly 90 per cent. This change had enhanced the competitive capability of the industry.

The other aspect of the qualitative change that had occurred relates to the age of the trees. Table 5.7 shows the age distribution of estate rubber as at the end of 1970. By 1970, the estates appeared to be already in an advanced stage of renewal. Trees not older than 15 years of age covered an area of nearly 980,000 acres or, 61.3 per cent of the total estate acreage. Immature trees (i.e. those of less than 6 years) accounted for about a quarter of the 980,000 acres. Another 18.3 per cent of the estate area comprised trees of 16–25 years of age. Thus, only about one-fifth of the total estate acreage was left with trees that were approaching the limits of their economic life or were already at these limits. This compares very favourably with the position in 1953 when nearly half of the

[69] It has been estimated that some 317,000 acres of estate land had been fragmented since the war but the trend was recently halted by Government action. See P.O. Thomas, "Malaysian Natural Rubber in the Seventies: A Forecast of Production Trends", a paper presented at the Rubber Research Institute of Malaya Planters' Conference, Kuala Lumpur, 9–11 July 1970.

Table 5.5

West Malaysia – Extent of New Planting and Replanting with Rubber in Estates ('000 acres)

Year	Total Rubber Area under Estates	Replanting		New Planting		Replanting and New Planting	
		During Year	Cumulative* (As % of Estate Rubber)	During Year	Cumulative* (As % of Estate Rubber)	During Year	Cumulative* (As % of Estate Rubber)
1951	1,964	58.2		14.8		73.0	
1952	1,997	51.6	5.5	7.2	1.1	58.8	6.6
1953	2,030	29.8	6.9	4.7	1.3	34.5	8.2
1954	2,018	39.1	8.9	7.1	1.7	46.2	10.6
1955	2,015	57.6	11.7	10.0	2.2	67.6	13.9
1956	2,008	78.4	15.7	14.7	2.9	93.1	18.6
1957	2,011	76.3	19.4	16.1	3.7	92.4	23.1
1958	1,981	64.8	23.0	13.9	4.5	78.7	27.5
1959	1,942	68.2	27.0	14.4	5.3	82.6	32.3
1960	1,935	75.2	31.0	21.7	6.4	96.9	37.4
1961	1,937	70.3	34.6	17.7	7.3	88.0	41.9
1962	1,927	63.0	38.0	10.0	7.9	73.0	45.9
1963	1,919	58.7	41.2	8.7	8.4	67.4	49.6
1964	1,893	58.9	44.9	6.1	8.8	65.0	53.7
1965	1,859	53.2	48.6	4.9	9.3	58.1	57.8
1966	1,813	50.0	52.6	3.2	9.7	53.2	62.3
1967	1,746	27.9	56.2	2.5	10.2	30.4	66.4
1968	1,676	13.1	59.3	0.6	10.6	13.7	69.9
1969	1,639	23.9	62.1	2.2	11.0	26.1	73.1
1970	1,598	34.8	68.9	2.9	11.5	37.7	77.4
1951–1970		1,053.0		183.4		1,236.4	

Sources: Computed from Department of Statistics, *Rubber Statistics Handbook*, 1960, 1965 and 1970.

*Cumulative from 1951.

Table 5.6

West Malaysia – Extent of High-Yielding Rubber in Estates
('000 acres)

Year	Total Rubber Area under Estates	Estate Acreage under High-Yielding Material			Acreage under High-Yielding Material as % of Estate Rubber
		Mature	Immature	Total	
1951	1,964	n.a.	n.a.	626.9	31.9
1952	1,997	n.a.	n.a.	673.8	33.7
1953	2,030	n.a.	n.a.	727.8	35.9
1954	2,018	490.7	293.3	784.0	38.8
1955	2,015	532.2	301.1	833.3	41.4
1956	2,008	568.6	329.3	897.9	44.7
1957	2,011	607.2	364.6	971.8	48.3
1958	1,981	641.9	400.2	1,042.1	52.6
1959	1,942	643.8	430.4	1,074.2	55.3
1960	1,935	665.3	465.0	1,130.3	58.4
1961	1,937	716.0	511.7	1,227.7	63.4
1962	1,927	780.1	524.1	1,304.3	67.7
1963	1,919	845.2	523.0	1,368.3	71.3
1964	1,893	906.6	510.4	1,417.0	74.8
1965	1,859	961.1	487.8	1,448.9	77.9
1966	1,813	1,025.0	450.8	1,475.8	81.4
1967	1,746	1,088.7	391.0	1,479.6	84.8
1968	1,676	1,140.1	323.6	1,463.7	87.3
1969	1,639	1,181.6	269.5	1,451.1	88.5
1970	1,598	1,194.1	241.8	1,435.9	89.9

Source: Compiled from:

1. P.O. Thomas and A. Fong Chu Chai (compilers), *Rubber Industry Statistics*, Kuala Lumpur, Rubber Research Institute of Malaya, August 1968.
2. Department of Statistics, *Rubber Statistics Handbook, Malaysia, 1970.*

n.a. = not available

Table 5.7

West Malaysia – Age of Trees in Rubber Estates as at End of 1970

Age of Rubber Trees in Estates (years)	High-Yielding Material		Unselected Seedlings and Mixed Stands		All Types of Material		% in Age Group with High-Yielding Material
	Area	As % of Total	Area	As % of Total	Area	As % of Total	
Less than 6	241.8	16.8	9.9	6.1	251.7	15.8	96.0
6–10	369.1	25.7	0.6	0.4	369.7	23.1	99.8
11–15	357.3	24.9	0.8	0.5	358.1	22.4	99.7
16–20	182.6	12.7	1.8	1.1	184.4	11.5	99.0
21–25	106.1	7.4	3.3	2.0	109.4	6.8	96.9
Above 25	179.0	12.5	145.3	89.9	324.3	20.3	55.2
All	1,435.9	100.0	161.7	100.0	1,597.6	100.0	89.9

Sources: Compiled from Department of Statistics, *Rubber Statistics Handbook, Malaysia 1970.*

total estate acreage comprised trees of more than 27 years of age (Table 5.3). Table 5.7 also reveals the share of the high-yielding trees in each age group. It can be seen that for all age groups up to 25 years, more than 95 per cent of the area in each age group had trees of high-yielding material. On the other hand, trees from unselected seedlings and mixed stands occurred largely in areas covered by the 'over 25 years' age group – indeed, about 90 per cent of such trees were within this age group.

The effects of replanting/new planting can be clearly seen in the rising productivity of the trees. Yield data for the estates sector computed on the basis of actual production and the average acreage tapped are shown in Table 5.8. The overall yield averaged 470 lbs. per acre before the introduction of the Government replanting scheme for estates.[70] By 1959, the point from which the replanting programmes started to show results, the overall yield was 641 lbs. per acre, an increase of 36 per cent. Since then, per acre yields had risen very rapidly so that by 1969, the yield had exceeded 1,000 lbs. per acre or was nearly 2¼ times higher than in 1951. This spectacular rise in yields was due to the use of planting material of increasing productivity. In areas using high-yielding material, the yield was only 800 lbs. per acre in 1951, but by 1959, the average yield was higher by nearly 100 lbs. per acre. By 1964, the high-yielding areas were commencing to produce in excess of 1,000 lbs. per acre; this rose steadily and reached 1,138 lbs. per acre by 1970. The relatively low yields on areas of unselected seedlings and mixed stands were of little importance as increasing proportions of the estate acreage were planted with high-yielding material. Table 5.6 shows that by 1970, nearly 90 per cent of the estate acreage were already under high-yielding rubber. It is interesting to note that the extensive coverage of estate acreage with high-yielding rubber had resulted in a substantial growth of output despite the decline in area. Between 1951 and 1970, output increased by 86 per cent but the estate acreage under rubber had fallen by 19 per cent.

In the smallholdings sector, the process of renewal was slower despite the more attractive inducements and greater attention given to it by public policy (Table 5.9). Replanting and new planting over the 20 years to 1970 came to only 59 per cent of the acreage under smallholdings. The replanted acreage during this period was slightly over one million acres, a little less than the replanting achieved by the estates sector. However, this represented only 38 per cent of the smallholdings acreage in 1970.

The achievement of the smallholdings sector was more notable in respect of new planting. The area new planted with rubber during the period was 564,000 acres or about 3 times that achieved by the estates sector. New planting accounted for 21 per cent of the smallholdings acreage of 1970. Part of this new planted area could be attributed to the policy of the Federal Land Development Authority (FELDA)[71] which selected rubber as the main crop for its land

[70] The average was for the years 1951–53.

[71] FELDA, established in 1956, is the Federal Government's main agency for land

Table 5.8

West Malaysia – Production and Yield of Rubber in Estates and Smallholdings

Year	Production ('000 tons)			Yield (lbs. per acre)			
				Estates[a]			
	Estates	Smallholdings	Total	High-Yielding Material	Unselected Seedlings of Mixed Stands	All Types of Material	Smallholdings[b]
1951	328.0	275.9	603.9	800	360	460	388.0
1952	341.1	241.5	582.6	830	370	480	338.1
1953	341.1	231.7	572.8	800	360	470	323.2
1954	344.9	240.2	585.1	820	350	480	330.3
1955	351.8	285.3	637.1	806	355	490	387.3
1956	350.8	273.4	624.2	781	354	496	363.2
1957	367.9	268.0	635.9	806	374	535	351.1
1958	389.4	271.4	660.9	854	404	586	344.4
1959	407.2	288.3	695.5	898	434	641	351.2
1960	413.2	292.8	706.0	927	442	676	346.6
1961	428.5	306.1	734.6	966	451	720	336.9
1962	438.3	276.6	714.9	976	441	746	290.9
1963	458.3	294.7	753.0	988	446	782	295.4
1964	476.8	314.4	791.2	1,010	430	818	302.9
1965	490.9	347.6	838.5	1,019	438	850	308.4
1966	513.9	386.4	900.3	1,048	420	898	336.7
1967	525.8	397.6	923.4	1,045	395	921	342.0
1968	563.0	471.7	1,034.7	1,082	423	986	404.1
1969	593.4	587.1	1,180.5	1,117	359	1,028	501.0
1970	611.2	585.4	1,196.6	1,138	343	1,061	489.8

Sources: 1. Department of Statistics, *Rubber Statistics Handbook*, 1960, 1965 and 1970.
2. P.O. Thomas and A. Fong Chu Chai, *Rubber Industry Statistics, op. cit.*

[a] Based on average acreage tapped.
[b] Based on total planted acreage.

Table 5.9

West Malaysia – Extent of New Planting and Replanting with Rubber in Smallholdings
('000 acres)

Year	Total Rubber Area under Smallholdings	Replanting		New Planting		Replanting and New Planting	
		During Year	Cumulative* (As % of Smallholding Rubber)	During Year	Cumulative* (As % of Smallholding Rubber)	During Year	Cumulative* (As % of Smallholding Rubber)
1951	1,593	3.8		5.5		9.3	
1952	1,600	4.2	0.5	6.8	0.8	11.0	1.3
1953	1,606	29.5	2.3	6.3	1.2	35.8	3.5
1954	1,629	22.6	3.7	3.3	1.3	25.9	5.0
1955	1,650	25.3	5.2	8.1	1.8	33.4	7.0
1956	1,686	46.5	7.8	13.1	2.6	59.6	10.4
1957	1,710	49.8	10.6	11.3	3.2	61.1	13.8
1958	1,766	59.7	13.7	10.8	3.7	70.5	17.4
1959	1,839	69.1	16.9	20.9	4.7	90.0	21.6
1960	1,892	69.5	20.1	25.1	5.9	94.6	26.0
1961	2,035	57.3	21.5	67.4	8.8	124.7	30.3
1962	2,130	69.2	23.8	82.5	12.3	151.7	36.1
1963	2,235	83.4	26.4	100.3	16.2	183.7	42.6
1964	2,325	79.7	28.8	57.5	18.0	137.2	46.8
1965	2,525	91.4	30.1	39.8	18.2	131.2	48.3
1966	2,571	49.3	31.5	26.9	18.9	76.2	50.4
1967	2,604	75.3	34.0	21.7	19.5	97.0	53.5
1968	2,615	39.1	35.4	14.2	19.9	53.3	55.3
1969	2,625	37.4	36.7	15.5	20.5	52.9	57.2
1970	2,677	53.2	37.9	27.1	21.1	80.3	59.0
1951–70		1,015.3		564.1		1,579.4	

Sources: Computed from Department of Statistics, *Rubber Statistics Handbook*, 1960, 1965 and 1970.

*Cumulative from 1951.

development schemes, at least until the first half of the 1960's.[72] In the period since its establishment to 1970, FELDA had developed nearly 148,000 acres of land on its schemes for rubber.[73]

Over the period 1951–70, the smallholdings acreage under rubber increased by about 1.1 million acres. Of this, new planting accounted for about half. The other part of the increase was the result of fragmentation of existing estates.[74]

The process of renewal of the smallholdings sector continued with the greater efforts planned after 1970. Though having a lesser achievement in replanting compared with the estates sector, the smallholdings sector had nevertheless attained a notable level of renewal, assisted no doubt by the more extensive new planting. In all, a total of about 1.6 million acres had been replanted/new planted with largely high-yielding material.

Comparable data on yields in rubber smallholdings were not available as there were no reliable records of the area of smallholdings tapped each year. But with the utilization of high-yielding material as a condition for grant assistance under their various replanting/new planting schemes, productivity in smallholdings can be expected to have risen as in the estates sector. A rough indication of this is given in Table 5.8 which presents yields in smallholdings based on relating output to the actual planted acreage. Despite the zero contribution to output from the immature areas (collectively very large during 1951–70), the yields per acre showed a substantial increase from 1968. The rise in productivity in smallholdings may also be seen in terms of the changes in output and acreage during the period. Between 1951 and 1970, output of the smallholdings sector increased by 112 per cent while its area rose by 68 per cent (Table 5.8).

In all these achievements on estates and smallholdings, the grants provided under the various schemes discussed earlier played an important role. Table 5.10 relates the acreage registered for grant assistance under the replanting/new planting schemes for estates to the total area replanted/new planted in estates each year. In some years, a high proportion of the replanting/new planting undertaken was assisted by these grants while in others the proportion of assisted acreage was small. But not too much should be read in these year-to-year figures as there would obviously be a time lag between the registration of the acreage for grant assistance and the actual replanting/new planting of these acreages. There would thus be years like 1953 and 1954 when the recorded

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settlement through agriculture. Chapters VII and VIII will deal with some aspects of FELDA's activities. For a good discussion of its operations, see Taib bin Haji Andak, "Land Development in Malaysia under the Federal Land Development Authority – Description of Programme and Techniques of Development Implementation" in *Report on First Seminar on Development*, Kuala Lumpur, 24 October – 3 November 1966.

[72] Federal Land Development Authority, *Annual Report 1969*, pp. 7–12.

[73] Federal Land Development Authority, *Annual Report 1970*, p. 8.

[74] For a comprehensive study of this problem, see Ungku A. Aziz, *Subdivision of Estates in Malaya, 1951–60*, Vol. I, in Federation of Malaya, *Report of the Subdivision of Estates Committee*, Kuala Lumpur, Government Printer, 1963.

Table 5.10

West Malaysia – Extent of Replanting and New Planting with Rubber in Estates Assisted by Replanting/New Planting Schemes

Year	Area in Estates Replanted/New Planted with Rubber ('000 acres)	Replanting/New Planting in Estates Assisted by Grants under various Schemes*	
		Area ('000 acres)	As % of Replanting/New Planting in Estates during Year/Period
1951	73.0	n.a.	n.a.
1952	58.8	n.a.	n.a.
1953	34.5	36.7	106.4
1954	46.2	47.3	102.4
1955	67.6	64.4	95.3
1956	93.1	84.5	90.8
1957	92.4	83.5	90.4
1958	78.7	59.7	75.9
1959	82.6	39.1	47.3
1960	96.9	25.7	26.5
1961	88.0	16.5	18.8
1962	73.0	72.2	98.9
1963	67.4	59.3	88.0
1964	65.0	47.0	72.3
1965	58.1	28.2	48.5
1966	53.2	15.9	29.9
1967	30.4	4.9	16.1
1968	13.7	–	–
1969	26.1	–	–
1970	37.7	–	–
1953–67	1,027.1	684.9	66.7

Sources: 1. Chairman of the Boards of Administrators of the Government Rubber Replanting Schemes.
2. Table 5.5

*Rubber Industry (Replanting) Scheme for Estates – Scheme No. 1 and Scheme No. 2.
n.a. = not available.

replanting/new planting fell short of the acreage for which grants were sought. This problem could be largely overcome by relating the total acreage registered for grants with the actual replanting/new planting over a number of years. Thus, for 1953–67 when the two replanting/new planting schemes for estates operated, it can be seen that 67 per cent of the 1.03 million acres of estate rubber replanted/new planted were assisted by grants.

Table 5.11 relates the acreage assisted by the replanting/new planting grants under the various schemes for smallholders to the total area replanted/new planted in smallholdings each year. Over the period 1953–70 when grant assistance was available to smallholders, again 67 per cent of the total acreage replanted/new planted were found to have been undertaken with grant assistance.

The major role of the replanting/new planting schemes is thus obvious. Grants under these schemes helped to finance two-thirds of the acreage replanted and new planted by the estates and the smallholdings. In the case of estates, about half of the cost of replanting an acre was given grant assistance while for smallholdings, the volume of assistance had increased over the years so that it could have covered a substantial part of the replanting cost, if not at all of it, as in the case of smallholders with up to five acres.[75]

It is also appropriate to discuss here the role played by the Government in the provision of grants under the various replanting and new planting schemes. The Government's role was basically to map out a programme of renewal for the industry in terms of rate and direction and to establish the appropriate machinery to mobilize resources from the industry and channel them back to it in accordance with this programme. The various schemes of replanting and new planting for smallholdings and estates, taking note of the needs of each of these sectors, have been discussed. As for resources to finance these schemes, there were two main sources: a) the replanting cess of 4½ cents per lb. on rubber exports of the smallholdings sector, which had been in existence since 1952; and, b) the first Government grant of $288.3 million approved in 1955 and the second grant of $200 million approved in 1963, both from the general revenue of the Government.[76] The first source is clearly a direct levy on the industry to finance its own renewal. As for the second source which amounted to $488.3 million of Government grant, this again did not represent a transfer of resources from other sectors but in effect, financing provided by the industry itself. Considering just export duties alone levied on the products of the industry, the Government collected $1,480.4 million during 1955–67, the period broadly covered by the distribution of the Government grants. This amount was 3 times larger than what the Government in turn gave back to the industry in the form of grants.

[75] The cost of replanting was taken as $800 per acre. See International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, pp. 38–39.

[76] There is, of course, the Schedule II Cess introduced in 1951 but its contribution was insignificant and the Cess was abolished in 1955.

Table 5.11

West Malaysia – Extent of Replanting and New Planting with Rubber in Smallholdings Assisted by Replanting/New Planting Schemes

Year	Area in Smallholdings Replanted/New Planted with Rubber ('000 acres)	Replanting/New Planting in Smallholdings Assisted by Grants under various Schemes*	
		Area ('000 acres)	As % of Total Replanting/New Planting in Smallholdings during Year/Period
1951	9.3	n.a.	n.a.
1952	11.0	n.a.	n.a.
1953	35.8	26.7	74.6
1954	25.9	21.4	82.6
1955	33.4	24.6	73.7
1956	59.6	45.1	75.7
1957	61.1	49.1	80.4
1958	70.5	58.6	83.1
1959	90.0	72.5	80.6
1960	94.6	74.7	79.0
1961	124.7	64.5	51.7
1962	151.7	74.4	49.0
1963	183.7	91.3	49.7
1964	137.2	89.5	65.2
1965	131.2	100.9	76.9
1966	76.2	52.7	69.2
1967	97.0	77.9	80.3
1968	53.3	37.3	70.0
1969	52.9	35.5	67.1
1970	80.3	48.5	60.4
1953–70	1,559.1	1,045.2	67.0

Sources: 1. Rubber Industry (Replanting) Board, Fund B.
2. Table 5.9.

*For a list of the schemes, see Table 5.1.
n.a. = not available

This self-reliance of the industry in financing its own renewal had one important implication for the process of economic diversification. It left intact the resources generated by the other sectors for their own growth and development. Also of importance, the rubber industry even continued to make available resources for the development of other sectors while financing its own renewal, as can be seen in the disparity between the proceeds of export duties on the industry's products and the Government grants to the industry. This net outflow from the industry would be even larger if other levies on the industry such as company tax had been taken into consideration.

Finally, any evaluation of the renewal policy for the rubber industry must take note of two consequences for the process of economic diversification that very often remained unnoticed and unemphasized. Firstly, the substantial renewal of the industry achieved so far was by itself of importance to the diversification process. Because a more efficient rubber industry had emerged, the economy had more time for the introduction and operation of appropriate policy measures to bring about the necessary structural change in the economy. It even opened the possibility of more resource-support from the rubber industry for the development of the other sectors of the economy. The following chapters of this book are in effect also an examination of the nature of response of public policy to these opportunities provided by the substantially renewed rubber industry.

The other consequence for the diversification process relates to the nature of the benefits arising from the renewal of the rubber industry. There are good grounds to suggest that agricultural diversification in West Malaysia becomes more meaningful if it can be viewed in terms to include also the above developments in the rubber industry. It is true that even merely considering the development of agricultural activities other than rubber production, a fair measure of agricultural diversification could be said to have already been achieved by 1970, as noted in Chapter III and will be seen again in Chapters VI–VIII of this study. However, this view does not recognize the fact that the rubber trees that were replanted on the old rubber land or planted on the newly-developed land were in effect production units that were significantly different in productivity from the ageing, low-yielding trees of the past. While these high-yielding rubber trees cannot be considered a diversification crop in the conventional sense since the process of concentrating on them does not broaden the crop composition of the country, their effects on the contributions of the industry in terms of incomes, employment, foreign exchange earnings, etc., cannot be ignored. There are two basic criteria that must be satisfied if development in an industry can be said to have contributed to the diversification process. Firstly, the development should correct, at least in part, the adverse effects on incomes, employment, foreign exchange earnings, etc., caused by the industry experiencing a serious trend of price decline. Secondly, it should contribute to the emergence of a broader production base so as to spread the risks of price decline or fluctuation in the future. The new rubber trees obviously satisfied the first criterion. On the second criterion, while new planting and replanting with rubber did not broaden the production base, the new and high-yielding varieties however ensured, at

least, that the poor rubber prices experienced since then had not been so sharply felt – an effect similar to that forthcoming from a more diversified crop structure. On these grounds, therefore, it can be said that the rubber policy based on the switch to high-yielding varieties was not without some of the benefits of agricultural diversification.

6. DIRECT CONTRIBUTIONS OF THE RUBBER POLICY TO ECONOMIC DIVERSIFICATION

The Government's rubber policy had also made some direct contributions to the process of economic diversification. Firstly, one aspect of the policy encouraged the expansion of a list of approved crops on existing rubber land and later, on new land. Identical grant assistance as for replanting and new planting of rubber was made available to estates and smallholdings to encourage them to switch from rubber to selected crops or to expand their holdings under such crops. This step was unique in that for the first time in Malaysian agricultural development, substantial inducements were provided to assist in the crop diversification of a major agricultural sector. However, as will be seen, the switch from rubber was limited in scale, thereby strongly suggesting the eminent suitability of rubber to Malaysian factor endowments and the still significant lead of rubber in comparative advantage relative to other alternatives despite indications of prospective price decline. At the same time, this also underlined the difficulties of rapid crop diversification in West Malaysia and hinted that these would have to be overcome before financial assistance could be of much significance.

The principle of agricultural diversification was first introduced into the rubber replanting scheme for smallholders as early as 1952 under the Rubber Industry (Replanting) Fund Ordinance, 1952. The justification was stated by the Member for Economic Affairs during the debate on this legislation: "We must also – and there is provision for this in the Bill – provide for diversification by the introduction of other crops where that is an economic possibility."[77] The principle was maintained in the package of the rubber replanting schemes that came with the 1955 Government grant for the rubber industry. The assistance, same as for rubber, was meant to "give practical encouragement to the diversification of the industry where the conditions are suitable".[78]

A fairly wide list of crops was made eligible for grant assistance: citrus and non-citrus fruits, coffee, pineapple, coconut, padi and sago.[79] Later, cloves and nutmegs (for Penang Island only) were added to the list. In 1962, three

[77] Speech of Mr. O.A. Spencer, the Member for Economic Affairs on the *Rubber Industry (Replanting) Fund Bill, 1952*. See Federation of Malaya, *Proceedings of the Federal Legislative Council (Fifth Session), February 1952 – February 1953*, p. 89.

[78] See speech of Member for Economic Affairs in the debate on the 1955 policy proposals of the Government for the rubber industry in Federation of Malaya, *Proceedings of the Federal Legislative Council (Eighth Session), March 1955– June 1955*, Col. 317.

[79] Rubber Industry (Replanting) Board Scheme No. 3 for the Administration of Fund B, *Report on Operations for the Year 1960*, p. 5.

other crops were approved namely, oil palm, tea and manila hemp.[80] In processing the applications for grant assistance, suitability of the land for the various crops would first be examined and, if found so, reference would then be made to the Department of Agriculture for advice.[81]

There were some differences in the crop diversification policy for estates and smallholdings. Most obvious was the size of the grant. As for replanting and new planting of rubber, the grant for estates replanting or new planting with the approved crops was $400 per acre. For smallholdings, the grant was increased over the years: it was $400 per acre initially; raised to $500 per acre with effect from 1953; increased to $600 per acre with the provision of the $112 million grant to the smallholdings sector in 1956; and in 1962, it was raised to $750 per acre for smallholders with more than five acres while for those owning up to five acres, a bonus of $50 per acre was payable on successful completion of replanting/new planting. The other difference was in the treatment of new planting with the approved crops in estates and smallholdings for purposes of the grants. For estates, the grant was receivable for both replanting the rubber land with the approved crops or new planting with such crops. For smallholders, grant assistance for the approved crops was initially given only for replanting of former rubber land. It was only from 1963 that the smallholders were given assistance to new plant with the approved crops, the rationale being to assist smallholders to diversify as much as possible, depending on soil and other factors.[82]

Table 5.12 sets out the area planted with approved crops under grant assistance provided in association with the various rubber replanting schemes during 1953–70. During the period, a total of 1,892,000 acres of estate land and smallholdings were replanted/new planted with rubber and the approved crops under grant assistance. Of these, only 161,000 acres or 8½ per cent were under the approved crops. The switch from rubber was therefore small. Of interest is that the share of grant-assisted replanting and new planting going into the approved crops was about the same for estates as for smallholdings. For estates, the share of the approved crops was 8 per cent and for smallholdings it was nearly 9 per cent.

In terms of individual crops, oil palm was by far the most important. This crop covered 77,200 acres or 48 per cent of the total area of approved crops planted with grant assistance. In the estates sector, the switch was virtually all to oil palm. It accounted for 95 per cent of the estate acreage under the approved crops given grant assistance. Among the smallholdings, oil palm was also an important crop but its share was only 21 per cent of the total area of small-

[80] Rubber Industry (Replanting) Board Scheme No. 3 for the Administration of Fund B, *Report on Operations for the Year 1962*, p. 7.

[81] Rubber Industry (Replanting) Board, Fund B, *Brief Information*, cyclostyled information booklet issued by the Board (undated).

[82] Rubber Industry (Replanting) Board, Scheme No. 3 for the Administration of Fund B, *Report on Operations for the Year 1963*, p. 26.

Table 5.12

West Malaysia – Approved Crops Planted with Grant Assistance under various Rubber Replanting/New Planting Schemes in Estates and Smallholdings, 1953–70
('000 acres)

Approved Crop	Area Planted with Approved Crops with Grant Assistance under Various Rubber Replanting Schemes, 1953–70		
	Estates	Smallholdings	Total
Oil palm	56.01	21.17	77.18
Coconut	1.34	20.38	21.72
Non-citrus fruits)	0.11	19.24)	21.98
Citrus fruits)		2.63)	
Pineapple	0.18	17.59	17.77
Sago	–	7.94	7.94
Padi	0.01	6.30	6.31
Coffee	0.19	5.72	5.91
Tea	1.36	–	1.36
Nutmegs	–	0.91	0.91
Cloves	–	0.22	0.22
Manila hemp	0.10	*	0.10
Pepper	0.01	–	0.01
Total	59.31	102.10	161.41
Total Area Replanted/ New Planted with Rubber and Approved Crops under Grant Assistance	744.56	1,147.25	1,891.81

Sources: 1. Chairman of the Boards of Administrators of the Government Rubber Replanting Schemes.
2. The Rubber Industry (Replanting) Board, Fund B.

*Negligible.

holdings planted with the approved crops under grant. Three other crops of similar importance amongst themselves made up another 38 per cent of the total area of approved crops provided with assistance. These were coconut, fruit trees (citrus and non-citrus) and pineapple. They occurred almost entirely in the smallholdings sector. The remaining area was spread out among eight other crops

but of these, three crops dominated. They were sago, padi and coffee. Again these crops occurred virtually in the smallholdings sector.

The analysis above, however, has not revealed the full significance of the rubber replanting subsidies on the crop structure. But a more detailed examination of the part played by these subsidies in the growth of planted acreages of the more important crops can be found in Chapters VII and VIII. On the basis of the findings of this detailed examination, the overall impact of the subsidies appeared to be much more profound than the impressions generally held. Most impressive is that the subsidies had assisted in financing the bulk of the increase in acreage of three types of crops: pineapple, fruit trees and coffee. Elsewhere, the effects appeared to be less. In the case of oil palm, there were other more crucial determinants underlying the sharp expansion of its acreage while the subsidies merely added to the momentum. The switch from rubber to coconut, although fairly large, however, contributed little towards the achievement of a more productive industry. The area under tea declined substantially during the review period; the area planted with the assistance of the subsidies was not even sufficient to offset this decline.

The other aspect of the Government's rubber policy which contributed directly to the diversification process is in the sphere of vertical diversification. In March 1965, the rubber industry, with the full backing of the Malaysian Government, introduced a national scheme for technical grading of rubber under a system known as Standard Malaysian Rubber (SMR).[83] At the same time, there was introduced into the market new processes which presented natural rubber in block form. The SMR Scheme covered all forms of solid rubber, that is, from conventional rubbers in the form of sheet or crepe to block rubbers produced by the new process. The SMR Scheme was especially appropriate for the latter which could not be graded visually. Indeed, the SMR Scheme has been increasingly associated with the new process rubbers as can be seen in Table 5.13. By 1970, virtually all the rubbers shipped under the SMR Scheme were the new process rubbers.

The significance of the new process rubbers is that these represent a higher and more sophisticated level of processed rubbers and in that sense, vertical diversification of the products of the rubber industry. The new processes enable a very wide variety of raw materials to be converted into processed rubbers that are highly uniform in properties.[84] This is of obvious advantage in view of the many qualities of rubber that are usually turned out by the producers and furthermore, users of rubber naturally prefer a uniform input. The new processes also present possibilities of more efficient use of chemicals and other

[83] Two interesting papers discussing the SMR Scheme are: D.J. Graham and J.E. Morris, "New Processes and the SMR Scheme" and R.N. Muthurajah, "New Process Rubbers and Their Marketing" in *Planters Bulletin of the Rubber Research Institute of Malaya*, November 1968 and November 1969, respectively.

[84] R.N. Muthurajah, *op. cit.*, p. 265; also Sekaran Nair and Others, "New Presentation Rubbers: SMR Market Reaction and Future Requirements", a paper presented at the Rubber Research Institute of Malaya Planters' Conference, Kuala Lumpur, 9–11 July 1970.

Table 5.13

West Malaysia – Exports of Rubbers under SMR Scheme by Types

Year	Total Volume of Rubbers Exported under SMR Scheme (tons)	Conventional Rubbers (As % of Total)	New Process Rubbers (As % of Total)
1965	711	39.2	60.8
1966	8,572	30.2	69.8
1967	23,576	19.5	80.5
1968	81,498	6.2	93.8
1969	138,715	3.6	96.4
1970	224,281	1.3	98.7

Sources: Compiled from Department of Statistics, *Rubber Statistics Handbook*, 1968 and 1970.

additives.[85] Moreover, the new processes could be directed to producing specially-modified rubber (viscosity-stabilized rubber) to meet various consumer requirements.[86] Another advantage for users is that the new process rubbers could be packed in forms comparable to synthetic rubber. Since natural rubber is blended with synthetic rubber in many lines of manufactures, the blending process is facilitated.[87] As the new process rubbers are marketed under the SMR Scheme, the strict standards[88] of the Scheme that applied to the marketed product have contributed considerably to consumers' confidence in the product.

Consumer response to the new process rubbers was very encouraging and these rubbers were sold "at as fast a rate as they were produced and often at high premiums".[89] The share of exports of the new process rubbers in terms of tonnage to the total exports of all types of rubbers had been increasing. In 1967, it was only 2 per cent but by 1970, it had reached 17½ per cent. Further expansion was anticipated. As at July 1969, there were 47 factories engaging in the production of the new process rubbers and another 14 were expected to commence production by the end of 1969.[90] It was soon found that the

[85] Sekaran Nair and Others, *ibid.*

[86] R.N. Muthurajah, *op. cit.*, p. 265.

[87] Sekaran Nair and Others, *op. cit.*

[88] For a discussion on the administration of the SMR Scheme see H.C. Baker and Others, "Technical Administration of the SMR Scheme" in *Planters' Bulletin of the Rubber Research Institute of Malaya*, No. 105, November 1969.

[89] Sekaran Nair and Others, *op. cit.*

[90] R.N. Muthurajah, *op. cit.*, p. 266.

demand for the new rubbers was persistently larger than supply and unless adequate expansion of output could be made to match this situation, interest in the new rubbers could dwindle. Thus in February 1970, the Government announced an incentive scheme to encourage the establishment of new process factories.[91] Under this scheme, all capital expenditures incurred in the setting up of such factories were allowed to be written off for tax purposes in one year. It is still too early to see the efficacy of this policy measure. However, the rubber industry felt that more could be done. It noted that the small and medium estates had problems of finding adequate financing to build new plants or convert their existing facilities into new process factories.[92]

But priority for direct assistance for new process factories was being accorded to the needs of smallholders. The scheme of assistance started with two group processing centres, one at Meru (Selangor) and the other at Rantau (Negri Sembilan).[93] Each centre covered 30–60 smallholdings. Originally, these were among the central processing factories set up by the Rural and Industrial Development Authority (RIDA) [the predecessor of the Majlis Amanah Raayat or MARA] to process smallholders' latex into first quality ribbed-smoked sheets (RSS). The Meru factory was taken over by the Rubber Research Institute of Malaya in 1965 after it ran into difficulties owing to poor management. With the success achieved in operating it, the Institute took over another factory at Rantau in 1967. Both factories were converted to heveacrumb (new process rubber) factories in 1967. In October 1969, the Malayan Rubber Fund Board[94] established a subsidiary, the Malaysian Rubber Developments Sendirian Berhad, to manage these two factories and two others which were then under construction in Grisek (Johore) and Mentakab (Pahang). To increase the effectiveness of the company, the Government turned it into the Malaysian Rubber Development Corporation Berhad, its objective being to take over the operation of these factories and to erect other such factories throughout the country for smallholders' rubber.[95] This measure was part of the new industrial policy of the

[91] Rubber Producers' Council of Malaya, *Annual Report, 1970*, p. 17.

[92] *Ibid.*, p. 17.

[93] For more details about these two centres see Colin Barlow and Others, "Assessment of Smallholders Central Processing and Marketing Schemes" in *Journal of the Rubber Research Institute of Malaya*, Vol. 21 Part V, 1969.

[94] The Malayan Rubber Fund Board was established in 1968 under the Malayan Rubber Fund (Research and Development) Ordinance 1958. Its basic objective is to place under unified control in Malaysia the various research and associated activities which have been financed by the rubber industry: the operations of the Rubber Research Institute (established in 1925), the Natural Rubber Producers Research Association (established in 1938) and the Natural Rubber Development Board (established in 1946). The Board decides the scope and balance of their various activities and determines the allocation of funds accordingly. Financing is from the research cess on rubber exports currently at 1 cent per pound. For details of the Board's operations, see Malayan Rubber Fund Board, *Annual Report, 1968.*

[95] Rubber Producers' Council of Malaya, *Annual Report, 1970*, p. 17.

Government charted after 1969, to supplement the role of the private sector.[96]

Thus, under the Second Malaysia Plan, 1971–75, the Government had intended that about 40 new process rubber factories be erected in West Malaysia to process smallholders' latex.[97] The Malaysian Rubber Development Corporation would establish and operate 25 of these factories while FELDA, the State Economic Development Corporations (SEDCs) and the private sector would be responsible for the other 15. The Plan estimated that these factories would produce "about 400,000 tons or more than 90 per cent of that part of smallholders' latex still available for conversion to new process rubber in 1971". In view of the substantial smallholders' production (almost half in terms of total rubber output in 1969–70, as can be seen in Table 5.8), the realization of these targets should be of great significance to the larger objective of increasing the degree of processing of Malaysia's agricultural exports.

This interest of public policy in the processing of smallholders' rubber was actually a further development of past efforts to improve the quality of the smallholders' output. Since processing of individual smallholding rubber was a small-scale operation, it had resulted in low quality output. Indeed in 1966, it was estimated that as much as 70 per cent of the smallholders' latex was still converted into merely unsmoked sheets.[98] As a measure to meet this problem, group processing centres had been encouraged by the Smallholders' Advisory Services Division (SHASD)[99] of the Rubber Research Institute since the mid-1960's. The SHASD approved and supervised the construction and initial development of these centres;[100] grants covering 100 per cent of the construction were provided by the Majlis Amanah Raayat (MARA).[101] For a small charge, the centres would process the latex of 20–40 smallholders into ribbed-smoked sheets or even unsmoked sheets, but largely the former. In 1967, 117 new centres had been set up with SHASD assistance. The more ambitious attempt of RIDA to have central factories to collect smallholders' latex for processing to high-quality ribbed-smoked sheets and to market these in bulk, failed because of lack of management personnel. Thirteen such factories were set up by RIDA during 1960–65 and all were closed down except for the two which formed

[96] Tun Abdul Razak, Deputy Prime Minister and Director of National Operations Council, "New Economic Development Policy" in *Malaysia – A New Industrial Development Strategy*, Kuala Lumpur, Federal Industrial Development Authority, July 1969.

[97] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 135.

[98] Lim Sow Ching, "Analysis of Smallholders' Rubber Marketing in West Malaysia" in *Journal of the Rubber Research Institute of Malaya*, Vol. 21 Part V, 1969, p. 605.

[99] The SHASD has been in operation since 1934. For more details see *Rubber Research Institute of Malaya*, a booklet prepared by the Institute outlining its functions and operations (undated).

[100] The SHASD also financed the construction of processing factories; in 1967 and 1968, it made an outlay of $986,000 for this purpose. See Malayan Rubber Fund Board, *Annual Report, 1968*, p. 5.

[101] Colin Barlow and Others, *op. cit.* pp. 592–593.

the basis of the scheme for the Government-operated heveacrumb factories.

In connection with the problem of new process factories for the small and medium-sized estates, it is unlikely that the Government would take the initiative, in view of its preoccupation with the smallholders' situation. However, there appears little justification for erecting factories *exclusively* for processing smallholders' output. Indeed, if these facilities could also be made available to nearby small and medium-sized estates, there could be scope for having even larger plants that could operate on greater economies. The planning of future central new process factories should consider this possibility. Similarly, the big estates should plan their facilities also to perform processing for other smaller estates and smallholdings nearby.

There was one other attempt on the part of public policy, albeit an unsuccessful one, to increase vertical diversification in the rubber industry. In the 1967 Budget,[102] the Minister of Finance announced the Government's intention to impose a duty of 2 cents per pound on all loose rubber that would be exported from West Malaysia with effect from 1 April 1967. The objective was to encourage the packing of rubber within the country. However, this was soon deemed impractical, given the existing facilities, and the imposition of the duty was suspended indefinitely.

[102] Speech of Minister of Finance introducing the *Supply (1967) Bill* on 19 January 1967.

CHAPTER VI
THE AGRICULTURE AND FORESTRY SECTOR – DIVERSIFICATION POLICIES AND PRODUCTION OF ESSENTIAL FOODSTUFFS

1. INTRODUCTION

Agricultural diversification, as pointed out earlier, was an objective of economic policy in West Malaysia even before the achievement of political independence. One of its important aspects was the goal of expanding domestic production of foodstuffs. Indeed, this was one of the four corner-stones of the country's agricultural policy in the early 1950's; the other three were diversification of crops, the rehabilitation of the ageing rubber trees and the maintenance of soil fertility.[1] The main effort in expanding food production was in the rice sector.[2]

The agricultural policy of the newly-elected Alliance Government of 1955, besides emphasizing on crop diversification, went one step further in respect of food production, namely, that it made eventual self-sufficiency in essential foodstuffs an explicit objective.[3] The re-election of the Alliance Party as the ruling party in 1959 ensured the continuation and intensification of this agricultural policy, but the goal of self-sufficiency was now more closely defined to cover especially rice production.[4] In its third term of government, the Alliance Party pursued further the policy of agricultural diversification. Insofar as the self-sufficiency objective in foodstuffs was concerned, the extent of it was specified, namely, that it was to be "as near self-sufficiency as is economically feasible and desirable".[5] This policy continued to 1970 and into the Second Malaysia Plan.

The consistent pursuit of such a food production policy to the 1970's introduced important changes to the production structure of the Malaysian agricultural sector. The reduced import dependence on rice and some of the food items was noted in Chapter IV. Some of the latter had even attained the

[1] *Annual Report of the Department of Agriculture for the Year 1953*, p. 1.

[2] *Annual Report of the Department of Agriculture for the Year 1954*, p. 1.

[3] *Annual Report of the Department of Agriculture for the Year 1955*, p. 1.

[4] *Annual Report of the Department of Agriculture for the Year 1959*, p. 1.

[5] *Annual Report of the Division of Agriculture for the Year 1966*, Appendix 1, p. 82.

status of minor exports. As will be seen, some of these developments arose in the main from policy measures pursued by the Government.

This chapter will examine the role of public policy in three major areas of production of essential foodstuffs in West Malaysia. These are rice, fish and meat. It will soon become obvious that while important advances were achieved in the production of these foodstuffs, the focus of public policy had been uneven amongst them. In a number of instances, the operation of market demand was able to stimulate expansion with little or no help from policy measures. In others, Government intervention made important contributions.

2. PUBLIC POLICY AND THE DEVELOPMENT OF RICE PRODUCTION

2.1 *Rationale Underlying Public Policy*

The main thrust of public policy in the agriculture sector was of course directed at rubber production, the details of which have been discussed. However, owing to the special interest of the Government in food production, rice production was accorded considerable and sustained assistance and attention especially during the 1½ decades to 1970, more so than for any other agricultural activities. The rationale underlying the interest in rice production was based on strategic and political considerations. The strategic considerations arose from the past experiences of rice shortages going back to the end of World War I: the serious rice shortage of 1918 coupled with restrictions on Burmese exports to the rice deficit countries; the shortage of 1920 followed by the suspension of Thai rice exports after a serious drought; the collapse of rubber prices during the Great Depression; the cut-off of overseas supply during the Japanese Occupation and the post-war shortages. In the light of these experiences, the value of maintaining a rice stockpile to deal with possible emergency situations was recognized and to this end, the Government has been operating a stockpile since World War II. The stockpile carried a minimum ration of rice for the population (excluding the padi farmers) of four months' supply.[6] The Government's view, however, has consistently been that such a stockpile could only deal with situations of very short-term dislocations of supply. In the long run, domestic production would have to be maintained at a high level to minimize the occurrence of such dislocations. In the subsequent evolution of this view, as is implied in the self-sufficiency objective, the position was even taken that this risk should be eliminated.

The political consideration arose from the fact that a substantial proportion of the population was dependent on padi production for their livelihood and that most of these had voting rights. In the 1957 Population Census, it was found that of the 2,164,861 persons who were economically active, 398,295 persons were engaged in padi production. Of these padi producers, 95.8 per cent were Malays. The 1970 Population Census indicated that of the total of

[6]The size of the Government rice stockpile is classified information but the minimum ration legally required to be maintained is stated. See Ford Foundation Team Report on Agricultural Diversification, *op. cit.* p. 12.

2,711,628 persons in employment, 426,486 persons were padi producers or mainly padi producers. No racial breakdown of this figure was available yet at the time of writing. But the percentage of Malays in such employment was not expected to have changed significantly since 1957. In fact, the Socio-Economic Sample Survey of Households carried out by the Department of Statistics in 1967/68 indicated that as high as 95 per cent of those engaged in padi production were Malays. Being recognized as sons of the soil by the country's Constitution, the Malays possessed automatic voting rights. The padi producers thus made up a very significant group of people with votes.

Padi farming is a low-income activity. Incomes data were scarce but surveys undertaken in recent years over selected areas showed that the average annual net income of a padi farm household varied from about $650 to $1,640 (Table 6.1). Even then, the entire income was not derived from padi output but that a part of it came from other crops and off-farm incomes such as wages and earnings from handicrafts and small businesses. On the basis of an average of five persons per farm household, this would work out to about $130–330 per capita, an amount well below the per capita national income of a little over $1,000 a year towards the end of the 1960's. As these incomes figures covered 1966–71, and therefore would reflect the many improvements in yields through the various measures already implemented, it is conceivable that net farm incomes in the mid-1950's could be considerably lower.

The persistence of the depressed state of incomes in the rice sector is untenable on both economic and political grounds. It is, therefore, not surprising that measures to meet the strategic objective in rice output had been greatly strengthened by the social welfare objective of income expansion for an economically depressed but politically articulate sector. Indeed, the Government had in the late 1950's even expressly fixed a target income of $300 a month for the padi farm family.[7] While the practicability of the target is debatable, it did indicate the strength of purpose of public policy on this matter.

Quite unlike most other sub-sectors of the agriculture sector, the development of the rice industry in West Malaysia was greatly fostered and protected by public policy. As will be seen, if left to market forces, the industry could never have developed to the status it had attained by 1970. But the cost to the economy in terms of more profitable investment opportunities foregone for the resources so directed to the rice industry is however another matter.

2.2 *Pattern and Trends in Padi Production*

Table 6.2 shows the planted acreages for the main season and off-season (second crop) wet padi and also for dry padi for the period 1955–70. The acreages under dry padi changed relatively little during the review period, these varying from about 51,000 acres to 61,000 acres. This is not surprising as the concentration of public policy was directed at wet padi cultivation. Between 1955 and 1970, the

[7] *Report of the Drainage and Irrigation Department for the Years 1958, 1959 and 1960*, p. 2.

Table 6.1

West Malaysia – Average Annual Net Income of a Padi Farm Household in Selected Padi Growing Areas

Selected Padi Growing Areas	Total Average Annual Net Income of Household ($)	Percentage Share of Annual Net Income		
		Padi Growing	Other Farming Activities	Off-farm Activities
Tanjong Karang (1966)	1,640	61	11	28
Province Wellesley (1968)	1,314	68	9	23
Kemubu (1968)	647	42	14	44
Sungei Manek (1970)	1,149	52	9	39
Changkat Jong (1970)	1,501	45	33	22
Besut (1970)	1,081	29	21	50
Krian (1971)	1,111	62	6	32

Source: S. Selvadurai, *Padi Farming in West Malaysia*, Kuala Lumpur, Ministry of Agriculture and Fisheries, March 1972 (mimeographed), p. 34.

total planted acreage under wet padi increased by 436,080 acres or 52.7 per cent to 1,263,940 acres. Of this increase, 72.7 per cent (or 316,920 acres) were accounted for by expansion of acreage under the off-season crop. The growth of the off-season crop or double cropping (as it is better known) was a recent development. Double cropping was practised over roughly 7,000–12,000 acres from the 1955/56 season to the 1958/59 season. However, it was from the 1959/60 season that marked increases in acreage occurred when the results and facilities arising from the Government's rice policy became increasingly evident. On a number of occasions, as between the 1963/64 and 1964/65 seasons, the 1965/66 and 1966/67 seasons, the 1966/67 and 1967/68 seasons and the 1968/69 and 1969/70 seasons, the acreage expansion under double cropping was very substantial. Over the period 1955–70, the share of the area planted with a second padi crop to the total area planted with wet padi expanded very markedly; it was 1.1 per cent in 1955/56, 2.4 per cent in 1959/60, 15.2 per cent in 1966/67 and 25.8 per cent in 1969/70. The acreage under the main season crop rose by 119,160 acres or 14.6 per cent between 1955 and 1970.

Output expansion up to 1970 was effected largely through improving existing areas with irrigation facilities, particularly to enable double cropping and use of improved varieties and fertilizer inputs. After 1970, two major irrigation schemes became fully operational and these brought about a sharp increase in the planted acreage. Firstly, there was the $228 million Muda Irrigation Project which would open up by 1973, 131,000 acres of new land for double cropping and provide

Table 6.2

West Malaysia – Planted Acreage under Padi
(acres)

Season	Wet Padi			Dry Padi
	Main Season	Off-season	Total	
1955/56	818,850	9,010	827,860	50,530
1956/57	832,380	7,290	839,670	55,120
1957/58	850,170	7,920	858,090	51,130
1958/59	859,850	11,640	871,490	56,460
1959/60	868,420	20,890	889,310	60,850
1960/61	879,300	35,570	914,870	52,920
1961/62	872,730	46,520	919,250	58,040
1962/63	886,170	49,110	935,280	55,450
1963/64	879,890	58,420	938,310	52,340
1964/65	896,700	89,840	986,540	53,440
1965/66	896,060	104,450	1,000,510	52,870
1966/67	878,910	156,940	1,035,850	51,500
1967/68	906,590	224,660	1,131,250	51,250
1968/69	945,970	238,130	1,184,100	57,180
1969/70	938,010	325,930	1,263,940	53,580

Sources: 1. Ministry of Agriculture and Lands.
2. Department of Statistics, *Rice Statistics 1969, West Malaysia.*

irrigation facilities to enable double cropping on another 130,500 acres of existing padi land. The other project was the $40 million Kemubu Scheme which would convert 55,000 acres from a single cropping to a double cropping area.

Table 6.3 sets out the production[8] and average yields of padi for the three broad classes of padi: main season padi, off-season padi and dry padi for 1955–70. Output of all types of padi showed a very marked increase over the 15-year period under review. Output for the 1955/56 season was 280.4 million

[8]Production figures for padi can present problems when comparisons over a long period are required as in this study. In 1969, the series of output statistics for padi was substantially revised compared with what was presented in 1968 (see Department of Statistics, *Rice Statistics 1969, West Malaysia*) but this revision extended backwards to only the 1961/62 season. To enable a fair and proper comparison to be made, as is required by this study, the production data for the earlier seasons as published have to be set aside and in their place a revised series constructed using the revised acreages for the various categories of padi and the average yields for the season concerned. See notes to Table 6.3.

Table 6.3

West Malaysia – Padi Production and Yields

Season	Wet Padi				Total Production ('000 gantangs)	Dry Padi		All Types of Padi
	Main Season		Off-Season					
	Production* ('000 gantangs)	Average Yield/ Acre (gantangs)	Production* ('000 gantangs)	Average Yield/ Acre (gantangs)		Production ('000 gantangs)	Average Yield/ Acre (gantangs)	Total Production ('000 gantangs)
1955/56	268,582	328	3,036	337	271,618	8,792	174	280,410
1956/57	303,818	365	2,690	369	306,508	14,661	266	321,169
1957/58	307,761	362	3,144	397	310,905	9,919	194	320,824
1958/59	284,610	331	4,877	419	289,487	12,082	214	301,569
1959/60	346,499	399	9,254	443	355,753	13,326	219	369,079
1960/61	375,461	427	13,445	378	388,906	11,483	217	400,389
1961/62	341,777	392	19,227	413	361,004	11,288	194	372,292
1962/63	364,438	411	21,426	436	385,864	12,489	225	398,353
1963/64	327,647	372	24,997	428	352,644	11,163	213	363,807
1964/65	365,856	408	40,207	447	406,063	10,529	197	416,592
1965/66	352,467	408	47,607	456	400,074	10,070	190	410,144
1966/67	327,756	389	68,794	438	396,550	8,799	171	405,349
1967/68	367,850	415	102,140	455	469,990	9,708	189	479,698
1968/69	407,905	431	114,595	481	522,500	10,609	186	533,109
1969/70	400,650	427	150,803	464	551,453	10,996	205	562,449

Sources: Compiled and computed from:

1. Department of Statistics, *Monthly Statistical Bulletin of West Malaysia*, July 1971.
2. Department of Statistics, *Rice Statistics 1969, West Malaysia.*
3. Ministry of Agriculture and Lands.

*Production data for seasons 1955/56 to 1960/61 are estimates derived from the product of average yield per acre and the planted area. The production figures for seasons 1961/62 to 1969/70 had been substantially revised (compare the series of production data as given in *Rice Statistics 1969, West Malaysia* with those in *Rice Statistics 1968, West Malaysia*) but those for the earlier seasons were not; hence the derivation as described earlier to present a comparable series of production data for the earlier seasons, based on the revised data on planted acreage and yield. This method gives a good approximation.

gantangs[9] but this increased by slightly more than 100 per cent by the end of the 15-year period when total production was 562.4 million gantangs.

This substantial expansion was virtually accounted for by wet padi production. The output of dry padi over the 15-year period changed little from one year to another, the annual output hovering around 10,000 gantangs.

Output of the main season padi formed the bulk of total padi production. In the period 1955–59, the main season padi accounted for about 95 per cent of the total padi output. But its share in production started to decline since then, until it fell to 71 per cent of total output for the 1969/70 season. In absolute terms, however, production had a rising trend, subject to wide changes in some years due to unfavourable weather condition such as in the 1958/59,[10] 1963/64[11] and 1966/67[12] seasons. Production in the 1969/70 season for the main season crop came to 400.6 million gantangs, an increase of 132.1 million gantangs or 49 per cent compared with the output of the 1955/56 season. Part of this increase could be attributed to the expansion in acreage as indicated earlier. But another important factor was the noticeable increase in average yield per acre. In Malaysian padi statistics, the average yield per acre is based on the planted acreage rather than the harvested area. There could, therefore, result in fluctuating yields due to unusually large losses of crops from bad weather and pests or unusually good years for crops. In spite of these limitations, the yield data could still serve to indicate broad trends. From Table 6.3 it can be seen that the 1959/60 season marked an important turning point in padi yields. Prior to this season and from the 1955/56 season, the average yield per acre exceeded 300 gantangs per acre, rising to a high point of 365 gantangs per acre in 1956/57. From the 1959/60 season, the average yield per acre can be said to have entered a new phase with yields rising to over 400 gantangs per acre except for three seasons: 1961/62, 1963/64 and 1966/67. In these three seasons, the average yield fell below 400 gantangs per acre, due largely to unusual factors as explained earlier.[13] By the 1968/69 and the 1969/70 seasons, the average yield

[9]The gantang is a volume measure used in Malaysia for padi and rice. Approximately 400 gantangs of padi make up one ton.

[10]The fall in production in 1958/59 was caused by late planting in many areas due to drought during the planting season in 1958, which was further aggravated by the early occurrence of dry weather in November-December 1958. See *Annual Report of the Department of Agriculture for the Year 1959*, p. 10.

[11]The relatively smaller harvest in the 1963/64 season was largely the result of unprecedented drought during the planting season. See *Annual Report of the Division of Agriculture for the Year 1964*, p. 7.

[12]The poor harvest in the 1966/67 season was due to heavy flooding and damages. See Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1967*, p. 18.

[13]Refer to the footnotes provided earlier to explain the decline in production in these seasons. For the 1961/62 season, the causes for the smaller output were floods and drought and disease (penyakit merah) in some states. See *Annual Report of the Department of Agriculture for the Year 1962*, p. 8.

was around 430 gantangs per acre, an increase of about 31 per cent compared with the average yield in the 1955/56 season.

Perhaps the most outstanding feature about the trend in production of wet padi was the emergence of the off-season crop. Up to the 1958/59 season, the off-season crop accounted for about 1–1½ per cent of total padi production. It was only in the 1960's that the share of output from double cropping to total padi output increased markedly and progressively, this being 2½ per cent of total padi output in the 1959/60 season, about 9½ per cent in the 1964/65 season, and rising to 21 per cent by the 1967/68 season. The rapid expansion of planted acreage under the off-season crop in the 1960's, as noted earlier, was one significant cause for this development. The other major factor, as for the main season crop, was rising productivity. The average yields were generally higher than those of the main season crop. Furthermore, they also attained markedly higher levels in the 1960's compared with the latter half of the 1950's. On the average, the yields in the three seasons within 1967–70 were 27 per cent higher than those for the three seasons in 1955–58.

The next point to consider is the contribution these developments make to the objective of self-sufficiency. A refined measurement of self-sufficiency could not be made because there were no published data on rice stocks in the country. Even for the public sector, no figures of stocks have ever been revealed in order to maintain secrecy of the size of the Government stockpile. However, some broad indication of the trend towards self-sufficiency may be derived by examining the share of domestic production to a crudely-estimated consumption volume comprising the sum of domestic production and net imports, as was done in Table 6.4. Ignoring the effects of abnormal years, it can be seen that there was a clear and unmistakable trend towards self-sufficiency in the 1956–70 period. In 1956, the percentage share of domestic production to estimated consumption was 56 per cent but towards the end of the period, this ratio had risen to 77–80 per cent. A further and significant increase in the early 1970's can be expected with the full operation of the Muda Irrigation Project and the Kemubu Project. The import-saving effects of the increased domestic production were also evident – in the latter half of the 1960's, the net imports of rice fell by at least 100,000 tons a year compared with the latter half of the 1950's. Some discussion on this aspect was made in Chapter IV.

2.3 *Nature of the Government's Rice Policy*

The long-standing interest of the Government in increasing rice production had brought forth a set of policy measures more elaborate than for the other agricultural activities, including rubber. The major areas for policy action were i) protection of domestic padi producers; ii) fertilizer subsidies; iii) seed development and distribution; iv) development of irrigation facilities; v) extension work in promoting double cropping; and vi) establishment of marketing and credit facilities.

2.3(i) *Protection of Domestic Padi Producers*

One of the earliest policy measures to foster increased rice production was the

Table 6.4

West Malaysia – Estimated Production and Consumption of Rice

Year	Estimated Domestic Production of Rice[a] ('000 tons) (1)	Net Imports of Rice ('000 tons) (2)	Crude Estimates of Rice Consumption[b] ('000 tons) (3) = (1) + (2)	Percentage Share of Estimated Production to Estimated Consumption (4) = $\frac{(1)}{(3)} \times 100$
1956	455.9	362.6	818.5	55.7
1957	522.2	340.5	862.7	60.5
1958	521.7	346.1	867.8	60.1
1959	490.4	360.0	850.4	57.7
1960	600.1	357.0	957.1	62.7
1961	651.0	315.7	966.7	67.3
1962	605.4	288.1	893.5	67.8
1963	647.7	389.3	1,037.0	62.5
1964	591.6	401.8	993.4	59.6
1965	677.4	257.4	934.8	72.5
1966	666.9	207.6	874.5	76.3
1967	659.1	285.9	945.0	69.8
1968	780.0	238.5	1,018.5	76.6
1969	866.8	220.3	1,087.1	79.7
1970	914.6	263.4	1,178.0	77.6

Sources: 1. Table 6.3
2. Department of Statistics, *Rice Supplement to Monthly Statistical Bulletin of the Federation of Malaya, 1963.*
3. Department of Statistics, *Monthly Statistical Bulletin of West Malaysia,* October 1971.

[a]Derived from the estimated padi production (both wet and dry padi) in Table 6.3, converted at the rate of 615 gantangs of padi for 1 ton of rice.
[b]As there were no data on rice stocks, the estimates were exclusive of stocks.

protection of the domestic padi producers from the low-cost producers abroad. This protection had two aspects namely, the implementation of a minimum guaranteed price for padi and the control of rice imports. These two aspects were linked to each other by the Government rice stockpile.

The guaranteed minimum price for padi (GMP) was established as early as 1949. An important reason for the GMP was the Government's recognition of the need to provide some guarantee of a *reasonable* return to padi farmers.[14] For example, the market price could fall suddenly when the farmer had, in his possession, his harvested crop or it could be depressed by the operations of unscrupulous dealers. The GMP was to protect the farmer against these possibilities. The GMP represented (and still does) the price at which the Government undertook to buy good dry padi at the mill door. For purposes of the GMP, 'good dry padi' was defined as fully matured padi having not more than 13

[14]Federation of Malaya, *Report of the Rice Production Committee,* Kuala Lumpur, 1953, Vol. I, p. 20.

per cent moisture content, and which was free of dirt, empty grains, husk, straw or other foreign matter. Padi with moisture content in excess of 18 per cent was normally not purchased at the GMP but at a price decided by negotiations. For padi with moisture content of 13 to 18 per cent, appropriate deductions by weight were made.[15] There was only one GMP covering padi of all types and for some time it applied only to the main season crop. With the growing prominence of the off-season crop, the GMP was then extended to padi of the Malinja and Mahsuri varieties in order to encourage the planting of these varieties; for other varieties, a lower price was paid.[16]

Table 6.5 shows the GMP for the padi seasons since 1951/52. Out of the 19 seasons covered, there were 8 seasons in which the GMP was $15 per picul and 7 seasons when the GMP was $16 per picul. In fact, in the last 14 years to 1970, the GMP was $15–16 per picul. In only the 1954/55 season was there a substantial departure of the GMP from these prices, that is, when it fell to $12 per picul.

The GMP was intended to be merely a floor price and it was, therefore, linked to the market price. It was fixed for one season at a time, this being always below the estimated market price for the year. Its weakness lies in this link with the market price. Thus, should the market price fall substantially as happened in the 1954/55 season when the prices of Thai and Burmese rice took a downward turn, the GMP would then have to be pitched at a level to correspond to the decline. Farm cost of production and commitments would naturally have been geared to the previous higher padi price (and GMP). The sharp fall of the GMP from $17 per picul in the 1953/54 season to $12 per picul in the 1954/55 season thus caused a sharp reaction as was pointed out by one Legislative Councillor when he moved a protest motion against the reduction in the GMP in the Federal Legislative Council: ". . . The whole of Tanjong Karang is seething with dissatisfaction and the padi planters of Perlis, Kedah and Province Wellesley and elsewhere are greatly dissatisfied and have protested in strong terms against it and will no longer be comforted by gentle advice and sweet promises. . ."[17] Despite the protests, the approach of the Colonial Government then was still to employ the GMP within the framework of trends in the free market prices.

With self-government in 1955, the Alliance Government introduced a new

[15] The deductions by weight are as follows:

Moisture Content (%)	*Deductions (kati per picul)*
13 – 15	2
15 – 17	4
17 – 18	7

[16] For example, when the GMP was $16 per picul, the price paid for varieties other than the Malinja and Mahsuri was $14 per picul. See Federal Agricultural Marketing Authority, *Annual Report and Statement of Accounts, 1965 and 1966*, p. 32.

[17] Speech of Mr. Mohamed Rashid in the Federal Legislative Council on 20 January 1955. See Federation of Malaya, *Proceedings of the Federal Legislative Council (Seventh Session), March 1954 to January 1955*, Kuala Lumpur, Government Printer, 1955, col. 1297.

Table 6.5

West Malaysia – Guaranteed Minimum Price for Padi

Season	Guaranteed Minimum Price ($ per picul)
1951/52	15
1952/53 – 1953/54	17
1954/55	12
1955/56	14
1956/57 – 1962/63	15
1963/64 – 1969/70	16

Source: Ministry of Agriculture and Lands.

element into the concept of the GMP. It gave more emphasis to the use of the GMP to subsidize the farmer in times of large falls in the domestic market price of rice. Thus, the GMP was raised from $12 to $14 per picul in the 1955/56 season, even in the face of considerable decline in the price of Thai rice a few weeks earlier. This new approach was spelled out by the Minister for Economic Affairs: ". . . the consumer of rice in Malaya may have to give up something in the form of a fall in the cost of living which he might otherwise enjoy in order to help shelter the Malayan padi grower from the hardship and depression which would otherwise fall upon him if there was a severe fall in the world market price for rice".[18] At the same time, the Government did not fail to stress that the protection was not to be unrestricted: ". . . there are limits to which the Government can go in holding the price of local rice above the level of the world market and of imported rice because, as I have said, that must come at the expense of the community – either in the consumer's capacity as a tax-payer or in what he pays for the rice itself. Our object is to find a *compromise* which is compatible with our declared policy and fair to both sides."[19] This approach has in fact been the philosophy underlying the GMP since then. Indeed, since 1956, the GMP had been quite stable, being at $15 per picul for seven seasons and then rising to $16 per picul for the following seven seasons, all these being maintained despite changing developments in the rice market.

[18] Speech of Mr. O.A. Spencer, Minister for Economic Affairs, announcing the new and higher GMP in the Federal Legislative Council on 9 December 1955. See *Legislative Council Debates – Official Report of the Second Legislative Council (First Session), 30 August 1955–13 September 1956,* Kuala Lumpur, Government Printer, 1958, col. 861.

[19] Ibid., col. 862.

In practice, the GMP was implemented indirectly. The Government did not buy padi directly except for a limited amount delivered to its few mills.[20] Thus, padi was largely sold to dealers and there was no guarantee that the farmers were paid the full GMP. With the establishment of the padi marketing schemes in 1967 under the Padi and Rice Marketing Board,[21] the operators under the schemes either purchased padi directly and thus assured the payment of the GMP or that dealers were issued with licences to transact in padi under certain conditions. In the latter case, a licensed dealer would have to purchase padi at a price of not less than the prevailing GMP. Padi would then be sold by the dealers to the rice mills. The Government would then purchase the milled rice from the mills for its rice stockpile at prices based on the GMP, provided that the millers certified that their padi had been purchased from the farmers at the GMP prevailing then. The amount purchased by the Government at each season was determined by the needs of the stockpile as a source of rice reserve and also to implement the GMP.[22]

On the other hand, to ensure that the GMP would be meaningfully applied and that domestic rice production geared to the GMP would be absorbed by the local market, the Government found it necessary from the start to operate quantitative restrictions on rice imports. Owing to the relatively lower standard of living and greater efficiency in rice production in the rice surplus countries in South-East Asia, imported rice had generally been cheaper than the locally-produced rice subsidized by the GMP. Table 6.6 attempts to show this difference for the period 1964–70. It can be seen that except for 1967 and 1968 when there was widespread shortage of rice and hence substantial increase in the import price of rice, the average prices of imported rice from the three major sources of Malaysian rice imports (Thailand, Burma and China) had been well below the cost of the locally-produced rice as reflected by the GMP of $16 per picul during the period.[23] In the absence of import restrictions, therefore, the domestic market for rice would have been swamped by imports. This would have rendered inoperative the GMP.

In order to control imports, all rice importers were subject to licensing. A licensed importer was given a monthly quota of imports (based on his past transactions). An important condition for the import licence was that the importer should give an undertaking to buy rice from the Government stockpile in accordance with a prescribed ratio of such purchases to every ton of imported

[20] The Government has four rice mills producing rice for its stockpile.

[21] *Padi and Rice Marketing Board Regulations, 1967*, Section 3(2). More discussion of the Board's operations is given later in this chapter. The functions of the Board were taken over by the National Padi and Rice Authority on the establishment of the latter on 1 July 1971.

[22] The Government rice stockpile was operated by the Supplies Division of the Ministry of Commerce and Industry until 1970. Formerly, it was the concern of the Treasury. In 1971, it came under the National Padi and Rice Authority.

[23] In using the GMP to reflect the cost of producing local rice, the assumption was made that cost had not changed significantly during the seven years examined.

Table 6.6

Import Unit Values of Rice from Thailand, Burma and China and Estimated Cost of Production of Domestic Rice (dollars per ton)

	1964	1965	1966	1967	1968	1969	1970
Import Unit Value of Rice from							
Thailand	393	401	463	517	559	454	392
Burma	416	358	377	531	560	363	307
China	357	342	403	550	588	442	342
Estimated Cost of Production of Malaysian Rice based on GMP of $16 Per Picul	462	462	462	462	462	462	462

Sources: 1. Department of Statistics, *Rice Statistics 1969, West Malaysia.*
2. Ministry of Agriculture and Lands.

rice allowed. This ratio was variable: the proportion of imported rice allowed was increased relative to purchases from the Government stockpile when there was shortage of local rice while such proportion was reduced when local rice was in abundance.

An interesting point to observe is the long-run pattern in the ratios of imports allowed to purchases from the Government stockpile. Table 6.7 attempts to show this by relating the various ratios of imports to purchases from the Government stockpile with the number of months that the respective ratios applied. Three quinquennial periods were compared. Over the three quinquennial periods, there was a shortening of the duration in which larger quantities of imported rice were allowed in relation to a given amount of rice to be purchased from the Government stockpile. For example, when the ratio of permitted imports to purchases from the Government stockpile was 2:1, the duration it was effective covered slightly more than two-thirds of the 1956–60 period. But for the other quinquennial periods, the duration when this ratio operated fell to slightly over half of the 1961–65 period and to nearly one-fourth of the 1966–70 period. On the other hand, there were only five months in the 1956–60 period when the ratio of imports to purchases from the stockpile was 1:1 but this ratio was effective for 22 months in 1961–65 and for 13 months in 1966–70; and furthermore, in the 1966–70 period, there were seven months when the permitted imports were proportionately less than the required purchase from the stockpile and two months when imports were even prohibited. It should however be pointed out that there were five months in the 1966–70 period when the ratio of imports to the required purchase from the stockpile was 7:1 and 10 months when the ratio was 5:1. But this represented an abnormal period[24] when extensive flooding in the 1966/67 padi season caused extensive crop damage so that some relaxation of import restrictions was deemed necessary. Apart from such abnormal circumstances, the overall pattern is clear. There was a growing and more intensive use of import restrictions to protect the Malaysian farmers from the cheaper foreign rice and to ensure that the rice produced on the basis of the GMP would find an enlarging domestic market.

The expanding padi capacity in the context of the price support programme poses problems for the 1970's. With approaching self-sufficiency, it means that increasingly the burden of the support programme has to be borne by the consumers. So long as when imports form a significant proportion of consumption, the margin obtainable between the sales price and the cost of imported rice will enable the rice importers to sell the rice they purchase from the Government stockpile at prices lower than what they paid to the Government.[25] This they did, thereby meeting part of the cost of the price support programme. But the extent that this can be done declines with the fall in the rice imports. The only

[24] See Table 6.7 for the time when these ratios applied.

[25] Federal Agricultural Marketing Authority, *Annual Report and Statement of Accounts, 1965 and 1966*, p. 32.

Table 6.7

West Malaysia – Ratios of Rice Imports Allowed to Purchases of Rice from Government Stockpile by Duration within Three Quinquennial Periods

Ratio of Rice Imports Permitted to Purchases from Government Stockpile	Number of Months during Five-Year Periods when Ratio Applied		
	1956–60	1961–65	1966–70
7:1	–	–	5[a]
6:1	–	–	–
5:1	–	–	10[b]
4:1	–	–	–
3:1	14	–	7
2:1	41	33	14
1½:1	–	5	2
1:1	5	22	13
2/3:1	–	–	7
No imports allowed	–	–	2
All cases	60	60	60

Source: Computed from data provided by Ministry of Agriculture and Lands.

[a] 1 December 1967 to 30 April 1968.

[b] 1 May 1967 to 30 November 1967 and 1 May 1968 to 31 July 1968.

real solution to eliminating the high-cost element in Malaysian rice production is to significantly increase the productivity of the rice sector. This requires early, substantial and vigorous efforts on all fronts in the 1970's. On the basis of past experience, this task will not be easy.

Another issue often raised in connection with the GMP was its indiscriminate application to padi of all types. This point was raised as early as 1963 by the Ford Foundation Team[26] in its report to the Malaysian Government on policy measures to diversify Malaysian agriculture but virtually no action had been taken. The GMP, as pointed out earlier was a single price covering all types of good, dry padi of the main season, subject to the prescribed moisture content. No reference was ever made of the varieties of padi to which it applied except for the off-season crop for which the GMP would be paid only for the Malinja and Mahsuri varieties while a lower price would apply to other varieties. The GMP could obviously be used as an instrument to induce the production of rice

[26] Ford Foundation Team Report on Agricultural Diversification, *op. cit.* p. 10.

of high quality – not only in terms of the varieties to be supported (and this is very important because varieties determine the length of grain, glutinous qualities, etc.) but also other characteristics like the proportion of broken grains, etc. Different levels of the GMP could apply as for the off-season crop. But some difficulties may be encountered such as arising from the current practice among farmers in using a wide range of padi varieties (as will be discussed shortly) and the problem of grading but these are not impossible to overcome. Action along these lines is becoming increasingly urgent as self-sufficiency approaches and rice consumers have to pay the support price. At least then, consumers would have a better product for the burden they have to bear.

2.3 (ii) *Fertilizer Subsidies*

One of the factors accounting for the rise in padi yields was the increasing use of fertilizers. This practice of applying fertilizers to assist the fertility of the land had its beginnings in the Government policy of subsidizing the cost of fertilizers to the farmers. In the early 1950's, experiments were carried out with fertilizers in the Government experimental stations and by 1953, the stage was reached when positive recommendations on the use of fertilizers could be made to padi farmers in Kelantan, Trengganu and Kedah.[27] Kelantan established the first fertilizer subsidy in 1952 and was followed by Trengganu in 1953. An important boost to the subsidy policy came in 1955 when the Federal Government made available $10 million to the padi growing states in proportion to their padi acreages.[28] The grant was made to partly compensate for the substantial reduction of the GMP from $17 per picul of padi to $12 per picul in the 1954/55 season. As a result of this grant, Kelantan and Trengganu were able to continue and expand their fertilizer subsidy schemes while in two other states, Malacca and Negri Sembilan, similar subsidy schemes were established. Not all the padi growing states used their share of the grant for subsidizing fertilizers. Kedah, for example, applied its funds to dealing with the *jual janji* problem (land mortgage) and for other general assistance to padi farmers.[29] Johore, on the other hand, used its own resources to finance a subsidy scheme.

The quantities of subsidized fertilizers sold in the five states in 1953–60 are shown in Table 6.8. Common to all states was the rapid rise in the volume of fertilizers purchased. Even more significant, the quantities of fertilizers purchased continued to expand while the subsidies were reduced. In Kelantan, the subsidy was $6 per 100 pounds of fertilizers in 1953; this was reduced to $4 per 100 pounds in 1955 and to just 90 cents per 100 pounds in 1958; but in these years, the volume of fertilizers purchased increased sharply nevertheless. In Trengganu, the subsidy was $7 per 100 pounds of fertilizers in 1957 but was reduced to $2 per 100 pounds in 1958 and $1 per 100 pounds in 1959 – again

[27] *Annual Report of the Department of Agriculture for the Year 1953*, p. 47.

[28] *Annual Report of the Department of Agriculture for the Year 1955*, p. 82.

[29] *Ibid.*

Table 6.8

West Malaysia – Volume of Fertilizers Purchased under Subsidized Schemes

Year	Volume of Subsidized Fertilizers Purchased (tons)					
	Kelantan	Trengganu	Malacca	Negri Sembilan	Johore	Total
1953	719	53	–	–	–	772
1954	345	49	–	–	–	394
1955	820	47	n.a.	–	–	867
1956	594	–[a]	n.a.	107	–	701
1957	1,399	363	88	219	24	2,093
1958	1,710	472	93	263	57	2,595
1959	–[a]	667	150	176	90	1,083
1960	–[a]	–[a]	396	270	127	793

	Rate of Subsidy in States Concerned (As % of Cost)	*Total Volume of Subsidized Fertilizers Purchased* (tons)
1961	50	3,820
1962	40	8,173
1963	30	8,890
1964	20[b]	11,469
1965	10	12,479
1966	30[c]	24,822
1967	30	25,000[d]
1968	30	25,000[d]

Sources: 1. *Annual Report of the Department of Agriculture*, 1953–1962.
2. *Annual Report of the Division of Agriculture*, 1963–1966.
3. Ministry of Agriculture and Co-operatives, *Report of the Government of Malaysia to the Food and Agriculture Organization of the United Nations, 1966–68*, Kuala Lumpur, 1969 (mimeographed).

[a]No subsidy
[b]The rate was 10% in Johore
[c]This rate of subsidy continued during 1966–70.
[d]Average.
n.a. = not available.

there were substantial increases in purchases in these years. The same patern was also true of Negri Sembilan when its subsidy was reduced from $11.50 per acre in 1958 to $7 per acre in 1960. It is interesting to note that the practice of applying fertilizers became so entrenched in Kelantan that it was possible even to dispense with subsidies after 1958 and still record a purchase of 3,049 tons of unsubsidized fertilizers in 1959 (compared with 1,710 tons purchased under subsidy in the previous year).[30] All these experiences point to the great potential in educating the farmers via financially-assisted means.

The fertilizer subsidy policy was even more vigorously pursued under the Second Five-Year Plan, 1961–65. Where previously the subsidy schemes covered only five states, the facility became available to 10 states during the plan period (Perlis, Kedah, Perak, Selangor, Negri Sembilan, Malacca, Johore, Trengganu, Pahang and later, Penang);[31] only Kelantan was not included. In terms of the

[30] *Annual Report of the Department of Agriculture for the Year 1959*, p. 76.

[31] *Annual Report of the Department of Agriculture for the Year* 1962, p. 41 and *Annual Report of the Department of Agriculture for the Year 1963*, p. 29.

volume of fertilizers purchased under subsidy, the amount was 44,831 tons in 1961–65 or more than 6 times the volume subsidized in the previous five years. Unlike the past, the rate of subsidy in each year in the 1961–65 period was uniform for all the states concerned, this being 50 per cent in the initial year and reducing by 10 percentage points each year until the subsidy was only 10 per cent by 1965. The quantities of subsidized fertilizers purchased again showed an increasing trend, in some years quite sharply, despite the declining rate of subsidy (Table 6.8). Over the period 1960–65, $2.69 million were spent on the subsidy facility and it was estimated that a total of 10,000 acres benefitted.[32]

Under the First Malaysia Plan, 1966–70, the padi fertilizer subsidy scheme was allocated $10 million, one of the largest items of crop subsidies in the Plan, and nearly 4 times the amount spent in the previous six years. The rate of subsidy was fixed uniformly at 30 per cent for the five-year period[33] and was expected to benefit about 220,000 acres.

There were of course problems associated with the subsidy schemes. Lack of cash and inadequate credit facilities proved to be important obstacles to wider use of fertilizers by farmers even at subsidized rates.[34] These problems have been recognized and in recent years, institutional sources of production credit have been strengthened with the establishment of the Agricultural Bank of Malaysia which commenced operation in 1970.[35] Another difficulty concerned farmers, who tended to use the fertilizers sparingly rather than in the recommended amounts. However, clear demonstrations in the experimental stations could help to overcome the problem. One aspect of the fertilizer policy needs review, nevertheless. The experience of the past, and particularly that of Kelantan, showed that once the practice of using fertilizers gained ground, the rates of subsidy could be reduced and the subsidy even terminated, without adversely affecting the volume of fertilizer input. It seems therefore, pointless to have a uniform rate of subsidy as provided under the First Malaysia Plan, as well as to continue to supply subsidized fertilizers to areas previously covered by even lower rates of subsidy. A more lasting and fruitful use of the fertilizer subsidy policy would be to view it as an instrument to introduce the use of fertilizers to farmers rather than as a means of subsidy in the conventional sense. The acceptance of this approach would mean that the subsidy schemes will operate only for a *definite* period in a particular area. The resources saved could be used for higher rates of subsidy elsewhere where the situation warrants or for meeting part of the transport costs in areas of difficult access. Furthermore, the approach allows for concentration of efforts in areas where fertilizers are not being used or are applied only in small quantities for a variety of reasons.

[32] Federal Agricultural Marketing Authority, *Annual Report and Statement of Accounts, 1965 and 1966*, p. 26.

[33] *Annual Report of the Division of Agriculture for the Year 1966*, pp. 42–43.

[34] *Annual Report of the Department of Agriculture for the Year 1953*, p. 47.

[35] Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1970*, p. 79.

2.3(iii) *Seed Development and Distribution*

Another important factor that assisted the rising yields was the increasing adoption of new and improved varieties of padi seeds.[36] Government efforts in this area commenced from the early post-war years. Basically, these efforts involved the development of improved strains of padi and their distribution to the farmers. Distribution of the new improved seeds was made through sale, exchange with the farmers' own seeds or, free supply.

One of the effects of the war was to undo all the work in varietal improvements achieved earlier. Consequently, a fresh start had to be made. The first pure strain from padi selection became available to farmers only in 1950. But the programme of improvement of varieties by selection was not ready for the widespread distribution of seeds up to as late as 1953;[37] it was only in 1954 that the first large-scale distribution took place.[38] And it was not until 1957 that recommendations on the improved strains could be made in *several* states.[39] To facilitate the production of the recommended varieties, seed farms in padi experimental and test stations (run by the Department of Agriculture)[40] were set up and in addition, seed production was undertaken in contract farms. In recent years, the latter became more important e.g. in 1964, of the total 799 acres of seed farms, 596 acres were contract farms.

In 1960, efforts in padi breeding and selection work on the main season varieties were vigorously pursued, especially in North Malaya.[41] At this time also, the possibilities of extensive double cropping were stressed and, among other things, the tempo and scale of development of the short maturation varieties were stepped up.[42] There was further progress in 1961 when the recommended high-yielding varieties became available for *almost all* the padi-growing areas.[43]

Under the Second Five-Year Plan, 1961–65, the seed development effort and distribution facility were formalized as the Padi Seed Multiplication and Distribution Scheme. The Scheme worked essentially in the same manner as in the past except that it was on a larger scale. The cost of the Scheme came to $901,000 in 1961–65 and resulted in 34 per cent of the wet padi area being planted with improved seeds.[44] This was, however, short of the target of 60 per

[36] For example, note statement to this effect in Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 8.

[37] *Annual Report of the Department of Agriculture for the Year 1953*, p.7.

[38] *Annual Report of the Department of Agriculture for the Year 1954*, p. 3.

[39] *Annual Report of the Department of Agriculture for the Year 1957*, p. 84.

[40] The Department of Agriculture (from 1963, the Division of Agriculture) is a unit of the Ministry of Agriculture.

[41] *Annual Report of the Department of Agriculture for the Year 1960*, p. 2.

[42] *Ibid.*, p. 23.

[43] *Annual Report of the Department of Agriculture for the Year 1961*, p. 44.

[44] Federal Agricultural Marketing Authority, *Annual Report and Statement of Accounts, 1965 and 1966*, p. 26.

cent of the wet padi acreage set for the Plan.[45] In the First Malaysia Plan, 1966–70, another such scheme was also made available and a sum of $1.5 million was allocated for the purpose.

Table 6.9 sets out the quantities of seeds distributed under the above arrangements during 1953–66. There were fluctuations from one year to another but the overall picture was one in which: i) there was a sustained effort to introduce improved varieties to the farmers and, ii) the distribution of the improved varieties had been increasing with the years. Admittedly, these yearly distributions were sufficient to provide for only a fraction of the planted acreage at any one time e.g. of the 90,676 gantangs distributed in 1963, the seeds were enough for only 30,255 acres[46] or slightly over 3 per cent of the planted acreage that year. But the significant point about seed distribution is the multiplication capabilities of the seeds once in the possession of the farmers. Furthermore, the continuous implementation of the distribution schemes will in the course of time reduce the numerous local varieties being used to a few recommended high-yielding varieties that will also produce high-quality rice.

In connection with these programmes, a very significant development for rice production was the emergence of four short maturation varieties which have assisted and accelerated the introduction of double cropping. These were the Malinja, the Mahsuri, the Padi Ria and the Padi Bahagia. The Malinja was released to the farmers in 1964 and the Mahsuri in 1965. Both have good grains and have facilitated the expansion of the area under the off-season crop. It can be seen from Table 6.2 that the planted acreage for the off-season crop expanded sharply from nearly 50,000 acres in the 1962/63 season to nearly 157,000 acres in the 1966/67 season. Table 6.9 shows that the bulk of 220,884 gantangs of seeds distributed in 1966 were mainly of the Mahsuri and Malinja varieties. In Kedah, double cropping was even possible in the non-irrigated areas when the Malinja and the Mahsuri varieties were used.[47] These varieties represented a breakthrough for the off-season crop in terms of quality. Their predecessor, the Pebifun variety, yielded relatively poor quality rice. Following collaboration with the International Rice Research Institute in Los Banos, it was found that the IR8 developed at the Institute could be introduced under Malaysian conditions and thus, the variety was released to Malaysian farmers as Padi Ria in 1966. While this variety has high-yield potential, it does not produce good quality rice. Work to improve further the characteristics of these three varieties continued. In September 1968, the Padi Bahagia was developed and released for general use. This variety has very good grain quality, is high yielding (about 900 gantangs per acre with moderate use of fertilizers or roughly twice the national average yield of the off-season crop) and is quite resistant to local padi diseases.

[45] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 33.

[46] *Annual Report of the Division of Agriculture for the Year 1963*, p. 43.

[47] *Annual Report of the Division of Agriculture for the Year 1966*, p. 43.

Table 6.9

West Malaysia – Volume of Improved Padi Varieties Distributed to Farmers (gantangs)

Year	Improved Seeds Distributed to Farmers		
	Selected Seeds	Others (Recommended)	Total
1953	29,060	–	29,060
1954	37,942[a]	–	37,942
1955	46,853[a]	–	46,853
1956	n.a.	n.a.	n.a.
1957	45,783	18,726	64,509
1958	32,000	25,000	57,000
1959	37,000	n.a.	37,000
1960	33,570	52,610	86,180
1961	44,077	51,015	95,092
1962	n.a.	n.a.	n.a.
1963		90,676[b]	90,676
1964		87,733[b]	87,733
1965		n.a.	n.a.
1966		220,844[b,c]	220,844

Sources: 1. *Annual Report of the Department of Agriculture*, 1953–1962.
2. *Annual Report of the Division of Agriculture*, 1963–1966.

[a] Mostly of selected strains.
[b] May include some unselected seeds.
[c] The bulk comprised the Mahsuri and Malinja varieties.
n.a. = not available

2.3(iv) *Development of Irrigation Facilities*

Much of the progress achieved in the expansion of planted acreage and output was due to the long-standing interest of the Government in ensuring a good and efficient system of irrigation works for the padi growing areas. The first large irrigation scheme constructed was the Krian Scheme which opened in 1903 to assist padi cultivation. An important phase in the development of public policy on irrigation was the establishment of the Drainage and Irrigation Department (DID) in 1932. This was one of the steps taken by the Government to increase rice production, following the drastic loss of purchasing power of rubber exports during the Depression. Since then, the DID had initiated and maintained a string of irrigation projects. However, with the articulation of the policy to increase

rice production after the war and, in particular, the vigorous pursuit of the self-sufficiency policy in rice by the Government from the mid-1950's, the policy on irrigation assumed a new dimension. During the period 1956–70, investments in irrigation facilities took on the following characteristics: i) a continuous quantitative increase in investments in irrigation facilities and ii) a growing shift in emphasis to facilities that would promote double cropping in padi.[48]

Table 6.10 shows the financial allocations and expenditures for irrigation and drainage projects under the various development plans. An estimated two-thirds of the allocations were for irrigation projects benefitting padi areas, while the rest were for drainage schemes for rubber, coconut and other crops. It can be seen that in terms of both plan allocations and actual expenditures, the growing stress on irrigation (and also drainage) projects was reflected in the sharply-rising quantities of these from one plan period to another. The actual expenditure on irrigation and drainage projects rose from $38 million in 1956–60 to 3 times that in 1961–65 and to over 8½ times that in 1966–70.

Data on the physical acreages of padi areas provided with irrigation facilities for the three Plan periods are presented in Table 6.11. It can be seen that considerable importance was attached to developing areas for double cropping. The acreage attained over the 10-year period, 1961–70, was about 282,000 acres. Table 6.2 has shown that between the padi seasons of 1961/62 and 1969/70, the increase in the planted acreage for the second crop of padi was about 280,000 acres. Thus, the development of irrigation facilities for double cropping during 1961–70 was obviously the principal cause for the expansion of the areas under a second crop. It is interesting to note that all irrigation schemes constructed since 1932 to at least 1957 were designed for the cultivation of a single crop and, in most cases these could not accommodate two crops of padi a year without "extensive reorganization and reconstruction".[49] The switch in emphasis, especially in the 1960's, towards developing irrigation facilities for double cropping thus represented an important change to a long-held policy. The two major irrigation projects, the Muda Irrigation Scheme and the Kemubu Scheme, started in the latter part of the 1960's would further extend the area for double cropping by another 208,500 acres during 1971–75.[50]

The improvement of irrigation facilities on existing padi land was another important aspect of irrigation policy since the mid-1950's but emphasis later on

[48] This trend continued into the Second Malaysia Plan period, 1971–75. See Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 136.

[49] This observation was first made in 1955 in the report of a committee set up to enquire into the economic status of padi cultivators and to recommend measures to assure an economic return to them. See Federation of Malaya, *Final Report of the Rice Committee*, Kuala Lumpur, Government Printer, 1956, pp. 45–46. The same view was expressed again in 1957. See *Annual Report of the Department of Agriculture for the Year 1957*, p. 11.

[50] For details, see footnote to Table 6.11.

Table 6.10

West Malaysia – Allocations and Expenditures for Irrigation and Drainage Projects

Development Plan	Plan Allocation ($ million)	Actual Expenditures	
		Amount ($ million)	As % of Allocation
1956–60	96.0	38.3	39.8
1961–65	100.0	116.2	116.2
1966–70	319.2	328.5*	102.9

Sources: 1. *Annual Report of the Drainage and Irrigation Division of the Ministry of Agriculture and Co-operatives, Malaysia for the Years 1964, 1965 and 1966*, p. 205.
2. Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 116.
3. Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 146.

*Estimated.

switched to efforts to develop areas for double cropping.[51] About 120,000 acres were developed with irrigation facilities in 1956–60 and in 1961–65, the area similarly developed was about 213,500 acres, of which 192,500 acres represented land provided with assured irrigation for one crop of padi and the other 21,000 acres were padi land developed from jungle swamp.[52] In contrast, only about 25,000 acres were similarly developed in the 1966–70 period, a large part of the resources of course having to be concentrated on the Muda and Kemubu projects.

In the development of policy in relation to irrigation facilities, there was concentration of resources largely on existing padi lands. Such an approach not only yielded early results on output but also economized the use of resources. The problems in developing new lands for padi planting were pointed out by the Drainage and Irrigation Division in its Annual Report of 1961–63.[53] Firstly, the

[51] The basic objective of the 1956–60 Plan with respect to rice was "to step up production by providing irrigation facilities to already cultivated areas and, to a minor extent, to new land". See Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 8. For the 1961–65 Plan period, new emphasis was given to the extension of double cropping areas. See *ibid.*, p. 28. For the stress on expanding double cropping areas in the 1966–70 period, see Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 67.

[52] *Annual Report of the Drainage and Irrigation Division of the Ministry of Agriculture and Co-operatives, Malaysia for the Years 1964, 1965 and 1966*, pp. 210–211.

[53] *Annual Report of the Drainage and Irrigation Division of the Ministry of Agriculture and Co-operatives, Malaysia for the Years 1961, 1962 and 1963*, pp. 4–5.

Table 6.11

West Malaysia – Padi Areas
Provided with Irrigation Facilities
(acres)

	1956–60	1961–65	1966–70
Irrigation facilities resulting in:			
i) Improvement of existing padi land	120,000	192,416	25,000
ii) New areas becoming cultivable		21,050	
iii) Possible double cropping	n.a.	105,107	177,000*

Sources: 1. Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 8.
2. *Annual Report of the Drainage and Irrigation Division of the Ministry of Agriculture and Co-operatives, Malaysia for the Years 1964, 1965 and 1966*, pp. 210–211.
3. Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 127.

*This figure presumably included the 100,000 acres made available in the northern half of the Muda Irrigation Project in early 1970 or a large part of it. The Project would yield an additional area of 161,500 acres for double cropping by July 1973. Another major project, part of which cost was included in the expenditure figure in Table 6.10 but the area developed under which was not reflected in the above figure, was the Kemubu Scheme which would make available 47,000 acres for double cropping after July 1971.

outlay would be very substantial. The Government would have to provide planting subsidies[54] to cover the felling, clearing and stumping of trees. It would then have to provide the settlers with a living allowance for six months and also free seeds for the first year. Besides these expenses, there would be the necessary capital investment to construct the irrigation facilities and expenditures for the required amenities like roads, education and other facilities. It was observed that the settler, usually having little or no capital, would require four or five years

[54] In the early 1950's, the subsidies paid varied from $33 to $50 per acre of jungle felled; there were other types of assistance such as for construction of settler homes. See Federation of Malaya, *Report of the Rice Production Committee*, Vol. I, *op. cit.*, p. 39.

with the help of his family to transform an area of five acres of jungle to productive padi land. Another problem would be the limited supply of suitable settlers. Many of these would prefer the more remunerative and less arduous schemes of rubber and oil palm that were being implemented by the Federal Land Development Authority.

Another aspect of irrigation policy which had continued for a long time was the element of subsidy to the padi farmers in the use of irrigation water. Under the Irrigation Areas Ordinance, 1953, water rates could be levied on all lands in specified (gazetted) irrigation areas. However, the rates chargeable were not specified except that different rates were allowed to be imposed for different classes of padi land within the irrigation area. For this purpose, padi lands were classified into three categories according to the yield capability per crop of padi: Class A land having a yield capability of 400 gantangs per acre, Class B land 250–400 gantangs per acre and Class C land less than 250 gantangs per acre. The water rates for these three categories differed from state to state but the Ministry of Agriculture indicated that the following rates applied generally throughout the country: $6 per acre for Class A land, $4 per acre for Class B land and $2 per acre for Class C land. Variations to this general pattern could be seen.[55] For example, in the Tanjong Karang padi area of Selangor, a double cropping area having a planted acreage of 81,730 acres, the water rates charged in 1965 were as follows: in the Kuala Selangor district, the annual rates were $6 per acre on land capable of yielding at least 600 gantangs and $4 per acre on land with yield capability of 400–600 gantangs; in Sabak Bernam, all the padi lands (except very poor lands) were charged $3 per acre per annum. The rates collected in these districts were found to be insufficient to cover the operating costs of the irrigation network.

In irrigation areas where two crops could be planted, the levy was twice the amount as applied for each crop. Computations made by the Ministry of Agriculture indicated that if the interest charge on the capital investment in the irrigation facilities (taken at 6 per cent per annum) as well as their maintenance costs were to be covered, the levy on average should be about $23 per acre. The rough magnitude of subsidies could thus be seen by a comparison of the average rate levied on each class of padi land with the average rate the farmer should pay to cover the costs of capital and maintenance.

2.3(v) *Extension Work in Promoting Double Cropping*

The provision of physical facilities such as irrigation network, subsidized fertilizers, improved seeds and seeds of short maturation varieties were in the initial stages not quite sufficient to induce the padi farmers to ease steadily into the tempo of double cropping. In the early 1960's, therefore, when the expansion of double cropping had its beginnings, considerable efforts were made

[55] Udhis Narkswadi and S. Selvadurai, *Economic Survey of Padi Production in West Malaysia*, Ministry of Agriculture and Co-operatives, Bulletin No. 120 (December 1968), pp. 19–21.

by the Department of Agriculture to smoothen this transition into what was to the farmers, a new farming and life pattern, through assistance of various types.

One of the problems of double cropping was to get all farmers in an area where water was assured by the Drainage and Irrigation Department to undertake double cropping. Less than full participation could encourage heavy crop damage by pests.[56] Padi farmers in areas with double cropping possibilities were thus organized. Meetings were held with the farmers by the field staff of the Department of Agriculture to discuss problems and sort out initial difficulties; in addition, instructions relating to double cropping were given in the form of talks and newsletters.[57] Furthermore, padi cultivators from all states were taken on conducted tours to see for themselves the advances made in double cropping in Province Wellesley, the main area for such at that time.[58] The task of promoting double cropping was also facilitated by the farmers' associations which provided the local leadership.[59]

More tangible forms of assistance were also provided.[60] For the first year of double cropping, free seeds and nursery fertilizers were distributed to the farmers. Land which did not receive irrigation water in time for buffalo ploughing was given mechanical preparation at subsidized rates. The control of pests was assisted with the free issue of insecticides and loan of spraying/dusting equipment. Later on, even loans of water pumps were provided in areas where irrigation facilities were inadequate.[61] As an encouragement, farmers in Trengganu who bought fertilizers for double cropping were given a bag of fertilizers (of 100 lbs.) free.[62]

These various forms of assistance, quite unlike others, were largely short-term in character and very often took the form of a 'once-and-for-all' nature. But their significance should not be underrated and while they might not have contributed in as tangible and direct a manner as the construction of irrigation facilities, their contributions were to be found in at least hastening the pace of double cropping soon after the basic conditions became available. At the same time, however, they represented another form of subsidy to the padi sector.

[56] *Annual Report of the Department of Agriculture for the Year 1958*, p. 76.

[57] *Annual Report of the Department of Agriculture for the Year 1960*, p. 42.

[58] *Ibid.*, p. 43.

[59] These farmers' associations, which have been encouraged by the Government with some financial assistance, have been found useful in implementing various measures at the farm level including the distribution of fertilizers under the Padi Fertilizer Subsidy Scheme and the production of seeds in the Seed Multiplication and Distribution Scheme. For more details, see *Annual Report of the Department of Agriculture for the Year 1961*, pp. 64–66.

[60] *Ibid.*, p. 44.

[61] *Annual Report of the Division of Agriculture for the Year 1963*, p. 43.

[62] *Annual Report of the Division of Agriculture for the Year 1964*, p. 32.

2.3(vi) *Establishment of Marketing and Credit Facilities*

For a long time, the marketing of padi at the primary level was recognized as one of the more serious problems in the padi sector, but virtually nothing of significance was undertaken to correct the situation until the establishment of the Federal Agricultural Marketing Authority in 1965. Before the advent of the marketing schemes for padi in 1967, padi from the farmers were marketed at poor prices, despite the GMP. The traditional pattern of padi marketing basically involved the sale of padi to the padi dealers who were very often a source of credit to the farmers. Under the *padi kuncha* system, for example, credit was provided to the farmers by the dealers during the cultivation period and in return for which the farmers pledged repayment in the form of an agreed quantity of padi at harvest, fixed at a level to cover the loan and an exorbitant interest element often of 100 per cent and more.[63] Other arrangements could be modifications of this but nevertheless they would still involve an obligation by the farmers to sell their padi to the dealers who provided them with loans. This dependence on non-institutional sources of credit was very widespread and was estimated by the World Bank to be as high as 80 per cent in the major producing areas in the 1950's.[64] The problem in the 1960's was still as intractable as ever and the first serious attempt to deal with it was the establishment of the Agricultural Bank of Malaysia in April 1969. The Bank introduced a production credit facility initially for the Muda Irrigation Area in 1970.[65] Before that, the only major source of institutional credit was the co-operative movement.[66] Most of the rural co-operatives in West Malaysia were very weak institutions, very limited in impact, ridden by inefficiency in management, having poor mobilization capability for funds, and characterized by an unusually high dependence on Government funds for their operations.[67] Under the circumstances, padi farmers and other rural operators became enmeshed in a continuous and unfavourable relationship with the non-institutional sources of credit.

The consequences of this type of relationship, as observed from studies made by the Federal Agricultural Marketing Authority, are as follows.[68] Excessive and unjustified deductions were usually made on the padi offered for sale to the

[63] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, p. 55.

[64] *Ibid.*

[65] For details, see "A Production Credit Scheme for the Muda River Irrigation Project" in Bank Negara Malaysia, *Quarterly Economic Bulletin*, Vol. 2 No. 10 (March 1969), pp. 29–34; also, Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1969*, pp. 34–35 and pp. 53–54.

[66] Federal Agricultural Marketing Authority, *Annual Report and Statement of Accounts, 1965 and 1966*, p. 29.

[67] Lee Hock Lock, *Household Saving in West Malaysia and the Problem of Financing Economic Development, op. cit.*, pp. 198–214 and pp. 284–290.

[68] Federal Agricultural Marketing Authority, *Annual Report and Statement of Accounts, 1965 and 1966*, pp. 32–33.

buyers under the GMP arrangement. The problem was further aggravated by the fact that the assessment of moisture content had to be made by sight and feeling, that there was no official recognition under the GMP arrangements for superior quality grains and that the farmers themselves lacked proper drying and cleaning facilities for their padi. Furthermore, the common practice of using volume measures instead of weight measures was to the disadvantage of the farmers.[69] Malpractices in measuring or weighing padi were common. All these meant that the farmers were forced to accept lower returns than they should otherwise obtain. The Government thus felt that this situation could blunt the incentive effects of the various policy measures discussed earlier.

The intervention by the Government in the sphere of padi marketing at the primary level was one way to enable the padi farmers to obtain better prices for their output. At least, it should ensure that the prices subsequently obtained by the farmers would more closely reflect the GMP and that the malpractices so long associated with measuring the farmer's output would be removed. On the other hand, it still left unattended the farmer's credit needs, which remained largely to be filled by the non-institutional sources. The cost of such credit continued to be excessive but intervention in marketing had at least successfully isolated the prices of padi received by the farmers from the direct consequences of a highly-deficient marketing system.

Even then, the intervention in the traditional padi market at the primary level came on only recently. In March 1967, the Padi and Rice Marketing Board was set up under the supervision of the Federal Agricultural Marketing Authority, to manage and control the padi marketing schemes that were in the process of being established in the various padi growing areas. These schemes had three basic objectives, namely, to ensure fair prices for the farmers, a ready market for their products with prompt payment and the removal of malpractices in the weighing and grading of padi. To implement these objectives, two types of schemes were introduced: a) a regulatory scheme and b) a trading scheme. Under a regulatory scheme, the buyers[70] of padi were required to be licensed by the Padi and Rice Marketing Board and the licences issued were subject to certain terms and conditions such as that purchases of padi should be at prices of not less than the GMP, that the system of measure was to be by weight and not volume and that every transaction should be completed by immediate cash payment. Under a trading scheme, the Board issued licences to dealers to buy padi on its behalf; the scheme also provided for transactions in padi, the milling of rice and the sale of rice.

There were 11 padi marketing schemes by the end of 1970, of which eight were regulatory schemes covering a total of 493,000 acres of padi land and three were trading schemes covering 401,000 acres. Against a total planted acreage of

[69] In the case of some padi varieties, 25 gantangs (a volume measure) could give rise to 1.2 piculs rather than 1 picul under the normal conversion rate.

[70] The buyers may be independent operators, mill agents, co-operative societies and farmers' associations.

938,010 acres of the main season crop of wet padi in the 1969/70 season, it can therefore be said that 95.3 per cent of the padi area had now come under the Padi and Rice Marketing Board; after the introduction of the Board's first four marketing schemes in 1967, the extent of coverage was only 24.1 per cent. Complete coverage was achieved in 1971 with the introduction of the regulatory schemes in Negri Sembilan and Johore. Table 6.12 sets out the various schemes by types and acreage covered, their location and their year of establishment.

These marketing schemes appeared to have achieved their basic objectives. It was found that the system of licensing padi dealers had a favourable effect on padi prices and marketing practices.[71] Where a trading scheme operated, the Board made additional investments in appropriate facilities. A milling complex was scheduled to commence operation under the Tanjong Karang scheme in 1971. Another such complex costing $3.4 million was under construction to serve the Kemubu area when a trading scheme was established there.

The lack of progress in dealing with the issue of institutional credit for padi farmers arose basically from the complexity of the problem itself which would require an elaborate machinery. It was made even more formidable by the very substantial financial resources required to be channelled through this machinery. The planning of rural credit for a group of producers comprising large numbers such as padi farmers would encounter a number of difficulties as setting up an extensive network of centres to assess credit-worthiness, disburse the loans, supervise the use of the credit and collect the repayments; the widespread low incomes and the consequent need for consumption credit (which ought to be regarded as urgent as that for production credit); the general lack of means until lately, to control the marketing of the farmers' output to assure repayment; and, the substantial resources required to fund past indebtedness to free the farmers from obligations to their past sources of credit. The situation thus remained unattended to until the establishment of the Agricultural Bank of Malaysia in 1969. In an important sense, the Agricultural Bank and the system of production credit which it provided was the outcome of pressure forced on the Malaysian Government to take steps to reform the system of rural credit. The two major irrigation projects, the Muda Scheme and the Kemubu Scheme were partly financed by the World Bank and a condition of the loans was the establishment of a viable production credit scheme for these two areas.[72]

The credit needs of the Muda project area were studied by a World Bank technical mission, a group of consultants and the Malaysian Government and out of this emerged a production credit scheme. Under the scheme, farmers' associations, co-operative societies, padi planters' boards, the Padi and Rice Marketing Board, the Majlis Amanah Rakyat (MARA), padi dealers and rice millers could serve as local credit centres whose main functions would be to assess the farmers' credit-worthiness and to collect the loan repayments. They would receive a service fee for undertaking the risk of collecting the loan repayments and

[71] Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1968*, p. 61.

[72] Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1968*, p. 46.

Table 6.12

West Malaysia – Padi Marketing Schemes:
Location, Coverage and Year of Establishment

Type of Padi Marketing Scheme/Location	Year of Establishment	Padi Areas Covered ('000 acres)
Trading Schemes		
Tanjong Karang	1967	46
Perlis	1967	66
Kedah	1968	289
		401
Regulatory Schemes		
Krian (including Mukims 9 & 10 of Province Wellesley)	1967	64
Penang and Province Wellesley (excluding Mukims 9 & 10)	1967	36
Kelantan	1968	172
Perak (excluding Krian)	1968	65
Selangor (excluding Tanjong Karang)	1968	4
Malacca	1970	32
Pahang	1970	50
Trengganu	1970	70
		493
Grand Total		894

Source: Federal Agricultural Marketing Authority.

incurring administrative costs but this fee was fixed at a level substantially below the amount charged by the non-institutional sources. The source of financing was the Agricultural Bank set up with Government funds of $10 million to extend credit to the agriculture sector, to co-ordinate and supervise the granting of loans by individuals and corporate bodies from public funds for agricultural activities, and to mobilize savings. Loans approved by the local credit centres took the form of coupons issued by the Agricultural Bank. Authorized suppliers of farm inputs would accept these coupons which the farmers could exchange for the appropriate inputs. In turn, the suppliers could exchange their coupons for cash with any commercial bank or post office and these would in turn redeem them with the Agricultural Bank. The basic objective of the scheme was to meet the farmers' need for production credit, especially with the extensive switch to double cropping, and to provide this credit supply at reasonable cost.

A pilot scheme was introduced in the Muda area in 1970 and following this, the scheme was extended to both the Muda and the Kemubu areas for the main season crop of 1971. A total of slightly over $½ million was given out to 2,268 farmers working on 10,093 acres.[73] Although this was only a small beginning, it was nevertheless a significant one because of its fresh approach to the rural credit problem and the development of rural credit institutions. No firm estimates of the credit needs of the padi sector were available. However, the World Bank technical mission had set the production credit requirements for the Muda project area of about 260,000 acres to be $45.3 million per crop season.[74] Assuming similar per acre credit needs for the whole of West Malaysia, about $220 million a season would be required to provide production credit on the basis of the planted acreage in 1969/70. This will increase substantially in the 1970's. If allowance is made for existing institutional sources and own funds, it would still be fair to expect at least $200 million in credit requirements still to be met if the non-institutional sources are to be replaced. The resources of the Agricultural Bank, at present fixed at $10 million, can possibly meet only a small fraction of the requirements and if it is to make a significant impact on the rural credit situation, either a substantial transfer of funds from the Government would be necessary or that it will have to mobilize its own funds or both.

The resource problem is already overwhelming even without considering the possibility of consumption credit. But consumption credit is an important factor to consider if the farmers are to be weaned away from the non-institutional sources or even to buy time to enable readjustments through the educational process to the practice of indulging in large unproductive and ostentatious expenditures which are often the cause of indebtedness.

2.4 *Summing Up*

Padi production in the review period had expanded considerably and the country is now close to self-sufficiency. These achievements were virtually due to the strong and sustained interest of the Government in rice production. The policy measures implemented were impressive in their range and intensity, compared with those that applied to the other agricultural activities in the country. But further action would need to be taken to improve the efficiency of the sector and to raise the economic position of the padi farmers. The agriculture sector had no doubt become more diversified as a consequence of the achievements in rice production. But quite unlike the contributions of many of the other expanding agricultural activities, considerations of cost had been deliberately given little weight.

3. THE FISHING INDUSTRY AND PUBLIC POLICY

3.1 *Introduction*

In terms of output growth, the fishing industry, particularly in respect of marine

[73] Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1970*, p. 79.

[74] "A Production Credit Scheme for the Muda River Irrigation Project", *op. cit.*, p. 32.

fish production, was one of the more dynamic sectors as indicated in Chapters III and IV. Very rapid development of the industry occurred especially from 1957. In this period, the neglect[75] of the industry by the Colonial Government in the pre-Independence days was replaced by closer attention and a fresh interest in the industry.

Fish is a major source of animal protein in the Malaysian diet and represented some 70–80 per cent of protein intake according to the observation of a former Director of Fisheries.[76] It is moreover a food item acceptable to all racial groups in the country. Being an essential foodstuff, fish production thus came within the scope of the Government's self-sufficiency policy. Direct employment within the fishing industry was also substantial, being nearly 50,000 in 1957 and increasing to about 68,000 by 1970. This figure excluded employment in the fresh-water fisheries. If employment in the related industries were to be taken into account, such as boat building, ice-making, transport, handling, etc., the economic contributions of the fishing industry would be even more substantial.

But fishermen constituted one of the poorest groups within the rural sector. A recent survey conducted by the Fisheries Division of the Ministry of Agriculture indicated that as high as 75 per cent of the fishermen had incomes of only up to $75 a month, another 15 per cent had incomes of $100–250 a month and only 10 per cent had incomes of $300–500 a month.[77] Public policy and action since 1957 were, therefore, geared to raising productivity in the fishing industry and to improving the living standards of the fishermen.

While the Government had given more attention to the fishing industry than in the pre-Independence period, it cannot however be said that the significant achievements of the industry arose mainly from the measures that grew out of this closer attention. Rather, the development of the industry was a case of response largely to the operation of market forces. This type of contribution to the diversification process is possible only where there exists clear evidence of demand and scope for adopting improved technology. In the case of the fishing industry, the growing population presented an assured and enlarging market; furthermore, the tastes developed for local fish and the perishable nature of fish would minimize any significant encroachment of the domestic market by imported supplies. In the sphere of technology, the industry as existed in 1957 was relatively backward and it was quite clear that productivity increases could be attained by taking on the easily adaptable techniques and equipment developed elsewhere. Pressure to undertake a renewal of the industry was assisted by

[75] A good indicator of this neglect may be seen in the number of senior officers (Division I) in the Fisheries Department. Before World War II, there were 2 such officers, on Independence Day, there were 7 and in late 1968, there were 45.

[76] Soong Min Kong, "Contributions of the Fisheries Division to the Economic Development of Malaysia", a paper presented at the Joint Annual Conference of the Ministry of Agriculture and Co-operatives, Kuala Lumpur, 21–23 February 1966.

[77] See "Strategy for Improving the Economic Position of the Fishermen", a paper presented by the Fisheries Division of the Ministry of Agriculture and Lands at the Seminar on Agricultural Development, Kuala Lumpur, 1971 (unpublished).

the constraints to output that were increasingly being felt as a result of depending on traditional methods of fishing and the already intensive exploitation of coastal fish stocks. But one consequence of this limited public intervention was that it left virtually unresolved the issue of distribution between entrepreneurship and capital, on the one hand, and labour on the other. The fishermen remained a depressed community as indicated by their incomes just cited.

This study will attempt to trace the sources of growth of the fishing industry, both marine and fresh water, and to assess the contributions of public policy to its development.

3.2 *Marine Fishing Industry – Sources of Growth*

Output of marine fish in 1957–59 averaged 113,863 tons a year but it rose to an average of 310,539 tons a year by 1968–70, almost a threefold increase. Table 6.13 shows the annual output of the marine fishing industry. Output growth became rapid since 1960 and from 1967, production levels rose sharply to around 300,000 tons a year. The number of fishermen engaged in the industry likewise showed an upward trend: it was around 50.000 a year in 1957–59 but exceeded 60,000 a year by 1964–70.

The sharp increase in output allowed for a very marked increase in exports. Table 6.14 shows the net exports of fresh, chilled and frozen marine fish, tuna and prawns. It can be said that growth in output between 1957 and 1963 hardly exercised any marked impact on exports. In this period, exports of fresh, chilled and frozen fish and prawns fluctuated without any consistent pattern within the range of $2–5¼ million. But from 1964, the net exports of these, including tuna, expanded considerably, these being in the higher range of $8.8–41.5 million.

One major source of growth in the net exports of fish and prawns after 1964 was from fish including tuna. The values were broadly $7–13 million a year except for 1967 when it was about $6 million. In 1957–63, the net exports of these were only in the region of $2–5 million. From 1967, when the external trade statistics provided information about tuna exports and imports, it can be seen that while other types of marine fish continued to be the major component, a significant share of net exports of marine fish of all types was accounted for by tuna alone. The tuna industry was established in West Malaysia in 1959 with joint Malaysian-Japanese capital.[78] In the main, the industry provided storage, processing and re-exporting facilities to tuna boats operating in the Indian Ocean. Commencing with a 200-ton refrigerated store, the company expanded its capacity to 4,500 tons in 1968. The storage capacity in the industry expanded by a further 1,000 tons with the establishment of another company in

[78] For a good discussion of the tuna industry, see Soong Min Kong, "The Role and Possibilities of Tuna Fisheries in South East Asia – the Malaysian Experience", a paper presented at the Seminar on Possibilities and Problems of Fisheries Development in South East Asia held in the Federal Republic of Germany, 10–30 September 1968.

Table 6.13

West Malaysia – Employment and Output in the Marine Fishing Industry

Year	Number of Licensed Fishermen	Output of Marine Fish (tons)
1957	49,443	110,863
1958	51,616	112,104
1959	50,541	118,622
1960	53,784	139,469
1961	53,083	150,650
1962	55,510	170,207
1963	59,449	183,636
1964	61,465	192,158
1965	68,188	198,377
1966	62,457	236,607
1967	62,153	301,856
1968	61,501	339,482
1969	63,614	297,840
1970	68,154	294,296

Sources: 1. Ministry of Agriculture and Co-operatives, *Statistical Digest*, February 1967, January 1968, March 1969 and January 1970.
2. Fisheries Division, Ministry of Agriculture and Lands, *Annual Fisheries Statistics, West Malaysia, 1970.*

1967.[79] The first company started to operate its own small tuna fleet in 1966. Since its initial stages, the company had also engaged in some canning of tuna for export (the export of canned tuna was $1.1 million in 1968 and $2.2 million in 1969).

The second factor underlying the expansion of the net exports of fresh, chilled and frozen marine fish and prawns in 1964–70 was the rapid development of an export market for fresh, chilled and frozen prawns. In the past, this item seldom amounted to $½ million a year. In 1965, the net exports of prawns rose to $0.8 million and by 1969, amounted to nearly $18 million, the first time they exceeded the export surplus on marine fish including tuna. Net exports of

[79] This is the Butterworth Ice Works Ltd. The first company is the Malayan Marine Industries Ltd.

Table 6.14

West Malaysia – Net Exports of Fresh, Chilled and Frozen Marine Fish and Prawns
($ million)

Year	Net Exports in Fresh, Chilled or Frozen State			
	Marine Fish	Tuna	Prawns	Total
1957	2.60	–	0.31	2.91
1958	4.12	–	0.24	4.36
1959	4.83	–	0.43	5.26
1960	3.79	–	0.56	4.35
1961	1.87	–	0.26	2.13
1962	2.95	–	0.02	2.97
1963	4.07*	–	0.34	4.41
1964	10.12*	–	0.35	10.47
1965	12.89*	–	0.80	13.69
1966	13.29*	–	1.05	14.34
1967	9.43	-3.20	2.59	8.82
1968	11.25	2.06	7.41	20.72
1969	8.55	5.35	17.81	31.71
1970	5.22	1.95	34.37	41.54

Sources: 1. Department of Statistics, *Imports and Exports during the Fourth Quarter 1957.*
2. Department of Statistics, *Federation of Malaya Statistics of External Trade*, 1958–1960.
3. Ministry of Agriculture and Co-operatives, *Statistical Digest*, February 1967, January 1968, March 1969, and March 1971.
4. Department of Statistics, *West Malaysia Annual Statistics of External Trade*, 1969 and 1970, Vols. I and II for each year.

*No breakdown for tuna.

prawns in 1970 almost doubled the 1969 value and constituted the bulk of the net exports of fresh, chilled and frozen marine fishery products.

The market for prawns was mainly Japan followed to a lesser extent by Australia, the United Kingdom, the United States and Singapore. There was a growing overseas demand for frozen prawns. A constraint to any sustained expansion of West Malaysia's prawn industry would therefore, be inadequate

supplies.[80] On the other hand, the major market for fresh, chilled and frozen fish *excluding* tuna was Singapore. Singapore's fishing industry was still unable to supply the full requirements of the state.[81]

One principal cause for the marked increase in marine fish landings was the striking transformation of fishing boats from a fleet of traditional vessels using sails and oars to one with a very high proportion of powered boats. From Table 6.15, it can be seen that in 1957, nearly three-fourths of the total number of fishing boats were non-powered but by 1970, only about one-fourth of the fishing fleet had remained so, while three-fourths had been fitted with engines. In the initial stages of mechanization, there was a preference for outboard engines because they could be used with little modification in the traditional craft. However, they were soon replaced by inboard diesel engines on grounds of economy and efficiency, especially from 1961. Boats not yet fitted with engines took on inboard motors in the conversion. The result was that by 1970, 63 per cent of the fleet were equipped with inboard engines and only about 11 per cent had outboard motors. It is also interesting to note that the number of fishing vessels had declined during 1957–70. In 1970, there were 3,518 vessels less than in 1957. The rising fish output, however, indicated that the productivity of the increasingly mechanized fleet more than offset the shrinkage in numbers. The effects of mechanization on productivity are obvious. It enabled fishing in new grounds,[82] changed fishing methods (involving, for example, more efficient gears using single boats or drift nets),[83] extended the period of fishing,[84] and accorded mobility to the East Coast fishermen to operate in the West Coast during the North East monsoon.[85]

A less obvious but nevertheless a significant factor in contributing to productivity increases was the switch to synthetic fishing lines and nets. In the late 1950's, the Ministry of Agriculture and Co-operatives reported the widespread use of synthetic nets in place of the old ramie and cotton nets, these changes covering not only drift nets but also many other types of traditional gears.[86]

[80] Malaysia, *Revised Report of the Capital Investment Committee Sub-Working Group on the Development of Fishery Industries*, Kuala Lumpur, September 1969 (mimeographed), p. 3.

[81] In 1966, it was estimated that Singapore's fishing industry could only supply 20 per cent of Singapore's consumption requirements. See Federal Agricultural Marketing Authority, *Annual Report and Statement of Accounts, 1965 and 1966*, p. 49.

[82] Federation of Malaya, *Official Year Book, 1961*, Kuala Lumpur, Government Printer, 1961, p. 245.

[83] *Ibid.*

[84] Federation of Malaya, *Official Year Book, 1962*, Kuala Lumpur, Government Printer, 1962, p. 282.

[85] *Ibid.*

[86] Ministry of Agriculture and Co-operatives, *A Report of the Progress Achieved by the Ministry of Agriculture and Co-operatives During the Period January 1958 – December 1960* [for submission to FAO], Kuala Lumpur, February 1962 (mimeographed), p. 14.

Table 6.15

West Malaysia – Mechanization of Licensed Fishing Vessels

Year	Total Number of Licensed Fishing Vessels	Non-Powered Boats	Powered Boats		
			Outboard Engines	Inboard Engines	Total
		(As Per Cent of Total Number)			
1957	23,824	73.6	19.9	6.5	26.4
1958	25,045	70.9	20.0	9.1	29.1
1959	22,263	64.6	21.4	14.0	35.4
1960	23,548	62.0	21.2	16.7	38.0
1961	22,958	57.9	21.1	21.0	42.1
1962	22,183	55.6	19.7	24.6	44.4
1963	22,754	53.9	17.8	28.3	46.1
1964	21,630	50.4	17.3	32.3	49.6
1965	22,464	45.3	17.4	37.3	54.7
1966	20,906	40.0	15.5	44.5	60.0
1967	20,236	35.6	14.3	50.1	64.4
1968	19,453	32.3	13.0	54.7	67.7
1969	19,184	29.2	11.3	59.4	70.8
1970	20,306	26.0	10.7	63.3	74.0

Sources: Same as for Table 6.13.

Fishermen using synthetic drift nets reported a threefold increase in their catches while on the East Coast, those using synthetic purse nets to catch *ikan bilis* (Stolephorus) experienced heavy landings.[87] Replacement of the ramie and cotton nets and lines by their synthetic counterparts had largely occurred by 1964.[88] The synthetic materials used in the nets made them more resistant to wear and tear, more capable of withstanding heavy catches and easier to handle.[89]

A third important contributing factor to the rapid growth of landings was the introduction of trawler fishing in 1965. Since its introduction, the contributions

[87] *Ibid.*

[88] Malaysia, *Official Year Book 1964*, Kuala Lumpur, Government Printer, 1966, p. 415.

[89] Cotton nets gain weight on contact with water.

of trawling to total fish landings rose sharply: by 1967, trawling accounted for nearly 20 per cent of total fish landings and by 1970, nearly 30 per cent. This is shown in Table 6.16. There is still considerable scope for expansion of fish output by trawling. It was estimated that about 50,300 square nautical miles of fishing grounds of less than 25 fathoms are available to Malaysian fishermen.[90] A recent Thai-Malaysian-German trawling survey also confirmed the possibility of rich demersal fish resources off the East Coast of West Malaysia.[91] Full development of the trawling industry had been inhibited by resistance posed by and conflict with the inshore fishermen who feared a depletion of the inshore fish resources and the destruction of fish spawning grounds by trawling activities. But this resistance was expected to be reduced.[92] The other inhibiting factor to the adoption of trawling was the large capital expenditures required which were beyond the means of most of the individual fishermen. It was estimated that a medium-sized trawler normally manned by a crew of eight would cost about $25,000.[93]

3.3 *Scope and Interest of Public Policy in the Marine Fishing Industry*

The interest of the Government in the development of the marine fishing industry can be said to have been motivated by two factors: i) the industry was and continues to be an important means for expanding food production; and ii) the industry was among the economically depressed in the country. The first factor was tied to the problem experienced in food supplies in the immediate post-war years and although there was determination to develop the fishing industry from 1947, concrete efforts were however not evident until after 1957.[94] The concern for the welfare aspect of the industry was articulated in 1955 when the partially-elected Federal Legislative Council publicly referred to the fishing industry in Malaya as "one of the lowest rewarded in the country" and resolved that a committee of enquiry be set up "to examine all the relevant problems connected with the fishing industry in the Federation with a view to recommending ways to improve the economic condition of the local fishing

[90] K. Tiews, "On the Possibilities for Further Developments of the South-East Asian Fisheries until the Year 2000", a paper presented at the Indo-Pacific Fisheries Council in its 12th Session held at Honolulu, October 1966.

[91] Department of Fisheries, Ministry of Agriculture, Thailand and Fisheries Division, Ministry of Agriculture and Co-operatives, Malaysia, *Results of the Joint Thai-Malaysian-German Trawling Survey of the East Coast of the Malay Peninsula, 1967*, Bangkok-Kuala Lumpur, December 1967, p. 49.

[92] "Increased Sea Fish Production – How It May Be Achieved", a paper prepared by the Fisheries Division, Ministry of Agriculture and Co-operatives, Kuala Lumpur, 1968.

[93] Malaysia, *Revised Report of the Capital Investment Committee Sub-Working Group on the Development of Fishery Industries, op. cit.*, p. 3.

[94] "Fisheries in Malaysia", a country report presented by the Malaysian Delegation to the Seminar on Possibilities and Problems of Fisheries Development in South-East Asia, held in the Federal Republic of Germany, 10–30 September 1968 (mimeographed).

Table 6.16

West Malaysia – Percentage Share of Total Marine Fish Landings by Types of Gears

Type of Gear	Marine Fish Landings as Per Cent of Total Landings				
	1958/59 (average)	1961	1964	1967	1970
Fishing Stakes	18.1	15.7	12.9	6.8	2.2
Seine nets	33.1	32.5	33.8	34.9	30.9
Gill/Drift nets	12.4	11.6	9.8	7.7	7.4
Lift nets	8.8	12.8	8.7	5.3	3.6
Push/Scoop nets	1.8	1.2	1.0	0.6	0.4
Bag nets	7.7	9.5	9.3	7.3	7.9
Barrier nets	0.3	0.7	0.6	0.6	0.2
Trawl nets	–	–	–	19.3	28.8
Lines	7.5	7.5	6.0	5.9	4.9
Traps and pots	3.5	3.3	2.8	2.0	2.4
Shellfish	6.2	4.7	10.5	8.9	10.8
Others	0.6	0.6	4.6	0.7	0.4
Total	100.0	100.0	100.0	100.0	100.0
Landings by all gears (tons)	111,318	150,650	192,158	301,856	294,296

Sources: Same as for Table 6.13.

population".[95] The Report of this Committee influenced considerably the nature of public policy and action at least in the early stages, as will be seen shortly. The objectives of the early fisheries policy of the Government were therefore "to effect the provision of sufficient fish to meet the needs of the growing population of Malaya and to promote the economic and social position of the fishermen".[96]

In time, these policy objectives were more explicitly expressed and widened.[97] For the 1966–70 period under the First Malaysia Plan, the production objective was to increase the quantity of fish landings to the point of as near self-sufficiency as would be economically feasible and to improve the quality of the fish landed. Furthermore, the fishing industry would be developed to provide raw materials for industrialization and export. Fisheries education programmes were to be fostered at producer and other levels. The objective of improving the socio-economic status of the fishermen was again stressed.

Measures of public policy during the period 1957–70 covered a wide range of programmes. One of the longer-established programmes was financial assistance to fishermen. The provision of financial assistance, however, was not a new measure introduced by the Government. In the pre-Independence period, financial aid to the fishing industry had been one of the responsibilities of the Rural and Industrial Development Authority (RIDA) since its establishment in 1953. Loans were given by the Authority for the purchase of inboard and outboard marine engines, nets of various types and in addition, it even financed an interim training scheme for fishermen on engine repair, maintenance and helmsmanship.[98] However, the financing was very small in relation to needs. As late as 1956, the total loans from the project fund of RIDA amounted to only $1.5 million but this covered 12 areas of which lending to the fishing industry was only one of them.[99]

The situation that confronted the Committee which enquired into the state of the fishing industry was that "the great majority of fishermen have no boats or gear of their own".[100] Fishing activity was thus financed by capitalists who rarely ventured out to sea themselves. In the West and South-East Coasts, the

[95] Federation of Malaya, *Report of the Committee to Investigate the Fishing Industry*, Kuala Lumpur, Government Printer, 1956, p. 1.

[96] Federation of Malaya, *Official Year Book 1961, op. cit.*, p. 251.

[97] See "Fisheries in Malaysia", *op. cit.*, p. 2.

[98] Twenty fishermen were given the course at a time which lasted 3 months. See Federation of Malaya, *Annual Report 1953*, Kuala Lumpur, Government Printer, 1954, p. 125.

[99] The other 11 areas for lending were i) agriculture, ii) animal husbandry, iii) arts and crafts, iv) industry and commerce, v) transport, vi) communications, vii) water and electricity, viii) training, ix) housing, x) amenities and improvements and xi) rubber production. The funds available for these projects were small because RIDA itself was financed by annual subvention and a $10 million loan from the Federal Government. See Federation of Malaya, *Annual Report 1956*, Kuala Lumpur, Government Printer, 1957, pp. 223–24.

[100] *Report of the Committee to Investigate the Fishing Industry, op. cit.*, p. 5.

main practice was for the fishermen to receive from the owners of the boats and gear (the capitalists) a price for the fish caught which took into consideration ownership.[101] Very flexible credit was extended to the fishermen for food and other necessities. Furthermore, credit could be outstanding for a long time. The interest on the debt was also reflected in the price paid for the fish. A variation was found in the North-East Coast where the fish landed were sold for the best price obtainable and the proceeds shared between the capitalists and the fishermen in varying proportions.[102] While this situation of capital and credit dependence accorded the financiers with virtual control of the fish landed, there was little the Government could do to alter the situation. Firstly, the capital involvement (in terms of financing of boats and gears and the redemption of debts of the fishermen estimated to be very heavy but unknown in volume) in replacing the private capitalists was too considerable to be seriously entertained. Moreover, such a move would be unprecedented and would have required fundamental changes in the Alliance Government's posture on private capital and ownership. Thirdly, from the practical standpoint, there was no readily available machinery to implement the move.

Although the Committee was conscious of the needs of the fishermen, it could only recommend a limited, and what it considered a practical scheme of assistance.[103] By way of machinery to channel the assistance, it proposed that the fishermen be encouraged to organize themselves into viable co-operatives or associations. It recommended the setting up of a fund of $3 million by the Government, initially to be made available for loans to selected groups of fishermen through their co-operatives or associations for the purchase of boats, gears, motors, etc. One-third of the loans was to be in the form of a subsidy, subject to the balance being repaid on the agreed terms.[104] RIDA would cease to assist the fishing industry financially.

The recommendations of the Committee were accepted by the Government in mid-1956. One direct result was the growth of fishermen's co-operatives, particularly in the North-East Coast where efforts were concentrated. In 1955, there were only eight such societies with a membership of 671 but by 1959, there were 56 societies with about 4,400 members.[105] The number of societies further rose to 86 in 1967 with a membership of about 8,800.[106] But membership of the fishermen in co-operatives was small; for example in 1967, it was only 14 per cent of the total number of fishermen. Through the co-operative

[101] *Ibid.*, p. 3.

[102] In cases involving a mechanized boat, the engine also received a share. See *ibid.*, p. 3.

[103] *Ibid.*, pp. 5–6.

[104] The borrower would qualify for the subsidy if he repaid the full loan within five years at an interest charge of 4 per cent. See Federal Agricultural Marketing Authority, *Annual Report and Statement of Accounts, 1965 and 1966, op. cit.*, p. 48.

[105] Federation of Malaya, *Official Year Book 1961, op. cit.*, p. 248.

[106] "Fisheries in Malaysia", *op. cit.*, p. 4.

societies, the Government planned to channel the $3 million recommended by the Committee to be set aside for the purpose. Financing would be available for purchasing modern fishing equipment, marketing of fish, and establishing ice factories and curing sheds. The scheme, known as the Assistance to Fishermen's Scheme, was implemented in the East Coast in 1957. Flow of the funds to the users was slow – by 1960, it was $1¼ million,[107] the amount remaining unchanged even by the end of 1962.[108] In 1961, the sum allocated for the Scheme was raised to $5½ million.[109] Under the First Malaysia Plan, another $3½ million were allocated to the Scheme.[110] By 1967, however, only an estimated $3 million of credit had been channelled through the co-operatives since the establishment of the Scheme.[111]

The very small impact of Government efforts in providing financial assistance to the marine fishing industry becomes clearer when viewed against the fact that capital investment in the industry was estimated at about $60 million in *1967/68*.[112] The renewal of the industry in terms of mechanization, the switch to synthetic nets and lines and the development of trawling, which were the direct contributing factors to the rapid growth of marine fish output, as pointed out earlier, was therefore virtually financed by private resources.

As it appears, the major constraint to the flow of the Government's financial assistance was the poor response of the fishermen to the co-operative system. The Government considered co-operatives to be the best means for the fishermen to acquire their own boats and gears and thus be freed from the control of the boat owners. But the Director of Fisheries himself admitted in 1968 that "channelling aid through the fishermen's co-operative societies has not been successful because of lack of managerial skill and leadership among our fishermen".[113] Besides the inability to provide sound and effective management of the co-operatives, it was also observed that the members on the whole lacked understanding of co-operative principles,[114] a sense of responsibility,[115] and

[107] Ministry of Agriculture and Co-operatives, *A Report of the Progress Achieved by the Ministry of Agriculture and Co-operatives during the Period January 1958 – December 1960, op. cit.* p. 10.

[108] Malaysia, *Official Year Book 1963,* Kuala Lumpur, Government Printer, 1964, p. 265.

[109] Federation of Malaya, *Official Year Book 1962, op. cit.*, p. 239.

[110] Soong Min Kong, "Mobilization of Resources for the Expansion of Fisheries under the First Malaysia Plan – Objectives and Tasks", a paper presented at the National Seminar on Agriculture, Kuala Lumpur, 17 April 1968.

[111] "Fisheries in Malaysia", *op. cit.*, p. 4.

[112] *Ibid.*

[113] Soong Min Kong, "Mobilization of Resources for the Expansion of Fisheries under the First Malaysia Plan – Objectives and Tasks", *op. cit.*

[114] "Fisheries in Malaysia", *op. cit.*, p. 5.

[115] "Increased Sea Fish Production – How It May Be Achieved", *op. cit.*

industriousness.[116] The absence or lack of education was also considered another important factor.[117] There had been a number of reported defaults on loan repayments[118] and it was only a matter of course that the flow of Government funds through these had to be cut off. A disturbing feature that came to light was that where there had been incompetence in operating the boats and gears within the co-operative framework, the fishermen were found to be even worse off than before, this arising from the burden of indebtedness to the Government for the loans received.[119]

It would be fair to conclude that the poor response of the fishermen to co-operatives cannot but provide the Government with strong grounds to keep its commitment for financial assistance small. The problem has to be effectively and fully resolved if aid to the industry is to expand to levels commensurate with needs. One notable measure taken by the Government recently was to subsidize the managerial expenses of the co-operatives during the initial stages to ensure efficient management.[120] But this approach still left the problem of the quality of membership unresolved.

The decision to establish the Fisheries Industry Development Authority in November 1971 was, therefore, appropriate. The Authority would foster the wider use of modern techniques in fishing, provide cold storage and processing facilities and operate a trawler fishing fleet of 300 vessels in the East Coast by 1975.[121] It would engage fishermen to operate the fleet.[122] This Authority could present a possible alternative to co-operatives. Besides the planned activities of the Authority, it seems worthy of serious consideration for it to take over from co-operatives the operation of the Assistance to Fishermen's Scheme. Once the co-operatives at particular fishing villages are re-established and become viable, boats and gears formerly purchased by the Authority can then be sold to members of these co-operatives. This will ensure that the capital provided for the Scheme will remain intact and that the boats and gears will be efficiently operated and maintained. These operations of the Authority could be focussed on large concentrations of fishermen in poverty-stricken areas. Furthermore, schemes operated by the Authority could serve as centres for owners of private boats and gears to be associated with in order to take advantage of the other facilities of the Authority (e.g. storage and processing facilities), provided they are prepared to observe the Authority's standards with regard to equitable sharing of income between fishermen and owners. Or the private owners could be compelled to observe the Authority's standards of sharing, as a condition for

[116] *Ibid.*

[117] *Ibid.*

[118] "Fisheries in Malaysia", *op. cit.*, p. 5.

[119] "Increased Sea Fish Production – How It May Be Achieved", *op. cit.*

[120] "Fisheries in Malaysia", *op. cit.*, p. 5.

[121] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 123.

[122] *Ibid.*

being allowed to operate side by side with it. Thus, the impact could extend beyond the actual capital investment and, capital assistance by the Government need no longer be limited by the absence of a proper channel.

It is necessary to point out here that not all co-operatives turned out to be disappointing. Those that were formed on the initiative and resources of the members had generally done well, some examples being the Hengwa Fishermen's Co-operative Society of Malacca and the trawler fishermen's co-operatives in Kedah, Penang and Perak.[123] The trawler fishermen's co-operatives in fact provide a workable example of possible co-operation between boat owners and the co-operatives.[124] Such a framework of co-operation could be established for the inshore fishing industry if the Government is not quite prepared to undertake the more active type of participation in the industry through the Fisheries Industry Development Authority as proposed above. As in the trawler co-operatives, the owners of the boats and gears would go into partnership with the co-operatives.[125] They could be made responsible for the proper maintenance of these equipment at their own expense and to bear any loss that may arise from damage or destruction of the boats and gears. The co-operatives could, on the other hand, be made responsible for providing landing and storage facilities and supplies, e.g. ice, food, fuel and, marketing the fish. Equitable methods of sharing among the three parties concerned (the owners, the co-operatives and the fishermen) could be drawn up. This approach appears less costly and simpler for the Government to act on, provided it could ensure adequate management resources for the co-operatives concerned and the formulation of effective rules governing the rights and obligations of all the parties involved.

Public policy and action in the fishing industry covered two other areas, the provision of infrastructure for the industry and the development of skill and knowledge. The effects of these on productivity were however, largely indirect.

Among the infrastructural facilities provided by the Government, the most prominent was an allocation of $4.7 million for the deveploment of fishing ports under the First Malaysia Plan. (Total development expenditure for fisheries for the period 1966–70 was $17 million.) In West Malaysia, there were about 350 fishing villages or centres scattered on its coastline. Most of these lacked berthing and shore facilities and were equipped with simple jetties suitable for small and shallow draught vessels. The allocation was intended for the development of facilities for deeper draught vessels. Efforts were concentrated on the Kuala

[123] "Increased Sea Fish Production – How It May Be Achieved", *op. cit.*

[124] For a good discussion on the workings of a trawler co-operative, see Tan Cheng Kiat, "Report on Visit to the Penang Trawler Scheme on 25th–27th July 1967", Department of Fisheries, Johore, August 1967 (mimeographed).

[125] Under Government policy on trawling, licences for trawling are only given to boats operating under co-operatives. Boat owners thus go into partnership with the co-operatives and their share of income under this arrangement is fixed at 50 per cent of the proceeds after deduction of operational expenses, cost of handling and transporting the catch and a 5 per cent commission on net balance from the sale of the fish to the co-operative. The other 50 per cent is then shared in various proportions among the crew.

Kedah Fisheries Complex, the Penang Harbour Complex and Lumut. Up to 1968, only feasibility studies for the two complexes had been completed. The construction of the ports was planned for the 1971–75 period. However, some construction of jetties and provisioning facilities were undertaken during the earlier Plan period 1961–65, particularly in the less developed areas: Pasar Payang, Kemaman, Dungun and Besut in Trengganu and Kuala Linggi in Malacca.[126]

A facility for which much publicity was given was the construction of eight cold room depots along the East Coast in the early 1960's.[127] The depots costing $870,000 were financed by the Canadian Government under the Colombo Plan. They comprised 21 units of cold rooms with a total storage capacity of 360 tons. The facility was intended to stabilize fish prices in the areas served. Obviously, its overall effects on fish prices in the East Coast would be inadequate as landings here (excluding Johore) totalled an average of 38,248 tons a year in 1967–69. Other minor facilities provided include the construction of two halting bungalows on the Redang group of islands off Trengganu to serve as retreats for Kelantan and Trengganu fishermen during sudden changes of weather and thereby enabling them to remain longer in the fishing grounds.[128] With the growing use of larger mechanized boats, there was the need for navigation aids like guiding lights to indicate the navigable channels to and from fishing bases; this was provided by the Government; for example, up to the end of 1966, about $114,000 had been spent.[129]

As pointed out earlier, one important cause for the increased fish output was the introduction of trawler fishing in 1965. But trawling operations had also been a cause of friction between the inshore fishermen and the trawler fishermen. In the period 1966–70, the development of trawling was second in the order of priorities set by the Government for the fishing industry. (First priority was given to the training of fishermen and the third was to provide financial assistance to the industry.) The Government's contribution here was the construction of 12 enforcement vessels which would, when operational, ensure that trawling would be carried out in the prescribed fishing grounds and thus minimize possible friction with the inshore fishermen. The construction and equipping of these vessels together with the building of research vessels and trial fishing units shared an allocation of $3.7 million.

In the area of developing skills and knowledge among the fishermen, efforts commenced as early as 1953 by RIDA. A total of 218 fishermen were trained from 1953 to 1956, after which the Department of Fisheries took over. In 1957, a marine fisheries school commenced giving courses in Glugor, Penang. A second school, built in Kuala Trengganu, became operational in 1961. The courses

[126] Malaysia, *Official Year Book 1965*, Kuala Lumpur, Government Printer, 1967, p. 394.

[127] *Ibid.*

[128] *Ibid.*, p. 393.

[129] Malaysia, *Official Year Book 1967*, Kuala Lumpur, Government Printer, 1968, p. 259.

covered simple navigation and boat handling, repair and maintenance of engines and, modern fishing methods. These were short courses mainly of 3–5 months' duration. In the 11 years 1957–67, a total of 1,216 fishermen were trained in these two schools. Considering that there were 50,000–70,000 fishermen during the period, the impact of the training programmes appeared of little significance. However, the training of fishermen was regarded as a top priority project under the First Malaysia Plan. A $2-million Fishermen Training Institute was constructed in Penang with the assistance of the United Nations Development Programme Special Fund. The Institute would provide training for ocean fishing, navigation and engineering, among other things. The Institute should at least alleviate the shortage of Malaysian fishermen capable of operating on deep seas.

Finally, another notable area of Government intervention in the industry was in fish marketing. An outcome of the extensive control of fish output by the financiers (i.e. boat owners, creditors, fish wholesalers, etc.) was the depressed incomes of the fishermen. Moreover, with an unregulated marketing chain, other fish producers, not otherwise so controlled, would also fail to receive appropriate returns on their efforts and investments. Belated though it was, the Government at last took steps through the Federal Agricultural Marketing Authority to deal with the problem.[130] The Authority had established a fish marketing scheme,[131] approved in February 1971, which will regulate the wholesaling of fish throughout the country and the marketing methods and also provide better marketing facilities among other things. Furthermore, the Fish Marketing Board, established to administer the scheme, is also empowered to undertake joint ventures with fishermen, fish traders, and other sectors of the industry in various marketing activities.

3.4 *An Overall View of the Marine Fishing Industry*

Impressive advances were made in the production of marine fish during 1957–70. In particular, output expansion arose from the achievement of a high degree of mechanization of fishing vessels during the period, the switch over to synthetic gears and the development of trawling. Considerable interest in the sector was shown by the Government and a fairly broad range of programme of assistance to the industry established. However, these had very limited impact. The major contribution in developing the industry came from private enterprise and capital.

3.5 *Public Policy and Growth of the Inland Fisheries*

No firm statistics on the output of fresh water fisheries were available but

[130] See Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1970*, p. 84. A regulatory scheme for wholesale marketing was originally envisaged for Kuala Lumpur and Kuching (East Malaysia) but this gave way to the country-wide scheme as above. See Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1968*, p. 61.

[131] For a concise description of the Scheme, see "Fish Marketing Scheme", a booklet issued by the Federal Agricultural Marketing Authority, February 1972.

estimates for 1960 indicated a volume of about 20,000 tons[132] and for 1967/68, 27,000 tons a year.[133] The fish were caught from padi fields, lakes, reservoirs, swamps, rivers, disused mining pools and fish ponds. Although output was only a fraction of the total marine fish production, the Government had also taken considerable interest in the development of fresh water fisheries, firstly, because this sector could provide a readily available source of protein for the rural people and secondly, because it could be a viable supplementary farm activity to expand rural incomes.

Public policy to encourage fresh water fisheries emerged only after 1957 and was based on fresh water fish culture. The Fisheries Department[134] of the Ministry of Agriculture operated a number of fish fry breeding stations from which were distributed fish fry to farmers without charge. The scale of this service expanded considerably in the 1960's: in 1960, there were only two fry breeding and distribution stations and by the end of 1965, there were four others.[135] These developments were however much more impressive in terms of the number of fish fry supplied during the period by these stations. Table 6.17 shows that the number of fish fry supplied by these stations increased from nearly 90,000 in 1958, to slightly over half a million in 1961 and to about 6¼ million in 1970. The bulk each year was supplied to farmers while the balance went to stocking padi fields, disused mining pools, irrigation canals, lakes and rivers. From 1963, well over 80 per cent of the fry supplied were the *lampam jawa*, a carp variety regarded as a good table fish.

Another aspect of the policy to encourage fresh water fish culture was the provision of advice to farmers on pond construction and management and material assistance to clear ponds of predator fish. In recent years, where ponds were of less than 0.22 of an acre, the Fisheries Division provided assistance in the form of fertilizers, lime, pipes, cement as well as the loan of equipment for the ponds.[136] In addition to these, training courses on fish culture were held from time to time for farmers. Table 6.18 shows the growing importance of fresh water fish ponds during the period 1957–70. From an acreage of 361 in 1957, the area of these ponds expanded by almost 10 times in 1966 and at the end of 1970, was 5,900 acres.

In the 13 years to 1970, public policy contributed substantially to the development of fresh water fish culture. But this is still a relatively new line of activity which offers good prospects for further development. Markets have to be cultivated and research undertaken to find additional varieties of fish as well as the most efficient means of production. The possibility of specialized fish

[132] Federation of Malaya, *Official Year Book 1961*, *op. cit.*, p. 249.

[133] "Fisheries in Malaysia," *op. cit.*, p. 7.

[134] Later this became the Fisheries Division.

[135] Malaysia, *Official Year Book 1966*, Kuala Lumpur, Government Printer, 1968, p. 261.

[136] Malaysia, *Official Year Book 1968*, Kuala Lumpur, Government Printer, 1969, p. 50.

Table 6.17

West Malaysia – Fish Fry Distributed by the Government Fry Breeding and Distribution Stations

Year	Fish Fry Distributed			
	All Types (Number)	Lampam Jawa	Lee Koh	Tilapia
		(As % of Total)		
1958	89,940	24.4	25.6	32.2
1959	123,252	53.3	16.0	16.4
1960	269,337	50.9	17.8	17.7
1961	509,791	70.4	20.5	8.3
1962	605,593	76.7	14.1	8.8
1963	1,027,402	84.5	10.3	4.2
1964	1,643,327	86.9	8.1	4.6
1965	2,444,972	92.1	6.1	1.5
1966	2,616,432	89.3	8.0	2.2
1967	2,587,742	82.8	12.7	4.3
1968	3,812,797	88.6	8.5	2.7
1969	4,870,220	85.5	12.1	1.9
1970	6,295,170	85.8	12.5	1.3

Sources: Same as for Table 6.13.

farms is worthy of a trial. In all these, continued and more intensive Government efforts would be appropriate.

4. THE LIVESTOCK INDUSTRY AND PUBLIC POLICY

4.1 *Survey of Developments in the Livestock Industry*

The livestock industry was one of the sectors which had contributed to a more diversified production structure of the economy. The impact of the industry in the 1957–70 period had two aspects. Most striking was the achievement of import replacement of pigs, poultry and eggs by domestic production, as indicated in Chapter IV. Less obvious was the maintenance of a very high proportion of animal slaughter from domestic sources for mutton, buffalo meat and beef. Rough estimates had been made of the value of products of the livestock industry by the Ministry of Agriculture. In 1960, the estimated value

Table 6.18

West Malaysia – Private Fresh Water Fish Ponds : Number and Acreage

Year	Private* Fresh Water Fish Ponds	
	Number	Acreage
1957	770	360.9
1958	984	538.3
1959	1,407	857.6
1960	1,850	1,178.1
1961	2,556	1,432.4
1962	3,191	1,741.0
1963	3,719	1,934.5
1964	4,567	2,434.3
1965	5,461	2,958.2
1966	6,369	3,502.0
1967	7,456	4254.5
1968	8,613	5,541.0
1969	9,663	7,130.0
1970	6,050	5,908.8

Source: Same as for Table 6.13.

*Pertains to private water bodies and excludes public water bodies such as irrigation canals, rivers, etc.

of such products was $184 million but by the end of the decade, it was $420 million, or a little more than twice as large.[137]

Table 6.19 shows the value of livestock production in 1960–71 with breakdowns by types of output. Between 1960 and 1971, the value of poultry output increased by $117 million or to nearly 4 times its level in 1960. During the same period, the value of egg production rose by $64½ million or to nearly 3½ times the value in 1960. Taken together, the share of poultry output and eggs grew from 36 per cent of total livestock production in 1960 to 57 per cent in 1971. The expansion of pork production was also notably large. Output was valued at $74½ million in 1960 but rose to $131 million in 1971 or an increase of 1¾

[137] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1964 to 1966*, p. 64. Also, Malaysia, *Official Year Book 1969*, Kuala Lumpur, Government Printer, 1971, p. 242.

Table 6.19

West Malaysia – Value of Livestock Production by Products

Product	1960		1962		1964		1966		1968		1971*	
	Value ($ million)	As % of Total	Value ($ million)	As % of Total	Value ($ million)	As % of Total	Value ($ million)	As % of Total	Value ($ million)	As % of Total	Value ($ million)	As % of Total
Beef	23.1	12.5	23.4	8.4	26.5	8.0	29.9	8.2	25.4	6.2	33.4	7.7
Mutton	3.1	1.7	4.1	1.5	4.2	1.3	4.8	1.3	3.3	0.8	4.0	0.9
Pork	74.5	40.4	108.9	39.1	110.2	33.4	117.9	32.4	128.1	31.3	130.9	30.2
Poultry	40.7	22.1	77.1	27.7	99.1	30.0	108.9	29.9	146.0	35.7	158.0	36.4
Eggs	26.0	14.1	48.1	17.3	72.9	22.1	85.3	23.4	89.0	21.8	90.4	20.8
Milk	16.0	8.7	16.0	5.7	16.0	4.9	16.0	4.4	16.0	3.9	16.0	3.7
Skins & hides	1.0	0.5	1.0	0.4	1.0	0.3	1.6	0.4	1.0	0.2	1.0	0.2
Total	184.4	100.0	278.6	100.0	329.9	100.0	364.4	100.0	408.8	100.0	433.7	100.0

Sources: Veterinary Division, Ministry of Agriculture and Fisheries.
Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1964 to 1966.

*Estimates for 1970 were not available.

times. Pork accounted for 30 per cent of total livestock production in 1971. In contrast, growth of the other livestock products was unimpressive. Beef production increased by only $10 million. The change in mutton production during the period was marginal while no change was recorded for milk production and output of skins and hides.

The livestock population should give a good indication of output capabilities. Data were available for the various animal livestock but no reliable records had been kept for the poultry population. Evidence of expansion in poultry population and output of eggs may, however, be seen in the trend reflected by the import data. Table 6.20 shows the livestock population (excluding poultry) from 1957. The most remarkable expansion was in the pig population. In 1957, there were slightly over 396,000 pigs but their population increased by 328,000 or 83 per cent by 1970. These figures reflected the rapid development of the pig industry especially during the 1960's. Much less spectacular growth was noted for the goat and cattle populations. The goat population in 1970 at about 333,000 was only 21 per cent higher than that of 1957; there were fluctuations though from year to year and in 1966, the population was already quite close to that reached in 1970. The cattle population also varied, this rising for some years and then declining in others. Thus, the largest number of cattle occurred in 1965 when it was about 312,000 or 9 per cent above that of 1957 but in 1967, the number declined to only slightly above that of 1957; the cattle population in 1970 was only 7 per cent larger than in 1957. Most of the cattle were draught animals. These increased by about 41,000 heads or 21 per cent in 1965 but between 1965 and 1970, the growth was less than 2,000 heads. Milch cattle totalled about 87,000 in 1957 or 30 per cent of the cattle population but over the period, their numbers and their share in total cattle population showed a fairly clear declining trend. In 1970, for example, the number of milch cattle fell to nearly 64,000 or 21 per cent of the total number of cattle that year. Buffaloes constituted the next largest group of livestock animals. The population of buffaloes showed a generally increasing trend from 1957 to 1961 from which it remained at about 8½–9 per cent above that of 1957 for three years and then rose again in 1964. From 1965, the number declined and since 1967, it had fallen to 6–11 per cent below that of 1957. An important factor to account for the slow growth of the cattle population and the decline in the buffalo population was believed to be the rapid expansion of double cropping of padi in the 1960's, as discussed earlier, and the increasing mechanization of the padi farms arising from it. The former reduced the areas of fallow fields for grazing and the latter made redundant the need to maintain draught animals. With the exception of 1964, the sheep population was between 30,000 and 40,000 a year, by far the smallest group of livestock animals; the trend over the review period was slightly increasing.

In the past, West Malaysia had relied considerably on the importation of live animals for slaughter. Table 6.21 shows the net imports of the various categories of livestock and eggs. It can be seen that over 1957–62, the net imports of live animals for food and eggs averaged $21.9 million a year (the highest was $25.2

Table 6.20

West Malaysia – Livestock Population
(Number of Heads)

Year	Buffaloes	Cattle			Goats	Sheep	Pigs
		Draught	Milch	Total			
1957	253,185	198,587	86,511	285,098	274,622	31,392	396,425
1958	254,696	211,574	79,279	290,853	268,540	32,656	398,295
1959	263,350	209,807	94,792	304,599	279,440	34,522	418,186
1960	269,355	209,347	98,801	308,148	271,169	36,897	445,014
1961	275,528	216,516	89,366	305,882	278,337	35,091	465,280
1962	275,816	207,782	89,846	297,628	286,857	37,182	491,791
1963	275,153	209,561	94,871	304,432	309,180	37,789	502,046
1964	283,922	224,618	81,141	305,759	319,513	42,674	462,781
1965	274,698	239,532	72,312	311,844	312,417	38,061	504,285
1966	259,433	235,278	75,198	310,476	330,475	37,967	599,393
1967	237,848	220,078	65,608	285,686	307,769	36,819	600,714
1968	226,994	216,555	69,686	286,241	320,655	36,108	691,556
1969	225,317	241,692	58,756	300,448	320,055	38,960	678,483
1970	233,032	241,090	63,702	304,792	332,523	38,183	724,446

Sources: Ministry of Agriculture and Co-operatives, *Statistical Digest,* March 1969, March 1971 and March 1972.

Table 6.21

West Malaysia — Net Imports of Livestock and Eggs by Value
($ million)

Year	Value of Net Imports of Various Categories of Livestock and Eggs								
	Buffaloes	Cattle	Goats	Sheep	Pigs	Poultry* and Eggs			Total
						Total	Poultry*	Eggs	
1957	1.56	0.74	−0.06	1.87	0.29	15.00	5.03	9.97	19.40
1958	2.09	0.66	0.18	1.79	1.79	15.23	4.94	10.29	21.74
1959	3.13	0.57	0.01	2.07	1.73	14.89	3.83	11.06	22.40
1960	2.55	0.55	−0.06	2.31	3.67	16.22	5.06	11.16	25.24
1961	2.39	0.56	−0.12	2.71	−0.05	17.40	6.43	10.97	22.89
1962	2.43	0.59	−0.08	2.34	0.26	14.26	6.03	8.23	19.80
1963	2.38	0.28	−0.04	2.36	−0.20	11.37	5.53	5.84	16.15
1964	2.43	−0.32	−0.06	1.59	2.46	10.63	5.64	4.99	16.73
1965	2.55	0.23	−0.06	1.73	2.45	8.80	3.16	5.64	15.70
1966	1.81	1.02	−0.06	1.87	1.62	3.22	0.15	3.07	9.48
1967	1.39	1.41	−0.06	1.72	0.71	1.56	−0.34	1.90	6.73
1968	1.16	1.08	−0.04	1.68	0.03	1.26	−0.08	1.34	5.17
1969	1.56	1.30	−0.03	2.02	0.10	−0.51	−1.12	0.61	4.44
1970	1.18	1.03	−0.05	2.16	0.06	−1.74	−1.38	−0.36	2.46

Sources: 1. Ministry of Agriculture and Co-operatives, *Statistical Digest,* February 1967 and March 1971.
2. Department of Statistics, *Federation of Malaya Imports and Exports During the Fourth Quarter, 1957.*
3. Department of Statistics, *Federation of Malaya Statistics of External Trade,* 1958, 1959 and 1960.
4. Department of Statistics, *West Malaysia Annual Statistics of External Trade 1970,* Vols. I and II.

*Excludes killed poultry.

million in 1960 and the lowest $19.4 million in 1957). It was from 1963 that substantial reductions in total net imports of these items occurred and in the four years to 1970, these averaged only $4.7 million a year or about one-fifth the annual average in 1957–62. For a number of years, the bulk of the net imports was accounted for by poultry and eggs. During 1957–62, poultry and eggs averaged $15½ million or 71 per cent of the total net imports of live animals and eggs. The net imports of poultry and eggs commenced to decline markedly from 1962, and by 1967, they were only about 10 per cent of the 1957–62 annual average. From 1970, the situation was reversed when the country became a net exporter. These trends provide a good indication, though an indirect one, of the rapid expansion of the poultry and egg industries in the 1960's.

Noted earlier was the sharp expansion of the pig population and its steadily rising trend. Table 6.21 shows that in any one year in 1957–70, the net imports of pigs never exceeded $2½ million except in 1960, indicating that domestic production enabled a high degree of self-sufficiency throughout the period. In recent years, especially in 1968–70, net imports dwindled to negligible amounts, following a steady declining trend from 1965.

After poultry and eggs, the next two largest items of net imports of livestock were buffaloes and sheep. Net imports of buffaloes varied from $1.2 million to $3.1 million. Some decline was noticeable in the net imports of buffaloes in 1966–70 compared with 1959–65. The trend for sheep was less clearly defined, although net imports for 1964–68 were generally lower than in 1959–63. These reflected the relatively small advances achieved in domestic supply.

On the other hand, net imports of cattle showed a small increase in recent years, being at $1–1.4 million a year in 1966–70, compared with $0.2–0.7 million a year in 1957–65 (an exception was 1964 when there was a small export surplus). Statistics of known cattle slaughter (Table 6.23) indicate a higher demand for beef from 1966. Apparently, higher imports had to be called upon to supplement domestic output.

Compared with the other categories of livestock, West Malaysia was a net exporter of goats during 1957–70, except for two years. But the annual value of net exports was very small, mainly less than $100,000.

One of the basic aims of public policy for the livestock industry was self-sufficiency as will be seen shortly. A broad but fairly good indicator of the extent of self-sufficiency in fresh meat production (i.e. excluding chilled and frozen meat) could be obtained by relating the number of each type of livestock imported to the number of known slaughter, as in Tables 6.22 and 6.23. A shortcoming of this approach is that the figures on known slaughter were incomplete to the extent that animals slaughtered in the *kampungs* had not been recorded and those slaughtered in the new villages had only been partly included.[138] But this is not expected to impair the purpose at hand. For this

[138] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1964 to 1966*, p. 106. It has been suggested that the unrecorded slaughter of pigs, cattle and buffaloes could be as high as 20 per cent of the known slaughter and that for goats as high as 50 per cent. See *ibid*., p. 108.

Table 6.22

West Malaysia — Known Slaughter of Goats and Pigs and Extent from Local Animals (Number of Animals)

Year	Goats				Pigs			
	Known Slaughter (1)	Imported for Slaughter (2)	Local Animals: Number Slaughtered (3) = (1) −(2)	Local Animals: As % of Known Slaughter	Known Slaughter (1)	Imported for Slaughter (2)	Local Animals: Number Slaughtered (3) = (1) −(2)	Local Animals: As % of Known Slaughter
1957	80,029	595	79,434	99.3	602,841	20,555	582,286	96.6
1958	86,839	8,398	78,441	90.3	537,170	35,582	501,588	93.4
1959	90,586	5,302	85,284	94.1	606,576	28,693	577,883	95.3
1960	85,553	2,628	82,925	96.9	646,459	41,156	605,303	93.6
1961	82,625	263	82,362	99.7	672,854	2,300	670,554	99.7
1962	76,083	176	75,907	99.8	741,526	4,200	737,326	99.4
1963	70,473	47	70,426	99.9	752,080	2,800	749,280	99.6
1964	78,030	—	78,030	100.0	751,182	30,400	720,782	96.0
1965	84,971	5	84,966	100.0	781,256	33,800	747,456	95.7
1966	90,710	5	90,705	100.0	824,874	27,300	797,574	96.7
1967	75,620	18	75,602	100.0	795,627	12,500	783,127	98.4
1968	65,959	—	65,959	100.0	773,169	100	773,069	100.0
1969	71,312	283	71,029	99.6	877,608	300	877,308	100.0
1970	69,720	120	69,600	99.8	926,726	227	926,499	100.0

Sources: Computed from Ministry of Agriculture and Co-operatives, *Statistical Digest,* February 1967, March 1969, March 1971 and March 1972.

Table 6.23

West Malaysia — Known Slaughter of Buffaloes and Cattle and Extent from Local Animals
(Number of Animals)

Year	Buffaloes				Cattle			
	Known Slaughter	Imported for Slaughter	Local Animals		Known Slaughter	Imported for Slaughter	Local Animals	
			Number Slaughtered	As % of Known Slaughter			Number Slaughtered	As % of Known Slaughter
	(1)	(2)	(3) = (1) −(2)		(1)	(2)	(3) = (1) − (2)	
1957	28,482	4,680	23,802	83.6	41,986	2,274	39,712	94.6
1958	26,513	6,120	20,393	76.9	34,456	2,483	31,973	92.8
1959	32,576	8,537	24,039	73.8	35,239	2,251	32,988	93.6
1960	35,838	7,839	27,999	78.1	38,097	2,192	35,905	94.2
1961	38,726	6,328	32,398	83.7	38,391	1,610	36,781	95.8
1962	36,160	6,266	29,894	82.7	35,486	1,705	33,781	95.2
1963	36,398	6,342	30,056	82.6	34,533	1,627	32,906	95.3
1964	38,243	6,051	32,192	84.2	33,945	538	33,407	98.4
1965	38,159	6,602	31,557	82.7	38,563	1,193	37,370	96.9
1966	38,338	5,285	33,053	86.2	44,820	3,965	40,855	91.2
1967	37,174	4,094	33,080	89.0	47,342	5,457	41,885	88.5
1968	34,055	3,329	30,726	90.2	42,954	4,324	38,630	89.9
1969	32,577	4,103	28,474	87.4	44,536	5,399	39,137	87.9
1970	36,017	3,329	32,688	90.8	43,931	4,650	39,281	89.4

Sources: Same as for Table 6.22

exercise, all the animals imported in any one year were assumed to be slaughtered in that year and if there had been exports, these were assumed to have come from domestic sources. As the slaughter of poultry was not required to be undertaken in abbatoirs and slaughter houses, there were no records of such.

In Table 6.22, the known slaughter of pigs increased very markedly and followed a clearly rising trend. In 1970, nearly 927,000 pigs were recorded slaughtered, an increase of 324,000 pigs or 54 per cent over the number in 1957. For some time, the number of imported pigs was maintained at no more than about 41,000 pigs at the largest. But from 1968, imports became negligible. The domestic pig industry was able to provide for over 90 per cent of the total recorded slaughter and in many years, virtual self-sufficiency was attained, as in 1961–63 and 1967–70.

In the case of goats, it can be said that domestic supply accounted for all the known slaughter since 1962 while in earlier years, the degree of self-sufficiency was over 90 per cent. There was no significant rise in the demand for mutton; in fact, the number of known slaughter in the last four years (1967–70) was well below the figure for 1957.

Table 6.23 shows the extent of local buffaloes and cattle slaughtered. In the case of buffaloes, the proportion of known slaughter accounted for by local animals rose from over 70 per cent in 1958–60 to over 80 per cent in 1961–70, with the percentages rising in the latter period. There was no spectacular change in the demand for buffalo meat over the review period, the increase being only 26 per cent during the 13 years.

The situation with regard to cattle was however different. The extent of known slaughter met from domestic sources declined somewhat during 1966–70 compared with 1960–65. During 1960–65, the proportion of local cattle slaughtered in relation to the known number of cattle slaughter varied from 94 to 98 per cent but these declined to 88 to 91 per cent in 1966–70. In this latter period, the number of known slaughter increased to an average of 44,717 compared with an average of 36,502 in 1960–65.

The discussions so far relate to only freshly-killed meat. In 1957–70, Malaysia was also a net importer of chilled or frozen meat to supplement the local fresh meat. Table 6.24 shows the net imports of the four major items of chilled and frozen meat: beef and veal, mutton and lamb, pork and, killed fowl. Taken together, it can be seen that the net imports of these had risen from slightly over $3 million a year in 1957–58 to around $7–8 million a year in 1967–70. The net imports of beef and veal increased to an average of $3.6 million a year in 1966–70 compared with an average of only $2.2 million in 1957–65. This fact together with the increased slaughter of cattle noted earlier for the 1966–70 period suggest an expansion of demand for beef of all grades. Net imports of mutton and lamb also rose. They averaged $3.0 million a year in 1966–70 compared with $1.7 million a year in 1957–65. The bulk of net imports of this item comprised the meat of lamb. The net imports of chilled and frozen pork never exceeded $0.6 million in any one year in 1957–70 indicating again the virtual reliance of the country on the domestic pig industry. Unlike live poultry, which were imported in substantial numbers before the full

Table 6.24

West Malaysia – Net Imports of Chilled and Frozen Meat
($ million)

Year	Value of Net Imports of Chilled and Frozen Meat				
	Beef and Veal	Mutton and Lamb	Pork	Killed Fowls	Total
1957	1.89	0.86	0.22	0.28	3.25
1958	1.74	0.92	0.22	0.26	3.14
1959	1.83	1.16	0.35	0.47	3.81
1960	2.39	1.51	0.58	0.66	5.14
1961	1.78	1.63	0.61	0.83	4.85
1962	1.98	1.61	0.50	0.59	4.68
1963	2.32	2.06	0.41	0.84	5.63
1964	2.64	2.67	0.40	1.03	6.74
1965	2.93	2.64	0.47	1.23	7.27
1966	4.01	3.07	0.49	1.54	9.11
1967	3.65	2.98	0.48	0.78	7.89
1968	4.10	2.95	0.40	0.87	8.32
1969	3.58	2.91	0.31	0.99	7.79
1970	3.08	3.21	0.22	0.79	7.30

Sources: 1. Ministry of Agriculture and Co-operatives, *Statistical Digest*, February 1967 and March 1971.
2. Department of Statistics, *West Malaysia Annual Statistics of External Trade, 1970*, Vols. I and II.

development of the poultry industry (Table 6.21), the net imports of killed poultry had remained small during 1957–70. There was some increase though in the 1960's but net imports appeared to have been stabilized at less than $1 million a year from 1967. This item could represent imports from the lower cost producers. Nevertheless, the preference of the local market for freshly killed fowls had kept this item small.

The discussion on self-sufficiency in the various livestock products may now be summed up. The domestic pig industry was able to meet virtually all the pork requirements of the country. The small imports of frozen pork were mainly for the consumption of foreigners. The poultry and egg industries also achieved a very substantial measure of self-sufficiency. With the further development of the poultry industry, the small net imports of poultry meat should disappear. Fresh mutton had for many years been fully supplied by local sources and there was even a minor surplus for export. Live sheep and lamb, however, continued to be imported while there was little significant change in local

supply. The local cattle industry was incapable of accommodating the growing demand for beef. Increasing reliance had to be placed on foreign sources for both live animals and chilled and frozen meat, especially in recent years. In the case of buffalo meat, there was some evidence of increasing ability of the local sources to replace imported animals in the supply of meat.

4.2 Contributions of Public Policy to the Development of the Livestock Industry

The interest of the Government in the livestock industry was not a post Independence development. The Colonial Government had introduced veterinary services into the country at a very early stage beginning with the Straits Settlements in about 1880 and later extending on to the Federated Malay States and the Unfederated Malay States.[139] The main preoccupation of these services was the control of animal diseases. This function was so well undertaken that West Malaysia had been free from epizootic diseases, a situation quite unique in Asia.[140] Owing to the unobtrusive nature of the disease-control measures, their contributions to livestock development were often overlooked. These contributions ought to be stressed in any appraisal of public policy. With the disease situation under control, attempts were made even as early as the latter part of the 1930's to focus increasing attention on livestock production. Work was seriously disrupted by the war while the immediate post-war years were concerned with livestock conservation. Some measures to upgrade the quality of livestock commenced in the 1950's, and these were continued into the post-Independence years.

Measures to increase and improve the livestock population received a boost under the Government's policy of self-sufficiency in essential foodstuffs. But this policy was no more than a further development of the livestock policy pursued by the Colonial Government before Independence. The livestock policy of the Colonial Government aimed for the conservation and production of all classes of livestock to meet as far as possible the country's local requirements of fresh meat, poultry and eggs, and its requirements for draught animals; this statement of policy appeared in 1952, though not for the first time.[141] In 1955 when self-government was achieved, the objectives of the livestock policy were re-stated within the context of the new Government's policy of self-sufficiency in essential foodstuffs.[142] They comprised all the basic aims of the former livestock policy but with two important additions. Firstly, the new policy would also aim at improving the quality of the local livestock and the maintenance of an efficient disease control service. The other additional objective was the

[139] For a brief history of veterinary services in Malaya, see *Proposals for the Development of the Livestock Industry and the Reorganization of the Veterinary Services*, Veterinary Division, Ministry of Agriculture and Co-operatives, Kuala Lumpur, 1967, pp. 1–5.

[140] *Ibid.*, p. 2.

[141] *Report on the Veterinary Department for the Year 1952*, p. 1.

[142] *Report on the Veterinary Department for the Years 1955 and 1956*, p. 4.

inclusion of milk as one of the commodities to be promoted. This policy framework had remained unchanged since then.

In implenting these policy objectives, the Government undertook to divert resources into five directions:[143]

a) programmes to achieve quantitative and qualitative improvement in the livestock population;
b) an efficient animal health service;
c) development of efficient mutton, pork, beef, poultry and dairy industries;
d) training programmes on livestock management;
e) an efficient advisory service to livestock owners.

The increasing amounts of financial resources made available for the development of the livestock sector indicate the growing interest of the Government in the sector. In 1956–60, only $1.7 million were spent but this rose to $11.3 million under the Second Five-Year Plan of Malaya (1961–65). Under the First Malaysia Plan (1966–70), $28 million were allocated for various programmes in animal husbandry.

This section will attempt to evaluate the impact of public policy and measures on the major categories of livestock. As for general measures, a notable one was the decision taken in 1962 to abolish the 25 per cent import duty on medicinal preparations for veterinary use.[144] The aim was to encourage the use of modern drugs to raise productivity and improve the quality of livestock.

4.2(i) *Poultry and Egg Industries*

The poultry and egg industries taken together emerged as the most important and dynamic sector of the livestock industry in 1957–70. But the contribution of public policy had been largely indirect. Possibly the most important was the successful control of the Ranikhet disease, an infectious disease which caused very high mortality among chickens. In fact before 1947, the poultry industry was just a backyard industry comprising 5–15 birds per unit because of the prevalence of this disease. The Veterinary Department then began to provide free vaccinations against the disease. With Independence, the Government continued to provide this facility on an even larger scale. Table 6.25 shows the number of vaccinations provided by the country's veterinary services during the important phase of the industry's development.

The successful control of the Ranikhet disease enabled the commercialization of the poultry industry. There was steady development of the industry from 1947. By 1960, there was very clear trend of specialization into either the production of table birds or eggs. A census of commercial poultry (excluding duck) farms was carried out by the Ministry of Agriculture and Co-operatives in 1966 and 1968. Some the main highlights of the two censuses are presented in

[143] *Report on the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1959 and 1960*, pp. 5–6.

[144] See speech of Minister of Finance introducing the *Supply (1963) Bill* in Parliament on 28 November 1962.

Table 6.25

West Malaysia – Vaccinations for Poultry against Ranikhet Disease provided by the Government Veterinary Services (in millions)

Year	No. of Birds given Vaccination against Ranikhet Disease		
	Grown Birds	Chicks	Total
1959	8.6	0.4	9.0
1960	10.3	1.0	11.3
1961	11.5	2.0	13.5
1962	12.3	2.7	15.0
1963	12.9	3.3	16.2
1964	12.5	3.6	16.1
1965	14.4	4.5	18.9
1966	16.1	6.8	22.9

Sources: Report on the Veterinary Division of the Ministry of Agriculture and Co-operatives, 1961–62 and 1964–66.

Table 6.26. The results are not strictly comparable because most of the farms carrying less than 250 birds were omitted in the 1966 Census. Three major features may be seen from the table. Firstly, there was clear specialization by farms into either the production of table birds or layer-type birds. Farms with mixed enterprises were relatively small in number. Secondly, the number of table birds and layer-type birds in the commercial farms were fairly balanced although the data seem to suggest a tendency to concentrate on layer-type birds. Thirdly, while the farms with less than 1,000 birds are not strictly comparable between the two census years, it appears that most of the farms were in this category. But farms with more than 10,000 birds each were not few in number either.

One important factor that greatly assisted the development of the poultry industry was the growth of the local feedmill industry producing balanced rations in the early 1960's. With the initial expansion of the pig and poultry industries in 1958–59, new possibilities were open to the feedmill industry for its expansion.[145] The availability of balanced rations, evidently cheaper than imported supplies, enabled the rearing of poultry under a more intensive system

[145] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1961 and 1962*, p. 2.

Table 6.26

West Malaysia – Commercial Poultry Farms, 1966 and 1968

	Number of Farms	
	1966	*1968*
Table birds only	944	3,676
Layer–type birds only	1,034	1,501
Mixed table and layer–type	348	799
Total	2,326	5,976

	Number of Birds	
	1966	*1968*
a) Table birds	3,129,270	2,862,838
b) Layer–type birds	2,249,205	3,014,068
Total	5,378,475	5,876,906

	Number of Farms	
	1966	*1968*
Up to 999 birds	1,228	4,847
1,000–3,999 birds	718	752
4,000–9,999 birds	274	276
10,000–19,999 birds	69	68
20,000–49,999 birds	33	30
50,000 birds and over	4	3
Total	2,326	5,976

Sources: 1. Ministry of Agriculture and Co-operatives, *West Malaysia: Census of Commercial Poultry Farms and Hatcheries, 1966.*
2. Ministry of Agriculture and Co-operatives, *Census of Commercial Poultry Farms and Hatcheries for West Malaysia, 1968.*

of management and on a larger scale. In 1960, there was only one feedmill in the country, but by 1969, there were 30 in operation. Output in 1969 was estimated at 420,000 tons of which about 220,000 tons were for the poultry industry and

200,000 tons for the pig industry. In the past, the high cost of imported feedstuff was one of the inhibiting factors to growth.[146]

The poultry and egg industries were the only components of the livestock industry for which tariff protection was granted. But even so, the protection was accorded only in the later stages of their development and furthermore, it appears that the measures should have been more effectively applied. Possibly the most significant was the import duty imposed on eggs. An import duty of 1 cent per egg was imposed at the beginning of 1960[147] but as can be seen from Table 6.21, the net imports of eggs in 1960 and 1961 were hardly affected. Although the net imports of eggs subsequently declined, these were nevertheless still large and averaged $5½ million a year for three years, 1963–65, thereby indicating the need for further protection. In late 1965, the import duty on eggs was raised to 3 cents per egg.[148] This succeeded in causing a marked decline in net imports. To augment the effects of this measure, the same duty was extended to Penang in 1968[149] and to East Malaysia in 1969.[150] By 1969, net imports of eggs had fallen to slightly over $½ million compared with about $5½ million in 1965 when the duty was raised. Of less significance was the imposition of an import duty of 30 cents on every pound of imported killed poultry in 1967 "to encourage and protect domestic production".[151] As shown in Table 6.24, the net imports of killed poultry had never been a large item during the review period and they exceeded $1 million in value in only three of these years. The duty had the effect of only reducing net imports by a few hundred thousand dollars. This duty was extended to East Malaysia in 1970.[152] On the other hand, there were no duties on imported live poultry and imports of this item continued to be substantial until 1965 (Table 6.21). The replacement of imported live poultry by domestic supplies after 1965 was due to the growing efficiency of the poultry industry. It thus appears that the industry could have developed more rapidly if tariff protection had been employed much earlier with

[146] Federation of Malaya, *Annual Report 1955*, Kuala Lumpur, Government Printer, 1956, pp. 188–189.

[147] *Malayan Trade Classification (Singapore and the Federation of Malaya) incorporating Federation of Malaya Customs Tariff Rates (Effective from 1st January 1960)*, Singapore, Government Printer (undated), p. 17.

[148] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1964 to 1966*, p. 59.

[149] Speech of Minister of Finance introducing the *Supply (1968) Bill* in Parliament on 18 January 1968.

[150] Speech of Minister of Finance introducing the *Supply (1969) Bill* in Parliament on 9 January 1969.

[151] Speech of Minister of Finance introducing the *Supply (1967) Bill* in Parliament on 19 January 1967.

[152] See 1970 Budget Message of Deputy Prime Minister and Minister of Finance of 15 January 1970 in "1970 Budget – The Budget Message", Kuala Lumpur, Department of Information, 1970.

a more positive sense of purpose and in the more crucial areas of the industry.

Compared with the other branches of the livestock industry, relatively little work was done by the Government to foster the improvement of poultry stocks. It was only in 1962 that a $½ million Research and Breeding Station was established in Johore Bahru[153] to enable experiments, among other things, to be conducted to produce high-yielding strains of poultry suitable for the local situation. The Station recently set up a poultry multiplication unit to provide good quality day-old chicks to poultry farmers.[154]

There were three factors inherent in the poultry and egg industries which greatly assisted their large and rapid development. These must be highlighted to put the deliberate efforts (whether by the industries themselves or the Government) in better perspective. Firstly, poultry meat and eggs are common items in the diet of the country's multi-racial population, unlike pork, beef or mutton which are consumed only by some racial groups. The market for poultry and eggs is thus not fragmented as for the other livestock products. Secondly, of all the categories of livestock, the production of table birds and eggs takes the least time. For example, table birds become marketable in 90–100 days when they reach an average weight of two and a half kati; broilers mature for the market even faster i.e. about 70 days.[155] A pig takes about six months[156] before it becomes marketable while an oxen requires four and a half to five years.[157] The prospect of quick and early returns is an important consideration governing Malaysian investment behaviour. Thirdly, the poultry and egg industries do not require for their efficient operation costly outlays such as the establishment of pastures.

4.2(ii) *Pig Industry*

The pig industry was the other branch of the livestock industry which also achieved a very large measure of success. Like the poultry and egg industries, considerable credit for the industry's development could be attributed to the good response of the private sector. However, public policy had also made some significant contributions.

Possibly the most important contributions of public policy were the decision of the Government to rescind the liberal import policy for pigs in 1959 and the action it took to stop the flow of smuggled pigs from Thailand. The Emergency

[153] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1961 to 1962*, p. 67.

[154] Malaysia, *Official Year Book 1969, op. cit.*, p. 242.

[155] Lim Seang Chye, "The Frozen Chicken and Pork Industry in Malaya" in *Ministry of Commerce and Industry Journal*, Vol. 2 No. 2 (March 1969), p. 4.

[156] *Ibid.*

[157] Ahmad Mustaffa bin Haji Babjee, "Prospects of Commercial Beef Production in Malaysia" in *Ministry of Commerce and Industry Journal*, Vol. 3 No. 2 (March 1970), p. 3.

that arose from the Communist insurgency in 1948 resulted in, among other things, the resettlement of squatters scattered over the countryside into tightly packed units called 'new villages'. This was a measure to stop the flow of food supply from the squatters to the insurgents. A number of these squatters were farmers cum pig rearers and as a result, pig production suffered. With the easing of the Emergency situation in 1953, the pig industry recovered. However, a liberal import policy for pigs was pursued, with pigs being allowed to be imported from Indonesia and Singapore, evidently to supplement the still disrupted industry.[158] The effects were quite unexpected. Although the resultant imports were small compared with the local output, they nevertheless caused considerable drop in prices.[159] At about the same time, starting from 1956, smuggling of pigs across the Thai-Malaysian border assumed disturbing proportions. With its depressive effects on prices, many local pig rearers were forced to close down their pig farms. The impact of both the liberal import policy for pigs and smuggling was sharply reflected in the pig population: in 1956, there were about 426,000 pigs but the number fell to 396,000 in 1957 and 398,000 in 1958 (Table 6.20).

To remedy the situation, corrective measures were adopted by the Government. Firstly, firm action was taken by the authorities to stop the smuggling of pigs from Thailand. To this end, a complete ban was imposed on the movement of pigs in the states bordering Thailand,[160] except under permit. Secondly, in 1959, the import of pigs from Indonesia was restricted and in late 1960, import restrictions were extended to pigs from Singapore.[161] These measures assured reasonable and fairly stable prices for the industry and provided an important impetus to the expansion that followed. In 1959, the pig population rose again to well over 400,000, and it increased markedly thereafter. Accompanying the increase in pig production following these measures was a change in the structure of the industry. Hitherto, pig-rearing was generally carried out in conjunction with vegetable gardening. As from about April 1960, a number of new farms were established, each carrying 800–900 heads of pigs.[162] The trend towards large-scale production with better husbandry techniques was further aided by the keen competition from Singapore pigs.[163]

[158] Earlier, the importation of pigs for any purpose had been prohibited by legislation. See *Report of the Veterinary Department for the Years 1957 to 1958*, pp. 2–3.

[159] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1964 to 1966*, p. 62.

[160] *Report on the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1959 and 1960*, p. 46.

[161] *Proposals for the Development of the Livestock Industry and the Reorganization of the Veterinary Services, op. cit.*, p. 10.

[162] *Report on the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1959 and 1960*, p. 46.

[163] *Ibid.*

Another aspect of public policy which assisted the development of the pig industry was the supply by the Government of improved foreign breeds of boars at nominal prices. In 1959/60, boars of Middle White and Berkshire varieties were distributed to the farmers.[164] However, by 1964–66, the lack of stud boars for stock improvement purposes began to be felt.[165] The various pig stations run by the Government were unable to produce enough stud boars due to inadequate allocation of funds for the purpose.[166] However, the larger farms were able to import their own requirements but the smaller farms continued to face the problem of getting good studs. Steps were, however, taken by the Government to reorganize the pig breeding stations in order to increase the supply of stud boars and breeding gilts to the farmers. To hasten the process of stock improvements, the Government introduced the technique of artificial insemination using semen of selected breeds. Three centres for artificial insemination were set up in 1965–66 in Sungei Buloh, Seremban and Malacca.[167] After a slow start, the response of farmers to using the technique to improve their stock was very encouraging so that by 1966, each centre was performing 1,500–2,000 inseminations a year.[168] This success provided the rationale for the expansion of the service to other major pig producing areas. The charges were $3–5 per conception with a maximum of three services. One obvious benefit from improving the stock was that the exotic breeds could be marketed in six to seven months while the local pigs would require nine to ten months.[169]

Another interesting measure was the implementation of the *pawah* scheme for pigs. The schemes discussed so far involved either the supply of boars or artificial insemination. But in 1962, the *pawah* scheme was introduced under which four or five piglings of two months were given by the Government to farmers, especially those who were too poor to purchase the animals.[170] Two of the pigs when grown were retained for breeding while the rest was allowed to be sold. When progeny became available, the farmer would have to return to the Government four or five piglings of two months of age and these would then be offered to some other farmer. A farmer receiving the piglings would have to build sheds, concrete floors and thatched roofing for the pigs. The effect of the scheme

[164] *Ibid.*

[165] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1964 to 1966*, p. 6.

[166] *Ibid.*

[167] *Ibid.*, pp. 6–7.

[168] *Ibid.*

[169] *Proposals for the Development of the Livestock Industry and the Reorganization of the Veterinary Services, op. cit.*, p. 17.

[170] See Malaysia, *Official Year Book 1965, op. cit.*, p. 231. Also, *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1961 and 1962*, p. 6 and p. 59.

was that it assisted the establishment of small pig farms in many remote areas with no pigs. The process of stock improvement was also undertaken at the same time by making available an improved stud in the area where the scheme operated.

Important as these measures were to the development of the pig industry, it must be stressed that a number of favourable factors assured the right response of the pig rearers. Firstly, the output of the industry was largely for the Chinese who constituted more than one-third of the total population of the country. To them, pork has always been an important and necessary item of food. Secondly, just like poultry, the foreign breeds of pigs introduced were able to adapt well to the Malaysian climate, environment and management conditions.[171] Thirdly, there was the development of the local feedmill industry in 1961–62 which enabled an improvement in feeding practices through the use of balanced rations. Fourthly, there was the readiness and ability of the pig rearers to undertake the expansion and structural change that came to the industry. Fifthly, pig rearing is, like poultry, a short maturity investment which finds favour with many Malaysian investors.

4.2(iii) *Cattle and Dairy Industries*

In contrast to the success of the poultry and egg industries and the pig industry, relatively little development was observed in the cattle and dairy industries. While the Government had given some attention to these industries, it should be stressed that the very nature of their problems required a more active and comprehensive role for public policy than was pursued in 1957–70. In the cattle industry, the direct efforts of the Government concentrated mainly on upgrading the cattle population. But three areas crucial for the development of cattle rearing into specialized, large-scale units received little or no attention from the Government. These were the development of pasture land, the supply of expertise for large-scale cattle rearing and the provision of financial assistance. Evidently, the private sector was neither in a position nor was prepared to deal with these problems. There was, therefore, no specialized beef industry and the dairy industry was hardly developed.

There were two main types of cattle in West Malaysia.[172] The first was the agricultural or draught cattle. This comprised largely indigenous animals that were small and hardy. They were largely owned in small numbers by padi farmers to plough the fields. They subsisted by grazing on whatever was available and when the fields were under padi, cut grass were fed to them. Thus, most of the cattle were found in the rice growing states, Kedah, Perlis, Kelantan and Trengganu.

[171] Johari bin Haji Mohd. Daud, "The Mobilization of Resources for Expansion of Animal Husbandry under the First Malaysia Plan – Objectives and Tasks" in *The Mission of Agriculture* (selected papers presented at the First and Second Seminars on Agriculture sponsored by the Centre for Development Studies), Kuala Lumpur (undated), p. 33.

[172] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1964 to 1966*, pp. 56–57.

The other category was the milch cattle mainly owned by Indian dairymen around the towns or by labourers in estates. The herds were generally poorly managed. Most of the lactating cattle were given cut grass at night and supplementary diet of broken rice, rice bran, oil cake and salt. Yields were low, being about 1,000 lbs. of milk generally per lactation yield but up to 3,000 lbs. in well-managed herds.

A number of problems hindered the development of large scale commercial production of beef and dairy products. Most obvious is that Malaysia lies outside the region of natural grasslands of the world. The development of pastures from especially virgin or secondary jungles would therefore be an expensive venture and one which would require continuous and careful management.[173] Fertilizers would be necessary to ensure the growth of good quality grass in view of the continuous leaching of the soils. The land would rapidly be encroached upon by the ubiquitous *lallang* (Imperata cylinderica) if neglected or left unused for a few months. This high cost factor had evidently inhibited the willingness of private capital to undertake large-scale cattle rearing in the past.

Another serious problem was the lack of local expertise and management capabilities in handling large-scale production of beef and dairy products. More important perhaps was that the existence of large and efficient cattle industry in the natural grasslands of the world ruled out the possibility of successful competition in the export markets. Production of meat for domestic consumption, on the other hand, was confronted not only by a small market but a fragmented one as well, since beef was not consumed for religious reasons by the Hindu Indians and a large part of the Chinese community. While there was evidence of growing demand for beef and inadequate domestic supply, as discussed earlier, the pressure that was building up was clearly not enough to stimulate large-scale investments in the cattle industry.

The Government was also in a way responsible for some other obstacles. Firstly, its policy had been (and continues to be) for land to be allocated to cattle rearing only after the land had been found unsuitable for agricultural purposes.[174] Until this policy is changed, cattle rearing obviously starts with a disadvantage. Secondly, it was only until very recently that research was undertaken by the Ministry of Agriculture on the suitability of various pasture materials for the Malaysian environment. Thirdly, in the area of animal development, the Ministry's efforts in cattle breeding for meat did not receive as much support as it should while efforts relating to dairy cattle were only made recently.

It would be fair to say that the Government began to focus considerable interest in the potentialities of the beef and dairy industries only towards the

[173] This observation was made by the Ministry of Agriculture. See *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1964 to 1966*, pp. 53–54.

[174] Veterinary Division, Ministry of Agriculture and Fisheries, *Review of the Livestock Sector for Accelerating Livestock Development*, Kuala Lumpur [1973] (mimeographed), p. 22.

closing years of the 1960's. This followed the work of two study missions. In 1969, a mission from the Food and Agriculture Organization (FAO) pointed out that no serious technical problems would stand in the way of establishing good pasture land in West Malaysia.[175] It suggested that even on the *bris* soil of the East Coast covering 30,000 acres (for which there is hardly any agricultural potential) pasture land could be developed. It also recommended the setting up of a 3,000-acre pilot beef ranch. Another study mission, jointly undertaken by the FAO and the World Bank in 1970, confirmed that commercial production of beef and dairy products could be a viable activity in Malaysia.[176] It pointed out that recent work on cultivated grass and legumes for grazing had shown excellent response from certain species such as Elephant grass, Guinea grass and Brachiaria to the Malaysian environment.[177] The mission also drew attention to the satisfactory results achieved in Government research stations in developing suitable animals from cross breeding local animals with imported breeds.[178] In view of the absence of "a tradition of beef/dairy husbandry", it urged the Government to set up on its own four pioneer enterprises, of which three could be dual dairy/beef operations to be located in West Malaysia and the fourth an exclusively beef enterprise to be in Sabah.[179] The projects in West Malaysia would cover 2,600 acres each and the one in Sabah 8,000 acres. One important role of these enterprises would be to demonstrate to the private sector the feasibility of commercial production. Up to mid-1973, however, the Government had taken only a small step to implement these recommendations. It established several cattle multiplication units.[180]

Some reference has earlier been made to the limited efforts of the Government in promoting the livestock industry. Of these, the Government appeared to have accorded most of its attention to animal improvement and management during the review period. A more detailed discussion of this aspect of the Government's policy would, therefore, be useful for the purpose at hand.

The cattle improvement policy was, in fact, an extension and elaboration of a policy formulated and implemented by the Colonial Government in 1950. One principal feature of the policy was the establishment of a stud bull scheme following the importation of Red Sindhi and Sahiwal bulls and cows from Pakis-

[175] Food and Agriculture Organization of the United Nations, *Potential for Livestock Development – Report to the Government of Malaysia*, Rome, 1969 (mimeographed), pp. 34–35.

[176] FAO/IBRD Co-operative Programme, *Draft Report of the Livestock Sector Review and Identification Mission to Malaysia*, Rome, Food and Agriculture Organization of the United Nations, August 1970 (mimeographed), pp. 1–2.

[177] *Ibid.*, p. 18.

[178] *Ibid.*, pp. 17–18.

[179] *Ibid.*, p. 2.

[180] Veterinary Division, Ministry of Agriculture and Fisheries, *Review of the Livestock Sector for Accelerating Livestock Development, op. cit.*, p. 3.

tan in December 1950.[181] Under the scheme, the bulls were hired out to cattle owners. Pedigree bulls bred at the Paroi Animal Husbandry Station were sold outright. The bulls to be hired out were placed in villages, estates, veterinary centres, animal husbandry and agricultural stations and among dairymen's herds. The hire charge for a bull was $20 per month. Comparing the number of services provided by the pure bred bulls in the six years following the commencement of the scheme (1951–56) with that of the following six years, it can be seen that there was some decline that is, 7,700 services were provided by the bulls in 1951–56 compared with 6,634 services in 1957–62. One factor inhibiting the growth of the scheme was a preference for purchasing the pure bred bulls rather than hiring.

But many others could not afford to make an outright purchase or to hire the bulls. In 1956, therefore, a subsidized stud bull scheme was introduced in Kelantan and was later extended to Kedah, Perlis and Trengganu.[182] Under this scheme, upgraded animals were sold from the animal husbandry stations with Government subsidy. A condition of sale was that purchasers should be prepared to castrate their local bulls.[183] The results were encouraging. These schemes relied on the pure-bred Red Sindhi and Sahiwal animals imported from Pakistan or upgraded animals resulting from cross-breeding these with the local animals. It was only around 1965/66 that attention was turned to other breeds such as Australian cattle for possible adoption in this country.[184]

As in the pig industry, the use of artificial insemination to improve stocks commenced as a pilot project in Kuala Lumpur in 1955. Free services were provided to cattle breeders. But response to the service had been slow; in 1959–62, for example, the number of inseminations undertaken was only between 35 and 227 a year. This technique of stock improvement had the advantage of being faster and cheaper than mating and furthermore, it could employ the semen of superior breeds from abroad in frozen or chilled state. Besides Kuala Lumpur, the service was then made available in three other centres, Seremban, Kluang and Kota Bahru.

Another aspect of cattle improvement was selective breeding. In Kedah, Kelantan and certain parts of Trengganu, legislation had been in effect for some years before 1957 for the compulsory castration of bulls that were considered unsuitable for breeding. The objective was to prevent the growth of low grade stock. In other states, voluntary castration of such bulls was actively encouraged.

As in the pig industry, a *pawah* scheme for cattle was operating since the beginning of the 1960's. The scheme aimed to encourage the rearing of cattle in

[181] *Report on the Veterinary Department for the Years 1955 and 1956*, p. 47.

[182] *Report on the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1959 and 1960*, p. 43.

[183] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1961 and 1962*, p. 69.

[184] Ahmad Mustaffa bin Haji Babjee, "Prospects of Commercial Beef Production in Malaysia", *op. cit.*

those areas with few or no cattle. Under the scheme, one to three female animals were distributed to each farmer and in all, a total of 30–40 animals were given to each *kampung* for easy supervision.[185] An upgraded bull or a pure Sindhi bull would be placed in the *kampung* to produce upgraded progeny. The farmers would be required to construct sheds to house the animals and to plant fodder grass. The farmers would have to rear the animals as their own and on producing calves, would have to return to the Government the same number they received. These would then be given to other farmers while the farmers could then assume ownership of the animals that produced the offsprings.

Even less was achieved in the development of the dairy industry during 1957–70. The source of supply for milk and milk products was still substantially based on imports. In 1968/69, for example, the net imports for milk and milk products averaged $43 million a year. Domestic production of milk was estimated by the Ministry of Agriculture at an unchanging figure of $16 million a year in 1960–71 (Table 6.19). The bulk of the local milk production came from small herds of local Indian dairy cattle in the urban and surrounding areas. The rest of the milk was produced by a few small but better organized units namely, the dairy colony in Batu Arang, in the Central Animal Husbandry Station in Kluang and a private European-type dairy farm in Johore.[186] The milk produced by the Indian dairymen was delivered to households in raw state, collected under unhygienic conditions and usually adulterated.

The industry continued to be characterized by low productivity. In the dairying countries abroad, the average yield of cattle was about 8,000–10,000 lbs. of milk per lactation but the average yield of local animals was estimated at only about 10–12 per cent of that.[187] However, it was found that upgraded cows with good management could yield 3,000–5,000 lbs. of milk per lactation. There were three factors underlying the low productivity of the local cows namely, the genetic make-up of the local animals, the poor practice of animal management and the low level of nutrition.

The animal improvement policy of the Government, as discussed earlier in relation to the cattle industry, was also pursued here. However, the use of the Red Sindhi and Sahiwal breeds as the basic animals to effect improvement in livestock quality did not markedly increase productivity in the dairy industry. One reason was that these breeds did not have high-dairying qualities.[188] Secondly, even so, there were available to the dairymen's herds only a limited number of the Sindhi and Sahiwal bulls under the stud bull scheme and the subsidized stud bull scheme because of claims on these by the beef-producing

[185] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1961 and 1962*, p. 97.

[186] Food and Agriculture Organization of the United Nations, *Potential for Livestock Development – Report to the Government of Malaysia, op. cit.*, p. 15.

[187] S. Thuraisingham, *Proposals for Large Scale Dairy Development in West Malaysia*, Kuala Lumpur, May 1969, p. 9.

[188] S. Thuraisingham, *op. cit.*, p. 2.

sector. It was only from 1967 that studies were made by the Ministry of Agriculture in the disease problems and management requirements of the imported pure-bred *Bos taurus* cattle for the dairy industry. The future expansion of the dairy industry would depend very largely on this search for a high-productivity cow. The tardiness of Government action in this regard can be regarded as a contributory cause for the state of the dairy industry today. Underlying this tardiness was the absence of a clear and long-term policy for livestock to serve as an important avenue for economic diversification.

The poor practice of animal management was partly a consequence of the absence of a highly-productive dairy animal. There was thus no demand for facilities to provide skills for managing specialized dairying units operating on large scale. The problem of nutrition was associated with the high cost of pasturage development in this country and the low productivity of the local dairy cow. The latter could not justify the large expenditures on the former. The Government however, attempted to provide management facilities and better nutrition for the local cows in the so-called dairy colonies[189] which it set up in the mid–1960's to develop the dairy industry. But the outcome was not a notable success. This seems to underline further the need for a genetically superior dairying animal. Two dairy colonies were set up, one at Batu Arang (Selangor) and the other at Pantai (Negri Sembilan). The colonies were essentially a resettlement scheme for dairy farmers in the suburban areas. In these colonies, the Government provided cattle sheds, fodder, grazing area, water supply, animal health service and assistance in the marketing of the milk. On their part, the settlers supplied and managed their own stocks. From these colonies, pasteurized fresh milk was sold to Kuala Lumpur and Seremban in half-pint cartons.

4.2(iv) *Buffaloes*

Buffaloes were usually kept in small numbers by the Malay padi farmers for ploughing their fields. They were allowed to graze for their sustenance and were given grass only when the fields were under padi.

The most prominent area of policy action was in encouraging the rearing of buffaloes in areas with sparse buffalo population. This was done under the *pawah* breeding scheme. The scheme, introduced in the early 1960's, however, operated only in certain states namely, Pahang, Kelantan, Negri Sembilan and Johore. Under the scheme, the Government purchased female buffaloes from areas highly populated with buffaloes and distributed an animal each to farmers in areas with sparse buffalo population. The animal then became the farmer's after he was able to return a two-year old progeny to the Government. The process would then begin elsewhere with the young animal.

Very little was done in stock improvement. The buffalo owners were merely urged to cross their local swamp buffaloes (which formed the bulk of the buffalo population) with the Indian Murrah buffaloes to obtain bigger animals that

[189] For a brief description, see Malaysia, *Official Year Book 1966, op. cit.*, p. 267.

would mature earlier and produce more milk. No inducements or facilities were made available for this purpose.

This relatively small contribution of public policy to this branch of the livestock industry had obviously not been able to offset significantly the effects of double cropping of padi and increasing mechanization on the buffalo population. The buffalo population had thus declined in recent years.

4.2 (v) *Goats*

The interest of public policy in goat rearing dated back before 1957. The Indonesian goats had been found to be hardy and to thrive well in West Malaysia. When cross-bred with the local animals, they would produce off-springs which were larger and more robust. Thus in 1954, Indonesian stud goats were imported for stock improvement purposes. However, these were so popular that there were never enough of them to be distributed or sold.[190] The scheme was very small. The number of stud goats distributed/sold were 56, 82 and 164 in 1957/58, 1959/60 and 1964/66 respectively. The insignificance of these numbers becomes obvious when viewed against the goat population of 270,000 to 330,000 during these periods. Much more could have been done in this respect. Another approach to stock improvement was the castration of scrub goats unsuitable for breeding. Free castration services were provided by the Government as an inducement.

As for the other livestock, a *pawah* scheme also operated for goats in the 1960's.[191] Under the scheme, five to ten female goats and a buck would be given to each selected farmer. Like other schemes, the progeny would have to be returned to the Government for subsequent distribution to other farmers.

4.3 *A General Evaluation of Public Policy in the Livestock Industry*

Possibly the most striking impression gained from this examination of public policy and actions in the livestock industry is the virtual absence of a bold and definite plan for the development of the industry. Many of the policy measures were mere extensions of measures adopted in the pre-Independence period. Others which were introduced originated more in response to specific situations than from initiative of public policy in relation to an overall plan. Some policy measures could have brought in larger benefits if they had been formulated and implemented earlier. The focus of policy was largely in animal health and disease control which produced beneficial results and, in animal improvement, an area in which inadequacies were quite evident in many respects. The policy measures hardly touched on the development of processing and the use of animal by-products. Furthermore, the objective of public policy was mainly on import-substitution, an approach which could lead to much earlier contact with limits

[190] *Report on the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1959 and 1960*, p. 44. Also, *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1964 to 1966*, p. 70.

[191] *Report of the Veterinary Division, Ministry of Agriculture and Co-operatives for the Years 1961 and 1962*, p. 65 and p. 97.

to production. There was a conspicuous absence of direct Government participation, which for some branches of the industry would seem necessary.

Nevertheless, important advances had been made which had effects on the production structure and imports. These advances were in the pig, poultry and egg industries.

CHAPTER VII
THE AGRICULTURE AND FORESTRY SECTOR: DIVERSIFICATION POLICIES AND THE PRINCIPAL EXPORTS OTHER THAN RUBBER

1. INTRODUCTION

In the discussion on export structure in Chapter IV, it was pointed out that some items of the agriculture and forestry sector had emerged as dynamic export items within the period under review. In particular, these were products of the oil palm, pineapple and timber. On the other hand, a traditionally large item of export, coconut oil and copra, was seen to have lost considerable ground. In all these cases, the diversification policies of the Government had exercised some influence or the lack of it. The objective of this chapter will be to evaluate the role and effects of these policies in relation to the development of these principal exports.

2. THE OIL PALM INDUSTRY

2.1 *Review of Output, Exports and Planted Acreage*

The oil palm industry was by no means a recently established industry in West Malaysia. The first commercial planting of the oil palm occurred in Kuala Selangor in 1917, following experimental plantings as early as 1903.[1] But in terms of planted acreage, output and contribution to export proceeds, the industry achieved significance only in the 1960's. Table 7.1 shows the production and exports of palm oil and palm kernels since 1957. Palm oil and palm kernels were among the fast expanding commodities in West Malaysia. As at the end of 1970, the oil palm estates employed about 36,400 workers.

Between 1957 and 1963, the yearly increase in the production of palm oil was relatively small, being in the range of 2,000–20,000 tons. The annual growth in tonnage increased substantially from 1964, this starting with 26,000 tons a year and rising generally to about 75,000 tons.[2] This could be seen more

[1] For a good account of the industry's early history, see Ministry of Agriculture and Co-operatives, *The Oil Palm in Malaya*, Kuala Lumpur, 1966, Chap. 1.

[2] In 1964, there was a strike on oil palm estates which affected output. The discussion here and below have treated this as abnormal and therefore outside of the growth trend.

Table 7.1

West Malaysia – Oil Palm Industry : Production, Exports and Prices

Year	Production		Exports			Prices[a] of Palm Oil ($ per ton)
	Palm Oil ('000 tons)	Kernels ('000 tons)	Palm Oil ('000 tons)	Kernels ('000 tons)	Total ($ million)	
1957	58.5	14.8	61.5	16.2	51.4	777.5
1958	69.7	18.3	74.3	20.9	55.4	638.0
1959	71.5	19.3	77.0	19.7	60.9	646.3
1960	90.3	23.7	96.0	25.2	71.6	630.2
1961	93.3	24.2	93.4	21.2	68.4	655.1
1962	104.5	27.8	105.7	20.3	71.9	615.9
1963	123.6	30.1	114.9	19.5	76.3	600.3
1964	120.1[b]	30.0	123.3	18.0	87.7	653.3
1965	146.3	34.4	139.2	18.7	114.7	761.3
1966	183.4	42.7	178.4	22.5	127.2	661.0
1967	213.4	48.3	177.2	23.3	119.4	623.5
1968	260.7	58.7	263.7	32.1	131.0	442.2
1969	320.9	73.4	325.6	33.5	154.7	435.8
1970	396.0	85.8	367.4	22.5	255.1	668.0

Sources: 1. Department of Statistics, *Oil Palm, Coconut and Tea Statistics,* 1967 and 1970.
2. Department of Statistics, *Monthly Statistical Bulletin of the States of Malaya,* February 1965.
3. Department of Statistics, *Monthly Statistical Bulletin of West Malaysia,* October 1971.

[a] Export unit value.
[b] Strike on estates.

clearly in the changing annual output levels. In 1963, total production of palm oil was slightly over 2 times that of 1957. But by 1966, output was 3 times larger than the 1957 output and by 1970, it was about 6¾ times that of 1957.

As products of the oil palm have largely been exported, the pattern of exports over the years broadly followed that noted for output, although annual changes in the export volume tended to be more marked in some years. The export volume of palm oil in 1963 was nearly 2 times that of 1957 while that of 1966 was nearly 3 times and that of 1970 was nearly 6 times.

Palm kernel is jointly produced with palm oil. As such, the annual increase had similar growth patterns as palm oil production. Between 1957 and 1963, the annual growth in output of palm kernels was between 500 tons and 4,400 tons but in 1964–70, the range was between 4,400 and 14,700 tons. Output level attained each year also bore a closely similar pattern to that of palm oil. For example, the output in 1963 was twice that of 1957, the output of 1966 was nearly 3 times, and that of 1970, nearly 6 times.

The pattern of exports of palm kernels, however, departed from the general pattern seen above. Firstly, except for 1968 and 1969, the volume of palm kernel exports did not have a clearly rising trend as palm oil exports did in 1957–70. Secondly, the annual change in export volume of palm kernels was smaller compared with the annual change in production, especially during 1964–70. Both features reflected the increasing domestic processing of the palm kernels.

In terms of export proceeds, both palm oil and palm kernels contributed $51½ million in 1957; in 1963, the export proceeds were only about 50 per cent higher. By 1966, these were nearly 2½ times larger than the export value in 1957 and by 1970, these were about 5 times larger. The slower increase in the value of exports of palm oil and palm kernels compared with their growth of production was due to lower prices in the years referred to compared with that of 1957. Nevertheless, the share of exports of palm oil and palm kernels in the total gross exports of West Malaysia increased quite noticeably, from about 2½ per cent of the total gross exports in 1957 to nearly 3 per cent in 1963, about 4 per cent in 1966, and slightly over 6 per cent in 1970. These changes become more significant when it is considered that total gross exports had also been increasing over the 1957 level (Chapter IV).

Table 7.2 shows West Malaysia as a producer of palm oil and palm kernels compared with the other major producers, Indonesia, Nigeria and the Democratic Republic of Congo. The rapid expansion of the Malaysian industry made Malaysia the second largest producer of palm oil in the world from 1966, next to Nigeria. With about half of its planted acreage still immature at the end of 1970 (Table 7.5), it could very well become the world's largest producer in the 1970's. In 1952–56, West Malaysia's output of palm oil accounted for only about 4½ per cent of world output but this share was slightly more than doubled in 1963, rose to about 17½ per cent in 1967 and to nearly 23 per cent in 1970. It was also the only major producer whose share in world output increased during 1952–70. Indonesia's share commenced to increase only after 1966 but dropped again after 1968. The share of output of the world's largest producer, Nigeria,

Table 7.2

Major Producers of Palm Oil and Palm Kernels

Country	Production of Palm Oil as Per Cent of World Output								
	1952–56	1963	1964	1965	1966	1967	1968	1969	1970
West Malaysia[a]	4.4	9.3	8.9	11.0	13.7	17.4	18.0	20.4[b]	22.7[b]
Indonesia[a]	13.4	11.0	11.7	11.6	11.1	14.0	12.8	11.8	11.0
Democratic Republic of Congo	16.0	16.6	15.3	12.0	12.4	14.3	16.6	14.0	12.4
Nigeria	46.3	37.9	37.5	39.2	37.4	26.1	25.2	26.3	27.1
World Output (in 100 metric tons)	12,024	13,465	13,721	13,516	13,565	12,457	14,681	15,987	17,684
Country	Production of Palm Kernels as Per Cent of World Output								
	1952–56	1963	1964	1965	1966	1967	1968	1969	1970
West Malaysia[a]	1.4	2.9	2.8	3.2	4.1	5.5	6.3	8.0[b]	8.2[b]
Indonesia[a]	4.3	3.1	3.2	3.0	3.2	3.9	4.2	4.5	4.2
Democratic Republic of Congo	12.4	9.3	10.2	6.8	7.6	10.7	13.2	10.7	10.3
Nigeria	45.1	40.1	38.0	41.6	40.4	25.2	20.4	19.0	23.5
World Output (in 100 metric tons)	9,742	10,474	10,733	10,963	10,525	8,862	9,505	9,327	10,644

Sources: Compiled from United Nations Food and Agriculture Organization, *Production Year Book*, 1968 and 1970.

[a] Estates only.
[b] Amended to conform with the latest figures from Malaysian sources.

declined from less than half of world output in 1952–56 to slightly over one-quarter in 1967–70. The share of the Democratic Republic of Congo also declined but much less markedly.

In the production of palm kernels, West Malaysia's share of world output had also grown but much less spectacularly. In 1952–56, it accounted for about 1½ per cent of the world output of palm kernels; by 1967, the share was 5½ per cent but rose to 8 per cent in both 1969 and 1970. It was the smallest producer after Nigeria, the Democratic Republic of Congo and Indonesia until 1964, after which its share surpassed that of Indonesia. The slower growth in the production of palm kernels in West Malaysia could be attributed to the difference in the types of palms grown here and in Africa. The commonly grown variety in Malaysia is the *tenera* which yields thick mesocarp (hence, the emphasis on oil as a product), a thin shell and a small size kernel whereas the common variety in Africa is the *dura* type which yields only a thin layer of mesocarp, a thick shell and a large kernel.[3]

The discussions have so far revealed only a part of the achievements of the oil palm industry. During the period 1957–70, extensive planting was undertaken

[3] See Ministry of Agriculture and Co-operatives, *The Oil Palm in Malaya, op. cit.*, p. 241.

Table 7.3

West Malaysia – Planted Acreage under Oil Palm
('000 acres)

Year	Planted Acreage under Oil Palm							Acreage in Production	
	Estates		FELDA[a]		Others[b]		Total Area	Average For Year	As % of Total Planted Acreage
	Area	As % of Total	Area	As % of Total	Area	As % of Total			
1957	116.0	100.0	–	–	–	–	116.0	n.a.	n.a.
1958	120.0[c]	100.0	–	–	–	–	120.0	n.a.	n.a.
1959	126.0[c]	100.0	–	–	–	–	126.0	n.a.	n.a.
1960	135.0[c]	100.0	–	–	–	–	135.0	98.9	73.3
1961	140.3[c]	99.4	0.9	0.6	–	–	141.2	107.0	75.8
1962	150.7[c]	98.2	2.7	1.8	–	–	153.4	114.1	74.4
1963	175.5	94.7	9.5	5.1	0.3	0.2	185.3	121.5	65.6
1964	186.7	90.8	17.8	8.7	1.1	0.5	205.6	129.0	62.7
1965	208.0	86.7	27.4	11.4	4.4	1.8	239.8	147.0	61.3
1966	256.0	84.3	41.4[d]	13.6	6.1	2.0	303.5	162.5	53.5
1967	319.9	79.8	59.6[d]	14.9	21.2	5.3	400.7	209.6	45.9
1968	380.7	76.7	90.7[d]	18.3	25.0	5.0	496.4	183.9	42.2
1969	438.3	73.4	127.0[d]	21.3	31.6	5.3	596.9	267.5	44.8
1970	478.0	69.0	160.6	23.2	53.9	7.8	692.5	331.3	47.8

Sources: 1. Department of Statistics, *Oil Palm, Coconut and Tea Statistics*, 1964, 1968 and 1970.
2. Department of Statistics, *Monthly Statistical Bulletin of the States of Malaya*, February 1965.
3. Federal Land Development Authority, *Annual Report 1969*.

[a] Federal Land Development Authority.
[b] Rubber Industry Replanting Board (Fund 'B') schemes for smallholders and State Governments.
[c] May include a very small area planted by institutions listed under 'Others'.
[d] Adjusted for consistency with data in 1969 FELDA Annual Report.
n.a. = not available.

which had expanded productive capacity, about half of which would only start to yield after 1970. In 1957, the oil palm acreage at 116,000 acres was the fourth largest area of land under an agricultural crop.[4] By 1969, the area under oil palm was slightly more than 5 times that of 1957 and oil palm had become the third largest crop in terms of area next to rubber and padi.[5] Table 7.3 shows the planted area under oil palm while Table 7.4 shows the annual growth in oil palm acreage. It can be seen from the latter table that the growth of oil palm acreage can be broadly divided into three phases. Between 1957 and 1961, the annual increase was small and was in the range of 4,000–9,000 acres a year. In the second phase, 1962–66, there was an acceleration of planting, the increase rising from slightly over 12,000 acres in 1962 to nearly 64,000 acres in 1966. The third phase, 1967–70, saw the annual increase being pushed to a level of 95,000–100,000 acres a year. Indications are that the high level of planting will continue into the 1970's. Two features need to be noted at this stage. Firstly,

[4] The others were (in thousand acres): rubber (3,721), padi (858) and coconut (518).

[5] In 1969, the other two larger crop areas were (in thousand acres): rubber (4,264) and padi (1,264).

Table 7.4

West Malaysia – Annual Increase in Planted Acreage under Oil Palm ('000 acres)

Year	Annual Increase in Planted Acreage under Oil Palm			
	Total	Estates	FELDA[a]	Others[b]
1958	4.0	4.0	–	–
1959	6.0	6.0	–	–
1960	9.0	9.0	–	–
1961	6.2	5.3	0.9	–
1962	12.2	10.4	1.8	–
1963	31.9	24.8	6.8	0.3
1964	20.3	11.2	8.3	0.8
1965	34.2	21.3	9.6	3.3
1966	63.7	48.0	14.0	1.7
1967	97.2	63.9	18.2	15.1
1968	95.7	60.8	31.1	3.8
1969	100.5	57.6	36.3	6.6
1970	95.6	39.7	33.6	22.3

Sources: Same as for Table 7.3.

[a]Federal Land Development Authority.
[b]Rubber Industry (Replanting) Board (Fund 'B') schemes for smallholders and State Governments.

the bulk of the increase in oil palm acreage each year until 1969 was undertaken by private estates. But after 1967, both the increase in estate acreage and the share of estates in the total increase in oil palm acreage each year showed a declining trend. Secondly, especially from 1963, the expansion of oil palm acreage was increasingly and substantially assisted by planting undertaken by the Federal Land Development Authority (FELDA). A closer examination of these features will be made in the discussion on public policy.

Oil palms take about four years to mature. Data on the average acreage in production from 1960 are shown in Table 7.3. The average acreage in production in 1970 was more than 3 times higher than that of 1960 but within the same period, the total planted acreage was 5 times larger. Thus, while the average acreage in production in 1960 was 73 per cent of the planted acreage, by 1970, this had been reduced to 48 per cent. Output in 1970 was, therefore, realized from less than half the capacity already established in that year. In other words, the output trend reviewed earlier could, in effect, be regarded as only a partial

Table 7.5

West Malaysia – Planted Acreage under Oil Palm by Mature and Immature Acreage and Age Distribution, 1970

	Area (000 acres)	As Per Cent of Total Planted Acreage
	(As at end of 1970)	
Total Planted Acreage	692.5	100.0
Immature acreage	329.8	47.6
Mature acreage	362.7	52.4
Distribution of Mature Acreage by Age		
3 – 5 years	170.7	24.7
6 – 10 years	86.5	12.5
11 – 15 years	39.5	5.7
16 – 20 years	28.6	4.1
21 – 25 years	15.9	2.3
Over 25 years	21.5	3.1
Total	362.7	52.4

Source: Compiled from Department of Statistics, *Oil Palm, Coconut and Tea Statistics, 1970.*

contribution of the oil palm industry to the diversification process. This should be an important qualification to the degree of agricultural diversification measured earlier in Chapter III.

From Table 7.5, it is clear that the large area not in production in 1970 virtually comprised immature acreages. The proportion of oil palm area not in production in 1970 was 52 per cent of the total planted acreage (Table 7.3) while immature acreages, on the other hand, made up 48 per cent of the planted acreage (Table 7.5). The youthfulness of the industry was also evident in the age distribution of the mature palms. In Table 7.5, it can be seen that 71 per cent of the mature acreage in 1970 consisted of palms of no more than 10 years old. The economic life of the oil palm is about 25 years, after which replanting is necessary.[6] Areas with palms of over 25 years old constituted only close to 6 per cent of the mature acreage or 3 per cent of the planted acreage.

[6]See "Production and Marketing Problems of Palm Oil" in Bank Negara Malaysia, *Quarterly Economic Bulletin*, Vol. 4 No. 4 (December 1971), p. 199.

2.2 *Public Policy and Development of the Industry*

There were a number of basic factors which favoured the growth of the oil palm industry in West Malaysia in the 1960's. Firstly, the soils and climatic environment have been found to be suitable for oil palm. The Ford Foundation Team which in 1963 recommended a number of measures for greater diversification of Malaysian agriculture considered that "next to rubber trees, no other tropical tree crop fits as well into the agricultural geography of Malaya" as the oil palm.[7] Studies indicated that most of the soil types in West Malaysia would suit the crop. Estimates made in 1967 placed 8.1 million acres of land under cultivation and forest to be suitable and another 3.8 million acres to be marginally suitable.[8] The suitable areas under forest are in Pahang, Johore and to a smaller extent in Trengganu. Thus, the availability of suitable land would never be a constraint to oil palm expansion, only an inefficient land administration machinery.

Secondly, the oil palm was not a new crop in the country but one which had been well tested in the local environment for decades. Thirdly, the oil palm industry in West Malaysia had been free from serious pests and diseases compared with the industry in Africa. There were, of course, pests and diseases which afflicted the palms at regular intervals or in large numbers but the industry had been able to keep these under control.[9] Fourthly, the oil palm has a shorter maturity period (four years) than its principal alternative, rubber.

These factors assured the viability of the industry in West Malaysia. But a factor of great importance in the 1960's was the good prices of palm oil coupled with the declining prices of rubber. The juxtaposition of these two price situations in the 1960's was the fundamental cause for the diversion of resources away from rubber to oil palm. The favourable prices of palm oil and the viability of the oil palm quickly established the oil palm industry as the most important and attractive outlet for new investments and reinvestments in agriculture. Table 7.1 shows the prices of palm oil (export unit values) for 1957–70. Except for 1968 and 1969, these prices exceeded $600 per ton and in two years (1957 and 1965), they were even well above $700 per ton. The price decline in 1968 and 1969 to levels somewhat below $450 per ton appeared to have little effect on investments in oil palm. In any case, confidence in the oil palm industry was quickly restored by the sharp price recovery in the 1970's.[10] In the case of

[7] Ford Foundation Team Report on Agricultural Diversification, *op. cit.*, p. 7.

[8] Ng Siew Kee, "Soil Suitability for Oil Palms in West Malaysia" in *Oil Palm Developments in Malaysia* (Proceedings of the First Malaysian Oil Palm Conference, Kuala Lumpur, 16–18 November 1967), Kuala Lumpur, Incorporated Society of Planters, 1968, pp. 15–16. See also *Rubber, Oil Palm, Coconut and Pineapple,* a report prepared by the Ministry of Commerce and Industry for the visit of the Asian Development Bank Team, Kuala Lumpur, August 1967, p. 7.

[9] For a good discussion of the various pests and diseases of the Malaysian oil palm, see C.N. Williams and Y.C. Hsu, *Oil Palm Cultivation in Malaya,* Kuala Lumpur, University of Malaya Press, 1970, Chap. 13.

[10] In 1970, the export unit value rose to $668 per ton and in 1971 to $675 per ton.

rubber prices, the discussions in Chapter II have shown that 1960 was a watershed point from which there emerged a generally consistent downward price trend and this became more pronounced from 1965.

A number of studies were undertaken in recent years to show the relative profitability of investments in oil palm and rubber, using different assumptions.[11] Despite these different assumptions, the studies nevertheless came to one common conclusion namely, that investments in the oil palm industry were more worthwhile than in rubber for the 1960's. A summary of the results of these studies is given in Table 7.6. Furthermore, the actual performance of past investments in oil palm compared with rubber had also enhanced the attractiveness of the oil palm industry. For example, the Guthrie Corporation found that in 1966, a mature acre of oil palm yielded a profit of £48.9 while that from a mature acre of rubber was only £24.1.[12]

Public policy took its cue largely from the changed prospects for rubber. Through two approaches, it *supported* and *reinforced* the shift of resources from rubber to oil palm, motivated already by the factors discussed. Firstly, oil palm was made eligible for grant assistance under the rubber replanting schemes. Secondly, there was a policy decision to emphasize on oil palm instead of rubber as the principal crop on new land settlement schemes opened up by the Federal Land Development Authority (FELDA).

As pointed out in Chapter V, the various rubber replanting schemes established since 1952 also provided identical grant assistance to estates and smallholdings to switch from rubber to selected crops. Oil palm was an approved crop for estates for purposes of grant assistance from as early as 1953. For smallholdings, it became an eligible crop only from 1962, the reason being that smallholders had hardly any experience with oil palm as a crop on their land. The grant for estates for new planting and replanting with oil palm (and the other eligible crops) was $400 per acre. The grant for smallholders which applied at the time when oil palm became an eligible crop for assistance was $750 per acre for those owning more than five acres and for those with less than five acres, an additional sum of $50 was payable on successful completion of replanting or new planting.[13]

[11] Some of these studies are: i) Lembaga Kemajuan Tanah Persekutuan, *Penyata dan Kira2 Tahunan Hingga 30-6-64*, p. 76; ii) Tippets-Abbett-McCarthy-Stratton and Hunting Technical Services Ltd., *The Jenka Triangle Report – Resources and Development Planning*, New York and Borehamwood, 1967, pp. 118–119; iii) Theodore J. Goering, "A Note on Investment Decisions in Oil Palm and Rubber" in *Review of Agricultural Economics, Malaysia*, Vol. 2 No. 1 (June 1968); iv) Ng Choong Sooi, *Economic Aspects of Replanting on Rubber Estates*, a thesis submitted to the University of Malaya for the degree of Master of Agricultural Science, 1969.

[12] R.P. Joaquim, "The Palm Oil Industry and the Malaysian Economy" in *Ministry of Commerce and Industry Journal*, Vol. 1 No. 3 (November 1968), p. 33.

[13] Before 1963, the grant assistance did not cover new planting with the eligible crops by the smallholders but only for replanting of former rubber land with such crops. See Chapter V.

Table 7.6

West Malaysia – Relative Profitability of Oil Palm and Rubber – A Summary of Selected Estimates

I. *Federal Land Development Authority (FELDA) [1964] : Estimated Monthly Income from 8 acres of Main Crop:*

		Gross Monthly Income before Loan Repayment ($)	*Average Monthly Income during Period of Loan Repayment ($)*
Oil palm[a]			
Market Price net of Export Duty			
$450 per ton (palm oil)		340	220
$600 per ton (palm oil)		500	270
$750 per ton (palm oil)		660	320
Rubber[b]			
Market Price (cents/lb.)	*Market Price net of Export Duty* (cents/lb.)		
55	$47^{3}/_{8}$	320	200
60	$52^{1}/_{4}$	350	220
65	$56^{1}/_{4}$	380	230

II. *The Jengka Triangle Report (1967):*

Estimated Yields at Maturity	*Price during First Year of Production*	*Present Worth of Annual Gross Margin for Years 0 to 25 Discounted to the Date of Planting — Rates of Interest used in Discounting*		
		5%	*10%*	*15%*
		($ per acre)		
Oil Palm				
9 tons FFB[c]	$500 per ton: oil $350 per ton: kernels	5,942	3,095	1,658
Rubber				
1,400 lbs (budgrafted)	53 cents per lb.	4,830	2,415	1,259
1,270 lbs (clonal seedlings)	53 cents per lb.	4,822	2,496	1,355

III. *Theodore J. Goering (1968):*

	Internal Rate on Return (%)
Oil Palm	
i) Palm oil price at $600 per ton in 1971 and declining to $475 by 1978; $450 thereafter. Planted on 6,000 acres of newly-developed land.	16.9
ii) Palm oil price of $500 per ton in 1971–74; $475 in 1975–78; $450 thereafter. Planted on 6,000 acres of newly – developed land.	15.9
iii) Palm oil price of $500 per ton in 1971–74; $450 in 1975 – 78; $400 thereafter. Planted on 6,000 acres of newly-developed land	14.1
Rubber	
i) 50 cents per lb. in 1974–81; 48 cents per lb. in 1982–89; 45 cents per lb. thereafter. Planted on 6,000 acres of newly-developed land.	10.9
ii) 47 cents per lb. in 1974–81; 45 cents per lb. in 1982–89; 42 cents per lb. thereafter. Planted on 6,000 acres of newly-developed land.	9.4

Sources: 1. Lembaga Kemajuan Tanah Persekutuan (FELDA), *Penyata dan Kira-Kira Tahunan bingga 30.6.64*, p. 76.
2. Tippets-Abbett-McCarthy-Stratton and Hunting Technical Services Ltd., *The Jengka Triangle Report – Resources and Development Planning, op. cit.*, pp. 118–119.
3. Theodore J. Goering, "A Note on Investment Decisions in Oil Palm and Rubber" in *Review of Agricultural Economics Malaysia*, Vol. 2 No. 1 (June 1968). pp. 82–83.

[a] Over a period of 20 years.
[b] Over a period of 25 years.
[c] Fresh fruit bunch.

Table 5.12 of Chapter V sets out the replanting and new planting of oil palm assisted by grants under the various rubber replanting schemes. It can be seen that by 1970, a total of 77,200 acres of oil palm had been planted with the assistance of such subsidies. During the period 1953–70, the acreage under oil palm increased by 592,500 acres. Subsidized replanting and new planting of rubber land with oil palm thus accounted for only 13 per cent of the increased acreage during the period. This suggests that while the subsidies had helped to facilitate some switch from rubber to oil palm, the crucial determinant of the large expansion in oil palm acreage lies elsewhere. With the continued worsening in rubber prices, particularly in the second half of the 1960's, the factor of relatively better prospects in oil palm investments became a very prominent consideration which encouraged the concentration on oil palm. Further evidence in support of this may be seen in Table 7.4. During 1968–70, when the replanting assistance ceased to be available to estates, planting of estate land with oil palm continued at a significantly higher level (averaging 53,000 acres a year) than in 1958–67 when the subsidy was available (the average per year then was 20,400 acres).

Oil palm is essentially an estate crop which requires highly capitalized processing plants, good transport facilities and well-organized maintenance and harvesting practices, among other things. Except in cases where there is easy access to these facilities, especially to the processing plant or, in properly organized production units with centralized facilities as in the FELDA oil palm schemes, the oil palm is not a suitable crop for smallholders. Thus, despite the larger financial assistance given to smallholders compared with that for estates, only 21,200 acres of smallholdings were replanted and new planted with oil palm in 1953–70 compared with 56,000 acres in estates (Table 5.12). This constituted about 21 per cent of the total smallholding acreage replanted/new planted with approved crops other than rubber during the period.

The second approach of public policy to expand oil palm acreage, that is, via the schemes of FELDA, was of a different character, being wider and more direct in impact and more certain in terms of execution of the policy. More specifically, it involved the development of new oil palm areas by FELDA mainly, and the financing of their cost of development by the use of public funds, part of which was however, recoverable from the settlers over a period of time. At the end of 1969, FELDA had drawn a total of $281.4 million[14] from public funds since it commenced operations in 1956 and of this, $216.2 million were being or would be recovered from the settlers with the maturity of the main crop.[15]

[14] Federal Land Development Authority, *Annual Report 1969*, p. 17.

[15] This amount comprised expenditures on direct agricultural development e.g. jungle clearing, establishment of cultivation areas, settler houses, allowance to settlers before the crops start to yield, planting material, tools and fertilizers. The non-recoverable part covered expenditures concerned with the administration of the land settlement schemes, e.g. office and staff buildings of FELDA, internal roads, staff salaries, motor vehicles and machinery.

From Table 7.3, it can be seen that since its establishment to 1970, FELDA was responsible for opening up new land areas and planting them with oil palm to the extent of 160,600 acres or 23 per cent of the planted acreage under oil palm in West Malaysia. FELDA had thus become a significant instrument in fostering agricultural diversification. However, it acquired this role not by intention or choice but by forces of circumstances which made oil palm a more profitable enterprise than rubber.

The basic objective of FELDA was "to increase rural incomes manifold and achieve higher standards and levels of living."[16] It sought to achieve this by enabling deserving rural people to own economically viable farms in planned land development and settlement schemes provided with a) all essential public utilities and social amenities, b) adequate management, training and extension facilities and, c) suitable processing and marketing arrangements.[17] The principle governing the selection of crops was laid down in a policy statement of the Authority in 1956: "As the purpose is to create wealth, for Malaya and for the farmer, crops of the highest value should be grown."[18] More specific recommendations on the crops to be planted on land to be developed by FELDA in its early period had, however, been spelled out by the Working Party set up by the Government in August 1955 to "assess the need in the various states and settlements for assistance from the Federal Government in the development of new areas for land settlement".[19] In recommending the establishment of a land development authority, the Working Party also urged that the main crops on the land development schemes should be those "which are well-established in this country and in which unknown agricultural factors can be kept to a minimum".[20] Rubber and coconut were generally recommended as the main crops by the Working Party but it also considered that oil palm and a few other crops[21] could serve as main crops in certain specific areas.

In working towards its basic objective, FELDA found rubber to be its obvious choice in the initial stages. In Table 7.7, it can be seen that rubber was the sole main crop on FELDA's land development schemes in 1957–60. In 1961, the first oil palm scheme was established but rubber continued to be planted in the 21 other schemes started in 1961 and 1962. In 1963 and 1964, the planting of oil palm was extended with the implementation of seven oil palm schemes. But

[16] Lembaga Kemajuan Tanah Persekutuan, *Penyata dan Kira2 Tahunan Hingga 30-6-64*, p. 56.

[17] *Ibid.*

[18] Federal Land Development Authority, "No Need to be Poor – A Policy Statement", Kuala Lumpur, 1956, p. 4.

[19] Federation of Malaya, *Report of the Working Party set up to Consider the Development of New Areas for Land Settlement in the Federation of Malaya*, Kuala Lumpur, Government Printer, 1956, p. 16.

[20] *Ibid.*

[21] The other crops were pineapple, coffee, tea, cocoa and padi.

Table 7.7

West Malaysia – FELDA Land Settlement Schemes by Number, Acreage and Settler Population

Year	Number of Schemes			Acres Planted			Number of Settler Families
	Rubber	Oil Palm	Total	Rubber	Oil Palm	Total	
1957–59	10	–	10	4,091	–	4,091	791
1960	4	–	4	10,509	–	10,509	1,981
1961	10	1	11	14,471	926	15,397	715
1962	11	–	11	24,673	1,749	26,422	881
1963	8	4	12	17,343	6,839	24,182	2,043
1964	8	3	11	22,393	8,317	30,710	1,150
1965	–	1	1	8,475	9,578	18,053	1,294
1966	–	1	1	14,442	14,032	28,474	1,465
1967	–	7	7	9,144	18,235	27,379	1,670
1968	–	6	6	2,344	31,044	33,388	3,791
1969	–	7	7	1,928	36,321	38,249	2,619
1970	5	4	9	18,007	33,554	51,561	2,318
1957–70	56	34	90	147,820	160,595	308,415	20,718*

Sources: Federal Land Development Authority, *Annual Report 1970.*

*Approximately 120,000 persons.

rubber was still largely emphasized as 16 new rubber schemes were started during the same period. Rubber generally continued to meet the criterion of the main crop for the land schemes until 1962 and to a lesser extent in 1963–64, although as pointed out earlier, the price decline for rubber commenced as early as 1960. Thus, up to 1964, a total of 51 rubber schemes were started and 93,480 acres planted to rubber. As against this, there were only eight oil palm schemes with a planted area of 17,831 acres.

In 1965, a decision was taken by FELDA which was of significance to crop diversification in West Malaysia. Rubber was no longer to be planted in all FELDA schemes to be established and in its place oil palm was chosen the sole main crop.[22] New planting of rubber would, however, continue on those schemes which were established earlier. A total of 26 new oil palm schemes covering 142,764 acres were established in 1965–70. By the end of 1970, the total area planted with oil palm in FELDA schemes was 160,595 acres which now exceeded the total rubber acreage on the schemes. In 1970, however, the policy with regard to oil palm as the sole main crop was modified and for the first time since 1965, rubber was planted again on the new schemes. This change was no doubt influenced by the sharp rise in rubber prices in 1969.[23] But oil palm continued to be emphasized (Table 7.7).

In the context of Malaysia's objective towards greater diversification of its production structure, the existence of FELDA was both appropriate and timely. Geared as it was towards the achievement of higher rural incomes, it thus possessed a built-in assurance that its main crop would be one that should yield the highest value in the long term. With acceleration of its activities during the period of declining prices of rubber, it became an important instrument in assisting the diversification process, through substantially expanding the oil palm acreage in the latter half of the 1960's.

But in another direction, public policy as reflected in the operations of FELDA during 1957–70 made only a very limited contribution to agricultural diversification. In the FELDA land development schemes as implemented, there were large provisions for the development of subsidiary crops. Each scheme allowed for two acres per settler family for the cultivation of subsidiary crops and other agricultural activities and in a typical scheme, 800 acres were allocated for this purpose.[24] As a total of 90 schemes had been launched by FELDA, this means a possible area of 72,000 acres for the development of subsidiary crops.[25]

[22] Federal Land Development Authority, *Annual Report 1967*, p. 54.

[23] The average price of RSS.1 in 1969 was 69.8 cents per lb. compared with 53.1 cents per lb. in 1968 and 54.1 cents per lb. in 1967.

[24] Lembaga Kemajuan Tanah Persekutuan, *Penyata dan Kira2 Tahunan Hingga 30-6-63*, p. 53.

[25] This is only an estimated area that could become available for subsidiary crops. It was reported in late 1967 that the 2 acres kept in reserve for subsidiary crops have been done away with. See Federal Land Development Authority, *Annual Report 1967*, p. 64.

Table 7.8

West Malaysia – Subsidiary Crops Acreage in FELDA Schemes by Types of Use, 1968

Used For	*Acreage at End of 1968*
Fish ponds	53
Wet Padi	2,979
Dry padi	515
Vegetables	178
Banana	1,340
Tapioca	390
Groundnut	6
Maize	120
Sweet Potato	70
Others	640
Total	6,291

Source: Federal Land Development Authority.

However, achievement was very limited. At the end of 1968, only 6,291 acres had been utilized for subsidiary crops in the manner set out in Table 7.8. This represented only 10.6 per cent of the estimated acreage for subsidiary crops at the end of 1968.

In the past it has been found that the utilization of the subsidiary crop area could only be achieved at some expense of the effort needed for the main crop area. One important reason for the neglect of subsidiary crops can therefore be attributed to FELDA's policy to maximize the main crop acreage for the settlers which no doubt was consistent with its income maximizing objective. However, the labour requirements on the rubber schemes lessened after the third year of planting. That should give the settlers more time for the development of the area for subsidiary crops. But in practice, the subsidiary crop acreage was left largely uncultivated.[26] Another factor for the neglect of subsidiary crops was part of the larger problem arising from the inadequate attention accorded by the Government to the development of the lesser crops. Thus, on many areas allocated for subsidiary crops in the rubber schemes, FELDA reported that "no actual development has been possible because of difficulties of selecting the type of crop or crops to be planted".[27] However, in 1967, FELDA disclosed its

[26] *Ibid.*, p. 65.

[27] *Ibid.*, p. 66.

intention to start pilot projects on the subsidiary crop areas for the more promising crops.[28]

A second potential for further agricultural diversification which remained unexploited also arose from the income maximizing objective of FELDA. In the initial years of the rubber schemes, 6 acres were accorded to each settler but this was raised to 7 acres in 1960 and to 8 acres in 1961, the latter being maintained since then.[29] These adjustments were introduced to compensate for the decline in rubber prices[30] but the extent to which this means can be used is obviously limited by the capability of the settler and his family to operate the alloted acreage efficiently. In the oil palm schemes, the standard area of the main crop was 10 acres per settler family. A possible alternative which, at the same time, would have provided some protection to the settlers in both the rubber and oil palm schemes against declining prices in the years to come and at the same time would have assisted agricultural diversification in general, would be to reduce the main crop acreage and to set up an area for cash crops to a corresponding extent, for each settler family. In addition, these crops would also be planted on the areas allocated for subsidiary crops. As it is, the almost sole concentration on rubber in the rubber schemes has now exposed such schemes to reduced incomes compared with the income targets planned earlier.[31] Oil palm schemes are not free from the possibility of declining prices either. Palm oil is highly substitutable with other fats and oils. The World Bank in a recent study forecast that over 1971–75, the total supply of fats and oils would grow faster than demand and with the expected increase in palm oil production (arising from the large planting in South-East Asia and Africa), the C.I.F. price of palm oil could fall to about $428 per ton by the mid-1970's.[32] (The export unit value in 1970 was $668 per ton). Further price declines would leave the settlers with less than the $220 a month average income envisaged during the loan repayment period.[33] It is tempting to suggest here that if the Government had initiated and supported adequate research in the past on a wide range of cash crops, more diversified holdings in the schemes of FELDA could have been greatly facilitated. But FELDA must also bear part of the blame as it could have at least

[28] *Ibid.*

[29] *Ibid.*, p. 63. However, it was felt that if rubber should form the main crop again in future FELDA schemes, the acreage per settler should be raised to 10 to allow for the low prices. See Federal Land Development Authority, *Annual Report 1969*, p. 12.

[30] Federal Land Development Authority, *Annual Report 1967*, p. 66.

[31] The 1971 average price of rubber (R.S.S. 1) was 46 cents per lb. and as further decline may be envisaged in the 1970's, the average monthly income for a settler family would be below $200 during the loan repayment period. See Table 7.6.

[32] International Bank for Reconstruction and Development, *Agriculture Sector Survey – Malaysia* (A report to the Malaysian Government in three volumes), Washington D.C., July 1971, Vol. I, p. 10.

[33] See Table 7.6 which computed average incomes on the basis of eight acres.

exercised some initiative to develop the more profitable subsidiary crops, considering that as much as two acres per settler family were earmarked for such a purpose. As it is, FELDA established a research department only in 1970. Besides research in oil palm, the department had started projects connected with cocoa and cattle farms.[34] It will be some years before there are tangible results.

Apart from FELDA, land development schemes planted with oil palm were also undertaken by the State Governments. Available yearly data combined the acreage planted by the State Governments with those planted by smallholders with grant assistance under the Rubber Industry (Replanting) Board Fund 'B' schemes. These are shown in Table 7.3. Since the planting of oil palm by rubber smallholders with grant assistance totalled 21,200 acres during 1953–70 (Table 5.12), the State Governments therefore accounted for 32,700 acres or only 4.7 per cent of the total planted acreage in 1970. These efforts were still relatively small.

The other aspect of development of the oil palm industry relates to research. On this, the Government had shown itself lacking in initiative, foresight and, boldness in approach. Since oil palm became a commercial crop in West Malaysia, research into its various aspects was undertaken by the Department (later, Division) of Agriculture, the agency houses owning the major estates and lately, FELDA. The more serious consequences of this fragmented approach to research were: i) the output of the research was not shared throughout the industry; and ii) it led to a waste of scarce resources in having to duplicate efforts which could very well have been avoided under a system of centralized research.

On the part of the Government, there was little interest in intensive oil palm research before 1965 for a number of reasons. Firstly, until the early 1960's, the promotion of agricultural diversification was in effect more a declaration of intent than as an objective to be implemented immediately. Furthermore, the massive replanting/new planting programmes in the rubber industry were for a long time considered sufficient for dealing with the rubber problem. Although rubber prices commenced to decline from 1960, they were not considered alarming until the mid-1960's. Secondly, the oil palm had generally adapted well to the Malaysian environment and, equally important, had enjoyed relatively good prospects. Thirdly, the large commitment of public funds in the oil palm schemes of FELDA commenced only from 1965. It is not surprising, therefore, that oil palm research undertaken by the Government had low priority until 1965. A World Bank mission which visited the country in 1966 considered the Government's facilities for oil palm research to be small, inadequately staffed and deficient in organization to meet the needs of the industry.[35]

The large switch to oil palm from 1965 pressed for more interest in oil palm research. Among other things, the Government decided to intensify the oil palm

[34] Federal Land Development Authority, Malaysia, *Annual Report 1970*, p. 14.

[35] International Bank for Reconstruction and Development, *Malaysia — Review of Economic Situation* (A report to the Malaysian Government in two volumes), Washington D.C., July 1967, Vol. II.

breeding and selection programmes, the objective of which was to produce high-yielding *tenera* seeds for FELDA and the State Government schemes.[36] In 1967, an oil palm research unit was established to pursue research more vigorously.[37]

For the private sector, the Oil Palm Growers' Council of Malaysia (OPGCM) noted that a considerable amount of production research had been undertaken by the various oil palm companies but there was "almost a complete void in the field of consumption research".[38] Pending more permanent arrangements, it was agreed that the Malayan Rubber Fund Board with its readily available facilities should be allowed to conduct such consumption research.[39] For its finance, the OPGCM decided to levy a voluntary cess of $1 per ton on oil production with effect from October 1970.[40]

In October 1969, the Government established the Malaysian Agricultural Research and Development Institute (MARDI) to undertake research to improve, promote and find new uses for agricultural products, including livestock. With this machinery now available, the Government conveyed to the OPGCM in December 1969 its view that all research on oil palm, beginning with production research and later consumption research, should be centralized at MARDI.[41] At the beginning of 1970, MARDI set up its Oil Palm Committee (the members of which included representatives of the OPGCM) to prepare a research programme covering the industry's needs. Work on the programme was expected to commence in early 1971.[42]

This is indeed one of the most important developments for oil palm research in Malaysia. But the concept of centralized research for oil palm was by no means a recent one. In the early 1950's, the Director of Agriculture made an unsuccessful attempt to have a central oil palm research station established on the basis of participation by all groups undertaking oil palm research.[43] This concept was never vigorously pursued until the establishment of MARDI. The reasons pointed out earlier seemed so overwhelming that the valuable example of the Rubber Research Institute appeared to have been lost sight of. The lack of foresight and initiative here had meant the delay of many years for a strong and co-ordinated research effort. Even after MARDI has begun to work, it will be quite sometime before the benefits of such research effort could be realized and made

[36] See "Special Appendix to the Royal Address by His Majesty the Yang di–Pertuan Agong" presented at the Opening of Parliament on 25 May 1965, para. 377.

[37] See "Special Appendix to the Royal Address by His Majesty the Yang di-Pertuan Agong" presented at the Opening of Parliament on 14 June 1967, para. 565.

[38] The Oil Palm Growers' Council of Malaysia, *Annual Report 1969*, p. 4.

[39] The Oil Palm Growers' Council of Malaysia, *Annual Report 1970*, p. 7.

[40] *Ibid.*, pp. 7–8.

[41] The Oil Palm Growers' Council of Malaysia, *Annual Report, 1969*, p. 5.

[42] The Oil Palm Growers' Council of Malaysia, *Annual Report 1970*, pp. 6–7.

[43] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, p. 191.

pervasive throughout the industry. The significance of these delays is already becoming obvious. As pointed out earlier, palm oil is highly substitutable with other oils and fats and also that it is expected to face a price decline in the 1970's. The Malaysian oil palm industry has no control over the supply of its substitutes or the growing supply of oil palm products from other countries. In view of the limited achievements of research in developing higher yielding palm varieties, the World Bank mission visiting Malaysia in late 1970 had obviously to confine its major recommendation for the oil palm industry (to meet the anticipated price decline) to that of merely stressing the need to plant oil palm in the most favourable areas.[44]

Attempts by the Government to promote further vertical diversification of the industry occurred in 1970.[45] All the time, Malaysia's exports of palm oil had been in the form of crude oil. Furthermore, the traditional practice of extracting oil from the palm kernels was by mechanical means. To provide incentive for further processing of palm oil in the country so that the products of the industry could be exported as refined edible palm oil and solid fats, the Government decided to accord such activities with tax relief under the pioneer industries incentive.[46] At the end of 1970, three companies were granted tax relief to undertake such processing.[47] At the same time, the Government also decided to grant the same incentive for extraction of oil from the palm kernels by the more efficient means of using solvent or chemical methods. At the end of 1970, six companies qualified for this incentive.[48] The pioneer industries incentive, as will be observed later, had been in existence since 1958 but the Government had not considered its use to promote processing industries until now. This long-standing lack of decision provides another indication of the absence of a firm and comprehensive approach in the Government's efforts to increase economic diversification.

2.3 *General Evaluation*

The most striking feature of the oil palm industry in 1957–70 was its remarkable growth. The major stimulus for this was the influence of market forces which favoured oil palm at the same time that they adversely affected rubber's prospects. This coupled with oil palm's suitability for the Malaysian environment caused a substantial diversion of investments into oil palm. The crop policies for the public land development schemes had assisted this switch in an important manner because its effects coincided with the Government's objective of income maximization for the settlers. Grants under the rubber replanting schemes had

[44] International Bank for Reconstruction and Development, *Agriculture Sector Survey Malaysia, op. cit.*, Vol. I, p. 24.

[45] Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1970*, p. 82..

[46] Discussion of this tax incentive will be made in Chapter IX.

[47] See the 1971 Budget Address by the Minister of Finance on 22 December 1970.

[48] *Ibid.*

also helped. However, other aspects of public policy had been less helpful. In particular, the Government had, until recently, shown a lack of initiative and foresight in the organization and development of research efforts for the industry and the provision of incentives for the more sophisticated processing of its products.

3. THE PINEAPPLE INDUSTRY

3.1 *Introduction*

The pineapple industry is one of the oldest industries in the country. It was established as early as the end of the 19th century, starting as a shop-house business canning the fruit of the pineapple plant.[49] By the late 1930's, canned pineapple became the third most important export after rubber and tin,[50] although it later lost this position to other emerging exports as palm oil, timber and iron ore.

Being an important and well-established source of foreign exchange, the interest of the Government in the industry naturally was also long-standing. Indeed, as early as 1934, the Government saw fit to introduce legislation, the Pineapple Industry Ordinance, to regulate production, particularly over the hygienic conditions in the canneries. In 1938, there was established the Central Board of Pineapple Packers the function of which was to exercise control over the purchase of fruit and the sale of the canned products. However, much of the work was undone during the Japanese Occupation of the country. The industry virtually disappeared during these war years when canning came to a stop coupled with widespread neglect and abandonment of the pineapple plantations. By 1945, only one out of the 17 canneries remained in working condition.[51]

The emergence of the pineapple industry as a substantial source of foreign exchange, averaging around $45 million per annum in recent years, owed itself therefore to post-war efforts and policy. This is not saying that the knowledge and experience accumulated in the pre-war years had not been a material factor. They helped considerably in re-establishing the industry faster than would otherwise have been possible. But during the post-war years, important developments occurred within the industry which altered its character and its growth potential. On these, public policy and measures had been instrumental in many respects. The following section will assess their contributions.

[49] See S. Selvadurai and S. Jegatheesan, *An Economic Survey of Pineapple Smallholdings in Pontian, Johore,* Kuala Lumpur, Ministry of Agriculture and Co-operatives, August 1968, p. 1.

[50] *Ibid.*

[51] O. Wahby, A. Sedky and M.H. Ragab, *The Present Situation of Pineapple Production, Processing and Marketing in Malaysia,* Kuala Lumpur, Food Technology Research and Development Centre of Malaysia, April 1969, p. 15.

3.2 *Public Policy and the Industry*

One of the most influential bodies to shape the character of the post-war pineapple industry was the Johore Pineapple Committee which was set up in 1947 to make recommendations for the reconstruction of the industry.[52] Several of the recommendations put forward by the Committee were accepted by the Governments of Malaya and the Colony of Singapore but some of these were implemented only after many years. Firstly, the Committee recommended the enactment of a revised Pineapple Industry Ordinance; this was implemented four years later as the Pineapple Industry Ordinance, 1951. The second recommendation called for the establishment of a joint industrial council for pineapple to advise the Government on the administration of the Ordinance. Such a council, the Pineapple Joint Industrial Council (PJIC), was formed only in 1955. Thirdly, the Committee recommended that the pineapple plant be established as a permanent crop by organized groups of small growers and that packers cultivate a minimum of 1,500 acres each. The rationale for this recommendation was that pineapple planting had traditionally been a catch crop on newly-developed land for rubber before the 1931 rubber restriction scheme and thereafter the new pineapple areas were mainly to be found on the hilly slopes in Johore where soil erosion had been a problem. The requirement for canneries to maintain a minimum of 1,500 acres of pineapple estates continued to be a condition for the granting of registration to a cannery even in later years.[53] The Committee also recommended that pineapple cultivation be on flat peat land and indeed this had been accepted as Government policy since the end of the war.[54] Another notable recommendation of the Committee was for the establishment of facilities for agronomic and processing research. Initially, research was undertaken by the Department of Agriculture with financing by the industry through the PJIC.[55] The Government also operated a canning research station in Tampoi. Another important recommendation was for a cess to be levied on pineapple exports to provide resources for the development of fruit production and processing within the industry. This was implemented in 1952 when a cess of 20 cents per case of pineapple exports was levied to finance research activities.[56] The Committee considered it appropriate for prices of fruit payable by the packers to the smallholders to be fixed from time to time under Government supervision. Indeed, the main emphasis of the control activities of the PJIC

[52] For a list of the recommendations of this Committee, see S. Selvadurai and S. Jegatheesan, *op. cit.*, pp. 2–3.

[53] *Pineapple Industry (Cannery Control) Regulations, 1959*, Section 4 (a).

[54] *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry* in Annexure to White Paper, Cmd 19 of 1960, tabled in Parliament on 16 June 1960, para. 14.

[55] *Annual Report of the Department of Agriculture for the Year 1954*, p. 10.

[56] *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry, op. cit.*, para. 91.

and its successor, the Malayan Pineapple Industry Board (MPIB), was on the pricing of the smallholders' fruit and the allocation of the fruit among the canneries.[57] The last significant recommendation of the Committee was that the maintenance of hygienic standards and the adoption of modern processing methods be made compulsory. The earlier part of the recommendation was a confirmation of the need to maintain efforts initiated before the war. As for the latter, there appeared no practical means to force canneries to use modern equipment.

All these measures assisted in no small way in re-establishing the pineapple industry in Malaya. By 1957, the total area under pineapple was 28,907 acres, of which estates accounted for nearly 60 per cent (Table 7.9). Output of fresh pineapples totalled 116,000 tons in 1957. Exports of pineapples and pineapple products for that year amounted to about $23½ million.

The next phase in the development of the pineapple industry began roughly from 1956. This period marks the point when it was possible to pursue a more Malayan-oriented policy-mix. It also coincided with a period of crisis within the industry which compelled the necessity for a new and more vigorous set of policy measures. In the main, the crisis placed the smallgrowers' sector in jeopardy and also required a number of deficiencies within the industry to be corrected in order to assure for its products a growing export market. The Government responded well to the situation and, if measured by the production gains and export performance, its policy measures had made a substantial impression on the problems of the industry. But undue delays marked the implementation of some of these measures.

The crisis in the industry covered a continuous period of about four years and was the result of a combination of factors. On the demand side, there was the decline in demand, particularly in the United Kingdom, a major market for Malayan canned pineapple. Due to the cold wet summer of 1956, very poor sales were recorded for the United Kingdom market.[58] In 1957, the dominant factor was increased competition from the other pineapple producing countries.[59] In 1958, the English summer again "proved to be unseasonable" and this was also accompanied by a cold summer in Europe.[60] In 1959, demand remained low, as reflected in the price paid for the smallgrowers' fruit.[61] It was only from the second half of 1960 that fruit prices recovered. On the supply side, a factor of great importance was the emergence from 1956 of expanded productive capacity in the other producing countries. The plantings were

[57] *Ibid.*, para. 16.

[58] *Annual Report of the Department of Agriculture for the Year 1956*, p. 15.

[59] *Annual Report of the Department of Agriculture for the Year 1957*, p. 17.

[60] *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry, op. cit.*, para. 20.

[61] The price was 2½ cents per lb. compared with 5 and 5½ cents per lb. for medium and small fruit in 1955.

Table 7.9

West Malaysia – Acreage under Pineapple of Canning Varieties by Smallgrowers and Estates (acres)

Year	Area* under Pineapple of Canning Varieties				
	Total	Smallgrowers		Estates	
		Area	As % of Total	Area	As % of Total
1957	28,907	11,931	41.3	16,976	58.7
1958	34,083	15,086	44.3	18,997	55.7
1959	28,441	13,271	46.7	15,170	53.3
1960	28,486	14,516	51.0	13,970	49.0
1961	27,298	14,158	51.9	13,140	48.1
1962	27,298	14,158	51.9	13,140	48.1
1963	28,098	14,158	50.4	13,940	49.6
1964	32,117	18,773	58.5	13,344	41.5
1965	32,117	18,773	58.5	13,344	41.5
1966	34,470	22,641	65.7	11,829	34.3
1967	34,470	22,641	65.7	11,829	34.3
1968	38,050	26,220	68.9	11,830	31.1
1969	38,050	26,220	68.9	11,830	31.1
1970	41,708	29,708	71.2	12,000	28.8

Sources: 1. Malayan Pineapple Industry Board.
2. O. Wahby, A. Sedky and M.H. Ragab, *The Present Situation of Pineapple Production, Processing and Marketing in Malaysia, op. cit.*
*Registered area.

reaching their periods of peak production in South Africa, Australia, Taiwan and Kenya. In Malaysia, the results of the post-war rehabilitation efforts were also becoming tangible from 1956.[62] In the early stages, the crisis took the form of large accumulations of stocks of canned pineapple coupled with a general reluctance by the canners to continue production at normal levels.[63] At this stage, the local canners also entered into price competition with the overseas producers in order to seize the restricted markets and to run down their large stock accumulations.[64] This action in turn affected the smallgrowers in that the prices paid for their fruit declined correspondingly. As the crisis deepened in 1957, high rates of rejection of the smallgrowers' fruit became widespread[65] and towards the end of 1958, certain canneries even refused to accept the smallgrowers' fruit with the consequence that the fruit were left to rot.[66] Considerable and prolonged hardships were thus experienced by the smallgrowers. In another direction, the depressed state of the industry caused a fall in the general standard of maintenance of the smallgrowers' holdings, the abandonment of a number of them and even a switch of some holdings to rubber, especially in 1958 and 1959.[67]

Faced with this crisis, the Government took an important decision which was to have a major impact on the stability and further development of the pineapple industry. This was the establishment of a $5 million cannery which could take up the bulk of the smallgrowers' fruit. The entire financial resources were provided by the Government. Of significance is that this measure represented a new approach of the Government towards directly productive activities which in the past had been left entirely to private enterprise. Its significance is even greater when it is considered that such public undertakings proved to be quite few even by the end of the 1960's.

In a sense, it maybe argued that this new approach in public policy was forced on the Government by circumstances. The concept of a cannery to absorb smallgrowers' fruit was not new but one that had been considered even by the Johore Pineapple Committee of 1947 as a possible long-term solution for the satisfactory marketing of smallgrowers'

[62] *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry, op. cit.*, para. 19.

[63] *Annual Report of the Department of Agriculture for the Year 1956*, p. 15.

[64] O. Wahby, A. Sedky and M.H. Ragab, *op. cit.*, p. 17. Also, *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry, op. cit.*, para 22 (b).

[65] *Annual Report of the Department of Agriculture for the Year 1957*, p. 17.

[66] The only cannery in Selangor closed down temporarily in August 1958 while in Johore, the canneries relied on the fruit grown on their own estates. See, *Annual Report of the Department of Agriculture for the Year 1958*, p. 15.

[67] *Annual Report of the Department of Agriculture for the Year 1958*, p. 77. Also, *Annual Report of the Department of Agriculture for the Year 1959*, p. 5.

fruit.[68] Up to 1959, the cannery as envisaged was, however, considered largely in terms of it being a co-operative venture. As such, the Commission of Enquiry which was appointed by the Yang di-Pertuan Agung in 1959 to report on the state of the pineapple industry and to make recommendations for its improvement, could not see in it as a sound venture. The grounds cited by the Commission were: the inability of the smallgrowers to finance the cannery, the lack of evidence that smallgrowers could successfully work within the co-operative framework, the difficulty of achieving control over the planting practices of widely-scattered growers, the scarcity of first-class management expertise which was considered necessary, the Commission's conclusion that smallgrowers were less efficient producers of the fruit than estates and, the difficulty for the cannery to penetrate the existing market.[69] The Report of the Commission was studied by the Government and in a statement made in 1960 on its future policy for the pineapple industry, the Government rejected the position taken by the Commission on the smallgrowers' cannery.[70] The Government maintained that such a cannery would be the best long-term solution for the smallgrowers' marketing problem and undertook to provide the initial financing for the project. It proposed to sell its controlling interest to the smallgrowers within the framework of co-operatives once the project became a going concern. A working party was accordingly appointed to work out the details.

Considerable delays, however, attended the implementation of the decision. The funds for the cannery project were made available only from 1963.[71] The cannery, known as the Pineapple Cannery of Malaya (PCM), commenced operation in March 1965, about five years after the decision to establish it was taken. The cannery was able to absorb the bulk of the smallgrowers' fruit – this varied from a maximum of 75 per cent of the smallgrowers' fruit during the off-season to a minimum of 50 per cent during the peak season.[72] Fruit not taken by the PCM were directed to the other canneries. Thus, a substantial market for smallgrowers' pineapples was assured.

The Government continued to hold control of the PCM. Indeed, to accelerate rural industrialization under its New Economic Policy[73] and to further enlarge the market for smallgrowers' fruit, the Government undertook further financial involvement in the canning sector of the industry. Thus in 1970, the capital of PCM was raised to $14 million by the Government to enable the establishment

[68] *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry, op. cit.*, para. 61.

[69] *Ibid.*, paras 68–69.

[70] *Statement of the Government's Future Policy for the (Pineapple) Industry*, a White Paper (Cmd 19 of 1960) tabled in Parliament on 16 June, 1960, para. 17.

[71] A sum of $2½ million was initially earmarked under the 1963 Development Estimates.

[72] S. Selvadurai and S. Jegatheesan, *op cit.*, pp. 72–73.

[73] The New Economic Policy will be discussed in some detail in a subsequent chapter.

of a second cannery for smallgrowers. This cannery, costing $7.5 million, was officially opened in April 1972.[74]

A review of the pineapple acreage and production will indicate that the source of expansion of the industry was the smallgrowers' sector. Table 7.9 shows the registered acreage under pineapple. During 1957–63, the total acreage each year except for 1958, fluctuated very closely around 28,000 acres. From 1964, marked expansion in acreage became clearly evident. Between 1964 and 1970, the total registered area under pineapple increased by 13,610 acres. This expansion occurred solely in the smallgrowers' sector, the increase being 15,550 acres during this period. The area under estates fell by 1,940 acres.

Obviously, the implementation of the decision to establish a Government cannery for smallgrowers' fruit in 1963 provided some stimulus for the expansion of the smallgrowers' acreage. Another important factor appeared to be the availability of financial assistance provided under the various rubber replanting schemes since 1953. As discussed in Chapter V, identical grants were available to assist the replanting and new planting of rubber areas with other approved crops (of which pineapple was one of them) besides high-yielding rubber. For smallholders, the grant was $500 per acre in 1953 but this was increased to $750 per acre by 1962. For estates, the grant was $400 per acre. Between 1953 and 1970, a total of 17,770 acres were planted with pineapple with the assistance of these grants and virtually all of these were under smallholdings (Table 5.12). No separate statistics on acreages of pineapple estates and smallholdings were available prior to 1957 to enable an assessment to be made of the part played by the rubber replanting and new planting subsidies in the expansion of the smallgrowers' holdings. However, a comparison of the aggregated acreages for estates and smallholdings indicated that during the period 1953–70, the total pineapple area increased by 17,778 acres.[75] Table 7.9 shows that estate acreage declined quite substantially (to the extent of nearly 5,000 acres) during 1957–70. Whether this declining trend commenced earlier than 1957 or not, the fact remains that the bulk of the increase in the smallgrowers' acreage must have been financed by the subsidies of the rubber replanting schemes.[76] It can be said

[74] See supplement on "Pineapple Cannery of Malaya Sdn. Bhd. – Opening of its Second Cannery" in *The Sunday Times*, 16 April 1972.

[75] The Department of Agriculture estimated that the total pineapple area in 1953 was 23,930 acres. See *Annual Report of the Department of Agriculture for 1956*, Appendix 1.

[76] The logic of this can be explained thus. If x represents the change in smallgrowers' acreage in 1953–70, and y the change in the acreage under estates, then $x + y = 17,778$. From Table 7.9, it is seen that the estate acreage had declined and for 1957–70, the decline was nearly 5,000 acres. If it is assumed that this was all the decline in the estate acreage, then this means that the increase in the smallgrowers' acreage x would be about 22,770, an area larger than that financed by the grants. But if it is assumed that the decline in the estate acreage in 1953–70 was larger than 5,000 acres, it is obvious that x will be even larger than in the previous case. On the other hand, x may be smaller than 22,770 acres if the decline in the estate acreage was less than 5,000 acres. But in all cases, that part of the area of increase in smallgrowers' acreage financed by grant will still constitute the bulk of the total increase in smallgrowers' acreage, x.

that this was the only major crop among the eligible crops which benefited considerably from the rubber replanting grants.

Another factor, though a less significant one, that would have contributed to the growth of the smallgrowers' acreage was the system of compulsory intercrops under the Coconut Replanting and Rehabilitation Scheme established in 1963. Under the Scheme (which is discussed in the next section of this chapter), the recipients of financial assistance for replanting and rehabilitation of their coconut holdings were required to establish intercrops, one of which was pineapple. Planting material of pineapple or the other specified intercrops were provided as part of the grant. However, no statistics were available on the extent of pineapple acreage established as a result of this..

Table 7.10 shows the production of fresh pineapples by estates and smallgrowers. Production as a whole followed a generally increasing trend and this was so even during the period of the crisis. By 1970, the production of fresh pineapples had increased by about 192,400 tons or somewhat over 2½ times the output in 1957. Two interesting points may be seen from the table. Firstly, the output of smallgrowers expanded very markedly from 1961. Output in 1961 was about the same as that of 1957 and by 1970, it was 3 2/3 times larger. The effects of an assured market for smallgrowers' fruit following the establishment of the PCM could be seen in the substantial expansion of smallgrowers' annual fruit production for four years (1965–68), the expansion being in the range of 22,000–26,000 tons a year. From being the source of about one-third of total fresh fruit production between 1957 and 1962, the rapid growth of smallgrowers' output from 1961 had expanded its share until it accounted for about two-thirds in 1968–70. The second point indicated by the table is that the volume of estate production showed some increase during the first half of the 1960's but declined from 1965 until output levels in 1969 and 1970 were similar to those of 1958 and 1959. Over the period 1957–70, the share of estate output in total production declined from over two-thirds to one-third.

Less obvious in impact but nevertheless of importance to the growth and development of the industry were i) the revision of the laws governing the industry and ii) the introduction of regulations in the light of the revised legislation. A revised legislation, the Pineapple Industry Ordinance 1957, was passed in May 1957. This legislation laid a new basis for the relationship between the Government and the industry in the years that followed political independence. Under the new Ordinance, a statutory board, the Malayan Pineapple Industry Board (MPIB) replaced the old advisory body, the Pineapple Joint Industrial Council (PJIC). Members of the Board comprised the owners of canneries, growers, exporters, can suppliers, representatives of states with canneries and representatives of the Governments of Malaya and Singapore.[77] The MPIB was given wider functions than its predecessor. Like the PJIC, it was empowered to negotiate agreements on prices and grades of fresh pineapples and to regulate the production and marketing of canned pineapple. In addition, the MPIB was

[77] *The Pineapple Industry Ordinance, 1957*, Section 3.

Table 7.10

West Malaysia – Production of Fresh Pineapples
by Smallgrowers and Estates
(tons)

Year	Production of Fresh Pineapples				
	Total	Smallgrowers		Estates	
		Volume	As % of Total	Volume	As % of Total
1957	116,003	55,885	48.2	60,118	51.8
1958	152,474	49,799	32.7	102,675	67.3
1959	143,522	42,060	29.3	101,462	70.7
1960	152,806	46,994	30.7	105,812	69.3
1961	164,589	54,865	33.3	109,724	66.7
1962	195,630	62,984	32.2	132,646	67.8
1963	189,364	70,346	37.1	119,018	62.9
1964	217,820	84,231	38.7	133,589	61.3
1965	254,293	109,326	43.0	144,967	57.0
1966	254,086	131,447	51.7	122,639	48.3
1967	275,288	155,466	56.5	119,822	43.5
1968	278,454	181,385	65.1	97,069	34.9
1969	301,499	197,513	65.5	103,986	34.5
1970	308,370	205,650	66.7	102,720	33.3

Source: Y.C. Wee and K.S. Chiew, *Pineapple (Fresh Fruit) Production, 1957–70*, Pineapple Research Station, Malayan Pineapple Industry Board, *Research Bulletin No. 5*, February 1971.

provided with powers to regulate the production, grading and marketing of *fresh pineapples* for sale to the canneries and to conduct research into the cultivation and processing of pineapples and their by-products.[78] The MPIB could recommend to the Minister of Commerce and Industry the imposition of an export cess on canned pineapple. The proceeds could then be applied by the MPIB for its functions.[79] With the establishment of the MPIB, comprehensive control of the industry became possible.

The full effects of the 1957 Ordinance were, however, not felt until nearly two

[78] *Ibid.*, Section 7(3).

[79] There was also a provision to impose a cess under the previous legislation.

years later when a number of regulations governing various aspects of the industry were issued in February 1959.

Firstly, there was the Pineapple (Cannery Control) Regulations, 1959, which spelled out three main things: i) that a condition for registration of a cannery was ownership of at least 1,500 acres of land approved for pineapple planting, ii) that specified health and hygiene standards be observed in a cannery and, iii) that the cannery observe specifications relating to canning and processing of canned pineapple.[80]

The second set of regulations, the Pineapple Industry (Grading, Labelling and Marking) Regulations, 1959, covered among other things, the definition of grades of canned pineapple, the style of cut for the fruit and the fixed standards; the rules governing labelling and marking the retail packs of canned pineapple and, provisions for inspection to assure observance of the standards and specifications.[81] This and the first set of regulations were aimed at achieving certain standards for the canned product which were certainly important and necessary in a competitive market.

The third set of regulations, the Pineapple Industry (Export Marketing) Regulations, 1959, was intended to ensure an orderly marketing of canned pineapple. It empowered the MPIB, after consultation with the parties concerned, to fix and publish minimum prices for each cut and grade of canned pineapple to be sold by a registered cannery to a registered exporter and to ensure that the prices for each cut and grade be observed by the exporters.[82] The obligations of a registered exporter concerning the observance of these prices were also spelled out.[83] These regulations were aimed at removing the unhealthy competition among the canners to dispose of their products and the price-cutting activities they had engaged in.[84] It was, however, found that this and other marketing problems would be best dealt with by a single marketing corporation which was set up in 1966.

The fourth set of regulations covered efforts to be made by the Board to match the fruit supply of the smallgrowers with the demand of the canneries, the prescription of standards for the fruit to be accepted by the canneries, the powers to fix prices for the fruit after considering representation from interested parties, and the obligation of the canners to accept as allocated to them, the smallgrowers' fruit that met the standards set. These were to be found under the

[80] *Pineapple Industry (Cannery Control) Regulations, 1959*, Parts II, III and IV.

[81] *Pineapple Industry (Grading, Labelling and Marking) Regulations, 1959*, Parts III, V and VI.

[82] *Pineapple Industry (Export Marketing) Regulations, 1959*, Part V.

[83] *Ibid.*, Part III.

[84] The Minister of Commerce and Industry referred again to these practices when he justified the setting up of a pineapple industry marketing corporation in 1964. See his speech of 8 July 1964 when he moved the *Pineapply Industry (Amendment) Bill, 1964.*

Pineapple Industry (Fruit Control) Regulations, 1959.[85] It is quite obvious that these measures were highly influenced by the crisis in the industry. The large supply of fruit in relation to demand during the crisis prompted the incorporation into the Regulations the concept of estimating fresh fruit requirements one year ahead and to allocate a fruit quota for the smallgrowers. It was hoped that this would match supply with prospective demand. However, this part of the Regulations was never really tested. The need for the MPIB to work out the fruit quota for the smallgrowers soon proved unnecessary with the improved situation for canned pineapple and the establishment of the PCM. In 1966, this was formally abolished.[86] The other part of the Regulations that continued to be valid and necessary was the requirement that canners should accept the smallgrowers' fruit as allocated to them since the PCM was not equipped to absorb the entire smallgrowers' output.[87]

One of the basic problems of the industry was the marketing of canned pineapple abroad. A feature in marketing that was found to have adverse effects on the long-run prospects of individual canneries and the Malayan canned pineapple industry as a whole was the competition and price-cutting often engaged in by the individual canneries in the past.[88] Although attempts were made under the 1959 export pricing regulations (referred to earlier) to deal with the problem, these soon appeared inadequate. The other weakness in the marketing system was the lack of finance of the canneries to carry stocks.[89] It was typical for the demand for canned pineapple to go through a slack period towards the end of each year with the onset of the cold season in the major markets abroad. In the face of this shrunken demand, the canneries with their limited finance for stocks would cut prices[90] and reduce their intake of smallgrowers' fruit.[91] The problem was complicated by the fact that the November-December period would coincide with one of the two natural harvesting peak periods for pineapple in Malaysia.[92] To deal effectively with these two problems of marketing, the Government decided to set up a central sales organization.

[85] *Pineapple Industry (Fruit Control) Regulations, 1959*, Part III.

[86] *Pineapple Industry (Fruit Control) (Amendment) Regulations, 1966*, Section 2.

[87] The basis of allocation was amended in 1966 to ensure that the PCM would have first claim on the smallgrowers' fruit in Johore and such amounts as it could not absorb would then be redirected to the other canners under a mutual agreement. See *ibid.*, Section 3.

[88] See speech of Minister of Commerce and Industry in moving the *Pineapple Industry (Amendment) Bill, 1964* on 18 July 1964 in Parliament.

[89] *Ibid.* See also, *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry, op. cit.*, para. 80.

[90] *Ibid.*

[91] Speech of Minister of Commerce and Industry in moving the *Pineapple Industry (Amendment) Bill, 1964*, on 18 July 1964 in Parliament.

[92] The other natural harvesting peak period is May-July. See Y.C. Wee and T.H. Tay, "Pineapple Cultivation in West Malaysia", in *Research Paper No. 11* of the Pineapple Research Station, Malayan Pineapple Industry Board, August 1968.

The establishment of a central sales organization for canned pineapple was first strongly advocated for and recommended by the 1959 Commission of Enquiry.[93] The Government, in its statement on the future policy for the industry, accepted in principle this recommendation.[94] As with the setting up of the PCM, considerable delay attended the implementation of the recommendation. Legislation was enacted only in 1964 to enable the setting up of the central sales organization, known as the Pineapple Industry Marketing Corporation.[95] It took another two years for the Government to bring into effect the regulations governing the operations of the Corporation.[96] This delay is difficult to explain as the Government had claimed in 1964 that all sections of the pineapple industry had welcomed the need for a central marketing organization.[97]

The Pineapple Industry Marketing Corporation was accorded the function of promoting, managing and controlling the marketing of canned pineapple. In the discharge of this function, it was given the right to act as the sole marketing agency for all canned pineapple produced in the country.[98] The Corporation was also empowered to fix, from time to time, minimum prices for each cut and grade of canned pineapple. Canners were not allowed to export their products at less than these minimum prices.[99] This provision thus replaced the 1959 regulations on export pricing and, like these regulations, was intended to eliminate the unhealthy competition among canneries. Thus, with the Corporation serving as the sole agency for canned pineapple, the objective of minimum pricing could now be effectively implemented. To assist canners with financial resources so as to enable them to continue production even during periods of slack demand, the Corporation was authorized to make advances to them.[100] In addition, it could also give credit in connection with the sale, purchase or export of canned pineapple.[101] For its initial resources, the Corporation could borrow up to $2 million from the Malayan Pineapple Industry

[93] *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry, op. cit.*, para 83.

[94] *Statement of the Government's Future Policy for the (Pineapple) Industry, op. cit.*, para. 19.

[95] *Pineapple Industry (Amendment) Act, 1964.*

[96] The regulations for the Corporation came into effect on 1 July 1966. See *Pineapple Industry (Marketing Corporation) Regulations, 1966*, Section 1.

[97] This point was made when amending the principal legislation. See speech of Minister of Commerce and Industry in moving the *Pineapple Industry (Amendment) Bill, 1964.*

[98] *Pineapple Industry (Marketing Corporation) Regulations, 1966*, Section 16.

[99] *Ibid.*, Section 17.

[100] *Pineapple Industry (Marketing Corporation) Regulations, 1966*, Section 15(1)(b).

[101] *Ibid.*

Board (MPIB).[102] The Malaysian Government agreed to provide guarantees to the MPIB for up to $1½ million borrowed by the latter to lend to the Corporation.[103] The membership of the Corporation comprised all the registered canners and the Chairman of the MPIB.

All these major policy actions, even though some took considerable time to be implemented, made the pineapple industry a growing source of foreign exchange. Table 7.11 shows the exports of pineapples and pineapple products. The export of canned pineapple juice was the least important component of the industry's exports. This item amounted to $1 million in 1970 after remaining at about $½ million a year in the previous nine years. The export of fresh fruit was also another small item and had never exceeded $4 million a year. But this was a generally declining item for the period 1956–70. The bulk of the industry's exports comprised canned pineapple. It was on this component that the various policy measures concentrated. From 1965, there was a sharp expansion of canned pineapple exports and for the 6-year period (1965–70), the annual value of these was in the range of $40–48 million. Before 1965, the value each year was below $30 million, except for 1964. This pattern was largely to be attributed to the expanded production capacity in canning following the operation of the PCM. The greater stability attained by the industry and the improvement in the quality of the products brought about by the other measures, including efforts at promotion by the industry itself, no doubt also contributed to the expansion of exports after 1965.

However, the Government had done very little in one important area in which action would appear imperative if the industry is to continue to contribute towards further diversification of the export structure. This is in the field of raising the efficiency of the industry as a whole. The need for cost-reducing measures had become more urgent for three reasons: i) the expansion of the canned pineapple industry in Taiwan, the United States (Hawaii), the Philippines, South Africa and Mexico;[104] lately, the Ivory Coast has emerged as another competitor; ii) the change in competitive position in favour of the rival countries through the 1971 currency realignment;[105] and iii) the entry of the United Kingdom in the European Common Market.[106]

[102] *Ibid.*, Section 13(1).

[103] *Pineapple Industry (Amendment) Act, 1964*, Section 7. The balance of $½ million was guaranteed by the Singapore Government.

[104] In 1966, the shares of the world's market of these countries were as follows: Taiwan: 20.6%; United States (Hawaii) 11.7%; the Phillippines: 10.9%; South Africa: 9.2% and Mexico: 5.8%. Malaysia's share was 19.4%.

[105] For a brief discussion of the currency realignment, see Bank Negara Malaysia, *Annual Report and Statement of Accounts, 1971*, pp.5–7.

[106] For an outline of the case for the United Kingdom's membership in the European Economic Community, see the Government's White Paper on the Common Market. A full text was published in *The Financial Times*, 8 July 1971.

Table 7.11

West Malaysia – Exports of Pineapples and Pineapple Products
($ million)

Year	Value of Exports			
	Canned Pineapple	Canned Juice	Fresh Fruit	Total
1955	–	17.5	–	n.a. 17.5
1956	–	19.4	–	4.0 23.4
1957	–	19.8	–	3.6 23.4
1958	24.5	0.1		2.5 27.1
1959	21.5	*		2.5 24.0
1960	26.1	0.1		1.3 27.5
1961	25.6	0.5		2.5 28.6
1962	27.8	0.5		3.0 31.3
1963	29.0	0.4		3.1 32.5
1964	32.7	0.4		3.3 36.4
1965	40.1	0.5		3.1 43.7
1966	43.6	0.5		2.6 46.7
1967	43.3	0.5		2.6 46.4
1968	47.9	0.5		1.7 50.1
1969	44.0	0.6		1.8 46.4
1970	42.5	1.0		2.3 45.8

Sources: 1. Department of Statistics, *Monthly Statistical Bulletin of the States of Malaya*, November 1963.
2. Department of Statistics, *Monthly Statistical Bulletin of West Malaysia*, February 1969 and December 1971.

*Less than $0.1 million.

The impact of competition from other countries in the market for canned pineapple was felt as early as 1956, when the crisis in the industry first emerged. Competition is now a continuing feature of the market. Some of the competitors, Taiwan and the Ivory Coast for example, had attained very high standards of efficiency in their industry.

The 1971 currency realignment further aggravated the problem faced by the pineapple industry. Following the devaluation of the United States dollar by 7.89 per cent against gold, two major competitors in canned pineapple, Taiwan and the Philippines, devalued their currencies by the same amount while a third, South Africa, devalued by 12.28 per cent. Malaysia, on the other hand, remained at its existing parity. Thus, exports from the countries that had devalued, in-

cluding their exports of canned pineapple, were now relatively cheaper, thereby enhancing their competitive advantage over others, including Malaysia.

The entry of the United Kingdom into the European Economic Community had important implications for the prospects of the Malaysian canned pineapple industry. The United Kingdom was the largest single market for Malaysian canned pineapple and in 1966–70, accounted for about 30–40 per cent of the value exported. In the past, Malaysian canned pineapple enjoyed preferential treatment in the United Kingdom market. In other words, while canned pineapple imported by the United Kingdom from non-Commonwealth countries were subject to an import duty of £0.275 per cwt. plus a sugar surcharge of 1½ per cent, imports from Malaysia and other Commonwealth countries entered the United Kingdom duty-free other than for a sugar surcharge of 5/8 per cent. The United Kingdom joined the European Economic Community in 1973 and one of its consequences was the dismantling of this Commonwealth preference. Thus, canned pineapple imported by the United Kingdom from Malaysia would now be subject to the Community's common external tariff, beginning on 1 January 1974 at about 9.6 per cent and rising yearly to its full level of about 24 per cent by 1 July 1977. On the other hand, efficient supplies of canned pineapple are developing in Martinique and the Ivory Coast,[107] both of which have associate status with the European Economic Community. These countries will have the important advantage of duty-free entry for their products in the enlarged Community.

The case for cost-reducing measures is thus very clear and will be even more so, when the scope for action in this sphere is examined. Firstly, a recent techno-economic study[108] undertaken by the Food Technology Research and Development Centre of Malaysia, observed that the yield per acre of Malaysian pineapple had been low due largely to the nature of the planting practices and the deficient use of appropriate inputs. Furthermore, the study noted that the size of fruit of smallgrowers and of estates had decreased markedly during 1958–68 as shown in Table 7. 12. In the absence of data on the age of the pineapple plants, the declining fruit size provides a fair indication of the ageing acreage.[109] However, the Government had decided to launch a replanting scheme for smallgrowers in the 1970's. Under the Second Malaysia Plan, the Government will provide assistance for replanting 10,000 acres with high-yielding varieties.[110] This is significant because it will cover about one-third of the smallgrowers' acreage as at 1970. A sum of $12.6

[107]The pineapple industry in the Ivory Coast has recently been expanding at 25–35 per cent a year. See *Britain and the EEC–Implications for Primary Producers,* London, Commonwealth Producers' Organization, p. 25.

[108]O. Wahby, A. Sedky and M.H. Ragab, *op. cit.*, p. 23.

[109]It has been pointed out that as the pineapple areas become older, a noticeable effect is the declining fruit size. See O. Wahby, A. Sedky and M.H. Ragab, *op. cit.*, p. 83.

[110]Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 136.

Table 7.12

West Malaysia – Average Weight of Pineapple Fruit

Source	Average Weight of Pineapple Fruit in lbs.						
	1957/58	1963	1964	1965	1966	1967	1968
Smallgrowers	3.1	2.6	2.6	2.7	2.7	2.5	2.7
Estates	2.6	2.0	2.0	2.2	2.2	2.2	2.2
Average for all fruit	2.8	2.2	2.2	2.4	2.4	2.4	2.5

Source: O. Wahby, A. Sedky and M.H. Ragab, *op. cit.*, p. 80.

million had been set aside for a seven-year replanting programme to begin in 1972; the assistance will be $400 per acre.[111]

This new policy for the industry still left unresolved a question of high priority to the industry, namely, the desirability of replacing the present canning variety with one that will yield a higher fruit recovery rate and other qualities desired by the consumers. The major variety used in Malaysia is the Singapore Spanish while very small quantities of two other varieties are also canned, the Sarawak (Kew) and the Selangor Green. The Singapore Spanish has a number of good qualities e.g. resistance to disease, the golden colour of the fruit, its popular flavour and firmness of the fruit. But an important disadvantage is that on account of the deep 'eyes' of the fruit, the recovery rate is low, varying from 20–22 per cent compared with 50 per cent for the smooth Cayenne variety which is predominantly planted by Malaysia's rivals.[112] Furthermore, the fruit of the Singapore Spanish is small, averaging 2–3 lbs. The desirability of replacing the present variety had been considered over the past decade or so but no firm decision was taken. The 1959 Commission of Enquiry stressed that the need to develop a fruit more suited for canning was "one of the most urgent problems facing the industry".[113] The validity of this position was confirmed by the techno-economic study of the industry in 1969.[114] But there have been no significant efforts made to improve the present variety.

For an industry facing severe international competition, it is surprising that research for the industry was so poorly managed. In its statement of policy for

[111] These details were announced by the Deputy Minister of Agriculture and Fisheries in June 1972. See *The Straits Times*, 11 June 1972.

[112] O. Wahby, A. Sedky and M.H. Ragab, *op. cit.*, p. 42.

[113] *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry, op. cit.*, para. 92.

[114] O. Wahby, A. Sedky and M.H. Ragab, *op. cit.*, p. 148.

the pineapple industry in 1960, the Government expressed its intention to establish a pineapple research institute which would undertake agronomic and processing research.[115] It was envisaged that the activities of the institute would be guided by a panel of scientists appointed by the Governments of Malaya and Singapore. The institute did not materialize, however. Research for the industry was financed by a cess and was carried out by the Department of Agriculture until 1959, after which it was passed on to the MPIB. The small importance attached to this undertaking was also evident from a statement made by the Minister of Agriculture in 1958 in reply to a question raised in the Federal Legislative Council by a member on the priorities of his Ministry for developing crops: the Minister revealed that pineapple was accorded only third degree of priority in the work of the Department of Agriculture.[116] The 1959 Commission of Enquiry could not find anything worthwhile to say of the achievements of agronomic research for the industry and as for processing research, it viewed the results as unimpressive.[117] When research activities came under the MPIB, the results were not much better. The 1969 techno-economic study of the industry commented on the situation of research as follows: "Although a large sum of money was spent on research during the last 10 years, the net achievement appears minimal in comparison to the expenditure."[118] Among the reasons advanced were the insecurity felt by the staff as a result of the crisis in the industry, the lack of a full-time director of research except for two years, and the limited experience of the research staff.[119] Some improvement in the situation could however be expected in the future. Towards the end of the 1960's, processing research was transferred to the Food Technology Research and Development Centre of Malaysia, a project of the United Nations Development Programme/Special Fund.[120] The Centre had commenced to look into the research needs of the industry with regard to processing. It is needless to point out that the cavalier approach to research activities in the past will make the task of meeting the impending problems of the industry much more difficult. This lack of foresight and action needs early and resolute remedy if the position of the industry is even to be merely maintained in the world markets in the 1970's.

Concerning the processing and canning facilities, only the Pineapple Cannery of Malaya was relatively new, it being established in 1965. The other four

[115] *Statement of the Government's Future Policy for the (Pineapple) Industry, op. cit.*, para. 22.

[116] See "Written Answers to Questions on 18 June 1958" in Federation of Malaya, *Legislative Council Debates – Official Reports of the Second Legislative Council (Third Session), September 1957 – October 1958*, col. 4782.

[117] *Report of the Commission to Enquire into the Position of the Malayan Pineapple Industry, op. cit.*, paras. 91–94.

[118] O. Wahby, A. Sedky and M.H. Ragab, *op. cit.*, p. 150.

[119] *Ibid.*, p. 149.

[120] *Ibid.*, pp. 150–151.

canneries were over 30 years old, although it must be pointed out that there were several renovations and additions of equipment since their establishment.[121] The second Government cannery for smallgrowers was of course the newest. Another aspect contributing to the higher cost of processing and canning was the use of automatic and semi-automatic machines for only certain operations whereas a higher degree of mechanization could reduce costs significantly.[122] Furthermore, the existing capacity of the canneries could be increased through mechanization without the need for additional buildings.[123] Improvements on these matters would no doubt raise certain problems such as a conflict with the present policy on labour-intensity for industrial activities, the opposition of labour unions, and the need for the Government to consider incentives of one kind or another to induce greater capital investment in view of the rather unhappy prospects of the industry in the 1970's. But the choice seems fairly obvious here if important cost-reductions have to be achieved.

3.3 *Overall View*

The pineapple industry stands out as one of the major economic activities in which there had been considerable Government intervention. In the process, the smallgrowers' sector had emerged as the dominant sector in the industry. In a more general manner, the policy measures had also established and ensured the maintenance of standards which contributed to the wide acceptance and more orderly marketing of the canned fruit in international markets. Many of the policy measures were, however, implemented only after some delays, a situation which appeared avoidable in retrospect if the Government had been more resolute and more ready in dealing with the various problems. A major problem stood in urgent need for early solution namely, the necessity to raise the productivity of the industry to ensure its place in international trade. In this area, public policy in the review period was found wanting.

4. THE COCONUT INDUSTRY

4.1 *Introduction*

The coconut industry is another of the long-established industries in the country. The coconut palm came into the country in ancient times and it was cultivated as a commercial crop from the latter part of the 19th century. In terms of planted acreage, it was for a long time the third largest crop next to rubber and padi; after 1968, it slipped to fourth place with the rapid expansion of oil palm areas. The industry provided an important source of livelihood for about 300,000 persons.[124] It was also a significant earner of foreign exchange,

[121] O. Wahby, A. Sedky, and M.H. Ragab, *op. cit.*, p. 97.

[122] *Ibid.*, p. 127.

[123] *Ibid.*

[124] This excludes the dealers who purchased the nuts from the smallholders for processing into copra, or copra for further processing as well as those engaged in the extraction and

this being largely from the export of crude coconut oil. A large part of the products of the industry was consumed locally.

The coconut industry is thus one which had established some standing in the economy. The relevance of the industry in this appraisal of the Government's diversification policies arises from the fact that by the 1950's and 1960's, the industry had assumed most of the characteristics of a neglected and declining industry and that an opportunity was presented to the Government to reinvigorate the industry or to let the situation deteriorate further. The measures taken by the Government throw further light on its whole approach to the objective of economic diversification as well as on the constraints that appeared to govern the policy measures adopted.

4.2 *Trends in the Industry's Development*

The acreage under coconut changed little during 1957–70. This is shown in Table 7.13. In 1957–61, the area was about 520,000 acres. From 1962 to 1967, the coconut acreage declined consistently to about 505,000 acres but from 1968, it expanded again and was 527,000 acres by 1970. But this was hardly more than 1 per cent higher than in 1957–61.

The industry was essentially based on smallholdings. Smallholdings accounted for a substantial and growing share of total acreage, this being around 84 per cent in 1960–63 and rising to about 89 per cent in 1968–70. There were no significant changes in the area under smallholdings in 1960–65 but from 1966, a trend of yearly expansion could be seen. Smallholdings accounted for the entire increase in the total acreage under coconut during 1960–70. The estates sector of the industry which accounted for 15–16 per cent of total acreage in 1960–63 reduced its share of total acreage to about 11 per cent in 1968–70. An important factor was the onset of decline in the estate acreage from 1964 to 1968 after which it seemed to have stabilized at about 55,000 acres. This decline over the years was the result of a switch to oil palm by estates having uneconomic blocks of coconut palms.[125] This tendency was likely to have been strengthened by the absence of any scheme of assistance to replant or rehabilitate the estate acreage.

Unfortunately, complete statistics of production were not available; only the output of estates was known. With the decline in acreage, the output of copra from estates followed the same trend (Table 7.13). However, figures of net exports of crude coconut oil provide a rough indication of output capability for the smallholdings and estates sectors taken together.[126] From Table 7.14, it can

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refining of oil and distribution of the copra cake. See Ragavan Nair, "The Coconut Industry in West Malaysia – Past Performance and Future Prospects" in *The Coconut Industry in West Malaysia,* Kuala Lumpur, Federal Agricultural Marketing Authority, 1968 (mimeographed).

[125] *Annual Report of the Division of Agriculture for the Year 1966,* p. 14.

[126] The bulk of exports of the coconut industry is crude coconut oil. Except for 1960, net exports of copra were either small or negative. See Table 7.14.

Table 7.13

West Malaysia — Acreage under Coconut in Estates and Smallholdings and Production of Estates

Year	Acreage under Coconut ('000 acres)					Estate Production		
	Estates		Smallholdings		Total	Copra ('000 tons)	Yield per Acre[a] (piculs)	Crude Coconut Oil[b] ('000 tons)
	Area	As % of Total	Area	As % of Total				
1957	n.a.	n.a.	n.a.	n.a.	518.0	35.8	n.a.	96.5
1958	n.a.	n.a.	n.a.	n.a.	520.0	34.8	n.a.	78.6
1959	n.a.	n.a.	n.a.	n.a.	520.0	33.1	n.a.	67.3
1960	80.6	15.5	439.9	84.5	520.5	32.3	6.7	73.6
1961	79.7	15.3	439.9	84.7	519.6	33.8	7.1	87.4
1962	77.8	15.3	431.8	84.7	509.6	33.2	7.2	91.7
1963	80.2	15.7	429.3	84.3	509.5	32.2	6.7	71.3
1964	71.7	14.1	436.1	85.9	507.8	29.7	7.0	62.1
1965	68.0	13.4	438.7	86.6	506.7	30.7	7.6	63.8
1966	63.1	12.5	442.7	87.5	505.8	27.7	7.4	83.4
1967	60.2	11.9	444.2	88.1	504.4	27.4	7.6	85.6
1968	56.6	11.0	460.2	89.0	516.8	28.0	8.3	89.9
1969	55.4	10.6	467.3	89.4	522.7	22.7	6.9	81.8
1970	55.5	10.5	471.7	89.5	527.2	23.6	7.1	100.3

Sources: 1. Department of Statistics, *Monthly Statistical Bulletin of the States of Malaya*, February 1965.
2. Department of Statistics, *Oil Palm, Coconut and Tea Statistics*, 1964–1970.

[a] In terms of copra.
[b] Production by oil mills.
n.a. = not available.

Table 7.14

West Malaysia – Net Exports of Products of the Coconut Industry

Year	Net Exports of Products of the Coconut Industry							
	Crude Coconut Oil		Refined Coconut Oil		Copra		Fresh Coconut	Total Value
	Value ($ million)	Quantity ('000 tons)	Value ($ million)	Quantity ('000 tons)	Value ($ million)	Quantity ('000 tons)	($ million)	($ million)
1957	46.2[a]	64.8[a]	-0.9	-1.1	-11.0	-28.5	0.8	35.1
1958	39.0[a]	48.6[a]	-1.4	-1.6	-11.8	-29.3	0.9	26.7
1959	28.5[a]	27.1[a]	-0.5	-0.5	2.4	2.1	1.7	32.1
1960	22.6[a]	26.6[a]	-0.7	-0.8	21.7	35.1	0.8	44.4
1961	27.5	41.5	-0.8	-0.9	5.4	4.6	1.0	33.1
1962	32.0	33.6	-1.3	-1.6	0.5	-5.1	1.6	32.8
1963	21.7	29.2	-1.3	-1.4	4.7	4.3	1.0	26.1
1964	11.3	13.7	-0.7	-0.7	2.8	5.3	2.3	15.7
1965	16.1	17.8	-1.3	-1.1	9.6	15.0	1.5	25.9
1966	19.3	24.6	-0.8	-0.7	6.3	10.6	0.5	25.3
1967	21.8	27.6	0.3	0.5	0.4	-0.6	0.4	22.9
1968	37.4	37.9	-0.7	-0.8	-0.9	-3.5	0.3	36.1
1969	19.1	22.8	0.1	*	-0.9	-4.0	0.3	18.6
1970	37.8	39.7	-0.3	-0.4	-0.8	-2.3	0.5	37.2

Sources: 1. Ministry of Agriculture and Co-operatives, *Statistical Digest*, February 1967, January 1968, March 1969, January 1970, March 1971 and March 1972.
2. Department of Statistics, *Monthly Statistical Bulletin of the States of Malaya*, February 1965.
3. Department of Statistics, *Annual Statistics of External Trade*, 1957–1960.

*Negligible.
[a]Includes refined coconut oil.

Table 7.15

Wholesale Prices of Copra and Crude Coconut Oil
($ per picul)

Year	Average Wholesale Prices – Malaysian International Chamber of Commerce		
	Copra	Crude Coconut Oil	
		Bulk (f.o.b.)	Drum (f.o.b.)
1957	26.85	44.99*	45.37*
1958	35.13	49.15	52.45
1959	41.29	61.57	63.36
1960	33.17	48.39	51.21
1961	26.63	38.08	40.92
1962	27.27	38.13	41.43
1963	29.89	44.70	47.93
1964	n.a.	49.03	53.76
1965	n.a.	64.00	n.a.
1966	n.a.	n.a.	47.90
1967	38.50	59.00	n.a.
1968	35.04	55.81	56.88
1969	30.50	50.43	52.23
1970	n.a.	55.96	58.17

Sources: Department of Statistics, *Monthly Statistical Bulletin of West Malaysia*, September 1970 and April 1972.

*Only for May–December 1957; data not available prior to that.
n.a. = not available.

be seen that the volume of net exports of crude coconut oil had declined. In 1957–63, the total net exports of crude coconut oil was 271,400 tons but for the remaining seven years, 1964–70, the volume was only 184,100 tons or 87,300 tons lower. There was no question of adverse overseas demand to reduce export volume. If anything, prices were more bouyant in 1964–70 compared with 1957–63 (Table 7.15). Taking the wholesale price of crude coconut oil, it can be seen that the average price for coconut oil in bulk was $55.70[127] per picul for 1964–70 compared with an average of only $46.43 per picul in

[127]This is the average for six years only as the wholesale price for 1966 was not available.

1957–63. Increase in domestic consumption might be a cause of the reduced volume of exports. But the most important factor appeared to be the inability of the industry to meet both domestic and export demand.

Apart from crude coconut oil, the other products of the industry were relatively unimportant in international trade. Over the 14 years reviewed, the net exports of copra appeared to be an uncertain source of foreign exchange; there were a number of years (1959–67) when there were net exports of copra but in other years, there were net imports. Taken together, the net receipts from copra over the period were only about $29 million. Exports of fresh nuts always showed a small excess over imports but this declined, particularly in the latter part of the 1960's. As for the refined coconut oil, West Malaysia was a net importer, though a very minor one. These indicators point to a still limited degree of processing for the industry's products. Total net export earnings from these various products fluctuated from one year to another and although there were some good years (1968 and 1970) in 1964–70, the total earnings during this period of $181.7 million were $48.6 million less than the total for 1957–63.

Among the major producers in the agriculture sector, the coconut industry was, for some years in the early 1950's, the second largest earner of foreign exchange. But with the growth of the oil palm industry, it became the third largest earner until 1961, after which it was pushed to the fourth place by the pineapple industry and had remained so to 1970. The relatively faster development of the oil palm and pineapple industries only provided part of the explanation for the declining importance of the coconut industry.

4.3 *Factors Contributing to State of the Industry.*

Many factors contributed to the present unhappy state of the coconut industry, not least of which was the limited role of public policy. Firstly, most of the coconut areas occurred in "derelict coastal areas" [128] Proper drainage of the soil is an important requirement for coconut growing. In a sample survey[129] of the economic position and problems of the coconut smallholders in West Malaysia undertaken by the Food and Agriculture Organization (FAO) in 1964/1965, it was found that waterlogging occurred in all the areas studied.[130] In Johore, 37 per cent of the plots in the Pontian district experienced waterlogging all the year round while 75 per cent in the peat areas and 45 per cent of the Batu Pahat district reported waterlogging for part of the year. In the Perak-Selangor area, 57 per cent of the plots reported waterlogging for part of the year. This state of affairs came largely through the uncontrolled

[128] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 33.

[129] The survey was estimated to cover 57 per cent of the compact area of coconut smallholdings and 23 per cent of the scattered palms area.

[130] Emmanuel Muttukumaru, *Report to the Government of Malaysia – Economic Survey of the Coconut Industry,* Rome, Food and Agriculture Organization of the United Nations, 1968, p. 57.

Table 7.16

West Malaysia – Extent of Drainage Areas for Coconut in Schemes Maintained by the Drainage and Irrigation Department, 1960 and 1969
('000 acres)

State	Drainage Areas[a] Maintained by the Drainage and Irrigation Department in Coconut Growing Areas[b]			
	1960	1963	1969	Increase 1960/1969
Johore	106.2	130.3	185.7	79.5
Negri Sembilan	6.0	6.8	7.5	1.5
Penang and Province Wellesley	12.2	12.2	19.8	7.6
Perak	50.3	50.3	50.3	—
Selangor	134.1	187.7	174.9[c]	40.8
Total	308.8	387.3	438.2	129.4

Sources: 1. *Report of the Drainage and Irrigation Department for the Years 1958, 1959 and 1960.*
2. *Report of the Drainage and Irrigation Division of the Ministry of Agriculture and Co-operatives, Malaysia, for the Years 1961, 1962 and 1963.*
3. *Triennial Report of the Drainage and Irrigation Division of the Ministry of Agriculture and Co-operatives, Malaysia for the Years 1967, 1968 and 1969.*

[a]Relates to assessable area.
[b]Includes areas in which coconut is one of the major crops.
[c]About 18,900 acres in two schemes no longer served as coconut areas.

manner with which these areas were opened up for coconut growing in the early part of this century and the development of these lands with "little or no thought for future drainage".[131] However, since 1932, the Drainage and Irrigation Department (D.I.D.) had established a chain of irrigation schemes in these areas. Statistics on the extent of drainage schemes maintained by the D.I.D. in coconut areas revealed a substantial increase of 42 per cent in the areas covered by the schemes between 1960 and 1969 (Table 7.16). About 61 per

[131] *Ibid.*, p. 55.

cent of the additional drainage areas that came into being since 1960 were established in Johore (the major coconut producing state) while Selangor accounted for 32 per cent. In Perak, there was no change in the areas with drainage facilities during the decade.

Available statistics on the extent of drainage schemes for the year nearest to the 1964/65 FAO survey were for 1963. From Table 7.16, it can be seen that since 1963, the extent of drainage areas in Johore (the state with the worst waterlogging problem) increased by 55,400 acres. In Selangor, the change was marginal[132] and in Perak, there was no change. Some alleviation of the waterlogging problem can, therefore, be expected for Johore compared with the situation during the survey but no such firm expectations can be held for the other two states. For the proper drainage of coconut holdings, there are in addition, a number of supplementary measures that would have to be undertaken by the coconut growers themselves.[133] These are the internal drains in the coconut holdings, the link between these drains and the surrounding drains and, the proper maintenance of these drains. The FAO survey indicated that 94 per cent of the plots surveyed in Kelantan had no internal drains while the percentages were 58 in Johore and 31 in Selangor/Perak.[134] Furthermore, the percentage of plots having internal drains but with no connection to the surrounding drains was very high: 98 per cent in Kelantan, 85 per cent in Johore and 68 per cent in Selangor/Perak.[135]

The deficiencies in the general drainage of the coconut areas have two important consequences. Firstly, it meant a large burden for the Government and the coconut growers. Secondly, so long as improvements to general drainage remained to be undertaken, the other efforts to assist the coconut industry could yield little significant results. Thus, the poor state of drainage in the coconut areas could be considered a factor that both affected current productivity of the palms and the prospects for the industry to be rejuvenated.

The second major problem that contributed to the poor state of the industry was low productivity, particularly among the smallholders. No estimates were available of smallholder production and thus no yield data on a national basis could be presented. However, the FAO survey could provide some indication. The survey found that the yield of copra per acre among the smallholdings was the lowest in Kelantan, being 2.3 piculs per acre and that in Johore was not better, being 3.3 piculs per acre; but more reasonable yields were recorded for Selangor/Perak, the average being 7.3 piculs per acre.[136] Placed against the

[132] In Selangor, two drainage areas (Badong and Sungei Buloh [Utara]) covering 18,900 acres no longer served coconut growing in 1969. If these two areas (which were under coconut and rubber in 1963) were excluded, the increase in the drainage area between 1963 and 1969 for Selangor would be only 6,100 acres.

[133] For a discussion of these measures, see Emmanuel Muttukumaru, *op. cit.*, pp. 58–59.

[134] *Ibid.*, Table 12.

[135] *Ibid.*

[136] *Ibid.*, Table 5.

average yields for estates which have been worked out in Table 7.13, only the average yield of smallholdings in Perak/Selangor was comparable. The average yield on estates had not changed significantly over the 1960–70 period but had remained at about 7 piculs per acre.

The poor drainage situation in the Johore coconut areas was obviously an important factor underlying the low productivity. An earlier survey undertaken by T.B. Wilson in 1956 showed that another important cause of low productivity was the low density of palms per acre. On an area of 128,000 acres of smallholdings, one-quarter had only 19 or fewer palms per acre while three-quarters had even less than the recommended stand of 48 palms per acre.[137] The usual density on smallholdings in West Malaysia was generally considered to be 70 palms per acre. From the FAO survey, the situation of low palm density appeared to have improved considerably by 1963 when it was found that smallholdings in Johore on the average had 71 palms per acre, the reasons advanced being improved drainage and better care.[138] In Selangor/Perak, a high density of 74 palms per acre was recorded by the FAO survey. Only for Kelantan was the density of 45 palms per acre below that generally observed for smallholdings in the Wilson survey.

However, the FAO survey revealed another factor which could have contributed to low productivity. In Johore, it was found that of the total number of palms surveyed, only 50 per cent were bearing; the percentages were better in Kelantan and Selangor/Perak, these being 64 and 69 respectively.[139] But only a part of the non-bearing palms could be immature palms. Coconut palms usually begin to bear fruit after about five years.[140] The FAO survey showed that palms of up to five years of age amounted to only 29 per cent in Johore (in which 50 per cent were of non-bearing palms), 17 per cent in Kelantan (in which 36 per cent of the palms were non-bearing) and also 17 per cent in Selangor/Perak (in which 31 per cent of the palms were non-bearing).[141]

Ageing palms was another factor contributing to low productivity. On the basis of the FAO survey (the only source of information on the age of palms), the problem appeared to be serious for Kelantan but not so for Johore and Selangor/Perak. The economic life of a coconut palm is generally about 60 years. In Kelantan, slightly over 35 per cent of the palms were over 60 years of age. In Johore, only slightly over 1 per cent of the palms were over 60 years old and in

[137] T.B. Wilson, *The West Johore Coconut Production Survey*, Kuala Lumpur, November 1958, Department of Agriculture Bulletin No. 104, p. 17.

[138] Emmanuel Muttukumaru, *op. cit.*, p. 37. The improved drainage can be confirmed by the large expansion of areas covered by the D.I.D. schemes between 1960 and 1963 as shown in Table 7.16 of this book.

[139] *Ibid.*, Table 3.

[140] The immature period could be shorter or up to seven years, depending on soil and climate.

[141] Emmanuel Muttukumaru, *op. cit.*, Table 4.

Selangor/Perak, the proportion of such palms was 3 per cent. The percentages in all these states would have increased since then.

There were other causes for the low yields. Neglect of many smallholdings was noted, which resulted in deterioration of internal drainage and uncontrolled undergrowth of weeds.[142] One explanation given for this tendency to neglect holdings was that incomes solely from coconut were in many cases considered insufficient for the farm family and this necessitated the smallholder having to seek supplementary sources of income elsewhere.[143] Incomes data from the FAO survey revealed that in Johore 77 per cent of the average income were derived from sources outside the smallholder's own holding, in Kelantan 56 per cent and in Selangor/Perak 38 per cent.[144] A common practice among the coconut smallholders was to lease out on short-term their holdings to money lenders, middlemen and shopkeepers for consumption credit.[145] This was another contributory cause for the deterioration of holdings. The inability of the industry to control the occurrence of the Rhinoceros Beetle (Oryctes Rhinoceros), despite much efforts, presented another obstacle to higher yields.[146] This pest continued to cause severe damage, particularly to the young palms and its numbers had increased greatly as a result of the presence of rotting wood of felled old rubber trees (which provided ideal breeding grounds) under the various rubber replanting programmes.

Thirdly, another factor which contributed to the unhealthy state of the industry was obviously the inability of the smallholders to deal with the problems of the industry all on their own. The conditions discussed earlier which had kept yields low and hence incomes, in turn worked to prevent any significant efforts on their part. Gross average incomes per year in 1964/65 including incomes from outside sources were only $2,411 in Johore, $1,951 in Selangor/Perak and $815 in Kelantan.[147] These are unimpressive.

Finally, the apparent indecisive commitment of public policy towards an early rejuvenation of the coconut industry must bear part of the blame for the present state of the industry. The nature and effectiveness of the policy measures adopted by the Government will be examined in the next section. It suffices here to outline the factors that shaped the character of the Government's coconut policy.

[142] *Annual Report of the Department of Agriculture for the Year 1959*, p. 78.

[143] S. Selvadurai, *A Preliminary Report on the Survey of Coconut Smallholdings in West Malaysia*, Kuala Lumpur, Ministry of Agriculture and Co-operatives, March 1968 (mimeographed), p. 140.

[144] Emmanuel Muttukumaru, *op. cit.*, Table 49.

[145] *Annual Report of the Division of Agriculture for the Year 1966*, p. 14.

[146] For the many unsuccessful efforts to curb the pest by chemical and biological measures see, *Annual Report of the Division of Agriculture*, various years.

[147] Emmanuel Muttukumaru, *op. cit.*, Table 49.

Firstly, there were obviously more attractive agricultural alternatives to coconut planting. As indicated in Chapter V, the country was still deeply committed to rubber despite the calls being continuously made to diversify to other crops. The advances made in developing high-yielding trees of rubber were considered an effective offset to the declining long-term trend in prices. Furthermore, there was no need to undertake improvements to drainage in the rubber areas as a prerequisite to replanting. Above all, incomes from rubber, even at the smallholdings level, were more attractive. This was confirmed by the reported switch over to planting with rubber on old coconut areas in the late 1950's and early 1960's.[148] Another attractive alternative was oil palm, which as pointed out earlier, was the crop to which some of the old coconut estates were planted to. The Government's interest in oil palm was shown clearly by the change over to this crop from rubber as the main crop in its FELDA schemes. It has been noted that on the basis of average yields of oil, an acre of oil palm will yield one ton or more of oil compared with half a ton or less of oil from an acre of coconut.[149] This gives oil palm a clear advantage as a larger source of income.[150]

Secondly, it appears that coconut as a crop could not meet all the criteria of a diversification crop acceptable to the Government. With the exception of padi, the Government obviously was not keen to encourage the expansion of a crop just because it was technically feasible in the Malaysian agricultural environment. The crop would also have to be a decisively good income earner in order for it to also meet the other major objective of the Government, namely, to raise rural incomes.[151] In other words, while coconut as a crop was well suited to the agricultural conditions of the country, its claim to being a source of good income in the context of an average-sized farm of 2–3 acres was questionable.

On the other hand, the coconut industry in West Malaysia was largely a smallholders' industry and was already in a depressed state even in the 1950's.[152] The Government was thus under pressure to rectify the situation.

[148] *Annual Report of the Department of Agriculture for the Year 1960*, p. 13.

[149] Ford Foundation Team Report on Agricultural Diversification, *op. cit.*, p. 14.

[150] For example, on the assumption of a 1-ton yield of oil for an acre of oil palm and a ½-ton yield of oil for coconut, the earnings (based on the Malaysian wholesale price of crude coconut oil and the London price of palm oil) are as follows:

	1960	*1965*	*1970*
Oil Palm ($)	690.1	841.6	810.0
Coconut ($)	406.5	537.6	470.0

[151] This objective has been expressed in the country's development plans. See Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 16 and Malaysia, *First Malaysia Plan,, 1966–1970, op. cit.*, p. 2.

[152] In 1954, the World Bank mission called for plans to check the current deterioration of the industry. See International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, p. 44.

Furthermore, the possibility of a large-scale shift out of coconut into rubber or oil palm appeared very limited. The problem of improving the basic drainage of the areas now occupied by coconut would still have to be faced by the Government even if there could be a switch to these alternative crops. In the case of a change over to oil palm, the problem would be further complicated by the fact that an important feature of oil palm cultivation is the requirement of a good transport network and adequate processing facilities (as pointed out earlier in this chapter). On these two counts, smallholder cultivation of oil palm without a tightly-organized system as under the FELDA oil palm schemes would encounter considerable difficulties. A large-scale transformation from coconut to other alternatives would be impracticable for another reason. A systematic switch to another crop would mean the loss of an important source of income for the coconut smallholders for 5–7 years (depending on the alternative selected) and with this would arise the need for a diversification fund[153] to meet both the requirements of financial support during the immature period of the new crop and the financing of a subsidy for planting the crop. Obviously, the Government was not quite prepared to undertake such a financial commitment.

Thus, the need to pay some attention to the improvement of the coconut industry, particularly the smallholdings sector, appeared unavoidable for the Government. However, the technical advice and recommendations it received on this matter from various quarters were generally cautious and qualified with certain reservations. The views of the World Bank mission of 1954 were that the coconut smallholdings would need a programme of rejuvenation to forestall their deteriorating situation.[154] The mission further urged that studies be made not only on improving coconut varieties and cultivation practices, and developing the supply of seedlings and extension services but also on "satisfactory alternative crops" for the coconut areas.[155] In 1956, a fairly comprehensive investigation of the coconut smallholdings in Johore was undertaken by the Department of Agriculture.[156] The report of the survey (referred to as the Wilson Survey) confirmed the World Bank's observation of the unhealthy state of the coconut smallholdings but unlike the Bank, it recommended that "in most areas coconut holdings should be replanted not with coconut but with alternative high-income crops, especially rubber".[157] The Wilson survey was also concerned

[153] An example of a diversification fund is that established by the International Coffee Organization under the International Coffee Agreement of 1968. For a good discussion of the fund, see "Co-operation with Commodity Diversification Funds", a staff paper of the International Bank for Reconstruction and Development presented for discussion at the Bank's Executive Directors' Seminar on 3 April 1969 (IBRD Document, 11 March 1969).

[154] International Bank for Reconstruction and Development, *The Economic Development of Malaya*, *op. cit.*, p. 189.

[155] *Ibid.*, p. 47.

[156] The results were analysed by the Department's agricultural economist, T.B. Wilson. See T.B. Wilson, *op. cit.*

[157] *Ibid.*, p. 41.

with the low-income earning capability of the coconut industry and stressed that where coconut was to be replanted, it should be combined with high income-earning intercrops (e.g. coffee, banana, rambutan).[158] It further urged the provision of assistance for coconut replanting. At about the same time, the Government appointed a working committee of officials to study and recommend improvements for the coconut industry.[159] As with the other two studies, the working committee also recognized the need to rehabilitate the industry.[160] While it urged the establishment of a comprehensive coconut replanting scheme, it however, recommended that in the first instance, only a limited specific area, namely, South-West Johore, be placed under the proposed scheme.[161] It could not see the extension of the scheme yet to other areas until the lack of detailed information and the administrative difficulties of operating a country-wide scheme could be overcome.[162] The approach here was thus similarly cautious and limited in objective though for reasons different from the Wilson survey. In 1963, the Ford Foundation team of experts undertook a study of agricultural diversification for West Malaysia. In its report,[163] the team stressed that "expanded coconut planting is not a promising form of diversification" and that "until better varieties and methods of production provide the opportunity to increase yields, major emphasis should be on other more potentially-rewarding enterprises".[164] Replanting with coconut was considered by the team to be appropriate only in recently drained or developed areas which would assure a substantial increase in yields.[165]

It is difficult to see how these four independent studies undertaken over a period of 10 years could not have exerted considerable influence on the Government's policy towards the coconut industry. One immediate effect was the strengthening of the doubts the Government had on coconut as a crop to be given substantial support. Much time was lost in the process of evolving a specific scheme of Government assistance. Such a scheme emerged only in 1963. Furthermore, the impact of the scheme on the coconut industry appeared rather limited.

4.4 *Public Policy and the Renewal of the Industry*

Since the early 1950's, however, the Government was concerned with the

[158] *Ibid.*

[159] See Federation of Malaya, *Report of the Working Committee on Coconut and Coconut Products*, Kuala Lumpur, Ministry of Commerce and Industry, October 1957 (mimeographed).

[160] *Ibid.*, p. 56.

[161] *Ibid.*

[162] *Ibid.*

[163] Ford Foundation Team Report on Agricultural Diversification, *op. cit.*

[164] *Ibid.*, p. 14

[165] *Ibid.*

Table 7.17

West Malaysia – Acreage of Coconut Renewed with Assistance of Subsidies (acres)

	1953–70
Replanting/New Planting with Coconut under Rubber Replanting Schemes:	
Smallholdings	20,380
Estates	1,340
Total	21,720
Replanting and Rehabilitation of Coconut Areas under Coconut Replanting and Rehabilitation Scheme	
Smallholdings only	45,916*
Total Area Renewed with Assistance of Subsidies	67,636

Sources: 1. Table 5.12.
2. S. Selvadurai, *A Preliminary Report on the Survey of Coconut Smallholdings in West Malaysia, op. cit.*, p. 148.
3. *Penyata Kemajuan Tahunan Ranchangan Pemulehan dan Menanam Semula Kelapa, Kementerian Pertanian dan Perikanan, 1971.*

*1963–1970.

coconut industry in another sense. The effects of this have often been overlooked. In Chapter V, it was pointed out that the establishment of the rubber replanting schemes also provided for the replanting or new planting of rubber land with approved crops, of which coconut was one of them. Identical grants were provided for these crops as for rubber that is, from $500 per acre initially to $750 per acre for smallholdings and $400 per acre for estates. Since the start of the schemes in 1953 to 1970, a total of 21,720 acres of rubber land switched over to coconut. This is shown in Table 7.17. Of these, 20,380 acres were undertaken by smallholders. However, the impact of the assistance under the rubber replanting subsidies on the renewal of the coconut acreage was very small. The total area of coconut palms planted with such assistance during 1953–70 covered only 4.1 per cent of the total area under coconut as of 1970.

The main task of assisting the rehabilitation and replanting of the coconut areas was however, given to a specific scheme, the Coconut Replanting and Rehabilitation Scheme, which was set up by the Government in 1963. The Scheme covered only smallholdings while the estates were expected to finance their own efforts. Table 7.17 shows that from its inception, the Scheme assisted

the rehabilitation and replanting of 45,916 acres of coconut smallholdings. Related to the total acreage under coconut in 1970, the total area rehabilitated and replanted with the assistance of the Scheme accounted for only 8 per cent.

The extent of renewal of the industry assisted by subsidies could be measured by aggregating the area of rubber land replanted/new planted with coconut (under the rubber replanting schemes) with the area replanted or improved by the Coconut Replanting and Rehabilitation Scheme. About 67,600 acres had thus been renewed since 1953, this constituting nearly 13 per cent of total coconut acreage in 1970. Thus, Government subsidies from all sources had resulted in only a limited renewal of the industry.

For reasons analysed earlier, the Government's commitment to coconut had been limited. Thus, experience and expertise on coconut replanting and rehabilitation work were very scarce, resulting therefore in the inability of the Government to launch the Coconut Replanting and Rehabilitation Scheme immediately on a scale commensurate with the needs of the industry. It is interesting to note that a sum of $15 million was allocated for the Scheme under the Second Five-Year Plan, 1961–65.[166] But the late start of the Scheme caused largely by the lack of experience together with the cautious approach in implementing it, led to a substantial reduction in the allocation for the Scheme to $3.7 million.[167] Under the First Malaysia Plan, 1966–70, a large allocation was again made for coconut replanting and rehabilitation, this being $11.2 million for 36,000 acres[168] (but later raised to 49,200 acres).[169] The necessity for more extensive efforts was increasingly being realized. For 1971–75, an enlarged target of 50,000 acres[170] for replanting and rehabilitation was set.

The objective of the Coconut Replanting and Rehabilitation Scheme[171] was to improve the economic position of the coconut smallholders by raising the returns on an acre of coconut to levels comparable to other crops. To this end, the Scheme provided assistance to the smallholders in selected areas to replant or rehabilitate their coconut holdings and also to adopt a more intensive system of cultivation on the coconut land through the compulsory planting of intercrops. The latter was to supplement the returns on coconut and reflected the Govern-

[166] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 33.

[167] Federation of Malaya, *Interim Review of Development in Malaya under the Second Five-Year Plan, op. cit.*, p. 22.

[168] See S. Selvadurai, *A Preliminary Report on the Survey of Coconut Smallholdings in West Malaysia, op. cit.*, p. 147.

[169] *Penyata Kemajuan Tahunan Ranchangan Pemulehan dan Menanam Semula Kelapa, Kementerian Pertanian dan Perikanan, 1971*, p. 2.

[170] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 136.

[171] A comprehensive description of the Scheme may be found in a recent paper by the Chief Coconut Replanting Officer. See Othman bin Mohd. Lela, "Coconut Replanting and Rehabilitation Scheme in West Malaysia", Kuala Lumpur, Department of Agriculture, 1970 (mimeographed).

ment's concern for its income objective in agriculture. The acceptable intercrops were pineapple, banana, coffee and cocoa, depending on the locality and suitability of soils. Other crops encouraged were maize, vegetables and sweet potato.

Since its inception, the Scheme provided assistance for both replanting and rehabilitation work. The grant for replanting was $500 per acre, payable over four years. Assistance for rehabilitation continued to be $300 and was payable over three years. A coconut holding would be eligible for the replanting grant if the number of economic palms which could be retained on an acre was less than 10.[172] On those areas having more than 10 economic palms per acre, the rehabilitation grant would apply. Rehabilitation work involved, besides bringing the number of palms up to 65 per acre (or reducing those in excess), the improvement of internal drainage, and eradication of noxious weeds. In both rehabilitation and replanting, a large sum was paid to cover certain specified work such as the felling of the uneconomic palms, internal drainage works and the planting of the new coconut seedlings and intercrops. The subsequent payments were made only on the satisfactory maintenance of the holdings.

The Scheme had a unique feature compared with other replanting schemes. Only the coconut smallholders in a block of land selected for the implementation of the Scheme could benefit from the Scheme. This means that smallholders outside the selected area could not participate. Another restriction was that only areas having drainage facilities would be selected.[173] The reasons for this block approach were: i) Improvements in internal drainage should be for a large area to ensure that the water-table in the area could be significantly affected; ii) The large number of dead and uneconomic palms could be systematically disposed of to prevent their becoming breeding grounds for the Rhinoceros Beetles; and iii) A large and compact area would enable close control of progress and supervision.

The Scheme suffered from one important disadvantage. There was lack of experience in managing a scheme of this nature. When first established, the objective was to rehabilitate 12,000 acres a year from 1963 but it became apparent that the Scheme should first start as a pilot project on an area of 4,000 acres in Minyak Beku, Johore, in order "to study the problems connected with the physical operations of the Scheme".[174] Another pilot project covering 2,000 acres was started in Matang Kunda, Perak in 1964[175] and a third, also of 2,000 acres, commenced in Daerah Kumumin in Kelantan in 1965, after a year's delay.[176] The Scheme had since emerged from the status of pilot projects in 1966–70 but the necessity to move cautiously in its early years was another indication of the past neglect of the industry.

[172] *Ibid.*, p.2.

[173] *Ibid.*

[174] *Annual Report of the Division of Agriculture for the Year 1963*, pp. 54–55.

[175] *Annual Report of the Division of Agriculture for the Year 1964*, p. 41.

[176] *Annual Report of the Division of Agriculture for the Year 1965*, p. 43.

The effects of the Scheme on productivity were encouraging. On the rehabilitated holdings, yields increased by an average of 30–35 per cent.[177] Furthermore, with the better selected seedlings, about one-quarter of the new palms in the Johore area commenced production in their fourth year, a year earlier than the average.[178] In the Minyak Beku area, a recent survey further noted that there had been a progressive increase in the size of the nuts.[179] Furthermore, output of the intercrops (compulsory under the Scheme) was reported to be considerable in some of the areas covered by the Scheme and provided a good source of monthly income.[180] No data were available yet on the replanted areas under the Scheme.

The limited reach of the Scheme on the vast area of coconut smallholdings has been commented upon. There were other important deficiencies. Firstly, a debatable point is the adequacy of the grant assistance. A recent assessment of the Scheme at Minyak Beku indicated that about 30 per cent of those who obtained grant payment in the first year failed to carry out the specified maintenance work on their plots in the second year in order to qualify for further grant assistance.[181] There seems to be no other strong reasons for this high rate of drop-out besides the apparent lack of resources on the part of the smallholders to see them through the whole replanting/rehabilitation phase. Estimates made by the Chief Coconut Replanting Officer indicated that the total cost of replanting an acre of coconut holding was $768 and that of rehabilitating one acre was $615.[182] Against a replanting grant of $500 per acre and a rehabilitation grant of $300 per acre, the smallholders would have to find funds of about $268 per acre for replanting and $315 per acre for rehabilitation work. Incomes of coconut smallholders from all sources as pointed out earlier, were low: in 1964/65, their gross incomes averaged $200 a month in Johore, $162 a month in Selangor/Perak and $67 in Kelantan. With such incomes, it would obviously be difficult for many of them to have accumulated enough savings to finance both the unsubsidized part of the replanting or rehabilitation costs and any loss of incomes during the replanting/rehabilitation phase.

Furthermore, it was pointed out as early as 1958 that the cost of replanting an area with coconut (and the compulsory intercrops) was higher than with rubber, the main reasons being the need for internal drains (not required in rubber areas), the better standard of cultivation required by coconut, and the

[177] Othman bin Mohd. Lela, *op. cit.*, p. 5.

[178] *Ibid.*

[179] S. Selvadurai and Othman bin Mohd. Lela, *An Evaluation of the Minyak Beku (Johore) Coconut Replanting and Rehabilitation Scheme*, Kuala Lumpur, Ministry of Agriculture and Co-operatives, June 1967 (mimeographed), p. 75.

[180] *Annual Report of the Division of Agriculture for the Year 1966*, p. 55.

[181] S. Selvadurai and Othman bin Mohd. Lela, *op. cit.*, p. 12.

[182] "Coconut Replanting and Rehabilitation Scheme – Proposal for Second Malaysia Plan, 1971–1975", Kuala Lumpur, Department of Agriculture (undated).

higher cost of disposing the felled palms (which have no commercial value) in order to remove possible breeding grounds for the Rhinoceros Beetles.[183] But the rubber planting/replanting grant had been fixed at $750 per acre with a bonus of $50 more for those smallholders owning less than five acres who had successfully replanted.[184] The large disparity in the subsidies provided for rubber replanting and coconut replanting (not to consider rehabilitation) despite the relatively higher cost of the latter is one of the irrational anomalies of public policy. Furthermore, the situation is even more baffling when it is considered that rubber smallholdings switching to coconut were given assistance identical to that provided for replanting with rubber (since coconut is one of the eligible crops for grant assistance to encourage diversification of the rubber areas)[185] while the replanting with coconut of a former coconut area would have to be satisfied with the relatively smaller subsidy.

Another limitation of the Scheme concerns research on coconut which remained relatively neglected. The World Bank mission of 1954 noted this neglect and recommended the Government and the private sector "to plan an intensive series of investigations into the varietal response and management aspects of coconut production".[186] Some efforts had been made since then but the situation was best summed up by the Director of Agriculture in 1968 when he pointed out that limited funds available for coconut research had resulted in little progress being achieved.[187] Thus, there was unavailable to the Scheme and to efforts outside the Scheme, high-yielding varieties[188] to replace the uneconomic palms. For effect, the Scheme therefore had to depend largely on improving the conditions of cultivation such as poor drainage, badly-controlled weeds, lack of fertilizers, etc., which had held down yields in the past, and selected seedlings. The FAO survey recommended that a research worker from different fields of research such as plant breeding, soil science, crop protection, etc. be made available for coconut research work and that their efforts be co-ordinated by an experienced agronomist.[189] By the end of 1970, the Malaysian Government had not yet taken any significant measure to correct this basic deficiency. Little is heard of the coconut research centre established on a

[183] T.B. Wilson, *op. cit.*, p. 40.

[184] See Chapter V.

[185] *Ibid.*

[186] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, pp. 189–190.

[187] Speech of Encik Mohamed bin Jamil, Director of Agriculture, at a Seminar on the Coconut Industry held in August 1968. See *The Coconut Industry in West Malaysia, op. cit.*, p. 1.

[188] Coconut varieties capable of yielding up to 20 piculs of copra per acre have been introduced in Ceylon. In West Malaysia, the highest yield was only about 11–12 piculs of copra per acre.

[189] Emmanuel Muttukumaru, *op. cit.*, p. 108.

127-acre site at Parit Botak in the mid–1960's. The problem comes back again to the lack of a full commitment by the Government on the renewal of the coconut industry.

But confrontation with the issue cannot be postponed indefinitely. Coconut oil is highly substitutable with natural oils such as ground-nut oil, palm kernel oil, palm oil, soya bean oil, lard, marine oil and even synthetic compounds. Like rubber, the future survival of the coconut industry will rest in the main on the price competitiveness of coconut oil against its substitutes. Research to improve yields on the one hand, and further improvement in cultivation conditions on the other, are prerequisites. Measures in these two directions in the 1960's were inadequate to assure the industry's competitive position in the future. Unless there is a reorientation of public policy towards the coconut industry early enough, the country will eventually face a situation in which it will have to make a large shift away from the industry. To the extent that public policy had failed to bring about a substantial renewal of the industry in the 1960's, the economy's progress towards greater diversification of its output and export structures had been smaller. A renewed and highly-productive coconut industry is one means towards greater diversification, a fact which public policy in the 1960's did not seem to recognize.

5. THE FOREST INDUSTRIES

5.1 *Introduction*

The forest industries emerged as one of the principal productive sectors of the economy in the 1960's. The most obvious impact of this development was on the export structure. In 1960 and 1961, exports of timber (saw logs and sawn timber) and plywood constituted the sixth largest exports after rubber, tin, iron ore, palm oil and kernels and coconut products. In 1962–66, this export group of forestry products was the fifth largest[190] and from 1967, it became the third largest. No firm data were available on the domestic absorption of forestry products but indicators like population growth and the expansion of building and construction output would suggest a corresponding increase in the consumption of such products.

As one of the principal contributors towards a more diversified economy in the 1960's, the forest industries present a very interesting case study. Firstly, the expansion of timber production in the 1960's was not a direct outcome of attempts to diversify the economy. Secondly, the forestry sector was and remains as one of the major productive sectors over which public policy at the national level had only partial authority and influence.[191] Nevertheless, it was also a sector that public policy attempted to influence to ensure and enhance its place in Malaysian production and exports, though in some areas the efforts

[190] In 1964, it was the fourth largest export item but slipped back to the fifth place in 1965 and 1966.

[191] *The Federal Constitution*, Article 74 and Item 3 of List II of the Ninth Schedule. Under these provisions, matters affecting forestry are vested with the individual State Governments.

Table 7.18

West Malaysia – Areas of Forest and Non-Forest Land
(square miles)

	1956	1965	1969
Forest Land			
Forest Reserves	12,539 (24.7%)	13,392 (26.4%)	16,007 (31.6%)
State Land Forest (including wild life and other reserves)	24,472 (48.3%)	19,643 (38.7%)	16,661 (32.9%)
Non-Forest Land	13,688 (27.0%)	17,664 (34.8%)	18,031 (35.5%)
Total Land Area	50,699	50,699	50,699

Sources: 1. Forest Department.
2. *Report on the Federal Forest Administration,* 1955 and 1965.

proved to be weak or lacking in resolution. The following section will attempt to appraise the contributions of public policy in the development of the sector.

5.2 *Public Policy and the Development of the Forestry Sector*

Timber is a major natural resource of West Malaysia. In 1956, out of the total land area of 50,699 square miles, 37,011 square miles or 73 per cent were under forests (Table 7.18). A decade later, the forested area was 33,035 square miles or 65 per cent of the total land area. By 1969, the forested land area fell further to 32,668 square miles or 63.5 per cent of the total land area, a still substantial source for timber. Not all the forested lands hold commercial timber. In a forest inventory taken in 1970/71, the preliminary results showed that of a total forested area of 32,250 square miles, the area of available unexploited commercial forests was about 9,135 square miles.[192] A further 15,345 square miles could be considered available if account was taken of forested land felled but not necessarily depleted of commercial timber.

Table 7.19 shows the production of logs in 1955–70. The yearly log production in 1955–59 was around 1.15 million tons of 50 cu. ft. Production expanded very rapidly from 1960. Output in 1965 was slightly more than double that of 1955; in 1968, it was slightly over 3 times larger and by 1970, was more than 4 times larger.

[192] FAO Forest Industries Development Project, *An Appraisal of the Wood-Based Industries of West Malaysia and Their Potential For Development,* (A draft report to the Malaysian Government), Kuala Lumpur, 1972, p. 1.

Table 7.19

West Malaysia – Production and Exports of Round and Sawn Timber

Year	Round Timber*		Sawn Timber	
	Production ('000 tons of 50 cu. ft.)	Exports as % of Production	Production ('000 tons of 50 cu. ft.)	Exports as % of Production
1955	1,107.2		490.4	
1956	1,192.3		524.8	
1957	1,146.3	14.8	523.1	22.0
1958	1,151.6	16.5	503.1	24.8
1959	1,177.4	18.6	543.9	26.5
1960	1,589.0	17.6	729.4	29.8
1961	1,563.5	18.0	711.1	25.0
1962	1,632.5	19.0	755.7	26.7
1963	1,905.3	22.0	830.5	30.2
1964	2,105.2	23.3	946.5	34.2
1965	2,277.7	25.0	950.6	35.3
1966	2,691.0	29.0	1,004.1	34.4
1967	2,965.5	27.6	1,218.9	33.8
1968	3,586.8	26.2	1,418.4	39.8
1969	3,788.9	27.1	1,454.3	44.6
1970	4,621.1	24.6	1,641.2	46.8

Sources: Computed from Department of Statistics, *Monthly Statistical Bulletin of West Malaysia,* August 1963, September 1970 and April 1972.

*Converted from data provided in solid cubic feet by dividing by 50 to obtain equivalent in tons of 50 cubic feet.

This marked expansion in timber production was the result of a number of factors. Firstly, the growing world demand for tropical woods began to be significantly felt from 1960 and this demand had generally continued unabated. The close proximity of Singapore was another important factor. The Malaysian timber industry became a substantial source of supply of logs and sawn timber to Singapore's wood-based industries and this facilitated their expansion in consonance with the strong industrialization programmes pursued by the Singapore Government in the 1960's.[193] On the supply side, output growth was considerably assisted by the large land development activities of the Federal Land Development Authority and the State Governments. For example, in the last four years of the 1960's (1966–69), a total of 1,421 square miles of land was alienated for agriculture (largely, for rubber and oil palm) but of this, 852 square miles were of land under forests. At a conservative estimate of a yield of 10 tons of commercial timber per acre of forest land,[194] this means an output of nearly 5½ million tons of logs from land development activities alone during this four-year period or 42 per cent of the total log production during the period. The percentage could be higher as the Malaysian forests were known to have yielded more than 20 tons per acre but the above estimate allows for wasteful exploitation typical of the land development schemes. Another factor that sustained the expanding supply of timber was the pressure brought on the State Governments by the Central Government for the states to earn as much revenue within each state as possible. Under the Federal Constitution, revenue from forests is one of the sources of revenue assigned to the states.[195] One recent study observed that this had indeed resulted in overcutting of the forest resources.[196] Furthermore, the cessation of the Emergency in 1959 provided a more secure environment for timber extraction compared with the earlier years of the 1950's when timber workers, officials and sawmills were among the targets of communist activities.[197]

Policies to promote economic diversification cannot, therefore, be given credit for any *direct* role in assisting the sharp expansion of log production in the 1960's. Such policies, however, had a more positive role in other aspects of

[193] For a good discussion on industrialization in Singapore, see Chia Siow Yue, "Growth and Pattern of Industrialization" and S.H. Huan, "Measures to Promote Industrialization" in You Poh Seng and Lim Chong Yah (ed.), *The Singapore Economy*, Singapore, Eastern Universities Press Sdn. Bhd., 1971, pp. 189–245.

[194] This yield figure was used by the Forest Department. See Federation of Malaya, *Official Year Book 1961, op. cit.*, p. 252; also, *Report on the Forest Administration for the Year 1958*, p. 38.

[195] *The Federal Constitution*, Tenth Schedule, Part III, Item 2.

[196] Food and Agriculture Organization, *Forest Industries Development, Malaysia. An Analysis of Problems Affecting the Development of Forestry and Forest Industries in West Malaysia* (A report prepared for the Malaysian Government), Rome, 1970 (mimeographed).

[197] See *Report on Federal Forest Administration in the Federation of Malaya*, 1950, 1951 and 1952, p. 1, p. 3 and p. 1, respectively.

the development of the forest industries. These policies may be divided into two groups: i) those that attempted to renew and improve the forest resources as the basis for the maintenance and expansion of the wood-based industries in the years to come; and ii) those of immediate impact which were directed at establishing standards for exports and increasing the degree of vertical diversification within the forest industries.

The formulation of a national policy to renew and improve the forest resources of West Malaysia had to operate within the constraints of the country's Constitution. On matters relating to forestry, the Constitution accords full autonomy to individual states. However, it also recognizes the need for a machinery to formulate, among other things, a national policy on forestry. Accordingly, under Article 91, it provides for the establishment of a National Land Council, the function of which is "to formulate from time to time in consultation with the Federal Government, the State Governments and the National Finance Council, a national policy for the promotion and control of the utilization of land throughout the Federation for mining, agriculture, forestry or any other purpose." Any policy so formulated will have to be followed by the Federal and State Governments. It may be noted that the constitutional provision relating to state authority over forestry matters was merely a continuation of the arrangement that existed between the Federal and the State Governments before Independence. It was this constitutional arrangement that appeared to be a major stumbling block towards agreement on a national forestry policy.

The consequences of autonomy for the states in forestry matters are fairly obvious. Forest reserves were established in each state with no co-ordination at the national level. Moreover, decisions to set up such reserves had been made with no prior knowledge of agricultural potential. Forest reserves are of two types, the protective forest reserves and the productive forest reserves. The former, which are maintained on hills, are "primarily to prevent erosion and floods and to conserve water supplies" while the latter, being on the lowlands and foothills, constitute the forest estates or a major source of timber supply for the country. The productive reserves covered 8,211 square miles in 1956 and 8,906 square miles in 1965. Extraction of timber on the productive forest reserves was closely regulated to ensure regeneration and maximum removal. The other component of forested land comprised the state land forests or land destined eventually for alienation. On these, extraction of timber was again undertaken in accordance with the varying approaches of the State Governments to forest exploitation. Logging activities in the state land forests were unsupervised and hence, wasteful harvesting and badly planned forest roads had become common features. Other consequences were erosion and damage to water catchment areas.

From the standpoint of overall economic development, it would be appropriate to have a national forest policy which would have regard to the following considerations. Firstly, the claims on unalienated land for forest reserves should be considered as important as those for agriculture, mining and industrial purposes. Therefore, a nationally acceptable set of land use criteria would have

to be evolved to help resolve this conflict among the different claims. The urgency of the problem became quite evident with the increasing pace of land development in the 1960's. Secondly, the preservation of forest resources as a continuing and expanding source of foreign exchange and raw materials for domestic economic activities should be regarded as crucial for a growing and more diversified economy. This implies the need for a co-ordinated and planned process for the regeneration and improvement of the forest resources in all the states of West Malaysia. The primary concern of the states in the past was the extraction of timber rather than its conservation. Efforts of the Forest Department showed that the present relatively low yield of about 10 tons per acre from virgin forests could be raised to 50 tons per acre with proper silvicultural practices following exploitation.[198] The urgency of undertaking measures to improve the quality of the forest stands had not been a prominent feature of forest development in the country largely because the State Governments generally had never been in a proper position to commit themselves to long-term investment in forestry.[199] As early as 1955, a survey[200] was undertaken by the Forest Department which indicated that in order to ensure self-sufficiency in timber in 70 years time, it would be necessary to extend the area of the productive forest reserves from the existing 8,000 odd square miles to 12,500 square miles and, furthermore, to regenerate this area at the rate of 100,000 acres a year.[201] But neither objective could be achieved because firstly, forestry was not given priority in land use over other alternatives and secondly, large areas of state land forests earmarked for agriculture and other uses had a higher priority for exploitation and, therefore, the required cut on forest reserves and, hence the area to be regenerated, had to be limited.

The Federal Government was indeed conscious of the desirability of having a national forest policy for a long time, even without having yet seen the effects of the uncoordinated approach to forestry matters among the individual states. As early as 1955, the Forest Department, a federal institution, called for "a clear and definite policy, employing terms specific enough to show what the practical requirements for its implementation will be in terms of land, finance and control of forest working".[202] With Independence in 1957, a Working Party was appointed by the Cabinet to examine the question of a national forest policy.[203] Firm recommendations were made by the Working Party for the adoption of a forest policy, on the area for permanent timber production and,

[198] *Report on the Forest Administration for the Year 1958*, p. 38.

[199] A regenerated forest takes about 70 years to mature. See Federation of Malaya, *Official Year Book 1961, op. cit.*, p. 252.

[200] Federation of Malaya, *Annual Report for 1957*, Kuala Lumpur, Government Printer, 1958, p. 197.

[201] *Report on the Federal Forest Administration for the Year 1958*, p. 42.

[202] *Report on the Federal Forest Administration for the Year 1955*, p. 25.

[203] *Report on Forest Administration for the Year 1959*, p. 40.

on the methods of silvicultural operations to be carried out.[204] These recommendations, collectively known as the Interim National Forest Policy, were deliberated upon by the Government but no decision was taken. In early 1967, it was decided by the Economic Committee of the Cabinet that a new Working Party be established to re-examine the matter.[205] Again no decision was taken by the Government.

The autonomy of the states obviously presented a very difficult framework for working out an agreed policy. The process was made even more difficult by the absence of reliable information on land capability, a necessary basis for decision on the size and siting of forests and for the resolution of possible conflict between the claims of forestry and other uses of land. The decision to undertake a land capability survey came about only following a recommendation made in 1963 by the Ford Foundation Team on Agricultural Diversification.[206] The survey was carried out by a Technical Sub-Committee of the National Development Planning Committee (NDPC)[207] and was completed in 1969. However, it was generally felt that further interpretation and discussion would be required before the results of the survey could be used as a basis for a national land use policy.

One other important gap in knowledge essential for the formulation of a national forest policy was a comprehensive study of the problems, potential and direction for future development of the timber and associated industries themselves. Action to rectify this was taken only in 1968 with the establishment of the Forest Industries Development Project. Assistance was provided by the Food and Agriculture Organization (FAO) and the United Nations Development Programme. The Project, initially scheduled for completion by 1973, would prepare a master plan for the development of the forest industries in Malaysia. In the process, it was to "undertake forest inventories, forest and forest products marketing studies, evaluate economic possibilities of specific industrial proposals and assist the Government of Malaysia in appraising and if necessary, modifying forest policies, legislation, administration, management and research programmes".[208]

Of more limited impact but nevertheless of significance in assisting the future management of the forestry sector was another major project entered into by

[204] *Report on Forest Administration for the Year 1960*, p. 41.

[205] The Working Party was under the Chairmanship of the Director of Forestry and comprised representatives of the Ministry of Commerce and Industry, the Ministry of Agriculture and Co-operatives, the Ministry of Lands and Mines, the Economic Planning Unit and the Treasury. See *Penyata Tahunan Perhutanan di-Malaysia Barat, Tahun 1967*, p. 6.

[206] Ford Foundation Team Report on Agricultural Diversification, *op, cit.*, p. 45.

[207] The NDPC is the highest planning authority in the country.

[208] Food and Agriculture Organization, *Forest Industries Development, Malaysia. An Analysis of Problems Affecting the Development of Forestry and Forest Industries in West Malaysia, op. cit.*, Appendix 7, p. 233.

the Federal Government. This was the Pilot Plantation of Quick Growing Industrial Tree Species Project.[209] The Project, with a budget of $6 million and undertaken with United Nations assistance, was launched at the end of 1967 and would run for five years. It arose from the fact that Malaysian forests lack the long-fibre species for pulpwood production but trials in the past with some species of tropical pines provided adequate results to encourage further research as a pilot project. The objective of the Project was thus essentially to examine the technical and economic feasibility of operating pulpwood plantations on a commercial scale and to develop the methods of managing them.

One could view then the rather fruitless efforts of the Federal Government in the 1960's to arrive at a national forest policy as being due to its limited authority and to its lack of circumspection in dealing with a sector on which it possessed little of the vital information. On the latter, its relative inexperience and inadequate intiative in economic planning must bear part of the blame. Furthermore, the fact that the effects of an uncoordinated forest policy could not be immediately felt in turn reduced the sense of urgency to press for an early solution to the problem.

Despite all these obstacles, expenditures on the forestry sector under the various development plans had an increasing trend. In the First Five-Year Plan, 1956–60, the actual expenditure was $2.2 million.[210] Under the Second Five-Year Plan, 1961–65, an allocation of $5 million was made. Of this, $4.6 million were earmarked for silviculture, the aim of which was to convert existing forest land into higher yielding forests (3–5 times more productive) in about 70 years time at the rate of 50,000–70,000 acres a year.[211] Total expenditure on forestry for 1961–65 exceeded its allocation by $1.6 million.[212] For 1966–70, under the First Malaysia Plan, a sum of $10 million was allocated, with concentration of the programmes on research and silviculture.[213] The realized expenditure was $11.9 million.[214]

These are possibly about as much as could be done under the circumstances in the sphere of forest renewal and other forestry activities. The lack of a national policy framework precludes the operation of any ambitious and systematic plan for the renewal of the forest assets as was done for the renewal of the rubber industry. The states on their own do not and cannot be expected to have the necessary resources to develop their forestry sectors. Federal assistance of a scale commensurate with the problem is thus necessary. On the other hand, the levies on the forestry industries had so far been diverted to purposes other than

[209] See Malaysia, *Official Year Book, 1969, op. cit.*, p. 303. Also, *Penyata Tahunan Perhutanan di-Malaysia Barat, Tahun 1967*, p. 3.

[210] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 29.

[211] *Ibid.*, p. 36.

[212] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 69.

[213] *Ibid.*, p. 115.

[214] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 68.

for the renewal of the forest resources. Firstly, there was the cess on logs and sawn timber, the proceeds of which financed the activities of the Malaysian Timber Export Industry Board. The second levy, introduced in 1967, was a 10 per cent export duty (15 per cent from 1972) on logs. The proceeds of this went into general revenue. But then a case could hardly be made out for the diversion of these resources to the renewal of the forest assets or for the levy of additional duty on the industries, unless a clearly defined national forest policy could be evolved and agreed upon by all the states.

More tangible results were, however, evident in the second group of policy measures which operated on the more immediate situation of the forest industries. The scope for policy action here was certainly larger as it was possible to implement policies that were national in character. But even so, there were still shortcomings.

In its primary stage of development, the output of the timber industry would be in the form of logs and the whole of the log output exported without further processing. However, the desirability of encouraging vertical diversification of the output of the industry was very early recognized, and measures were introduced to induce local processing of the timber logs before export.

In the post-war years, the policy of prohibiting the export of logs was first put into effect by the Colonial Government under the Prohibition of Exports Order, 1949.[215] The Order required the licensing of timber exports from the country, these licences being issued in accordance with a general policy which prohibited the export of round logs and permitted the export of sawn medium and light hardwoods. However, the Order did not apply to the export of logs to Singapore. Another regulation under the Order was the requirement for the sawn timber exports to the "exacting markets" (Europe, United States, Australia, England, South Africa and New Zealand) to be graded according to the Malayan Grading Rules (or other approved rules) under the supervision of the Forest Department. The Order was superceded by the Prohibition of Exports Order, 1956, which contained the essential features of its predecessor. In 1958, the export policy was slightly modified to permit the export of two species of abrasive logs, the White Meranti and the Mersawa,[216] this modification to apply only so long as these logs could not be processed by the local sawmills.[217] In later years, with the stepping up of land development activities, there was an increase in the production of the unpopular species of logs and to enable these to be marketed, a small proportion of the popular species of logs was allowed to be mixed with them for export.[218]

[215] Federation of Malaya, *Annual Report 1953*, Kuala Lumpur, Government Printer, 1954, p. 135.

[216] *Report on Forest Administration for the Year 1958*, p. 4.

[217] *Report on Forest Administration for the Year 1959*, p. 4.

[218] Lian Kwen Kuo, "The Future of the Sawmilling and Plywood Industries in West Malaysia" in *The Malayan Forester*, Vol. XXIX, No. 4 (1966), p. 246.

One obvious intention of these Orders was to encourage the processing of timber within the country. Table 7.20 shows the export of logs for 1957–70. Until 1965, the control of log exports to overseas markets other than Singapore was quite effective. But after 1966, log exports to these markets became quite significant, rising to nearly 110,000 tons of 50 cu. ft. and valued at $11.2 million by 1970. Reflecting even more adversely on the singleness of purpose of the Government in implementing the policy measure to urge the greater domestic processing of logs is the overall growth trend in the volume of log exports over the 1957–70 period. The total volume of log exports in 1957 was only 172,300 tons of 50 cu. ft. but it had grown since then until the volume exported in 1970 was about 6 2/3 times larger. Furthermore, as shown in Table 7.19, the percentage of logs exported in relation to total log production had even increased during 1957–70. Between 1957 and 1962, the percentage of logs exported from total output varied from about 15 to 20 per cent. From 1965 to 1970, the proportion exported ranged from 25 to 30 per cent of total log production. More than 90 per cent of the log exports went to Singapore except for two years when Singapore's share was slightly below 90 per cent.[219]

All these indicate foregone opportunities for West Malaysia which were well within its capability and means to exploit. The exclusion of Singapore for purposes of the prohibition on log exports in the pre-Independence period is understandable as it would be unrealistic to expect the British to pursue a policy of cutting off raw materials from one of its governed territories to another of its colonies. The decision to continue to permit log supply to Singapore under the Prohibition of Exports Order, 1956 could perhaps be justified until 1965 by the preoccupation with more pressing problems connected with political independence and the emergence of the concept of Malaysia (which included Singapore) in 1961,[220] and its realization until the separation of Singapore from Malaysia in 1965. But after 1965, there appeared no more valid reasons to postpone the introduction of appropriate measures to retain the maximum possible volume of log production for domestic processing. Yet, all that appeared was initially a 10 per cent ad valorem export duty imposed on saw logs and veneer logs in January 1967.[221] In justifying this measure, the Minister of Finance stated, "The Government sees no reason why the Malaysian timber industry should not be encouraged to process such logs".[222] Table 7.20 shows that this export duty was quite ineffective in discouraging the volume of log exports. Log exports had even increased during 1967–70. Further confirmation of the deficiency of this measure came in January 1972 when the Minister of

[219] These years were 1959 and 1967.

[220] For a brief official account of the formation of Malaysia, see Malaysia, *Official Year Book 1963*, Kuala Lumpur, Government Printer, 1964, pp. 32–49.

[221] See speech of Minister of Finance introducing the *Supply (1967) Bill* in Parliament on 19 January 1967.

[222] *Ibid.*

Table 7.20

West Malaysia – Exports of Logs by Major Markets

Year	Total Exports of Logs		Exports of Logs to:			
			Singapore		Other Countries	
	Volume ('000 tons of 50 cu. ft.)	Value ($ million)	Volume ('000 tons of 50 cu. ft.)	Value ($ million)	Volume ('000 tons of 50 cu. ft.)	Value ($ million)
1957	172.3	11.03	172.3	11.03	–	–
1958	192.8	11.66	192.8	11.66	*	+
1959	220.4	11.69	196.0	9.88	24.4	1.81
1960	275.5	15.51	268.4	14.94	7.1	0.57
1961	282.4	15.45	282.3	15.45	0.1	+
1962	305.1	16.96	304.9	16.95	0.2	0.01
1963	417.1	24.26	407.8	23.26	9.3	1.00
1964	492.8	26.84	485.7	26.50	7.1	0.34
1965	574.4	30.87	573.7	30.83	0.7	0.04
1966	777.4	43.18	742.0	39.97	35.4	3.21
1967	815.7	58.99	730.0	52.86	85.7	6.13
1968	941.1	76.06	857.7	68.44	83.4	7.62
1969	1,032.4	84.81	947.2	77.00	85.2	7.81
1970	1,145.6	98.70	1,036.1	87.52	109.5	11.18

Sources: Department of Statistics, *Annual Statistics of External Trade, West Malaysia,* various years.

*Less than 100 tons of 50 cu. ft. +Less than $0.01 million.

Finance found it necessary to raise the duty to 15 per cent.[223] He stressed that log processing "which cannot by any means be regarded as a sophisticated industry, could well be done by us".[224]

An examination of the sawmilling facilities would indicate that capacity could not have been a factor accounting for the tardy and weak Government action. In fact, the country's sawmilling capacity in 1968 was estimated at 4.2 million tons of 50 cu. ft. in terms of log intake while the total production of logs in that year was only 3.6 million tons of 50 cu. ft.[225] By 1970, however, total log production exceeded the 1968 capacity of the sawmills by nearly ½ million tons of 50 cu. ft. But any assumption of capacity remaining at the 1968 level would be unrealistic as some expansion should be expected since there had been no restrictions on the licensing of sawmills by the State Governments.

There was another factor which encouraged the increase in log exports to Singapore. The wood-based industries of Singapore were undoubtedly very efficient and this enabled them to bear the higher cost of logs arising from the 10 per cent export duty.

Of the logs that were utilized within the country, Table 7.21 shows that the bulk was processed by the sawmills into sawn timber. Until 1964, virtually all the logs retained for domestic processing were processed by the sawmills. From 1965, the volume of log intake by the sawmills continued to rise but an increasing, though still a small part of the locally-retained logs was being diverted to the veneer and plywood mills.

From Table 7.19, it can be seen that a substantial part of sawn timber production was for domestic consumption. But there was also a clear trend that a growing share of output was being exported. In 1957, only 22 per cent of the total production of sawn timber were exported; by 1970, it was 47 per cent. Sawn timber was the major product of the forest industries. Table 7.22 shows the export values of the various products of these industries. Exports of sawn timber averaged nearly $20 million in 1957–59; by 1965, the value was slightly more than 3 times larger and by 1970, it was nearly 8 times larger. Growth of the other two products, saw logs and, veneer and plywood sheets were even faster than that of sawn timber during the same period. The share of sawn timber exports thus fell from over 60 per cent of the total exports of timber products during 1957–65 to slightly over 50 per cent in 1966–70.

The first important policy measure made under the Prohibition of Exports Order, 1949, required sawn timber for exports to be graded.[226] This was done under a set of rules, the Malayan Grading Rules, which soon became accepted as

[223] See speech of Minister of Finance introducing the *Supply (1972) Bill* in Parliament on 6 January 1972.

[224] *Ibid.*

[225] International Bank for Reconstruction and Development, *Agricultural Sector Survey – Malaysia*, Vol. III, *op. cit.*, para. 70.

[226] After the war, sawn timber was first exported in 1948 in the form of 15 tons of ungraded timber.

Table 7.21

West Malaysia — Production, Local Processing and Exports of Logs

Year	Total Log Production (million cu. tons)	Volume of Logs Processed Locally				Exports of Logs
		Total	Sawmills	Veneer & Plywood Factories	Others	
		(As % of Total Log Production)				
1957	1.15	75.7	75.7	*	*	14.8
1958	1.15	73.0	73.0	*	*	16.5
1959	1.18	75.4	75.4	*	*	18.6
1960	1.59	77.4	76.7	*	*	17.6
1961	1.56	76.3	75.6	*	*	18.0
1962	1.63	76.7	76.1	*	*	19.0
1963	1.91	73.3	72.3	0.5	0.5	22.0
1964	2.10	73.3	71.9	1.0	0.4	23.3
1965	2.28	69.3	66.7	2.2	0.4	25.0
1966	2.69	64.0	60.6	3.0	0.4	29.0
1967	2.97	65.3	61.6	3.4	0.3	27.6
1968	3.59	70.2	63.2	5.3	1.7	26.2
1969	3.79	66.0[a]	60.2	5.8	n.a.	27.1
1970	4.62	66.1[a]	58.7	7.4	n.a.	24.6

Sources: 1. *Report on Forest Administration,* 1955–1967.
2. Department of Statistics, *Monthly Statistical Bulletin of West Malaysia,* August 1963, September 1970 and April 1972.
3. Ministry of Agriculture and Fisheries, *Statistical Digest,* March 1972.

*Less than 10,000 cu. tons.
[a]Excludes logs consumed by 'Others'
n.a. = not available

Table 7.22

West Malaysia – Exports of Major Categories of Timber Products

Year	Saw Logs		Sawn Timber		Plywood and Veneer Sheets		Total ($ million)
	Value ($ million)	As % of Total	Value ($ million)	As % of Total	Value ($ million)	As % of Total	
1957	11.03	37.0	18.63	62.6	0.12	0.4	29.78
1958	11.66	37.2	19.63	62.6	0.05	0.2	31.34
1959	11.69	35.6	21.10	64.3	0.05	0.2	32.84
1960	15.51	28.0	39.76	71.9	0.03	*	55.30
1961	15.45	37.1	25.99	62.4	0.20	0.5	41.64
1962	16.96	34.9	31.56	64.9	0.09	0.2	48.61
1963	24.26	36.4	41.23	61.9	1.14	1.7	66.63
1964	26.84	30.3	59.56	67.2	2.17	2.5	88.57
1965	30.87	32.1	61.29	63.8	3.91	4.1	96.07
1966	43.18	40.5	56.00	52.6	7.33	6.9	106.51
1967	58.99	41.6	70.62	49.8	12.11	8.5	141.72
1968	76.06	37.1	106.34	51.9	22.46	11.0	204.86
1969	84.81	34.4	128.08	51.9	33.93	13.7	246.82
1970	98.70	32.5	156.79	51.6	48.18	15.9	303.67

Sources: Department of Statistics, *Annual Statistics of External Trade, West Malaysia,* various years.

*Less than 0.1

assurance of quality control. The Forest Department provided the training for private timber graders. Furthermore, it maintained a team of timber inspectors to check on the work of the private graders. In 1969, the timber inspectorate had 21 timber inspectors checking on the work of 220 graders employed by the sawmills and exporters. It can be said that the practice of grading timber greatly assisted the growth of timber exports in that it enabled the local products to meet the demand for quality timber abroad and to compete more effectively with the other timber producers. It was, therefore, logical for the Government to maintain and strengthen the policy of timber grading. Since the early 1960's, modifications to the grading system had been made.[227]

The expansion of the timber trade soon brought forth "part-time exporters and mala fide traders who indulge in unscrupulous trade practices and whose only interest was quick profits without any regard for the prestige of Malaysian timber overseas".[228] In particular, the reputation of the Malaysian exporters had been damaged by those traders who made frequent breaches of their sales contract by supplying sub-standard timber or by not fulfilling orders when the local prices of timber went up. A working party comprising Government officials and representatives of the timber industry was set up in the mid–1960's to look into the problem. It recommended the regulation and control of the timber export industry. Thus, by an Act of Parliament of 1966,[229] the Malaysian Timber Export Industry Board was established. The Act provided for the Government to be represented on the Board. The Board was empowered to issue export registration certificates to exporters who satisfied the conditions laid down by the Board. No timber could be exported without these certificates. The Board could also regulate the nature of the contracts between the exporter and the importer, the methods of fixing prices and measures for maintaining proper standards in the conduct of the trade. The Board's activities were financed by a cess.[230] By the end of 1968, all bona fide exporters of timber had been registered by the Board.[231] To further strengthen its control on all stages of the export industry and to check the export of low quality timber, the Board was empowered in 1968 to register all suppliers of timber to the exporters for purposes of issuing certificates.[232]

The question of efficiency of the sawmilling industry also engaged the attention of the Government in the 1960's. A survey made by a Colombo Plan

[227] Food and Agriculture Organization, *Forest Industries Development, Malaysia. An Analysis of Problems Affecting the Development of Forestry and Forest Industries in West Malaysia, op. cit.*, p. 52.

[228] See speech of Minister of Commerce and Industry in moving the *Malaysian Timber Export Industry Board (Incorporation) Bill* in Parliament on 15 November 1965.

[229] *The Malaysian Timber Export Industry Board (Incorporation) Act, 1966.* Singapore also passed a parallel legislation.

[230] The cess was 80 cents per cu. ton for sawn timber and 80 cents per Hoppus ton for logs.

[231] *Malaysian Timber Export Industry Board – Second Annual Report, 1968*, pp.1–2.

[232] This was under the *Registration of Timber (Export) Suppliers Regulations, 1968.*

expert on the sawmilling sector in 1960 indicated that the recovery percentages in sawmills varied from 30 to 90 per cent. As a follow-up, the Forest Department established a committee in January 1962, the Committee to Advise on the Layout and Design of Sawmills.[233] The Committee served to examine all applications for setting up new sawmills and proposed changes in existing mills. It would also advise the State Forest Officer concerned (the final approving authority) on whether the design and layout of the mills would contribute to efficiency and, if not, make the necessary recommendations. Although the Committee's influence on the State Forest Officers was merely advisory, the effects were however noticeable in recent years in the form of a trend towards larger and more efficient mills.[234]

The sawn timber produced for exports was still a low-valued product, simply processed from logs into rough-sawn air-dried timber. Technically, there was scope for more advanced processing of logs into fine-sawn and kiln-dried timber. Furthermore, it was observed that it would not require substantial additional capital investment by the existing mills in order to undertake such processing.[235] However, the Government had not put forth any incentive to induce development in this direction.

In the field of further processing of timber, most progress was however, achieved in the production of plywood and veneer (Table 7.23). From a mere output of less than 5 million square feet a year in 1957–60, the production of plywood and veneer expanded very rapidly from year to year after 1965. Output in 1970 was over 703 million square feet. It is interesting to note that output in 1970 expanded by more than twice the 1969 level of 324 million square feet. There was only one producer of plywood in 1957 but the number increased to 22 in 1970; between 1968 and 1970, there were seven additional factories, a factor which no doubt accounted for the phenomenal expansion of output during this period and particularly in 1970. This trend in expansion was also reflected in the emergence of plywood and veneer as significant export items. Their contribution towards a more diversified export structure has been noted in Chapter IV. Exports of plywood and veneer were insignificant before 1963 but these exceeded $1 million in 1963 and from then expanded in multiples of the previous year's level (Table 7.22). By 1970, exports amounted to nearly $50 million or about 16 per cent of the total value of exports of the major categories of timber products.

There was of course the factor of strong and growing overseas demand for plywood and veneer which assured high profits for the industry. The Govern-

[233] Liew Khooi Cheng and Donald T. Lopes, "Development of the Sawmilling Industry in West Malaysia" in *The Malayan Forester*, Vol. XXXI No. 1 (1968), pp. 36–38.

[234] L.H. Hartman, "A Report on the Wood-Based Industries of West Malaysia with particular reference to Sawmills and Plywood" in Appendix 3 of Food and Agriculture Organization, *Forest Industries Development, Malaysia. An Analysis of Problems Affecting the Development of Forestry and Forest Industries in West Malaysia, op. cit.*, p. 145.

[235] FAO Forest Industries Development Project, *op. cit.*, p. 61.

Table 7.23

West Malaysia – Plywood and Veneer Factories:
Number of Establishments, Input, Production and Employment

Year	Number of Factories	Input of Logs (cu. tons)	Outturn of Veneer and Plywood (million sq. ft.)	Employment
1956	1	2,902	3.24	85
1957	1	2,727	4.95	126
1958	2	2,611	4.90	86
1959	4	2,241	4.25	n.a.
1960	4	2,628	4.59	210
1961	4	3,842	6.38	84
1962	6	7,898	11.44	361
1963	6	11,918	15.94	546
1964	9	22,866	26.91	903
1965	11	47,352	59.92	1,462
1966	12	79,692	116.66	1,921
1967	13	102,050	123.08	2,278
1968	15	190,554	224.77	3,211
1969	19	224,374	324.35	4,603
1970	22	341,024	703.37	6,899

Sources: 1. *Report on Forest Administration*, 1955–1967.
2. Ministry of Agriculture and Fisheries, *Statistical Digest*, March 1972.

ment added further inducements to the development of the industry by according pioneer status (i.e., eligibility for income tax relief for a specified period)[236] for the production of plywood, plywood with treated surface, corestock veneers and face veneers.[237] Furthermore, financing at reasonable cost was available from the Malayan Industrial Development Finance Limited (MIDF), an industrial development bank in which the Government had exercised considerable influence.[238] As at the end of March 1972, MIDF reported having issued loans totalling $45.9 million to the plywood mills.

The major instrument of the Government to encourage the development of the wood-based industries was the granting of tax relief under the pioneer in-

[236]This incentive is discussed in Chapter IX.

[237]See list of gazetted pioneer products as at 31 December 1968 in Federal Industrial Development Authority, *1968 Annual Report*, Appendix 8, p. 28.

[238]The MIDF is discussed in Chapter X.

Table 7.24

West Malaysia – Number of Firms and Capital Investment of Wood-Based Industries Granted Pioneer Status, 1968–70

End of Year	Firms Granted Pioneer Status	
	Number of Firms	Total Paid-up and Loan Capital ($ million)
1968	7	12.2
1969	10	24.6
1970	12	37.2

Source: Federal Industrial Development Authority, *1970 Annual Report*, Appendix 19.

dustries incentive scheme. In addition to plywood and veneer, the Government had also accorded pioneer status for the manufacture of a number of wood products: building and insulating boards of wood, particle sheets and particle board products, glue-up laminated wood products, kiln-dried and antilyctus timber, and prefabricated housing units.[239] Detailed statistics were not available for the industries producing these various products. For the wood-based industries as a whole (including plywood and veneer), the number of firms granted pioneer status increased from 7 to 12 during 1968–70 (Table 7.24). Their capital investments also showed very large expansion,[240] these rising from $12 million in 1968 to $37 million in 1970.

The above was an important but rather rare occasion of good co-ordination among public policies.

5.3 Overall View

West Malaysia was very fortunate in that at a time when its major economic commodity, rubber, began to experience decline in prices, a number of factors operated to cause a new and growing productive sector, the forest industries, to emerge. In developing to and becoming the third largest export in the latter part of the 1960's, the products of the forest industries made important contributions to alleviating the adverse effects of rubber's worsening position. Yet, the expansion of timber supplies over the period hardly owed its prominence to the

[239] This was the position at the end of 1970. See the following annual reports of the Federal Industrial Development Authority: *1968 Annual Report*, Appendix 8; *1969 Annual Report*, Appendix 7 and *1970 Annual Report*, Appendix 25.

[240] Paid-up and loan capital.

initiative of public policy. This was another case which confirmed the lack of a systematic approach on the part of the Federal Government towards the whole issue of economic diversification, despite constant declaration of intent towards that goal. In other words, it appeared that economic diversification had been pursued on the basis of a restricted overall planning perspective, a consequence no doubt of the country's limited experience in economic planning and the obvious lack of crucial information and, perhaps just as important, on the basis of only a slowly deepening commitment of public policy to the diversification objective.

However, the Government attempted to seize initiative in other aspects of development of the forest industries. In some important respects, it was not successful as in its attempts to work out and implement a national forest policy to ensure the renewal and improvement of the forest resources for the coming decades. It also failed in its efforts to restrain the export of timber in the form of logs. In other respects, the efforts of the Government made significant contributions, as in the establishment of standards for output for the export markets and in the development of the wood-based industries. But on the whole, a major role still awaits public policy in the 1970's.

CHAPTER VIII
THE AGRICULTURE AND FORESTRY SECTOR: PUBLIC POLICIES ON MINOR CROPS AND LAND DEVELOPMENT – THEIR CONTRIBUTIONS TO AGRICULTURAL DIVERSIFICATION

1. INTRODUCTION

The Malaysian environment offers large possibilities for the development of a number of agricultural activities other than those discussed in Chapters V to VII. These are collectively referred to as 'minor crops' in this study.[1] In the review period, 1957–70, the Government developed considerable interest in these in its efforts to strive for greater diversification of agricultural output. Yet, achievements in terms of tangible results were limited due to a number of reasons, the most important among which was the weak impact of policy measures in these areas.

The post-Merdeka land policies gave a large role to the public sector in land development. The contents of these policies and the framework within which they had to operate had some implications for the process of agricultural diversification.

This chapter will appriase public policies in these two areas.

2. PUBLIC POLICY AND THE DEVELOPMENT OF THE MINOR CROPS

Previous discussions have indicated the concentration of the Government's attention on rubber, padi and pineapple and more recently, on oil palm while limited attention was accorded on other activities such as the production of fish, meat and timber. Even then, output expansion in these was insufficient to deal with the problems of large dependence on rubber. The need to establish a wider range of agricultural crops was obvious, both as import substitutes and as new exports. But all that happened in respect of the minor crops by the end of 1970 was that their potential as either of these remained to be realized.

[1] Reference to 'minor crops' in this chapter covers crops other than rubber, oil palm, pineapple, coconut and padi.

The relative underdevelopment of these minor crops, however, should largely be viewed as the product of circumstances. Firstly, while agricultural diversification had been proclaimed as a policy objective, the real pressure to seriously implement this objective was not felt until the 1960's when the long-term decline in the prices of natural rubber became evident. This has two adverse effects. The lack of urgency to pursue the diversification objective in the 1950's resulted in little achievement in the development of new and suitable crops for a long time. Secondly, the commencement of serious efforts at diversification following on evidence of declining price trend for rubber meant that work at new crop development had a relatively late start. The problem was further aggravated by the long time lag which usually attended the search for new crops and their successful adaptation to the local environment.

A serious constraint to any large-scale efforts to widen agricultural possibilities during the review period was, in any case, the coincidence of the phase of Malayanization of the public services with the period when work on agricultural diversification was becoming a growing necessity. Prior to Merdeka, senior staff positions in the public services were held by expatriates and, local staff intake at the senior level or promotions of local staff to these positions were negligible. The situation in the Department of Agriculture was no exception. One of the consequences of political independence was a programme of Malayanization of these positions over a period of years from 1957. Table 8.1 shows the loss of senior expatriate officers in the Department of Agriculture and the attempt to replace them with local staff during the important phase of Malayanization.

Staff losses during 1955–57 were largely through the retirement of expatriate officers under the Malayanization programmes. It can be seen from the table that losses of senior staff under Malayanization and normal losses through resignations, etc. totalled 29 in 1955–60. It was not until 1965 that the losses incurred during this earlier period was about compensated by the recruitment of local personnel to fill the vacancies left by the expatriates. In other words, the expansion of the Department of Agriculture did not in effect take place until after 1965. There was also an important qualitative aspect to the situation. A large number of the expatriates who left were officers with considerable experience while on the other hand, the newly recruited local personnel were virtually fresh university/college graduates. In terms of experienced staff therefore, the capability of the Department of Agriculture was, in fact, not quite compensated by the recruitment of local staff; this deficiency made the restoration of the status quo even longer.

Among other things, a function of the Department of Agriculture was investigation work on all crops excluding rubber and later, also pineapple and oil palm. In its Annual Reports, the Department reported the curtailment of its programme of investigation on fruits, oil palm, coconut, cocoa and other crops owing to the shortage of professional staff arising from losses under the Malayan-

Table 8.1

West Malaysia — Changes in the Number of Senior Staff in the Department of Agriculture

Year	Number of Senior Staff Lost through Malayanization, Retirement, Resignation, Transfers and Death			Number of Senior Staff Recruited			Net Position during Year
	Expatriates	Local	Total	Expatriates	Local	Total	
1955	5	2	7	5	—	5	- 2
1956	7	1	8	—	1	1	- 7
1957	12	1	13	—	2	2	-11
1958	10	—	10	1	7	8	- 2
1959	6	1	7	—	3	3	- 4
1960	8	—	8	—	5	5	- 3
1961	2	—	2	—	7	7	+5
1962	5	—	5	—	5	5	—
1963	1	—	1	—	8	8	+7
1964	—	—	—	—	9	9	+9
1965	1	—	1	—	14	14	+13
1966	—	6	6	—	26	26	+20

Sources: Compiled from *Annual Report of the Division of Agriculture*, 1955–1966.

ization programme, particularly in 1959–61.[2] Some of the old experiments were maintained but no new investigations could be started.[3] With the limited resources, highest priority was given to padi and soil investigation,[4] the former because of the self-sufficiency policy in foodstuffs and the latter, to meet the requirements for immediate investigation of large areas of land under the rural development schemes.

The situation could possibly have been different if the Government had been more committed to agricultural diversification during the years immediately after Merdeka. There would then have been a clear sense of direction for agricultural development and appropriate adjustments could have been made to the Malayanization programme, at least to forestall its adverse effects on the operating capability of the Department of Agriculture for the long period of time that the programme caused. The absence of any firm commitment by the Government in these years allowed the consequent staff shortage to aggravate the difficulties of finding a sense of direction towards greater agricultural diversification. Consequently, in the 1960's, it can be said that the Government was virtually at a loss as to what it could do in respect of the minor crops.

Much of the work of identifying crop possibilities and other preparatory work therefore, commenced only in the 1960's. In 1962, the Government enlisted the services of a team of three experts (with the financial assistance of the Ford Foundation) "to make a detailed study in depth of the need, possibilities, opportunities and definite approaches for a broad agricultural diversification programme in Malaya".[5] This Ford Foundation Team made a number of recommendations, possibly among the most significant of which was the one which led the Government to undertake a land capability survey. The survey which was completed in 1969 opened up possibilities of classifying the suitability of areas for various crops and other uses.[6] The absence of data on land capability constituted an important gap in knowledge which not only hampered the process of proper land use among the various activities but also inhibited any bold venture into crops hitherto little planted or untried. On the minor crops that could assist the country's agricultural diversification, the Ford Foundation Team listed the following as promising: cocoa, coffee, tea, various citrus fruits,

[2] *Annual Report of the Department of Agriculture for the Year 1959*, p. 4; *Annual Report of the Department of Agriculture for the Year 1960*, p. 2 and *Annual Report of the Department of Agriculture for the Year 1961*, p. 2.

[3] *Annual Report of the Department of Agriculture for the Year 1961*, p. 3.

[4] *Ibid.*, p. 2.

[5] Ford Foundation Team Report on Agricultural Diversification, *op. cit.*, p. 2. The three experts were: Dr. Karl Brandt, Dr. J. Norman Efferson and Dr. Don Paarlberg (Chairman).

[6] Ministry of Agriculture and Co-operatives, *Report of the Government of Malaysia to the Food and Agriculture Organization of the United Nations, 1966–1969*, Kuala Lumpur, 1969 (mimeographed), p. 27.

cashew nut, manila hemp, tapioca and sugar.[7] But it stressed that considerable research would be required to derive suitable varieties of these as well as to test their appropriateness for the major agricultural regions of the country. The inability of the Ford Foundation experts to make a more positive recommendation than this is not surprising in view of the negligible research undertaken in the past.

In 1966, the Government felt impelled to gather more expert advice on the feasibility of greater agricultural diversification. It thus requested the FAO to provide a team of specialists to study the problem and a report was accordingly made to the Government in 1967.[8] Among other things, the team was asked to examine the problems associated with field crops such as maize, sorghum, grain legumes, etc., and the suitability of the local varieties as well as "to advise on the introduction of new and more suitable crops and on the most suitable areas for their production. . ." On the minor crops, the FAO team again highlighted the inadequacy of applicable research for a number of crops which have promising prospects: maize, groundnut, soya bean, sorghum and fibre crops.[9] The effects of past neglect were also noted for another group of crops. The locally-grown tobacco was felt to be of too poor a quality to replace imports in significant amounts;[10] the cost of production of cane sugar was found to be high relative to imported sources;[11] while cocoa could not be recommended until the causes of the die-back disease could be determined.[12] Only tapioca and tea were considered appropriate for expansion from the technical and market standpoints[13] while coffee was recommended only for the domestic market because of poor external demand.[14]

As can be seen, in the five years between the report of the Ford Foundation Team and the FAO study, little progress was evident in terms of new and applicable knowledge that would be necessary if any of these minor crops was to assume some economic significance. The FAO study again could not proceed

[7] Ford Foundation Team Report on Agricultural Diversification, *op. cit.*, pp. 31–32.

[8] The team visited the country in October 1966 – March 1967. Its report was Food and Agriculture Organization, *Agricultural Survey Mission on Crop Diversification–Report to the Government of Malaysia*, Rome 1967.

[9] *Ibid.*, pp. 13–14.

[10] *Ibid.*, p. 12.

[11] *Ibid.*

[12] *Ibid.*, p. 14. The die-back disease was a serious affliction of the cocoa tree in West Malaysia, the causes of which were still not known. Its prevalence since 1954 had effectively discouraged the expansion of cocoa areas. For a brief discussion on this, see K. Kanapathy and S. Thumboo, "West Malaysian Soils in Relation to Cocoa", a paper presented to the Malaysian Crop Diversification Conference, Kuala Lumpur, 1969.

[13] Food and Agriculture Organization, *Agricultural Survey Mission on Crop Diversification – Report to the Government of Malaysia, op. cit.*, pp. 13–14.

[14] *Ibid.*, p. 14.

beyond the stage of merely recommending more intensive investigations into virtually all the minor crops. However, this did not mean that no changes had taken place in the production of these crops or that they had been ignored completely by public policy.

It would be useful at this stage to look closely at the developments of the more significant of the minor crops and to assess the Government's interest and efforts to promote them. Through such an evaluation, some of the reasons for their limited growth may then become clearer.

Table 8.2 shows the areas of selected minor crops for 1958–70. These were largely estimates made by the Ministry of Agriculture and should be regarded as such. Data in earlier years were not available. Among these crops, the areas of sugar cane and cocoa expanded sharply after 1967.

The total area under sugar cane each year was in the range of 1,500–2,700 acres until 1967. Rapid expansion occurred from 1968 until an area of nearly 18,000 acres was planted by 1970. The Government's interest in the sugar cane industry began in the mid-1960's when Australian experts were called in under the Colombo Plan to study the feasibility of expanding the industry. In their report, they recommended certain areas to be developed for the industry.[15] The report was in turn closely studied by a working party of officials in 1967.[16] Consequently, the Government decided to promote 100,000 acres of sugar cane ultimately to replace the imports of raw sugar which reached $75 million in 1970 (Table 8.3). Initial development was to be through joint ventures involving the Government, private capital (which would also provide management expertise) and co-operatives.

Government interest in the cocoa industry during the post-war years first appeared in the setting up of a working party of officials in 1954 to consider the development of the industry and to make recommendations on Government policy for it.[17] The working party completed its work in 1955 but the occurrence of the die-back disease from 1954 which soon reached alarming proportions and was unresponsive to treatment ruled out any serious consideration of the recommendations made.

The industry continued to be subject to the die-back disease. However, in the 1960's, a wide range of Upper Amazon hybrid crosses was introduced which proved to be less susceptible to the disease compared with the Amelonado variety introduced earlier. This enhanced the feasibility of the industry somewhat, and resulted in the rapid expansion of acreage in 1968–70. But the total acreage was still small and considerable research necessary. These developments were initiated by the coconut estates in Perak and Selangor. Under the Second

[15] Special Appendix to the Royal Address by His Majesty the Yang di-Pertuan Agong at the Opening of Parliament on 14 June 1966, para. 505.

[16] Special Appendix to the Royal Address by His Majesty the Yang di-Pertuan Agong at the Opening of Parliament on 14 June 1967, para. 486.

[17] Federation of Malaya, *Report of the Working Party Set Up to Consider the Development of a Cacao Industry in the Federation of Malaya,* Kuala Lumpur, Government Printer, 1955.

Table 8.2

West Malaysia – Acreages under Selected Minor Crops
('000 acres)

Year	Area[a] under Selected Minor Crops							
	Fruits[b]	Tapioca	Coffee	Tea[c]	Maize	Groundnuts	Sugar Cane	Cocoa
1958	100.0	28.2	9.8	10.6	8.3	3.6	1.5	1.4
1959	97.1	27.0	10.0	10.5	7.7	3.3	1.7	1.4
1960	98.6	30.2	10.8	10.7	7.2	3.0	1.7	1.4
1961	100.1	31.4	10.6	9.5	7.2	4.6	1.8	1.4
1962	101.5	46.6	10.3	9.5	9.3	5.6	1.8	1.4
1963	101.2	54.9	11.0	8.1	9.6	5.8	2.0	1.4
1964	102.6	45.5	11.4	9.4	9.3	6.5	2.2	1.7
1965	108.2	40.4	11.2	8.8	9.5	5.6	2.7	1.9
1966	113.2	36.2	12.7	9.1	7.8	5.3	2.3	2.0
1967	113.9	44.8	12.5	8.2	10.0	5.6	2.3	2.1
1968	117.9	42.1	13.2	7.6	10.4	5.4	4.7	2.8
1969	116.1	43.3	13.3	8.4	8.7	5.9	7.0	4.7
1970	118.4	43.6	13.1	7.9	7.6	6.2	17.7	8.3

Sources: 1. Computed from Ministry of Agriculture and Co-operatives, *West Malaysia – Acreages of Miscellaneous Crops, 1958–1966.*
2. Ministry of Agriculture and Lands, *Acreages of Miscellaneous Crops, West Malaysia, 1970.*

[a] In sole crop equivalent. The sole crop equivalent was computed by adding 75 per cent of the area where the commodity was the main crop and 50 per cent of the area where it was a mixed crop to the area in which it was the sole crop. These were the proportions used by the Ministry of Agriculture for deriving the sole crop equivalent for 1968–70 and they were thus applied to earlier data to obtain a comparable series.
[b] Excludes pineapple.
[c] Highland and lowland tea.

Table 8.3

West Malaysia – Net Imports of Selected Agricultural Products Currently Produced in Small Quantities
($ million)

Product	Net Imports of Selected Agricultural Products									
	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970
Sugar:										
Refined	61.2	42.2	79.5	86.3	19.5	15.9	7.7	2.6	2.3	5.6
Raw	0.1	0.2	0.3	21.7	38.0	38.8	30.4	50.4	61.7	74.7
Coffee	0.3	1.0	3.1	4.7	5.1	6.3	5.6	7.3	5.2	6.1
Cocoa[a]	0.4	0.3	0.4	0.2	0.1	0.2	-0.1	-0.5	-0.2	-0.4
Tea[b]	1.3	1.3	1.4	1.1	-0.4	-0.9	-0.6	-0.4	-0.2	-0.1
Tapioca	2.0	4.0	4.0	3.7	3.1	2.6	2.4	2.9	2.5	4.6
Maize[c]										
Unmilled	6.8	12.5	14.3	11.1	8.3	11.7	12.5	15.1	22.8	23.3
For animals	–	–	–	4.7	5.3	6.6	4.5	1.2	8.6	13.7
Total	6.8	12.5	14.3	15.8	13.6	18.3	17.0	16.3	31.4	37.0
Soya Beans and Groundnuts:										
Soya beans, flour and oil	6.2	6.3	6.0	6.8	7.5	7.4	7.4	8.7	8.2	8.7
Groundnuts and oil	7.9	8.4	8.2	9.8	10.2	11.2	9.9	8.6	5.8	5.6
Oil cakes of soya beans & Groundnuts[d]	1.3	2.1	2.7	2.9	3.5	4.7	4.6	6.7	8.4	9.3
Total	15.4	16.8	16.9	19.5	21.2	23.3	21.9	24.0	22.4	23.6

Sources: 1. Ministry of Agriculture and Co-operatives, *Statistical Digest*, January 1967.
2. Ministry of Agriculture and Fisheries, *Statistical Digest*, March 1972.

[a] Exluding chocolate and other preparations.
[b] Including mate.
[c] Excluding ears of grain and maize leaves the total value for which was quite small.
[d] Including small amounts of the oil cakes of unimportant seeds and nuts.

Malaysia Plan, cocoa acreage in smallholdings could be expected to expand as the crop was listed for the first time as a compulsory intercrop under the Coconut Rehabilitation and Replanting Scheme. A target of 20,000 acres of intercropping with cocoa had been fixed within the 50,000 acres of coconut smallholdings to be replanted or rehabilitated during 1971–75.[18] Furthermore, research on developing improved varieties of cocoa and on cultivation practices as well as disease and pest control have been made one of the priority projects of the Malaysian Agricultural Research and Development Institute (MARDI) established by the Government in 1969 to undertake research and development of all crops except rubber.[19] If successful, the cocoa industry will be largely export-oriented. West Malaysia was a very small net importer of cocoa until 1966 but from 1967, it became a very small net exporter (Table 8.3).

Among the minor crops which received Government assistance during the review period were fruits, coffee, tea and maize.

[18] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 136.

[19] Ministry of Agriculture and Lands, *Report of the Government of Malaysia to the Food and Agriculture Organization of the United Nations, 1969–1970*, Kuala Lumpur, 1971 (mimeographed), p. 62.

In 1960, concern was expressed by the Government that many of the areas under fruit trees were old and unproductive.[20] A Fruit Replanting/ Rehabilitation Scheme was thus established under the Second Five-Year Plan, 1961–65. The Scheme was implemented in all states. Under the Scheme, a subsidy (given in the form of planting material) of $100 per acre was provided for replanting and $50 per acre for rehabilitation. The limitation of the Scheme in orienting fruit smallholdings-towards commercial production was realized but the Scheme was found to have introduced good fruit varieties and better techniques of cultivation in the areas benefitted by it.[21] During 1961–65, 8,700 acres (72 per cent of the target acreage)[22] of fruit holdings were replanted or rehabilitated, but this represented only about 8½ per cent of the average acreage during the period. The Scheme was continued under the First Malaysia Plan, 1966–70.[23] Under the Second Malaysia Plan, 1971–75, the subsidies were raised to $200 per acre for replanting and $100 per acre for rehabilitation.[24]

Of far greater importance was the subsidy available under the various rubber replanting schemes to enable rubber areas to be replanted with specified crops including fruit trees. (See Chapter V for details). Since 1953, a total of 21,980 acres of rubber land had been replanted with fruit trees (excluding pineapple) with the aid of the subsidy and virtually all of these were on smallholdings. Table 8.2 shows that between 1958 and 1970, the area under fruit trees increased by about 18,400 acres. During the same period, the area of rubber land replanted with fruit trees under grant assistance was 17,476 acres. Thus, the subsidies under the rubber industry replanting schemes had assisted 95 per cent of the expansion of the fruit acreage in 1958–70.

However, there was no scheme to assist the establishment of new fruit acreage on non-rubber land or even the expansion of the existing fruit acreage. The lack of initiative on the part of the Government in encouraging the use of allocated areas for subsidiary crops including fruits in land schemes developed by FELDA has been commented upon earlier in Chapter VII.

On the consumption side, measures taken by the Government until the end of 1972 to encourage larger intake of local fruits had been relatively mild compared with neighbouring countries like Thailand which discouraged imports of foreign fruits. These were educational measures and publicity on the qualities of the local fruits.[25] The impact of these would take a long time to bear results.

[20] *Annual Report of the Department of Agriculture for the Year 1960*, p. 14

[21] *Annual Report of the Division of Agriculture for the Year 1964*, p. 11; also, *Annual Report of the Division of Agriculture for the Year 1965*, p. 12.

[22] Special Appendix to the Royal Address by His Majesty the Yang di-Pertuan Agong at the Opening of Parliament on 14 June 1966, para. 504.

[23] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 110.

[24] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 140.

[25] For example, the Minister of Agriculture and Co-operatives designated 1964 a "Fruit Year" during which talks and exhibitions were held in various states to promote local fruits. See *Annual Report of the Division of Agriculture for the Year 1964*, p. 37.

It was only in 1973 that the Government took more positive action to encourage the consumption of local fruits when it doubled the duties levied on imported fruits.[26] The effectiveness of this remains to be seen.

Coffee is essentially a smallholder's crop in West Malaysia. The area under coffee had grown slowly during 1958–70. It was around 10,000 acres a year in 1958–62, rose to about 12,500 acres a year in 1966–67 and to about 13,000 acres in 1968–70 (Table 8.2). The total estimated area under coffee in 1952 was about 9,300 acres,[27] and compared with the 1970 acreage, there was an increase of about 3,800 acres. Coffee was one of the crops eligible for grant assistance under the rubber industry replanting schemes. The total area of rubber land replanted with coffee under the assistance during 1953–70 was 5,910 acres.[28] Comparing this area (which represented a switch from rubber to coffee) with the increase of coffee acreage during the same period and even allowing for the weakness of the latter set of figures, it is clear that more than the entire increase in the coffee acreage in 1953–70 had been assisted by the rubber replanting subsidies. Besides these subsidies, coffee planting enjoyed another facility, the Coffee Development Scheme, which provided for subsidized fertilizers during 1966–70.[29] However, despite these incentives and that the coffee plants had virtually been free from serious pests and diseases, the expansion of coffee production was inadequate to result in import replacement. Table 8.3 shows that since 1961, the value of net imports of coffee had generally followed a rising trend. The net import values in 1969–70 averaged $5.6 million a year compared with an average of $0.7 million a year in 1961–62 (Table 8.3). Coffee of course had the disadvantage of a weak world market characterized by surplus production since the mid-1950's.[30] This thus ruled out any external stimulation to output expansion. However, under the Second Malaysia Plan, coffee growing would be given further encouragement in the form of crop subsidies.[31]

Like coffee, Government assistance to the tea industry was also through the subsidies provided under the rubber replanting schemes. Being best cultivated under estate conditions, the assistance was not made use of by those smallholders intending to move out of rubber. On the estate rubber land, only a total of 1,360 acres had switched over to tea cultivation under assistance in 1953–67,

[26] Speech of Minister of Finance introducing the *Supply (1973) Bill* in Parliament on 6 December 1972.

[27] *Annual Report of the Division of Agriculture for the Year 1966*, p. 21.

[28] Of this 5,720 acres were planted by smallholders and only 190 acres by estates.

[29] *Annual Report of the Division of Agriculture for the Year 1966*, p. 21.

[30] Attempts were made under two international agreements of five years each from 1962 and 1968 respectively, to bring about long-term equilibrium between production and consumption and to prevent prices from falling below the 1962 level. For a good discussion of the world coffee situation, see International Monetary Fund and International Bank for Reconstruction and Development, *The Problem of Stabilization of Prices of Primary Products, op. cit.*, pp. 85–87.

[31] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 140.

the period of the rubber replanting schemes for estates. Virtually all of this occurred in 1953–62.[32] During 1958–70, the area under tea in fact declined by about 2,000 acres (Table 8.2) suggesting therefore that the assisted new acreage had been more than offset by the larger tendency of tea acreage as a whole to decline. Despite the shrinkage in acreage, the country changed from being a net importer of tea of a little over $1 million a year in 1961–64 to being a very small net exporter from 1965 (Table 8.3). Yields of Malaysian tea were considered comparable to those of tea producers in other parts of South-East Asia but the industry being small, lacked the research and advisory facilities available elsewhere. This deficiency was recognized as early as 1963[33] but such support for the industry was still not forthcoming, even under the research programmes of MARDI under the Second Malaysia Plan period.[34] The relative lack of interest by the Government to promote tea as an export commodity is difficult to comprehend, especially when production can be expanded without great technical problems and when Malaysian tea had achieved export values of about $4–7 million a year during 1961–70.[35] Furthermore, a declining trend in the export proceeds of tea appeared to have emerged from 1967[36] and some attention should be directed to this.

Increasing interest was focussed on maize production in recent years by the Government. Among the minor crops, the domestic market for maize was among the largest and was second only to raw sugar. From Table 8.3, it can be seen that net imports of maize (unmilled maize and maize for animal feeds) were growing, this being particularly marked from 1969. In 1963, the value of net imports was $14 million, or about 2 times larger than in 1961 but by 1969, it was $31 million or 4½ times larger than that of 1961 and by 1970 it was $37 million or 5 times larger. In West Malaysia, the bulk of the imported maize was utilized by the animal feed industry and it has been estimated that only about 10 per cent

[32] Only 68 acres of rubber land were replanted with tea during 1962–67. This information was provided by the Chairman of the Boards of Administrators of the Government Rubber Replanting Schemes.

[33] Malaysia, *Official Year Book 1963*, *op. cit.*, p. 310.

[34] There was no specific mention of research priority being given for tea by MARDI.

[35] The bulk of the locally-produced tea was exported while lower grade tea was imported for domestic consumption. This gave rise to a very small net position between imports and exports as shown in Table 8.3.

[36] The gross exports of tea from West Malaysia are (in $ million):

	1962	*1963*	*1964*	*1965*	*1966*	*1967*	*1968*	*1969*	*1970*
Tea Green Leaf	*	–	*	0.1	0.2	0.1	*	–	–
Tea Black Leaf	4.6	4.5	4.9	5.7	5.6	5.1	5.1	4.2	3.5
Tea Black Dust	2.3	1.6	1.2	1.4	1.3	0.7	0.7	0.4	0.6
Total	6.9	6.1	6.1	7.2	7.1	5.9	5.8	4.6	4.1

*Less than 0.1.

of total demand was for human consumption.[37] The expansion of the pig and poultry industries provided this growing and sustained demand for maize and this can be expected to develop further. Another factor accounting for the interest in maize was the existence of a good external market, particularly in Japan and the success achieved by Thailand in exploiting this market as part of its agricultural diversification programme.[38]

Although maize had been cultivated in West Malaysia since the 18th century, the yields achieved were generally low, ranging from about 700 lbs. per acre[39] to 3,200 lbs. per acre[40] compared with an average yield of 4,000 lbs. per acre[41] in the United States, the world's largest exporter.[42] An objective of public policy was thus to search for suitable varieties for West Malaysia, this search having started in 1964 with exploratory trials of local and foreign varieties by the Department of Agriculture.[43] From these trials, an Indonesian variety, the Metro was then recommended to local farmers on account of its consistently high yields. Seeds of the Metro variety were also multiplied for distribution to farmers. The Metro variety was, however, not a satisfactory solution in the search for suitable varieties. Other trials were conducted to assess hybrid material in co-operation with the Rockefeller Foundation under the Inter-Asian Crop Improvement Programme.[44] To achieve the objective of greater agricultural diversification, maize was one of the new crops to be given a subsidy under the First Malaysia Plan.[45] However, the subsidy was relatively small, this being $40–50 per acre to assist in cultivation costs, supply of seeds and some fertilizers. The scheme was tried as a pilot project in Kuala Berang, Trengganu and

[37] Federal Agricultural Marketing Authority, *The Cultivation of Maize, Banana and Tapioca in West Malaysia and Their Export Potential,* Kuala Lumpur, 1969 (mimeographed), p. 22.

[38] For some discussion on the world market for maize, see *ibid.*, pp. 24–29.

[39] J.W. Blencowe, "Alternative Sources of Income During the Immature Period of Perennial Crops" in *Progress in Oil Palm* (Proceedings of the Second Malaysian Oil Palm Conference), Kuala Lumpur, Incorporated Society of Planters, 1969, pp. 238–248. Blencowe pointed out that an estate spending $75 per acre on fertilizers attained a yield of 1,700 lbs. per acre but the crop was unprofitable.

[40] The yields reported on the various maize schemes were 2,000–3,200 lbs. per acre. See Ruth Goh Pek Ean, "Maize and Sorghum – Prospective Intercrops in Malaysian Plantations", a paper presented at the Malaysian Crop Diversification Conference, Kuala Lumpur, 1969.

[41] J.W. Blencowe, *op. cit.*

[42] The United States accounted for about two-thirds of total world exports of maize.

[43] T.K. Van, *A Decade of Progress in Agricultural Research in West Malaysia (1957–1966), op. cit.*, p. 4.

[44] T.K. Van, *ibid.* Also, Ministry of Agriculture and Co-operatives, *Report of the Government of Malaysia to the Food and Agriculture Organization of the United Nations, 1966–1969, op. cit.*, p. 27.

[45] The other new crops made eligible for subsidies were citrus fruits, banana, groundnut and cashew nut. See Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 111.

in 1970, an area of 1,500 acres of the Metro variety was planted as an off-season crop on dry padi land.[46] The area under maize, as shown in Table 8.2, had remained virtually the same throughout the period 1958–70. Maize was one of a number of commodities for which market conditions were encouraging but output expansion of which had to be held back for lack of a technical breakthrough in the production of appropriate varieties. To deal with this problem, maize was made one of the priority crops for research by MARDI.[47]

Among the minor crops, tapioca was the largest earner of foreign exchange. Its net export earnings varied from $2 million to $4½ million a year during 1961–70. This can be seen in Table 8.4. The other two minor crops which were net earners of foreign exchange during the latter part of the period were cocoa and tea, each of which had net receipts of only less than $1 million a year. The tapioca industry had achieved this fairly respectable export performance despite an unhelpful policy environment during 1957–70.

It is clear from Table 8.4 that the export capability of the industry had remained virtually stagnant during 1961–70. Net exports of tapioca flour, tapioca flakes and tapioca pearl taken together showed little change during the period. Secondly, almost similar values of tapioca refuse continued to be imported from one year to another during 1961–70, suggesting that domestic production was not keeping pace with the expansion of demand for animal feedstuffs. On the demand side, tapioca was one of the few agricultural commodities which were not experiencing a glut in their export markets.[48] Recent demand projections made by FAO indicated an expansion in the livestock industries of Western Europe and Japan in the 1970's and hence a good market for tapioca products.[49] In the domestic market, the main source of absorption was also the animal feedstuff industry. Since tapioca chips are substitutable to some extent with other feed components such as maize, rice bran, soya bean meal and fish meal, the price of tapioca is crucial. Among the important problems of the local industry were the high cost of production of tapioca roots as well as a tendency for their prices to increase.[50]

To a large extent, the lack of development of the tapioca industry can be traced to the effects of Government policy on tapioca. An important aspect of this policy was the Government's attitude towards tapioca cultivation as an agricultural activity. The tapioca plant has long been known to be a large and

[46] International Bank for Reconstruction and Development, *Agriculture Sector Survey, Malaysia, op. cit.*, Vol. II Annex 2, p. 25.

[47] Ministry of Agriculture and Lands, *Report of the Government of Malaysia to the Food and Agriculture Organization of the United Nations, 1969–1970, op. cit.*, p. 62.

[48] International Bank for Reconstruction and Development, *Agriculture Sector Survey, Malaysia, op. cit.*, Vol. II Annex 2, p. 26.

[49] See reference to FAO study in Federal Agricultural Marketing Authority, "Tapioca Chips Processing in West Malaysia", Kuala Lumpur, 1970, pp. 7–8.

[50] In 1957, the average price of tapioca roots in Perak was $1.35 per picul but by 1968, it was $2.43 per picul. See *ibid.*, p. 7.

Table 8.4

West Malaysia – Net Exports of Tapioca Products
($ million)

Year	Net Exports of Tapioca Products					
	Flour	Flakes	Pearl	Sub-total	Refuse*	Overall Position
1961	–	0.3	3.4	3.7	-1.7	2.0
1962	1.1	0.3	3.9	5.3	-1.3	4.0
1963	1.3	0.2	4.1	5.6	-1.6	4.0
1964	1.7	0.2	3.0	4.9	-1.2	3.7
1965	1.7	0.3	3.1	5.1	-2.0	3.1
1966	1.8	0.2	2.6	4.6	-2.0	2.6
1967	1.0	0.2	3.4	4.6	-2.2	2.4
1968	1.0	0.2	3.3	4.5	-1.6	2.9
1969	1.6	0.1	2.4	4.1	-1.6	2.5
1970	2.2	0.6	2.8	5.6	-1.0	4.6

Sources: 1. Ministry of Agriculture and Co-operatives, *Statistical Digest,* January 1967.
2. Ministry of Agriculture and Fisheries, *Statistical Digest,* March 1972.

*For animals.

rapid absorber of plant nutrients in soils. Because of this characteristic, the West Coast states of West Malaysia established restrictions of one kind or another on tapioca planting even before the Second World War.[51] Furthermore, on land newly alienated for other crops, tapioca planting was not allowed beyond two crops. During the Japanese Occupation, the rice shortage caused tapioca to be a substitute food and cultivation expanded, largely on squatter land. Illegal cultivation of tapioca on such land continued even after the war, encouraged on the one hand, by the inability of the land administration to effectively control the situation and, on the other, by the existence of a market for its products. In 1950, the Government even imposed a 5 per cent tax on the exports of tapioca and tapioca products[52] to discourage production.[53] The pattern of production in the 1960's was largely the outcome of the past policy – that is, much of the crop was grown on temporary and illegally-occupied state land,[54] a cultivation practice that obviously inhibited the application of fertilizers and good management. There were other adverse effects such as insufficient and uneven flow of tapioca roots to the processing factories, high cost in producing the roots and even the development of inefficient and small processing factories, all of which restricted the role of tapioca as an export commodity and an important input for the domestic feedstuff industry. The area under tapioca shown in Table 8.2 hardly changed during 1962–70. But with extensive areas under illegal cultivation and hence, reliable estimates being unavailable, no worthwhile comment can be made on this aspect.

One significant point to note is that the Government perpetuated its past policy on tapioca in the post-war period without even attempting to evaluate the basis of this policy through research and agronomic investigations on tapioca cultivation. As late as the First Malaysia Plan period, there were no financial provisions for such activities. This absence of research in turn made it almost impossible for any change in public policy towards tapioca cultivation. It is not surprising, therefore, to find no official acceptance of this crop as one of the possible means to further agricultural diversification under the various development plans during the review period. This position was held despite the recommendations of the experts of the Ford Foundation Team and the FAO Team to

[51] In Perak, planting of a single holding with more than 12 acres of tapioca was prohibited in 1919 but this was relaxed later. In Negeri Sembilan, the crop was prohibited and was allowed as a cash crop only from 1917. The crop was discouraged in Selangor round about 1925. In Kedah, it was only allowed as a catch crop; its prohibition as a sole crop occurred in 1905.

[52] *Customs Proclamation B.M. No. 30;* this came into effect on 8 June 1950.

[53] Besides exhaustion of soil fertility, another justification for the tax was that tapioca was being grown in remote areas and therefore constituted an important source of foodstuff for the communist guerrillas.

[54] Ford Foundation Team Report on Agricultural Diversification, p. 32; also, J.W. Blencowe, *op. cit.*

the Government to consider research into the possibilities of tapioca.[55] However, experiences elsewhere indicated that with good agricultural practices and fertilizer applications, tapioca could be grown continuously on the same piece of land.

Recently, the above policy on tapioca cultivation was altered. The success achieved by Thailand with this crop, the greater pressure for agricultural diversification in the latter part of the 1960's and the early 1970's, and a more liberal and enlightened approach to the problems of agriculture, were some of the reasons for this change. Under the Second Malaysia Plan, tapioca was thus included in the list of crops to be promoted through the use of crop subsidies.[56] Furthermore, research on tapioca production would be one of the priority activities of MARDI in the 1970's.[57]

The Government also decided to encourage three other minor crops under the Second Malaysia Plan. These are groundnut, soya bean and sorghum. As shown in Table 8.3, the net imports of groundnuts and soya beans and their associated products (including animal feedstuff) during 1961–70 were substantial. These rose from an average of $16 million a year in 1961–63 to an average of $22 million a year in 1964–70. The increase occurred in the imports of beans, flour and oil of the soya bean but more sharply in respect of oil cakes of soya beans and of groundnuts for use as animal feedstuff. On the other hand, the net imports of groundnuts and groundnut oil showed a declining trend from 1967 but more markedly from 1969. This suggests increasing domestic production arising largely from improved productivity (since the groundnut acreage did not change markedly during the period concerned as shown in Table 8.2). Sorghum has been used extensively elsewhere in place of maize as feedstuff for livestock.[58] With the expanding livestock industry, there would now be a potential domestic market for sorghum if suitable varieties could be found. Since 1966, many varieties of sorghum were tried and some had been considered adaptable for cultivation locally[59] but obviously more research was needed for extensive planting. Work on soya bean during the review period was also merely in the stage of initial research and trials.[60]

[55] See Ford Foundation Team Report on Agricultural Diversification, *op. cit.*, p. 32 and Food and Agriculture Organization, *Agricultural Survey Mission on Crop Diversification – Report to the Government of Malaysia, op. cit.*, p. 19.

[56] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 140.

[57] Ministry of Agriculture and Lands, *Report of the Government of Malaysia to the Food and Agriculture Organization of the United Nations, 1969–1970, op. cit.*, p. 62.

[58] Other uses of sorghum are as materials for brewing beer, adhesive starch, dextrose and edible oil.

[59] Ministry of Agriculture and Co-operatives, *Report of the Government of Malaysia to the Food and Agriculture Organization of the United Nations, 1966–1969, op. cit.*, p. 27. Yields of 5,000–6,000 lbs. per acre were achieved under experimental conditions.

[60] Malaysia, *Mid-Term Review of the First Malaysia Plan, 1966–1970, op. cit.*, p. 52.

Under the Second Malaysia Plan, Government assistance for these crops would take the form of subsidies[61] for groundnut and sorghum and, research priority[62] in the programmes of MARDI for soya bean and sorghum.

Ten minor crops were examined above in relation to public policy. The observations made may now be summarized. The most important observation concerned the unavailability of species or varieties which could be extensively introduced into Malaysian agriculture. During 1957–70, this was the case for seven out of the 10 crops examined. Research and trials undertaken by the Department of Agriculture had produced a few species/varieties of limited value but generally further investigations would be required. The situation during the review period thus reflected the large gap existing between the objective of agricultural diversification and the implementation of measures necessary to enable this objective to be realized. However, the goal of diversification was not lost sight of and research priority was accorded on five of the crops (cocoa, maize, tapioca, soya bean and sorghum) under the Second Malaysia Plan. Secondly, the Government assistance extended to the minor crops during the review period had limited impact. One obvious point is that the assistance covered only a few of the minor crops namely, fruits, coffee and tea. The most important of the subsidies were those granted to rubber smallholdings and estates intending to switch from rubber to a list of specified crops under the various rubber replanting schemes. The subsidies had been instrumental in causing the expansion of the acreages of fruit trees and coffee. Two other minor schemes of assistance to the fruits sector and coffee respectively appeared to have produced only limited results. The third observation made was that more use would now be made of crop subsidies in fostering agricultural diversification in the 1970's. Of the 10 crops surveyed, seven would become eligible for subsidies under the Second Malaysia Plan; these were cocoa, fruits, coffee, maize, tapioca, groundnut and sorghum. In addition, subsidies would also be available to encourage four other crops,[63] cloves,[64] nutmegs,[65] cashew nut[66] and pepper. In the case of sugar cane, the encouragement would be more direct with the implementation of joint ventures between the Government and the private sector.

The discussions have highlighted the crucial role for agricultural research. Allocations for agricultural research for crops other than rubber had increased under the various development plans. Under the First Five-Year Plan,

[61] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 140.

[62] Ministry of Agriculture and Lands, *Report of the Government of Malaysia to the Food and Agriculture Organization of the United Nations, 1969–1970, op. cit.*, p. 52.

[63] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 140.

[64] & [65] Cloves and nutmegs were among the crops eligible for subsidy under the rubber replanting schemes.

[66] Cashew nut was first designated for subsidy under the First Malaysia Plan, see Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 111.

1956–60, the allocation for research and extension[67] was only $2.7 million but this rose to $23.2 million[68] under the Second Five-Year Plan, 1961–65 and to $51.6 million[69] under the First Malaysia Plan, 1966–70. The expansion was very marked between the different plan periods but as observed earlier, the minor crops received rather little attention. Among the major beneficiaries were rice production (with good results) and soil studies. Even for the major crops and other agricultural activities, there were deficiencies in the conduct and management of agricultural research as pointed out earlier in Chapter VII with regard to particularly, oil palm, coconut and pineapple. Furthermore, except for oil palm, there was virtually no contribution to research efforts by the private sector. On the other hand, the contributions of the Rubber Research Institute to the rubber industry had indicated the benefits of adequate and properly managed research activity.

However, the authorities finally realized that the existing mode and approach of agricultural research as undertaken by the Divisions of Agriculture, Veterinary Services and Fisheries and, other bodies involved in agricultural research, were proving to be inadequate for the task of greater agricultural expansion and diversification. Thus, a centralized research and development institute with the status of a statutory body was conceived. It was stressed that as a statutory body, the institute would be able to pursue its objectives free from the constraints of rules and traditions of a Government department. In particular, this would facilitate the intake of well-qualified and scarce research staff.[70] Furthermore, as a statutory body operating under the guidance of a Scientific Council comprising representatives of the Government, agricultural education institutions and the private sector, it was felt that research problems in all fields of agriculture in the country would be given due regard and action.[71]

Such a research body, the Malaysian Agricultural Research and Development Institute (MARDI), was set up in 1969 under an Act of Parliament.[72] Its basic function is "to conduct scientific, technical, economic and sociological research in Malaysia with respect to the production, utilization and processing of all crops (except rubber), livestock and fresh water fisheries".[73] Another important function of the Institute is for it to be an important centre for specialist

[67] No separate figure was available for research.

[68] This was the revised allocation. See Federation of Malaya, *Interim Review of Development in Malaya under the Second Five-Year Plan, op. cit.*, p. 24..

[69] This was also the revised allocation. Allocation for research was $25.6 million. See Malaysia, *Mid-Term Review of the First Malaysia Plan, 1966–1970, op. cit.*, p. 60.

[70] This point was emphasized by the Minister of Agriculture and Co-operatives, Haji Mohamed Ghazali bin Haji Jawi, at the Second and Third Reading of the *Malaysian Agricultural Research and Development Institute Bill, 1969* in Parliament on 13 February 1969.

[71] *Ibid.*

[72] *Malaysian Agricultural Research and Development Institute Act, 1969.*

[73] *Ibid.*, Section 3(a).

extension service to transmit the results of its research to the users.[74] Towards achieving these functions, the Institute would incorporate under its wing several bodies: the various branches under the Division of Agriculture dealing with research and experimentation, the Food Technology Division of the Ministry of Agriculture, the research section of the Malayan Pineapple Industry Board (MPIB) and the research functions of the Fisheries and the Veterinary Divisions.[75]

An important development was that the research priorities for the Institute had been established by 1970.[76] As noted earlier, one important area of priority was the development of the minor crops. In respect of the principal crops, attention would be given to rice, oil palm and pineapple. Another priority area was livestock improvement research, particularly for beef cattle, pigs and poultry. Research would also be conducted on soil and water management, including irrigation schemes. Another area of research priority was food technology and processing, the aim of which was to expand the end uses of the agricultural products.

The end of the review period saw MARDI commencing its staff recruiting exercise, which as must be expected, proved to be difficult owing to the shortage of qualified and experienced research personnel. For its work programme in the next five years, it would need 150 officers with post-graduate degrees (50 with doctoral degrees) and 200 with a first degree in science.[77] Another problem which had consumed considerable time and effort of the new Institute was the process of consolidation and the exercise of harnessing its current limited resources to meeting the more urgent claims on its efforts. One can expect many ready reasons to justify any lack of significant results during its early years, particularly the many teething problems it has and will face. On the other hand, the short-sightedness of the Government, its lack of direction and weakness of purpose in the past had contributed to the considerable delays towards greater agricultural diversification in the 1960's. At least, some tangible results will have to show for the Institute's efforts. This may require the use of less orthodox methods of recruitment and management and even a less ambitious coverage of its activities for a while.

On another aspect of agricultural research, that is, the utilization of the farm products for processing and the preservation of food, earlier action was taken by the Government. As early as 1964, the need to establish facilities for such purposes was recognized and in 1966, a Division of Food Technology was established within the Ministry of Agriculture with the assistance of the United

[74] *Ibid.*, Section 3(c).

[75] Speech of Minister of Agriculture and Co-operatives at the Second and Third Reading of the *Malaysian Agricultural Research and Development Institute Bill, 1969* in Parliament on 13 February 1969.

[76] Ministry of Agriculture and Lands, *Report of the Government of Malaysia to the Food and Agriculture Organization of the United Nations, 1969–1970, op. cit.*, pp. 62–64.

[77] *Ibid.*, p. 64.

Nations Special Fund. Up to 1970, the work programme of the Division covered eight areas: i) pineapples, ii) coconuts, iii) rice processing, iv) tapioca processing, v) fruit and vegetable processing, vi) meat technology including poultry and eggs, vii) fish processing and viii) animal feedstuffs. These are important areas supplementing the efforts at developing a wider range of agricultural activities discussed earlier. Two field stations had commenced operation by 1970, one in fish processing in Kuala Trengganu and another in fruit and vegetable research in Tampoi while another two were scheduled to operate in Alor Star by 1972 to cover rice processing, animal feedstuffs, and poultry and eggs development. With the establishment of MARDI, the activities of the Division were now placed under it for better co-ordination with research in the other agricultural activities.

3. LAND DEVELOPMENT POLICIES AND AGRICULTURAL DIVERSIFICATION

Public policy on land development for agriculture also has important implications for agricultural diversification. On the one hand, the formulation and implementation of such a policy gives rise to new land which in turn provides additional area for the expansion of agriculture. In 1970, the estimated area under agricultural crops was 7,176,000 acres.[78] Of this, 869,400 acres[79] or 12 per cent represented new land made available for crops in 1961–1970. Efforts of the public sector accounted for 683,300 acres, or the bulk of this increase during the period. On the other hand, land development policies, at least in West Malaysia, have as one of their important aspects a policy on crops. Given the additional land, the crop policy would be important in determining the pattern of agriculture on the new land.

This section will be concerned mainly with these two important aspects of land development policies. In particular, attention will be focussed on the following: the position and role of the Federal Government on land matters, the issue of land alienation for agriculture, the various schemes of land development as employed and the crop policy on the newly-developed land.

Under the Federal Constitution, matters on land and agriculture are vested with the individual states.[80] This means that each state has considerable powers over the alienation and development of new land within its borders. However, the need for a co-ordinated approach to land use was recognized and the Constitution had provided for the establishment of a National Land Council, the basic function of which is to formulate policies which are uniform and national in character on the use of land for various purposes, including agriculture.[81] The

[78] Estimate of the Ministry of Agriculture.

[79] See Table 8.6.

[80] *The Federal Constitution*, Article 74(2) and Sections 2 and 3 of the Second List in the Ninth Schedule.

[81] Some discussion on the Council was made in the last chapter.

Council was established in 1957. Both the State Governments and the Federal Government are represented on the Council and, therefore, the decisions made are binding. Unfortunately, the policy decisions of the Council from mid-1963 to 1970 have remained known only to the parties concerned so that the role and effectiveness of the Council cannot be fully assessed.[82] However, on one aspect of land policy, it is well-known that the Council had met with considerable difficulties owing to the absence of basic data. This relates to the formulation of a national guideline on land use. It was only after the completion of the land capability survey in 1969 that the Council was able to work on the guideline.

More visible efforts of the Federal Government to achieve a uniform land policy may be seen in the three legislations on land matters: the Land Development Ordinance, 1956, the Land (Group Settlement Areas) Act, 1960 and the National Land Code, 1965. The last was essentially concerned with providing a single uniform land code for the 11 states of West Malaysia which have no less than seven separate systems of land law. As the Code deals largely with routine matters of land administration, it is of little interest here. The other two legislations are more relevant as they deal with questions of land development. The Land Development Ordinance, 1956 enabled the establishment of the Federal Land Development Authority (FELDA). As a federal authority with financial allocations from the Federal Government, the body was able to implement a uniform policy on the development and settlement of new land, including matters concerning the size of holdings and crop policy as discussed in the last chapter. More important, the Land Development Ordinance, 1956, provided the Federal Government with a means to determine the pace of land development in the country. The Federal Government made large use of this means through FELDA. As will be seen later, FELDA soon became the largest single agency in the country to formulate and implement land development policies. No less than 34 per cent of the land developed for agriculture by all sectors during 1961–70 were due to the efforts of FELDA (Table 8.6).

In 1960, the Land (Group Settlement Areas) Act was passed by Parliament to further strengthen the concept of uniformity of law and policy in respect of large blocks of land designated by the Act to be group settlement areas in different states. Among the significant provisions of the Act were that land for a group settlement area would be alienated only to landless citizens,[83] that no

[82] A summary of the decisions of the Council to mid-1963 appeared in Gayl D. Ness, *Bureaucracy and Rural Development in Malaysia*, Berkeley and Los Angeles, University of California Press, 1967, pp. 196–199. For purposes of this study, a request was made for permission to examine the subsequent decisions of the Council but this was refused by the Secretary-General of the Ministry of Agriculture and Lands in July 1971 on the grounds that the policy papers of the Council have been "classified either as confidential or secret and as such are not made available to public scrutiny".

[83] *Land (Group Settlement Areas) Act, 1960*, Section 19. The "landless" is defined as a person who does not own more than two acres of country land and who may own a plot of town land for residential purposes. But extension of the acreage limit of country land is allowed to six acres if a group settlement scheme is intended for supplementing uneconomic holdings. See Section 19(2) of the Act.

subdivision would be allowed on individual holdings,[84] that the State Government concerned would finance the cost of clearing the land in a group settlement area (which finance could however be recovered from the persons to whom land had been alienated),[85] and that the holdings would be planted with only the specified crops.[86]

The issue of land alienation for agriculture has two major aspects. The first concerns the area that should appropriately be alienated to agriculture while the second concerns the question of to whom should agricultural land be alienated. Until the completion of the land capability survey in 1969, there were no reliable data on the location and extent of potential land for agriculture. While land was an abundant resource, there was no guarantee that the pattern of land alienation for the various uses was optimal. The survey revealed that the potential agricultural land was slightly more than double the 7 million acres utilized in 1969 (Table 8.5). The potential area for annual crops was 2 times larger than that being used while the potential area for perennial crops was even larger. Considerable land hunger appears to exist in the country as can be seen in the large and long-existing backlog of land applications in land offices throughout the country and the substantial number of applications for participation in the land schemes of the public sector. On the other hand, the availability of substantial areas of land suitable for agriculture but yet unutilized must imply largely the inability of the Government to manage effectively this abundant resource.

There were, of course, some constraints to faster land development in the post-war years over which the Government had little control. Firstly, rubber no longer served as the primary stimulus for land alienation as in the period before the Stevenson Scheme.[87] In the 1960's, the evidence of decline in the prospects of rubber aggravated the situation. Furthermore, the focus of efforts of the Government and the private sector was largely on the replanting of the existing rubber areas. Oil palm gained significance only from 1962 and in any case, the pressure it exerted on the process of land alienation was not comparable to that of rubber in the pre-Depression period. Moreover, the activities of insurgents during the Emergency and the substantial diversion of resources during a large part of 1948–60 to deal with this problem reduced the urgency of new land development.

But the State Governments have to accept a large part of the responsibility for the slow pace of land development which could and should have been faster, since they control the machinery which alienates and administers land in the country. Rights to the use of land were granted by each State Government either as temporary occupation licences or at the other extreme, as titles in perpetuity.

[84] *Ibid.*, Section 15(1). This rule also applies on FELDA schemes.

[85] *Ibid.*, Section 9.

[86] *Ibid.*, Section 17(b).

[87] This has been discussed in Chapter II.

Table 8.5

West Malaysia – Pattern of Land Utilization:
Existing and Potential
(million acres)

	Land Utilization	
	Actual (1969)	Potential
Agriculture	*7.1*	*15.9*
Annual Crops	1.6	3.4
Perennial Crops	5.5	12.5
Forestry	*8.2*	*14.2*
Productive Forest	7.2	10.2
Protective Forest	1.0	4.0
Mining	*0.1*	*0.4*
Others (including urban)	*17.2*	*2.1*
Total	32.6	32.6

Source: Economic Planning Unit, Prime Minister's Department.

Titles were granted for land for agricultural, industrial or urban purposes.[88] In the case of land alienated for agriculture, the crops that could be grown were often specified and the land then could not be used for other crops unless applications were made later on to change the crop condition. Not all titles were given in perpetuity and where such was the case, a time limit for the use of the land might be fixed. For rural land of less than 10 acres, the District Officer was empowered to grant a title. For urban and industrial lots and rural land exceeding 10 acres, the granting authority was the State Commissioner of Lands. For land of area larger than 50 acres, the authority was the State Executive Council. The administration[89] of lots of less than 10 acres was done by the District Officer while that of 10–50 acre lots rested with the State Commissioner of Lands.

A very revealing study on the deficiencies of the land administration machinery was made by the Development Administration Unit (DAU) of the

[88] *The National Land Code, 1965*, Section 52.

[89] This involves matters like land transfers, acquisitions, foreclosures, wills, collection, transfers of use, determination of premium and rent, etc.

Prime Minister's Department in 1968.[90] An interesting finding was that on the average, it took 564 days for an application for state land to be approved but even this was considered fast when compared with cases which have been known to take more than three years.[91] Applications to have conditions to the land titles changed (as for example, to alter the crop allowed on the land) took on the average 301 days to be approved. Delays such as these generally led to the large backlog of land applications so well-known and in one state it was found to total about 30,000 in 1967.[92] The approach commonly used in dealing with the problem was to urge the officers concerned to speed up their work. But as the DAU study pointed out, this merely treated the problem superficially while its fundamental solution would have to be a complete change of the systems and procedure generally used by the land offices in the country.[93] The Government was certainly aware of the inefficiency of the land administration machinery. In 1967, the then Deputy Prime Minister, Tun Abdul Razak, acknowledged that "... the slowest and most outdated machine in our way of Government is the machinery of land administration which is still tainted with colonial methods".[94] The obstacles to reform, however, appeared to be a lack of will and leadership on the part of the Federal Government and the difficulties of getting the individual states to accept early and effective reform measures. The problem thus remained and continued into the 1970's.

The issue of to whom should land be alienated is also of importance to the pace of land alienation and development. An important question here is the policy of alienating land to the private sector. The initiative for land development in the pre-war period was largely provided by the private sector, particularly the estates. In the post-war years, land alienation underwent a change of character. In this period, the various State Governments generally took a "reserved attitude" towards the establishment of estates by the non-Malays.[95] There was also a general reluctance to alienate large tracts of land to private interest. Furthermore, the National Land Council was known to have made a ruling that no land was to be alienated to the private sector but only to the landless. This ruling was, however, relaxed from 1966. As can be seen in Table 8.6, out of a total of 1.5 million acres of land alienated for agriculture in 1961–70, only 24 per cent of such land were alienated to the private sector. In

[90] Development Administration Unit, *Land Administration – A Study on Some Critical Areas*, Kuala Lumpur, Prime Minister's Department, 1968 (mimeographed). The study was based on discussions with experienced land and departmental officers connected with land matters in selected states and a detailed study of three land offices with different problems.

[91] *Ibid.*, p. 17.

[92] *Ibid.*

[93] *Ibid.*, p. 17 and p. 24.

[94] Speech of the Deputy Prime Minister at the State Operations Room in Johore on 3 July 1967.

[95] International Bank for Reconstruction and Development, *Current Economic Position and Prospects of Malaysia*, Washington, D.C., 1968, (mimeographed), Vol. 1.

Table 8.6

West Malaysia – Alienation and Development of Land for Agriculture
('000 acres)

Scheme/Agency	Area Alienated			Area Developed		
	1961–65	1966–70	1961–70	1961–65	1966–70	1961–70
FELDA[a]	176.1	132.1	308.2	119.3	179.0	298.3
Fringe Alienation	128.5	11.3	139.8	115.6	11.7	127.3
Youth Schemes	–	9.8	9.8	–	5.3	5.3
Controlled Alienation	187.7	106.3	294.0	108.2	42.0	150.2
SEDCs[b] and Others	121.8	101.0	222.8	21.8	30.3	52.1
Block Planting and State Schemes	135.0	28.2	163.2	34.8	15.3	50.1
Private Estates	139.0	225.8	364.8	140.1	46.0	186.1
Total	888.1	614.5	1,502.6	539.8	329.6	869.4

Source: Adapted from Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, pp. 125–126.

[a] Federal Land Development Authority.
[b] State Economic Development Corporations.

1961–65, the private sector's share of alienated agricultural land was smaller, being 16 per cent of the 881,100 acres alienated for agriculture during the period. In 1966–70, the percentage of land alienated to the private sector for agriculture was larger, this being 37 per cent of the total of 614,500 acres alienated for agriculture. Clearly, the lower percentage in 1961–65 was largely caused by the ruling of the National Land Council which must have come in between mid-1963 and 1966.[96]

There are important implications in this pattern of land alienation. It means the burden of land development had to be and was largely borne by the public sector. The point to note is that the public sector willingly took upon itself the main burden. Under the Second Five-Year Plan, 1961–65, 330,000 acres of new land were set as a target for agricultural development (of which FELDA was to account for 250,000 acres) but there was no specific target for the private sector.[97] As it turned out, nearly 540,000 acres were developed of which only 140,100 acres were accounted for by the private sector (Table 8.6). Under the First Malaysia Plan, 1966–70, 291,000 acres or 65–73 per cent of the total[98] new land to be developed was made the objective of the public sector. It managed to develop a total of 283,600 acres or 97 per cent of the target. The target for development by the private sector was 109,000–159,000 acres and achievement was only 42 per cent, taking the more conservative objective.

However, there were apparently no indications of inability or unwillingness on the part of the private sector to undertake large land development. Indeed, in 1961–65, the agricultural land developed by private estates slightly exceeded the area alienated to them[99] (Table 8.6). It was only in 1966–70 that there was a large discrepancy between the area alienated to the private sector and the area developed by it, that is, the latter was only 39 per cent of the former. By comparison, the area developed by the public sector as a percentage of the land alienated to it during 1966–70 was much better, this being 73 per cent. The reasons advanced for the discrepancies between the area alienated and the area developed in the private and public sectors taken together were the unsuitability of some land for agriculture, the little interest on the part of the recipients to develop the land and the time lags usually occurring between alienation and development.[100] On the suitability of the land as a factor for the discrepancy, this obviously arose from the Government's lack of the basic information required to assist decision-making. In any case, the recent completion of the land capability survey should minimize the importance of this factor in the future.

[96] This ruling restricting alienation to the private sector did not appear among the 16 known decisions taken by the Council up to mid-1963.

[97] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, pp. 30–31.

[98] The aggregate land area to be opened up in 1966–70 totalled 400,000–450,000 acres. See Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 117.

[99] This was possible through the development of land alienated before 1961 but not yet developed.

[100] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 127.

With regard to the lack of interest in developing the alienated land, there were certain safeguards the authorities could have taken to minimize such occurrences. There had been obvious cases of abuse in that the recipients of alienated land were more interested in removing the timber on the land rather than in its subsequent development. A World Bank mission in 1968 had observed that the structure of premiums[101] and quit rent[102] had in fact contributed to such abuses.[103] It urged the Government to lower the premium payment and to raise the quit rent to more appropriate levels so as to induce a more intensive use of the land; as it was, the premium could easily be recovered from the sale of timber from the land. Another difficulty noted was that land titles had tended to carry conditions on the specific crops to be grown. A more flexible method of specifying the crops that can be grown on the alienated land could obviously assist the faster development of the land.

Certain important issues follow from the discussions above. Firstly, the abundance of land for agricultural purposes coupled with the need to expand output and productivity in agriculture justify the pursuit of a liberal land alienation policy for both the public and private sectors. Secondly, the private sector is willing and capable of playing a larger role in land development, and this could be effective given proper safeguards and guidance. In not tapping more vigorously the resources of the private sector, a heavier task had been imposed on the various land development bodies in the public sector. This contributed to some wastage of resources as will be seen later. Thirdly, the concentration of land development efforts within the public sector resulted in emphasis on smallholding agriculture in newly developed land.[104] From Table 8.6 and the following discussion, it can be seen that as a result of public sector efforts at land development for agriculture, 73 per cent of the total land so developed in 1961–70 took the form of smallholdings. This arose from the fact that an important objective of the public land development schemes was to enlarge the smallholding-owning class. It is not difficult to see that a better balance between smallholding agriculture and estate production could make for higher productivity as a whole. If a larger role is allowed for the private sector, this better balance could be easily achieved without affecting the Government's objective to expand ownership of agricultural land among the smallholders.

In bearing the main burden of land development efforts, the Federal and State Governments had employed different types of schemes and agencies. The most important of these was the Federal Land Development Authority (FELDA). FELDA accounted for 34 per cent of the total land area developed for agriculture or 44 per cent of such land developed by the public sector. The

[101] This is a payment made by the recipient when the land is alienated.

[102] This is a payment made yearly and varies with the use of the land.

[103] International Bank for Reconstruction and Development, *Current Economic Position and Prospects of Malaysia, op. cit.*, para 207.

[104] The estate type of agriculture had also made its appearance in the form of the public sector estates but the extent was relatively small.

schemes of the State Governments were the Controlled Alienation Schemes, Fringe Alienation Schemes, Public Sector Estates of the State Economic Development Corporations (SEDCs) and Joint Ventures of the SEDCs and the private sector, Block Planting and State Schemes, and Youth Schemes. However, the Federal Government provided some form of assistance to three of these schemes. Under the Fringe Alienation Schemes, the Federal Government provided financial assistance for initial development. For the Public Sector Estates of the SEDCs, it made available loan facilities. In the Block Planting Schemes, housing settlements were financed by the low-cost housing schemes of the Federal Government together with the state counterpart schemes. In addition, finance was available from the Rubber Industry (Replanting) Board for the clearing of land.

Among the schemes of the State Governments, the most important in terms of achievement were the Controlled Alienation Schemes. Under these, large blocks of land were made available by the State Governments for distribution to smallholders. But the smallholders had to provide their own capital to develop the land and they were also required to pay rent. These schemes covered 17 per cent of the total land area developed for agriculture in 1961–70.

Next in importance were the Fringe Alienation Schemes which accounted for 15 per cent of the newly-developed agricultural land in 1961–70. These involved the development of land for agriculture within a distance of three to four miles of an existing settled area. The objective was to enable existing smallholders to expand their agricultural land holdings. As can be seen in Table 8.6, most of the efforts under these schemes occurred during the first half of the 1960's. The main reason was that these schemes had generally turned out to be disappointing in that the planted areas were not properly maintained. Thus, little land was alienated to these schemes after 1963. A new institution, the Federal Land Consolidation and Rehabilitation Authority (FELCRA) had to be set up in 1966 to deal with, among other things, the redevelopment of many of the Fringe Alienation Schemes.[105] The achievement of the schemes in quantitative terms has therefore to be qualified.

In this connection, it must be pointed out that the lack of success was not only confined to the Fringe Alienation Schemes. It was also found that a number of the Controlled Alienation Schemes and the Block Planting Schemes "were not as successful as was anticipated and required urgent salvation and rehabilitation in the interest of national development".[106] The task of redeveloping these also fell on FELCRA. For its task of rehabilitation, FELCRA obtained its resources wholly from the Federal Government under allocations in the Development Estimates.[107]

[105] The other functions of FELCRA are to consolidate small plots of land, particularly in padi areas and to develop new land schemes. FELCRA is also sometimes referred to as the National Land Rehabilitation and Consolidation Authority.

[106] National Land Rehabilitation and Consolidation Authority, *Annual Report and Statement of Accounts, 1–10–66 to 31–12–67*, p. 24.

[107] *Ibid.*, p. 35.

In many cases, the basic weakness in the schemes operated by the State Governments was poor management and control. FELDA was able to avoid this problem in its schemes by deciding from the start that good management was to be an integral part of all its land schemes. But this added considerably to their costs. One important reason for the State Governments to adopt the cheaper approach to land development was obviously their limited finances.

The third group of schemes of the State Governments comprised the Public Sector Estates and the Joint Ventures between the SEDCs and the private sector. Together, these accounted for 6 per cent of total agricultural land developed in 1961–70. These schemes were in effect attempts to combine the advantages of large-scale production and efficient management with the policy of public ownership and control of some agricultural land. While the State Governments were reluctant to alienate land for the development of private estates, as has been noted, the high productivity of these and other advantages as such were however, recognized as desirable. Thus, there emerged the Public Sector Estates in which ownership rested with SEDCs while their management could be with the SEDCs or hired management. The workers on the Estates were paid wages. A proto-type of such Estates was the Sungei Tong Scheme in Trengganu. A variation of the Public Sector Estate was the Joint Venture with the private sector. For example, the Trengganu State Government alienated 33,500 acres (ultimately to be 50,000 acres) to the Malayan Co-operative Insurance Society for oil palm cultivation. The Society paid the premium on the land cleared as well as rent during the life of the project which was fixed at 46 years.[108] The Trengganu State Government's share was 1 per cent of the gross sales of the oil palm products. Both types of schemes were largely for oil palm. The concept of the state-owned estate was further pursued under the Second Malaysia Plan period, during which a target of 50,000 acres (about the same as the acreage developed in 1961–70) was fixed for the development of such estates.[109] One notable point to observe is that this concept appears to be a departure from the basic objective of the land development schemes of the public sector, which was and continues to be the expansion of smallholdings. As the main crop on these is oil palm, it can therefore be said that this policy modification was largely one of expediency rather than of any radical change in policy objective because oil palm is essentially an estate crop.

Of about the same importance as the state-owned estates were the Block Planting and "State Schemes" taken together. Under the former, blocks of land were developed by the State Governments for distribution in units of six to eight acres to rubber smallholders whose holdings were so very small that replanting would not be possible without loss of livelihood. In this connection, therefore, the Block Planting Schemes had the financial support of the Rubber Industry (Replanting) Board. The other component of this group, the "State Schemes,"

[108] On the expiry of this period, the ownership of the project reverts to the Trengganu State Government.

[109] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 134.

occurred in Kelantan. Under these, settlers received a six–acre lot for rubber, two acres for padi (if available), one acre for garden and a quarter acre for housing, as well as planting material.

The last category comprised the Youth Schemes which in 1961–70 accounted for only slightly over 5,000 acres of the newly-developed agricultural land. These were financed entirely by the State Governments. Unemployed and unmarried village youths were employed on these schemes to clear and plant the land and after five years, they were given a share in the scheme.

Having examined these schemes, some general observations may now be made. One obvious feature is that these were basically directed at the development of the smallholdings sector. In 1961–70, 92 per cent of the acreage of land developed for agriculture by the public sector were for smallholders.[110] Secondly, different methods had been employed to develop agricultural land. On the one hand, there were the comprehensive schemes of FELDA in which the settlers virtually worked their way to owning their land over a period of time. On the other hand, many of the schemes of the State Governments provided assistance for only part of the development costs while the settlers had to have some resources to finance those activities for which no assistance was provided. While this latter group of schemes have much to commend in that the burdens on the public purse were relatively lighter and, hence, more development would theoretically be possible given the resources, there have been a notable lack of success in many of these schemes and therefore, some waste of resources. Examples are the Fringe Alienation Schemes, the Controlled Alienation Schemes and the Block Planting Schemes. Thirdly, many land schemes and land development agencies had emerged with hardly any reference to the question of their effectiveness. Land being a state matter, there was no central body that could effectively evaluate the efficiency of each type of scheme and agency and enforce modifications to the various land development practices of the State Governments. The problem was further complicated by the fact that with some exceptions, the schemes of the State Governments were financed wholly by the states themselves and obviously, interference by the Federal Government was likely to be ineffective. However, where Federal funds were used, there appeared a lack of initiative on the part of the Federal Government to apply pressure to rationalize the schemes. So far, the role of the Federal Government was merely to salvage (as through FELCRA) schemes that had failed rather than to deal with the problem at its source namely, the nature of the schemes themselves.

It would be appropriate to mention here another measure taken by the Government. With the growing momentum of land development, the Federal Government made a notable modification to its tax policy in 1962. Before 1962, tax-payers who incurred capital expenditures for clearing or planting new areas of land were given an allowance of 10 per cent of these expenditures per annum

[110] If the total area of land developed for agriculture in 1961–70 is considered, the share of smallholdings is 73 per cent.

for 10 years.[111] In 1962, the Government raised this allowance to 50 per cent a year for two years in order to encourage such expenditures.[112] The effect of this measure was to enable a more rapid write-off of these expenditures against tax liability, although it did not reduce the total tax liability. No information was available for the impact of this change to be assessed. A point of interest is that there has so far been no attempt to use this tax policy to favour capital expenditures for certain crops only and thereby assist agricultural diversification.

One point remains to be discussed, namely, the implications of the land development policies on agricultural diversification. There is first the quantitative aspect. The development of new land and the faster pace of land development meant that crops other than rubber were afforded a further opportunity to expand (on the newly-developed land) in addition to the mere replacement of existing rubber land with these other crops. The latter, as was seen in Chapter V, was very limited in terms of the acreage switched since the old stands of rubber were also being replaced, with the assistance of attractive subsidies, with superior rubber varieties capable of meeting at least in part the declining price prospects. The availability of new land, as seen in Chapter VII, provided the means for the development of new crops, particularly oil palm. A land policy capable of making available new tracts of agricultural land was, therefore, an important aid to agricultural diversification in this context. But while the land policies of 1957–70 resulted in the emergence of oil palm as a principal crop, their many weaknesses as have been pointed out earlier, had however at the same time, stood in the way of maximum diversification. The First Malaysia Plan for example, indicated that limited alienation of land for agriculture had hindered diversification into other crops such as oil palm.[113]

However, maximum diversification of crops can find full expression only if policies elsewhere have been well co-ordinated with the land development policies. The problem of developing a wider range of alternative crops to rubber is a case in point. As observed earlier in this chapter, agricultural research on these crops had not been undertaken in a significant manner or that the research efforts could not produce as yet crops or varieties that were feasible and profitable propositions. Thus, it was only oil palm very largely that could take advantage of the opportunities opened up by the land development policies.

The other aspect of the relationship between land development policies and agricultural diversification relates to the crop policy for the new agricultural land. It can be said that the underlying considerations for the crop policy on the newly-developed land were the attainment of a good income for the newly-established smallholders in the years to come and that the crop should adapt well to the agricultural environment. This point becomes clearer when it is remembered that the primary objective of land development in West Malaysia

[111] *Income Tax Ordinance, 1947*, Section 18A.

[112] *Income Tax Act, 1962*, Section 7. This provision was later incorporated in Schedule 3, paras. 7 and 23 of the *Income Tax Act, 1967*.

[113] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 36.

Table 8.7

West Malaysia – Land Developed for Agriculture by the Public Sector by Principal Crops ('000 acres)

Agency	Area Developed for Agriculture by the Public Sector in 1961–70 by Principal Crops				
	Rubber		Oil Palm		All Crops
	Area	As % of All Crops	Area	As % of All Crops	Area
FELDA	133.2	45	160.6	54	298.3
State Governments[a]	260.3[b]	68	53.9	14	385.0
Total	393.5	58	214.5	31	683.3

Sources: 1. Tables 7.3, 7.7 and 8.6
2. Department of Statistics.

[a]Includes all the land schemes of the public sector other than those of FELDA.

[b]1961–68.

was to build up a group of prosperous smallholders rather than to employ newly-developed land to widen the range of agricultural production. In discussing the role of oil palm as a diversification crop in the last chapter, it was pointed out that oil palm's emergence as such a crop was due largely to the coincidence of two circumstances: i) the falling rubber prices and ii) the eminent suitability of oil palm as an alternative crop from the technical and market standpoints. It is conceivable that had there been no serious decline in the long-term prospects of rubber, land development would only serve to enhance the country's concentration on rubber.

In the post-war years, land development as undertaken by the public sector virtually had its beginnings with the establishment of FELDA. Various State Governments then supplemented the efforts of FELDA with the different types of schemes. But FELDA remained a model land development agency with many aspects of its operations being emulated, an important one of which was its crop policy. Discussions on the crop policy of FELDA have been made in the last chapter and need not be repeated here except to point out that rubber was the sole main crop on FELDA schemes initially until about the mid-1960's when oil palm emerged as an important crop and finally became the more important of the two. The various schemes of the State Governments also concentrated on

rubber and oil palm but unlike FELDA schemes, the interest in oil palm was relatively much less intense, it being planted on only 14 per cent of the total area developed for agriculture by these schemes in 1961–70, compared with 54 per cent for FELDA (Table 8.7).

Taken together, both rubber and oil palm made up 89 per cent of the total land area developed for agriculture in 1961–70. In fact, the actual percentage should be larger, possibly exceeding 90 per cent, since data on the area planted with rubber in the schemes of the State Governments were available only to 1968.[114] Rubber accounted for 58 per cent of the total area developed by the public sector during the same period. The area under oil palm was 31 per cent. No detailed statistics were available for the other crops grown on the newly-developed land but these taken together made up less than 10 per cent of all the land developed by the public sector for agriculture. Nevertheless, considerable agricultural diversification had been achieved on the newly-developed land, even though oil palm held a predominant position among the crops which were planted as alternatives to rubber.

On the private estates, there was no crop policy as such and the choice of crops was determined largely by market prospects. Since prospects of earning a good future income also determined the crop policy for the public sector schemes, the emerging crop pattern in private estates was therefore similar to that on public sector land schemes, that is, a predominance of the two crops, rubber and oil palm. Indications of this may be seen in Chapters V, VII and the first part of this chapter.

[114] The unavailability of data for 1969 and 1970 was not serious as there were indications of a slow-down in rubber planting during the two years in the schemes of the State Governments.

PART III

PUBLIC POLICIES AND MEASURES IN THE MANUFACTURING SECTOR

PART III

PUBLIC POLICIES AND MEASURES IN THE MANUFACTURING SECTOR

CHAPTER IX
THE MANUFACTURING SECTOR – A REVIEW OF MALAYSIAN INDUSTRIAL DEVELOPMENT STRATEGY AND APPRAISAL OF THE USE OF FISCAL POLICY TO PROMOTE INDUSTRIAL GROWTH

1. INTRODUCTION

In the development of policies to diversify the economy, the focus on the manufacturing sector was undisputed from the start. Firstly, the sector offered virtually a new avenue for restructuring the economy. Manufacturing activities in the early 1950's, as observed by the 1954 World Bank mission, were relatively unimportant and lacked sophistication.[1] The units were very small and were spread over a wide range of activities such as processing of agricultural, mining and forestry products, and the manufacturing of food products, beverages, tobacco, rubber products, furniture, printed materials and inputs for the building industry. Secondly, the experiences of the industrial countries have shown that the expansion and development of the manufacturing sector is the logical path for proceeding to a sectorally more balanced economy. Thirdly, the manufacturing sector elsewhere has shown itself to be capable, if developed, of absorbing a substantial part of the labour force. This is a matter of considerable interest to West Malaysia as it touches on one of the underlying reasons for greater economic diversification.

It is, therefore, not surprising to see that the Government had introduced a wide array of policies and measures aimed at developing the manufacturing sector. Furthermore, these policies and measures had been reinforced, modified and made more embracing with the passing of time.

In turn, the manufacturing sector showed significant progress during the review period. As indicated in Chapter III, the contribution of manufacturing to the gross domestic product was $425 million or 8.6 per cent of the total product in 1960. By 1970, it had risen to $1,254 million or 14.8 per cent of the gross domestic product. This represents an increase of 195 per cent during the period. The examination of export structure in Chapter IV revealed that exports of

[1] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, pp. 84–85.

manufactured goods had become increasingly important.[2] In 1960, the important items of manufactured goods exported amounted to $122 million or 4 per cent of total exports. But by 1969, these expanded to $443 million or 11 per cent of total exports. Data on employment in the manufacturing sector for 1960–70 also showed impressive gains. In Table 9.1, it can be seen that employment in the manufacturing sector rose by 107,000 or 74 per cent to 252,000 in 1970. This large increase assumes even greater significance when comparison is made with the agriculture sector. During 1960–70, the agriculture sector, which was about 4 times larger than the manufacturing sector in terms of output in 1960, created employment opportunities for only a total of 82,000 persons. In other words, the employment opportunities provided by the manufacturing sector were 30 per cent more than those provided by the agriculture sector, despite its smaller size.

Table 9.1

West Malaysia – Employment in the Manufacturing Sector

Sector	Number Employed ('000)			As % of Total			Increase 1960/1970
	1960[a]	1965[a]	1970[b]	1960	1965	1970	('000)
Manufacturing	145	217	252	6.7	8.4	9.4	107
Agriculture	1,277	1,350	1,359	58.7	52.1	50.5	82
Others	752	1,023	1,082	34.6	39.5	40.1	330
Total	2,174	2,590	2,693	100.0	100.0	100.0	519

Sources: 1. Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 4.
2. Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 35.
3. Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 98.
4. Department of Statistics, labour force data from the 1970 Population Census (not yet published).

[a]Estimates.
[b]1970 Population Census.

Public policies and measures had no doubt assisted these developments in an important manner. However, these policies and measures were not without flaws and shortcomings and certainly a more developed and dynamic manufacturing sector could have emerged without these deficiencies. These policies and measures are examined in this and the following two chapters. Section 2 of this

[2]For more details, refer especially to Table 4.14.

chapter reviews the industrial development strategy of the Government since 1957. Sections 3 and 4 appraise the use of fiscal incentives to promote industrial development. Chapter X examines the Government's policies on tariffs, industrial financing, industrial estates and the principle and efforts of direct participation in industrialization by the public sector. Chapter XI reviews the more general policies and measures that helped to develop a conducive environment for industrial development. Although the terminal year for review is 1970, it becomes necessary in some cases to extend the review by a few more years after this as many of the policies examined have their origin in the review period and also that a better appraisal and perspective can be achieved thereby.

2. DEVELOPMENT OF THE GOVERNMENT'S INDUSTRIAL STRATEGY – A SURVEY

From the collection of policies and measures, it is possible to identify the Government's strategy for industrial development. This strategy, as will be seen shortly, went through some important changes. By the end of 1970, it emerged in a form more complex and more purposeful. But certainly further evolution would be necessary to transform West Malaysia into an industrial economy.

Possibly the earliest elaborate attempt to develop an industrial strategy for the Government was the set of recommendations drawn up by the World Bank mission of 1954. The mission's view was that the Government's role should properly be one of creating a conducive environment for the development of industries.[3] In particular, it urged the Government to assist industrialists to acquire factory sites, to use tariffs as a means to protect new domestic industries and, to improve the financing facilities. Other measures recommended were reorienting education and training programmes towards the needs of industry, ensuring the adequacy of basic services (electricity, water supply and, transport and communications) and the establishment of technological and market research services for industry.

These recommendations and the analysis which preceded them served to identify the areas for early action by the Government and naturally assisted and influenced the process of policy formulation when the Government was ready to seriously consider the design of an industrial development policy. On the attainment of self-government in 1955, the consideration of such a policy became possible. The reasons for the absence of a positive industrial development policy during the colonial period were obvious. The main economic interest of the Colonial Government then was the development of the raw materials sector. Furthermore, any development of the manufacturing sector would, of necessity, have to be based on some reduction of the domestic market for imports, including British manufactures which constituted an important component. Hence, for the period, there was a virtual laissez faire situation for industrial

[3] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, p. 86.

development, other than for certain administrative regulations governing industry.

With impending political independence, a Working Party of Officials was set up in May 1956 "to assist the Government in formulating an industrial development policy".[4] The recommendations of the Working Party were, on the one part, similar to those proposed by the World Bank mission. In addition, the Working Party recommended the following: industrial promotion efforts by the Government, commitment to the existing rate of company tax or to some specified increase, the maintenance of the existing initial and annual depreciation allowances, Government guarantees of compensation to foreign capital in the event of nationalization, the continued maintenance of the existing practice of allowing remission of profits and the repatriation of foreign capital, the acceptance of the principle of exemption or reduction in the duties on imported inputs for manufacturing and, utilization by Government departments and statutory bodies of the products of local industry.

The report of the Working Party enabled the Government to declare its industrial development policy on 7 May 1957.[5] With two important exceptions, the Government accepted all the recommendations of the Working Party. The first exception relates to the principle of introducing tax relief for pioneer[6] industries. On this, the policy statement declared, "The introduction of tax reliefs for pioneer industries, whether financed by local or overseas capital, is however accepted as prima facie desirable, subject to adequate safeguards for efficient, established local industries and it will be further examined with a view to the preparation of suitable legislation." The anxiety of the new Malayan Government to provide suitable inducements to capital investment is understandable not only on grounds that manufacturing was very largely a new activity but also and perhaps more obvious, that the country was about to assume independent political status, a situation which had been known to inhibit investments in some countries for sometime. The principle of tax relief had been examined by the World Bank mission of 1954 but it was not recommended on the following grounds:

> "We believe that general concessions[7] along the lines now followed are likely to be more effective in Malaya in encouraging industrial development than any attempt to distinguish 'new' industries as such under

[4] Federation of Malaya, *Report of the Industrial Development Working Party*, Kuala Lumpur, Government Printer, 1957, p. 1.

[5] "Interim Statement of Industrial Development Policy", No. 30 of 1957, tabled before the Federal Legislative Council on 7 May 1957.

[6] The definition of a pioneer industry is discussed later in this chapter.

[7] The concessions existing at that time were: a) Enterprises were allowed to offset losses over the previous six years against current profits for purposes of deriving taxable income; b) Capital expenditures on buildings were given an initial depreciation allowance of 10 per cent (20 per cent for other capital expenditures) and an annual depreciation allowance thereafter of 2 per cent.

'pioneer industry' legislation. New Malayan industries should mostly grow out of the wide range of existing enterprises, and special tax concessions to 'new industries' would, in our opinion, involve invidious comparisons of a very difficult and unnecessary kind."[8]

The Working Party, in considering this issue felt that "this authoritative opinion must be treated with respect",[9] and therefore deferred making a positive recommendation on the use of tax relief to induce investment. In turn, it urged a further examination of the issue by a special committee.[10] Examining the issue in retrospect, it would appear that the Government's decision to grant tax relief on capital investment was correct. Firstly, it successfully attracted a substantial volume of capital to the manufacturing sector. Secondly, it provided the means through which the Government could exercise some selection in industrial development and also to implement its policy of inducing greater participation of Malay capital and labour in industry. Indeed, in the period under review, the principle of tax relief became the heart of the system of incentives for new industrial investment.

The other area of difference between the Government's declared industrial policy and the recommendations of the Working Party was that the Government was not prepared to commit itself to any given taxation policy affecting the manufacturing sector. The preservation of flexibility of its fiscal policy is an understandable act of any Government. But as subsequent discussions will show, revenue considerations had on a number of occasions overridden the claims of maintaining an atractive climate for industrial investment. Had there been a commitment of one sort or another, the Treasury would perhaps have been in a stronger position to resist the pressure for more revenue.

The strategy followed up to the mid-1960's was based very largely on the philosophy contained in the policy declaration of 1957. The main concern was overall industrial growth although there was some attempt to influence the pattern of manufacturing through the concept of the 'pioneer industry'. This phase of industrial development was also inward looking and import substitution provided the mainspring of growth. Investment rested virtually with the private sector.

The successful formation of Malaysia in 1963 brought Singapore, Sabah and Sarawak into a federation with the Federation of Malaya. Following this development, efforts were made particularly in the mid-1960's to integrate the hitherto fragmented markets and resources of these component states.[11] This was to be achieved in large measure by the intensive use of tariff policy. Indeed,

[8] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, p. 315.

[9] Federation of Malaya, *Report of the Industrial Development Working Party, op. cit.*, p. 30.

[10] *Ibid.*, p. 46.

[11] Singapore separated from Malaysia on 5 August 1965 before the integration exercise commenced.

this integration exercise could be regarded as being primarily responsible for the prominence given to tariffs as a policy instrument in subsequent years. In particular, tariff policy was used to achieve three objectives:

i) the establishment of a wide range of protective tariffs to further encourage manufacturing activities;
ii) the removal of tariff barriers in all the component states on goods of Malaysian origin to integrate the fragmented markets;
iii) the harmonization of import duties to facilitate movement of imported goods throughout Malaysia.

Other significant modifications to the Government's industrial strategy were also made from the mid-1960's. Generally, these took the form of a move towards greater precision in the conduct of industrial policy. More specific articulation of the direction of industrial growth to be pursued was evident in the nature of the policy measures. In particular, positive encouragement was given to the following: i) greater utilization of labour in the manufacturing process; ii) greater utilization of domestic raw materials; iii) more export industries; iv) the manufacture of 'priority' products and v) a more balanced dispersion of industries throughout the country. Inducements to promote these objectives formed part of one exercise in 1968 which enlarged the package of incentives for industries under the Investment Incentives Act, 1968. The tax relief for pioneer industries continued to be one of the major incentives but this was now further strengthened by the grant of an investment tax credit for new investments in factory, plant or machinery.

This widening of industrial incentives in 1968 could be attributed to three principal reasons. Firstly, progress in the growth of the manufacturing sector under the existing incentives was considered unsatisfactory.[12] Secondly, in 1967, rubber prices fell sharply to one of its lowest levels for the post-war period.[13] The impact of this in the context of an already declining price trend could be expected to have stepped up the pressure for a more vigorous promotion of the manufacturing sector. Thirdly, in December 1967, Singapore liberalized its policy of industrial incentives, widening them to include among other things, tax relief for new capital expenditures by established enterprises, the establishment of a very low rate of effective taxation on export enterprises and, tax exemption on interest payable on foreign loans acquired for productive equipment.[14] The similarity between Singapore and Malaysia in respect of their

[12] Speech of Minister of Finance introducing the *Supply (1968) Bill* in Parliament on 18 January 1968.

[13] The prices of rubber for a large part of this period could be seen in Table 2.15 of Chapter II.

[14] Singapore also provided tax relief for pioneer industries. This and the new incentives mentioned above were placed under the *Economic Expansion Incentives (Relief from Income Tax) Act, 1967*, which was passed by Parliament on 5 December 1967 and given Presidential assent on 9 December 1967.

economic and social facilities and hence, their respective industrial climate, together with their close proximity made Singapore an important rival and competitor for the attraction of investment funds. From this standpoint, therefore, the Investment Incentives Act, 1968 of Malaysia could be construed as an attempt to reduce the tilt of advantage to Singapore brought forth by the new industrial policy.

All the while, the Government was concerned with the low level of participation by the Bumiputras in industry. Among the more notable of the early measures were the provision of loan facilities to industrial and other business enterprises by specialized institutions such as the Rural and Industrial Development Authority (RIDA) and, after 1965, the Majlis Amanah Raayat (MARA), the obligation placed on pioneer companies to accord Bumiputras with a specified share of capital and labour participation and, constant exhortations to the Bumiputra community to take advantage of the opportunities created by the Government. The achievements were, however, small.[15] In 1965, RIDA was reorganized into MARA to provide more effective assistance to the Bumiputras. Under the First Malaysia Plan, therefore, an allocation of $70 million was made to MARA to finance its activities in commerce and industry which included education and training, the provision of technical and financial assistance and, the establishment of new industrial enterprises. Of significance to the development of the Government's industrial policy was the last category of activities. It represented the beginnings of direct participation by the public sector in industrial activities which hitherto were entirely in the hands of the private sector. These industrial enterprises were set up by MARA or jointly with others, and managed by it in the initial stages; they would then be transferred to the Bumiputras ultimately.[16] Up to 1969, the Government declared that it had "no intention to reserve to MARA any particular lines of economic activity or to preclude private investment in those fields in which MARA may choose to participate".[17] But later events proved that this undertaking had been too hastily made.

Another important phase in the development of industrial policy occurred in mid-1969. In May 1969, Malaysia went through a brief period of racial conflict.[18] While the outbreak of violence was triggered off largely by the tensions and animosities built up during the campaigns prior to the General Elections in May when sensitive issues among the races were heavily exploited by the campaigning political parties, one of the important factors generally accepted as

[15] Evidence of the small achievement in the extent of Bumiputra participation in industry and the need to rectify the situation found strong expression in the proceedings and resolutions of the two Bumiputra Economic Congresses held in June 1965 and September 1968.

[16] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 137.

[17] Malaysia, *Mid-Term Review of the First Malaysia Plan, 1966–1970, op. cit.*, p. 79.

[18] For an official version of the conflict see, National Operations Council, *The May 13 Tragedy – A Report*, Kuala Lumpur, 1969.

underlying the racial animosities was however the economic imbalance among the major racial groups. An outcome of the racial strife was a thorough review of economic policies for the post-May 1969 period, the objective being to reduce this imbalance in order to promote national unity. The Government's industrial policy was among the earliest to be reoriented; this was publicised in July 1969.[19] Two basic objectives could be discerned in the new industrial policy. Firstly, the new policy emphasized on acceleration of industrial development. Secondly, it laid down directions for a more equitable distribution of the benefits of industrial growth among the racial groups.

The major means of accelerating industrial development under the new policy was the introduction of a positive and aggressive approach to industrialization by the Government. In the policy speech outlining this approach, the Deputy Prime Minister declared that "the Government will take the initiative in industrialization and, if necessary, will participate in the establishment of industries either by itself or in joint venture with the private sector both local and foreign." But the positive role of Government was also to serve simultaneously the goal of increasing Bumiputra participation in industry. Developments so far have shown that both objectives were inextricably bound. While this approach was by no means entirely new since it was observed earlier that the Government had intended to use MARA for direct participation in manufacturing, it was nevertheless significant because it opened the way for large-scale direct Government intervention. Besides MARA, other new institutions were set up and existing bodies reinvigorated. The creation of industrial opportunities for Bumiputras was among the most important of their functions. The more prominent among these bodies were the National Corporation Berhad (Perbadanan Nasional Berhad or PERNAS) set up in November 1969 and, at the State level, the state economic development corporations (SEDCs). A good though broad indicator of the seriousness of the new Government policy may be seen in the substantial financial allocations made to these bodies under the Second Malaysia Plan (Table 9.2).

One notable feature of the new industrial policy was the importance attached to labour-intensive enterprises. Past efforts to promote investment had failed to solve the problem of growing unemployment. The new policy thus accorded priority to labour-intensive projects. In the early 1970's this found concrete expression in two forms namely, the granting of tax exemption for varying periods depending on the number of full-time paid employees (subject to a minimum of 50) and the provision of special tax exemption of varying periods to the electronics industry (a labour-intensive industry).[20]

[19] See statement of Tun Abdul Razak, Deputy Prime Minister and Director of the National Operations Council, "New Economic Development Policy" in *A New Industrial Development Strategy,* Kuala Lumpur, Federal Industrial Development Authority, July 1969, pp. 2–5.

[20] This special incentive for the electronics industry applied to projects approved before 31 January 1973.

Table 9.2

West Malaysia – Public Development Expenditure to Promote Industrialization
($ million)

Activity	Actual Public Development Expenditure			Allocation
	1956–60	1961–65	1966–70	1971–75
Industrial Estates	11.1	24.5	19.3	4.4
Finance For Industry				
a) MIDF	–	24.1	16.0	100.0
b) MARA*	–	10.5	50.9	73.0
c) PERNAS*	–	–	10.0	100.0
d) SEDCs*	–	–	–	45.6
e) MRDC	–	–	2.6	35.0
Industrial Promotion, Research etc.				
FIDA	–	–	3.4	10.0
NISIR	–	–	0.3	5.5
Others	1.0	–	–	–
Total	12.1	59.1	102.5	373.5

Sources 1. Malaysia, *First Malaysia Plan, 1966–1970.*
2. Malaysia, *Second Malaysia Plan, 1971–1975.*

*These institutions, MARA, PERNAS and SEDCs also undertook, as the case may be substantial volume of commercial, financial, housing, construction, agricultural and other activities. But there were no means of separating the amount of funds utilized for these from that for industrial purposes.

Abbreviations:
MIDF = Malaysian Industrial Development Finance Berhad.
MARA = Majlis Amanah Raayat (formerly the Rural and Industrial Development Authority or RIDA)
PERNAS = National Corporation
SEDCs = State Economic Development Corporations
MRDC = Malaysian Rubber Development Corporation
FIDA = Federal Industrial Development Authority
NISIR = National Institute for Scientific and Industrial Research

A new aspect of policy on employment in industry was that firms should strive to maintain an employment structure that would reflect at all levels of the work force, the multi-racial composition of the country. This was to ensure that there would be a fairer distribution of employment opportunities among the races.

The third aspect of the new industrial policy expressed the Government's intention to divert industries to the smaller towns and the rural areas. The Investment Incentives Act, 1968, had provisions to encourage industrial dispersion to areas designated as 'development areas'. The inducement took the form of a more liberal application of certain incentives under the Act if the firm being accorded these incentives also decided to locate its facilities in a 'development area'. However, in 1973, the Act was amended to introduce a further incentive to encourage industrial dispersion. Tax relief periods varying with the types of specified industries would be granted to such industries if they were to locate in areas designated eligible for this incentive.

This discussion highlights the principal developments in the Government's industrial strategy to the early part of the 1970's. Table 9.2 shows the expanding volume of public development expenditures concerned with industrial development for five-year periods during 1956–70 and allocations of such for 1971–75. Transfers of financial resources to some institutions such as MARA, the National Corporation (PERNAS) and the state economic development corporations (SEDCs) included provisions of substantial amounts for non-manufacturing activities such as commerce, finance, housing, construction and agriculture. It was not possible to distinguish these provisions from those for manufacturing activities. Nevertheless, even after making allowance for these, the overall picture presented is one in which the Government's financial involvement in industrial development had increased markedly. But even this was by no means a complete account of the Government's role in industrial development. Non-financial measures and those involving the foregoing of revenue of one form or another were also of importance as will be seen in this and the following two chapters.

In presenting this broad survey of industrial strategy, no attempt was made to appraise the effectiveness and consequences of the various measures. The following sections in this and the next two chapters will provide some evaluation of the key policy measures.

3. FISCAL POLICY AND INDUSTRIAL DEVELOPMENT

Among the package of instruments used to promote industrial development in West Malaysia, fiscal policy was one of the most important. This arose from its versatility in providing inducements for achieving a wide range of the objectives of the Government's industrial strategy. More specifically, fiscal policy was utilized to provide incentives in relation to the following: pioneer industries, non-pioneer industries, priority products, labour utilization, industrial dispersion, utilization of domestic inputs and exports of manufactures. These incentives differed in effectiveness. On the other hand, there had been occasions when revenue objectives introduced elements of disincentives into the fiscal framework. A proper appraisal of fiscal policy would need to consider also these elements.

3.1 *Fiscal Policy and Pioneer Industries*

The establishment of a tax incentive in 1958 to induce investment in pioneer industries was the first major use of fiscal policy to promote industrial development.[21] Prior to this, the existing tax legislation, the Income Tax Ordinance, 1947 provided concessions to industrial investment only in the form of initial and annual allowances for industrial buildings and, plant and machinery. An initial allowance was provided for industrial buildings to the extent of 10 per cent of the capital expenditure[22] and, for plant and machinery to the extent of 20 per cent.[23] For industrial buildings, the annual allowance was fixed at 2 per cent of the capital expenditure[24] and for plant and machinery, there was no fixed rate.[25] These concessions have since remained unchanged.[26] On grounds of possible loss of revenue, the Government was not prepared to increase these capital allowances as an alternative means of promoting investment.[27] On the other hand, in deciding on the tax incentive for pioneer industries, which involved the granting of tax relief on profits for a specified period, the Government obviously must have attached substantial weight to the impact of its novelty to attract new investments. Furthermore, this incentive system would enable some selection of industries and products, depending upon how the term 'pioneer' was to be defined. It was not to be a 'blanket' incentive to cover all new industrial investments. Not the least important of the considerations was the expectation that the incentive of tax relief should attract investments which would not otherwise have been made. A temporary tax relief granted on the profits of such investments was thought to be more beneficial than not making such tax concessions with the consequence of a smaller amount of taxable profits in the future. The whole principle of the incentive rested on one premise namely, that the pioneer companies were expected to make profits early in order for the incentive to be most attractive. To that extent, it encouraged efficiency. From this standpoint, the incentive for pioneer industries was commendable.

There are two basic aspects in the incentive. Firstly, it defined the types of industries and products that would be promoted by the incentive. Secondly, it linked the tax relief period to the size of the capital investment made. Both have important effects on the pace and direction of industrial growth.

[21] This was made under the *Pioneer Industries (Relief from Income Tax) Ordinance, 1958.*

[22] Section 16 (1) of the *Income Tax Ordinance, 1947.*

[23] *Ibid.*, Section 19 (2).

[24] *Ibid.*, Section 16 (2).

[25] *Ibid.*, Section 19(2).

[26] *Income Tax Act, 1967,* Section 42 and Schedule 3, para. 12; Schedule 3, paras. 10 and 15.

[27] See speech of Minister of Finance on the Second Reading of the *Pioneer Industries (Relief from Income Tax) Bill, 1958* on 31 July 1958 in the Federal Legislative Council.

Industries eligible for the incentive were categorized as pioneer industries. In turn, they were defined as industries having the following characteristics at the time they were declared eligible for the tax incentive:

i) they were not being undertaken at all or on a scale commensurate with the "economic requirements or development of the Federation";

and,

ii) a) they were capable of further development;

or b) there were insufficient facilities in the country to enable the manufacture of their products at the desired level.[28]

On the basis of this definition, it is quite clear that the term 'pioneer industries' is liable to very wide interpretation. For all goods not being produced yet, such could be declared as pioneer products. For goods still insufficiently produced, all such goods could conceivably fall within the definition. Intermediate and capital goods would be able to meet both the criteria in the definition, 'economic requirements' and 'development'. Consumer goods would be able to satisfy the first criterion. The only qualifying test is that these goods should have been inadequately produced.

This unsophisticated approach to the selection of industries is understandable for a number of reasons. Firstly, the early concern in industrialization was with the volume of industrial investment and output rather than their direction and pattern. Secondly, for a long time, there were no expertise and accumulated knowledge to help identify industries that would be crucial in accelerating the pace of industrialization. As a result, the incentive gave rise to a large collection of products of varying degrees of importance to further industrial growth. It is not surprising, therefore, for the Government to have to establish in 1968 a new incentive to induce investment in the manufacturing of 'priority products'.[29]

Table 9.3 classifies the list of products declared by the Government as pioneer products up to the end of 1970 into categories of consumer goods, intermediate goods and, investment and related goods and further into their industry groupings. It can be seen that of a total of 607 pioneer products, slightly over half were consumer goods. Of the balance, intermediate goods accounted for slightly over 20 per cent of the total number of pioneer products and, investment and related goods nearly 30 per cent. Within the category of consumer goods, there were large concentrations in six industry groups: food manufacturing, chemicals and chemical products, electrical machinery, transport equipment, metal products and, textiles. Among the intermediate goods, about 50 per cent of the declared pioneer products were in the chemicals and chemical products group; the other important groups were products of petroleum and coal, wood products and, paper and paper products. For investment and related goods, the largest concentration was in the metal products group while there was a fairly even spread of virtually the rest in four other groups: electrical machinery, machinery (excluding electrical machinery and appliances), non-metallic mineral products and, basic metal industries.

[28] Section 3(1) of the *Pioneer Industries (Relief from Income Tax) Ordinance, 1958.*

[29] This is discussed in Section 3.3 of this chapter.

Table 9.3

West Malaysia – Analysis of Pioneer Products by Major Categories as at End of 1970

Industry Group	Number of Pioneer Products as at End of 1970 - Consumer Goods	Intermediate Goods	Investment and Related Goods	All Categories
1. Food Manufacturing	62	–	–	62
2. Beverage Manufacturing	3	–	–	3
3. Tobacco Products	–	–	–	–
4. Textiles	23	6	–	29
5. Footwear, Other Wearing Apparel	8	–	–	8
6. Wood Products	2	14	1	17
7. Furniture and Fixtures	7	–	–	7
8. Paper and Paper Products	12	12	–	24
9. Printing, Publishing and Allied Industries	2	–	–	2
10. Leather and Leather Products	–	5	–	5
11. Rubber Products	4	2	2	8
12. Chemicals and Chemical Products	49	65	–	114
13. Products of Petroleum and Coal	–	19	–	19
14. Non-metallic Mineral Products	5	2	23	30
15. Basic Metal Industries	–	–	22	22
16. Metal Products	25	3	50	78
17. Machinery excl. Electrical Machinery	8	–	31	39
18. Electrical Machinery and Appliances	33	–	38	71
19. Transport Equipment	28	–	4	32
20. Others	36	1	–	37
Total	307	129	171	607
As % of Total in All Categories	50.6	21.3	28.1	100.0

Sources: Federal Industrial Development Authority, *Annual Report*, 1968, 1969 and 1970.

Table 9.4 made a similar classification of the establishments manufacturing pioneer products into the three categories of goods and industry groups. Nearly 53 per cent of the establishments were engaged in producing consumer goods in 1969 while about 27 per cent were producing intermediate goods and another 20 per cent investment and related goods. A notable feature is that these proportions were very similar to the shares of the corresponding categories in the list of declared pioneer products. The consumer goods industry was dominated by four industry groups: food manufacturing, textiles and textile products, chemicals and chemical products and, electrical machinery and appliances. In the intermediate goods sector, most of the establishments were engaged in chemicals and chemical products and, wood and wood products. The establishments in the investment goods sector were fairly evenly distributed among its component groups. Over the period 1959–69, the number of pioneer establishments increased by 158. Of this increase, 85 were in the consumer goods sector, 40 in

the intermediate goods sector and 33 in the investment and related goods sector. The pattern that emerged appeared reasonably balanced between the number of establishments producing consumer goods and non-consumer goods. It cannot, therefore, be said that the pioneer incentive had given rise to concentration in consumer goods industries, at least as far as the distribution of establishments was concerned. It has not been possible, however, to categorize the industries on the basis of their value added since the industry breakdown was not detailed enough.

The second aspect of the pioneer incentive is that periods of tax relief of up to five years were provided in accordance with the size of the capital investment. When the incentive was first introduced, the capital investment limit for a given period of tax relief was relatively lower.[30] But in 1965, these limits were raised to what was considered to be more realistic levels as shown below:

Minimum Fixed Capital Investment Required	*Period of Tax Relief Allowed (Years)*	
	1958–65	*After 1965*
Under $100,000	2	2
$100,000	3	2
$250,000	5	3
$500,000	5	4
$1,000,000	5	5

The rationale for this was that relief should be given only where worthwhile investments in new industrial capacity were made.[31] Thus, as a result of this change, larger investments would have to be made in order to qualify for a given period of tax relief. However, the principle of permitting relief of a minimum of two years was still maintained to accommodate the small investments set up with domestic capital. For purposes of granting relief, capital investment was taken to mean expenditure on factory, plant and machinery. The Investment Incentives Act, 1968 which incorporated into it the pioneer incentive, left the capital expenditure limits unchanged.

[30] *Pioneer Industries (Relief from Income Tax) Ordinance, 1958*, Section 12.

[31] See speech of Minister of Finance introducing the *Pioneer Industries (Relief from Income Tax) (Variation) Bill* in Parliament on 4 March 1965.

Table 9.4

West Malaysia – Establishments Manufacturing Pioneer Products by Major Categories and Industry Groups

Major Category/Industry Group	Establishments Manufacturing Pioneer Products					
	1959		1963		1969	
	Number	(%)	Number	(%)	Number	(%)
I. *Consumer Goods*						
Food Manufacturing	–	–	12	14.5	26	14.9
Beverage Manufacturing	–	–	1	1.2	2	1.1
Textiles and Textile Products	1	5.9	5	6.0	14	8.0
Footwear, Other Wearing Apparel	–	–	–	–	5	2.9
Furniture and Fixtures	–	–	–	–	3	1.7
Paper and Paper Products	–	–	1	1.2	1	0.6
Printing and Allied Industries	–	–	1	1.2	1	0.6
Chemicals and Chemical Products	4	23.5	12	14.5	10	5.7
Non-metallic Mineral Products	–	–	–	–	1	0.6
Metal Products	–	–	2	2.4	2	1.1
Electrical Machinery and Appliances	1	5.9	3*	3.6	9	5.1
Transport Equipment	–	–	1	1.2	3	1.7
Others	1	5.9	9	10.8	15	8.6
Total	7	41.2	47	56.6	92	52.6
II. *Intermediate Goods*						
Textile and Textile Products	–	–	–	–	2	1.1
Wood and Wood Products	–	–	1	1.2	10	5.7
Paper and Paper Products	–	–	–	–	1*	0.6
Leather and Leather Products	–	–	–	–	1	0.6
Rubber Products	–	–	1	1.2	3*	1.7
Chemicals and Chemical Products	6*	35.3	10	12.1	24	13.7
Products of Petroleum and Coal	–	–	2	2.4	4	2.3
Metal Products	2	11.8	2	2.4	3	1.7
Total	8	47.1	16	19.3	48	27.4
III. *Investment and Related Goods*						
Wood and Wood Products	–	–	1	1.2	2	1.1
Non-metallic Mineral Products	–	–	5	6.0	6	3.4
Basic Metal Industries	–	–	3	3.6	7	4.0
Metal Products	2	11.8	8	9.6	10	5.7
Machinery excluding Electrical Machinery	–	–	3	3.6	5	2.9
Electrical Machinery and Appliances	–	–	–	–	5	2.9
Total	2	11.8	20	24.0	35	20.0
IV. *All Categories*	17	100.0	83	100.0	175	100.0

Sources: Compiled from:–

1. Department of Statistics, *Census of Manufacturing Industries in the Federation of Malaya, 1959.*
2. Department of Statistics, *Census of Manufacturing Industries in the States of Malaya, 1963.*
3. Department of Statistics, *Survey of Manufacturing Industries, West Malaysia, 1969.*

*May involve manufacture of products of other categories.

However, the Investment Incentives Act, 1968 introduced one improvement. Under its provisions, an investor wishing to be eligible for a longer period of tax relief could undertake the necessary qualifying expenditure during the year the extension was sought[32] whereas under the earlier legislation, the qualifying expenditure would have to be undertaken before the expiration of the existing tax relief period.

Besides the basic incentive, there were subsidiary benefits attached to it. Firstly, capital allowances for capital expenditure incurred during the tax relief period were not taken into account for purposes of assessing the firm's exempt income but were treated as if they were incurred after the tax relief period and were allowed accordingly.[33] This means that pioneer companies did not lose the existing privilege for capital expenditure otherwise available under the country's tax legislation. In the event of losses incurred by the pioneer company during its tax relief period, the capital allowances were notionally calculated and aggregated for each year and the amount was then allowed to be deducted in the year after the tax relief period.[34] Secondly, where a pioneer company incurred losses during its tax relief period, these losses after they have been offset by any income earned by the company during the period, could be carried forward for deduction after its relief period.[35] However, this was a less liberal concession than the practice applying to non-pioneer companies which could set off the full amount of their losses in one year against their incomes of subsequent years.[36] Thirdly, pioneer companies were exempted from the Development Tax of 5 per cent which had applied to non-pioneer firms since 1967.[37] Furthermore,

[32] *Investment Incentives Act, 1968*, Section 13 (2).

[33] *Pioneer Industries (Relief from Income Tax) Ordinance, 1958*, Section 16; *Investment Incentives Act, 1968*, Section 18(1) and (2).

[34] *Investment Incentives Act, 1968*, Section 18(3)(a) and (b). Actually, this provision of the Act corrected an anomaly in the preceding legislation. Under the latter, although capital allowances were allowed for capital expenditure incurred during the tax relief period, its method of calculation (which involved taking the various capital expenditures during the period together as an aggregate) gave rise to a situation in which a pioneer company experiencing losses during its tax relief period could be worse off than a non-pioneer company in the same circumstances.

[35] *Pioneer Industries (Relief from Income Tax) Ordinance, 1958*, Section 21; *Investment Incentives Act, 1968*, Section 25.

[36] *Income Tax Ordinance, 1947*, Section 33; *Income Tax Act, 1967*, Section 44.

[37] *Supplementary Income Tax Act, 1967.*

Table 9.5

Malaysia – Pioneer Industries: Number of Approvals, Proposed Called-up Capital and Potential Employment

Year	Number of Firms Granted Pioneer Status	Proposed Called-up Capital ($ million)	Potential Employment
1959	15	31.3	3,514
1960	13	14.8	1,276
1961	25	31.4	2,591
1962	23	53.5	2,993
1963	6	5.4	695
1964	15	12.7	1,758
1965	9	5.9	1,911
1966	17	13.1	1,302
1967	32	40.5	4,705
1968	40	41.6	5,200
1969	120	277.2	22,615
1970	173	317.4	34,992
1971	150	301.6	29,678
Total	638*	1,096.4	113,230

Source: Ministry of Trade and Industry.

*Includes 15 for Sabah and 12 for Sarawak in 1968–71.

pioneer companies were also exempted from the payroll tax of 2 per cent on payroll levied during 1965–70.[38]

There is no doubt that the pioneer incentive had made a substantial impact. Since its establishment to 1971, a total of 638 firms had been provided with pioneer status in the whole of Malaysia (this figure included 15 for Sabah and 12 for Sarawak). The proposed called-up capital of these firms totalled $1,096.4 million. Their potential employment was 113,230 persons. Table 9.5 provides an annual breakdown of these figures. One notable feature is the phenomenal increase in the number of approvals for pioneer status, and hence, also the proposed called-up capital and potential employment from 1969. An important cause of this spurt of approvals was the streamlining of the machinery for processing and approving applications for pioneer status after the May 1969 disturbances.[39]

[38] *Investment Incentives Act, 1968*, Section 23.

[39] This will be discussed in Chapter XI.

Table 9.6

Malaysia – Position of Approvals of Pioneer Companies as at End of June 1971

	Position of Companies Granted Pioneer Status as at 30 June 1971	Number of Companies	Per Cent of Total
I.	In production or at various stages of implementation	371	68.8
II.	No progress	117	21.7
III.	Approvals which did not materialize or have ceased operations	51	9.5
	Total	539	100.0

Source: Ministry of Trade and Industry.

While it is important to bear in mind that some of the approved firms will not materialize, a recent survey made by the authorities concerned however indicated that such cases constituted only less than 10 per cent of the 539 companies approved for grant of pioneer status as at end of June 1971. Another 22 per cent of the approvals showed no progress. But this group should not be written off as there appeared good prospects for a number of these to eventually make some progress. Of those that had commenced production or were in the process of doing so, the percentage was nearly 70, a respectably high proportion considering that the bulk of the approvals occurred after 1969 (Table 9.5). All these are shown by Table 9.6.

In terms of capital investment, the companies already in production accounted for a total of $613 million at the end of 1970 (Table 9.7). The bulk or 83 per cent of the total investment comprised equity capital while loan capital made up 17 per cent. Of the equity capital, foreign capital accounted for 59 per cent and local capital 41 per cent. However, not all the industry groups were dominated by foreign capital. There were six industry groups in which local equity capital was predominant: textile manufacturing, wood products, paper products and printing, non-metallic mineral products, basic metal industries and, plastic industries. On the other hand, there were nine groups in which foreign capital was predominant: food and beverages, furniture and fixtures, leather and leather products, chemicals and chemical products, products of petroleum and coal, metal products, machinery and transport equipment, electrical machinery and, 'others'.

The picture that emerged is one in which capital investment as undertaken by the pioneer companies over the last 11 years to 1970 was very substantial. Well over $600 million had been actually invested and, if the bulk of the approvals made to 1971 were implemented, the total investment could be in the region of $1,000 million during the early 1970's. On the somewhat larger share of foreign capital in total investment as well as in the large number of industry groups, this feature provided a good reflection of firstly, the success achieved by the Govern-

Table 9.7

West Malaysia — Capital Investment by Pioneer Companies[a] by Industry Groups and Sources and Types of Capital as at End of 1970
($ million)

	Industry Group	Number of Establishments	Local Capital		Foreign Capital		All Sources		
			Equity[b]	Loan	Equity[b]	Loan	Equity[b]	Loan	Total
1.	Food and Beverages	24	40.7	2.4	65.0	13.2	105.7	15.6	121.3
2.	Textile Manufacturing	15	28.2	6.4	20.0	2.1	48.2	8.5	56.7
3.	Wood Products	12	28.9	4.3	3.5	0.4	32.4	4.7	37.1
4.	Furniture and Fixtures	4	0.5	0.2	1.2	0.4	1.7	0.6	2.3
5.	Paper Products and Printing	3	4.9	-	1.3	-	6.2	-	6.2
6.	Leather and Rubber Products	3	6.0	6.3	16.0	*	22.0	6.4	28.4
7.	Chemicals and Chemical Products	33	19.9	9.2	43.8	2.5	63.7	11.7	75.4
8.	Products of Petroleum and Coal	4	17.9	10.2	74.9	18.4	93.8	28.6	121.4
9.	Non-metallic Mineral Products	8	8.1	15.6	3.0	1.3	23.7	4.3	28.0
10.	Basic Metal Industries	8	31.3	11.7	26.5	8.3	57.8	20.0	77.8
11.	Metal Products	15	4.4	*	9.4	0.3	13.9	0.3	14.2
12.	Machinery and Transport Equipment	7	4.3	0.5	4.6	2.0	8.9	2.5	11.4
13.	Electrical Machinery and Appliances	13	7.3	1.0	15.0	1.6	22.3	2.6	24.9
14.	Plastic Industries	8	3.6	1.1	0.7	*	4.3	1.1	5.4
15.	Others	4	0.8	*	1.8	-	2.6	*	2.7
	Total	161	206.7	56.4	299.5	50.5	506.2	106.9	613.1

Source: Federal Industrial Development Authority, *1970 Annual Report.*

*Less than $100,000.

[a] Only of companies holding pioneer certificates at the end of 1970 or pioneer certificates which have expired.

[b] Paid-up.

ment in promoting foreign investment and secondly, its liberal policy on foreign ownership of industries. On the latter, the Government's policy was flexible.[40] Usually, companies applying for the fiscal incentives and in particular, pioneer status, were required to have at least 50 per cent of their equity capital to be of domestic origin and these were given a period of time to help them to achieve this requirement if they could not implement it immediately. However, foreign investors were not excluded from the possibility of retaining more than 50 per cent of the equity capital if prior permission had been granted by the Ministry of Trade and Industry. In such a case, the extent of foreign ownership allowed would vary with the merit of the situation. Where the company intended to produce for the foreign market, the Government was even prepared to entertain complete foreign ownership of equity.

Table 9.8 shows the total foreign investment of pioneer companies by country of origin. Five countries provided nearly 90 per cent of the total foreign investment in these companies. Singapore accounted for more than one-quarter of the total, the United Kingdom and the United States for about one-fifth each and Japan and Hong Kong together for another one-fifth. The balance was provided by a number of other countries. The large investment of Singapore which totalled $93 million raises an interesting point since that country also offered a similar tax incentive to investors together with other incentives.[41] It would thus appear that the Malaysian incentive combined with other advantages such as market considerations were more than able to hold their own against the facilities offered by Singapore.

An assessment of the significance of pioneer industries can be undertaken on the basis of data made available by the 1968 Census of Manufacturing Industries. Table 9.9 provides this analysis in terms of their contribution to total employment and value added of the manufacturing sector. In 1968, ten years after the introduction of the pioneer incentive, the value added of all the pioneer companies amounted to nearly *one-third* of the total value added of the manufacturing sector. This was indeed a significant contribution, considering that the value added of the non-pioneer companies had also been increasing over the decade. Another notable contribution of the pioneer companies was in the diversification of manufacturing output. Of the 12 industry groups into which output was categorized, pioneer companies accounted for more than 50 per cent of the value added of six of these groups. They were beverage manufacturing, chemicals and chemical products, basic metal industries, electrical machinery and appliances, textile manufacturing and, products of petroleum and coal. And in each of these last four groups, pioneer companies accounted for between 70 and 100 per cent of the value added.

[40] See policy column of Chairman of the Federal Industrial Development Authority entitled "Local Participation" in Federal Industrial Development Authority, *Malaysia Industrial Digest*, Vol. 1 No. 4 (Fourth Quarter, 1968).

[41] For details of the pioneer and other incentives offered by the Singapore Government, see S.H. Huan, "Measures to Promote Industrialization" in You Poh Seng and Lim Chong Yah (ed.), *The Singapore Economy, op. cit.*, pp. 224–244.

Table 9.8

West Malaysia – Foreign Investment in Pioneer Companies as at End of 1970 by Country of Origin

Source of Capital	Equity and Loan Capital of Foreign Origin as at End of 1970	
	Amount ($ million)	Share of Total (%)
Singapore	92.78	26.5
United Kingdom	73.69	21.1
United States	64.91	18.5
Japan	42.06	12.0
Hong Kong	33.60	9.6
Puerto Rico	13.00	3.7
Bahamas	9.50	2.7
Canada	4.99	1.4
Australia	3.97	1.1
Holland	1.98	0.6
Ireland	1.58	0.5
Taiwan	1.13	0.3
Indonesia	1.02	0.3
Others*	5.77	1.6
Total	349.98	100.0

Sources: Federal Industrial Development Authority, *1970 Annual Report.*

*Comprising other countries each of which accounted for less than $1 million.

The contribution of pioneer companies to total employment in manufacturing was however less important. They accounted for only 18 per cent of total employment. The employees of pioneer firms concentrated in the four industry groups mentioned above, namely, products of petroleum and coal, textile manufacturing, electrical machinery and appliances and, basic metal industries.

The next issue of importance is whether there was a tendency for pioneer companies to be *capital-intensive.* Capital intensity here must be considered in its wider sense, that is, it should take account of the use of physical capital as well as human capital. While no justification is necessary for considering the former, the inclusion for consideration of the element of intensity in the use of human capital requires some explanation. Firstly, the crucial role of investment

Table 9.9

West Malaysia – Share of Pioneer and Non-Pioneer Industries in Value Added and Employment, 1968

	Industry Group	Total Value Added ($'000)	Percentage Share of Value Added for Group		Total Employment (in Equivalent Full-time Employees)[a]	Percentage Share of Employment in Group	
			Pioneer Companies	Non-Pioneer Companies		Pioneer Companies	Non-Pioneer Companies
1.	Food Manufacturing	140,083	47.4	52.6	18,937	16.2	83.8
2.	Beverage Manufacturing	36,263	51.2	48.8	2,313	17.6	82.4
3.	Textile Manufacturing	19,533	88.9	11.1	5,079	79.4	20.6
4.	Wood and Cork Products	94,437	10.5	89.5	19,536	9.1	90.9
5.	Chemicals and Chemical Products	79,476	55.4	44.6	5,746	46.9	53.1
6.	Products of Petroleum and Coal	40,676	100.0	*	396	98.5	1.5
7.	Non-metallic Mineral Products	61,760	11.9	88.1	7,213	16.1	83.9
8.	Basic Metal Industries	21,188	71.1	28.9	3,061	73.3	26.7
9.	Metal Products	38,987	24.2	75.8	8,026	20.5	79.5
10.	Machinery except Electrical Machinery	25,158	5.2	94.8	6,007	3.3	96.7
11.	Electrical Machinery and Appliances	20,781	72.5	27.5	2,143	61.0	39.0
12.	Other Industries	295,509	11.2	88.8	47,075	8.4	91.6
	Total	873,851	31.8	68.2	125,532	18.2	81.8

Sources: Compiled from Department of Statistics, *Census of Manufacturing Industries, West Malaysia, 1968.*

*Less than 0.1.

[a] A part-time employee is taken as equivalent to half of a full-time employee.

in human resources had been identified early in the 1960's[42] and since then attempts have been made to incorporate it in economic analysis. Secondly, in the Malaysian context, it is just not enough to know whether pioneer companies tended to employ more physical capital. While this by itself is an important question because of the direct link between the tax relief period and the volume of capital investment, another important question is whether there was a tendency for the pioneer companies to utilize more skilled labour (including management). The latter, which is a scarce commodity, has important policy implications just as physical capital intensity has for labour utilization.

The objective of examining capital intensity, taking account of both physical and human capital, can be met by applying the method recently developed by Lary[43] for measuring factor intensities of groups of industries in the United States. Lary's measure is based on the principle that the value added per employee of an industry is a reflection of the flow of services from both human and physical capital employed in the production process. The 'wages and salaries' component of value added[44] represents the contribution of labour while the non-wage value added represents that of physical capital. For purposes of inter-industry comparison, these two components of value added per employee were compiled for each industry group in Table 9.10, and then plotted on a chart with the wage value added on the vertical axis and the non-wage value added on the horizontal axis (See Chart). The average wage value added and the non-wage value added for the whole manufacturing sector were also drawn on the chart. These divided the chart into four sectors. The upper right sector of the chart represents the capital-intensive zone while the lower left sector represents the zone where there is intensive use of relatively unskilled labour. To facilitate understanding of this, Lary suggested that it would be "helpful to think of the labour force as if it were composed of units of completely unskilled labour to each of which is added according to the industry, varying amounts of skill or human capital (vertical axis of chart) and of machinery and other physical assets (horizontal axis)".[45]

To enable a comparison between pioneer and non-pioneer companies, the measure was applied to each of these two categories of companies in each industry group (Table 9.10). Eleven industry groups were considered. The group 'All Other Industries' was ignored in this exercise because its composition in the pioneer and non-pioneer categories differed too widely for any meaningful comparison. The data from the 1968 Census of Manufacturing Industries were used, these being the latest available complete source of information for the non-pioneer industries.

[42] One of the earliest contributions in this field is T.W. Schultz, "Investment in Human Capital" in the *American Economic Review*, March 1961.

[43] Hal B. Lary, *Imports of Manufactures From Less Developed Countries*, New York, National Bureau of Economic Research, 1968, especially Chapter 2.

[44] For convenience, this component will henceforth be referred to as the 'wage value added'.

[45] Hal B. Lary, *op. cit.*, p. 22.

Table 9.10

West Malaysia – Wage and Non-Wage Value Added per Employee of Pioneer and Non-Pioneer Industries by Major Industry Groups, 1968

	Industry Group	Total Value Added ($'000)	Wages and Salaries ($'000)	Non-Wage Value Added ($'000)	Number of Employees (Full-time Equivalent)	Wage Value Added per Employee ($'000)	Non-Wage Value Added per Employee ($'000)	Total Value Added per Employee ($'000)
Pioneer Industries								
1.	Food Manufacturing	66,394	10,481	55,913	3,062	3.42	18.26	21.68
2.	Beverage Manufacturing	18,584	2,622	15,962	407	6.44	39.21	45.66
3.	Textile Manufacturing	17,373	5,590	11,783	4,031	1.38	2.92	4.30
4.	Wood and Cork Products	9,945	2,661	7,284	1,782	1.49	4.08	5.58
5.	Chemicals and Chemical Products	44,033	9,958	34,075	2,696	3.69	12.63	16.33
6.	Products of Petroleum and Coal	40,674	4,499	36,175	390	11.53	92.76	104.29
7.	Non-metallic Mineral Products	7,350	3,489	3,861	1,163	3.00	3.31	6.31
8.	Basic Metal Industries	15,069	6,620	8,449	2,244	2.95	3.76	6.71
9.	Metal Products	9,416	4,318	5,098	1,647	2.62	3.09	5.71
10.	Machinery except Electrical Machinery	1,305	431	874	197	2.18	4.43	6.62
11.	Electrical Machinery and Appliances	15,067	3,546	11,521	1,308	2.71	8.80	11.51
Non-Pioneer Industries								
1.	Food Manufacturing	73,689	26,721	46,968	15,875	1.68	2.95	4.64
2.	Beverage Manufacturing	17,679	4,746	12,933	1,906	2.49	6.78	9.27
3.	Textile Manufacturing	2,160	862	1,298	1,048	0.82	1.23	2.06
4.	Wood and Cork Products	84,492	38,623	45,869	17,754	2.17	2.58	4.75
5.	Chemicals and Chemical Products	35,443	8,175	27,268	3,050	2.68	8.94	11.62
6.	Products of Petroleum and Coal	2	2	–	6	0.33	–	0.33
7.	Non-Metallic Mineral Products	54,410	14,084	40,326	6,050	2.33	6.66	8.99
8.	Basic Metal Industries	6,119	1,285	4,834	817	1.57	5.91	7.48
9.	Metal Products	29,571	12,252	17,319	6,379	1.92	2.71	4.63
10.	Machinery except Electrical Machinery	23,853	11,790	12,063	5,810	2.02	2.07	4.10
11.	Electrical Machinery and Appliances	5,714	1,533	4,181	835	1.83	5.00	6.84
All Industries		873,851	266,957	606,894	125,535	2.13	4.83	6.96

Sources: Compiled from Department of Statistics, *Census of Manufacturing Industries, West Malaysia, 1968.*

WEST MALAYSIA – WAGE AND NON-WAGE VALUE ADDED PER EMPLOYEE OF PIONEER AND NON-PIONEER INDUSTRIES BY MAJOR INDUSTRY GROUPS, 1968

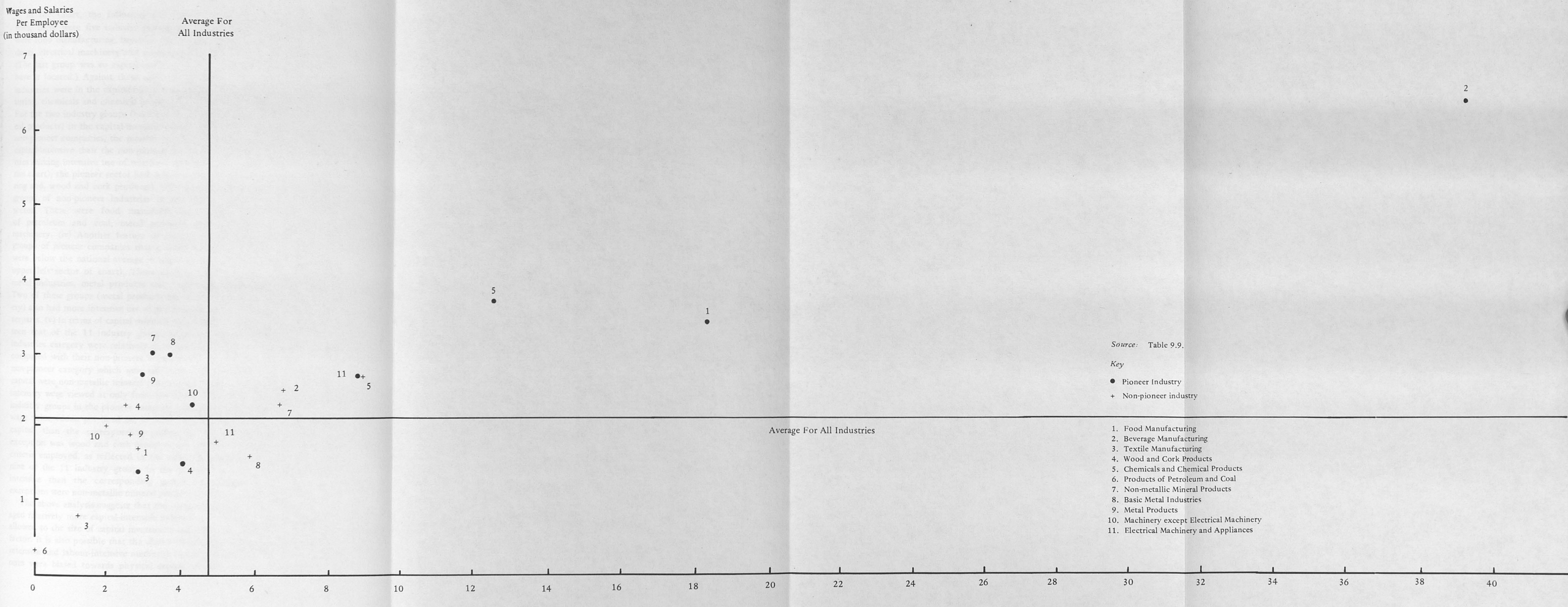


Table 9.10

In the Chart, the following are evident: (i) Among the pioneer industries, there were five industry groups in the capital-intensive category. These were food manufacturing, beverage manufacturing, chemicals and chemical products, electrical machinery and appliances and, products of petroleum and coal. (The last group was so capital-intensive that it would require a larger chart to have it located.) Against these, only three industry groups of the non-pioneer industries were in the capital-intensive category, these being beverage manufacturing, chemicals and chemical products and, non-metallic mineral products. (ii) For the two industry groups (beverage manufacturing and, chemicals and chemical products) in the capital-intensive category in which there were pioneer and non-pioneer companies, the pioneer producers in each case were relatively *more* capital-intensive than the non-pioneer producers. (iii) In the category of industries making intensive use of relatively unskilled labour (see lower left sector of the chart), the pioneer sector had only two industry groups (textile manufacturing and, wood and cork products). On the other hand, there were five industry groups of non-pioneer industries in the relatively unskilled labour-intensive sector. These were food manufacturing, textile manufacturing, products of petroleum and coal, metal products and, machinery except electrical machinery. (iv) Another feature of interest is that there were four industry groups of pioneer companies that utilized relatively better-trained labour but were below the national average in terms of utilization of physical capital (see upper left sector of chart). These were non-metallic mineral products, basic metal industries, metal products and, machinery except electrical machinery. Two of these groups (metal products and, machinery except electrical machinery) also had more intensive use of physical capital than their non-pioneer counterparts. (v) In terms of capital intensity based only on physical capital, it can be seen that of the 11 industry groups examined, nine of these in the pioneer industries category were relatively more intensive in the use of physical capital compared with their non-pioneer counterparts. The two industry groups in the non-pioneer category which were relatively more intensive in terms of physical capital were non-metallic mineral products and basic metal industries. If capital intensity were viewed at only from the standpoint of human capital, 10 of the industry groups in the pioneer category could be seen to have relatively higher wage value added per head or, in other words, more intensive use of human capital, than the corresponding groups in the non-pioneer category. The exception was wood and cork products. On capital intensity based on the two criteria employed, as reflected in the value added per employee (Table 9.10), nine of the 11 industry groups in the pioneer category were more capital-intensive than the corresponding groups of non-pioneer companies. The exceptions were non-metallic mineral products and basic metal industries.

The above analysis suggests that the pioneer incentive had generally encouraged relatively more capital-intensive industries. The link of the tax relief period allowed to the size of capital investment was one likely important contributory factor. It is also possible that the choice of techniques (that is, between capital-intensive and labour-intensive methods) could be limited and the most feasible ones were biased towards physical capital intensity. But no information was

available on this. There was also the general tendency for pioneer companies to utilize relatively more skilled labour compared with the non-pioneer companies. This certainly would not help to lighten the problem of creating employment opportunities for the unskilled labour which continued to be an abundant resource. If this past trend continues, the need for adequate training facillities for industrial workers is underlined, considering the substantial increase in the approvals for pioneer status in 1969–71 (Table 9.5).

Finally, the pioneer incentive also affected industrial development in another manner. The Government had, for a long time, been concerned with the low level of Malay participation in industry and commerce. It therefore sought to use this incentive in two ways to alleviate this problem. For being given pioneer status, companies would have to (i) employ a certain percentage of Malays in their labour force and (ii) reserve a reasonable portion (10 per cent in the past) of their equity shares for sale to the Malays.[46] On the question of widening Malay employment in industry, the deliberate use of the pioneer incentive as an instrument had produced fairly satisfactory results as shown in Table 9.11 which was based on a survey of the situation in 1967 by the Department of Statistics. A sample survey of 1,770 manufacturing establishments revealed that employment of Malays was only 27 per cent of the full-time paid labour force. In the pioneer companies, the share for Malays was 42 per cent. However, the proportions of Malays in the managerial, professional, technical and supervisory levels in pioneer companies were still low, a reflection of the scarcity of Malay personnel in these categories as well as the fact that policy in the past had mainly concentrated on overall percentages by race.

In respect of increasing the equity participation of the Malays in industry, the application of the other implicit condition for the grant of pioneer status had been of some assistance but an important problem was the lack of Malay investors. Of the $206.7 million of local equity capital of pioneer companies in 1970, only $21.7 million were held by the Malays, or only 4.3 per cent of the total equity capital. This was well below the 10 per cent target set. Other domestic sources, on the other hand, accounted for 36.5 per cent of the total equity capital.

These limited achievements for advancement of Malay participation in industry under the pioneer incentive system could thus be considered as one of the grounds for the change in the Government's industrial strategy after 1969.

3.2 *Fiscal Policy and Investment in Non-Pioneer Enterprises*

While the pioneer incentive continued to be the principal fiscal inducement for capital investment, the Government found it appropriate to introduce another inducement in 1968 in order to hasten the pace of industrialization. This was the investment tax credit (ITC) provided under the Investment Incentives Act,

[46] These conditions were implicit and did not appear in the relevant legislations and regulations.

Table 9.11

West Malaysia – Employment of Malays in Manufacturing, 1967

Race/Status	Paid Full-time Employees in 1967	
	Manufacturing Sector[a]	Pioneer Industries[b]
	(% of Total)	
Malaysian	94	94
a) *Malays*		
i) All categories	27	42
ii) Managerial, professional, technical and supervisory	12	13
b) *Non-Malays*		
i) All categories	67	52
ii) Managerial, professional, technical and supervisory	73	59
Non-Malaysian	6	6
Total	83,332	22,553

Source: Department of Statistics, *Survey on Employment in Manufacturing Industries*, 1967 (unpublished).

[a]Based on sample survey of 1,770 establishments.
[b]Covered 135 pioneer and ex-pioneer companies.

1968.[47] The basic objective of the ITC was to encourage capital expenditure on factory, plant and, machinery in approved projects which would not be eligible for the pioneer incentive. But a company eligible for pioneer status could opt to apply for the ITC facility if it was more beneficial. In effect, this facility represented the Government's recognition of the possible contribution of the non-pioneer sector to industrial growth. Its timing also seemed to suggest that this was a measure to partly balance the decision of the Singapore Government in 1967 to grant tax relief of three to five years for investments undertaken by approved established enterprises which were non-pioneer companies.[48]

[47]*Investment Inventives Act, 1968*, Chapter 3.

[48]See Singapore, *Economic Expansion Incentives (Relief from Income Tax) Act, 1967*, Part III.

The ITC had been granted at the rate of at least 25 per cent of the capital expenditure for the year in which it was incurred. The capital expenditures for a project could run on for some years but eligibility for the ITC was limited to within five years from the time the project was approved for the incentive. The amount equal to the tax credit received each year would be exempted from tax. In the event of a company experiencing losses during the period it was accorded the ITC or, if the profits were less than the amount of ITC granted, the full or unutilized tax credit could be carried foward to subsequent years until it had been fully deducted from profits.

Table 9.12 shows the effectiveness of the ITC in contributing to capital investment and employment. The response to the incentive was very poor in 1969, the year following its establishment. Approvals were granted to only four companies having a called-up capital of $6.3 million. Potential employment was only about 540 workers. However, interest in the incentive picked up from 1970 when 30 establishments with a called-up capital of $53 million and potential employment of slightly over 4,000 persons, were approved. For 1971, approvals covering the whole of Malaysia indicated further response to the incentive – the companies granted the ITC facility declined in number but rose substantially in terms of called-up capital to $109 million and of potential employment to over 9,000 persons. On the basis of past trends, most of these would be located in West Malaysia. In 1972, the number of companies granted the ITC fell, as also their capital investment and potential employment but these were still larger than for 1969.

Like the pioneer incentive, the ITC was also based on capital expenditure. It could thus also provide some bias towards capital-intensive methods. But there were no data yet for this to be ascertained. As an instrument to induce investment, its impact was much less than the pioneer incentive. Even the volume of capital investment and potential employment of the new manufacturing enterprises approved without incentives[49] for each year of 1969–72 had been larger than those relating to approvals under the ITC (Table 9.12). Nevertheless, as indicated above, there were some encouraging signs of response to the ITC.

For completeness, it would be useful to refer to another measure implemented by the Government to encourage investment outside of those areas covered by the various incentives, including the ITC. This was the increased capital allowance introduced under the Investment Incentives (Amendment) Act, 1971. The objective of this incentive was to enable capital allowances for tax purposes to be accelerated and thereby encourage an enterprise to undertake expenditures to modernize its production technique at an existing factory or to establish a modern factory. Categories excluded from this incentive were non-resident companies and companies already enjoying incentives such as pioneer status, the labour utilization relief (which will be discussed later) and the ITC.

[49] In June 1969, the Minister of Commerce and Industry introduced a policy requiring all investors, including those not applying for any of the Government incentives, to obtain prior approval before commencing operations. See Federal Industrial Development Authority, *1969 Annual Report*, p. 35.

Table 9.12

West Malaysia – Manufacturing Ventures Approved by the Government With and Without Incentives, 1969–72.

	Manufacturing Ventures Approved by Government				
	With Pioneer Status	With Investment Tax Credit (ITC)	With Accelerated Depreciation Allowance	Without Incentives	Total
Number of Establishments					
1969	110 (120)	4 (4)	- (-)	21 (21)	135 (154)
1970	165 (173)	30 (31)	3 (3)	127 (127)	325 (334)
1971	(150)	(22)	4 (n.a.)	(115)	
1972	(158)	(10)	(n.a.)	(169)	
Authorized Capital ($ million)					
1969	563.4 (580.0)	12.0 (12.0)	- (-)	40.8 (40.8)	616.2 (632.8)
1970	807.1 (827.4)	97.0 (100.0)	4.5 (4.5)	207.0 (207.0)	1,115.6 (1,138.9)
1971	(800.2)	(177.1)	(n.a.)	(148.2)	
1972	(567.2)	(61.9)	(n.a.)	(122.3)	
Called-up Capital ($ million)					
1969	218.7 (227.2)	6.3 (6.3)	- (-)	13.2 (13.2)	238.2 (246.7)
1970	307.7 (317.4)	52.9 (54.4)	1.7 (1.7)	80.1 (80.1)	442.4 (453.6)
1971	(301.6)	(109.0)	(n.a.)	(59.0)	(563.4)
1972	(246.0)	(39.1)	(n.a.)	(58.0)	
Potential Employment					
1969	21,143 (22,614)	537 (735)	- (-)	1,634 (1,634)	23,314 (24,983)
1970	34,167 (34,992)	4,033 (4,071)	343 (343)	8,826 (8,826)	47,369 (48,232)
1971	(29,678)	(9,197)	(n.a.)	(7,182)	
1972	(40,755)	(2,647)	(n.a.)	(10,089)	

Sources: 1. Federal Industrial Development Authority, *1970 Annual Report.*
2. Federal Industrial Development Authority, *Malaysia Industrial Digest,* Vol. 5. No. 1 (First Quarter, 1972)

Notes: (a) No approvals were granted for incentives other than pioneer status in 1968.
(b) Figures in brackets relate to whole of Malaysia.

Under the existing income tax legislation, an annual allowance of 2 per cent would be granted for expenditures on an industrial building; for plant expenditures, it would be at rates prescribed by the tax authorities.[50] The prescribed rates would vary for different types of machinery.[51] Analysing the latest list of prescribed rates drawn up in 1968, it can be seen that of a total of 186 items of industrial machinery, slightly over 80 per cent of the items were subject to three rates of annual allowance, namely, 5 per cent (applying to 18 per cent of the items), 7½ per cent (applying to 32 per cent of the items), and 10 per cent (applying to 31 per cent of the items). The highest rate of annual allowance for industrial machinery was 25 per cent and this applied to only one item; the next largest rate of annual allowance was 20 per cent and it applied to 14 per cent of the items.

Under the increased capital allowance provision introduced in 1971, the annual allowance for industrial buildings was raised to 3 per cent and that for plant was fixed at 40 per cent of the residual expenditure.[52] The latter in effect raised and standardized the annual allowances for plant expenditures to the same rate as that introduced for plant expenditures in export industries from 1968 under the Accelerated Depreciation Allowance (ADA).

The effects of this incentive cannot be assessed yet. It must be pointed out that increasing the capital allowance merely shortens the period when an enterprise can write off its plant and building expenditures. The experience of the ADA with respect to plant expenditure, as shown in Section 3.7 of this chapter, has been disappointing however.

3.3 *Fiscal Policy and Priority Products*

As pointed out earlier, the concept of defining priority products by the Government and providing inducements for their production was only a recent development of the Government's industrial strategy. The discussion on the meaning of pioneer industries showed that the Government's early concern very largely with the quantitative aspect of industrial investment caused it to opt for a wide definition of pioneer products. This ruled out the possibility of using the incentive for some form of product selection, except in a very broad sense.

Under the Investment Incentives Act, 1968, tax incentives for priority products were available in two forms. If a pioneer company were to produce marketable quantities of a priority product, it would become eligible for an additional year of tax relief.[53] For a company enjoying the ITC incentive and also producing marketable quantities of a priority product, it would be eligible to

[50] See *Income Tax Ordinance, 1947,* Section 16(2)(a) and Section 19(2) and *Income Tax Act, 1967,* Section 42 and Schedule 3, para. 12 and Schedule 3, para. 15.

[51] For a full list of the prescribed rates of annual allowances, see *Income Tax (Qualifying Plant Annual Allowance) Rules, 1968.*

[52] *Investment Incentives (Amendment) Act, 1971,* Section 5(a) and Part IIIB of First Schedule.

[53] *Investment Incentives Act, 1968,* Section 14(2) (b).

receive an additional tax credit of 5 per cent of its approved capital expenditure.[54]

The first full list of priority products for purposes of the Act was officially gazetted only in July 1970, almost 2½ years after the Act was passed by Parliament.[55] Table 9.13 presents this list after regrouping and classifying the items as consumer goods, intermediate goods and, investment and related goods. It must be pointed out that the classification had to be arbitrary for some items for lack of finer breakdowns.[56] With this qualification in mind, some interesting comments may be made on the list of priority products. Firstly, the declared priority products could be found in all the three categories of goods – consumer goods, intermediate goods and, investment and related goods. The number of items was about the same for the consumer goods category and the investment and related goods category, although the number in the intermediate goods category was markedly smaller than for these two groups. Secondly, some clear bias towards two industries could be seen, these being the motor vehicle industry and the electronics industry. On the former, it reflected the Government's intention to encourage the local manufacture of various parts and fittings of motor vehicles, now that a number of motor vehicle assembly plants have been established. The emphasis on the latter arose from the Government's policy of promoting labour-intensive industries; the electronics industry was considered one of the major industries in this category. Thirdly, the composition of the list suggested that *essentiality* was *not* an important or common criterion for a product to be declared a priority product. Neither did the list show that it represented the products of *key* industries that would facilitate or accelerate industrial or agricultural development through their high backward and/or forward linkages. Fourthly, except for two relatively unimportant items,[57] the priority products were also products which had been granted pioneer status, particularly in 1970.[58]

Such absence of a more purposeful selection of products as priority products obviously reduced the usefulness of the incentive measure. It must also be pointed out that the condition for the award of the fiscal incentive which specified that the priority product must be produced 'in marketable quantities', although simple in concept, has little economic significance when viewed in the

[54] *Ibid.*, Section 26(2) (b).

[55] *Investment Incentives (Priority Industry and Priority Manufactured Product) Order, 1970,* made on 22 July 1970. However, the same list was released to the press on 6 July 1969, see *The Sunday Times*, 6 July 1969.

[56] For example, the various component parts of the motor vehicle industry were arbitrarily placed under consumer goods but obviously these included parts for goods carrying vehicles and buses which should rightly be in the investment goods category. The other cases were relatively less serious.

[57] These are toys of textiles and manufactures of padi husks.

[58] The 1970 list of approved pioneer products can be found in Federal Industrial Development Authority, *1970 Annual Report*, Appendix 25.

Table 9.13

Malaysia – Priority Products Declared for Tax Incentives by Major Categories in 1970.

Priority Products Declared for Tax Incentives, 1970		
Consumer Goods	Intermediate Goods	Investment and Related Goods
1. Fruit canning excluding pineapple canning	1. Fibre board	1. Conveyor belts, transmission belts and V-type belts of rubber
2. Vegetable canning	2. Chipboard	2. Rubber insulated and braided cables
3. Meat canning excluding chicken and mutton curries	3. Soft board	3. Axes, pliers, screw drivers, spanners, riveting tools, hammers, pincers
4. Pineapple waste and bran for feedstuffs	4. Hard board	4. Machine tools
5. Toys of rubber, metal, plastic, wood and textile	5. Titanium dioxide	5. Industrial machinery – all types
6. Manufactures of padi husks and straws	6. Ball bearings	6. Outboard motors
7. Rubberised fabrics		7. Components, accessories, spare parts, supplies and fittings for tractors and other earth-moving plants
8. Pleasure craft		8. Printed circuit boards
9. Bus and car seat frames		9. Electron tubes
10. Motor vehicles – parts, fittings for engines		10. Transistors and radios (semi-conductors)
11. Motor vehicles – parts, fittings for transmission system		11. Fixed and variable resistors – all types
12. Motor vehicles – parts, fittings for suspension system		12. Fixed and variable capacitors – all types
13. Motor vehicles – parts, fittings for steering system		13. Connectors
14. Motor vehicles – parts, fittings for braking system		14. Relays
15. Motor vehicles – parts, fittings for exhaust system		15. Switches
16. Motor vehicles – parts, fittings for cooling and wind screens		16. Ferrite cores and rods
17. Motor vehicles – parts, fittings for windows and body		17. Electronic computer components
18. Motor vehicles – parts, fittings for chassis and body		18. Electronic calculating machines
19. Motor vehicles – rubber parts		19. Electronic components
20. Motor vehicles – accessories, all types		20. Telephone switching equipment
21. Loud speakers		21. Tubular heating elements
22. Radios – all types		22. High rupturing fuses/cartridges, electric motor starters/contractors, battery separators
23. Amplifiers		
24. Tape recorders		
25. Electric hot plates		
26. Ventilating fans, food mixers, caps for incandescent and flourescent lamp		

Sources: *Investment Incentives (Priority Industry and Priority Manufactured Product) Order, 1970.*

context of the need for greater inter-industry relationships. Moreover, the omission of any reference to the cost of production among the conditions for award of the incentive further reduced the significance of the measure. In short, the concept of the priority product as pursued even up to late 1972 was deficient in purpose and could only have rather diffused effects on the pattern and direction of industrial growth.

In late 1972, the Government produced another list of priority products covering 156 items. These have been categorized as consumer goods, intermediate goods and, investment and related goods in Table 9.14. The emphasis of this list was on investment and related goods, of which there were 84 items. The number of priority products in the consumer goods category was slightly more than that in the intermediate goods category. There was now a more serious attempt to include products which have strong forward linkages. In particular, equipment and other goods for mineral exploration and exploitation featured prominently in the investment and related goods category as also, agricultural machinery. However, the list also included a number of other goods the production of which could not be justified on grounds of essentiality or notable linkage effects. Some examples of these were glassware products of various kinds and, cassettes and tapes. There was thus still considerable room for a more purposeful selection of the priority products, although there had been some improvements. Furthermore, for some of the products in the list, the possible contribution from domestic producers would at best be very limited in terms of value added. This would be especially true of the more sophisticated mining equipment. It would thus be useful to consider another criterion for determining a priority product namely, that the manufacture of the product should result in a reasonably large value added for the firm concerned.

3.4 *Fiscal Policy and Labour Utilization*

In the Malaysian situation, unskilled labour is a factor of production in plentiful supply. Indeed, industrialization was encouraged, among other things, to create employment opportunities to help absorb the growing labour supply in the market. However, the industrial policy of the Government to about the mid-1960's was mainly concerned with job creation through increased industrial investment. There was no attempt to influence the direction of industrial development in order to encourage the labour-intensive industries. On the other hand, some of the policies pursued could even be considered to have disincentive effects on the greater utilization of labour. The bias towards capital intensity for industries encouraged by the pioneer incentive has been noted earlier and this was likely to continue so long as the pioneer incentive remained in its present form. Aiding this was the introduction in the 1965 Budget of a payroll tax of 2 per cent on the payroll of enterprises, the levy being made on the employers.[59] The justification for the tax was the growing expenditures in education and

[59] See speech of Minister of Finance introducing the *Supply (1965) Bill* in Parliament on 25 November 1964.

Table 9.14

Malaysia – Priority Products Declared for Tax Incentives by Major Categories in 1972

Consumer Goods	Intermediate Goods
1. Pre-packaged frozen & chilled chicken	1. Oil granule
2. Wooden handle	2. Dolmix granule
3. Wooden table lamps	3. BHC 7.5% W.P.
4. Wooden stand lamps	4. Satorex 50%
5. Wooden hat & coat stands	5. DDT 25% E.C.
6. Bicycle frames	6. DDVP 50% E.C.
7. Badminton rackets	7. Acothion 50% E.C.
8. Shuttle cocks	8. Malathion 80% E.C.
9. Brake cables	9. Hsan 50% E.C.
10. Clutch cables	10. Ambithion 50% E.C.
11. Speedometer cables	11. Weather proofing, water proofing & protecting of concrete, masonry metal on insulation surface
12. Throttles cables	12. Internal lining of steel latex drums
13. Advertising film	13. Underbody coating & seam seating of motor vehicle
14. Pistons	14. Sticking wall & floor coverings and insulants
15. Piston pins	15. Cast aluminium
16. Piston rings	16. Cast iron
17. Cylinders liner	17. Cast brass
18. Polypropylene woven cloth bags	18. Heat insulating materials
19. Plastic cassettes & cartridge case & spare parts	19. Powder
20. Cassettes and cartridge blank tapes	20. Polypropylene film
21. Stereo cassettes and cartridge pre-recorder tape	21. Heavy polyethylene
22. Ordinary glass bottles	22. General purpose polyethylene
23. Fancy glass bottles	23. Bensoic acid
24. Glass containers	24. Sodium bensoate
25. Glassware of various colours	25. Antimony metal)
26. Decorative glassware of various colours	26. Antimony ore) milling, smelting,
27. Drinking glasses	27. Antimony oxide) refining
28. Glass ampoules	28. Arsenic trioxide)
29. Pulicat sarong	29. Urea formaldehyde adhesive
30. Handkerchief	30. Hardener for urea formaldehyde adhesive
31. Palm kernel	31. Phenol formaldehyde
32. Palm kernel oil	32. Fuller for phenol formaldehyde adhesive
33. Soya bean oil and cakes	33. Formaldehyde
34. Sunflower seed oil and cakes	
35. Palm kernel cakes	
36. Rape seed oil and cakes	
37. Room air conditioners	
38. Compressors and parts and components of air conditioners, 90% of which for export	
39. Paper-based linokam	

(Continued next page).

Table 9.14 *(continued).*

Investment and Related Goods		
1. Refractories	49. Working barges and cargo barges	
2. Castables refractory motors	50. Work launches and pilot boats	
3. Welded pipes 6", 8", 10", 12" & 14" diameter	51. Process and recovering plant for alluvial minerals	
4. P.V.C. coated galvanized iron ore	52. Mechanical handling, screening and conveying equipment	
5. Conduit pipes	53. Structural steelwork for general engineering purposes	
6. Earth pipes	54. Spare-parts of dredges and mining plant	
7. Fence poles	55. High efficiency pumps for handlings solids, gravel, slurries, etc.	
8. Boiler	56. Special type of ferries	
9. Water softner	57. Small special ships for containers roll on/roll off operation	
10. High carbon steel perforated liner plates	58. Fixed platforms)	
11. High carbon steel bottom and bind plates	59. Self-elevating platforms)	
12. High carbon steel perforated screen plates	60. Drilling barges)	For off-shore
13. High carbon steel screen blind liner plates	61. Supply vessels)	oil industry
14. Electrical capacitors	62. Storage and distribution vessels)	
15. Scientific and laboratory instruments	63. Floating derricks and cranes)	
16. King pins	64. Off-shore mineral dredges)	
17. Spring pins	65. Onshore mineral dredges)	For onshore/
18. Shuckles pins	66. Overburden stripping dredges)	off-shore
19. Metal bushes	67. Supply vessels)	mining
20. Bucket bushes)	68. Mineral jigs)	industry
21. Crawler shoes)	69. Bucket dredges)	
22. Wearing slabs or plates)	70. Cutter suction dredges)	For civil
23. Bucket trays)	71. Crab hopper dredges)	dredging industry
24. Screen plates)	72. Self-dumping barges)	
25. Bucket pins) of iron foundries	73. Self-tipping barges)	
26. Scusher jaws)	74. Assembly-cum-manufacture of agriculture machinery including power tiller and attachments	
27. Digger teeth)	75. Rice thresher	
28. Track shoes)	76. Rice dryer	
29. Buckets)	77. Automatic sprayer	
30. Crushing media)	78. Peanut shelter	
31. Inland alluvial mining dredges	79. Stainless steel (ingots only)	
32. Offshore alluvial mining dredges	80. Nodular iron castings	
33. Stationary suction dredges	81. Manganese steel and castings (locomotives and automobile, mining machines and parts)	
34. Cutter suction dredges	82. Spring steel and casting	
35. Jet lift suction dredges	83. Die (ingots)	
36. Trailing suction upper dredges	84. Tool steel	
37. Bucket dredges—stationary		
38. Bucket dredges – self-propelling		
39. Dipper dredges		
40. Grab dredges		
41. Rock-breaking equipment		
42. Off-shore oil drilling rigs		
43. Oil-well working and extraction platforms		
44. Pipeline laying barges		
45. Oil rig supply & service vessels		
46. Hopper barges for dredging spoil		
47. Tugs of all sizes		
48. Floating cranes		

Source: Federal Industrial Development Authority, *Annual Report 1972.*

health.[60] However, for purposes of computing profits, payment of the tax was allowed for deduction as in the case with wages and other costs incurred in producing the output of the enterprise concerned and this had the effect of reducing the rate of the tax to 1.2 per cent. The Government thus argued that the tax should not affect labour utilization. While this tax rate appeared small, its influence should not be viewed in terms of this rate alone. An important consideration for investors was that the Government could possibly use the tax to raise more revenue at some future time, now that there had been established a machinery to collect the tax. Furthermore, the absence of any government assurance to the contrary had not helped matters. Eventually, the Government was convinced of the desirability of abolishing the tax in order to remove all doubts. This it did with effect from 1 January 1971.[61] In doing so, the Minister of Finance admitted for the first time that the tax was "at variance, at least in principle, with the present emphasis on development of labour-intensive industries".[62]

The result of these past policies may be seen in the trend in factor intensities in the manufacturing sector. The method developed by Lary to estimate factor intensities may be extended in its application to inter-temporal comparisons. For this purpose, the value added per employee, broken down into its wage and non-wage components, were computed for each industry group. The selected years were 1959 and 1968, these being years in which the results of two manufacturing censuses were available and also being very appropriate initial and terminal years to mark the period before concrete measures for labour-intensive industries were formulated and implemented. The data were presented in Table 9.15. It must be borne in mind that inter-temporal comparisons of wage value added per employee and non-wage value added per employee introduce new problems such as changes in wages and prices over time which are not taken note of in the measure used. On this account, therefore, the comparison would have to show substantial changes between the two years compared before any conclusions should be drawn.

For 1959, separate data were available for 13 industry groups.[63] These were compared with their corresponding groups for 1968. The group 'All Other Manufactures' was excluded because it could not be meaningfully compared. Between 1959 and 1968, the non-wage value added per employee had increased for 12 out of the 13 industry groups. For seven out of these 12 groups, the increases had been very marked, which strongly suggested that whatever price increases might have occurred, these alone could not fully have accounted for these changes. Since the non-wage value added per employee is a good proxy for

[60] *Ibid.*

[61] The *1971 Budget Address* of the Minister of Finance on 22 December 1970.

[62] *Ibid.*

[63] Another group, 'Products of Petroleum and Coal', has no comparable data in 1959 as there were no producers then.

Table 9.15

West Malaysia – Wage and Non-wage Value Added per Employee in the Manufacturing Sector, 1959 and 1968
($'000)

Industry Group	Total Value Added per Employee		Wage Value Added per Employee		Non-Wage Value Added per Employee	
	1959	1968	1959	1968	1959	1968
1. Processing of Agricultural Products in Factories off-Estates	10.33	7.24	1.75	1.86	8.57	5.37
2. Food Manufacturing	4.99	7.39	1.38	1.96	3.62	5.43
3. Beverage Manufacturing[a]	5.32	9.27	1.79	0.97	3.53	8.29
4. Tobacco Products	3.54	14.08	1.15	2.47	2.39	11.60
5. Textile Manufacturing	*	3.84	*	1.27	*	2.57
6. Footwear and Other Wearing Apparel and Made-up Textile Goods	*	2.21	*	0.96	*	1.24
7. Wood and Cork Products	3.85	4.83	1.58	2.11	2.27	2.72
8. Furniture and Fixtures	2.94	3.71	1.27	1.54	1.67	2.16
9. Paper and Paper Products	*	4.34	*	1.33	*	3.00
10. Printing, Publishing and Allied Industries	3.96	5.52	1.71	2.43	2.25	3.09
11. Leather and Leather Products	*	2.87	*	1.28	*	1.58
12. Rubber Products	2.68	6.04	1.22	2.12	1.47	3.91
13. Chemicals and Chemical Products	7.10	13.83	1.84	3.15	5.26	10.67
14. Products of Petroleum and Coal	–[b]	102.71	–[b]	11.36	–[b]	91.35
15. Non-metallic Mineral Products	4.83	8.56	1.49	2.43	3.34	6.12
16. Basic Metal Industries[c]	*	6.92	*	2.58	*	4.33
17. Metal Products	3.70	4.85	1.45	2.06	2.25	2.79
18. Machinery excluding Electrical Machinery[d]	2.92	4.18	1.53	2.03	1.38	2.15
19. Electrical Machinery and Appliances[d]	*	9.69	*	2.37	*	7.32
20. Transport Equipment[e]	3.01	5.17	1.53	2.01	1.48	3.16
21. All Other Manufactures[f]	2.99	4.93	1.36	1.56	1.63	3.37

Sources: Compiled from:

1. Department of Statistics, *Census of Manufacturing Industries in the Federation of Malaya, 1959.*
2. Department of Statistics, *Census of Manufacturing Industries, West Malaysia, 1968.*

*Included under 'All Other Manufactures'.

[a]Excluded breweries.

[b]Industry not yet established.

[c]Census excluded tin smelting.

[d]Included repair activities.

[e]Repair activities included other than on motor vehicles and bicycles.

[f]Census excluded goldsmith, silversmith and abbatoirs.

health.[60] However, for purposes of computing profits, payment of the tax was allowed for deduction as in the case with wages and other costs incurred in producing the output of the enterprise concerned and this had the effect of reducing the rate of the tax to 1.2 per cent. The Government thus argued that the tax should not affect labour utilization. While this tax rate appeared small, its influence should not be viewed in terms of this rate alone. An important consideration for investors was that the Government could possibly use the tax to raise more revenue at some future time, now that there had been established a machinery to collect the tax. Furthermore, the absence of any government assurance to the contrary had not helped matters. Eventually, the Government was convinced of the desirability of abolishing the tax in order to remove all doubts. This it did with effect from 1 January 1971.[61] In doing so, the Minister of Finance admitted for the first time that the tax was "at variance, at least in principle, with the present emphasis on development of labour-intensive industries".[62]

The result of these past policies may be seen in the trend in factor intensities in the manufacturing sector. The method developed by Lary to estimate factor intensities may be extended in its application to inter-temporal comparisons. For this purpose, the value added per employee, broken down into its wage and non-wage components, were computed for each industry group. The selected years were 1959 and 1968, these being years in which the results of two manufacturing censuses were available and also being very appropriate initial and terminal years to mark the period before concrete measures for labour-intensive industries were formulated and implemented. The data were presented in Table 9.15. It must be borne in mind that inter-temporal comparisons of wage value added per employee and non-wage value added per employee introduce new problems such as changes in wages and prices over time which are not taken note of in the measure used. On this account, therefore, the comparison would have to show substantial changes between the two years compared before any conclusions should be drawn.

For 1959, separate data were available for 13 industry groups.[63] These were compared with their corresponding groups for 1968. The group 'All Other Manufactures' was excluded because it could not be meaningfully compared. Between 1959 and 1968, the non-wage value added per employee had increased for 12 out of the 13 industry groups. For seven out of these 12 groups, the increases had been very marked, which strongly suggested that whatever price increases might have occurred, these alone could not fully have accounted for these changes. Since the non-wage value added per employee is a good proxy for

[60] *Ibid.*

[61] The *1971 Budget Address* of the Minister of Finance on 22 December 1970.

[62] *Ibid.*

[63] Another group, 'Products of Petroleum and Coal', has no comparable data in 1959 as there were no producers then.

Table 9.15

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2.	Food Manufacturing	4.99	7.39	1.38	1.96	3.62	5.43
3.	Beverage Manufacturing[a]	5.32	9.27	1.79	0.97	3.53	8.29
4.	Tobacco Products	3.54	14.08	1.15	2.47	2.39	11.60
5.	Textile Manufacturing	•	3.84	•	1.27	•	2.57
6.	Footwear and Other Wearing Apparel and Made-up Textile Goods	•	2.21	•	0.96	•	1.24
7.	Wood and Cork Products	3.85	4.83	1.58	2.11	2.27	2.72
8.	Furniture and Fixtures	2.94	3.71	1.27	1.54	1.67	2.16
9.	Paper and Paper Products	•	4.34	•	1.33	•	3.00
10.	Printing, Publishing and Allied Industries	3.96	5.52	1.71	2.43	2.25	3.09
11.	Leather and Leather Products	•	2.87	•	1.28	•	1.58
12.	Rubber Products	2.68	6.04	1.22	2.12	1.47	3.91
13.	Chemicals and Chemical Products	7.10	13.83	1.84	3.15	5.26	10.67
14.	Products of Petroleum and Coal	–[b]	102.71	–[b]	11.36	–[b]	91.35
15.	Non-metallic Mineral Products	4.83	8.56	1.49	2.43	3.34	6.12
16.	Basic Metal Industries[c]	•	6.92	•	2.58	•	4.33
17.	Metal Products	3.70	4.85	1.45	2.06	2.25	2.79
18.	Machinery excluding Electrical Machinery[d]	2.92	4.18	1.53	2.03	1.38	2.15
19.	Electrical Machinery and Appliances[d]	•	9.69	•	2.37	•	7.32
20.	Transport Equipment[e]	3.01	5.17	1.53	2.01	1.48	3.16
21.	All Other Manufactures[f]	2.99	4.93	1.36	1.56	1.63	3.37

Sources: Compiled from:

1. Department of Statistics, *Census of Manufacturing Industries in the Federation of Malaya, 1959.*
2. Department of Statistics, *Census of Manufacturing Industries, West Malaysia, 1968.*

•Included under 'All Other Manufactures'.

[a]Excluded breweries.

[b]Industry not yet established.

[c]Census excluded tin smelting.

[d]Included repair activities.

[e]Repair activities included other than on motor vehicles and bicycles.

[f]Census excluded goldsmith, silversmith and abbatoirs.

the services that may be ascribed to physical capital, the marked increase in this for the seven industry groups suggested that in the production process, the quantity of physical capital utilized per employee had increased during the decade, that is to say, there had been an increase in physical capital intensity in these seven groups. These seven industry groups were food manufacturing, beverage manufacturing, tobacco products, rubber products, chemicals and chemical products, non-metallic mineral products and, transport equipment. The five industry groups for which an increase in physical capital intensity was also likely though the evidence was less strong were wood and cork products, furniture and fixtures, printing, publishing and allied industries, metal products and, machinery (excluding electrical machinery). It can, therefore, be said that for a large part of the manufacturing sector, there had been a rise in intensity in the use of physical capital.

With the increasing difficulties experienced by the rubber industry, the Government became more conscious of the need to promote labour-intensive industries. In the First Malaysia Plan, therefore, the Government declared that it would "encourage the use of labour-intensive methods of production wherever these are technically possible and economically justified".[64] No concrete measures, however, found their way into the enlarged body of incentives presented under the Investment Incentives Act, 1968, except for some reference to the wage bill in the formula for computing export allowances. In the first articulation of the New Economic Policy formulated after the racial disturbances of May 1969, the problem of unemployment was singled out by the Deputy Prime Minister as one "which we have not successfully resolved" and in order to deal with it, "we must now give priority to economic projects which can generate employment opportunities".[65] It was this policy statement which laid the foundation for the measures to encourage labour-intensive industries.

Besides the abolition of the payroll tax, two important incentives were introduced in 1971 to encourage labour-intensive industries. These were the labour utilization relief and the special incentive for the electronics industry. Both these measures are discussed in this study because they represented the outcome of decision and efforts made particularly from the latter part of 1969.

The labour utilization relief (LUR) was incorporated into the system of incentives by the Investment Incentives (Amendment) Act, 1971.[66] The incentive provided for relief from income tax for specified periods, on the basis of the number of full-time paid employees in the manufacturing enterprise. The periods of tax exemption and the qualifying employment are as follows:

[64] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 131.

[65] Statement of Tun Abdul Razak, Deputy Prime Minister and Director of the National Operations Council, "New Economic Development Policy" in *A New Industrial Development Strategy, op. cit.*, p. 2.

[66] *Investment Incentives (Amendment) Act, 1971*, Section 4.

Period of Tax Relief (years)	*Number of Full-time Paid Employees Required to be Employed*
2	51 – 100
3	101 – 200
4	201 – 350
5	351 and above

Before the award of the tax relief, the Minister of Trade and Industry would have to be satisfied that the establishment of the company applying for the incentive would be "in the interest of the industrial development of Malaysia".[67] Some form of product selection appeared to have been intended by this condition but it was obviously too vague to be of much value.

The qualifying employment for the incentive had been set at quite a high level compared to the size of the labour force in a majority of manufacturing enterprises in the country. For example, in 1968, firms with a labour force of 50 and more employees made up only 5.7 per cent of the total number of establishments (Table 9.16). With the LUR, this proportion should increase. At the same time, the LUR, as formulated, would most likely encourage only the larger firms. Table 9.16 indicates that on the basis of past experience, the firms employing a large labour force were also those that were large in size (as measured by the value added per establishment). This was especially pronounced for those firms having a full-time labour force of more than 50 persons per establishment.

In 1972, the Government approved the grant of the LUR incentive to nine firms having a called-up capital of $9.3 million and potential employment for 2,303 persons.

The other incentive to encourage labour-intensive industries involved the grant of special benefits for the electronics industry. For purposes of this incentive, 61 items were listed as eligible products, these ranging from consumer goods such as radios, television sets, tape recorders to electronic calculators and computers.[68] These had already been declared pioneer products and firms producing them would therefore, be eligible to enjoy the tax relief under the pioneer incentive. But it was felt that special recognition should be accorded to the labour-intensive character of the firms producing these products. An additional two years of tax relief were thus added to the period already allowed under the pioneer incentive at each level of the qualifying investment as shown below.[69]

[67] *Ibid.*, Section 2.

[68] See Section 5 (b) and the Second Schedule to the *Investment Incentives (Amendment) Act, 1971.*

[69] *Ibid.*, Section 3(c).

Table 9.16

West Malaysia – Distribution of Manufacturing Establishments and Value Added per Establishment by Size of Labour Force, 1968

Size of Labour Force (Number of Full-time Paid Employees)	Establishments, 1968		Value Added, 1968		
	Number	As Per Cent of Total	Amount ($'000)	As % of Total	Per Establishment ($'000)
0	3,347	37.1	12,253	1.4	3.7
1 – 4	2,738	30.4	29,090	3.3	10.6
5 – 9	957	10.6	27,330	3.1	28.6
10 – 19	738	8.2	44,355	5.1	60.1
20 – 29	394	4.4	41,047	4.7	104.2
30 – 49	334	3.7	69,589	8.0	208.4
50 – 99	275	3.1	118,993	13.6	432.7
100 – 199	133	1.5	189,147	21.7	1,422.2
200 – 499	77	0.9	187,495	21.5	2,435.0
500 and above	20	0.2	154,553	17.7	7,727.7
Total	9,013	100.0	873,851	100.0	

Source: Compiled from Department of Statistics, *Census of Manufacturing Industries, West Malaysia, 1968.*

Size of Qualifying Fixed Capital Investment	*Period of Tax Relief (Number of Years)*	
	Under Pioneer Incentive	*Under Special Incentive for Electronics Industry*
Under $250,000	2	4
$250,000 and above	3	5
$500,000 and above	4	6
$1,000,000 and above	5	7

The special incentive was subject to two other important conditions:[70]

i) that the enterprises producing the listed products should be export-oriented;

ii) that the investment plans of the enterprises should have been approved before the end of January 1973.

The list of products eligible for this special incentive also included a number of the priority products discussed earlier. Enterprises producing these priority products would be eligible for an additional year of tax relief.

One feature of the electronics industry in Malaysia was its very large dependence on imported component parts and important sections of the industry were merely concerned with the assembly of these components into products for subsequent export. To facilitate the operation of this industry, the Government established free trade zones[71] into which the imported components could be brought for processing, assembly and subsequent export, without having to pay customs duty. Locally-manufactured components could also enter the zones free of excise duty. By 1972, two areas had been declared as free trade zones for the electronics industry, these being Bayan Lepas (on Penang Island) and Sungei Way in Selangor.[72]

All these were major measures to intensify the use of labour by the manufacturing sector. However, any large swing towards the adoption of highly labour-intensive techniques for the manufacturing sector as a whole appeared unlikely for two reasons. Firstly, the pioneer incentive which had encouraged capital intensity, as seen earlier, should provide some offsetting effect to the LUR since the same tax relief periods were also available under it. The opportunities it presented should ensure some measure of rational choice of techniques. Secondly, the special incentive for the electronics industry was intended specifically for this industry only.

One criticism that may be levelled at the special incentive for the electronics industry is that it did not discriminate between enterprises that merely

[70] Federal Industrial Development Authority, "The Electronic Components Industry in Malaysia – Present Position and Future Prospects", Kuala Lumpur, 1972, p. 14.

[71] See *Free Trade Zones Act, 1971.*

[72] Federal Industrial Development Authority, "The Electronic Components Industry in Malaysia – Present Position and Future Prospects", *op. cit.*, p. 12.

assembled the imported components and those that could make a larger contribution in terms of value added. A more favourable treatment of the latter category would be beneficial both to the pace and direction of industrial growth.

3.5 *Fiscal Policy and Industrial Dispersion*

One of the areas of concern of the Government was the unequal distribution of industries among the various states. An analysis of the distribution of industrial enterprises, their value added and their paid full-time employment, by states, will reveal this. Table 9.17 provides this analysis using data from the 1968 Census of Manufacturing. Four states, Selangor, Perak, Penang and Johore, accounted for nearly 70 per cent of the total number of manufacturing establishments, 84 per cent of the total value added and 83 per cent of the total industrial employment. Except for Selangor, the other three states had similar shares in these. The remaining seven states of West Malaysia shared among themselves 30 per cent of the total number of establishments, 16 per cent of the total value added and 17 per cent of the total industrial employment.

In view of this glaring disparity, the Government introduced the concept of a 'development area' in the Investment Incentives Act, 1968. Under the Act, the Minister of Trade and Industry, with the concurrence of the Minister of Finance, could declare any area in Malaysia to be a development area for purposes of granting additional incentives to industries that would locate in these areas.[73] In 1969, the following were declared development areas in West Malaysia:[74]

i) the states of Kedah, Perlis, Pahang, Kelantan, Trengganu and Malacca;
ii) the industrial estates of Senawang (Negri Sembilan) and Kamunting (Perak).

It is clear from this list that six of the seven states that had little industrial activities have been accorded the status of a development area. Although the seventh, Negri Sembilan, was not in the list, its industrial estate had been made a development area and for all practical purposes the state could be regarded as such since the industrial estate was to be its focal area for industries. On the other hand, in this first list, only one area (Kamunting) in one of the four industrially-advanced states, Perak, was designated a development area. Since then, two other areas in the industrially-developed states had been declared development areas, these being the Bayan Lepas Free Trade Zone in Penang (1971)[75] and the Sungei Way Free Trade Zone in Selangor (1972).[76] It was hoped that with the additional incentive provided for location in the development areas, industries would tend to concentrate less in the four industrially-developed states. Under the New Economic Policy introduced in 1969, the need

[73] *Investment Incentives Act, 1968*, Section 14(1) (a).

[74] This was confirmed in 1970 by the *Investment Incentives (Development Area) Order, 1970.*

[75] *Investment Incentives (Development Area) Order, 1971.*

[76] *Investment Incentives (Development Area) Order, 1972.*

Table 9.17

West Malaysia – Number of Manufacturing Establishments, Value Added and Employment by States, 1968.

State	Number of Establishments, 1968	Value Added 1968	Number of Full-time* Employees, 1968
	(As Per Cent of Total)		
Industrially Developed States			
Selangor	23.5	51.1	38.5
Perak	18.8	10.9	14.6
Penang	15.0	9.2	12.0
Johore	12.5	12.4	17.4
	69.8	83.6	82.5
Industrially Less Developed States			
Kedah	8.6	2.2	4.0
Kelantan	4.0	1.5	2.7
Malacca	4.6	2.0	2.6
Negri Sembilan	4.5	7.7	3.9
Pahang	4.5	2.4	2.9
Perlis	0.9	0.1	0.2
Trengganu	3.2	0.5	1.1
	30.3	16.4	17.4
All States	9,013	$873,851,000	125,535

Source: Compiled from Department of Statistics, *Census of Manufacturing Industries, West Malaysia, 1968.*

*In equivalent of full-time paid employees.

for a better dispersal of industries was again stressed and the underlying thought behind this emphasis was the desirability to spread employment opportunities to the smaller towns and the rural areas.[77]

The incentive provided for industries to locate in a development area was linked to some of the incentives provided under the Investment Incentives Act, 1968. For pioneer industries locating in a development area, an additional year of tax relief was granted irrespective of the size of the capital investment.[78] Also, should an electronics firm which enjoyed the special incentive for the electronics industry be located in a development area, it became eligible for an additional year of tax relief. For a company that had been granted the investment tax credit (ITC), an additional credit of 5 per cent of the approved capital expenditure would be granted if the company were to be located in a development area.

The effectiveness of this incentive may be seen in the data on approvals of manufacturing enterprises. Table 9.18 shows the distribution of approvals given to enterprises under the various incentives as well as to those without incentives classified by industrial estates and states. The data commenced with 1970, the first full year of operation of the development area incentive. One indication of the response to the development area incentive could be seen from a comparison of the proposed location of enterprises granted incentives of one type or another under the Investment Incentives Act, 1968 and the proposed location of enterprises approved by the Government without incentives. For 1970 and 1971, the proportions of enterprises granted pioneer status that would be located in a development area were only 10 and 16 per cent respectively.[79] For those granted with ITC, the percentages were higher, being 21 and 15 per cent for 1970 and 1971 respectively. In contrast, for those manufacturing enterprises granted approval without incentives, the proportion that would be located in a development area was only 5—5½ per cent in 1970 and 1971. These figures suggest that the incentive for locating in a development area had some influence in assisting the dispersal of industry but it was by no means strong enough to be of much significance. Indeed, in 1970 and 1971, the percentages of enterprises that were eligible for this incentive, whether under pioneer status or ITC, were considerably lower than the proportion for all manufacturing establishments located in development areas in 1968 (Table 9.17). If the position for all manufacturing establishments approved in 1970 and 1971 were to be compared with the position in 1968, it can be seen that the incentive to induce locating in development areas had not even been able to ensure that the share of establish-

[77] See statement of Tun Abdul Razak, Deputy Prime Minister and Director of the National Operations Council, "New Economic Development Policy" in *A New Industrial Development Strategy, op. cit.*, p. 3.

[78] *Investment Incentives Act, 1968*, Section 14(2) (a).

[79] The picture for 1971 should not change significantly even after allowance was made for the fact that approvals for Bayan Lepas in Penang (declared a development area in 1971) could not be identified.

Table 9.18

West Malaysia – Distribution of Manufacturing Establishments Approved by Government in 1970 and 1971 by States and Areas

State/Area	Manufacturing Establishments Approved by the Government									
	With Pioneer Status		With Investment Tax Credit		With Accelerated Depreciation Allowance		Without Incentives		Total	
	1970	1971	1970	1971	1970	1971[a]	1970	1971	1970	1971
Industrially Developed States										
Selangor										
Kuala Lumpur	4	13	1	–	–	3	9	12	14	28
Petaling Jaya	16	8	2	1	1	–	18	15	37	24
Batu Tiga	21	23	3	3	–	1	12	9	36	36
Others	21	21	4	2	–	–	24	13	49	36
Total	62	65	10	6	1	4	63	49	136	124
Jobore										
Johore Bahru	12	9	1	4	–	–	12	15	25	28
Others	15	3	4	3	–	–	7	9	26	15
Total	27	12	5	7	–	–	19	24	51	43
Penang										
Prai	9	10	1	–	–	–	1	7	11	17
Mak Mandin	4	3	–	–	–	–	8	8	12	11
George Town	–	5	–	–	–	2	–	–	–	7
Others	8	6	2	–	–	–	10	11	20	17
Total	21	24	3	–	–	2	19	26	43	52
Perak										
Ipoh	10	7	2	1	1	1	6	3	19	12
Taiping	2	2	–	1	–	–	1	1	3	4
Others[b]	8	4	3	2	–	–	4	1	15	7
Total	20	13	5	4	1	1	11	5	37	23
Total for all 4 states	130	114	23	17	2	7	112	104	267	242
As Per Cent of Total for West Malaysia	89.7	84.4	79.3	85.0	66.7	53.8	94.9	94.5	90.5	87.1
Industrially Less Developed States										
Negri Sembilan[c]	4	8	1	–	1	2	2	5	8	15
Malacca[c]	1	6	–	1	–	1	2	–	3	8
Pahang[c]	4	1	2	–	–	3	–	1	6	5
Kedah[c]	4	3	2	–	–	–	–	–	6	3
Kelantan[c]	–	2	–	–	–	–	–	–	–	2
Trengganu[c]	2	1	1	–	–	–	1	–	4	1
Perlis[c]	–	–	–	2	–	–	1	–	1	2
Total for all 7 states	15	21	6	3	1	6	6	6	28	36
As Per Cent of Total for West Malaysia	10.3	15.6	20.7	15.0	33.3	46.2	5.1	5.5	9.5	12.9
Total for West Malaysia	145	135	29	20	3	13[d]	118	110	295	278
Undecided	20	6	1	1	–	–	9	4	30	11
East Malaysia	8	9	1	1	–	5	–	1	9	16
Total for Malaysia	173	150	31	22	3	18	127	115	334	305

Source: Federal Industrial Development Authority, *Malaysia Industrial Digest*, Vol. 5 No. 1, (First Quarter, 1972).

[a]The figures for 1971 include those for firms granted with other incentives not elsewhere specified.
[b]The industrial estate of Kamunting in Perak had been declared a "development area".
[c]Declared as a "development area".
[d]Only 4 of the 13 refer to approvals for Accelerated Depreciation Allowance.

ments that would be set up in development areas could match that for 1968 (when there was no such incentive).

This analysis of the poor performance of the incentive had to be based solely on the number of establishments. Since the main objective of the incentive was the achievement of a more equitable distribution of employment opportunities, reference to potential employment would have been more appropriate. But relevant data were not available. In any case, Table 9.17 indicates quite clearly that the number of establishments would provide a fairly good proxy for employment opportunities and value added. In the light of this, the above analysis based on the number of establishments should give a reasonably good indicator of the effects of the incentive on industrial dispersal.

One obvious factor underlying the limited attractiveness of development areas was the fewness of established industrial estates in these. Table 10.12 shows that up to 1970, there were only two industrial estates in the development areas: Kamunting in Perak and Senawang in Negri Sembilan. In 1971, the Bayan Lepas Free Trade Zone was established and declared a development area and in 1972, the Sungei Way Free Trade Zone. The availability of industrial estates with prepared industrial land, water, power, roads, communications and other ancillary facilities had been found to be of importance for the establishment and location of industries.[80] The establishment of more industrial estates in the development areas by the State Governments concerned should assist the incentive in a significant way.

Undoubtedly, it must be this very limited results of the development area incentive that prompted the Government to introduce a new incentive in 1973.[81] Under this incentive, tax relief periods of up to 10 years and varying with the types of industry would be granted to firms that would locate in areas designated as eligible for the incentive.[82] The designation of such areas would be guided by the objective of the New Economic Policy to encourage the dispersion of industries from urban locations.[83] Firms enjoying existing incentives under pioneer status, the labour utilization relief and the investment tax credit would have to surrender these privileges if they were to be considered for this locational incentive.[84] Obviously, this meant that more attractive tax relief periods or other benefits than those provided under the existing incentives would be available to investors in the designated areas. The real test of the facility, however, would be whether the incentive had been made attractive

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[80] The role of industrial estates will be discussed in Chapter X.

[81] See *Investment Incentives (Amendment) Act, 1973.*

[82] *Ibid.*, Section 2.

[83] See speech of Encik Musa Hitam, Deputy Minister of Trade and Industry on the Second and Third Reading of the *Investment Incentives (Amendment) Bill, 1973* in Parliament on 31 January 1973.

[84] *Investment Incentives (Amendment) Act, 1973*, Section 2.

enough to compensate for the many disadvantages of locating in a designated area. Only time and experience will tell, as for the earlier incentive.

3.6 *Fiscal Policy and Utilization of Inputs of Domestic Origin*

The earliest use of fiscal policy to encourage the utilization of products of domestic origin was the adoption of a policy by Government departments and statutory bodies to purchase locally-produced goods as far as possible. As a result of the recommendations of the Working Party on industrial development,[85] the Government in its interim statement of industrial policy made in 1957 indicated that it had in fact accepted this policy and that it would appoint a special technical committee "to advise on standards of locally-manufactured articles offered for sale to the Government".[86] With the implementation of this policy, locally-manufactured goods were required to be purchased by all ministries, Government departments and statutory bodies if the prices of these manufactures did not exceed the equivalent of 10 per cent of their import prices.[87] Thus, locally-manufactured goods of some standard have been able to find a ready and expanding market in the public sector. This 10 per cent price preference also provided a reasonable inducement to local manufacturers to strive for greater efficiency in production.

More generally, however, the major instrument to induce increasing consumption of domestic manufactures was the use of tariff policy, particularly from the latter part of the 1960's. This will be discussed in the next chapter.

In 1968, a measure was introduced under the Investment Incentives Act, 1968, to encourage greater interdependence among producing units within the manufacturing sector and also between the manufacturing sector and the agriculture and forestry sector. The measure provided additional incentive for two categories of investments, those investments accorded with pioneer status and those granted with the ITC. The condition to be satisfied for the receipt of the additional incentive in each case was that the enterprise concerned would have to use inputs of Malaysian origin to an extent specified.[88] This requirement had since then been specified as "at least 50 per cent by value of Malaysian raw materials and/or parts and components manufactured in Malaysia, excluding wages, salaries and other domestic inputs".[89] For enterprises enjoying the pioneer incentive that could satisfy this condition, a further year of tax relief

[85] Federation of Malaya, *Report of the Industrial Development Working Party*, *op. cit.*, p. 45.

[86] "Interim Statement of Industrial Development Policy", *op. cit.*

[87] Federal Industrial Development Authority, *Malaysia Industrial Digest*, Vol. 3 No. 1 (First Quarter, 1970).

[88] *Investment Incentives Act, 1968*, Section 14(1)(c) and Section 26(2)(c).

[89] Federal Industrial Development Authority, "All About Investment Incentives", a pamphlet published by the Authority in 1972.

was granted.[90] The electronics industry, while having a special incentive as discussed earlier, was also eligible for an additional year of tax relief subject to the fulfilment of the condition, since it had also been categorized as a pioneer industry. For enterprises granted with ITC that could meet this condition, the tax credit would be increased by an additional 5 per cent of the approved capital expenditure.[91] Unfortunately, no information could be obtained from the authorities concerned to enable an assessment of this incentive. However, from scattered information it would appear that approvals for this incentive had not been up to expectations. But no move appeared in sight to revise this incentive.

Another incentive to encourage greater use of domestic inputs was also introduced in 1968. This formed part of a formula for computing a new export incentive, the export allowance. Under this formula, the larger the use of local inputs, the larger would be the export allowance, other things being equal. A fuller discussion of this incentive appears in the next section. However, as will be seen, the export allowance remained very largely a paper incentive.

Another use of fiscal policy to promote greater absorption of local materials was in the timber industry.[92] This was the attempt to stop the flow of export of logs by the imposition of a 10 per cent duty in 1967, to encourage local processing. The failure of this measure and the subsequent action taken had been discussed in Chapter VII.

One area in the manufacturing sector in which the Government had expressed its intention to foster greater reliance on domestic inputs is the motor vehicles industry. In 1967 and 1968, there was a rapid expansion of motor vehicle assembly plants – six such plants were established which could assemble 90 different models of 37 makes of foreign cars. The stimuli given to the assembly plants were initially a 35 per cent import duty on cars (raised to 45 per cent by 1970) and a 20 per cent import duty on commercial vehicles (raised to 30 per cent by 1970) together with import licensing. In addition, one assembly plant had been established for motor scooters and two others for motor cycles. It was the Government's intention that the development of the assembly plants would eventually lead to the domestic manufacture of many of the component parts now imported. In 1969, the Federal Industrial Development Authority (FIDA), a statutory body set up in 1967 to promote industrial development,[93] identified a list of 66 component products that could be produced locally.[94] In order to

[90] *Investment Incentives Act, 1968,* Section 14(2) (c).

[91] *Ibid.*, Section 26(2) (c).

[92] While there was an attempt to encourage domestic processing of rubber by the intended imposition of a duty of 2 cents per lb. on all exports of loose rubber, this measure could not be implemented. See Chapter V.

[93] For a comprehensive account of the functions of FIDA see, Federal Industrial Development Authority, *1968 Annual Report*, p. 6.

[94] Federal Industrial Development Authority, *Malaysia Industrial Digest,* Vol. 2 No. 4 (Fourth Quarter, 1969).

speed up the manufacture of parts locally and to promote their use, the Government in fact made known its intention towards the end of 1969 to introduce an assembly tax legislation.[95] However, up to mid-1973 no concrete action had been taken, a major causal factor no doubt was the fragmentation of an already small market for component parts brought about by the liberal and rather short-sighted policy of permitting the establishment of plants geared to the assembly of so many models and makes of vehicles.

On the whole, it would appear that the attempts made to achieve greater inter-industry and inter-sectoral dependence, have not proved to be of much consequence. The efforts of the Government also seemed to show a lack of direction and strength of purpose. It must be emphasized that appropriate policies in this area would be crucial in order to produce the secondary stimulus to industrial expansion once the initial investments have been made.

3.7 *Fiscal Policy and Exports of Manufactures*

The discussions of Chapter IV have indicated that exports of manufactured goods have become an increasingly noticeable component of the export structure of West Malaysia. This section will attempt to appraise the role and contribution of fiscal policy in promoting the exports of manufactures.

One of the earliest concessions given to export enterprises was made under the Customs Ordinance, 1952. Under this Ordinance, a drawback was allowed on customs duty paid on imported goods which were subsequently re-exported "as part or ingredient of any goods manufactured in the Federation."[96] The drawback was to be *at rates prescribed* by the Comptroller- General of Customs and Excise. This facility had since remained unchanged and it was preserved when the Ordinance was replaced by the Customs Act, 1967.[97] Of course, the intention of this provision in the early years could be construed as mainly to assist entrepot trade rather than manufacturing activities of which there were not much to speak of. However, this provision was made an instrument of industrial policy in the 1960's. In presenting the 1966 Budget, the Minister of Finance announced that the Government had agreed in principle to a *100 per cent drawback* on duties insofar as they applied to imported raw materials used in manufactures that were exported, the objective being to encourage exports.[98]

Besides this provision, both the Customs legislations of 1952 and 1967 also empowered the Minister of Finance (the High Commissioner earlier) to exempt

[95] *Ibid.*

[96] *Customs Ordinance, 1952,* Section 95. The drawback was, of course, granted only if the applicant conformed to the conditions for control and supervision as prescribed by this section of the Ordinance.

[97] *Customs Act, 1967,* Section 99.

[98] See speech of Minister of Finance introducing the *Supply (1966) Bill* in Parliament on 17 November 1965.

any class of goods or persons wholly or partly from the payment of customs duties.[99] The policy, when applied to promote industrialization, was to allow duty exemption on imported plant and machinery required for the setting up of new enterprises but its application did not extend to imported spare parts or replacement of existing plant and machinery. This provision applied equally to import-substituting industries.

There was hardly any information on the extent to which duty drawback had been utilized. As for duty exemption, there were only two cases during the Colonial period[100] but in the 1960's there were indications of much more use of this provision. For example, the Tariff Advisory Board (set up by statute of 1963 mainly to recommend appropriate rates of protective duties to the Government) recommended, among other things, 23 items for duty exemption during the period 9 August 1965 to 31 December 1967.[101]

There were other privileges given to the export of manufactures. One such privilege provided for full drawback on excise duty that had been paid on goods utilized as part or ingredient for any product manufactured and then exported.[102] Secondly, the income tax legislation allowed deductions for expenditure on business visits, exhibitions and fairs. Thirdly, even the payroll tax system provided special treatment for export industries – the tax legislation allowed for a rebate on the tax at the rate based on the proportion of the value of exports to the annual production of the enterprise, provided that this proportion exceeded 20 per cent.[103]

While these have been helpful in some respects to the export sector, their collective impact was however not considered significant enough to induce a more export-oriented industrial development. The disadvantages of relying solely on a strategy of import substitution were realized and the attention of the Government was drawn to these in 1966 by a special committee of officials set up to examine investment incentives.[104] In doing so, the Committee recommended new incentives for promoting exports of manufactures.[105] The

[99] *Customs Ordinance, 1952*, Section 13(1) and *Customs Act, 1967*, Section 14(1).

[100] Federation of Malaya, *Report of the Industrial Development Working Party, op. cit.*, p. 14.

[101] See Tariff Advisory Board, Malaysia, *Report and Audited Statement of Accounts for the Year Ended 31st December 1967*, p. 5.

[102] *Excise Act, 1961*, Section 15A(1).

[103] This was later incorporated as Section 30 of the *Investment Incentives Act, 1968*.

[104] "The Committee recognized the need to encourage exports of manufactures not only to diversify the country's exports but also to enable manufacturers to increase their volume of production and attain fuller utilization of capacity, and thereby help reduce their unit cost of production." See *Report of the Committee on Invesment Incentives*, Kuala Lumpur, Ministry of Commerce and Industry, 1966 (mimeographed), p. 21.

[105] The major fiscal proposals of the Committee were i) a scheme of tax deduction for 5 years for new export industries; ii) a scheme of tax deduction for increased exports of existing export industries, *ibid.*, p. 26.

Government readily accepted in principle the need for new incentives to promote the export of manufactures but it differed from the Committee in terms of the character of these incentives. Thus in 1968, there was introduced under the Investment Incentives Act, a set of three incentives aimed at encouraging the export of manufactures.

The first of these was the accelerated depreciation allowance (ADA). It will be recalled that under the Income Tax Act, 1967, an initial allowance of 20 per cent would be allowed for capital expenditure on plant and machinery followed by an annual allowance to be prescribed.[106] At the usual rates allowed for industrial machinery and equipment, such expenditures would require about 20 years to write off. Under the ADA, the initial allowance remained unchanged but the annual allowance was granted at 40 per cent of the residual capital expenditure.[107] This would thus have the effect of enabling more than 90 per cent of the capital expenditure to be written off in only five years. The rationale for the ADA was that effective competition in the export market would require new and appropriate plant and machinery. The ADA was applicable to such expenditures whether undertaken by new or existing enterprises.

The ADA was, however, available only to resident[108] enterprises that exported more than 20 per cent of their total production. The facility did not cover exporters of primary commodities or enterprises enjoying pioneer status, the ITC or the LUR.[109]

The second of the export incentives was the export allowance. The facility was not applicable to non-resident companies, exporters of primary commodities, and companies granted pioneer status or LUR. For purposes of income tax, the export allowance was deductible from the gross income of the enterprise.[110] The size of the export allowance would depend on three elements: i) the export performance in the year concerned compared with the average export position of the three preceding years; ii) the wage bill covering employees with wages up to $500 per month; and iii) the amount of domestic materials utilized in the manufacture of the exports. These were incorporated in a formula as follows:[111]

$$\text{Export Allowance} = \frac{E_t - \frac{1}{3}(E_{t-1} + E_{t-2} + E_{t-3})}{E_t + C_t} \times \frac{1}{5}(M_L + W)$$

[106] The same provision was available under the *Income Tax Ordinance, 1947.*

[107] *Investment Incentives Act, 1968*, Section 28(2) (a).

[108] A resident enterprise is one whose control and management are exercised in Malaysia.

[109] *Investment Incentives Act, 1968*, Section 28(2)(c)

[110] *Investment Incentives Act, 1968*, Section 29.

[111] *Ibid.*, Section 29 (2).

Where E = exports,
t = year concerned,
C_t = domestic sales during year concerned, hence,
$E_t + C_t$ = total sales (domestic + exports),
M_L = inputs of domestic origin,
W = wage bill of workers with wages up to $500 per month.

From this formula, it is obvious that the export allowance would be larger i) if exports in the year concerned increased; or ii) if there had been greater use of local inputs and/or larger utilization of labour; or iii) if (i) and (ii) increased together. The export incentive could, therefore be said to have three objectives: to encourage exports, to promote labour intensity and to maximize the use of domestic inputs.

The third incentive accorded additional deduction for income tax purposes to an enterprise if it had engaged in export promotion activities overseas. The eligible expenses arising out of these activities that would count for the additional deduction were:[112] i) overseas advertising; ii) supply of free samples abroad; iii) export market research; iv) preparation for overseas tenders; v) negotiation and conclusion of contracts abroad; and vi) supply of technical information abroad. For pioneer companies and those granted LUR, such expenses incurred during their tax relief period could be carried forward for deduction after the expiry of their tax relief period.[113]

The response of the manufacturing sector to these incentives had been below expectations. Data on approvals granted to manufacturing establishments (whether with incentives or not) are set out in Table 9.12. Approvals granted for accelerated depreciation allowance (ADA) were not encouraging. There were no approvals in 1969, the first full year of availability of the ADA. In 1970, the ADA was granted to only three enterprises having a called-up capital of less than $2 million and in 1971 there were four such approvals.

On the export allowance, information provided by the Department of Inland Revenue indicated that between 1968 and 1972, only 10 companies had been granted export allowance totalling $955,120. The number of companies involved as well as the amount of the allowance granted were undoubtedly very small, considering that these were results covering a period of four years. The case for a new export incentive is thus obvious.

Table 9.19 shows the number of companies given tax allowance on expenses incurred in export promotion and the value of exports attained by these firms. In 1968–71, 11–14 companies each year took advantage of this tax facility. These companies represented an annual export capability of about $27½–$54 million. In 1972, only two firms were granted the incentive, these having total

[112] *Income Tax (Promotion of Exports) Rules, 1968,* Rule 4(2), in Schedule 2 of the *Investment Incentives Act, 1968.*

[113] *Ibid.*, Rule 5 and Rule 5 after amendment by the *Investment Incentives (Amendment) Act, 1971.*

Table 9.19

Malaysia – Firms Approved for Tax Allowance on Export Promotion Expenditures

Year	Number of Firms Granted Approval	Value of Exports ($ million)
1968	13	53.8
1969	11	38.2
1970	14	45.4
1971	12	27.4
1972	2	8.1

Source: Ministry of Trade and Industry.

exports amounting to only $8 million. Some observations may be made on these data. Firstly, only a small number of firms incurred expenses on export promotion on a scale large enough as to induce them to apply for the incentive. Secondly, the introduction of the tax incentive had *not* encouraged more firms to incur promotion expenses to sell their exports. The number of companies granted approval had remained substantially unchanged during 1968–71 and if 1972 were to be taken into consideration, the number would have declined drastically.

The Government's approach to the promotion of manufactured exports thus far revealed some important deficiencies. It is clear from the above discussions that the three export incentives had made little impact. The encouraging development of exports of manufactured goods noted in Chapter IV was obviously due to other reasons. The response of the manufacturing sector to market opportunities abroad was no doubt an important underlying factor. Equally important, the export growth had been facilitated by the many policy measures of the Government discussed elsewhere in this and the two following chapters. For example, in recent years, a substantial share of the exports of manufactures originated from industries granted pioneer status. In 1970, out of over $500 million of exports of manufactures, pioneer industries accounted for $175 million or about 35 per cent.

The important point, however, is that while these other policy measures could be expected to contribute to the further development of exports of manufactures, they should not be relied upon to bear the main burden of export promotion. In the interest of better results, policy instruments having more direct and predictable effects on export performance would have to be sought out and used as soon as possible. In this connection, it must be pointed out that the major fiscal incentives such as pioneer status, the ITC and the LUR, made no distinction between import-substituting industries and export-oriented industries. Any export-oriented industry that emerged obviously would do so

only largely on account of the existence of favourable export prospects. But where the existence of this factor could not be too clearly discerned or where there were other inhibiting factors, a system of specific export incentives would be of great assistance. Indeed, if the Government had been concerned early enough with the development of export industries, it would have been a relatively simple exercise to operate a system of incentives biased in favour of export industries. For example, a longer tax relief period, or a larger tax credit, among other things, could be allowed for export industries within the existing system of incentives such as pioneer status, the LUR and the ITC, as the case may be. However, this principle of discrimination had so far been applied only in a very limited manner as when more liberal tax relief periods were introduced in 1971 for the electronics industry (an export and labour-intensive industry). It is also interesting to note that the system of fiscal incentives not only treated alike domestic-oriented industries and export industries, but it also excluded industries enjoying incentives such as tax relief or investment tax credit from being eligible for the two major export incentives, the ADA and the export allowance. It is possible for these two export incentives to be accorded to firms currently enjoying tax relief under the pioneer incentive or the LUR. In the event, the ADA or the export allowance could apply on the expiration of the tax relief period.

On the other hand, there were also some important shortcomings in the character of the export incentives themselves which must have contributed in no small way to the poor response to them.

The ADA does not reduce tax liability but merely delays the payment of tax because of the larger deductions allowed in the earlier years. It, therefore, cannot amount to much of an incentive.

In this appraisal, attention must also be drawn to the effects of the introduction of the increased capital allowance [discussed in Section 3.2] in 1971 on the ADA. The increased capital allowance provision introduced two additional features over and above those available under the ADA: i) Unlike the ADA, no reference to the export performance of the applying enterprise was required and, ii) it increased the annual allowance on industrial buildings by 1 percentage point. Being more generous than the ADA, it should logically be applicable to the export industries as well. Thus, the continued maintenance of the provision under the ADA concerning the eligibility reference to export performance must have been an oversight. Anyway, the increased capital allowance of 1971, being more liberal than the ADA, might produce better results than the ADA on capital expenditures in the export industries.

As for the export allowance, its most important defect was the smallness of the benefit owing to the principles underlying the formula for its determination. The formula took a proportion based on *export increase* (rather than *total* exports) to total sales and related it to *only 20* per cent (instead of a more liberal percentage) of local materials and labour costs. Moreover, it was

frequently reported that considerable difficulties were experienced by manufacturers in calculating expenditures on the local inputs and labour.[114]

On expenses incurred in the promotion of exports, the list of such expenses eligible for deduction for tax purposes was by no means comprehensive. Some items of significance to promotion efforts had been omitted. Important examples are display materials (bill boards, posters, etc.) and advertising in the mass media.

The poor performance of the export incentives resulted in a recent reappraisal by the Government. In introducing the 1973 Budget, the Minister of Finance was able to announce the intention of the Government to introduce an export allowance that would be more liberal and simpler than its predecessor.[115] Under the improved facility, an export allowance would be permitted by way of a deduction from gross income in arriving at adjusted or taxable income. The amount of allowance would be 5 cents for every dollar of increase in the export sales of the firm. For computing the increase in export sales, the average annual export sales of the *five* immediately preceding years would be deducted from the export sales for the year in question but where the firm had a shorter export experience, some modifications would be allowed as shown below:

Export Experience of Firm (including year in question)	*Formula for Computing the New Export Allowance*
(i) More than 5 years (the normal case)	$\frac{1}{20}\left[E_t - \frac{1}{5}(E_{t-1} + E_{t-2} + E_{t-3} + E_{t-4} + E_{t-5})\right]$
(ii) 5 years	$\frac{1}{20}\left[E_t - \frac{1}{4}(E_{t-1} + E_{t-2} + E_{t-3} + E_{t-4})\right]$
(iii) 4 years	$\frac{1}{20}\left[E_t - \frac{1}{3}(E_{t-1} + E_{t-2} + E_{t-3})\right]$
(iv) 3 years	$\frac{1}{20}\left[E_t - \frac{1}{3}(E_{t-1} + E_{t-2})\right]$
(v) 2 years	$\frac{1}{20}\left[E_t - \frac{1}{3}(E_{t-1})\right]$
(vi) 1 year	$\frac{1}{20}(E_t)$

where E = export sales

t = the year in question.

One important advantage of the proposed export incentive is its relative simplicity compared with its predecessor. The size of the allowance is immediately obvious and is much easier to calculate. Secondly, the incentive is directly related to export expansion, an essential feature for a good export incentive measure. What is debatable is only the rate (5 cents for every dollar of export increase) for determining the permissible allowance. However, its appropriateness can only be ascertained by experience and any necessary increase can be easily incorporated in the formula.

[114] This was conveyed to the writer by officials of FIDA.

[115] Speech of Minister of Finance introducing the *Supply (1973) Bill* in Parliament on 6 December 1972.

While there is a good case to change the existing export allowance, the even more important task of finding an appropriate incentive to facilitate more rapid investment in export industries should not be lost sight of. It is hardly necessary to be reminded that an export allowance such as conceived above is only basically a stimulus for export expansion and, as such, would be a most effective measure only in situations where investments in export industries are already being adequately made.

Finally, there was another facility introduced by the Government to promote export industries. In 1971, the Government introduced the concept of the free trade zones to industrial estates established by the public sector.[116] Reference to this was made in connection with the discussions on the electronics industry. These zones provided for the duty-free movement of dutiable goods. They therefore catered essentially for industries that were export-oriented, in particular those industries which used large amounts of imported components and which could take advantage of the relatively cheaper labour resources of the country. By 1972, two areas had been designated free trade zones: Bayan Lepas (Penang Island) and Sungei Way (Selangor). In Bayan Lepas, the area under the first phase of the zone's development covering 25 acres had been fully occupied while its second phase covering another 50 acres was being developed.[117] The area in Sungei Way covered 160 acres.[118] Besides these, other areas were currently being considered for designation as free trade zones.

The establishment of the free trade zones was part of the measures to promote the electronics industry. However, the zones were also appropriate for other industries; in the Bayan Lepas Free Trade Zone, two other categories of manufacturing had been specified as eligible for locating in the Zone, namely, made-up textile goods and hair wigs, both export-oriented and labour-intensive.[119]

The establishment of free trade zones could be attributed primarily to two factors. Firstly, there was the vigorous emphasis on labour-intensive industries in the post-1969 industrial strategy. Secondly, there was the increasing evidence of the poor response to the export incentives introduced in 1968. But the principle underlying the zones was certainly not a new one and had appeared in another form previously. As pointed out earlier, the facility of allowing for drawbacks on duties paid on imported inputs for products that were subsequently exported had been in operation for a long time. The free trade zones incorporated this principle with that of providing reasonably priced industrial land supplied with all the necessary facilities. In doing so, it became administratively possible not to levy duties on the imported inputs. They were therefore of great convenience to

[116] They are governed by the Free Trade Zones Act, 1971..

[117] Federal Industrial Development Authority, *Malaysia Industrial Digest*, Vol. 5 No. 1 (First Quarter, 1972).

[118] *Ibid.*

[119] *Free Trade Zones (Type of Manufacture) Notification, 1972.*

industries highly dependent on these inputs. Furthermore, the attractiveness of the sites could also be due to the low prices charged for land in the two zones. In Bayan Lepas, the premium for the land was $1.00 per square foot under a 60-year lease while for Sungei Way, the premium was $1.00 to $1.50 per square foot for land of 99-year lease.[120]

4. SOURCES OF CONFLICT BETWEEN OBJECTIVE OF INDUSTRIAL DEVELOPMENT AND OTHER OBJECTIVES OF FISCAL POLICY

The above discussions have shown the important role accorded to fiscal policy in promoting industrial development. However, Malaysian fiscal policy, as elsewhere, had also been used as an instrument to pursue multiple objectives. There were important instances where the pursuit of other fiscal objectives, in particular, the revenue objective, had created contradictions to the use of fiscal policy to promote industrial growth. The sources of these contradictions must be discussed as they had a bearing on the environment for investment that the fiscal incentives were trying to create and improve.

When Malaya started in earnest its policy of industrialization in 1958, the rate of company tax was only 30 per cent. But in December of that year, the Government raised it to 40 per cent[121] and it has remained unchanged since then. In justifying this increase, the Minister of Finance stressed that at 40 per cent, the tax was "still at a rate lower than the rate in several neighbouring countries" and that in the view of the Government, the increase would not be an unreasonable burden "in the favourable conditions appertaining to the Federation" [122] However, the maintenance of a low tax rate for new manufacturing activities, even for a limited period, would have widened the range or increased the versatility of the fiscal incentives at the disposal of the Government. It seemed, therefore, that an important opportunity had been allowed to pass. The search for additional sources of revenue is a perennial task of newly-developing countries but the Malayan Government could have acted to its advantage if it had decided to exempt from the increase in company tax all *new* manufacturing enterprises that could meet certain prescribed criteria. If this had appeared too generous, the exemption from the increase could be fixed for a limited period, say, 10 years, after which the general rate would then apply. In the circumstances then, a discriminatory company tax could easily be justified as the pioneer incentive was itself one form of such discrimination. The propaganda value for the Government would have been substantial. Moreover, the loss in revenue would be small, considering that the amount that would have to be foregone would be merely the additional 10 per cent.

[120] Federal Industrial Development Authority, *Malaysia Industrial Digest*, Vol. 5 No. 1 (First Quarter, 1972).

[121] See speech of Minister of Finance introducing the *Supply (1959) Bill* in the Federal Legislative Council on 3 December 1958.

[122] *Ibid.*

In 1967, a new tax known as the development tax was introduced.[123] The tax was on 'development income' defined as 'income derived from any trade, business, profession or vocation and rent from the letting of properties'. The tax was levied at the rate of 5 per cent. From this, it is obvious that the tax had the same effect as an increase in the company tax by 5 percentage points to 45 per cent. Again, this tax was implemented with basically revenue consideration in mind. Thus, in the pursuit of more revenue, the rate of company taxation had in effect increased by 50 per cent since industrial promotion started. If exemption from the development tax were to be granted on earnings of certain manufacturing activities established after the decision to levy the tax, the Government would have been able to introduce another fiscal incentive.

Another measure that had unfavourable effects on industrial development was the imposition of the surtax on imports. Following the decision to repeal the turnover tax with effect from 1 January 1967, the Minister of Finance imposed a surtax of 2 per cent on virtually all imports as a substitute during the 1967 Budget.[124] Important exclusions were direct imports of the Government, essential items like rice, salt and crude petroleum and, items covered by the trade agreements with Australia and New Zealand. In other words, insofar as the manufacturing sector was concerned, the surtax also fell on imported inputs including replacement industrial machinery. However, export industries could apply for drawbacks.[125] Furthermore, industrial machinery for establishing new industries or for expanding existing ones were exempted.[126] In 1971, when the payroll tax was abolished, the surtax on imports was as a consequence increased to 4 per cent but the surtax on inputs for the manufacturing sector and replacement machinery remained at the old rate.[127] The point to note is that even at a rate of only 2 per cent, the surtax did contribute to a tangible increase in the cost of manufactures for the domestic market, considering the fairly widespread use of imported inputs. This obviously had not helped to increase the competitiveness of domestic manufacturers in relation to imports. It should also be pointed out that the inclusion of replacement machinery for purposes of the surtax was not logical while machinery for new or expanding industries could be exempted.

The imposition of the payroll tax in the 1965 Budget and its contradiction to the policy of promoting labour-intensive industries were discussed in some detail earlier and needs no further elaboration here.

All these inconsistencies to the objective of promoting industrial development do not appear unavoidable. They suggest a lack of resourcefulness in the search for new revenue.

[123] See speech of Minister of Finance introducing the *Supply (1967) Bill* in Parliament on 19 January 1967.

[124] *Ibid.*

[125] *Ibid.*

[126] See the "1971 Budget Address" of the Minister of Finance on 22 December 1970.

[127] *Ibid.*

CHAPTER X
THE MANUFACTURING SECTOR – POLICIES ON TARIFFS, INDUSTRIAL FINANCING, INDUSTRIAL ESTATES AND PUBLIC SECTOR PARTICIPATION IN INDUSTRIES

1. INTRODUCTION

The last chapter highlighted the important role given to fiscal policy in promoting the volume and direction of industrial investments. However, fiscal incentives alone would not have been enough to overcome the various problems and handicaps faced by an emerging manufacturing sector. This chapter will focus on four other major problem areas to which public policy was directed and in which it had a direct impact. In the process, the success and deficiencies of the policy measures will be evaluated. These four areas are tariff protection, industrial financing, industrial estates and, initiative of the public sector in establishing and operating industries. Policies in these areas had made significant impact on the pace and pattern of industrial growth.

2. TARIFF POLICY – ITS DEVELOPMENT AND APPLICATION

The open character of the Malaysian economy presented formidable problems to local manufacturers in terms of competition from imports. West Malaysia never had problems of foreign exchange shortage, even during periods of very poor prices for its traditional exports. As a result, most goods were and continued to be freely imported without exchange control or import licensing. Local manufacturers that could match the prices and quality of imported goods with almost immediate effect were scarce and were largely limited to industries with comparative advantage. It was realized early that the assurance of the domestic market, small as it was, would have to be one of the major prerequisites for fast industrial growth. In its interim statement of industrial policy in 1957, the Government accepted the principle of protection for industries as one of the instruments to be used by the authorities.[1] This position was reiterated in the Second Five-Year Plan of 1961–65.[2]

[1] "Interim Statement of Industrial Development Policy", *op. cit.*, para. 16.

[2] Federation of Malaya, *Second Five-Year Plan, 1961–1965*, *op. cit.*, p. 19.

In its tariff policy, the Government took great care to state the conditions for granting tariff protection. These conditions were: i) the tariffs must be necessary; ii) the tariffs would not be abused as, for example, to protect goods of inferior quality or those excessively priced; iii) the period of protection would be temporary that is, the protected industry was expected to be fully competitive in due course; and iv) there would be no adverse effect on revenue.[3] When the Tariff Advisory Board Act, 1963, was drafted, most of these conditions were formalized in the Act.[4] In addition, the Act required that tariff determination should also give consideration to the interests of entrepot trade, the cost of production in export industries, the cost of development works in the public sector and, employment and income. These conditions continued to form the basis for deciding and determining tariffs since then.

For a long time, the prevailing tariffs were generally revenue tariffs. Although the principle of protective tariffs was accepted as early as 1957, their widespread use to promote industrialization occurred only from 1965. One principal reason for this delay of about eight years was the absence of an appropriate tariff-making machinery.[5] The formation of Malaysia in 1963 played a key role in advancing the use of tariffs. In anticipating the need for economic unification of the component states of Malaysia, the Governments of the Federation of Malaya and Singapore requested a World Bank mission to make recommendations that would facilitate the achievement of this objective.[6] One of the major recommendations of the mission accepted and implemented by the Malaysian Government was the establishment of an independent tariff board to advise it on tariff matters necessary for the formation of a Malaysian common market.[7] Thus, legislation (the Tariff Advisory Board Act, 1963) was enacted in 1963 to enable the setting up of such a body but problems encountered in getting an acceptable chairman delayed its full constitution until June 1964.

The separation of Singapore from Malaysia in 1965 introduced some modification to the scope and nature of the work of the newly-established Tariff Advisory Board. Before then, two lists of recommendations on tariffs had been prepared by the Board which included items of interests to Singapore.[8] With the separation, the work of integrating the hitherto separate political units remained,

[3] *Ibid.* Also, "Interim Statement of Industrial Development Policy", *op. cit.*

[4] *Tariff Advisory Board Act, 1963,* Section 5(3).

[5] The Government had, in fact, admitted in 1963 the very limited use of protective tariffs. See Federation of Malaya, *Interim Review of Development in Malaya Under the Second Five-Year Plan, op. cit.*, p. 49.

[6] See International Bank for Reconstruction and Development, *Report on the Economic Aspects of Malaysia, op. cit.*

[7] *Ibid.*, Chapter VI.

[8] See Tariff Advisory Board, Malaysia, *Report and Audited Statement of Accounts for Period 16th September 1963 to 31st December 1965* (mimeographed), pp. 2–3.

though it now excluded Singapore. From 1965 to 1970, therefore, the Malaysian tariff policy may be seen to be dominated by four features:

i) the marked increase in the use of tariffs as a protective device for domestic industries and agriculture;
ii) the use of tariffs to integrate the separate markets of the component states of Malaysia for locally-produced goods;
iii) the harmonization of customs duties in the component states of Malaysia to facilitate movement of imports;
iv) the erosion of preferential tariffs.

The first major change in tariff policy occurred on 9 October 1965 as a result of recommendations of the Action Committee on Tariffs, a body comprising the full-time members of the Tariff Advisory Board and representatives of the Treasury, the Department of Customs, the Ministry of Commerce and Industry and the Ministry of Agriculture and Co-operatives.[9] The Committee's main function was to advise the Government on urgent tariff matters which could not be dealt with fast enough by the Tariff Advisory Board.

One important aspect of this change in tariff policy in 1965 covered adjustments to levels of import duties on certain goods imported, with the objective of increasing the rate and extent of protection to domestic industries.[10] One part of this exercise involved the introduction for the whole of Malaysia of new rates of protective duties on a number of imported items. The effect of this can be seen shortly in an analysis of the tariff structure in this section. Apart from the protection they accorded, the new rates of duties also had the effect of widening the market for manufacturers in West Malaysia in that with a common tariff to apply to the commodities concerned in Sabah and Sarawak, the markets in these two states now became available. The second part of the adjustment exercise involved the increase of a number of import duties in Sabah and Sarawak to levels in West Malaysia. This exercise also contributed to a widening of the market for West Malaysian producers when it eliminated the advantage enjoyed by imports in Sabah and Sarawak arising from hitherto lower tariffs in these states. The third part of the exercise benefited only East Malaysia, but should be mentioned for completeness. Here, the customs duties on over 200 items of imports in Sabah and Sarawak were removed. The items covered very largely raw materials and, equipment and machinery. Insofar as these items were utilized by the manufacturing sector in these two states, the removal of duties on these raised the effective rates of protection in the industries concerned.[11] A further effect was the reduction in the cost of development inputs generally.

[9] *Ibid.*, pp. 14–16.

[10] *Ibid.*, p. 16.

[11] The effective rate of protection is defined as the ad valorem tariff on the value added per unit of output of the industry. Duties on imported inputs reduce the effective rate of protection as can be seen as follows:

$$E = \frac{T - TmMm}{V}$$ where E is the effective rate of protection, T is the tariff rate on the end

Since October 1965, the tariff policy continued to focus on giving necessary protection to industries. The major means was the extension and escalation of the tariff system as will be seen shortly. In September 1969, a new approach in the use of protective tariffs was adopted. Here, for the first time, the Government took the initiative in imposing new tariffs, and these covered 21 items such as chocolates, biscuits, jams, gas stoves, cookers, conveyor belts, telephone equipment, toys and furniture.[12] These items met one or more of the following three conditions:

i) only small quantities of these items were being locally produced;

ii) the capacities in the industries manufacturing these items were under-utilized;

iii) potential investors have expressed interest in manufacturing them.

In imposing tariffs on these items, the objective was to provide the assurance of the domestic market to potential investors and, if the problem was under-utilization, to induce fuller employment of resources. It would appear that this approach was not by any means the best way to assure investors of the domestic market, although a review of the tariffs was promised in the event that there were no investor interest on the items within a reasonable time. The imposition of tariffs on these goods immediately raised their prices to consumers. It was widely felt that these price increases served no purpose except to benefit Government revenue so long as there was no domestic production. As for inducement to investors, it was argued that the same effect could be achieved by a mere Government commitment to impose tariffs at the specified levels for the goods concerned when production started. This rather unhappy experience (for the consumers) was valuable in causing an important change to the next exercise in 1972. Thus, instead of immediate tariffs, *suspended* import duties were imposed in this new exercise which covered 16 items.[13] The proposed import duties on these items were made known and the Government indicated that it would consider imposing these duties should there be adequate response from investors. The interests of industrial promotion and consumers were thus served by this arrangement.

The second feature in the post-1965 tariff policy was the integration of the fragmented markets following the formation of Malaysia. This was done by a series of exercises involving duty exemption on goods produced and manufactured in Malaysia when moved to any part of Malaysia. Before October 1965, goods produced and manufactured in one part of Malaysia when imported by

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product, V is the percentage value added in producing the end product by the industry, Tm is the weighted average rate of tariffs on imported inputs and Mm is the percentage of imported inputs in total output. For a good discussion of the above, see Shu-Chin Yang, "National Policies For Import Substitution and Export Promotion" in Economic Development Institute, IBRD, *Papers on Economic Development, 1966–1967*, Washington, 1967.

[12] See Federal Industrial Development Authority, *Malaysia Industrial Digest*, Vol. 2 No. 4 (Fourth Quarter, 1969).

[13] See Federal Industrial Development Authority, *Malaysia Industrial Digest*, Vol. 5 No. 2 (Second Quarter, 1972).

another, incurred customs duties, this arising from the fact that West Malaysia, Sabah and Sarawak were separate entities before being federated in 1963. The first major step at integrating the markets of the component states occurred in October 1965 when duty-free movement was permitted on some 170 items of goods of Malaysian origin throughout Malaysia.[14] Another important move occurred in March 1966 when the duty exemption list on goods of Malaysian origin was extended to cover *all* such goods except for a dozen items (e.g. hard soap, matches, rubber footwear, petroleum products, motor vehicles and non-alcoholic beverages).[15] The exceptions were made to prevent hardships to East Malaysian industries.[16] Nevertheless, the list of duty exemption was further extended until by the end of 1969, only two items remained outside the list, namely, motor vehicles and petroleum products.[17] Thus, it can be said that by 1966, West Malaysian manufacturers had virtually the benefit of an enlarged market.

The third feature in the post-1965 tariff policy involved the harmonization of the different tariff rates prevailing in the component states of Malaysia. Different tariff rates existed because there were in the early years of Malaysia five customs areas namely, West Malaysia, Sabah, Sarawak and the two free port centres of Penang and Labuan. The effect of the harmonization exercise was that imported goods, once duty had been levied at the point of entry, could move without further hindrance to any other part of Malaysia. By the end of 1968, about 1,840 items or sub-items totalling about 80 per cent of the total number of imports in the Malaysian Tariff Classification had been made subject to the Malaysian common tariff.[18] This meant that about 80 per cent of the dutiable items could now move freely in Malaysia. Of significance to industrial growth, it also meant that instances of relatively lower protection in some parts of Malaysia (because of lower import duties) had now been largely removed.

The fourth feature of the tariff policy after 1965 was the erosion of preferential tariffs in Malaysia. Being former colonies of the United Kingdom and subsequently remaining within the British Commonwealth, there was maintained in Sabah, Sarawak and West Malaysia a preferential system of tariffs under which lower or even zero tariffs applied to imports from the United Kingdom and the

[14]This was under the *Customs Duties (Exemption) (Goods of Malaysian Origin) Order, 1965.* See Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1967,* p. 6.

[15]*Ibid.*

[16]Commercial vehicles and petroleum products were excluded because of the different methods of collecting revenue on these items. See Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1966,* p. 9.

[17]See Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1968,* p. 8 and Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1969,* p. 8.

[18]Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1968,* p. 8.

other Commonwealth countries.[19] In the context of industrialization, the existence of this preferential system of tariffs could become a source of embarrassment to any attempt to use protective tariffs. If tariffs were to be effective, they (both preferential and non-preferential) would have to be raised to levels sufficiently high so as to discourage imports but then at such levels a margin of preference would have hardly any meaning. The simplest solution was, therefore, to abolish the Commonwealth preferences. In August 1966, Malaysia took the first major step when it abolished a number of preferential tariffs and replaced them with the standard tariffs. These preferential tariffs were on several categories of imports such as sugar, textiles, wearing apparel, alcoholic beverages, cosmetics, perfumery, television and wireless sets, tyres and tubes, etc.[20] It is interesting to note that this action was precipitated basically by revenue consideration that is, "with a view to strengthening the financial position of the Government which in the current fiscal year is facing a deficit on the current account".[21] It was supposed to bring in $17 million. The protective effects of the measure were, however, recognized but were considered only incidental to the exercise.[22] This reflected the still limited attention given to the development of a system of protective tariffs. However, for the rest of the 1960's, there was further dismantling of the preferential system. An analysis will be given later on in this section concerning the changes in the preferential tariffs by 1970. This analysis will show that the dismantling of the system had involved not only a reduction in the number of the preferential tariffs but also the raising of the rates for some of the remaining preferential tariffs. Whatever might have been the initial motivation that started the dismantling exercise, the point of relevance to the promotion of industrial development was that by 1970, not much of the preferential tariff system had remained.

As stated earlier, all these developments of tariff policy were fairly recent. One other aspect of public policy should be discussed as it had a bearing on the environment of protection that was being built by the tariff policy. This was the legislative provision enabling the Government to counter the dumping of goods in the Malaysian market or the entry of excessively subsidized imports.[23] Thus under the Customs (Dumping and Subsidies) Ordinance, 1959, the Government could fix appropriate duties on the dumped or excessively subsidized goods.[24]

[19] In return, exports of the Malaysian states were granted preferential treatment in the United Kingdom and Commonwealth markets. For a readable account of the preferential system, see "Commonwealth Preference", a paper prepared for the British Information Services by the Central Office of Information, London, July 1969.

[20] See *Customs Duties (Amendment) (No. 6) Order, 1966.*

[21] See speech of Minister of Finance introducing the *Customs Duties (Amendment) (No. 6) Order, 1966,* in Parliament on 27 August 1966.

[22] See reply of Minister of Finance to speeches of other members in Parliament on the subject.

[23] The relevant legislation is the *Customs (Dumping and Subsidies) Ordinance, 1959.*

[24] *Ibid.*, Section 7(1).

For purposes of this Ordinance, imports would fall into these categories if they would significantly affect or threaten the viability of an established industry or would seriously inhibit the establishment of a new industry.[25] The Ordinance was passed in 1959 to improve the environment for investment. Its existence appeared to have served as a deterrent against dumping and excessive subsidization by other countries.

Having discussed the various features of Malaysian tariff policy, it would be useful now to examine the Malaysian tariff structure. In particular, special attention will be paid to the following: i) the distribution of tariffs among the various industry groups and categories; ii) the changes that had occurred in the pattern of tariffs by 1970, especially in terms of new tariffs since 1962 and modifications to existing tariffs still maintained since then; iii) the levels of tariffs as among industry groups and categories; and iv) the changes in the preferential tariff system with reference to the lines of analysis set out in i) to iii). All these should throw further light on the Government's use of tariffs.

Several problems were encountered in analysing the tariff structure as outlined above and this largely explains the tendency for discussions on Malaysian tariffs to avoid such a quantitative approach. Indeed, the only quantitative work of reference on this subject was a pioneer study by John Power on the nominal and effective rates of tariff protection in West Malaysia for 1963 and 1965.[26] This study, however, could not be used for the purpose at hand as it did not cover adequately the crucial period of development of Malaysian tariff policy and in any case, would not be able to provide information along the lines set out above.

In the analysis of tariff levels attempted here, attention was focussed primarily on nominal tariffs. No attempt was made to estimate the effective rate of protection as was done by the Power study since the necessary data for such an exercise were not available. In any case, such an exercise did not appear essential as the intention here was merely to view the broad magnitudes of relative protection and the changes that had occurred. Furthermore, Stephen Lewis had observed in his study on Pakistan that when ranking of industries by relative rates of nominal protection was compared with ranking by effective rates, the overall rankings were quite similar and thus "we could learn a great deal about relative protection by examining the rates of nominal protection".[27] Nevertheless, a very crude estimate of effective protection was attempted for this study, this having been done without adjusting for duties paid on inputs.

The second problem was to integrate the two systems of levying duties on imports in Malaysia, namely, the ad valorem duty and the specific duty. The

[25] *Ibid.*

[26] John Power, "The Structure of Protection in West Malaysia" in Bela Balassa and Associates, *The Structure of Protection in Developing Countries*, Baltimore and London, Johns Hopkins Press, 1971, pp. 203–222.

[27] Stephen R. Lewis, Jr., *Pakistan–Industrialization and Trade Policies*, London, Oxford University Press, 1970, p. 84.

specific duty (e.g. $3 per lb.) would have to be converted to its ad valorem equivalent and this would require the determination of the import unit value of the commodity concerned. In a few cases, this was not possible when the unit of quantity of import and the unit of quantity expressed in the duty were different.[28] For this study, such tariffs were included in the tally in Table 10.1 but they were ignored when the rates were averaged for Table 10.2. In other cases, the specific duty would remain unchanged between two periods of time but when converted to ad valorem equivalent, it would show a change. For purposes of this study, such a change was regarded as a change in the magnitude of the import duty during the period compared.

The third difficulty was the choice of weights for averaging the rates of tariff. Averages weighted by the country's imports would be subject to a downward bias as low tariffs were likely to be associated with high imports and hence would get large weights while high tariffs would restrict or even cut imports to zero and hence would have small weights or zero weights as the case may be.[29] On the other hand, unweighted averages could lead to large error possibilities, especially in industry groups where the "law of large numbers" could not operate.[30] Some attempted to resolve the problem by using independent weights like world trade weights. In this study, the unweighted average was used, largely because of its simplicity and the absence of a reasonably practical weighting system.

The fourth problem concerned the presence of the preferential system. In India, where a similar situation existed, Bhagwati pointed out that "ideally we might have tried to weight the preferential and the standard tariff rates by, for example, the share of the two sources in total imports" [31] But he pointed out that an important consideration was the obvious absence of product homogeneity.[32] A practical solution used by him was to treat the two sets of rates separately. This approach was adopted in this study.

Bearing in mind all these problems and the nature of the solutions adopted, the following analysis on tariff structure is presented.

Table 10.1 shows the following: i) the number of tariffs that were introduced since 1 January 1962; ii) the tariffs as existing on 1 January 1962 which were still maintained at the end of 1970 and the changes that had occurred to them.

[28] For example, the unit of quantity in import statistics for high-speed diesel fuel was 'tons' while its specific duty for 1970 was 20 cents per gallon; in such cases, it would be impossible to convert one unit of quantity to another in order to transform the specific duty to its ad valorem equivalent.

[29] Bela Balassa, "Concepts and Measurement of Protection" in Bela Balassa and Associates, *op. cit.*, p. 19.

[30] *Ibid.*

[31] Jagadish N. Bhagwati and Padma Desai, *India – Planning For Industrialization*, London, Oxford University Press, 1970, p. 348.

[32] It must have been because of product differentiation, among other things, that there had been imports from a higher tariff source (i.e. where the standard tariffs were applicable). *Ibid.*

Table 10.1

West Malaysia – Nominal Standard Tariffs: Changes During 1962–70

	Industry Group	Number of Tariffs Introduced Since 1 January 1962 (1)	Changes to Tariffs Existing as on 1 January 1962 (2)				Total Number of Tariffs on 31 Dec. 1970 (3) = (1) + (2)
			Increased	Decreased	Unchanged	Indeterminate	
1.	Processing of Agricultural Products	2	1	–	1	–	4
2.	Food Manufacturing	30	40	18	22	–	110
3.	Beverages: a) Alcoholic	3	17	6	1	–	27
	b) Non-alcoholic	1	14	–	1	–	16
4.	Tobacco Products	1	5	3	–	–	9
5.	Textiles	19	8	1	102	–	130
6.	Footwear, Wearing Apparel, Made-up Textile Goods	14	19	4	42	–	79
7.	Wood Products	19	2	–	3	–	24
8.	Furniture and Fixtures	11	7	1	7	–	26
9.	Paper and Paper Products	10	11	2	15	–	38
10.	Printing, Publishing and Allied Industries	4	6	–	1	–	11
11.	Leather and Leather Products	1	9	–	11	–	21
12.	Rubber Products	11	5	1	3	9	29
13.	Chemicals and Chemical Products	65	32	19	46	3	165
14.	Products of Petroleum, Coal	5	2	3	–	9	19
15.	Non-metallic Mineral Products	12	9	7	26	–	54
16.	Metal Industries	71	12	4	32	–	119
17.	Machinery, excluding Electrical Machinery	21	24	7	37	–	89
18.	Electrical Machinery and Appliances	52	31	1	34	–	118
19.	Transport Equipment	19	6	1	–	–	26
20.	All Others	25	14	14	39	1	93
	Total	396	274	92	423	22	1,207
	Consumer Goods	178	202	70	291	2	743
	Intermediate Goods	104	47	17	94	20	282
	Investment and Related Goods	114	25	5	38	–	182
	Total	396	274	92	423	22	1,207

Sources: Compiled and computed from:

1. Federation of Malaya, *Malayan Trade Classification (Federation of Malaya and Singapore) and Federation of Malaya Customs Tariff effective from January 1, 1962.*
2. Malaysia, *Trade Classification and Tariffs, 1969* and incorporating all amendments to 1970.
3. Department of Statistics, *States of Malaya External Trade 1962/63*, Vol. II.
4. Department of Statistics, *West Malaysia Annual Statistics of External Trade, 1970*, Vol. II.

These are then viewed in relation to industry groups and categories. The year 1962 was selected as the base year because it represented a convenient point in time when tariff policy was hardly an important instrument of industrial promotion. The following points emerge from this analysis:

i) A substantial portion or about 33 per cent of the tariffs in 1970 were tariffs that were imposed after 1 January 1962. These 'new' tariffs reflected in large part the intensive use of tariffs during the period;

ii) About 45 per cent of the 'new' tariffs were imposed on imports of consumer goods while the balance was distributed in about the same proportion between imports of intermediate goods and of investment and related goods;

iii) The period 1962–70 was marked by significantly increased concentration of protection in the intermediate and investment goods sectors. This was suggested by the share of the 'new' tariffs to the total number of tariffs in each sector. For the investment and related goods sector, the 'new' tariffs accounted for 63 per cent of the total number of tariffs on goods in this sector. For the intermediate goods sector, the percentage share was 37. The 'new' tariffs had the lowest percentage share (24 per cent) in the consumer goods sector;

iv) In 8 of the 19 specified industry groups, the 'new' tariffs made up from more than one-third to nearly four-fifths of the total number of tariffs in each group. In other words, the 'new' tariffs had a reasonably good spread over the manufacturing sector. The share of 'new' tariffs in the total number of tariffs in each of the eight industry groups were as follows: wood products (79 per cent), transport equipment (73 per cent), metal industries (60 per cent), electrical machinery and appliances (44 per cent), furniture and fixtures (42 per cent), chemicals and chemical products (39 per cent), rubber products (38 per cent) and, printing, publishing and allied industries (36 per cent);

v) Also of significance in reflecting the intensified application of tariff policy were those tariffs existing on 1 January 1962 which had their rates raised during 1962–70. These 'old' tariffs with rates which had been increased made up 23 per cent of the total number of tariffs in 1970. Therefore, together with the 'new' tariffs, 56 per cent of the total number of tariffs in 1970 could be said to be the outcome of active use of tariff policy after 1962;

vi) Of the 'old' tariffs with rates which had been increased, the bulk of them or 74 per cent were on consumer goods while those on intermediate goods and investment and related goods made up 17 per cent and 9 per cent respectively. The already large number of existing tariffs on consumer goods naturally contributed to this pattern;

vii) Increasing the rate of tariffs as one approach to intensifying the application of tariff policy was not only less important than the approach of imposing additional tariffs but the scope for doing this in terms of spread over industry groups also appeared limited. Of the 19 specified industry groups examined, increases in tariff rates were of large importance in only five of these groups. These industry groups with their share of tariffs with rates which had been increased (in relation to the total number of tariffs in each group) were as follows: beverage manufacturing (72 per cent), transport equipment (56 per cent), printing, publishing and allied industries (55 per cent), leather and leather products (43 per cent), and food manufacturing (36 per cent).

The examination of the changes in the number of 'new' tariffs and the extent of 'old' tariffs with rates which had been raised has yielded some strong evidence of active utilization of tariff policy during 1962–70. It would be useful now to look into the following: i) the changes in tariff rates between 1962 and 1970; ii) the broad pattern of rates among the industry categories. For these purposes, the nominal tariffs were utilized and these were averaged for the various industry groups which, in turn, were classified into categories according to the nature of the output. The data are presented in Table 10.2. As explained earlier, preferential tariffs have been treated separately. The discussion here will be concerned with the full or standard tariffs as these were the relevant ones, especially in the light of the virtual phasing out of preferential tariffs in West Malaysia. Furthermore, in considering the results, it is important to remember

Table 10.2

West Malaysia – Average Nominal Standard Tariffs by Industry Groups and Commodity Categories

Industry Group	Average Nominal Standard Tariffs (Per Cent)							
	Consumer Goods		Intermediate Goods		Investment and Related Goods		All Categories of Goods	
	1962[a]	1970[b]	1962[a]	1970[b]	1962[a]	1970[b]	1962[a]	1970[b]
1. Processing of Agricultural Products	13.6	5.7	–	10.0	–	–	13.6	3.8
2. Food Manufacturing	20.9	32.8	–	–	–	–	20.9	32.8
3. Beverages: a) Alcoholic	202.4	290.0	–	–	–	–	202.4	290.0
b) Non-alcoholic	18.3	40.1	–	–	–	–	18.3	40.1
4. Tobacco Products	172.1	213.1	–	–	–	–	172.1	213.1
5. Textiles	22.9	24.0	22.1	23.2	–	–	22.7	23.8
6. Footwear, Wearing Apparel, Made-up Textile Goods	28.6	28.2	–	–	–	–	28.6	28.2
7. Wood Products	17.0	21.2	16.9	18.6	–	–	17.0	19.2
8. Furniture and Fixtures	17.9	28.5	—	–	–	–	17.9	28.5
9. Paper and Paper Products	14.4	18.2	15.1	15.1	–	–	14.8	16.6
10. Printing, Publishing and Allied Industries	15.0	22.5	–	—	–	–	15.0	22.5
11. Leather and Leather Products	—	—	18.3	25.0	–	–	18.3	25.0
12. Rubber Products	–	–	28.7	28.8	–	–	28.7	28.8
13. Chemicals and Chemical Products	32.5	28.6*	21.3*	26.2	–	–	25.2	27.0
14. Products of Petroleum, Coal	–	–	28.0	27.0	–	–	28.0	27.0
15. Non-metallic Mineral Products	21.5	18.5	22.6	24.2	8.5	21.6	19.4	20.7
16. Metal Industries	19.5	24.3	40.0	20.0	13.9	17.0	19.3	20.4
17. Machinery, excluding Electrical Machinery	19.4	23.3	—	—	17.2	20.2	18.3	21.7
18. Electrical Machinery and Appliances	19.7	28.9	23.3	24.4	21.7	26.2	20.5	27.5
19. Transport Equipment	22.9	44.8	—	—	—	29.1	22.9	38.1
20. All others	30.0	34.0	13.9	18.5	20.0	22.5	27.6	31.7
All Groups	30.8	40.9	20.5	23.2	16.4	21.3	27.4	33.6
All Groups (excluding alcoholic beverages)	24.4	31.0	20.5	23.2	16.4	21.3	23.0	27.6

Sources: Same as for Table 10.1

[a]January 1962. [b]31 December 1970 *Excludes one abnormally large item.

the possible distortion effects of one or more exceptionally high[33] tariffs on the average tariff rate for an industry group. Fortunately, these instances were few and all possible care had been taken to minimize them. For example, where such occurrences were known to concentrate in one group of imports, they had been isolated as was done for the alcoholic beverages group.

On the levels of tariffs between 1962 and 1970, the evidence was clear that the average nominal tariff in each industry group had generally increased. Of the 21[34] industry groups examined, the tariff rates of 18 groups were on the average higher in 1970 compared with 1962; in only three groups were the rates in 1970 lower than in 1962 but even then in one of these, the difference was marginal. Of the 18 industry groups with higher tariff rates in 1970, the rates in nine of these were substantially higher, these ranging from 7 to 88 percentage points above their respective levels in 1962. These were food manufacturing, beverages (alcoholic and non-alcoholic), tobacco products, furniture and fixtures, printing,

[33] An exceptionally low tariff could also exercise a similar influence but this possibility was non-existent in the Malaysian context.

[34] The beverages group was sub-divided into two groups.

publishing and allied industries, leather and leather products, electrical machinery and appliances and, transport equipment.

Even when the industry groups have been categorized into consumer goods, intermediate goods and, investment and related goods, the general pattern of increase in the average nominal tariffs remained. In the consumer goods sector, there were 18 industry groups and of these, 14 industry groups had higher rates of tariffs in 1970. In the intermediate goods sector, there were 12 industry groups but eight of these had higher average tariffs in 1970 while in two others, the tariff rates in 1970 and 1962 were about the same. For the investment and related goods sector, the tariff rates in all the six industry groups were higher in 1970 compared with 1962.

The pattern of tariff rates for industry groups in the three categories of goods was also very interesting. There was a clear and consistent pattern of higher tariffs for consumer goods compared with intermediate and investment goods. The average nominal tariffs for all consumer goods was 41 per cent in 1970 while the average for intermediate goods was only 23 per cent and that for investment and related goods 21 per cent. Even excluding alcoholic beverages which had very high tariffs for revenue purposes, the average for consumer goods was still substantial at 31 per cent. This pattern also prevailed in 1962, although the respective rates were lower. In breaking down the three categories of goods into industry groups, this pattern of higher tariffs on consumer goods compared with intermediate and investment good was still valid. The tariff rates of 11 industry groups could be compared as each of these industry groups was represented in at least two if not all the three categories of goods. In these 11 industry groups in 1970, the tariff rates on consumer goods were higher than the rates on intermediate goods and on investment goods for nine of these groups. But it did not necessarily follow that the tariff rates for intermediate goods were higher than those on investment goods as indicated by the overall rates; in 1970, there were only two out of four industry groups in which the rates on intermediate goods were higher. The pattern as described for 1970 applied broadly to 1962.

Nominal tariffs can only give a very rough indication of the extent of protection. They do not take account of the contribution (the value added) of the industry concerned to output. Neither do they provide adjustments for import duties payable on the imported inputs. On the other hand, the concept of effective protection takes account of all these things. But the many gaps in information did not permit a proper calculation of effective protection. However, a very crude attempt to measure the broad magnitudes of effective protection was made in Table 10.3. Owing to unavailability of data on imported inputs, the various levies on inputs have been ignored. This will have the effect of overestimating the effective protection. In other words, effective protection was being measured by $E = \frac{T}{V}$ rather than $E = \frac{T - TmMm}{V}$ where

E is the effective rate of protection;

T is the tariff rate on the end product;

V is the percentage value added in producing the end product by the industry;

Table 10.3

West Malaysia – Rough Estimate* of Effective Protection in 1970

	Industry Group	Per Cent of Value Added in End Product, 1968 V	Average Tariff Rate on End Product, 1970 T (Per Cent)	Rough Estimate* of Effective Protection (E) $E = \frac{T}{V}$ (Per Cent)	Category of Goods Produced (Based on Table 10.2)
1.	Processing of agricultural products	13.6	3.8	27.9	Consumer and intermediate goods
2.	Food manufacturing	20.1	32.8	163.2	Consumer goods
3.	Beverages: a) alcoholic	58.8	290.0	493.2	Consumer goods
	b) non-alcoholic	54.3	40.1	73.9	Consumer goods
4.	Tobacco products	26.1	213.1	816.5	Consumer goods
5.	Textiles	27.0	23.8	88.2	Consumer and intermediate goods
6.	Footwear, wearing apparel, made-up textile goods	26.1	28.2	108.1	Consumer goods
7.	Wood products	37.8	19.2	50.8	Consumer and intermediate goods
8.	Furniture and fixtures	34.3	28.5	83.1	Consumer goods
9.	Paper and paper products	29.6	16.6	56.1	Consumer and intermediate goods
10.	Printing, publishing and allied industries	50.2	22.5	44.8	Consumer goods
11.	Leather and leather products	18.8	25.0	133.0	Intermediate goods
12.	Rubber products	46.2	28.8	62.3	Intermediate goods
13.	Chemicals and chemical products	37.9	27.0	71.2	Consumer and intermediate goods
14.	Products of petroleum, coal	23.2	27.0	116.4	Intermediate goods
15.	Non-metallic mineral products	52.3	20.7	39.6	Consumer, intermediate and investment goods
16.	Metal industries	36.2	20.4	56.4	Consumer, intermediate and investment goods
17.	Machinery excluding electrical machinery	39.8	21.7	54.5	Consumer and investment goods
18.	Electrical machinery and appliances	36.2	27.5	76.0	Consumer, intermediate and invesment goods
19.	Transport equipment	22.8	38.1	167.1	Consumer and investment goods
20.	All others	39.0	31.7	81.3	Consumer, intermediate and investment goods

Sources: 1. Table 10.2
2. Department of Statistics, *Census of Manufacturing Industries, West Malaysia, 1968.*

*Does not take account of duties and other taxes on inputs.

Tm is the weighted average rate of tariffs on imported inputs;

Mm is the percentage of imported inputs in total output.

Furthermore, as the latest comprehensive data on value added for the industry groups were from the 1968 Census of Manufacturing Industries, these were used to relate to the tariff data for 1970, on the assumption that the proportion of value added accounted for by each industry group in 1970 to total output did not differ significantly from the 1968 position. Even so, the Census data on value added were not fine enough to enable a breakdown in each industry group into consumer, intermediate and investment goods. However, a comparison with Table 10.2 showed that of the 21 industry groups identified,[35] seven groups were *purely* consumer goods industries, three groups purely intermediate goods industries and the rest were combinations of consumer goods with intermediate goods or investment goods or with both (see last column of Table 10.3). From this, some indication of the relative degree of effective protection on consumer goods and other goods may be seen.

The pattern that emerged was no different from that derived from the examination of nominal tariffs. Allowing for some very few exceptions, it can be seen that effective protection was generally higher for industry groups producing

[35] The beverages group was sub-divided into its alcoholic and non-alcoholic components.

solely consumer goods than for those groups producing consumer goods and intermediate goods or, consumer goods and investment goods or, consumer goods and intermediate and investment goods. An important factor must have been the relatively lower nominal tariffs on intermediate and investment goods compared with those on consumer goods in industry groups producing these three categories of goods (Table 10.2). Therefore, if it had been possible to estimate effective protection (even on a crude basis) for the three categories of goods separately, the pattern would obviously be generally higher effective protection for consumer goods compared with intermediate and investment goods. The same conclusion of a bias in tariff policy against intermediate and capital goods was also arrived at in the Power study on effective protection for 1965.[36] In this respect, Malaysia was in a similar position with other countries in their early stages of industrialization.

The relatively lower degree of protection for intermediate and investment goods compared with consumer goods raises an important issue. It is obvious that this disparity could enhance the attractiveness of the consumer goods sector which, even without this advantage of more protection, already had an edge over the intermediate and investment goods sectors, particularly in terms of being more appropriate to the capability and resources of industrialists at the initial stages of industrialization in Malaysia. It has been pointed out that a country industrializing on the basis of import substitution would ultimately have to develop its intermediate and investment goods sectors in order that the limits of its domestic market for consumer goods would not become a constraint to further industrial growth.[37] For this reason, Malaysia's tariff policy needs to be re-examined with a view to giving more encouragement to the production of intermediate and investment goods. The absence of specific fiscal incentives for these categories of goods makes the need for this exercise even more pressing.

There were other shortcomings in the Government's use of tariff policy. The increasing application of tariffs to serve the objective of protection as noted earlier was certainly a major development. However, except for the moves in 1969 and 1972 in which the Government acted on its own to establish or proposed to establish some tariffs, the initiative for proposing protective tariffs had very largely come from interested enterprises. This by itself is not undesirable if the Government had developed a firm policy for encouraging investments in certain directions based on a set of priorities and had laid this down as guiding principles for the tariff-making authorities. But the Government had done this only in a very limited way, judging from its use of fiscal incentives. Thus, the tariff-making authorities had to rely very much on themselves to work out a set of principles.

Moreover, many important data such as value added and input data were either not available totally or not available in the form required. As a result, it is usual to see in the list of nominal tariffs, uniform rates cutting across products

[36] See John Power, "The Structure of Protection in West Malaysia", *op. cit.*, p. 219.

[37] John Power, "Import Substitution: Barrier to Subsequent Growth", *op. cit.*, p. 176.

and industries. Given the nominal tariff, this could give rise to varying effective rates of protection which would be *unintentional* and, in some cases even undesirable, since the value added differs as among products and among industries. For example, the effective rate of protection would be very high in activities where the value added is small and rather low for industries having a relatively higher value added.

There is, therefore, a need to develop future tariff policy into a more precise instrument of industrial promotion. It is not a mere matter of generally increasing the number of new tariffs or raising the rates of existing ones.

The last aspect of this examination of Malaysian tariff structure concerned preferential tariffs. Table 10.4 analyses the changes in the number and rates of the preferential tariffs. These are viewed in relation to industry groups and the categories of goods. On the changes in the number of tariffs, it can be seen that on 1 January 1962, there were 333 preferential tariffs covering goods in 19[38] industry groups. As a result of the series of exercises in dismantling the preferential tariffs, the number of such tariffs fell to only 54 by the end of 1970, a decline of 279. This involved the complete removal of preferential tariffs from 12 industry groups and the substantial removal of such from four other industry groups. A substantial number of preferential tariffs were concentrated in four industry groups at the beginning of the period; these were textiles; footwear, wearing apparel and made-up textile goods; food manufacturing; and, electrical machinery and appliances. By the end of 1970, these tariffs had been completely or very largely lifted.

The substantial reduction in the number of preferential tariffs was only one aspect of the move to abolish these tariffs. Of those that remained, the preferential margins of a number had been reduced by 1970 as a result of increases in their rates. On the average, the rates of preferential tariffs had been raised in four out of the seven industry groups still having preferential tariffs in 1970.

Although little publicity was given to this process of eliminating preferences in the Malaysian tariff structure, it was nevertheless an important development. As a result, a more effectively protected market had emerged for the goods concerned as standard tariffs increasingly replaced the preferential tariffs. But the task remained unfinished so long as there were other preferential tariffs.

3. POLICY ON INDUSTRIAL FINANCING

The need for an organized institutional source of industrial finance was realized as early as 1954, when the World Bank mission made a comprehensive study of the economy.[39] The banking system operated on practices and traditions developed by the British banks and this meant that its resources were applied largely to the provision of short-term credit, particularly in the field of trade.[40] Bank

[38] The beverage group was sub-divided into two groups.

[39] See International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.*, p. 89.

[40] The deficiencies of the Malaysian banking system as a source of long-term finance, including industrial finance, have been dealt with elsewhere by the writer. See Lee Hock

Table 10.4

West Malaysia – Average Nominal Preferential Tariffs by Industry Groups and Commodity Categories

	Industry Group	Number of Items with Preferential Tariffs			Average Nominal Preferential Tariffs (Per Cent)							
					Consumer Goods		Intermediate Goods		Investment & Related Goods		All Categories of Goods	
		1962[a]	1970[b]	Decrease	1962[a]	1970[b]	1962[a]	1970[b]	1962[a]	1970[b]	1962[a]	1970[b]
1.	Processing of Agricultural Products	4	-	4	1.0*	-	-	-	-	-	1.0*	-
2.	Food Manufacturing	30	16	14	11.8	18.8	-	-	-	-	11.8	18.8
3.	Beverages: a) Alcoholic	14	-	14	181.2	-	-	-	-	-	181.2	-
	b) Non-alcoholic	4	-	4	7.3*	-	-	-	-	-	7.3*	-
4.	Tobacco Products	6	-	6	104.5	-	-	-	-	-	104.5	-
5.	Textiles	96	-	96	15.0	-	-	-	-	-	15.0	-
6.	Footwear, Wearing Apparel, Made-up Textile Goods	64	8	56	18.4	15.0	-	-	-	-	18.4	15.0
7.	Furniture and Fixtures	4	3	1	10.0*	10.0*	-	-	-	-	10.0*	10.0*
8.	Paper and Paper Products	3	3	-	-	-	0*	5.3*	-	-	0*	5.3*
9.	Leather and Leather Products	20	20	-	-	-	10.3	15.0	-	-	10.3	15.0
10.	Rubber Products	11	-	11	-	-	17.4	-	-	-	17.4	-
11.	Chemicals & Chemical Products	10	-	10	25.0*	-	19.0	-	-	-	20.3	-
12.	Products of Petroleum, Coal	1	-	1	-	-	20.0*	-	-	-	20.0*	-
13.	Non-metallic Mineral Products	5	-	5	-	-	15.0*	-	4.3*	-	12.5*	-
14.	Metal Industries	7	-	7	10.0*	-	35.0*	-	10.0*	-	17.1	-
15.	Machinery, excluding Electrical Machinery	3	-	3	7.5*	-	-	-	10.0*	-	8.3*	-
16.	Electrical Machinery and Appliances	30	3	27	18.1	30.0*	20.0*	-	18.0	17.5*	16.3	21.7
17.	Transport Equipment	6	1	5	18.7	15.0*	-	-	-	-	18.7	15.0*
18.	All others	15	-	15	17.7	-	-	-	-	-	17.7	-
	All Groups	333	54	279	25.5	17.1	14.5	13.7	11.4	17.5	23.4	15.7
	All Groups (excluding alcoholic beverages)				17.6	17.1	14.5	13.7	11.4	17.5	23.4	15.7
	Number of Tariffs Examined for Rates										329	54

Sources: Same as for Table 10.1

[a] 1 January 1962 [b] 31 December 1970 *Less than 5 items

credit was, of course, available to the manufacturing sector but the volume involved was small and the form it generally took namely, overdraft facilities, hardly enabled such credit to be a major source of industrial finance. The problem was aggravated by the fact that industrial financing required profitability appraisal, a different exercise altogether from that which the local bankers were familiar with (that is, appraising the credit-worthiness of borrowers or the quality of collateral). At best, manufacturers were able to obtain only working capital from the banks for their enterprises. However, there was one institution that had been providing some industrial credit for sometime, this being the Rural and Industrial Development Authority (RIDA), established in 1953 by the Government to promote economic and social development especially in the rural areas. As this was essentially a rural development institution, at least until 1965, its industrial activities had thus been very limited. For example, in 1958–60, the loans issued to industry amounted to only $205,400

Lock, *Household Saving in West Malaysia and the Problem of Financing Economic Development, op. cit.*, pp. 170–188.

or 6½ per cent of the total loans issued by the institution during the period.[41]

The Government had in fact given very early attention to filling this institutional gap. Even while the Industrial Development Working Party was formulating its recommendations in 1957, the Government was already negotiating with banks, insurance companies and other financial institutions to set up a new industrial credit institution.[42] However, this institution, which later became known as the Malayan Industrial Development Finance Ltd. (MIDFL), was not formed until 1960. The MIDFL was established with a wide range of functions, all oriented towards the various aspects of industrial financing.[43] Most important of these was that it would be a source of long-and medium-term loans for industries and a source of their equity capital. Its other functions covered the provision of issuing house services for capital flotation, the underwriting of share issues and the provision of financial advisory services.

The MIDFL was modelled along the lines of industrial development banks elsewhere. The bulk of its equity capital was held by private financial institutions, especially commercial banks. The Government held only 10 per cent of the shares of the Company up to 1970 while the Central Bank held another 10 per cent. Another 10 per cent was held by the International Finance Corporation, an affiliate of the World Bank. However, the Government's financial interest in the Company was far more than this. In 1963, it agreed to grant an interest-free loan of $37.5 million to the Company. Furthermore, MIDFL's line of credit from the World Bank which totalled $24 million, was guaranteed by the Government. As a result of these financial interests, including that of the Central Bank, the Government was able to exercise considerable influence in the formulation and implementation of MIDFL's policies. One aspect of this influence was reflected in the representation of the Government and the Central Bank on the Board of Directors of the Company. In the 11 financial years during 1960/61 to 1970/71, the Government's representative served as the Deputy Chairman of the Board for nine of these years; from 1969/70, the Governor of the Central Bank, which was represented on the Board all the time, took over the Chairmanship of the Board. In 1964/65, to facilitate policy determination and implementation, an Executive Committee of three was formed within the Board and on this, the Governor of the Central Bank sat as a member. In 1968/69, when the Executive Committee was enlarged to comprise five members, one of the two additional members was the Government's representative. The MIDFL could, therefore, be regarded as the major means through which Government policy on industrial financing was articulated.

[41] See Rural and Industrial Development Authority, Federation of Malaya, *Annual Report 1958*, p. 45 and Lembaga Kemajuan Kampong dan Perusahaan, Persekutuan Tanah Melayu, *Penyata Tahunan 1959*, p. 65, and *Penyata Tahunan 1960*, p. 69.

[42] Federation of Malaya, *Report of the Industrial Development Working Party, op. cit.*, p. 35.

[43] Malayan Industrial Development Finance Ltd., *Annual Report and Accounts, 1960/1961.*

One of the most important contributions of the Company to industrial development arose from the standard of its financing policy. From the start, the Company decided to operate purely as a commercial enterprise.[44] It, therefore, followed that financial assistance would be made available only to soundly-planned industrial projects. In other words, the projects had to satisfy the Company on technical, managerial, organizational and commercial grounds. The significance of this has often been taken for granted but when viewed against institutions like RIDA with its more liberal financing policies which resulted in a number of badly performing enterprises, the value of the Company's policy would then be better appreciated. In developing a sector where efficiency would ultimately be reflected in the cost of its products to domestic consumers and to their saleability abroad, the high standard required of project feasibility was both sound and logical. Indeed, this was possibly the only instance among the range of incentives and facilities available to investors which insisted upon sound conception and viability as a qualification for assistance.

In the field of industrial financing, the Government was interested particularly in two areas. The first concerned the volume of such financing and the second the direction to which such financing was to be supplied.

After the Company had been operating for about two years, the Government soon realized that its basic purpose was far from being fulfilled. For one thing, the resources of the Company comprised entirely of its equity capital which was small in relation to the task ahead; its called-up capital in 1962 was only $9 million. For another, the Government was only a minority shareholder and the composition of the policy-making Board of Directors did not quite reflect that considered appropriate for the Company's intended role as a development institution. In 1962, therefore, the Government invited a joint mission of the World Bank and the International Finance Corporation "to investigate the problems of industrial financing in the country and, in particular, to make recommendations regarding the role which should be played by MIDFL in meeting the need for finance and technical assistance of industrial enterprises and to make recommendations regarding the capital structure, the sources of finance and policies of MIDFL to enable it to fulfil the role recommended".[45] In the meantime, the influence of the public sector was enhanced by the participation of the Central Bank in the equity of the Company of $2½ million.[46]

The findings and recommendations of the joint mission determined the resources and hence, the financing capability of the Company to about mid-1970. This can be seen in Table 10.5. Briefly, the following steps were taken by the Company in the light of the recommendations of the joint mission:

[44] Malayan Industrial Development Finance Ltd., *Annual Report and Accounts, 1960/1961,* and *Annual Report and Accounts, 1961/1962,* p. 10.

[45] Malayan Industrial Development Finance Ltd., *Annual Report and Accounts for the Year Ended 31st March 1963,* p. 11.

[46] *Ibid.,* p. 10. This represents 25,000 shares of $100 each.

Table 10.5

Malaysia — Financial Resources of the Malaysian Industrial Development Finance Limited, 1961–71
($ million)

Year As At March 31	Called Resources				Uncalled Resources			All Resources		
	Equity	Government Loan	World Bank Credit	Reserves	Equity	Government Loan	World Bank Credit	Called	Uncalled	Total
1961	5.2	–	–	–	9.8	–	–	5.2	9.8	15.0
1962	9.0	–	–	0.1	6.0	–	–	9.1	6.0	15.1
1963	12.5	–	–	0.2	8.4	–	–	12.7	8.4	21.1
1964	15.0	22.5[a]	–	0.7	10.0	15.0[a]	24.0[b]	38.2	49.0	87.2
1965	15.0	22.5[a]	5.7[b]	1.4	10.0	15.0[a]	18.3[b]	44.6	43.3	87.9
1966	15.0	22.5[a]	17.6[b]	2.8	10.0	15.0[a]	6.4[b]	57.9	31.4	89.3
1967	25.0	37.5[a]	21.3[b]	2.6	–	–	2.7[b]	86.4	2.7	89.1
1968	25.0	37.5[a]	21.7[b]	3.6	–	–	2.3[b]	87.8	2.3	90.1
1969	25.0	37.5[a]	24.0[b]	5.8	–	–	–	92.3	–	92.3
1970	25.0	37.5[a]	24.0[b]	7.6	–	–	–	94.1	–	94.1
1971	34.0[c]	67.5[a, d]	24.0[b]	10.0	–	70.0[d]	–	135.5	70.0	205.5

Sources: Malaysian Industrial Development Finance Berhad, 2nd-11th Annual Reports.

[a] Under a loan agreement of 6 August 1963 with the Central Government which granted the Company an interest-free loan of $37.5 million.
[b] Under a loan agreement of 13 July 1963 with the World Bank which gave the Company a line of credit of US$8 million.
[c] Following resolution of 25 May 1970, 90,301 ordinary shares of $100 each were issued before 31 March 1971 at a premium of $10 per share.
[d] Under a loan agreement of 9 June 1971 with the Central Government which agreed to lend the Company a sum of $100 million at interest of 6¾ per cent annum. Up to 31 March 1971, the Company had drawn $30 million of this loan.

i) the issued capital was raised from $17½ million to $25 million, the allocation of the increase to be such that the shares held locally plus those of IFC should amount to about 51 per cent of the total issued capital;
ii) the acceptance of a long-term interest-free loan of $37½ million from the Government;[47]
iii) the negotiation of a line of credit from the World Bank, finally fixed at $24 million, and guaranteed by the Government.

As a result of these measures, the total resources of the Company increased from $15 million to $86½ million, excluding reserves generated from its operations.

In the middle of 1970, the Company entered into the next phase of resource expansion. The underlying reason was in anticipation of expanding demand for industrial financing following from the more vigorous pursuit of industrialization during the Second Malaysia Plan period. The issued capital of the Company was increased by $9 million in May 1970. On its part, the Government agreed in June 1970 to lend the Company a sum of $100 million within the next five years at a modest interest rate of 6¾ per cent per annum.[48] By the end of March 1971, the Company had drawn $30 million of this loan. In addition, by 1972, the Company had successfully negotiated lines of credit from a number of foreign institutions including the Asian Development Bank, totalling $76 million.

The other aspect on the supply side of industrial financing concerned the extent to which the MIDFL had disbursed its resources. This can be seen in Table 10.6. The total financing varied from one year to another. A substantial amount, $14.7 million, was made available in the year ending March 1965, the result of the prospect of a common market including Singapore. Disbursements of this size were not attained again until five years later. There were other years when the volume of financing was as low as $1.6—$3.7 million, as in years ending March 1962, 1964 and 1968 respectively. But financing provided by the Company showed very marked increases in the last two years of the review period, that is, $15.8 million in the year ending March 1970 and $27.7 million in the year ending March 1971. In other years, the volume of financing averaged $7.7 million a year.

How important are these in relation to known magnitudes of industrial financing? As can be seen in Table 10.6, the bulk of MIDFL financing took the form of long- and medium-term loans. Up to the year ending March 1971, the aggregate medium- and long-term loans amounted to $78.7 million or nearly 80 per cent of the total financing provided by the Company since its establishment. On the other hand, financing provided in the form of equities amounted to only $7 million or about 7 per cent of its total financing. The balance took the form of hire purchase contracts and investments in company debentures and in its subsidiary, the Malaysian Industrial Estates Ltd. In its first five years of

[47] The loan was repayable 15 years from the date of receipt of the loan in 15 equal instalments.

[48] The loan was repayable in 10 equal annual instalments from the end of 1976.

Table 10.6

Malaysia — Financing of Industries by the Malaysian Industrial Development Finance Limited
($ million)

Year As At March 31	Long and Medium Term Loans	Factory Mortgage Loans	Hire Purchase Contracts	Other Investments in Industries		Investments in MIEL[a]		Total Financing	
				Equities	Debentures	Share	Loan[b]	Amount	Increase
1961	2.10[c, d]	—	0.05	—	—	—	—	2.15	
1962	3.65[c, d]	—	0.12	—	—	—	—	3.77	1.62
1963	11.45[c, d]	—	0.16	—	—	—	--	11.59	7.82
1964	13.50[d]	0.07[d]	0.14[d]	—	—	—	—	13.71	2.12
1965	25.70	0.27	0.34	1.05	—	1.00	0.03	28.39	14 68
1966	32.74	0.52	0.45	0.32	1.77	1.00	1.00	37.80	9.41
1967	38.42[e]	0.72	0.41	0.69	1.98	1.00	1.00	44.22	6.42
1968	39.75	0.81	0.53	2.61	1.98	1.00	1.21	47.89	3.67
1969	44.10	1.41	1.46	3.52	1.98	1.00	1.90	55.37	7.48
1970	55.14	2.16	2.33	5.91	1.98	1.00	2.64	71.16	15.79
1971	78.66	2.38	4.20	7.03	0.98	1.00	4.64	98.89	27.73

Sources: Malaysian Industrial Development Finance Berhad, 2nd–11th Annual Reports.

[a] The Malaysian Industrial Estates Limited, a subsidiary company.
[b] Interest-free loan.
[c] Includes factory mortgage loans.
[d] Less provision for doubtful debts.
[e] Includes a short-term loan of $9.25 million.

operation, the Company's borrowers were mainly pioneer companies and it accounted for almost one-third of the loan capital raised by the pioneer companies.[49] No information on the broad identity of its clients has since been disclosed but some diversification of its clientele to include non-pioneer companies could be expected. The raising of equity resources had not been a problem to investors in this country. Equity shares of well-managed companies with sound prospects had always met with heavy over-subscription during the 1960's whenever they were offered on the market.[50] The concentration of the Company's resources in providing loan capital was therefore appropriate in the circumstances.

In 1970, an important development in expanding the volume of loan financing mainly for industries was initiated by MIDFL. Here, it took a leading role in forming consortium arrangements with commercial banks to provide loan financing for the larger industrial enterprises. In the two years to March 1971, MIDFL had organized a total of eight such consortium arrangements which made available $47.7 million.[51] It is interesting to note that in these two years, these collaborative efforts made available the equivalent of more than half of the loan financing provided by the Company in its 11 years of operation. It must be pointed out, however, that consortium financing was limited to very few large firms compared to the relatively many more that benefited from the smaller loans granted by the Company. Nevertheless, this development was of great significance to industrial financing as a whole. Firstly, the collaborative efforts enabled the vast resources of the commercial banks to be tapped for industrial purposes. Suitable industrial projects carefully assessed by MIDFL were presented to the banks for financing, thereby circumventing the problem of industrial project appraisal which most banks were not yet in a position to undertake. Secondly, the consortium arrangements spread out the risks to all its participating members and this was important since industrial financing was a relatively new activity for banks. Thirdly, the consortium arrangements in effect multiplied the potentiality of a given amount of MIDFL's resources. In other words, without the arrangement, a dollar of loan financing by MIDFL would have added only the same value to the total of loan financing but with a consortium of banks, a given dollar of MIDFL loan would draw out several other dollars from the banking system that would otherwise be unavailable for industrial purposes. The potential of this arrangement was thus immense.

[49] Malayan Industrial Development Finance Ltd., *Fifth Annual Report and Accounts for the Year Ended 31st March 1965*, p. 12.

[50] Since new share issues commenced to be a feature of the capital market, there was only one case of failure and one case of just full subscription, both of which were due to the depressed state of the market in 1964 and 1965. For more discussion on the market for new company shares see Lee Hock Lock, *Household Saving in West Malaysia and the Problem of Financing Economic Development, op. cit.*, pp. 219–222.

[51] Malaysian Industrial Development Finance Ltd., *11th Annual Report and Accounts for the Year Ended 31st March 1971*, p. 73.

In determining the *direction* of its financing activities, one of the major preoccupations of MIDFL was the needs of small-scale industries. Very early in its operation, MIDFL already recognized that small enterprises were handicapped by their limited access to private capital resources. Two facilities were thus introduced largely to assist these enterprises: i) the hire purchase facilities for industrial equipment and, ii) the factory mortgage finance.[52] The first facility provided finance for the acquisition of industrial machinery and repayment was on an instalment basis during the productive period of the machinery. The other facility made available loans for erecting standard factory units. Both facilities have continued. However, the volume of financing for both facilities remained very small; since the establishment of the Company, it was slightly over $4 million for the hire purchase facility for industrial machinery and less than $2½ million for the factory mortgage facility (Table 10.6). Taken together, they accounted for only over 6 per cent of total financing provided by the Company since it commenced operation.

The concern with the financial requirements of small industries was, in fact, strengthened by the Government's financial involvement in the Company. One of the motivations of the Government for granting the $37½ million interest-free loan was to enable the Company to give more emphasis to the financing of small enterprises. This task was acknowledged in the 1963 annual report of the Company.[53] However, the share of the Company's loans to small industries had been small. Some indication of this can be seen in a breakdown of the data on loan commitments by size (Table 10.7). It is true that in terms of the number of borrowers, the bulk comprised the small borrowers. For example, about half the total number of borrowers had loans of up to $100,000 each and if the individual loan limit were to be placed at $250,000, the proportion of such borrowers to the total number would be raised to about 70 per cent in each of the years ending March 1968 and March 1971. But far more significant should be the share of the small borrowers in relation to the total loan commitments. Loans of up to $100,000 each made up only 5.9 per cent of the total loan commitments in the year ending March 1968 and 5.5 per cent in the year ending March 1971. If all loans up to $250,000 each were considered, the share of these to the total loan commitments came to only 12½ per cent and 13 per cent in the years ending March 1968 and March 1971 respectively. However, the shares for loans in these categories had generally increased during the three financial years reviewed. But one thing is clear from this analysis. The bulk of the Company's loans had gone to the larger enterprises. It is interesting to see that by the year ending March 1971, more than three-fourths of the total loan commitments involved loans of more than $½ million each. The proportion was similar in the year ending March 1968 but was nearly 80 per cent of the total in the year ending March 1965.

[52] Malayan Industrial Development Finance Ltd., *Annual Report and Accounts, 1961/1962*, p. 11.

[53] Malayan Industrial Development Finance Ltd., *Annual Report and Accounts for the Year Ended 31st March 1963*, p. 12.

Table 10.7

Malaysia – Loan Commitments of the Malaysian Industrial Development Finance Limited by Size

Size of Loan ($)	Number of Loan Commitments as Per Cent of Total (Cumulative to End of March)			Amount of Loan Commitments as Per Cent of Total (Cumulative to End of March)		
	1965	1968	1971	1965	1968	1971
Up to 50,000	46.0	42.2	34.1	2.5	2.9	2.3
50,001 – 100,000	6.9	14.1	15.9	1.1	3.0	3.2
100,001 – 250,000	12.6	14.1	19.2	5.0	6.6	7.5
250,001 – 500,000	14.9	12.4	10.8	11.9	13.7	9.9
500,001 – 1,000,000	8.0	9.2	9.6	13.4	20.7	17.5
1,000,001 – 2,000,000	5.7	4.3	5.3	21.6	18.9	20.0
2,000,001 – 3,000,000	3.4	2.7	3.5	18.7	18.9	19.7
Above 3,000,000	2.3	1.1	1.6	25.8	15.3	20.0
Total	87	185	490	$40,666,000	$68,755,000	$209,013,000

Sources: Malaysian Industrial Development Finance Limited.

The difficulties of finding small borrowers with sound projects are well-known and so also the high cost of processing and servicing such borrowers. But the pattern that emerged seemed to suggest that the Company had given undue emphasis to the giant-sized loans. The disadvantages are only too obvious, notwithstanding the fact that the projects concerned satisfied all the Company's stringent criteria. Firstly, borrowers with projects sound enough to be able to borrow sums of $½ million or more from MIDFL should have no difficulty in getting access to other sources of funds. The recent development of consortium arrangements with banks should facilitate this and it would be in the interest of industrial financing for the economy as a whole to ensure that in future such large borrowers are diverted to this and other sources. It might even be useful to consider the concept of fixing a limit to the size of each loan. From Table 10.7 it can be seen that loan commitments of over $1 million had been substantial. The other obvious disadvantage in the pursuit of this policy of allowing exceptionally large loans is that it easily exhausts the resources of the institution. Thirdly, the effects on industrial growth generally of such a loan policy would be very narrowly confined. The only justification in this connection would be when such financing is made to enterprises that could stimulate the establishment or accelerate the growth of other related industries. But this was not evident.

Table 10.8 analyses the loan commitments in terms of the industry groups to which they apply. In the three financial years examined, it can be seen that the share of the loans going to the various industry groups had changed, in some cases quite significantly. These changes, however, should not be regarded as indicators of shifts in priorities of the Company concerning the types of industries to be encouraged. The Company had in fact never attempted to use its loan policy in a discriminatory manner. As pointed out earlier, the Government had not provided leadership on this matter and if it had done so, institutions that dispense credit such as the MIDFL would obviously have an important role. Nevertheless, among the nine industry groups specified (excluding those under 'Others'), five groups appeared to have obtained more loan facilities than others by the year ending March 1971. Among these were metal and engineering products, wood products, and, the textiles and clothings group, each with a share of 17–18 per cent of the total loan commitments. The other two groups had smaller shares, these being the chemicals group (10 per cent) and the non-metallic mineral products group (nearly 9½ per cent).

A development of some significance to particularly the small manufacturers was the decision of MIDFL to establish a subsidiary in 1964, the Malaysian Industrial Estates Ltd. (MIEL). It was found that one of the more obvious needs was a lack of suitable sites and factory buildings to meet the demand of the small and medium-sized industries. MIDFL felt that this problem could in part be met by setting up a subsidiary company to develop industrial estates.[54] Thus,

[54] Malaysian Industrial Estates Ltd., *1st Annual Report for the Period Ended 31st March 1965*, p. 8.

Table 10.8

Malaysia – Loan Commitments of the Malaysian Industrial Development Finance Limited By Industry Groups

Industry Group	Number of Loan Commitments as Per Cent of Total (Cumulative to End of March)			Amount of Loan Commitments as Per Cent of Total (Cumulative to End of March)		
	1965	1968	1971	1965	1968	1971
Food, beverages, tobacco	6.9	10.8	10.8	13.0	10.9	7.1
Textiles, clothings	9.2	11.9	11.2	12.7	12.3	17.1
Paper and printing	3.4	7.6	10.8	1.7	2.8	2.6
Leather goods	1.1	1.1	0.6	1.1	0.5	0.2
Rubber goods	5.7	7.0	7.3	18.6	12.0	5.2
Chemicals	4.6	2.7	5.5	8.6	5.1	10.0
Wood products	12.6	9.7	12.9	10.6	11.1	17.4
Non-metallic mineral products	6.9	5.4	5.5	15.8	16.6	9.4
Metal and engineering products	25.3	25.4	19.6	12.8	19.8	18.5
Others	24.1	18.4	15.7	5.0	8.8	12.5
Total	87	185	490	$40,666,000	$68,755,000	$209,013,000

Sources: Malaysian Industrial Development Finance Limited.

it provided a sum of $1 million for the establishment of MIEL. To fulfil its purpose, MIEL's primary function was to develop well-designed ready-made factories and to provide loan assistance to small industrialists to acquire these. The response was encouraging and further expansion of MIEL's resources was made possible by loans totalling $6 million from MIDFL at an interest charge of 6 per cent per annum.[55] By March 1971, $4.6 million had been drawn (see Table 10.6).

The activities of MIEL are shown in Table 10.9. Expenditures on the development of industrial estates slightly exceeded $3 million by March 1971 but growth of expenditures was relatively small from one year to another until March 1970. Between March 1970 and March 1971, the expansion was very sharp, amounting to nearly $2 million. Factory mortgage loans expanded more evenly and by March 1971 was about $3¾ million. In physical terms, MIEL had built a total of 153 factories with a floor area of 1.06 million square feet.[56] So far, MIEL's factories were located in only six areas, of which five were in West Malaysia (Petaling Jaya, Mak Mandin, Shah Alam, Larkin and Prai) and one in Sarawak (Bintawa).[57]

One important limiting factor to a more vigorous role by MIEL was the difficulties it encountered with some State Governments in getting suitable sites on reasonable terms.[58] This was part of the wider problem in which diversification and other development policies had been hindered by the constitutional powers of the State Governments on land matters, especially where the policies and administrative capabilities of the states lagged behind those of the Federal Government.

The activities of MIDFL and its subsidiary, MIEL, comprised one major element of the Government's policy on industrial financing. The other element was part of the larger task to widen and intensify the participation of the Bumiputras (the Malays and other indigenous peoples) in the field of commerce and industry. Since Independence, the wide disparity in incomes between the Bumiputras and the other racial groups had been one of the areas of concern of the Government and one of the steps considered crucial for narrowing this gap was to bring the Bumiputras into the main stream of commerce and industry. Various ways were devised and these formed the subject of intensive discussions in two economic congresses in recent years.[59] In the field of industrial

[55] The first loan of $1 million from MIDFL was granted in March 1967 and another $1 million loan was received in the 1967/68 financial year. In the 1969/70 financial year, a further loan of $4 million was granted. See Malaysian Industrial Estates Ltd., *4th Annual Report for Year Ended 31st March 1968*, p. 12 and *6th Annual Report for Year Ended 31st March 1970*, p. 28.

[56] Malaysian Industrial Estates Ltd., *7th Annual Report for Year Ended March 31, 1971*, p. 30.

[57] *Ibid.*

[58] *Ibid.*, p. 31.

[59] These are better known as the First and Second Bumiputra Economic Congresses held in 1965 and 1968 respectively. For a good summary of the decisions of these two Congresses,

Table 10.9

Malaysia – Major Operations of the
Malaysian Industrial Estates Limited
($ million)

Year (As at End of March)	Development of Industrial Estates	Factory Mortgage Loans	Total
1965	0.02	–	0.02
1966	0.17	0.19	0.36
1967	0.84	1.05	1.89
1968	0.78	1.35	2.13
1969	0.90[a]	2.28	5.31
1970	1.16[b]	2.92	4.08
1971	3.06[c]	3.74	6.80

Sources: Malaysian Industrial Estates Limited, 2nd–7th Annual Reports.

[a]Includes $0.10 million on land and development costs in Bintawa, Sarawak.

[b]Includes $0.36 million on land and development costs in Bintawa, Sarawak.

[c]Includes $0.51 million on land and development costs in Bintawa, Sarawak.

financing, the conversion of RIDA into the Majlis Amanah Raayat (MARA) was an important measure to ensure that Bumiputras would have larger and more effective financing facilities to join these two sectors. The improvement of industrial credit was one aspect of the policy but towards the latter part of the 1960's, direct Government participation in industries through institutions such as MARA gained considerable significance. This section will deal with only the first aspect while the second aspect will be the main subject of discussion in the last part of this chapter.

The limited impact of RIDA as a source of industrial credit up to 1960 was discussed earlier. There was little change in the situation since then to about 1964. One of the objectives of the reorganization of RIDA into MARA was to improve the flow of industrial credit to the Bumiputras. Table 10.10 sets out the volume of loans issued by MARA for the manufacturing and other sectors for the years 1965–70. Despite the fresh outlook of MARA, however, the amount

see Bank Negara Malaysia: *Annual Report and Statement of Accounts 1965*, p. 19 and *Annual Report and Statement of Accounts 1968*, p. 58.

Table 10.10

Malaysia – Majlis Amanah Raayat (MARA) and Financing of the Manufacturing Sector
($ '000)

Sector	Volume of Loans Issued							
	1965	1966	1967	1968	1969	1970	1965–1970 Amount	1965–1970 % of Total
Manufacturing Sector								
i) Processing of agricultural products	26	8	15	34	36	55	174	0.4
ii) Manufacturing	225	176	464	837	391	953	3,046	7.4
Total	251	184	479	871	427	1,008	3,220	7.8
Other Sectors								
Agriculture, forestry and fisheries	385	48	410	67	852	1,442	3,204	7.8
Mining and quarrying	13	22	3	–	30	–	68	0.2
Construction	1,208	763	1,770	3,382	3,613	2,407	13,143	32.0
Utilities	4	35	50	35	–	74	198	0.5
Commerce	944	465	728	1,650	1,656	2,102	7,545	18.4
Transport and communications	1,076	861	940	1,265	2,552	4,443	11,137	27.1
Services	153	135	363	537	512	816	2,516	6.1
Total	3,783	2,329	4,264	6,936	9,215	11,284	37,811	92.2
All Sectors	4,034	2,513	4,743	7,807	9,642	12,292	41,031	100.0

Sources: MARA, *Penyata Tahunan*, 1965–1970.

of credit it made available to the manufacturing sector had been small. In 1965–70, out of a total of $41 million of loans issued, industrial credit accounted for only $3.2 million or slightly less than 8 per cent. On the other hand, more than three-fourths of the total loans issued went to three other sectors, construction, transport and communications and, commerce. Finance was not a limiting factor however. In 1966–70, the estimated amount of funds actually transferred to MARA under the First Malaysia Plan was $50.9 million,[60] as against a Plan allocation of $70 million.[61] MARA obviously could not absorb the balance during the Plan period. The real constraints were the lack of knowledge, experience, expertise and capital on the part of the Bumiputras. These deficiencies were even more marked at the level of small enterprises. The intensification of direct Government participation in industries through MARA, as will be discussed later, was an attempt to compensate for this limited absorptive capacity of the Bumiputra community. The establishment of MARA also brought with it a new loan policy which combined credit with technical assistance to ensure success.[62] This resulted in a better utilization of loan resources than in the past. The problem of increasing the absorptive capacity of industrial credit by the Bumiputra community requires long-term measures and the lack of significant results will, in the meantime, have to be supplemented by other action.

4. POLICY ON INDUSTRIAL ESTATES

The increased and sustained Government spending on economic and social infrastructure since 1957 improved the environment for manufacturing. But many of these facilities accorded benefits to other sectors too. Among those that had a direct effect on the growth of manufacturing were the industrial estates. The discussion here will be restricted only to this category of industrial infrastructure.

Industrial estates have a relatively long history in Malaysia, going back to 1952 with the establishment of Petaling Jaya originally as a resettlement scheme. In the course of its development, the authorities had also planned for the town to provide specially allotted sites for industrial activities. It can be said that the industrial site as initially conceived for Petaling Jaya was more a project in response to considerations of town planning than one with industrial promotion as a basic objective. Nevertheless, this concept of developing special sites for industry prompted the World Bank mission of 1954 to recommend that the Government should undertake to provide factory space on such sites for rental or hire purchase to private investors.[63] Another consideration underlying this

[60] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 79.

[61] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 69.

[62] Majlis Amanah Raayat, *Penyata Tahunan 1965*, p. 7.

[63] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.* p.315.

recommendation was that industrial credit was virtually non-existent and so by making the sites developed by the Government available under the terms recommended, part of the credit gap could be filled.[64] The Industrial Development Working Party also accepted the principle that the Federal Government should take the initiative in acquiring and laying out areas for industrial operations but went further to suggest that it might be appropriate for the Government to bear the cost of acquiring and developing the land.[65] Indeed, it considered that the development of industrial estates was "a most promising field for direct Government action".[66] In its interim statement of industrial development policy in 1957, the Government acknowledged the importance of providing industrial sites but did not commit itself to the principle of subsidizing their development.[67] In a subsequent rationalization of the policy on developing industrial sites, the Government stressed that such a policy would assist industrialization in two ways: i) in establishing sites supplied with the basic utilities, the policy would reduce the problems facing new industries; and ii) through it, the delays often experienced in getting land for industrial and other purposes under the direct land alienation procedures would be circumvented.[68]

The process of establishing industrial estates, however, required more than unilateral action by the Federal Government alone. Under the Constitution, land matters come under the jurisdiction of the State Governments. Therefore, the success of any policy on industrial estates would also require co-operating and complementary measures by the State Governments and some local authorities. On its part, the Federal Government provided the motivating force by making available funds for the development of the sites. The importance given to this by the Federal Government may be seen in the amount of funds going into site development under the various development plans. From Table 10.11, it can be seen that the Federal Government had directed a substantial volume of resources to the development of industrial estates. Between 1956 and 1970, $55 million had been so utilized and this amount was more than double the sum originally allocated. However, the flow of resources for the development of industrial estates had shown signs of slowing down in the second half of the 1960's and the trend appeared likely to continue into the 1970's with the drastic reduction in the 1971–75 allocation to merely $4.4 million.[69] It is interesting to note that

[64] *Ibid.*

[65] Federation of Malaya, *Report of the Industrial Development Working Party, op. cit.*, pp. 31–32.

[66] *Ibid.*

[67] "Interim Statement of Industrial Development Policy", *op. cit.*, para. 8.

[68] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 3.

[69] On the other hand, the allocations for industrial sites have increased substantially for East Malaysia, these being $12.8 million for Sabah and $6.3 million for Sarawak for 1971–75, compared with estimated expenditure of only $4.3 million for these two states together in the previous five years. See Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 179.

Table 10.11

West Malaysia – Public Development Expenditure on Development of Industrial Estates
($ million)

Period	Public Development Expenditure on Industrial Estates			
	Plan Allocation	Actual	Percentage Share in Total for Industrial Development	
			Plan Allocation	Actual
1956–60	n.a.	11.1	n.a.	91.7
1961–65	7.5	24.5	27.8	41.5
1965–70	14.0	19.3	12.7	20.9
Total	21.5	54.9		

Sources: 1) Malaysia, *First Malaysia Plan, 1966–1970.*
2) Malaysia, *Second Malaysia Plan, 1971–1975..*
n.a. = not available

the actual expenditures for the development of industrial estates made up a major part of the financial allocations for industrial development, particularly in 1956–65. In 1956–60, actual expenditures on industrial estates undertaken by the Federal Government amounted to 92 per cent of the total public development expenditures for industrial development while in 1961–65, these constituted 42 per cent.

The financial resources were made available to the State Governments in the form of loans. The task of developing the sites and administering them rested with the State Governments or the state economic development corporations of those states or the municipality, as the case may be.

By 1970, West Malaysia had 12 industrial estates with a total area of about 6,734 acres.[70] These were located in six states, of which five states acounted for the bulk of the country's industries. Table 10.12 provides some of the key data on these industrial estates. The estates varied in size, from an area of 105 acres in Tupai to 2,252 acres in Prai. Land on these estates had a lease of generally 99 years although in Johore the lease was shorter at 60 years. These industrial estates were all provided with the basic utilities such as water and electricity. Electricity rates applied uniformly for estates in all states (except Perak) where the supply was provided by the National Electricity Board; in

[70] This figure excluded the estate in Bagan Serai, the acreage of which was not known yet at the time of writing.

Table 10.12

West Malaysia – Industrial Estates as in 1970

State/Area	Industrial Area (acres)[a]	Period of Lease (Years)	Premium		Annual Quit Rent Per Acre	Developing Authority
			Per Sq. Ft.	Per Acre		
Selangor						
Petaling Jaya	700	99	$1.00	$43,560	$500	Selangor State Development Corporation
Batu Tiga	1,600	99	80 cts. to $1.00		$786	Selangor State Development Corporation
Perak						
Tasek	370	99	i) 50 cts. ii) 40 cts. iii) 35 cts.	i) $21,780 ii) $17,424 iii) $15,246	$120	Municipality of Ipoh
Kamunting	581	99	20 cts.	$8,712	$30	Perak State Government
Menglembu	221	n.a.	5.7 cts.	$2,500	n.a.	Municipality of Ipoh
Tupai (Taiping)	105	n.a.	n.a.	n.a.	n.a.	Taiping Town Council
Penang						
Prai	2,252	99	55 cts.		$695	Penang State Government
Mak Mandin	320	99	50 cts.		$431	Penang State Government
Bagan Serai	n.a.[b]	99	i) 90 cts ii) 70 cts.		$695	Penang State Government
Johore						
Jalan Larkin	154	60	40 cts.		) $200 (light industries)) $300 (medium industries)) $400 (heavy industries)	Johore State Government
Tampoi	146	60	40 cts.		) $200 (light industries)) $300 (medium industries)) $400 (heavy industries)	Johore State Government
Negri Sembilan						
Senawang	285	99	11.5 cts	$5,000	$800[c]	Negri Sembilan State Government

Sources: 1. Federal Industrial Development Authority, *1968 Annual Report.*
2. Malaysian Industrial Development Finance Limited, *Sites for Industry.*
3. Federal Industrial Development Authority, *Malaysia Industrial Digest*, Vol. 4 No. 1, (First Quarter, 1971)

[a] These are based on the latest revised figures as known in 1972.

[b] The estate covers 1,180 acres and will be used for industrial, commercial and residential purposes.

[c] For just 5 years and subject to revision in later years.

Perak, where electricity supply was from the Perak River Hydroelectric Power Company Ltd., a different set of rates applied.[71] The water rates showed greater variation between estates and ranged from $1.00 to $1.70 per 1,000 gallons.[72] In addition, access roads and other communications facilities formed part of the features of each estate. The prepared sites were sold to industrialists on the payment of a premium which varied from one industrial estate to another and in some cases, even within an estate itself. The premium was fixed at a level usually to cover the cost of site development and in instances where non-state land was involved, also the cost of acquiring the land. Some of the premia were as low as 6 cents per square foot (Menglembu) while others were as high as $1.00 per square foot (Petaling Jaya). A quit rent, which was also variable among the estates, was levied each year.

Other developments enhanced the role of the industrial estate as a promotional instrument. As discussed earlier, MIDFL had long established a loan facility to assist industrialists to finance their factories. Furthermore, its sub-

[71] For a list of the rates charged by these two authorities, see Federal Industrial Development Authority, "Power, Water and Telephone Rates For Industry", a booklet issued for information of industrialists.

[72] *Ibid.*

sidiary, the MIEL, had built ready-made factories on the industrial estates themselves to facilitate their acquisition by particularly the small and medium-sized enterprises. Recently, the decision to intensify the development of export-oriented industries involving the assembly and processing of imported component parts introduced a new feature to the traditional industrial estates. Thus two industrial sites were developed, Bayan Lepas and Sungei Way, which were also accorded the status of free trade zones to facilitate the operation of industries located in them.

The industrial estate had certainly become an important means of facilitating industrial growth in West Malaysia in the 1960's. Most of the new industries were located in these estates and they constituted a strong force in determining industrial location and dispersion. In recent years, however, the Government had sought through fiscal incentives to encourage the establishment of industries in areas outside of the industrial estates already set up. But it appeared that the dispersion incentives would have been more fruitful if steps had been taken first to establish industrial estates in the 'development areas' or the 'designated areas' for which the incentives applied. In this connection, it must be pointed out that the large reduction in financial allocation for industrial site development in West Malaysia in 1971–75 would severely restrict the establishment of such sites.

Another aspect that required some attention concerned the virtual lack of co-ordination in the development of industrial estates in general. Because of the Federal-State division of powers, there had not emerged an effective body that could lay down appropriate policies for all industrial estates, existing or new, that would take account of the individual interests of the states as well as the overall needs of the economy. Thus, in 1966–68, the Federal Government found that several industrial estates had been established "with insufficient regard to probable demand for the facilities", thereby resulting in wasteful use of resources.[73] The Federal Government's influence in such circumstances could only be to withhold financial assistance and this it did.[74] But there was nothing to prevent the states from turning to other sources of finance. Furthermore, it is not just the primary decision to establish industrial estates that posed a problem. Different industrial estates have different 'attracting' power and there is much that could be done at the Federal level to prescribe some 'compensation' in the various state policies so as to ensure a more balanced and more equitable distribution of industries among the industrial estates. A lasting solution to these problems must necessitate some voluntary surrender of state sovereignty on these matters.

5. PUBLIC SECTOR PARTICIPATION IN INDUSTRIES

In the review of the Government's industrialization strategy in the last chapter, it was pointed out that participation of the public sector in the establishment of industries, either by itself or jointly with others, had become an important

[73] Malaysia, *Mid-Term Review of the First Malaysia Plan, 1966–1970, op. cit.* p. 82.

[74] *Ibid.*

aspect of the industrial policy of the late 1960's. This section will attempt to analyse this aspect of public policy.

Public sector involvement in the establishment of industrial enterprises actually started much earlier than the late 1960's. As seen in Chapter VII, one such case was the direct financing by the Government of a pineapple cannery in the early 1960's. Another example was equity participation in a steel mill (the Malayawata Steel Ltd.). Even earlier were some industrial projects established and directly managed by RIDA in the 1950's and 1960's.[75] Among the notable ones were the RIDA rubber factory (a processing plant for smallholders) in Grisek, the RIDA East Coast Textile Centre (which functioned basically as a supplier of inputs, credit and research information to weavers and as a training facility), and the RIDA boat yard (boat building and repairs).

The investment in the pineapple cannery, as noted earlier, was prompted largely by deficiencies in the existing private canning facilities and it appeared only to be an ad hoc solution to a problem and not a major policy shift concerning direct Government participation. The rationale for participation in the steel mill was to ensure some Government influence in the policies of a basic industry and again it did not reflect any departure from the principle of leaving industrialization to the private sector.[76] On the other hand, the motivations underlying the direct activities of RIDA were different – they in fact already contained the rationale which was to be the basis for the large scale public sector participation in setting up industries beginning from the late 1960's. In justifying the directly managed or controlled projects, RIDA stressed in its 1959 Annual Report that they were intended to improve the economic position and incomes of the Malays and that they would continue to be under direct RIDA management "until they are sufficiently and firmly established to be hived off as self-supporting industrial undertakings under Malay ownership and management".[77]

This basic philosophy for public sector participation in industries had not changed. What had changed was the strength of purpose in the pursuit of this philosophy. The directly managed industrial activities of RIDA initiated in the

[75] For more details on these projects, see Rural and Industrial Development Authority, Federation of Malaya: *Annual Report 1958*, pp. 8–9 and 12–13; *Annual Report 1959*, pp. 4–5, and 9–10 and *Annual Report 1960*, pp. 8–9 and 14–17.

[76] The manner with which the Government took up equity participation in Malayawata Steel Ltd. is also interesting. One of the conditions for granting pioneer status to the steel mill was that 51 per cent of its share capital should be held by Malaysians. With the separation of Singapore, the mill was not able to comply with this condition. Because of the Government's interest in the mill as a basic industry, it thus seized the opportunity presented by the circumstances and took over $3.45 million of the shares held by non-Malaysians. This was a step prior to buying more shares in the mill to secure representation on its Board of Directors. See speech of Minister of Commerce and Industry during the debate in Parliament on the *Development (Supplementary) (No. 1) Estimates 1966*. During 1966–70, the Government invested another $4.5 million in the company. See Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 180.

[77] Rural and Industrial Development Authority, Federation of Malaya, *Annual Report, 1959*, p. 4.

1950's were not only small in number but could hardly be considered as commercial successes. Moreover, the management of some of them left very much to be desired. In the meantime, there was mounting pressure on the Government to improve the economic position of the Malays and the other Bumiputras, particularly in the field of commerce and industry. In the 1960's, two economic congresses were held to clarify the problems underlying the limited participation of the Bumiputras in commerce and industry and to find solutions for them. From a close examination of the resolutions passed in these two congresses, it can be seen that their problems concentrated very largely in three basic areas: i) capital deficiency; ii) lack of entrepreneurship and skills; and iii) lack of opportunities.

For any significant increase in Bumiputra participation in industry, the constraints in these three problem areas would have to be effectively surmounted. The earlier discussion on industrial credit suggested that availability of credit alone was not enough and hence MARA's loan facilities had been used only in a limited manner. On the other hand, it was realized that participation by the public sector in establishing industries would offer a means by which these constraints could be simultaneously overcome without compromising on the basic objective of Bumiputra participation. Furthermore, besides assuring the Bumiputra community of a fair share of the ownership of industrial activities (even if these were to be held in trust for them for the future), industries initiated by the public sector could provide employment opportunities for the Bumiputras. In the past, only a small number of Bumiputras had found employment in industries. (Table 9.11.). Above all, these industries would also afford them with training opportunities in and exposure to all levels of industrial management in the process. The latter would greatly assist the development of an entrepreneurial and managerial class among the Bumiputras, a necessary condition for the long term and sustained growth of Bumiputra participation in industry. Under the pressure of the circumstances, therefore, a policy providing for industries to be established by the public sector naturally appeared very attractive. Moreover, such a policy has the further advantage in that it could be applied in both a quantitative and a selective manner. It is thus not surprising that the Government decided to employ this means in the late 1960's and under the Second Malaysia Plan period.

As the initiative of the public sector in industrialization has been closely associated with racial welfare, the economic significance of this policy measure often tends to be overlooked or underestimated. Apart from improving the position of the Bumiputras, one outcome of this policy measure that could be expected would be faster overall industrial development to the extent that its implementation would result in additional industrial activities. For one thing, the entry of the public sector into industry would enlarge the supply of entrepreneurship in the economy. The significance of this is enhanced where entrepreneurial activities have not been very substantial, as in Malaysia. Moreover, there was hardly any tangible evidence to suggest that participation of the public sector in industries had reduced the investment opportunities open to non-Bumiputra capital. With few exceptions, the field of industrial investment

continued to remain open to capital from all sources. Concerning these exceptions, the Government had so far used the policy of embargoing investment in certain industries only in a very limited manner. For example, in January 1972, the Government revealed that it had placed a six-month embargo on entry into 18 industries in order to give exclusive consideration for participation by Government and Bumiputra organizations.[78] These organizations were MARA, the National Corporation (PERNAS), the state economic development corporations (SEDCs), the Malay Chambers of Commerce and other Bumiputra organizations. Some of the embargoed industries were concerned with the following products: tapioca chips and pellets, integrated timber projects, limestone complex, rubber gloves, tapioca starch, cashew nuts, sandlime bricks and laminated parquet. The Government, however, intended to extend the list should more industries be identified suitable for these organizations. In any case, even with the further extension of this list, it can be argued that under present circumstances, its effects on private investments would be diversion rather than restriction since possibilities in other industries remain open and moreover, are numerous because of the still relatively early stage of industrialization. The embargo could even provide useful pressure to compel private investors to be more diligent in looking for the less obvious but viable industries.

However, there is one disadvantage that could arise from reserving certain industries for direct public sector participation. Although the embargo period had been specified as six months, this is not a date-line for the establishment of the industries concerned. There could then be considerable delays for a variety of reasons. To the extent that the delays are significantly longer than what it would take for private capital to bring a project to fruition, the economy would be the loser as industrialization would be slower. Much would, therefore, depend upon the dynamism and efficiency of the organizations that decided to take on the projects.

The policy of providing for public sector participation in the establishment of industries had largely been implemented through specialized institutions. Basically, the Government provided financing to these institutions in the form of a grant, loan or equity capital or a combination of loan and equity. As one of the earliest institutions through which the Government implemented its policy of industrial participation, MARA was provided with direct allocation from the development budget. In 1961–65, MARA (and its predecessor, RIDA) received $10.5 million for *all* its activities and in 1966–70, $50.9 million (as against an allocation of $70 million); in 1971–75, $100 million had been earmarked for it. In November 1969, the National Corporation (PERNAS) was incorporated with corporate status, and it also has as its basic objective the widening of Bumiputra participation in commerce and industry. The Government provided $5 million of its paid-up capital of $11¼ million, the rest being subscribed by the Central Bank, the Bank Bumiputra, the state economic development corporations of

[78] See reply of the Deputy Minister of Finance to questions raised in Parliament on 24 January, 1972.

Pahang, Perak and Selangor and the Lembaga Urusan dan Tabong Haji. In addition, the Government had made available to it a loan of $5 million and, for the Second Malaysia Plan period, another loan of $100 million. The third group of institutions involved in implementing the above policy comprised the state economic development corporations (SEDCs) of 10 of the 11 states in West Malaysia. The SEDCs undertook various types of development activities ranging from housing and land development to industrialization. Capital for these came from state sources.

On the other hand, lending or investment of funds by the Government directly in industrial enterprises had been few. In March 1971, the Government sought Parliamentary approval for equity participation in or loans to three industrial enterprises. Decisions to participate directly in these enterprises were, however, planned or made before 1971 and Parliamentary approval was a mere formality. These direct financing activities were $9 million to the Pineapple Cannery of Malaya Ltd. as equity (for the setting up of its second cannery), $3.5 million to the Sharikat Malaysia Explosives as equity capital and, $300,000 as equity capital and $300,000 as loan to the Batik and Handicraft Company.[79] Earlier instances of direct financial participation were fewer, the major ones as mentioned before being the first cannery of the Pineapple Cannery of Malaya Ltd. and Malayawata Steel Ltd.

While these various means employed might give a rather satisfactory impression that a concerted and vigorous attack was at last being mounted on the problem of low Bumiputra participation in industry in particular and, industrial development in general, a closer examination however revealed that the approach as a whole lacked central direction, co-ordination and clear division of labour. The result of such a situation would lead to, among other things, a less than efficient use of the already scarce factor, namely, managerial and entrepreneurial resources of both the Bumiputras and the Government as well as the limited available funds.

The lack of direction from a central point is becoming more evident. One obvious effect was an increase in the number of institutions, each having overlapping functions. Around 1968, the Government modified its policy of leaving industrial development entirely in the hands of the private sector. Under this modified policy, the Government made known its intention to use MARA to establish and control, either by itself or jointly with private investors, selected industrial enterprises.[80] As a result of this policy modification, MARA established a total of nine industrial enterprises between 1968 and 1970.[81] These are

[79] Approval was also sought for direct equity and loan participation in two non-industrial enterprises: the Malaysian International Shipping Corporation ($2.1 million as equity capital and $43.9 million as loans) and Malayan Banking Bhd. ($33.7 million to purchase 22½ million shares to enable the Government to have controlling interest). See speech of Deputy Minister of Finance in Parliament on motion authorizing direct Government participation in these enterprises on 8 March 1971.

[80] Malaysia, *Mid-Term Review of the First Malaysia Plan, 1966–1970, op. cit.*, p. 79.

[81] This included a timber complex industry, the Sharikat Kebangsaan Kayu Kayan Sendirian Berhad, Jengka Triangle, which was actually established in 1967.

shown in Table 10.13. In these nine enterprises, MARA invested as equities and loans an estimated sum of over $9 million by 1970. The total authorized capital of these nine enterprises amounted to slightly over $48 million. However, the range of industries covered was quite limited and was confined to four industry groups: food manufacturing (including animal feedstuffs); textiles; garments; and, wood and wood products. While some experienced losses and initial teething troubles (Table 10.13), the overall picture was one in which some substantial investments had been made. It is still too early to judge the efficiency of these industries and even the viability of a few.

In both the Bumiputra economic congresses, a resolution was passed urging the Government to establish a national corporation to undertake commercial and industrial activities, including wholesale business and external trade. Thus in November 1969, PERNAS was incorporated. Towards the end of 1971, it had set up 10 subsidiary companies, one of which, the Johore Cement Sdn. Bhd., was a manufacturing concern.[82] Besides these subsidiary companies it had invested in other companies engaged in a number of industrial activities such as ship-building, electron[illegible], salt and chemical products. While participation in manufacturing was only one of a number of activities of PERNAS, its involvement here brought it into a common area of endeavour with MARA. In this, there was no clear line of demarcation between the activities of MARA and those of PERNAS. It is interesting to note that this partial duplication of the activities of PERNAS with those of MARA was not a matter of unanimous agreement among all the parties concerned with formulating the policies and activities for PERNAS. The Working Committee set up by the Government in December 1968 under the Chairmanship of the Governor of the Central Bank to study the question of establishing PERNAS was of the view that the direct investment function of MARA should be transferred to the proposed corporation.[83] The principal reason advanced by the Working Committee was that MARA, being a statutory body, had to depend on the Government for its funds, either in the form of grants approved by Parliament or loans. It pointed out that there were some companies established by MARA which were not likely to become viable "because of a lack of funds which MARA is not certain of providing and because also being small they need a certain degree of subsidization".[84] It also recommended that the existing direct investments of MARA be taken over gradually by the proposed corporation. Furthermore, the Committee felt that the means by which MARA obtained its funds could also

[82] The others were PERNAS Construction Sdn. Berhad (civil engineering, building activities), PERNAS Trading Sdn. Berhad (import/export, distributor), PERNAS Properties Sdn. Berhad (real estate), PERNAS Engineering Sdn. Berhad (mining), PERNAS Securities Sdn. Berhad (investments), Malaysia International Consultant Sdn. Berhad (engineering and construction consultant), Malaysia Nasional Insurance Sdn. Berhad (insurance), Malaysia Off-shore Mining Sdn. Berhad (mining) and Kontena Nasional Sdn. Bhd.

[83] See Malaysia, *Report of the Working Committee on the Establishment of a Proposed National Corporation*, Kuala Lumpur, 1969 (mimeographed), p. 11.

[84] *Ibid.*

Table 10.13

West Malaysia – Industrial Enterprises Established by the Majlis Amanah Raayat (MARA) by End of 1970

Name of Enterprise	Year of Establishment	Nature of Activities	Capital: Authorized ($ '000)	Capital: Paid-up by MARA ($ '000)	Employment (Number of Employees)	Planned Production	Remarks
1. Sharikat Kebangsaan Kayukayan Sendirian Berhad, Jengka Triangle	1967	Timber-logs	5,000 (1967) 30,000 (1969)	459 (1968) 30,000*	1,200	35,000 tons in first year and 70,000 tons in second year	The logging area is 4,200 acres. A participant in the venture is Canadian Transworld Technical Services Ltd.
2. Sharikat Kulitkraf Sendirian Berhad, Petaling Jaya	February 1968	Leather products e.g. bags, shoes, others	2,000	1,200	125 (250 expected by 1971)	50–200 pieces of leather goods a day	Had substantial orders: 120,000 pairs of footwear for Ministry of Defence in 2 years. 5,000 pairs of shoes for National Electricity Board before end of 1970. Sales in 1970 expected to be $3 million. At end of 1970, MARA agreed to increase its capital by $0.85 million, of which $0.48 million was to be in form of 15 year loan with interest of 6½ per cent.
3. Sharikat Jelatek Sendirian Berhad Petaling Jaya	May 1968	Batek shirts, handkerchiefs, neck ties and non-batek shirts	250	185	50 employees 50 contractors	20,000–120,000 batek shirts, 20,000–60,000 of other items	Made a profit in 1970.
4. Batek Malaysia Sendirian Berhad, Petaling Jaya (relocated at Kampong Dato' Keramat)	June 1968	Rolled batek materials, made-up batek goods	200 (1968) 600 (1970)	190 (1968) 590 (1970)	50 (in 1969)	100,000–200,000 yards a year (1968, 1969); 240,000 yards after capital increase, rising to 500,000 yards in 3 years' time	MARA provided additional capital of $400,000 in 1970 to write off part of the losses incurred since establishment. Factory site also changed.
5. Sharikat Perusahaan Kayu Sedia, Kuala Lumpur	July 1968	Timber processing	200	200	77	6,000–11,000 tons of processed timber	*Market:* Government Departments, building contractors, furniture industry.
6. Sharikat Mawar Sendirian Berhad, Petaling Jaya	September 1968	Bread	80	80	25	3,000 loaves a day	*Market:* MARA Institute of Technology, Hospital, College of Agriculture, the armed forces and coffee shops.
7. Sharikat Ubiyu Malaysia, Kuantan	September 1968	Tapioca flour, pellets, chips, starch and glucose	2,000	1,000 (ordinary shares) 900 (debenture) 928 (loan)	58	6,000–6,750 tons of tapioca products	Production commenced in April 1970. Company experienced loss in 1970.
8. Perbadanan Pemasaran Batek Bumiputra Berhad	October 1968	Supply of white cloth, dyestuff and tinsels to batek and songket makers and marketing their output; also marketing for Batek Malaysia Sendirian Berhad	5,000	900 (1968) 198 (from batek makers)	n.a.	n.a.	By 1970, the Company still encountered problems such as failure of batek makers to supply within agreed period; different pricing by batek makers for sales to public and to the Company; lack of knowledge in improving the quality of the batek supplied.
9. Sharikat Kima Berhad, Kajang	September 1969	Textiles	8,000	4,000 (of which MARA's share was 2,800)	300 (initially)	10–20 million yards a year	A joint venture with Textile Corporation of Malaysia. Rotating capital assisted by MIDFL to extent of $2 million and overdraft facilities from 2 banks of $3½ million.
Total			48,130	9,440	1,935		

Sources: Compiled from: 1. MARA, *Penyata Tahunan, 1968*, pp. 4–7.
2. MARA, *Penyata Tahunan, 1969*, pp. 6–11.
3. MARA, *Penyata Tahunan, 1970*, pp. 11–30.

*Allocated
n.a. = not available

place limits on the managerial and technical staff required by it to expand its activities.[85] To merge the direct investment activities of MARA with the proposed corporation, the Committee recommended that MARA be one of the original subscribers to the capital of the corporation and that part of MARA's share in the subscribed capital of the corporation be the value of the investments already made by MARA in the various enterprises.[86]

However, the proposed exercise in merger never materialized. MARA even stayed out of the group of subscribers. The reasons are not hard to find. Firstly, MARA could quite naturally be expected to oppose such a move as it would mean a curtailment of a recently-established major activity and hence, a loss of influence. PERNAS, on the other hand, considered that direct investments in industries would have to be part of its multiple activities in order to lend meaning and influence to its existence as a national corporation to further Bumiputra interest in commerce and industry. Secondly, the rationale provided by the Working Committee to bring the direct investment function of MARA under PERNAS did not appear convincing when the Government was already fully committed to expand Bumiputra participation in industries and this was more so in the situation prevailing after the racial disturbances of May 1969. In other words, no matter what the nature of the means for getting funds, it was inconceivable that the Government and Parliament would find it fit to place obstacles in the flow of resources to MARA, provided that it could do the job. MARA was convinced that it could.

The problem of reorganizing the whole approach to direct investments by the public sector was further complicated by the initiative of the State Governments. From about the middle of the 1960's, the Governments of the various states in West Malaysia took the initiative to set up their own state economic development corporations (SEDCs) which are owned, managed and controlled by them. The philosophy behind the SEDCs is that the exploitation of natural resources of the state and the development of land for housing and industrial purposes should be the joint responsibility of the state and the private sector and not of the latter alone as in the past. Therefore, with their establishment, activities such as prospecting and mining, housing development and the establishment of industrial estates, became the major preoccupation of the SEDCs. This can be seen in Table 10.14 which sets out the major activities of the SEDCs of 10 states in 1970/71. However, the SEDCs of some states were more enterprising than others and these had even branched out into establishing or investing in directly productive activities like manufacturing. These were the SEDCs of Trengganu, Kelantan, Negri Sembilan and Penang. What is not apparent, since data on these were limited, is that the SEDCs operated under very difficult conditions. An observation made by a UNIDO industrial development mission

[85] *Ibid.*

[86] *Ibid.*, p. 14.

Table 10.14

West Malaysia – State Economic Development Corporations and their Major Activities in 1970/1971

State Economic Development Corporations	Major Activities	Remarks
Selangor (established in 1964)	1. Housing development 2. Business premises 3. Industrial estates 4. Mineral prospecting	Major activity
Trengganu (established in 1965)	1. Land development projects for oil palm, rubber 2. Modernization of fishing industry including fish canning and food procesing industries 3. Management of rest houses	
Kelantan	1. Hotel and business premises 2. Housing development 3. Reconstruction of infrastructure in Kota Bahru 4. Veneer processing factory 5. Tuna fishing industry and fish fertilizer factory 6. Rice milling 7. Textile weaving factory 8. Tapioca planting and processing	
Negri Sembilan	1. Sugar industry 2. Industrial carbons industry 3. Integrated timber complex 4. Passion fruit juice industry 5. Integrated poultry breeding industry 6. Mineral prospecting	Through subsidiary
Malacca (established in 1969)	1. Timber extraction 2. Industrial-cum-housing estate 3. Free trade zone	
Perak (established in 1967)	1. Housing development 2. Prospecting for tin	Major activity
Pahang	1. Business premises 2. Housing development	
Penang	1. Industrial estates and free trade zones 2. Electronics industry 3. Mushroom project	
Kedah	1. Business activities earmarked for Bumiputras 2. Housing development	
Johore	1. Mining silica	

Sources: 1. Bank Negara Malaysia, *Annual Report and Statement of Accounts 1971*, p. 95.
2. "The State Economic Development Corporations – Progress Report" in *The Sunday Mail*, 12 March 1972.

to Malaysia in January 1972 indicated that with few exceptions, the SEDCs were lacking in finance and badly in need of suitable personnel.[87]

The part played by some SEDCs in establishing industrial enterprises should also be closely examined. Apart from the strain these activities placed on the already meagre resources of these SEDCs, both human and financial, the possibility would also have to be considered that the narrow interests of the states concerned would feature very importantly in their choice of enterprises. And these choices could come into conflict with the larger interest of the economy. There is no authority at the moment which could lay down clear and effective guidelines for such operations of the SEDCs. However, dealing with this particular problem would not be easy as any means to achieve some measure of co-ordination and consistency is likely to touch on the sensitive issue of state autonomy in one way or another. From this standpoint, the full and utmost co-operation of the individual State Governments is essential.

Besides these institutions, the Government itself had undertaken direct investments in industries. Some of these were with the objective of establishing enterprises as, for example, the pineapple canneries and the ammunitions factory while others involved equity participation to provide for Government influence in the industries concerned. It is in the first category that unusually large demands are made on the resources of the Government, for these include entrepreneurial and management skills besides the mere provision of finance. The second category is less demanding and after subscription to the equity capital of the enterprise, the Government could meet its objective by providing a senior civil servant to represent it on the policy-making board. In view of the fact that entrepreneurship and managerial talents are scarce within the Government sector and that there already exists specialized institutions controlled by the Government which are directly establishing new industries, the present policy providing for the Government to also undertake such activities needs to be reviewed. It would appear logical and desirable for all future activities of the Government relating to establishing and operating new industries to be transferred to the specialized institutions, whatever the ultimate form these institutions take but with one important exception. Where it is in the public interest for the Government to own these, there should be provision for such.

It is clear from these developments that what is lacking is a strong central authority to bring about greater specialization of functions of the various bodies and, in particular, the clear allocation of responsibility for the establishment and management of industries. The task of setting up and managing industries, as pointed out before, involves the provision of capital and the supply of managerial skills and entrepreneurship, all of which are available only in limited quantities where the Bumiputras are concerned. The present approach of carrying out the policy of direct participation in industries by the public sector has the built-in possibility of dispersing these limited factors of production. Thus

[87] E.L. Wheelwright, *UNIDO Industrial Development Mission to Malaysia – Draft Report*, Kuala Lumpur, 1972 (mimeographed), p. 24.

much less could be achieved in terms of economies in the use of the available resources. Moreover, with different organizations operating in the same area, there could be wastefulness from rivalry and from investments that have been dictated by the narrow interests of the individual organizations.

Finally, the case for a strong co-ordinating body can be supported from another viewpoint. The increasing encroachment of the public sector into a sphere of activity that was hitherto the preserve of private enterprise inevitably must generate some measure of uncertainties and confusion among private investors. Much of these can be dispelled if a strong body as such exists which could give out clear directions on the scope and intention of public sector involvement in direct industrial investments. The private sector should then be better able to find its role in the future industrial environment. And overall industrial development would be faster.

CHAPTER XI

THE MANUFACTURING SECTOR – OTHER POLICIES TO ESTABLISH A CONDUCIVE ENVIRONMENT FOR INDUSTRIAL GROWTH

1. INTRODUCTION

The last two chapters have dealt with public policies that had a more direct and immediate impact on industrial growth. There is yet another category of policies which should also be considered. These policies, though less obvious, were nevertheless relevant for the establishment of a favourable environment for industrial growth. This chapter will deal with four major groups of policies in this category. These policies relate to the following:

i) expanding and improving the supply of industrial skills and management resources;
ii) improving the flow of technical services to industry;
iii) enhancing the attractiveness of the country for industrial investment;
iv) developing an effective machinery for formulating and implementing the Government's industrial policies.

Policies in these four areas have been evident during the review period. But in some cases these were inadequate, inappropriate or tardy in their implementation. In others, they had made some positive contributions to industrial growth.

2. EXPANDING AND IMPROVING THE SUPPLY OF INDUSTRIAL SKILLS AND MANAGEMENT RESOURCES

2.1 *Introduction*

In a developing country with a recent background in industrialization, one of the major problems that needs to be tackled as early as possible is the introduction of appropriate policies to assure an adequate supply of technical skills and management resources. In the short run, shortages could be met with some rearrangement of the existing stock of such personnel and from foreign supply, particularly in respect of higher management personnel. But in the long run, the necessity for the country to develop its own supply is unavoidable, if industrialization is to progress satisfactorily. This task must fall largely on the Government as it is the most important source of control and finance of educational and training activities in developing countries.

This section will examine three aspects of the role of the Malaysian Government on this matter. They are:

i) policies affecting the education system and manpower development;
ii) measures affecting the development of skills among the Bumiputras;
iii) efforts outside the education system.

2.2 *Policies Affecting the Education System and Manpower Development*

Ideally, once the objective of economic diversification has been articulated, the development of the system of education together with that of training facilities supplementing it should be geared towards facilitating the eventual attainment of this objective. This implies the early establishment of manpower planning practices to guide the growth of educational institutions and other training facilities. It also implies that the growth of these institutions and facilities would have to be closely co-ordinated and even regulated. And for countries emerging from a background of heavy dependence on the production of primary commodities, it will further imply the need for a rather significant shift towards a more technical and vocational bias in its educational and other training facilities. More specifically, with a policy of economic diversification, the emerging industrial sector will increasingly require personnel with technical and/or vocational education. Similarly, agricultural diversification will require increasing numbers of scientific and technically-trained personnel.

However, the development of education and training policies in West Malaysia had fallen quite short of this ideal. Firstly, for the review period 1957–70, there had never been implemented any comprehensive and co-ordinated plan for the development of the education system geared towards the objective of economic diversification. One noteworthy effort must however be mentioned, although it never materialized as a working plan. In 1962, the Government established a Higher Education Planning Committee (HEPC) comprising five ministers[1] under the Chairmanship of the Minister of Education. This Committee was charged with the task of evaluating the arrangements for higher education in the country and to recommend improvements in the light of needs and financial resources.[2] In 1967, the Committee completed its study which incorporated a number of recommendations setting out broad targets up to 1985 to be achieved in the field of higher education and upper secondary education (covering general, technical and vocational education).[3] This was the first serious attempt to relate anticipated needs for manpower resources of various categories to the development of the education system.[4] Of significance, this exercise was undertaken with reference to the objective of economic diversification. However, the recom-

[1] These were the Minister of Finance, the Minister of Works, Posts and Telecommunications, the Minister of Health, the Minister of Commerce and Industry and the Minister of Agriculture and Co-operatives.

[2] Malaysia, *Report of the Higher Education Planning Committee*, Kuala Lumpur, Government Printer, 1967, p. 163.

[3] For a summary of these recommendations, see *ibid.*, Chapter X.

[4] For purposes of manpower planning, primary education is not a crucial area.

mendations of the Committee were never formally accepted and incorporated into a plan for educational development in their specific forms.[5] The Government only agreed on the general principle stressed in the Committee's Report namely, that more emphasis should be placed on vocational, scientific and technical education rather than on general education.[6]

It is clear that the Government was not quite ready as yet to undertake a more precise and integrated form of manpower planning beyond the observance of some broad principles for the development of educational and training facilities.

But on the other hand, it had successfully used its powers of control to forge a national education system. In the phase of self-government beginning from 1955, one of the conspicuously felt aspirations of the country on the threshold of political independence was the reform of the education system which, up to that time, comprised schools in four language media (English, Malay, Chinese and Tamil).[7] These had different curricula, different standards, different objectives and different sources of finance. The Government felt that this chaotic system would not be conducive to the establishment of a united Malayan nation. In 1956, it thus appointed a special committee under the Minister of Education to formulate a national system of education based on Malay, the national language, but with provisions to preserve and sustain the growth of the language and culture of other communities living in the country.[8] The recommendations of the Committee were accepted by the Government and formed the foundation of the present education policy of the country.[9] In very brief terms, the policy provided for the eventual use of Malay as the medium of instruction in all schools. For a start, Malay became one of the compulsory languages besides English and, common content syllabuses with Malayan orientation were introduced in all schools.

In 1959, the Government appointed the Education Review Committee to have another look at the education system. In its report, it recommended, among other things, free primary education, the introduction of secondary continuation education of two years for pupils who failed to qualify for the regular secondary schools and the offer of full assistance to Chinese secondary

[5]Like any other attempt at forecasting, the results produced by the HEPC are debatable. For one recent critique of the forecasting efforts of the HEPC, see Eddy Lee, *Educational Planning in West Malaysia*, Singapore-Kuala Lumpur, Oxford University Press, 1972, Chapter V.

[6]Malaysia, *Mid-Term Review of the First Malaysia Plan, 1966–1970*, *op. cit.*, p. 106.

[7]For a brief history of the education system, see Ministry of Education, *Education in Malaysia*, Kuala Lumpur, Dewan Bahasa dan Pustaka, 1970; also Francis Wong Hoy Kee and Ee Tiang Hong, *Education in Malaysia*, Singapore-Hong Kong, Heinemann Educational Books (Asia) Ltd., 1971.

[8]See 'Federation of Malaya, *Report of the Education Committee, 1956*, Kuala Lumpur, Government Printer, 1956. This is also commonly known as the Razak Report.

[9]See *Education Ordinance 1957*.

schools if they switched to either Malay or English as the medium of instruction.[10] These recommendations were accepted by the Government.[11]

The main resources of the Government in the field of education were thus concentrated on the establishment and consolidation of this national system of education, a process which continued through 1970. Undoubtedly, this preoccupation left little attention for the type of *use-oriented reform* of the education system necessitated by the adoption of objectives of industrialization and agricultural development.

One aspect of the development of the national education system touched on the question of supply of skills. The system, as formulated by the 1956 Education Committee, had as one of its features a selection examination at the end of the six-year course of primary education, the Malayan Secondary Schools Entrance Examination (or the MSSE), which allowed only 30–35 per cent of the primary pupils to enter secondary schools. The Education Review Committee, however, was deeply concerned with this high drop-out rate of 65–70 per cent of primary pupils each year and therefore recommended the introduction of a two-year course of secondary continuation schools. But this proposal did not materialize owing to lack of support. In 1964, the Government attempted to deal with the problem by introducing the Comprehensive Education System. Under the System, the MSSE was abolished and every primary school pupil could now find a place in a secondary school for up to three years after his primary education. All children during this period had to study *at least one* pre-vocational subject from the following: industrial arts, home science, agricultural science or commerce. On the basis of the Lower School Certificate of Education (LCE) Examination which was to be taken at the end of the three-year period, the students were streamed into arts, science, technical and vocational courses. Two factors prompted the introduction of the Comprehensive Education System: i) the desire of the Government to provide education for the bulk of the pupils up to the age of 15, and ii) the existing technical and vocational schools were not meeting the needs of the country.[12]

If the objective in using the Comprehensive Education System was to help cover up for the deficiencies of the technical and vocational schools system, the question that arises is how has the System affected the supply for skilled workers? From all indications, it would appear that the additional three years of schooling after primary school for a large portion of the pupils who could not get admission into the upper secondary schools hardly prepared them for employment requiring lower level skills. On the basis of the curriculum during this three-year period, it can be seen that the time allotted for technical and

[10] See Federation of Malaya, *Report of the Education Review Committee, 1960*, Kuala Lumpur, Government Printer, 1960. This is also known as the Rahman Talib Report.

[11] See *Education Act, 1961.*

[12] See "Education in Malaysia", a talk given by the Minister of Education, Encik Hussein Onn, to members of Parliament, Senators and members of State Legislative Assemblies at the Dewan Bahasa dan Pustaka, Kuala Lumpur on 18 February 1971.

vocational subjects was quite limited.[13] The school had only to allocate a minimum of 160 minutes each week or 9 per cent of the total time of 1,780 minutes of classroom work for such a subject which could be selected from a list of four: i) industrial arts,[14] ii) home science, iii) commercial studies and iv) agriculture/agricultural science. Even if more than one of these had been selected, the pupils' knowledge would only be widened to another unrelated skill but not intensified for a particular field. Among the list of optional subjects for which 80 minutes a week were allowed, technical drawing would be the only subject of some relevance for the pupils' industrial knowledge. Besides the limited time allocated for these subjects, they were taught only at *pre-vocational* levels. Furthermore, in many schools, the teachers concerned had not been properly trained and the course equipment were often inadequate. It is thus clear that the three additional years of post-primary schooling for a substantial portion of the school-going pupils could hardly have made a significant contribution to the supply of lower level skills. This is particularly serious when it is considered that the numbers involved were sizeable. In 1968–70, an average of 49 per cent or 50,863 pupils a year failed to get admission into Form IV after their LCE Examination. Most of these had to enter the labour market.

On the other hand, the Comprehensive Education System had diverted considerable resources to its implementation. The only important benefit is that the System had effectively prevented large numbers of pupils from being thrown into the labour market at the tender age of 12–13 years and in the process, also raised a little of their education level.

Within the education system, the components that provided training in skills for employment were the secondary technical and vocational schools. But the Government's interest in these had for a long time been very limited. In a talk to Members of Parliament, Senators and State Assemblymen in February 1971, the Minister of Education referred to this neglect: ". . . A few trade schools and a few rural trade schools were all that this country had until about 1960. The quality of education and the nature of the courses provided were unsatisfactory."[15] Even in the 1960's, however, there had not been any notable change, although the Government had put in more efforts. Table 11.1 shows the enrolment in the secondary technical and vocational schools by various categories of schools. Pupils for the secondary technical schools were selected on the basis of their performance in the LCE examination. Instructions were given in the electrical, mechanical and building trades and at the end of two years, the pupils would sit for the Malaysian Vocational School Certificate.[16] Special-

[13] For details of time allocation among subjects, see Ministry of Education, *Education in Malaysia*, *op. cit.*, p. 24.

[14] Industrial arts cover instructions in elementary woodwork, metal work, electricity and power mechanics.

[15] Minister of Education, Encik Hussein Onn, "Education in Malaysia", *op. cit.*

[16] Ministry of Education, *Education in Malaysia*, *op. cit.*, p. 55.

Table 11.1

West Malaysia – Secondary Technical and Vocational Schools: Student Enrolment and Number of Schools

Year	Assisted Secondary Technical Schools (Technical Institutes)		Assisted Secondary Vocational Schools		Other Assisted Vocational Schools		Other Vocational Schools (Private)		All Technical and Vocational Schools	
	Enrolment	Number of Schools	Enrolment	Number of Schools	Enrolment	Number of Schools	Enrolment	Number of Schools	Enrolment	Number of Schools
1957	122	1	459	3	2,369	16	4,932	12	7,882	32
1958	245	2	391	3	2,762	14	6,137	15	9,535	34
1959	343	2	367	3	3,637	32	6,575	19	10,922	56
1960	445	2	338	2	657	28	6,229	18	7,669	50
1961	517	2	368	2	149	2	4,627	21	5,661	27
1962	561	2	382	2	113	2	6,615	32	7,671	38
1963	646	2	403	2	118	2	6,607	48	7,774	54
1964	732	2	462	2	138	2	8,173	36	9,505	42
1965	855	2	553	3	158	2	6,805	37	8,371	44
1966	1,271	3	729	4	326	3	7,048	37	9,374	47
1967	1,332	3	594	3	110	2	6,053	30	8,089	38
1968	959	3	879	6	120	2	7,601	35	9,559	46
1969	1,595	3	2,118	8	337	6	13,118	61	17,168	78
1970	1,973	3	2,672	9	279	4	12,101	72	17,025	88

Sources:
1. Ministry of Education, Malaysia, *Educational Statistics of Malaysia, 1938 to 1967,* Kuala Lumpur, Dewan Bahasa dan Pustaka, 1968.
2. Ministry of Education, Malaysia, *Educational Statistics of Malaysia, 1968,* Kuala Lumpur, Dewan Bahasa dan Pustaka, 1970
3. Ministry of Education, Malaysia, *Educational Statistics of Malaysia, 1969,* Kuala Lumpur, Dewan Bahasa dan Pustaka, 1971.
4. Ministry of Education, Malaysia, *Educational Statistics of Malaysia, 1970,* Kuala Lumpur, Dewan Bahasa dan Pustaka, 1972.

ization was allowed. These technical schools were Government-assisted. Besides these, Government assistance was also provided to the secondary vocational schools. Their minimum entry qualification was also the LCE. In these schools, the subjects offered covered building, engineering and electrical trades, power mechanics, sheet-metal working and welding, radio and television servicing and, commerce. In 1968, the home science vocational schools were set up and in 1969 and 1970, the agricultural vocational schools.[17] The other important category comprised the private vocational schools, a large number of which specialized in commercial education, although there were some concentrating on the engineering trades such as motor vehicle repairing and servicing or the electrical trades such as radio and television servicing.

One obvious feature emerging from Table 11.1 is the minor role of the Government in providing technical and vocational training facilities. During 1957–70, enrolment in government-assisted schools accounted for only 14–30 per cent in 11 of the 14 years in the period. There was a sharp expansion of facilities provided by the private sector in 1969 and 1970 accompanied by a very marked increase in pupil enrolment. Enrolment in private institutions had been fairly steady during 1958–68, these varying from about 6,000–8,000 (except in 1961) but it jumped to an average of 12,500 in 1969–70. In the government-assisted schools, pupil enrolment also increased markedly in these two years; the enrolment in 1969 was about 4,000 and in 1970, about 5,000. However, these increases lose much of their significance when it is considered that about a decade ago, enrolment in the government-assisted schools had already reached 4,400. The other noteworthy point is the very small number of government-assisted technical and vocational schools – there were only 16 in 1970 but the number had remained at less than 10 for a number of years (1961–67).

This heavy reliance on private initiative to provide technical and vocational education is one feature of public policy that should be corrected early. Firstly, this practice rendered very difficult, if not impossible, the coordination between supply and demand for skilled manpower. In accepting this practice, the Government had in fact abdicated substantially its control over the supply of skilled labour. It is questionable whether private action could respond as effectively as Government action to anticipatory demand arising out of the Government's objective to increase economic diversification. The problem was made even more difficult since the Government, as noted earlier, had not attempted to utilize a working plan quantifying the economy's manpower requirements of various types. Many interpretations of requirements would therefore be inevitable. The second undesirable consequence arising from depending largely on the private sector is that the quality and types of the courses remained unregulated. Thus, the arrangement would not necessarily assure a supply of skills of the right categories or of appropriate quality. With rather fierce competition among the private schools, there could be over-supply of certain types of training facilities. Moreover, conditions in many of the private schools were

[17] Minister of Education, Encik Hussein Onn, "Education in Malaysia", *op. cit.*

Table 11.2

West Malaysia – Share of Enrolment in Secondary Technical and Vocational Schools in Total Enrolment in Assisted Secondary Schools

Year	Enrolment in Assisted Secondary Schools/Institutions	Enrolment in Secondary Technical/Vocational Institutions	
		Number	As % of Enrolment in Assisted Secondary Schools/Institutions
1967	410,176	8,089	2.0
1968	440,280	9,559	2.2
1969	468,453	17,168	3.7
1970	467,970	17,025	3.6

Sources: Same as for Table 11.1

certainly not conducive to attracting qualified instructors or the installation of expensive but necessary training equipment.

Table 11.2 relates the enrolment in secondary technical and vocational schools to total enrolment in secondary schools for 1967–70. The enrolment ratio in technical and vocational schools had improved in 1969–70, this being an average of 3.6 per cent of total enrolment in secondary schools compared with an average of 2.1 per cent in 1967–68. Without any reliable estimates of manpower requirements, it was not possible to assess the adequacy of these ratios. However, they were very low compared to similar ratios in the more industrialized countries in Asia. In 1960–61, the ratio in Japan was 13.1 per cent while those in Taiwan and Korea were 7.8 per cent and 7.7 per cent respectively.[18] A higher ratio appeared to be correlated with a higher degree of industrialization.

The pattern of higher education naturally reflected the outcome of the policies pursued in the secondary schools. The major preoccupation of the authorities in building a national education system had another side effect. For a long time, there was little work done to change the traditional emphasis on the humanities in the school curriculum towards a more scientific and technical type of education. It was only towards the end of the 1960's that a higher content of science and mathematics in the school syllabuses was stressed as a matter of policy.[19] Thus, education at the tertiary level was biased towards arts subjects.

[18] United Nations (ECAFE), *Economic Survey of Asia and the Far East, 1965*, p. 92.

[19] At the national primary schools, a crash programme was launched to improve the teaching of science and mathematics and it was expected that every primary school should

Table 11.3

West Malaysia – Enrolment by Arts, Science and Technology in Universities and Colleges

Stream	1961		1965		1970[a]	
	Enrolment	Per Cent of Total	Enrolment	Per Cent of Total	Enrolment	Per Cent of Total
Universities						
Arts	556	55	1,646	58	5,345	65
Science	256	25	908	32	2,493	30
Technology	198	20	281	10	392	5
Total	1,010	100	2,835	100	8,230	100
Universities & Colleges[b]						
Arts			2,183	52	6,673	56
Science			1,021	24	3,079	26
Technology			980	24	2,139	18
Total			4,184	100	11,891	100

Sources: 1. Same as for Table 11.1
2. Table 11.5
3. Table 11.6

[a]Includes enrolment in the Universiti Kebangsaan and the Universiti Sains Malaysia.

[b]The colleges are the Technical College, the College of Agriculture, the MARA Institute of Technology and the Ungku Omar Polytechnic.

Table 11.3 categorized enrolment in colleges and universities in West Malaysia into three major groups: arts, science and, technology. The definitions of these followed those used by the Report of the Higher Education Planning Committee.[20] Between 1961 and 1970, there was a very substantial increase in the enrolment for science and technology at university level. However, the expansion of enrolment in arts was much more rapid so that by 1970, the ratio of enrolment in arts to science and technology was 65:35 compared with a ratio of 55:45 in 1961 and 58:42 in 1965. Based on its studies, the Higher Education Planning Committee (HEPC) recommended that training in arts, science and, technology be provided in the ratio of 4:3:3[21] or 40:30:30. This was the ratio that would have to be achieved at university level by 1971, if the needs as revealed by its surveys for category one personnel (i.e. persons with a university

benefit by this programme by 1974. At the same time, modern mathematics and integrated science were introduced at the lower secondary level. Retraining of science and mathematics teachers at the upper secondary level had also begun. See talk of Minister of Education, Encik Hussein Onn, "Education in Malaysia", *op. cit.*

[20]The term 'arts' includes subjects conventionally in the humanities group, economics, accountancy and administration. The term 'science' covers the traditional science subjects together with medicine, dentistry, pharmacy and agriculture. The term 'technology' includes all fields of engineering, architecture, surveying and telecommunications. See Malaysia, *Report of the Higher Education Planning Committee, op. cit.*, p. 203.

[21]*Ibid.*, p. 204.

degree or equivalent) were to be met. The actual ratio of 65:30:5 attained in 1970 was substantially different from the target considered appropriate by the Committee. The rapid expansion of arts enrolment had accentuated the share of arts students while the rather slow growth of enrolment in technology caused its share to be considerably reduced. At the college level, arts students were relatively unimportant (the only source being the MARA Institute of Technology – see Table 11.6) while the bulk were science and technology students. In the second part of Table 11.3 , the college enrolment was added on to the university enrolment for 1965 and 1970.[22] With this augmentation, the ratio for arts, science and technology was 52:24:24 in 1965 and 56:26:18 in 1970. Again, these ratios were still quite different from the target of 40:30:30 set by the HEPC for tertiary education. There was again a prominence in arts enrolment and a significant deficiency of technology students.

It is not difficult to trace the causes for the prevailing distribution in the enrolment ratios. The past policy of concentration on arts in the primary and secondary schools was one of the basic factors and has been noted earlier. The absence of manpower planning with respect to higher education was another. Without any firm central direction, the growth of student enrolment can be expected to be most rapid in courses which can be readily expanded with the lowest of requirements in terms of equipment and recurrent costs. Such are inevitably the arts courses. It can be seen from Table 11.4 that from the standpoint of recurrent costs, the arts students were the cheapest to maintain. The experience in the University of Malaya showed that it required about twice the amount of money to maintain an ordinary science student in the university compared with that for an arts student and it was about 50 per cent more expensive to maintain an engineering student than an arts student.

It is true that the broad ratio of 40:30:30 for arts, science and technology students as proposed by the HEPC is debatable in terms of precise needs because the validity of such a ratio would depend considerably on the assumptions underlying the manpower projections. But what is difficult to dispute is the basic point of this ratio namely, that the past pattern of emphasis on arts must give way to a more scientific and technological bias if economic diversification is to move faster. The prevailing ratio in 1970 suggested the need for considerable reorientation of policies.

From the standpoint of industrialization, the most relevant areas for expansion are in the science (excluding medicine, dentistry) and technical courses. In Table 11.5, data on enrolment and graduates are given for these courses. Admittedly, these data show that efforts to expand facilities in science and technology were not absent. In the decade 1961–70, the number of science students (excluding medical) at university level expanded by about 7½ times to over 1,500 students. The number of engineering students also increased but at a

[22] Students undergoing teacher-training in colleges were deliberately excluded because the available data did not permit distinction for purposes of the three categories used and including them into any one category could distort the results. There were 9,114 and 1,927 trainee teachers in training colleges in 1965 and 1970 respectively.

Table 11.4

West Malaysia – Recurrent Costs of Maintaining a Student in the University of Malaya by Courses

Course	Recurrent Costs of Maintaining a Student in the University of Malaya (in dollars)		
	1969	1970	1971
I. *Arts*			
Arts	1,808	2,224	2,317
Economics & Administration	2,428	2,526	2,556
Education	3,484	3,452	3,472
II. *Science*			
Science	4,030	4,458	4,490
Agriculture	4,359	5,219	5,714
Medicine	9,587	10,396	10,727
III. *Technology*			
Engineering	3,208	4,069	3,734
IV. *All Categories*	3,199	3,646	3,710

Source: Malaysia, *The Expenditure Budget of the Federal Government, 1971*, Kuala Lumpur, Government Printer, 1971, p. 446.

smaller rate of roughly twice the number at the beginning of the decade. At the college level, there had also been a substantial expansion in enrolment. Firstly, the enrolment at the Technical College increased threefold to 943 in 1970 since the latter part of the 1950's.[23] In 1969, an additional technical training centre commenced operation; this was the Ungku Omar Polytechnic. Secondly, as part of the Government's efforts to expand technical training for the Bumiputras, the MARA Institute of Technology was made another important training centre for technical personnel in the second half of the 1960's. These, taken together, augmented considerably the supply of college-trained technicians.

This pattern of expansion in enrolment for science and technology is noteworthy, especially for a recently independent country. But without any point of

[23] Before 1957, there was a limitation on the enrolment in the College but this was relaxed in 1957 when the College had its own independent Board of Governors.

Table 11.5

West Malaysia – Enrolment and Graduates in Science and Technical Courses in Universities and Technical Colleges

Year	Universities				Technical Colleges			MARA Institute of Technology
	Science*		Engineering		Technical College, K.L.		Ungku Omar Polytechnic, Ipoh	
	Enrolment	Graduates	Enrolment	Graduates	Enrolment	Graduates	Enrolment	Enrolment
1957	–	–	–	–	270	52	–	–
1958	–	–	–	–	317	42	–	–
1959	31	–	129	21	314	66	–	–
1960	114	3	159	23	422	95	–	–
1961	203	16	198	17	516	104	–	–
1962	318	56	226	27	509	83	–	–
1963	398	75	257	31	543	78	–	–
1964	462	115	262	51	643	158	–	–
1965	568	159	281	33	682	154	–	–
1966	670	186	311	54	701	158	–	17
1967	878	223	327	56	752	n.a.	–	120
1968	1,038	308	338	74	913	n.a.	–	441
1969	1,243[a]	455	359	74	872	293	216[b]	540
1970	1,538[c]	548	392	79	943	198	364[d]	593

Sources: 1. Same as for Table 11.1.
2. Table 11.6.
3. Universiti Malaya, *Lapuran Tahunan Ke 22, 1970–1971.*

[a] Of which 54 were in Universiti Sains Malaysia.
[b] Excludes 61 in accountancy and business studies.
[c] Of which 138 were in Universiti Sains Malaysia and 37 in Universiti Kebangsaan.
[d] Excludes 182 in accountancy and business studies.
*Excludes medical students.

reference with respect to manpower needs, the growth experience of the various components could so easily become a source of satisfaction to the authorities concerned. It is only when these are viewed in relation to a realistic plan for demand expansion that the efforts could be meaningfully assessed. Up to the early 1970's, this was an important shortcoming in the planning of technical and scientific education at the tertiary level.

2.3 Measures Affecting the Development of Skills Among the Bumiputras

The second aspect of public policy on the supply of industrial skills and management resources is tied to the Government's objective of raising the level of Bumiputra participation in commerce and industry. Besides capital assistance, as discussed in the last chapter, the Government felt that wider participation could also be facilitated by providing training opportunities for the Bumiputras in the technical and management fields. The major instrument used by the Government was the Majlis Amanah Raayat or MARA. To achieve this objective, MARA operated in four areas: i) a formal training college, the MARA Institute of Technology; ii) MARA's own vocational institutes; iii) scheme for on-the-job training; and iv) the provision of scholarships and loans. Taken together, these have emerged as one of the major components of the Government's efforts to expand the supply of technical and management resources.

The concept of operating a formal training institution specifically for the Bumiputras was by no means a recent one.[24] In the days of the Rural and Industrial Development Authority (RIDA), there was established in 1956, the Dewan Latehan under RIDA which conducted short elementary training courses in commerce. However, RIDA was dissatisfied with the standards of these courses and in 1960, entry requirements were raised to the School Certificate. More advanced courses were introduced, these being accountancy, secretaryship and stenography. Business management was added in 1962. The student population for the professional courses was relatively small, these being 25 in 1960 and rising to 72 in 1965.[25] It was due to the resolutions passed in the Economic Congress of Bumiputras in 1965 that technical and management training for the Bumiputras received an important boost. The Dewan Latehan became the Maktab MARA or MARA College following the widening of its cope of courses. Plans soon materialized for the expansion of the College to become the MARA Institute of Technology, for which $50 million were allocated. The Institute commenced in 1966 with eight schools: i) Engineering, ii) Applied Arts, iii) Accountancy, iv) Business, v) Applied Science, vi) Pre-university Studies, vii) Administration and viii) Catering and Hotel Management.[26]

[24] For a comprehensive review of training efforts by RIDA/MARA see MARA, *The MARA Institute of Technology – Yesterday, Today and Tomorrow*, Kuala Lumpur, Government Printer, 1969, Chapters 1–3.

[25] Majlis Amanah Raayat, *Penyata Tahunan, 1966*, p. 17.

[26] *Ibid.*, p. 22.

Table 11.6

West Malaysia – Enrolment in MARA Institute of Technology by Fields of Study of Relevance to Industrialization

Field of Study	Student Enrolment as at End of Year				
	1966[a]	1967	1968	1969	1970
Applied Science and Technology	17	120	441	540	593
Business, Accounting and Management	219	520	751	780	824
Administration and Law	318	487	622	366	206
Total	554	1,127	1,814	1,686	1,623
Other[b]	–	257	515	509	519
Grand Total	554	1,384	2,329	2,195	2,142

Sources: 1. Majlis Amanah Raayat, *Penyata Tahunan*, 1966–1969.
2. MARA Institute of Technology

[a] At beginning of year.

[b] Most of these were students preparing for the Higher School Certificate Examinations.

Table 11.6 shows the enrolment of students at the Institute in courses of relevance to industrialization. Excluding those enrolled for the Higher School Certificate, the enrolment in the technical and management courses reached 554 in 1966 and rising to 1623 in 1970 compared with only 72 in 1965. These increases were substantial by any standards. An interesting feature is that of the increase of 1069 students between 1966 and 1970, 54 per cent were in courses on applied science and technology. This was certainly a laudable ratio, considering trends elsewhere as seen earlier. The other major source of growth was the expansion of enrolment in business, accounting and management; enrolment in these accounted for about 57 per cent of the enrolment increase in 1966–70.

By comparison, the vocational institutes operated by MARA were of relatively small significance. In 1968, MARA decided to establish its own vocational institutes to train Bumiputras in selected skills. In that year, three schools were established, one in Kuala Trengganu for tailoring, one in Malacca for motor mechanics and one in Alor Star for woodworking and civil draughtsmanship.[27] A fourth school was established in Petaling Jaya in 1970 for radio/

[27] Majlis Amanah Raayat, *Penyata Tahunan, 1968*, p. 26.

television and electrical courses. In 1970, the number having obtained training in these schools were as follows:[28]

Vocational Institutes at	*Number Trained*
Alor Star	113
Malacca	186
Kuala Trengganu	55
Petaling Jaya	93
Total	447

There were plans to expand the number of trainees in these schools. The activities of MARA here could be seen to be augmenting efforts in a long-neglected area. They had the added significance in that the facilities were designed to meet the special needs of the Bumiputras, many of whom would have difficulties in getting into the other existing facilities for financial and other reasons.

A less formal scheme of training for skills in the various trades was initiated even earlier. This was the on-the-job training scheme for selected Bumiputra youths in workshops and factories in the private and public sectors. The training could be from six months to two years and during the training period, MARA provided the trainees with a subsistence allowance.[29] The number of trainees for the various trades varied from year to year. Certain trades however tended to provide more places than others. Except for 1969, a total of 700 to over 1,000 had come under the scheme each year. Table 11.7 shows the distribution of on-the-job trainees by categories of skills. Activities such as management and accounting, motor mechanics and painting, electrical skills and, construction were some of the more important categories offering opportunities for training.

The scheme had been a useful measure for stepping up the supply of skills, although there were disadvantages such as the absence of formal examinations for gauging the level of training achieved. However, in establishing the scheme, MARA opened up training opportunities particularly in the private sector which would not otherwise have been available. One advantage with schemes of this type is that the trainees were immediately exposed to training of direct relevance to their work while in some of the more formal vocational courses there had been notable instances of instructions having been given which largely proved to be of little practical value later on.

The fourth aspect of the Government's policy to provide opportunities for acquisition of industrial and management skills among the Bumiputras is through the scholarship and loan schemes of MARA. It must be noted that these schemes were not the only means available to the Bumiputras. Scholarships and loans have been awarded by the Federal and State Governments annually for various

[28] Majlis Amanah Raayat, *Penyata Tahunan, 1970*, p. 86.

[29] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, pp. 229–230.

Table 11.7

West Malaysia – Trainees in MARA's On-the-Job Training Scheme by Industrial Skills

Industrial Skill	Number of Trainees Accepted			
	1966*	1967*	1968	1970
Motor mechanics and painting	5	214	262	346
Other mechanical skills, metal work	17	76	50	32
Electrical skills	–	63	95	91
Construction	27	352	22	65
Wood working	7	14	54	26
Textile manufacture, garments and shoe-making	19	37	110	44
Management, accounting	18	451	585	76
Others	12	218	37	22
Total	105	1,425	1,215	702

Sources: Compiled from Majlis Amanah Raayat, *Penyata Tahunan*, 1967, 1968 and 1970.

Note: In 1969, only 267 new trainees were accepted but no breakdown into their respective fields was available.

*Refers to total number undergoing training and, therefore, includes those taken in previous years and were continuing their training.

fields of studies at local and foreign universities and colleges. Most of these were granted to Bumiputras. The MARA schemes represented a specific case of the use of loans and scholarships to meet the problem of shortage of technical and management personnel, particularly those from the Bumiputra community.

The scholarship and loan schemes of MARA formed an important part of a concerted attempt to raise the education levels of the Bumiputras, especially in the technical and management fields. To this end, the MARA Education Foundation was launched as a means to finance "a more extensive scholarship programme".[30] The Foundation provided the means for MARA to obtain assistance from the public and interested parties both in Malaysia and abroad. The scholarship and loans programmes were a substantial departure from past practices. Under RIDA, scholarships were also awarded but these were "only a few a year".[31]

[30] MARA, *The MARA Institute of Technology – Yesterday, Today and Tomorrow, op. cit.*, p. 28.

[31] *Ibid.*, p. 27.

Table 11.8 shows the number of scholarships and loans awarded by MARA classified by broad fields of study. There was a very impressive expansion in the number of awards. In 1966, when the scholarship scheme was launched, there were 111 awards compared with only 10 a year earlier but in 1967, the number was trebled that of 1966 and in 1968, it was nearly 4 times as large. However, the number fell to 175 in 1969 but this was because of the shift of emphasis to loans, of which 569 were granted. The loans programme actually commenced in 1968 and this appeared likely to become even more important than the scholarship programme. Some elaboration on the loans programme would be useful here. In line with MARA's basic objective of expanding the technical and management resources amongst the Bumiputras, a policy was laid down in 1967 to use the scholarships to encourage courses in science and technology.[32] Thus, the award of scholarships for studies in arts and law was discouraged. However, so as not to inhibit the advancement of Bumiputras qualified to undertake higher studies in courses other than in science and technology, the loans programme was established in November 1967 to provide assistance to them. The number of such students was significant in view of the prevalent inclination of Bumiputras towards arts courses in schools and the inadequate facilities for and lack of emphasis on science and mathematics in a number of schools, especially in the rural areas. However, while the loans scheme supported students largely in the humanities, it was also becoming important for financing students for courses in management and accountancy.

Taking the four measures of MARA together, the achievements can reasonably be regarded as impressive and the potentialities for the future immense. And this is all the more so considering that all the developments occurred within the last five years of the 1960's. While a very strong case exists for efforts to increase the number of technical and management personnel among the Bumiputras, it must be borne in mind that the problem of ensuring adequate supply of trained manpower to facilitate economic diversification cannot be effectively solved by vigorous concentration on the Bumiputra community alone. The same degree of urgency must attend Government efforts elsewhere.

2.4 *Efforts Outside the Education System*

Outside the education system, the Government had also initiated measures to increase the supply of skilled labour and management personnel. Of these, the two most important were the National Apprenticeship Scheme and the National Productivity Centre. A third measure and the most recent one was the establishment of the National Youth Pioneer Corps. In addition, a realistic policy pertaining to skilled and managerial personnel of foreign origin had long been pursued.

The National Apprenticeship Scheme was an attempt initiated by the Ministry of Labour to provide a systematic training facility for skilled labour.[33]

[32] Majljs Amanah Raayat, *Penyata Tahunan, 1967*, p. 3.

[33] For a good write-up on the history of the Scheme see *Annual Report of the Ministry of Labour for the Year 1968*, pp. 68–69.

Table 11.8

West Malaysia – University and College Scholarships and Loans Awarded by MARA by Fields of Study

Field of Study	Number of Scholarships Awarded					Number of Loans Awarded	
	1965	1966	1967	1968	1969	1968	1969
Pure Science	–	2	83[a]	52	14	2	8
Applied Science	9	3	n.a.	36	26	8	29
Engineering		28	58[b]	62	54	6	10
Economics, Business Administration, Management, Accountancy	1	32	80	122	30	31	133
Agriculture	–	9	n.a.	40	30	2	14
Humanities, Medicine, Others	–	37	100	76	21	116	375
Total	10	111	321	388	175	165	569

Sources: Compiled from Majlis Amanah Raayat, *Penyata Tahunan*, 1965–1970.

Notes: No breakdown of the scholarship and loan figures into fields of study are available for 1970. But a total of *958* scholarships and loans were awarded in 1970. Of these, 718 were loans and 25 were scholarships tenable at the University of Malaya and 215 were scholarships and loans tenable abroad.

[a] Includes technology and agriculture.

[b] Includes architecture and surveying.

n.a. = not available.

Until the establishment of the Scheme in 1957, whatever little training was provided by employers occurred only in certain Government industrial departments and some of the large private companies. The Scheme started as a pilot project in Selangor but by 1963, it had covered the whole of West Malaysia. Under the Scheme, employees in both the private and public sectors went through a programme of apprenticeship lasting four years (initially it was five years). Certain trades were declared 'apprenticeship' trades for purposes of the Scheme; currently, there are four: mechanical trades, electrical trades, building trades and printing trades. The age of entry was specified at 16–20 years and the educational requirement was at Form Two or its equivalent.[34] In mid-1964, the first Industrial Training Institute was completed in Kuala Lumpur. It had facilities for training in all the declared apprenticeship trades together with hostel facilities for trainees from outside of Kuala Lumpur. The Institute was built at a cost of $2½ million. Full-time courses lasting eight weeks were introduced at the Institute. Unlike the part-time courses under which employers provided a 'day release' a week for the apprentices to attend classes, the full-time courses operated on a 'block release' system of eight weeks of full pay for the apprentices. The Institute met the full cost of the training including accommodation at the hostel and part of the cost of board.[35] The Institute had expanded since. Besides training apprentices, it also conducted preparatory trade courses for school leavers.[36] A second institute was built in Prai in 1970.[37]

Table 11.9 shows the number registered under the National Apprenticeship Scheme and the number having completed apprenticeship training for 1957–70. There was some increase in the number of workers registered particularly from 1959 but in the 1960's, the number registered each year appeared to have settled at below 300. This limited growth capacity needs corrective action if the Scheme is to have wider impact. Another interesting feature is that the facility was widely used by Government departments. The share of Government employees in the total number of apprentices registered each year was quite substantial and in some years exceeded the share of employees from the private sector. This means that the contribution of the Scheme to the development of skills in industry was even more limited than had at first appeared. The third point emerging from the table is that only 417 persons from the private sector had completed their apprenticeship in 1957–70. The very limited impact of the Scheme comes out clearly when the number of employees who had completed their apprenticeship is related to the total number of employees eligible for training under the Scheme. The Malaysian Socio-Economic Sample Survey of Households revealed that in 1967/68, there were 24,685 persons with lower

[34] Initially the educational requirement for the mechanical trades and certain categories of the electrical trades was Standard VI or its equivalent. See *Annual Report of the Ministry of Labour and Social Welfare for the Year 1963*, pp. 21–27.

[35] *Annual Report of the Ministry of Labour for the Year 1965*, p. 48.

[36] Malaysia, *Second Malaysia Plan, 1971–1975*, *op. cit.*, p. 229.

[37] *Ibid.*

Table 11.9

West Malaysia – Registration for and Completion of Apprenticeship under the National Apprenticeship Scheme by Sectors

Year	National Apprenticeship Scheme					
	Number Registered			Number Completed Apprenticeship		
	Government	Private	Total	Government	Private	Total
1957	42	22	64	–	–	–
1958	55	30	85	–	–	–
1959	74	32	106	–	–	–
1960	43	98	141	10	3	13
1961	55	82	137	18	6	24
1962	64	90	154	48	14	62
1963	114	133	247	14	2	16
1964	92	93	185	44	22	66
1965	105	116	221	35	53	88
1966	101	166	267	74	40	114
1967	111	107	218	45	55	100
1968	51	107	158	49	55	104
1969	65	90	155	93	65	158
1970	149	134	283	91	102	193
1957–1970	1,121	1,300	2,421	521	417	938

Sources: 1. *Annual Report of the Ministry of Labour for the Year 1968.*
2. Ministry of Labour and Manpower, *Handbook of Labour Statistics, West Malaysia, 1970.*

secondary education employed in the manufacturing sector.[38] By 1970, the number of such employees should have increased. In any case, the output of the Scheme to 1970 made up only 1.8 per cent of the work force eligible for training. Even including the Government employees who had completed their apprenticeship, the total output of the Scheme came to only 938 for 1957–70.

The limitations of apprenticeship schemes from the standpoint of supply of skilled personnel must be recognized. No matter how comprehensive and effective, they cannot be a substitute for a good system of technical and vocational education at the school level. Firstly, such schemes depend very largely on the co-operation of employers. In developing countries such as Malaysia, it takes considerable time for many employers to see the benefits of permitting their employees to register as apprentices. A far more important limitation is that such schemes, by their very nature, can cover only the employed labour force. Even then their coverage is often very meagre, as in West Malaysia. A very disturbing problem in Malaysia (and other developing countries) is that facilities for imparting skills in and outside the school system were generally inadequate (as has been seen) and as a result a large part of the labour force remained untrained or had hardly any relevant education. The Socio-Economic Survey estimated that of a total labour force of 2,597,800 in 1967/68, 26 per cent had no formal education and 57 per cent had only primary education.[39] Obviously, one principal task in any good manpower policy must be to correct the deficiencies in these facilities as well as to increase the opportunities for those already in employment to upgrade their skills or receive further training. Apprenticeship schemes can be only one of the very many means required to be employed.

The National Productivity Centre serves another purpose. Established in 1961, the Centre's basic objective was "to train managers, supervisors, trade union executives and others" and, in the process, raise the standards of management, including supervision at all levels and improve the efficiency of industrial operations, sales and marketing as well as the quality of the products. The Ministry of Commerce and Industry was responsible for its administration and finance until 1966 when it became an autonomous body.[40] Initially, the Centre had three units: i) industrial engineering, ii) management accounting and iii) supervisory training. In 1964, three more units were added, these being i) light industries services, ii) industrial relations and iii) marketing and sales. The Centre conducted only short courses covering these various fields. In the selection of trainees, priority was given to those in the manufacturing sector.[41] By and large, the Centre had placed more emphasis on training for the middle

[38] Department of Statistics, *Socio-Economic Sample Survey of Households – Malaysia, 1967–68 – Employment and Unemployment, op. cit.*, Table 26.0.0.

[39] *Ibid.*, p. 77.

[40] *The National Productivity Council (Incorporation) Act, 1966.*

[41] National Productivity Center, *Annual Review 1964*, p. 7.

and lower management levels as it considered these categories most urgently in need of its attention.[42] A management consultancy service was added to its facilities in 1970.[43]

The Centre operated on a non-profit making basis. Its entire budget was met by the Federal Government but it charged nominal fees for its training courses since 1967.[44]

Table 11.10 shows the number of courses and participants since the Centre commenced operation. Up to 1970, a total of 6,873 persons benefited from its courses. There was a sharp increase in the number of courses offered by the Centre since 1967. From 1968, the number of participants each year exceeded 1,000. One of the factors considered important by the Centre was that more employers had increasingly recognized the necessity of further developing their managerial and supervisory personnel.[45] Another factor was, of course, the greater sense of purpose the Centre had acquired since it became an autonomous body.

The National Productivity Centre fulfilled an important function. In an economy with a recent history of industrialization, it was inevitable that a large part of its managerial and supervisory personnel acquired much of their experience by trial and error and with little of formal training. This was especially so in the small and medium-sized enterprises. The Centre's courses and seminars provided a useful means for the experience of such personnel to be reviewed and also the means through which they could draw from a systematic body of knowledge that could increase their efficiency. Apart from academic training at the universities, there were no practice-oriented facilities in the country for the training of would-be industrial management personnel at all levels. For the supervisory personnel, there was not even a formal training facility of any kind. The National Productivity Centre was thus in an eminent position to satisfy at least part of these needs. The contacts it had through its courses with management and supervisory personnel already in employment should give it a valuable source of knowledge of conditions on the ground. However, the Centre's activities had so far been confined only to those already in employment. The problem of augmenting the supply of management and supervisory resources should be accorded as much, if not more, attention as that given to improving the quality of such existing personnel.

Since the attainment of political independence, the Government had been implementing a policy of Malayanization (later Malaysianization) under which jobs held by foreigners were gradually filled by similarly qualified local staff. This policy applied first to the public services but was subsequently extended to the private sector. In doing so, the Government was however careful not to cause

[42] National Productivity Centre, Malaysia, *The Second Annual Report 1967*, p. 4.

[43] National Productivity Centre, Malaysia, *Annual Report and Statement of Accounts 1970*, p. 9.

[44] National Productivity Centre, Malaysia, *The Second Annual Report 1967*, p. 5.

[45] National Productivity Centre, Malaysia, *The Fourth Annual Report 1969*, p. 6.

Table 11.10

West Malaysia – National Productivity Centre: Number of Courses/Seminars Organized and Number of Participants

Year	Number of Courses/Seminars Organized	Number of Participants
1962	5	105
1963	22	462
1964	25	370
1965	28	480
1966	25	417
1967	46	765
1968	67	1,121
1969	91	1,389
1970	114	1,764
1971	114	1,939
1962–70	423	6,873

Source: National Productivity Centre, Malaysia, *Annual Report and Statement of Accounts, 1971.*

undue alarm and anxieties among foreign investors. In other words, it recognized the existence of two important factors that ought to be taken into consideration when applying the principle of Malayanization (Malaysianization) to industry. Firstly, the Government acknowledged that foreign investors would want to retain certain key posts in the firms for their own people to ensure that their interests would be fully safeguarded.[46] Secondly, it recognized that certain specialized skills would not yet be available from local sources.[47] Therefore, a minimum number of such posts for expatriates was allowed in each enterprise. On the first category of expatriate staff, the foreign firms were allowed to retain a minimum number of such personnel indefinitely, this number being determined by the volume of foreign investment involved, the control of the companies from abroad and the degree of policy-making responsibility.[48] The second category of staff was, however, subject to eventual replacement by

[46] Federal Industrial Development Authority, "Labour and Wage Rates", a booklet issued to potential industrialists (undated).

[47] *Ibid.*

[48] Federal Industrial Development Authority, *Malaysia Industrial Digest*, Vol. 1 No. 3 (Third Quarter, 1968), Chairman's Column on 'Malaysianization'.

Malaysians.[49] For industries established before 1965, a target of 1980 was set for the achievement of full Malaysianization. However, this target would not apply to industries set up after 1965 but these would be required to submit to the Government a 'realistic' Malaysianization programme for the expatriate staff in this category.

The pursuit of this policy with regard to expatriate specialists and managers had, in no small way, assisted in establishing a conducive environment for foreign and domestic investors. It is certainly a very realistic policy under the circumstances. The special requirements of industry for such trained personnel cannot be ignored without seriously impairing the productivity or even the feasibility of the investment projects. Furthermore, it would be impractical for the Government to provide facilities to step up the supply of a number of these specialized personnel when it would be more economical for the firms concerned to provide the specific training themselves. Thus, in pursuing a reasonable programme of Malaysianization, both the urgent industrial requirements and national aspirations had so far been met with satisfaction.

The discussion on policy affecting the supply of skilled personnel outside the education system would not be complete without some reference to the National Youth Pioneer Corps, a scheme under the Ministry of Culture, Youth and Sports. This Scheme was set up in 1966 "to provide discipline and skill training for youths who could not normally gain admission to other training programmes because of educational standards".[50] However, the actual training period for a particular skill seemed rather short, this being *up to 12 months* only. Other parts of the course included two months of disciplinary training and four months in the Works Section of the Corps. A limited range of trade had so far been taught: motor mechanics, tailoring and, tractor driving and maintenance. Up to the end of 1970, a total of 2,576 trainees had been enrolled. The need for such a scheme was again a reflection of the weakness of the technical and vocational education system. But in concept, scope and resources, the scheme could at best solve only a small part of this larger problem.

2.5 *Problem of Multiple Decision-Making Centres in Manpower Supply*

In examining these various aspects of the Government's policies on the supply of technical and managerial resources, a number of deficiencies and shortcomings have been noted. All these point to, among other things, the virtual absence of comprehensive and systematic manpower planning. This fragmented approach to meeting manpower requirements was made even less effective by the existence of many decision-making centres. For example, the schools, colleges and universities were under the Ministry of Education. Furthermore, the colleges and universities also had considerable autonomy. The whole policy of increasing training opportunities for the Bumiputras, being largely the responsibility of MARA, came under the Ministry of National and Rural Development. The

[49] *Ibid.*

[50] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 35.

National Apprenticeship Scheme continued to be the responsibility of the Ministry of Labour while the National Youth Pioneer Corps was under the Ministry of Culture, Youth and Sports. The National Productivity Centre was an autonomous body. It is not surprising, therefore, that an integrated approach to manpower planning had never materialized thus far. But this problem will have to be resolved if economic diversification is not to encounter a serious constraint in the long run. For the immediate future, at least a more formal and tighter means to co-ordinate and regulate the development of manpower supplies from these sources should be seriously considered.

3. IMPROVING THE FLOW OF TECHNICAL SERVICES TO INDUSTRY

The importance of technical services for industry has long been recognized in West Malaysia. Among its recommendations for the manufacturing sector, the World Bank mission of 1954 considered the provision of technological and market research services for industry to be one of the contributions that the Government could make to foster industrial development.[51] The Industrial Development Working Party of 1956 felt that this recommendation of the Bank had "great merit", although it did not consider itself competent to express a final opinion on the matter.[52] In its interim statement of industrial policy in 1957, the Government revealed that it was studying the possibility of providing industrial research facilities, including an autonomous industrial research institute.[53] To this end, a report was prepared by a United Nations expert in 1962 which examined the possibility of establishing a national chemical laboratory, an institute of industrial technology allied with a productivity centre, a national standards institution and a national testing establishment.[54] But the actual supply of technical services of one type or another was, however, slow in developing and it was only towards the end of the 1960's that concrete measures to provide these services were taken.

Basically, there are two broad types of technical services that may be considered: those provided under a credit relationship and those provided generally to stimulate industrial investment and growth. The former category is the more familiar of the two The Malaysian Industrial Development Finance Limited (MIDFL) regarded the provision of technical advice an important part of its loan operations. Technical assistance was provided even at the stage of loan negotiations with the entrepreneurs and this was continued through in the planning and construction stages of the industrial project.[55] Thus, the Company

[51] International Bank for Reconstruction and Development, *The Economic Development of Malaya*, *op. cit.*, pp. 86–87.

[52] Federation of Malaya, *Report of the Industrial Development Working Party*, *op. cit.*, pp. 33–34.

[53] "Interim Statement of Industrial Development Policy", *op. cit.*, para. 9.

[54] Federation of Malaya, *Official Year Book 1962*, *op. cit.*, p. 228.

[55] Malaysian Industrial Development Finance Ltd., *Fifth Annual Report and Accounts for Year Ended 31st March 1965*, p. 12.

had a Follow-up Division which it expanded in 1968. Its basic function was to follow up the progress of loans and projects in order to spot potential problems for timely action by MIDFL or some other appropriate sources of technical assistance. This type of service had proved to be of great value in the establishment of new loan projects.

One of the important lessons learnt by the Majlis Amanah Raayat (MARA) from the rather poor performance in the loans programme of its predecessor, RIDA, was that the mere provision of credit did not necessarily ensure the viability of a project.[56] Thus, when MARA commenced operations in 1965, it set up an Advisory Services Division to provide technical and professional advice free of charge or at nominal cost as the case may be, especially to those it had given loans. Moreover, since its establishment, MARA required that all loans issued by it would have to be accompanied by technical advice in order to ensure their success.[57] The individuals and businesses in the industrial and commercial sectors that benefitted from the Advisory Services Division had increased markedly, from 238 in 1967 to 416 in 1970.[58]

The supply of the other category of technical services to industry was hardly evident during the review period but the development of the institutions to provide them made some progress towards the end of the 1960's. Generally, it can be said that public policy during the review period appeared to have given less emphasis to the development of technical services to promote industrial expansion.

When the World Bank mission formulated the form and functions of the Federal Industrial Development Authority (FIDA) in 1963, it placed considerable importance on industrial promotion work among its list of functions.[59] It envisaged that FIDA would offer, as the main basis of its promotion activities, feasibility studies which it would prepare on its own initiative. Since its establishment in 1967, FIDA attempted to fill this gap in technical information in a number of ways. Firstly, there were the pre-investment studies it made (49 in 1968 and 24 in 1969)[60] which were meant "to be promotion materials to invite interests from potential investors".[61] But these studies lacked many important details and so from 1970, they were replaced by more comprehensive project reports which, among other things, included technical and cost data.[62] FIDA

[56] Majlis Amanah Raayat, *Penyata Tahunan, 1965*, p. 51.

[57] Majlis Amanah Raayat, *Penyata Tahunan, 1966*, p. 9.

[58] Majlis Amanah Raayat, *Penyata Tahunan, 1968*, p. 53 and *Penyata Tahunan, 1970*, p. 59.

[59] International Bank for Reconstruction and Development, *Report on the Economic Aspects of Malaysia, op. cit.*, pp. 34–35.

[60] Thirty-two of the 49 studies of 1968 appeared in two booklets issued by FIDA, *Invest in Growing Malaysia*, Series No. 1 and 2 and 22 of the 24 studies of 1969 appeared in *Invest in Growing Malaysia*, Series No. 3.

[61] Federal Industrial Development Authority, *1968 Annual Report*, p. 11.

[62] Federal Industrial Development Authority, *1970 Annual Report*, p. 70.

completed 27 of these studies in 1970. Even so, the studies had still not proved themselves to be an important basis for vigorous promotion work.

In other directions, FIDA conducted market studies for potential investors and accommodated enquiries, usually verbal, for market and other technical information. Another form of assistance from FIDA was the provision of technical services to industries, the emphasis being on the small and medium-scale industrial units.[63] The objective of these services was to enable the industries to upgrade their efficiency and expand or diversify their production. For these purposes, visits were made to factories by officials and advice tendered on the spot, if appropriate.[64]

There were other sources of technical services. The National Productivity Centre offered advisory services to its course participants as they carried out in-plant training.[65] In 1970, it established a facility to provide management consultancy services.[66] On the other hand, a survey conducted by MIDFL in 1970 on the small industry sector revealed that one of the urgent needs of the sector was for a consultancy service.[67] A wholly-owned subsidiary of the company was thus established in November 1971 to provide these services.[68] The subsidiary, MIDFL Industrial Consultants Sdn. Bhd., commenced with a paid-up capital of $½ million and a line of credit of $1.5 million.

Towards the end of the 1960's, two important sources of technical services were established, the National Institute for Scientific and Industrial Research (NISIR) and the Standards Institution of Malaysia (SIM). As noted earlier, the need for these institutions had been considered by the Government more than a decade ago. Indeed, a financial allocation was even made for an institute of industrial technology under the Second Five-Year Plan (1961–65), this being $1.8 million to be shared with the National Productivity Centre.[69] The project was revived as the National Institute for Scientific and Industrial Research with a grant of $5 million.[70] Nevertheless, the necessary legislation for its incorporation was enacted only in 1970 and was formally approved by Parliament in July 1971.[71] Only $0.3 million of the allocation was spent and in the Second

[63] Federal Industrial Development Authority, *1968 Annual Report*, p. 14.

[64] Federal Industrial Development Authority, *1970 Annual Report*, p. 72.

[65] National Productivity Centre, Malaysia, *The Third Annual Report, 1968*, p. 7.

[66] National Productivity Centre, Malaysia, *Annual Report and Statement of Accounts, 1970*, p. 9.

[67] Malaysian Industrial Development Finance Ltd., *10th Annual Report and Accounts for Year Ended 31st March 1970*, p. 72.

[68] Malaysian Industrial Development Finance Ltd., *12th Annual Report and Accounts for Year Ended 31 st March 1972*, p. 76.

[69] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op. cit.*, p. 44.

[70] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 69.

[71] *Emergency (Essential Powers) Ordinance No. 44, 1970*; the formal legislation passed by Parliament was the *National Institute for Scientific and Industrial Research (Incorporation) Act, 1971.*

Malaysia Plan (1971–75), a sum of $5.5 million was allocated to it, the National Productivity Centre and the Standards Institution of Malaysia (SIM).[72] In the case of SIM, an allocation of $0.1 million was made under the First Malaysia Plan. Although the legislation for its incorporation was passed in 1966, it did not become fully operational until 1969.

The long period before these two institutions materialized could easily be attributed to two factors. Firstly, their possible contributions to the process of industrialization, though important, could not be easily quantified in terms of effects. Consequently, the Government in its early efforts to promote industrialization, naturally tended to concentrate more on other measures which would yield more easily identifiable or tangible results. Secondly, the Government did not appear to appreciate the fact that a fairly long time would have to pass before the benefits of these institutions could be felt or even for them to become fully operational.

However, the important point is that the groundwork for a greater flow of technical services had been prepared. NISIR, as envisaged, would undertake a number of functions. These are:[73]

i) to assist the establishment of new industries by providing technical know-how and services;
ii) to find new uses for local raw materials and industrial by-products;
iii) to modify and adapt technological methods and instruments of foreign origin to suit local conditions for the use of local industries;
iv) to develop new techniques and new industrial processes for the use of local industries;
v) to carry out trouble-shooting services for the existing industries;
vi) to provide useful technical information to local industrialists and potential investors.

Given time and coupled with a sense of purpose, NISIR should make an important contribution to the future industrialization of the country.

On the other hand, SIM would provide a more restricted type of technical service to industry. For its early stages of operations, SIM's main concern was with the establishment of industrial standards for Malaysian products. To this end, it set up 11 industry committees comprising representatives from associations of manufacturers, trade and consumers, the Government, and professional, technical and research bodies. These committees, which covered a number of fields,[74] decided on the priorities for drawing up standards and appointed technical committees to draft the standards. By 1971, 47 Malaysian standards had

[72] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 69.

[73] The National Institute for Scientific and Industrial Research, *Organization, Operation and Facilities, 1971–1975*, a booklet published by NISIR (undated).

[74] These are: materials and chemicals, textiles and clothing, agriculture, electrical engineering, electronic engineering, mechanical engineering, civil engineering and building construction, domestic and consumer goods, mining, biological and medicinal products and, codes of practice.

been published covering seven industry groups.[75] Associated with the preparation of Malaysian standards, SIM also operated a certification marking scheme. Under it, the SIM Mark would be affixed to a product that conformed to the Malaysian standard for the particular product. As SIM is affiliated to several world organizations on standards control, the SIM Mark should provide an independent guarantee that the product concerned is of acceptable quality for the domestic and foreign markets.

These technical services of SIM are of special importance to Malaysian industrial development. The long exposure of the Malaysian market to imports had created a strong brand consciousness among the public so much so that local products are often held in low esteem. In the case of exports of Malaysian manufactured goods, one of the problems is the uncertainty of their quality. The introduction of the SIM Mark should increase the acceptability of Malaysian products both at home and abroad since it implies the observance of independently established standards. SIM's certification marking scheme had, however, been operating much too slowly. The first SIM Mark was granted only in early 1973 to locally-manufactured crash helmets for motor cyclists.

The overall view is that the flow of technical services to industry, although recognized by the Government as important, had been rather limited and slow during the review period. However, a number of important steps had been taken which should assure a more satisfactory flow of and a more dynamic role for technical services in the 1970's.

4. ENHANCING THE ATTRACTIVENESS OF THE COUNTRY FOR INDUSTRIAL INVESTMENT

Since 1957, the Government had implemented a number of policies which had as their basic objective the attraction of investments generally. A few of these originated from the specific aim of industrial promotion. All these contributed to increasing the attractiveness of the country as a location for industrial investment.

Of importance is the Government's policy of giving considerable weight to the development of physical infrastructures such as utilities, transport and communications.[76] This emphasis is obvious in all the development plans since 1956. As a result, infrastructural development had kept pace with the requirements of industrial growth. Thus, there had been no serious cases of industrial projects being held up or new investments encountering difficulties as a result of inadequate facilities.

[75] See *Standards Institution of Malaysia*, an information booklet issued by SIM in 1972 (mimeographed), pp. 15–16.

[76] See Federation of Malaya, *Second Five-Year Plan, 1961–1965*, *op. cit.*, pp. 9–12 and pp. 36–43; Malaysia, *First Malaysia Plan, 1966–1970*, *op. cit.*, Chapters IX and X; Malaysia, *Second Malaysia Plan, 1971–1975*, *op. cit.*, Chapters XII and XIII.

The Government's financial policies had also helped. Fiscal policies[77] were conservative and non-inflationary. Monetary policies since 1959 (the year the Central Bank was established) were mainly concerned with the maintenance of a stable currency and a sound credit situation.[78] Indeed, after the Central Bank assumed currency-issuing powers in June 1967, the Minister of Finance was quick to point out the Government's position on currency stability: "Top priority was attached by the Bank [the Central Bank] to ensuring that the new Malaysian currency would command the same degree of confidence in Malaysia and the outside world as the old Malayan dollar enjoyed in the past". The outcome of all these was a general stability of domestic prices extending into the early 1970's, although there were periods of price increases such as in 1967, caused by external factors quite beyond the control of the Government.[79]

These general policies enhanced the country's attractiveness as a place for investments of all types from both domestic and foreign sources. There is another set of policies which were particularly directed at the foreign investors. Most of them shared one common feature namely, that they were formulated and implemented during the initial stage of industrial promotion.

In presenting its interim statement of industrial development policy in 1957, the Government accepted two important obligations to ensure the security and rights of capital investment. Firstly, it gave the undertaking that it would pay fair compensation should any private enterprise be nationalized.[80] Secondly, it reaffirmed that foreign enterprises would be permitted to remit abroad dividends arising from their investments and that foreign capital could be repatriated when desired, subject only to normal exchange control practices. A close examination of the exchange control practices in respect of capital repatriation would reveal their liberal character.[81] The exchange control practices were in operation long before the promotion of industrial development by the Government and they have remained basically the same since then. Under these practices, no restric-

[77] For a good discussion of fiscal policies see C.T. Edwards, *Public Finances in Malaya and Singapore,* Canberra, Australian National University Press, 1970.

[78] For a review of monetary policies since the establishment of the Central Bank, see "Central Bank of Malaysia, 1958–1968" in Bank Negara Malaysia, *10th Anniversary Commemorative Issue, 26 January 1959–26 January 1969,* pp. 19–33. Also, Anders Olgaard, "Monetary Policy in Malaysia as Part of Policies Towards Economic Development" in *UMBC Review,* Vol. V No. 2 (1969); A.A. Walters, "Monetary Policy and Economic Development in Malaysia" in *Kajian Ekonomi Malaysia,* Vol. VII No. 1 (June 1970). A good background book on the Malaysian monetary system is P.J. Drake, *Financial Development in Malaya and Singapore,* Canberra, Australian National University Press, 1969.

[79] The notable increase in domestic retail prices in 1967 was largely attributed to the sharp rise in the price of imported rice. See speech of Minister of Finance when presenting the *Supply (1968) Bill* in Parliament on 18 January 1968.

[80] "Interim Statement of Industrial Development Policy", *op. cit.*, para. 13.

[81] For a brief but comprehensive description of Malaysia's exchange control system, see International Monetary Fund, *22nd Annual Report on Exchange Restrictions,* Washington, D.C., 1971, pp. 277–79 or any of the previous reports in this series.

tions were imposed on capital transfers between Malaysia and the other countries in the Sterling Area. For transfers of capital to countries outside of the Sterling Area, these were generally permitted and they required only the prior approval of the exchange control authorities.

Two other measures had been taken to assure the security and rights of private capital. The Government had at all times expressed its readiness to enter into investment guarantee agreements with foreign governments.[82] The scope of the agreement could vary from case to case but basically it would involve the government of the investing country compensating its nationals in the event the risk covered by the agreement should materialize. In cases of expropriation, the foreign government in turn would then take appropriate measures as provided under the agreement to recoup its losses from the Malaysian Government. However, compensation paid under certain other claims would not be recoverable from the host government, e.g. compensation paid for losses arising from wars, revolutions, insurrections and normal business risks. Up to 1970, Malaysia had entered into investment guarantee agreements with only two countries, the United States and the Federal Republic of Germany. The agreement with the United States Government came into effect in June 1965 and covered guarantees on currency convertibility, expropriation, wars, revolutions and insurrections and, other risks, including normal business risks. The agreement with the Federal Republic of Germany was made earlier, in 1960, and covered only expropriation. In October 1971, an agreement was made with Canada covering nationalization, expropriation, riots and any other actions of the Malaysian Government which could deprive the Canadian investors of their rights.

The other measure was Malaysia's accession to the Convention on the Settlement of Investment Disputes between States and Nationals of Other States in October 1965.[83] The Convention, which was sponsored by the World Bank, provided facilities for the settlement of disputes between States and foreign investors through conciliation and arbitration by qualified persons of independent judgement. This would be done through the International Centre for Settlement of Investment Disputes, an autonomous international institution. The Centre's jurisdiction covered only States that had acceded to the Convention and the nationals of other such States. The Contracting States were obliged to abide by any award handed down by the Arbitral Tribunal of the Centre in the event of arbitration. It was felt that in acceding to the Convention, such States would be "promoting an atmosphere of mutual confidence and thus stimulating a larger flow of private international capital into those countries which wish to attract

[82] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 131.

[83] For a full description of the Convention, see *Convention on the Settlement of Investment Disputes Between States and Nationals of Other States*, a report submitted to governments by the Executive Directors of the International Bank for Reconstruction and Development, Washington, D.C., March 1965.

it".[84] As at mid-1969, a total of 61 States had signed the Convention, including most of the major capital-exporting countries.[85]

Finally, Malaysia had entered into agreement for relief from double taxation with a number of countries. These included Denmark, Japan, Norway, Singapore, Sweden and the United Kingdom. It stands ready and interested to do so with other states that so desire.[86]

5. DEVELOPING AN EFFECTIVE MACHINERY FOR FORMULATING AND IMPLEMENTING THE GOVERNMENT'S INDUSTRIAL POLICIES

The discussion on industrial policies will not be complete without some appraisal of the Government machinery for formulating and implementing these policies. It will be obvious from the Malaysian experience that the nature of the machinery not only affected efficiency in implementing policies but also had notable influence over the Government's capability and initiative to formulate them. Over the review period, the machinery had undergone some important changes, reflecting the Government's growing emphasis on industrialization. But a number of flaws yet remained.

When the Government first launched its industrialization policy, it did not even have a machinery to deal with industrial development. A new section was accordingly set up within the Ministry of Commerce and Industry in 1957. The Industrial Development Working Party recommended that an important function of the section should be "to provide all possible assistance and information to potential industrialists in establishing new industries and expanding existing ones".[87] This it did but its main preoccupation was the administration of the pioneer industry legislation. Little promotion work was done.[88] This rather passive phase lasted for a number of years.

In 1963, a World Bank mission which studied and made recommendations on the economic aspects of the formation of Malaysia urged the establishment of two new institutions that would accelerate industrialization.[89] These were the Federal Industrial Development Authority (FIDA) and the Tariff Advisory Board (TAB). Both recommendations were accepted. Legislation for the establishment of the TAB was enacted in 1963 and that for FIDA in 1965.[90] The TAB commenced operations in 1964 and FIDA in 1967.

[84] *Ibid.*, p. 4.

[85] International Centre for Settlement of Investment Disputes, *Third Annual Report, 1968/1969*, pp. 5–6.

[86] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 131

[87] Federation of Malaya, *Report of the Industrial Development Working Party, op. cit.* p. 46.

[88] International Bank for Reconstruction and Development, *Report on the Economic Aspects of Malaysia, op. cit.*, p. 36.

[89] *Ibid.*, pp. 14–15.

[90] These are the *Tariff Advisory Board Act, 1963* and the *Federal Industrial Development Authority (Incorporation) Act, 1965.*

In recommending the establishment of FIDA, the World Bank mission took cognizance of two factors.[91] Firstly, the mission saw a clear need for the Federation of Malaya and the Borneo States to provide industries with "more substantial and vigorous assistance and encouragement than is at present found . . ." Secondly, as several agencies and the Governments of the component states of Malaysia were undertaking one form of industrial promotion activity or another, this called for co-ordination and avoidance of duplication. Thus, FIDA was set up with four basic functions.[92] The first was the promotion of industrial activities. Economic feasibility studies to be prepared by FIDA would be the main basis of these activities.[93] Secondly, FIDA would advise the Government on the formulation of industrial policy and, in the case of industrial sites, to undertake the development of such sites where appropriate.[94] Thirdly, FIDA would evaluate applications for pioneer status.[95] Fourthly, it would co-ordinate the activities of institutions concerned with industrial development.[96]

The range of functions given to FIDA appeared sufficiently comprehensive and adequate for the tasks ahead. However, FIDA's impact was below expectations. In particular, it had so far failed to establish itself in an authoritative position to influence the pace and pattern of industrial development. Much of this could be attributed to its lack of technical brilliance, experience and expertise, all of which are essential ingredients for a leadership role. As pointed out earlier, FIDA had yet to undertake the carefully selected and adequately comprehensive type of feasibility studies. As a result, its promotion efforts had been rather general in nature. In other words, these efforts had been largely concerned with merely providing publicity for the various incentives and facilities available to investors. On the other hand, promotion efforts based on feasibility studies would have added a new dimension to the country's industrial development in that these studies could assist the process of deliberate industry-selection. The lack of outstanding technical capabilities on the part of FIDA naturally affected also the tone and quality of its advisory role. The situation was considerably aggravated by the presence of two other bodies which were also concerned with the formulation of industrial policies, namely, the Economic Planning Unit of the Prime Minister's Department[97] and the Industries Division of the Ministry of

[91] International Bank for Reconstruction and Development, *Report on the Economic Aspects of Malaysia, op. cit.*, p. 34.

[92] *Federal Industrial Development Authority (Incorporation) Act, 1965*, Section 5.

[93] *Ibid.*, Section 5(a); also International Bank for Reconstruction and Development, *Report on the Economic Aspects of Malaysia, op. cit.*, p. 34.

[94] *Federal Industrial Development Authority (Incorporation) Act, 1965*, Section 5(d) and (f).

[95] *Ibid.*, Section 5(e).

[96] *Ibid.*, Section 5(c).

[97] Malaysia, *Mid-Term Review of the First Malaysia Plan, 1966–1970, op. cit.*, p. 78.

Commerce and Industry.[98] These bodies also had their own ideas about industrial development and FIDA, with its limited technical expertise and experience, could hardly have been able to see much of its will and influence prevailing under the circumstances. Furthermore, the possibility of inter-agency rivalry should not be ruled out.

Further comments can be made on this multiplicity of bodies concerned with industrial development. Little merit can be seen in the present arrangement. The continued maintenance of the Industries Division in the Ministry of Commerce and Industry must have as one of its consequences a curb on the full and proper development of FIDA. Furthermore, while it is recognized that industrial policies are of interest to overall planning, the Economic Planning Unit can still engage in effective planning without having to *actually share* in the process "for planning the nation's overall approach to industrial development".[99] What the Government should have is only a body capable and reliable enough to advise it on the formulation of industrial policies. FIDA could be developed into such a body. The most important thing here is that such an institution would assure that there will be only one major source of advice. In Singapore, the Economic Development Board, also a statutory body like FIDA, had been given this role since 1961, and no small measure of the success of Singapore's industrialization programme had been attributed to this factor.[100]

The other function of FIDA, namely, the evaluation of applications for fiscal incentives, relates to policy implementation. It is needless to emphasize the importance of an efficient implementing machinery, for cases abound, particularly in developing countries where the lack of such a machinery has made ineffective many good policies. From 1968, FIDA became solely responsible for processing and recommending all applications for pioneer status and, with the passing of the Investment Incentives Act, 1968, this task was extended to all applications for incentives under this Act. Hitherto, the applications for pioneer status were dealt with by the Industries Division of the Ministry of Commerce and Industry. However, FIDA constituted only a part of the larger implementing machinery but its work was basic to the decision-making process. The recommendations made by FIDA on the applications would then be considered by the Action Committee on Incentives[101] which would then present its views to the Minister of Finance and the Minister of Commerce and Industry for their decisions. However, the Government soon found this overall implementing machinery unable to deal with applications fast enough and this provided one of the underlying reasons for the establishment of the Capital Investment Committee (CIC) in June 1969.

[98] Malaysia, *Official Year Book 1969, op. cit.*, p. 195.

[99] The sharing of this task between FIDA and the Economic Planning Unit was noted in Malaysia, *Mid-Term Review of the First Malaysia Plan, 1966–1970, op. cit.* p. 78.

[100] See Economic Development Board (Singapore), *Annual Report*, various years.

[101] This Committee comprised senior Government officials from the Ministry of Commerce and Industry, the Ministry of Finance, the Department of Inland Revenue and the Department of Customs and Excise.

With the decision of the Government to make more intensive use of tariffs as an instrument to promote industrial development, the Tariff Advisory Board (TAB) was set up in June 1964 as recommended by the World Bank mission. Its predecessor, the Tariff Advisory Committee set up after 1957, had proved to be inadequate to frame a dynamic tariff policy for Malaya. The basic function of the TAB was to establish a common market for all goods produced or manufactured in significant quantities in the component states of Malaysia and common protective tariffs for all such goods and products.[102] Over the period of its existence, the TAB conducted a number of public enquiries. Its recommendations covered largely changes in the rates of import duty but they also involved other measures such as imposition or removal of import controls, exemptions from import duties and, price undertakings to be obtained. A breakdown of the TAB's recommendations for 1965–68 is presented in Table 11.11. The Annual Reports of the TAB also provided interesting information on the Government's response to the TAB's recommendations on changes in import duty. Between 9 August 1965[103] and the end of 1967, the TAB made 49 recommendations on rates of import duty covering 330 tariff items. Of these, changes on 308 tariff items were accepted by the Government for implementation while only 10 were rejected; on another 12 items, no decision was taken.[104] In 1968, 23 recommendations were made on rates of import duty covering 46 tariff items and of these, recommendations on 34 items were accepted by the Government, only one was rejected and no decision was taken on 11 others.[105] No corresponding information was available for 1969. By these indications, the TAB can be said to have exercised rather extensive influence on the country's tariff structure.

However, it was found that the tariff-making procedures of the TAB with its public hearings were cumbersome and time-consuming. Following the separation of Singapore, there were urgent cases of tariffs to be altered. A special committee, the Action Committee on Tariffs, was thus set up to deal with this problem and to handle future urgent requests for protection. The Committee had made some important contributions to the tariff structure. The Government's decision of October 1965 to allow for duty-free movement of 170 categories of goods produced in Malaysia and the extension of this measure in 1966 to cover virtually all locally-produced goods, were the outcome of the Committee's recommendations. Between 1965 and 1969, it considered a total of 146 urgent applications for tariff protection. In addition, the Committee also

[102] *Tariff Advisory Board Act, 1963*, Section 6.

[103] This was the date of the separation of Singapore from the rest of Malaysia. Prior to that, the TAB had submitted tariff recommendations covering also Singapore but these were put away following the separation.

[104] Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1967*, p. 5.

[105] Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1968*, p. 7.

Table 11.11

Malaysia – Recommendations Made by the Tariff Advisory Board, 1965–68 by Categories

	Recommendation	Number of Recommendations Made		
		9 August 1965 – 31 December 1967	1968	Total
1.	Changes in Rates of Import Duty	49[a]	23[b]	72
2.	Imposition or Removal of Import Controls	33	13	46
3.	Exemption from Import Duty	23	10	33
4.	Price Undertakings to be Obtained	15	9	24
5.	Tariff Classification	24	6	30
6.	Others	48	5	53
	Total	192	66	258

Sources: 1. Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1967.*

2. Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1968.*

[a]Covers 330 tariff items.

[b]Covers 46 tariff items.

considered urgent cases of applications for exemption from customs duty on raw materials, removal of import duty and import restriction. From November 1966, the functions of the Committee were enlarged to include the final examination of applications for pioneer status,[106] but with the establishment of the Action Committee on Incentives in 1968, this function was transferred to the latter Committee. Although the Committee dealt with tariff matters, it was not part of the TAB. But the full-time members of the TAB[107] were members of the Committee together with officials representing the Treasury, the Ministry of Commerce and Industry and such other Government departments as might be required.

In 1970, a further change was made to the tariff-making machinery. The TAB was abolished. In its place, tariff matters were passed on to two committees, the Tariff Advisory Committee (TAC) and the Special Advisory Committee on Tariffs (SACT), the latter to advise the Government on urgent requests for

[106]With this enlargement of functions, the Committee was renamed the Action Committee on Tariffs and Industrial Development.

[107]The full-time members of the TAB were its Chairman and Deputy Chairman.

protection.[108] Members of SACT comprised officials of the Ministry of Commerce and Industry, the Treasury and FIDA while members of TAC comprised all the members of SACT plus two other persons selected from a panel appointed by the Government. FIDA was appointed to service these Committees. The changeover from the TAB was the outcome of a review made by the Capital Investment Committee (CIC),[109] the rationale provided being that it would streamline the tariff-making procedures.[110] Where the TAB was legally required to hold public enquiries for considering changes in tariffs, the TAC would hold such enquiries only if these were considered desirable or when directed to do so by the Minister of Finance or the Minister of Commerce and Industry.[111]

These were major modifications to the tariff-making machinery. The discretionary use of the public enquiry would certainly speed up the tariff-making procedures. But against this must be weighed the possibility of inadequate consideration of the views of all likely to be affected by a proposed change in tariffs. Another important disadvantage was that tariff-making had been transferred from an independent[112] body to a body comprising largely of government officials. It thus exposed the tariff-making process to possible biases that might arise from sectional and even political pressures. From the standpoint of industrial development, these disadvantages could have important implications should they give rise to unnecessary protection or inadequate protection. A third disadvantage was that the TAC members would be concerned with tariff matters only on a part-time basis since they were also government officials with other duties while the panel members would have their own business or professional interests. The establishment of protective duties is just one aspect of operating a dynamic tariff policy. The maintenance of tariffs at appropriate levels over time is the other equally important but often overlooked aspect. Both aspects of the work would be best served by a body with full-time members on the job as would have been possible under the TAB. The replacement of the TAB by the TAC as constituted therefore introduced another source of weakness. Even without these disadvantages, the case to provide a substitute for the TAB merely to achieve a less cumbersome tariff-making procedure was already weakened by the fact that urgent applications could be effectively dealt with by a special committee, as was done in the past.

[108] *Federal Industrial Development Authority (Incorporation) (Amendment) Act, 1972* which replaced the *Emergency (Essential Powers) Ordinance No. 43, 1970.*

[109] This Committee, set up in June 1969, will be discussed shortly.

[110] Tariff Advisory Board, Malaysia, *Report and Audited Statements of Accounts for the Year Ended 31st December, 1969*, p. 8.

[111] *Federal Industrial Development Authority (Incorporation) (Amendment) Act, 1972*, Section 2(6)(c).

[112] The independence of the TAB was assured by the fact that the full-time members of the TAB could only be removed by Parliament. See *Tariff Advisory Board Act, 1963*, Section 3(2).

The shift to greater aggressiveness by the Government under its new industrial policy following May 1969 necessitated a new institution. Thus, the Capital Investment Committee (CIC) was established in June 1969. Both its composition and its terms of reference could be construed as an attempt by the Government to remedy the limitations of the old machinery. Members of the CIC included the Minister of Finance (Chairman), the Minister of Commerce and Industry (Deputy Chairman), the Minister for Rural Development and Co-operatives, the Deputy Minister of Finance and top officials of the Treasury, the Ministry of Commerce and Industry, the Economic Planning Unit, the General Planning Unit, the Central Bank and FIDA.[113] The participation of the Minister of Finance and the Minister of Commerce and Industry (the two Ministers whose decisions are required for important industrial matters) in a Committee with senior government officials meant that decisions could be taken more quickly than in the past. Hitherto, the Ministers were consulted for decisions only after a committee of civil servants (e.g. the Action Committee on Incentives) had deliberated. One tangible effect of this could be seen in the sharp increase in approvals granted for incentives under the Investment Incentives Act, 1968, as shown in Tables 9.5 and 9.12. Another significant point was that the CIC was serviced not just by FIDA alone but by a joint secretariat made up of FIDA, the Economic Planning Unit and the Office of Civil Affairs.[114] This again reflected the inability of FIDA yet to be recognized as the sole authority on matters relating to industrial development.

The terms of reference of the CIC are as follows:[115]

i) to review current policies and programmes of industrial development, both at Central Government and state levels, with a view to co-ordinating them into an integrated programme of accelerated industrial development particularly of labour-intensive industries and those with strong export potential;

ii) to identify development priorities, and formulate policy guidelines and incentives for the effective implementation of such industries;

iii) to streamline present procedures for processing applications in order to speed up decision-making on industrial development matters;

iv) to re-deploy existing staff of different organizations into a more cohesive force to achieve these objectives;

v) to direct the implementation of the Committee's policies and decisions in collaboration with State Governments and departments concerned.

The CIC's terms of reference could very well be read as some rather adverse judgement on the past performance of FIDA and the capabilities of the other parts of the Government machinery. Firstly, the CIC had set for itself the task of

[113] For the names of the Committee members, see Federal Industrial Development Authority, *1970 Annual Report*, p. 64.

[114] The Office of Civil Affairs, being a creation during the state of Emergency following civil disturbances in May 1969, was abolished after the reconvening of Parliament.

[115] Federal Industrial Development Authority, *1970 Annual Report*, p. 64.

reviewing the current industrial policy. It will be recalled that one of FIDA's basic functions is to advise the Government on policy matters in industrial development and for that it would have to initiate appropriate studies. Apparently, it had not done this job satisfactorily. Secondly, the pursuit and implementation of industrial objectives by the State Governments received some prominence in the work to be undertaken by the CIC. In recent years, a number of obstacles had been encountered at the state level such as the difficulties in getting state land for industrial purposes,[116] the unco-ordinated development of industrial estates, and the different degrees of urgency accorded to industrial development by the different states. The existing Government machinery appeared to have been unable to deal effectively with these problems. Hence, recognition was given to these matters in the CIC's terms of reference. Thirdly, importance was given in the functions of the CIC to improving the machinery for implementing industrial policies. The sharp increase in the number of applicants for tax incentives in 1969 and 1970 referred to earlier was undoubtedly a tangible benefit from the setting up of the CIC. However, the same could not be said of the CIC's role in the decision to abolish the TAB, even though there is now a less cumbersome tariff-making machinery.

But the CIC is nothing more than a committee and as such would have to rely on the full-time staff of the institutions which serviced it for the necessary advice, staff work and, research. This means that the problem of reconstructing FIDA to increase its effectiveness will still have to be faced. If this problem continues to be given inadequate attention, the CIC, despite its ambitious functions and energy, will find it difficult to achieve the impact it sought to make. The increase in the financial allocation for FIDA from an estimated grant of $3.4 million in the First Malaysia Plan to $10 million in 1971–75[117] is no assurance of greater effectiveness and influence unless two conditions are satisfied namely, that FIDA's weaknesses are fully recognized and that the Government changes its views on the role for FIDA and acts accordingly.

[116] Malaysia, *Progress Report of the Capital Investment Committee as at 31st December 1969*, (mimeographed), pp. 8–9.

[117] Malaysia, *Second Malaysia Plan, 1971–1975, op. cit.*, p. 69.

PART IV

PUBLIC POLICIES AND MEASURES IN THE MINING SECTOR

CHAPTER XII

THE MINING SECTOR – DEVELOPMENTS AND PUBLIC POLICY

1. INTRODUCTION

In the discussions on sectoral change in Chapter III, it was noted that the contributions of the mining sector to the gross domestic product were fairly substantial and varied from 6 to 9 per cent of the gross domestic product in the 1960's. However, trends were evident that the share of this sector in total product was declining. This chapter will examine the major developments within this sector, especially those which have an important bearing on the process of economic diversification. In particular, special attention will be focussed on two aspects of these developments. The first aspect concerns the progress achieved during the review period in extending the economic life of the tin mining industry. The second concerns the efforts made to expand the range of mineral production.

Efforts to diversify mineral production are easily and readily recognized as contributions to economic diversification. For these represent the simple form of widening the range of output. But less obvious and almost always overlooked is the contribution to the diversification process of efforts to lengthen the economic life of the tin industry. Like the renewal of the rubber industry discussed in Chapter V, there are good reasons why such efforts in the tin industry should be considered as a relevant and important part of the overall efforts to achieve greater economic diversification. Firstly, the extension of life of the tin industry would purchase time for the development of the other sectors of the economy, particularly, the manufacturing sector. Furthermore, a reinvigorated tin industry could even be made to facilitate the process of diversification by appropriate policies for it to finance the development of other sectors.

2. DEVELOPMENTS IN THE MINING SECTOR, 1951–70

West Malaysia has a long history of mining activities. Tin mining continued to dominate the mining sector. The following discussions will review the sector over the period 1951–70. The extension of the review period backwards to 1951 was made to enable developments in 1957–70 to be seen in better

perspective in view of the fact that with the exception of some products, mining is an 'old' activity.

Table 12.1 shows the volume and value of the major minerals produced in West Malaysia in 1951–70 while Table 12.2 shows the value of output of the minor minerals. In 1951–70, total output of the mining sector showed a generally rising trend from one year to another. Comparing the decade of the 1960's with that of the 1950's, total output in value terms was estimated to have increased by 87 per cent. This remarkable expansion could be attributed to a number of factors. Most important was, of course, the relatively better prices of tin in the 1960's than in the 1950's (Table 2.22). Secondly, the output of tin-in-concentrates in volume terms increased by nearly 22 per cent in the 1960's, thus reinforcing the price effect. As a result, the value of output in the 1960's rose by 78 per cent compared with the previous decade. The significance of this becomes clear when it is observed that tin-in-concentrates accounted for 70–86 per cent of total mineral output in the 1960's. Thirdly, the 1960's also saw the sharp expansion of iron ore production. The volume of iron ore produced increased by 156 per cent in the 1960's compared with the previous decade and in value terms, the increase was 165 per cent. Iron ore production reached some of its highest levels within the first half of the 1960's so that within this period it accounted for nearly 30 per cent of the total mineral output. Another factor in the 1960's, though of much less significance to total output, was the rapid growth of bauxite production, particularly in the second half of the 1960's.

An important feature of the mining sector is that its products were almost wholly export-oriented. Thus trends in the foreign exchange earnings of the sector were closely related to trends in output. Table 12.3 shows the value of exports of the various mineral products. The total value of mineral exports showed a clearly increasing trend, particularly within the 1960's. The average export value in 1969–70 at $1,114 million was almost twice as high as the average for 1951–52. If the total export proceeds of the 1960's were compared with those of the 1950's, the increase was 91 per cent. The principal source of expansion was of course the tin industry. Prices were not only higher on the average in the 1960's but also export volume. In the decade 1961–70, the total value of tin exports was 81 per cent higher than for the previous decade. Expansion in the export values of iron ore and bauxite for the 1960's were even larger, these being 165 per cent and 175 per cent respectively. On an annual basis, export proceeds of both the tin and bauxite industries showed a clearly rising trend to the end of the 1960's. But for the iron ore industry, the rising trend in export receipts was evident only up to 1963 after which the trend showed a steady decline. Even so, the level to which receipts fell in 1970 (i.e. $107 million) was still considerably higher than the annual earnings of the industry up to 1958.

Taken as a whole, the mining sector was a very substantial source of foreign exchange earnings. It accounted for 17–27 per cent of total export receipts in the 1950's and 27–34 per cent in the 1960's. However, the share declined from 1966 after reaching a peak of 34 per cent in 1965 but the lowest it fell to by the end of the decade was still a formidable 27 per cent of total exports.

Table 12.1

West Malaysia – Volume and Value of Major[a] Minerals Produced

Year	Tin-in-Concentrates			Iron Ore			Bauxite		
	Volume ('000 tons)	Value ($ million)	As % of Total Value	Volume ('000 tons)	Value ($ million)	As % of Total Value	Volume ('000 tons)	Value ($ million)	As % of Total Value
1951	57.4	487.3	94.2	846.8	18.7	3.6	–	–	–
1952	57.1	458.5	92.6	1,055.5	24.3	4.9	21.8	0.3	*
1953	56.4	343.4	89.5	1,062.7	21.4	5.6	152.7	2.1	0.5
1954	60.9	358.5	90.0	1,212.8	23.2	5.8	165.6	3.4	0.9
1955	61.2	376.4	88.5	1,466.2	30.3	7.1	222.2	4.2	1.0
1956	62.3	405.1	84.8	2,444.6	52.4	11.0	264.4	5.0	1.0
1957	59.3	371.7	81.6	2,972.5	66.7	14.6	325.6	6.1	1.3
1958	38.5	238.6	74.7	2,795.3	67.4	21.1	262.4	4.6	1.4
1959	37.5	250.2	68.6	3,760.7	99.5	27.3	381.7	6.9	1.9
1960	52.0	343.8	68.5	5,640.3	143.8	28.6	452.0	8.1	1.6
1951–60	542.6	3,633.5		23,257.4	547.7		2,248.4	40.7	
1961	56.0	420.6	69.5	6,733.5	171.4	28.3	409.9	7.3	1.2
1962	58.6	440.9	71.1	6,507.3	167.8	27.1	349.4	6.2	1.0
1963	59.9	458.6	68.7	7,264.5	194.3	29.1	444.0	7.7	1.2
1964	60.0	624.4	77.7	6,465.7	166.3	20.7	463.8	7.9	1.0
1965	63.7	751.7	80.0	6,872.7	167.8	17.9	843.2	14.5	1.5
1966	68.9	746.7	81.8	5,762.4	138.1	15.1	940.4	16.0	1.8
1967	72.1	727.1	82.4	5,349.8	124.4	14.1	885.4	14.8	1.7
1968	75.1	713.2	84.4	5,085.3	110.3	13.1	786.0	13.2	1.6
1969	72.2	759.1	84.4	5,151.0	113.2	12.6	1,056.1	17.9	2.0
1970	72.6	811.5	86.0	4,420.1	98.3	10.4	1,121.3	19.0	2.0
1961–70	659.1	6,453.8		59,612.3	1,451.9		7,299.5	124.5	
1971	74.3			935.0			962.5		

(Continued next page).

Table 12.1 *(Continued)*

Year	Gold			Coal			Estimated Value of All Minerals Produced ($ million)
	Volume (ozs. troy)	Value ($ million)	As % of Total Value	Volume ('000 tons)	Value ($ million)	As % of Total Value	
1951	17,018	1.7	0.3	382.5	7.8	1.5	517.1
1952	19,806	2.0	*	314.9	7.9	1.6	495.1
1953	18,203	1.9	0.5	286.4	8.6	2.2	383.6
1954	20,955	2.1	0.5	224.5	6.7	1.7	398.3
1955	22,838	2.3	0.5	206.1	6.2	1.5	425.3
1956	20,310	2.1	0.4	182.5	5.5	1.2	477.5
1957	11,157	1.1	0.2	152.3	4.6	1.0	455.6
1958	22,484	2.3	0.7	66.5	2.2	0.7	319.2
1959	26,739	2.7	0.7	75.6	2.6	0.7	364.8
1960	20,745	2.1	0.4	6.8	0.2	*	502.0
1951–60	200,255	20.3		1,898.1	52.3		4,338.5
1961	12,486	1.3	0.2	-	-	-	605.0
1962	6,923[b]	0.7	0.1	-	-	-	619.9
1963	9,116[b]	0.9	0.1	-	-	-	667.9
1964	7,295[b]	0.7	0.1	-	-	-	803.5
1965	4,051[b]	0.4	*	-	-	-	939.6
1966	2,959[b]	0.3	*	-	-	-	913.2
1967	1,290[b]	0.1	*	-	-	-	882.3
1968	1,454[b]	0.1	*	-	-	-	845.2
1969	3,152[b]	0.3	*	-	-	-	899.2
1970	3,912[b]	0.4	*	-	-	-	943.3
1961–70	52,638	5.2		-	-		8119.1

Sources: 1. Department of Mines, *First Quinquennial Bulletin of Statistics relating to the Mining Industry, 1951–1955.*
2. Department of Mines, *Second Quinquennial Bulletin of Statistics relating to the Mining Industry, 1956–1960.*
3. Department of Mines, *1961 Annual Supplement to the Second Quinquennial Bulletin of Statistics relating to the Mining Industry, 1956–1960.*
4. Department of Mines, *1962 Annual Supplement to the Second Quinquennial Bulletin of Statistics relating to the Mining Industry, 1956–1960.*
5. Department of Mines, *Bulletin of Statistics relating to the Mining Industry of Malaysia*, 1963 to 1970.

*Less than 0.1 per cent.

[a]Covers important mineral products mined for themselves.

[b]Largely the by-product of tin mining.

But this broad review of output and the foreign exchange earnings of the mining sector does not quite reveal the development of some rather serious problems within it. In particular, three of these problems have implications for the diversification process and the policies to assist it. These are:

i) the trends towards fewer mineral products in the output structure;
ii) the tendency of the mining sector to reduce its absorptive capacity for labour; and
iii) the growing prospect of declining ore reserves in major mining activities.

It would be appropriate here to examine these problems in order that a more effective appraisal of public policy for the mining sector could be made at a later stage.

2.1 *Trend Towards Fewer Mineral Products in the Output Structure*

The trend towards fewer mineral products in the output structure commenced in the mid-1950's. A closer examination of the output composition of the mining sector reveals the predominant position of tin all the time. In the early 1950's, the share of tin-in-concentrates to the value of total output of the mining sector even exceeded 90 per cent. Even so, there were other mineral products mined in fairly large quantities. The most important of these was iron ore which, as observed earlier, grew to account for nearly 30 per cent of the total mineral output in the early 1960's. Next in importance was bauxite mining which, by about the mid-1960's, was producing nearly $16 million of ore. Other notable minerals in the 1950's were gold and coal. Besides these, there were the minor

Table 12.2

West Malaysia — Value of Minor Minerals Produced[a]

($ million)

Year	Value of By-Products from the Tin Industry									Mineral Product Mined for Itself		All Minor Minerals	
	Ilmenite	Xenotime	Monazite	Columbite	Copper Concentrates	Zircon	Scheelite	Manganese	Tin Slags[b]	Wolfram	China Clay	Value	As % of All Minerals Produced
1951	0.58	n.a.	n.a.	n.a.	n.a.	n.a.	0.20	n.a.	-	0.40	0.07	1.25	0.2
1952	0.48	n.a.	n.a.	n.a.	n.a.	n.a.	0.30	n.a.	-	0.57	0.05	1.40	0.3
1953	0.70	n.a.	n.a.	n.a.	n.a.	n.a.	0.29	n.a.	-	0.90	0.04	1.93	0.5
1954	1.24	n.a.	n.a.	n.a.	n.a.	n.a.	0.24	n.a.	-	0.22	0.08	1.78	0.4
1955	1.59	n.a.	n.a.	n.a.	n.a.	n.a.	0.39	n.a.	-	0.35	0.11	2.44	0.6
1956	4.52	n.a.	0.65	1.56	0.01	*	0.30	n.a.	-	0.32	0.08	7.44	1.6
1957	3.62	n.a.	0.50	0.71	0.21	*	0.06	n.a.	-	0.11	0.10	5.31	1.2
1958	2.65	n.a.	0.37	0.76	0.02	*	0.05	n.a.	0.04	0.05	0.07	4.01	1.3
1959	1.91	n.a.	0.09	0.50	0.15	0.01	0.02	n.a.	*	0.04	0.08	2.80	0.8
1960	3.05	n.a.	0.01	0.46	0.21	*	0.11	n.a.	-	0.06	0.10	4.00	0.8
1951–60	20.34	n.a.	1.62	3.99	0.60	0.01	1.96	n.a.	0.04	3.02	0.78	32.36	
1961	2.67	n.a.	0.18	0.81	0.17	0.01	0.08	n.a.	0.31	0.04	0.11	4.38	0.7
1962	2.86	*	0.18	0.77	0.10	-	-	0.02	0.21	n.a.	0.23	4.37	0.7
1963	3.95	*	0.25	0.41	0.16	0.02	-	0.27	1.10	0.01	0.06	6.23	0.9
1964	3.66	-	0.09	0.22	0.10	0.01	*	-	-	0.01	0.08	4.17	0.5
1965	3.85	-	0.23	0.24	0.14	0.06	-	0.03	0.37	0.04	0.01	4.97	0.5
1966	3.62	1.59	0.50	0.67	0.06	0.07	-	2.61	0.57	0.03	0.13	9.85	1.1
1967	2.75	6.02	0.68	0.92	0.08	0.04	0.11	n.a.	5.12	0.13	0.12	15.97	1.8
1968	3.98	0.63	0.87	0.36	0.28	0.08	0.05	n.a.	1.16	0.78	0.09	8.28	1.0
1969	4.30	0.64	0.64	0.38	0.22	0.11	0.01	n.a.	1.91	0.43	0.12	8.76	1.0
1970	6.52	1.97	0.61	0.42	0.40	0.06	n.a.	-	2.14	1.76	0.23	14.11	1.5
1961–70	38.16	10.85	4.23	5.20	1.71	0.46	0.25	2.93	12.89	3.23	1.18	81.09	

Sources: Same as for Table 12.1

[a] Covers virtually all the minor minerals of economic importance.

[b] Tin slags, which are by-products of tin smelting, contain appreciable quantities of the combined oxides of tantalum and columbium. These were exported entirely and appear above only from the time when such exports were recorded.

* Less than $5,000.

n.a. = not available

Table 12.3

West Malaysia – Exports of Mineral Products by Value[a]
($ million)

Year	Major Minerals			Minor Minerals (By – Products of the Tin Industry)						All Minerals	
	Tin	Iron Ore	Bauxite	Ilmenite	Columbite Tantalite	Monazite	Scheelite	Tin Slags	Wolframite	Export Value	As % of Total Gross Exports
1951	563.8	16.8	0.3	0.9	0.2	-	0.2	-	2.6	585	17
1952	510.8	23.2	0.7	0.5	0.5	-	0.3	-	1.5	538	25
1953	382.8	20.5	2.9	0.7	0.3	-	0.3	-	1.2	409	26
1954	403.9	21.8	3.4	1.2	2.0	-	0.3	-	0.2	433	27
1955	433.7	32.6	4.9	1.6	2.6	-	0.4	-	0.4	476	20
1956	471.7	51.2	4.8	4.5	1.0	-	0.3	-	0.3	534	24
1957	439.4	65.6	6.4	3.6	0.5	-	•	-	0.1	516	24
1958	274.5	65.5	4.4	2.6	1.5	-	•	•	0.1	349	19
1959	298.9	99.8	6.6	1.9	0.2	-	0.1	•	0.1	408	17
1960	507.3	140.2	8.0	3.0	0.5	-	0.1	-	•	659	23
1951–60	4,286.8	537.2	42.4	20.5	9.3	-	2.0	•	6.5	4,907	
1961	553.1	163.8	5.1	2.7	1.2	0.2	0.1	0.3	0.1	727	28
1962	620.3	166.1	5.6	2.9	0.5	0.2	-	0.2	-	796	30
1963	642.4	176.3	7.9	4.0	0.3	0.2	-	1.1	•	832	31
1964	728.3	162.5	9.3	3.7	•	0.1	•	-	0.1	904	33
1965	871.8	161.3	11.6	3.8	0.2	0.2	-	0.4	0.2	1,050	34
1966	792.0	136.2	17.1	3.6	0.8	0.6	-	0.6	0.2	951	31
1967	755.4	122.0	14.2	2.8	0.4	0.7	•	5.1	0.4	901	31
1968	829.7	110.8	13.1	4.0	0.4	0.9	0.1	1.2	0.3	961	30
1969	939.7	115.7	14.6	4.3	0.3	0.6	•	1.9	2.0	1,079	27
1970	1,013.3	107.2	18.1	6.5	0.2	0.6	-	2.1	2.3	1,150	27
1961–70	7,746.0	1,421.9	116.6	38.3	4.3	4.3	0.2	12.9	5.6	9,351	
1971	905.7	20.5	17.1	5.6	0.1	0.5	-	•	2.9	952	24

Sources: 1. Department of Statistics, *Monthly Statistical Bulletin*, August 1955, December 1950, February 1965 and October 1971.
2. Same as for Table 12.1

[a]Covers exports in excess of $50,000 a year.
•Less than $50,000

minerals which, taken together, accounted for only about 1½ per cent of mineral output at the most. The bulk of these were by-products of the tin industry. Details of these minor minerals are given in Table 12.2.

By the end of 1970, two of the more important mineral products ceased to be mined while the production of a third was drastically reduced. The first of these three mineral products to cease production was coal. Large scale production of coal commenced in 1916 when output jumped from a mere 10,725 tons in the previous year to 100,921 tons.[1] By the first half of the 1950's, the coal industry was already facing difficulties. A study commissioned by the Government in 1954 concluded that the cost of production in the industry was high and productivity low and that the former could not be significantly reduced to enable the product to compete effectively with fuel oil.[2] The decision of the Malayan Railway and the Central Electricity Board to switch to fuel oil further reduced the already limited market for coal.[3] The decline in production commenced from 1951 after reaching a post-war peak of 415,777 tons in 1950 (Table 12.1). In January 1960, the one and only colliery closed down when it became clearly uneconomic to continue operation. The colliery was located at Batu Arang in Selangor. It has been established that the only other known tertiary area is at Bukit Arang in Perlis but its coal content had not yet been adequately examined.[4]

Gold mining was the other activity that ceased to exist as an independent industry. Gold occurred in many parts of the country but the bulk of the output came from one lode mine at Raub in Pahang. In 1961, this mine closed down after having exhausted its economic deposits.[5] From 1962, output markedly decreased (Table 12.1). The reduced output produced since then was largely the by-product of tin mining activities.

Despite these developments, the total output of the mining sector even expanded, as indicated earlier. But the decline of the third mineral product, iron ore, could be expected to leave a substantial impact on the output of the mining sector unless this is offset by the commencement of petroleum mining and some expansion of the tin industry in the 1970's.

Iron ore mining is another 'old' mining activity in Malaya. For many centuries, iron ore was mined on a small scale but it was only in the 1930's that iron ore mining became important with the introduction of Japanese interest in the large ore deposits near Dungun in Trengganu and two smaller mines in

[1] Department of Mines, *First Quinquennial Bulletin of Statistics Relating to the Mining Industry, 1951–1955*, p. 14.

[2] See reference to study made by Messrs. Powell, Duffryn Technical Services Ltd. in A. Renwick and D.E.H. Rishworth, *Fuel Resources (Coal, Lignite and Petroleum) in Malaya*, Ipoh, Ministry of Lands and Mines, May 1966 (mimeographed), p. 73.

[3] International Bank for Reconstruction and Development, *The Economic Development of Malaya, op. cit.* p.235.

[4] A. Renwick and D.E.H. Rishworth, *op. cit.*, p. 83.

[5] Federation of Malaya, *Official Year Book 1962, op. cit.*, p. 325.

Kelantan.[6] Production exceeded one million tons a year from 1934 and continued until the outbreak of the Pacific War in 1941.[7] This level of production was not attained again until 1952. Structurally, the industry depended very largely on the Dungun deposits as the main source of production, although there were a number of smaller mines in Perak, Johore and Kedah in the post-war years.[8] In the late 1950's, a large iron ore deposit in the Rompin district of Pahang was developed and mining commenced in June 1962.[9] With this other iron ore mine, the industry was able to maintain very high levels of output in the 1960's, averaging nearly six million tons a year (Table 12.1).

Japan was the virtual market for the Malaysian ore.[10] Certain developments in this market produced rather unfavourable prices for the Malaysian ore, particularly in the latter part of the 1960's. In 1965, Japan started to diversify its sources of supply for iron ore.[11] The consequent competition from the higher grade ore produced elsewhere had some depressive effects on Malaysian ore prices as indicated by the export unit values in Table 12.4. Prices took on a declining trend from the second half of the 1960's.

The more serious problem of the industry, however, was the exhaustion of its major sources of ore. Both the Rompin and the Dungun mines produced about 83 per cent of the total ore output in 1970. In October 1970, the Rompin mine ceased to operate and in December 1970, the Dungun mine also closed down.[12] It can be seen from Table 12.1 that, as a result, iron ore production in 1971 fell to less than one million tons. This development thus reduced the mining sector in the early 1970's to one almost dependent on tin.

2.2 *Tendency of the Mining Sector to Reduce its Absorptive Capacity for Labour*

As a source of employment, the mining sector had not proved to be helpful in absorbing the new entrants to the labour market. In Table 12.5, it can be seen that for the sector as a whole, the volume of employment provided had remained virtually the same in 1969–70 as for 20 years earlier, i.e. slightly over 50,000 persons a year. However, there was some rise in employment in 1966 and 1967 but the increase was less than 10 per cent.

To some extent, the closure of the coal, gold and iron ore mines affected the employment figures. The colliery had accounted for about 2,600 employees

[6] *Ibid.*, p. 324.

[7] Department of Mines, *First Quinquennial Bulletin of Statistics Relating to the Mining Industry, 1951–1955, op. cit.*, p. 18.

[8] The mines in Kelantan ceased to operate after 1941.

[9] Malaysia, *Official Year Book 1963, op. cit.*, p. 365.

[10] For example in 1969, of the 5.3 million tons of iron ore exported, 5.2 million tons went to Japan.

[11] Bank Negara Malaysia, *Annual Report and Statement of Accounts 1965*, p. 28.

[12] Bank Negara Malaysia, *Annual Report and Statement of Accounts 1970*, p. 85.

Table 12.4

West Malaysia – Export Unit Values of Malaysian Iron Ore
($ per ton)

Year	Export Unit Value	Year	Export Unit Value
1960	25.5	1965	24.3
1961	25.5	1966	24.0
1962	25.8	1967	23.3
1963	26.8	1968	21.7
1964	25.7	1969	22.0
		1970	22.1

Source: Bank Negara Malaysia, *Quarterly Economic Bulletin*, Vol. 5 No. 4 (December 1972).

during 1950/51. The closure of the Rompin and Dungun iron ore mines was estimated to have thrown out of work about 3,700 persons.[13] The full impact of this, however, had not yet been completely reflected in the 1970 figure of employment in the industry but nevertheless the figure had fallen by some 2,100 compared with 1969. The closure of the Raub gold mine caused the loss of employment of less than 1,000 during the period. As against these, there were only marginal increases in employment in the bauxite mines and other minor mining activities. Similarly, within the tin mining industry which accounted for 80 to over 90 per cent of total employment in the mining sector, employment towards the end of the 1960's showed only a very slight increase over the levels of about 20 years ago.

The limited absorptive capacity of the mining sector for labour can be seen even more clearly in Table 12.6. In this table, the employment-output ratio was worked out for the tin and iron ore mines over the 20-year period. The employment data available only showed employment at the end of each year. The exercise assumed that these year-end positions would broadly reflect the level of employment for the year as a whole. In tin mining, it can be seen that the employment-output ratio was rather high in the first half of the 1950's; on an average it was 707 persons per 1,000 tons of output of tin-in-concentrates. For the subsequent 10 years, the ratio fell close to 600 persons per 1,000 tons of output, that is, an average of 610 persons per 1,000 tons of output in 1956–60 and 613 persons per 1,000 tons of output in 1961–65. There was some increase in the ratio to 663 persons per 1,000 tons of output in 1966–70, but this was still well below the average ratio for 1951–55. The decline in the number of employed persons for every 1,000 tons of output of ore in the iron ore industry

[13] See the 1971 Budget Address of the Minister of Finance on 22 December 1970.

Table 12.5

West Malaysia – Employment in the Mining Sector by Mineral Products

End of Year	All Minerals	Tin		Iron Ore		Bauxite		Gold		Coal		Others	
	Number Employed	Number Employed[a]	As % of Total	Number Employed	As % of Total	Number Employed	As % of Total	Number Employed	As % of Total	Number Employed	As % of Total	Number Employed	As % of Total
1951	51,421	45,931	89.3	1,840	3.6	n.a.	n.a.	908	1.8	2,606	5.1	136	0.3
1952	51,168	44,659	87.3	2,574	5.0	n.a	n.a.	924	1.8	2,638	5.2	373	0.7
1953	41,661	36,899	88.6	1,689	4.1	n.a	n.a.	729	1.7	2,043	4.9	301	0.7
1954	43,665	39,715	91.0	1,667	3.8	n.a.	n.a.	867	2.0	1,224	2.8	192	0.4
1955	44,407	39,559	89.1	2,452	5.5	n.a.	n.a.	756	1.7	1,049	2.4	591	1.3
1956	44,127	39,459	89.4	3,101	7.0	n.a.	n.a.	188	0.4	1,029	2.3	350	0.8
1957	41,879	36,585	87.4	3,725	8.9	n.a.	n.a.	385	0.9	843	2.0	341	0.8
1958	27,654	23,153	83.7	3,381	12.2	n.a.	n.a.	534	1.9	253	0.9	333	1.2
1959	29,295	23,778	81.2	4,373	14.9	n.a.	n.a.	525	1.8	243	0.8	376	1.3
1960	36,736	29,242	79.6	6,594	17.9	n.a.	n.a.	466	1.3	-	-	434	1.2
1961	40,365	32,459	80.4	7,277	18.0	n.a.	n.a.	262	0.6	-	-	367	0.9
1962	42,359	33,373	78.8	8,341	19.7	n.a.	n.a.	258	0.6	-	-	387	0.9
1963	41,137	33,650	81.8	6,988	17.0	256	0.6	-	-	-	-	243	0.6
1964	44,900	38,387	85.5	6,103	13.6	280	0.6	-	-	-	-	130	0.3
1965	51,584	45,345	87.9	5,806	11.3	351	0.7	-	-	-	-	82	0.2
1966	55,176	48,800	88.4	5,905	10.7	424	0.8	-	-	-	-	47	0.1
1967	54,702	49,224	90.0	5,120	9.4	337	0.6	-	-	-	-	21	*
1968	53,449	48,190	90.2	4,644	8.7	354	0.7	-	-	-	-	261	0.5
1969	51,423	46,458	90.3	4,166	8.1	534	1.0	-	-	-	-	265	0.5
1970	49,453	46,457	93.9	2,067	4.2	401	0.8	-	-	-	-	528	1.1

Sources: Same as for Table 12.1

[a]Excludes dulang washers.

*Less than 0.1 per cent.

n.a. = not available

Table 12.6

West Malaysia – Employment Per Unit of Output in the Tin and Iron Ore Mines

Year	Tin Mines			Iron Ore Mines		
	Employment at End of Year (No. of Persons)	Output* in Year ('000 tons)	Number Employed Per 1,000 tons of Output	Employment at End of Year (No. of Persons)	Output in Year ('000 tons)	Number Employed Per 1,000 tons of Output
1951	45,931	57.4	800.2	1,840	846.8	2.2
1952	44,659	57.1	782.1	2,574	1,055.6	2.4
1953	36,899	56.4	654.2	1,689	1,062.7	1.6
1954	39,715	60.9	652.1	1,667	1,212.8	1.4
1955	39,559	61.2	646.4	2,452	1,466.2	1.7
1956	39,459	62.3	633.4	3,101	2,444.6	1.3
1957	36,585	59.3	616.9	3,725	2,972.5	1.3
1958	23,153	38.5	601.4	3,381	2,795.3	1.2
1959	23,778	37.5	634.1	4,373	3,760.7	1.2
1960	29,242	52.0	562.3	6,594	5,640.3	1.2
1961	32,459	56.0	579.6	7,277	6,733.5	1.1
1962	33,373	58.6	569.5	8,341	6,507.3	1.3
1963	33,650	59.9	561.8	6,988	7,264.5	1.0
1964	38,387	60.0	639.8	6,103	6,465.7	0.9
1965	45,345	63.7	711.9	5,806	6,872.7	0.8
1966	48,800	68.9	708.3	5,905	5,762.4	1.0
1967	49,224	72.1	682.7	5,120	5,349.8	1.0
1968	48,190	75.1	641.7	4,644	5,085.3	0.9
1969	46,458	72.2	643.5	4,166	5,151.0	0.8
1970	46,457	72.6	639.9	2,067	4,420.1	0.5
1951–55 (Average)			707.0			1.9
1956–60 (Average)			609.6			1.2
1961–65 (Average)			612.5			1.0
1966–70 (Average)			663.2			0.8

Sources: Computed from sources cited in Table 12.1

*Tin-in-concentrates.

was even clearer. In 1966–70, the number of persons employed per given unit of output was less than half that of 1951–55. On an annual basis, the decline in the ratio occurred quite consistently over the 20-year period.

Table 12.7 suggests that the principal explanation lies in the increasing capital intensity in tin and iron ore mining. For this exercise, the volume of power machinery employed in each type of mining activity (measured in terms of horse-power) was used as a proxy for the volume of the capital investment involved. In both tin and iron ore mining, the amount of power machinery used for every 1,000 tons of output had a consistently rising trend over the 20-year period. In tin mining, the volume of power machinery employed averaged 12,155 horse-power per 1,000 tons of output of tin-in-concentrates in 1966–70, or a little over 2 times that for 1951–55. For iron ore mining, the volume of power machinery employed, which averaged 18.7 horse-power per 1,000 tons of output in 1966–70, was 2 times that for 1951–55.

In view of this trend of increasing use of capital-intensive methods in the mining sector, the benefits from a further expansion of the sector will obviously be in areas other than employment creation. Most important of these will be foreign exchange earnings since virtually the entire output of the sector is exported. Even with just this benefit, the mining sector will still be of importance as it will be recalled that besides employment creation, another major objective of Malaysian economic diversification is to develop additional

Table 12.7

West Malaysia – Employment of Machinery and Hydraulic Power[a] in Tin and Iron Ore Mining.

Year	Tin Mining			Iron Ore Mining		
	Machinery and Hydraulic Power Employed[b] (in Horse-Power)	Output[c] during Year ('000 tons)	Machinery and Hydraulic Power Employed Per 1,000 tons of Output (in Horse-Power)	Machinery and Hydraulic Power Employed[b] (in Horse-Power)	Output during Year ('000 tons)	Machinery and Hydraulic Power Employed Per 1,000 tons of Output (in Horse-Power)
1951	318,806	57.4	5,554	7,069	846.8	8.3
1952	323,500	57.1	5,665	6,221	1,055.5	5.9
1953	306,539	56.4	5,435	8,850	1,062.7	8.3
1954	348,220	60.9	5,718	15,346	1,212.8	12.7
1955	364,906	61.2	5,963	17,553	1,466.2	12.0
1956	386,092	62.3	6,197	30,819	2,444.6	12.6
1957	380,886	59.3	6,423	39,990	2,972.5	13.5
1958	306,157	38.5	7,952	42,244	2,795.3	15.1
1959	281,629	37.5	7,510	50,783	3,760.7	13.5
1960	358,417	52.0	6,893	64,259	5,640.3	11.4
1961	413,123	56.0	7,377	74,943	6,733.5	11.1
1962	430,156	58.6	7,341	94,119	6,507.3	14.5
1963	462,589	59.9	7,723	110,832	7,264.5	15.3
1964	562,291	60.0	9,372	107,133	6,465.7	16.6
1965	704,274	63.7	11,056	113,498	6,872.7	16.5
1966	798,452	68.9	11,589	117,683	5,762.4	20.4
1967	840,393	72.1	11,656	107,615	5,349.8	20.1
1968	894,312	75.1	11,908	103,407	5,085.3	20.3
1969	905,342	72.2	12,539	92,808	5,151.0	18.0
1970	949,746	72.6	13,082	65,979	4,420.1	14.9
1951–55 (Average)			5,667			9.4
1956–60 (Average)			6,995			13.2
1961–65 (Average)			8,573			14.8
1966–70 (Average)			12,155			18.7

Sources: Computed from sources cited in Table 12.1

[a] The term "machinery and hydraulic power" covers equipments based on electric, internal combustion, steam and hydraulic power.

[b] As at end of the year.

[c] Tin-in-concentrates.

sources of foreign exchange to help compensate for the declining earnings from the rubber industry.

2.3 *Growing Prospect of Declining Ore Reserves in Major Mining Industries*

Reliable estimates of ore reserves in the various mining industries were not available. However, there was general consensus that the depletion of known reserves was only a matter of time. A World Bank mission reviewing the development prospects of the country in 1960 warned that at current rates of exploitation, the reserves of both tin and iron ore might not last more than 10–15 years.[14] The First Malaysia Plan even forecast a decline in tin production during 1966–70.[15] Output from dredges was expected to fall as the deposits they worked on were gradually exhausted and while output from the gravel pump mines working on low grade ground would increase, that would not be large enough to offset the decline in the output from dredges.

The prediction of the World Bank mission had already materialized for iron ore with the closure of the Rompin and Dungun mines. The forecast of the First Malaysia Plan for tin proved to be too pessimistic and did not accord adequate weight to the effectiveness of the efficient and highly capital-intensive methods applied to the low grade deposits, to maintain production at a high level.[16] Even so, the point is undisputed that reserves exhaustion is at hand.

An examination of the area of land under mining titles gives a fairly good indication of the state of the mining industry from the standpoint of reserves. It must be borne in mind, however, that land titles granted for mining purposes could extend to 21 years[17] and, therefore, mining rights could still be held even when all mining operations have ceased. Table 12.8 shows the acreages of land under mining titles for the major types of minerals at the end of each year. Table 12.9 explains the year-to-year change in acreages.

The two tables highlight a rather serious situation for the tin industry. Since 1965, the area of land under title for tin mining continued to be at levels substantially below the acreages for past years. For 1966–70, the average area under title for tin mining each year was 278,342 acres, representing a decline of 33 per cent from the average for the preceding five years. Table 12.8 shows that during 1961–70, the mining titles on 271,511 acres of tin mining land were cancelled, obviously due to the exhaustion of tin resources. However, some new land was made available for tin mining during the period but this was inadequate to offset the cancelled area by as much as 113,730 acres. Of the additional land made available for tin mining, 124,618 acres were newly-alienated land and

[14] International Bank for Reconstruction and Development, *The Economic Position and Development Prospects of the Federation of Malaya*, Washington, D.C., September 1960 (mimeographed), para. 49.

[15] Malaysia, *First Malaysia Plan, 1966–1970, op. cit.*, p. 128.

[16] This was considered the major factor for the industry's ability to maintain high production levels in recent years. See The Treasury, Government of Malaysia, *Economic Report, 1972–73*, Kuala Lumpur, December 1972, p. 29.

[17] Federation of Malaya, *Annual Report 1956, op. cit.*, p. 216.

Table 12.8

West Malaysia – Area of Mining Land under Title by Mineral Products

End of Year	Mining Land under Title (Acres)					
	Tin	Iron Ore	Bauxite	Coal	Gold	Wolfram
1955	408,688	3,384	3,952	8,467	19,303	46,394
1960	410,004	11,991	4,446	8,181	18,472	46,638
1961	410,247	13,588	4,618	8,181	18,472	46,638
1962	414,672	16,245	4,955	2,638	18,413	46,638
1963	415,848	17,378	4,995	749	18,413	46,486
1964	422,651	19,450	5,557	749	18,383	46,758
1965	258,668	22,059	5,573	465	9,707	46,758
1966	273,234	23,240	5,573	465	9,707	46,529
1967	272,551	23,859	5,671	465	9,317	45,782
1968	283,497	25,721	5,788	465	9,288	45,782
1969	285,825	26,209	5,838	–	9,059	63,062
1970	296,274	21,348	564	–	8,374	63,062

Sources: Same as for Table 12.1

33,163 acres represented conversions from land previously designated for other uses. In respect of the new land made available for tin mining, Table 12.9 reveals another interesting feature. The pace of land alienation for tin mining was rather slow in the early 1960's but it quickened considerably from 1964. A substantially large switch-over to tin from land previously designated for other uses was also noticeable from 1968. Public policy had an important influence on this as will be discussed later. Besides being unable even to replace the already mined out areas, the newly made available land had not been noted for any remarkably rich reserves.

In the iron ore industry, the increase in acreage under title had exceeded the cancelled area. In 1961–70, there was a net addition of 9,357 acres of mining land for iron ore. Newly-alienated land totalling 17,150 acres accounted for virtually all the new land placed under iron ore mining. Of this, slightly over 10,000 acres were alienated in 1962–65. However, the expansion of iron ore mining areas obviously had only marginal effects on the total known ore reserves since the closure of the Rompin and Dungun mines could not be offset significantly by the development of new mines thus far. One further supporting evidence was the plan to transfer the displaced workers from these closed iron mines to the timber industry in Trengganu and the newly-established copper

Table 12.9

West Malaysia – Mining Land under Title: Additions and Cancellations by Major Minerals

Year	Tin				Iron Ore				Bauxite			
	Acreage Newly Alienated	Acreage Converted from Other Titles	Acreage Cancelled	Change during Year	Acreage Newly Alienated	Acreage Converted from Other Titles	Acreage Cancelled	Change during Year	Acreage Newly Alienated	Acreage Converted from Other Titles	Acreage Cancelled	Change during Year
1960	4,370	1,284	6,917	- 1,263	1,330	140	-	+ 1,470	535	-	171	+ 364
1961	4,466	1,982	6,205	+ 243	1,538	59	-	+ 1,597	-	172	-	+ 172
1962	7,185	758	3,518	+ 4,425	2,577	82	2	+ 2,657	337	-	-	+ 337
1963	6,182	1,609	6,615	+ 1,176	2,462	18	1,347	+ 1,133	40	-	-	+ 40
1964	11,460	1,276	5,933	+ 6,803	2,535	88	551	+ 2,072	93	469	-	+ 562
1965	18,711	1,136	183,830	-163,983	2,545	73	9	+ 2,609	-	18	2	+ 16
1966	15,461	1,781	2,676	+ 14,566	1,730	85	634	+ 1,181	-	-	-	-
1967	10,698	1,483	12,864	- 683	988	-	369	+ 619	98	4	4	+ 98
1968	20,920	2,762	12,736	+ 10,946	2,004	42	184	+ 1,862	85	32	-	+ 117
1969	15,392	8,414	21,478	+ 2,328	596	12	120	+ 488	50	-	-	+ 50
1970	14,143	11,962	15,656	+ 10,449	175	373	5,409	- 4,861	170	38	5,482	-5,274
1961–70	124,618	33,163	271,511	-113,730	17,150	832	8,625	9,357	873	733	5,488	-3,882

Sources: Same as for Table 12.1

mine in Sabah because the iron ore mining industry as a whole could not accommodate them.[18]

In the third largest mining industry, the bauxite mines, most of the known deposits were thought to occur in the Pengerang Area of South-East Johore. There were no recent estimates of ore reserves but one made by ECAFE in 1959 placed ore reserves then at 20.8 million tons.[19] From Table 12.1, it can be seen that a total of 7.8 million tons or slightly more than one-third of this estimated reserves had been mined during 1960–70. In view of the few locations of known ore reserves, it is not surprising to find that the additional land becoming available for bauxite mining had been very limited (Table 12.9). On the other hand, in 1970, the titles to virtually all of the land for bauxite mining were cancelled leaving only 564 acres (Table 12.8). However, this reduction covered only the areas of hardly any economic value.

For the other two minerals, gold and coal, though mining titles for these products continued to be held for years after the cessation of mining operations, these were of no significance. As for wolfram, it is interesting to note that rather substantial areas were covered by mining titles and the acreage even increased markedly from 1969. However, the value of output had remained very small and there were no indications of the possibility of the product becoming more important in the near future.

2.4 *Implications of the Three Problems*

Some conclusions may now be drawn from the above examination of the three problems confronting the mining sector. Firstly, it is clear that the mining industry is seriously being threatened by exhaustion of ore reserves. While some of the expectations on this matter had materialized in the 1960's, they were not of such magnitudes as to have caused very serious dislocations as yet. Secondly, the shift towards a virtually mono-product mining sector placed the sector in a precarious position. In the first place, there had been the lack of success in expanding the range of mineral products up to the end of the 1960's. Far more serious, the mono-product itself (tin) could no longer be depended upon as an almost permanent source of foreign exchange and economic activities. Thirdly, the employment creation capability of mining activities had diminished over the years as a result of technological change in mining methods. If the existing employment level within the mining sector is to be maintained, output expansion will have to be achieved at a pace fast enough to compensate for the displacement of manpower by machines. If the sector is to increase its employment of labour, an even higher level of mining activities will have to be maintained. However, the benefits of technological development in the mining industry should not be overlooked. In making for greater productivity, it had

[18] Bank Negara Malaysia, *Annual Report and Statement of Accounts 1970*, p. 85.

[19] See reference to this study in P.L.C. Grubb, *Geology and Bauxite Deposits of the Pengerang Area, Southeast Johore*, Geological Survey, West Malaysia, District Memoir 14, Ipoh, 1968, p. 103.

enabled the industry to better withstand adverse price situations and be better equipped to handle increasingly the lower grade and more difficult ore resources. That this had posed to be a problem from the standpoint of labour absorption arises from the fact that the mining sector had not been able to expand significantly the amount of the country's known mineral reserves.

All these made out a very strong case for vigorous efforts to renew and expand the mining sector. The emergence of these problems, however, did not mean that efforts were absent. For mining activities in particular, it is well known that a number of measures cannot bear immediate results. The next section will appraise the role of the Government in inducing efforts to reinvigorate the mining industries.

3. PUBLIC POLICY AND REINVIGORATION OF THE MINING SECTOR

Generally, it can be said that the mining sector was one of those where Government intervention was among the least. Nevertheless, from about the middle of the 1960's, Government interest in the sector became more intense and this can be expected to increase in the 1970's as the policy of wider participation for the Bumiputras in the mining industry gains further ground.

During the review period, the role of public policy to reinvigorate the mining sector can be conveniently grouped under four aspects. These are:

i) encouragement of prospecting for new mineral resources;
ii) promotion of wider participation of the Bumiputras in the mining industry;
iii) provision of technical assistance and service to the mining sector;
iv) fiscal instruments favourable to the development of the mining sector.

3.1 *Encouragement of Prospecting for New Mineral Resources*

Minerals are wasting assets when they are mined and the fundamental solution to the problem of maintaining a strong mineral sector is continual prospecting. Advice and arguments in this direction have not been lacking. In his well-known report to the pre-war Government of Malaya on the Malayan mining industry, Sir Lewis Fermor had stressed the urgency for extensive prospecting for tin.[20] The need for prospecting was again emphasized by the World Bank mission of 1954 in its recommendations for the mining sector.[21] There is thus no doubt that the Government had been well-advised on the need for prospecting. But for a long time, prospecting activities had virtually ceased. Among the principal causes were the tin control schemes of the pre-war days, the Japanese Occupation of the country and the period of Emergency that followed. Whatever efforts were made, these were further slowed down by the nature of the survey conditions which have been considered to be "amongst the most difficult in the world".[22]

[20] Sir Lewis Leigh Fermor, *Report Upon the Mining Industry of Malaya*, Kuala Lumpur, Government Printer, 1943 (Third Impression), pp. 177–193.

[21] International Bank for Reconstruction and Development, *The Economic Development of Malaya*, especially pp. 248, 254 and 257.

[22] H. Renwick and D.E.H. Rishworth, *op. cit.*, p. 15.

Table 12.10

West Malaysia – Area Authorized for Prospecting and Area Selected for Mining

Year	Acreage Authorized for Prospecting	Acreage Selected for Mining
1956	254,239	9,278
1957	249,772	8,431
1958	415,818	4,248
1959	343,439	6,773
1960	406,919	20,627
1961	415,620	13,476
1962	413,348	11,632
1963	216,354	13,696
1964	197,314	14,939
1965	214,306	22,959
1966	475,828	29,421
1967	517,171	23,440
1968	515,394	21,869
1969	248,810	13,394
1970	221,227	13,601
1956–60	1,670,187	49,357
1961–70	3,435,372	178,427

Sources: Same as for Table 12.1

Table 12.10 shows the extent of prospecting authorized each year since 1956 and the acreage selected for mining. In all, a total of 5.1 million acres were authorized for prospecting between 1956–70 and of this, a total of 228,000 acres representing 4.5 per cent were selected for mining. Large as the selected area for mining was in relation to the total area under mining titles[23] in any one year during the period observed, the earlier discussion based on Table 12.9 has pointed out that for an important industry like tin, the new lands becoming available for mining (after alienation) had not even been keeping pace with lands lost to mining when their mining titles were cancelled. This was further aggravated by the fact that the mineral content in the newly-alienated land had not been rich either. Similar marginal effects on new ore reserves have also been noted for the iron ore and bauxite industries, even though there had been

[23] The various issues of the *Bulletin of Statistics relating to the Mining Industry* confirm this; however a good indication is also obtainable from Table 12.8 which covers a very large part of land under mining titles.

extensions of mining land through alienation. It is true that the alienated land tended to lag behind the area selected for mining after prospecting. For example, in the decade 1961–70, the total area alienated for the more important mining activities was 142,641 acres, or 35,786 acres short of the total area selected for mining as a result of prospecting. There were at times good reasons to account for this gap as when it was the result of the slowness of the State Governments to alienate land. This can be minimized by improving the land alienation machinery. But this is by no means an easy task.

This is, of course, part of the wider problem that arises from the constitutional provisions governing the authorities of the Federal and State Governments. Under the Federal Constitution, the Federal Government is responsible for the development of the country's mineral resources.[24] The State Governments, on the other hand, have complete authority over the issue of permits and licences for mineral prospecting and leases and certificates for mining, in their respective territories.[25] A number of problems had arisen from this division of powers which hindered the pace of prospecting and mining during the review period. Firstly, while the Federal Government as a matter of policy continued to urge the expansion and diversification of the mining sector, this policy could obviously be translated into tangible forms only by the State Governments themselves. For a variety of reasons, the sense of urgency of the policy objective appeared to have weakened as it filtered down to the level of the State Governments. This is aggravated by the fact that the Federal Government considered it appropriate (and rightly so) not to back this policy objective with financial assistance to the states. Secondly, there had been no uniformity of policy for mineral development among the different states, although the Federal Government had striven, with little success so far, for a common policy to be adopted by all the states. Thirdly, mineral occurrences do not follow state boundaries and difficulties had been encountered in getting prospecting permits or mining licences for deposits that cut across such boundaries. Clearly, this is another area where national economic policies could not be quickly and effectively implemented because of the powers of the states.

There is, however, one aspect of public policy concerned with land use which should have a positive effect on the extent of mining land. In considering an area of unalienated land for agricultural development, the Government would accord priority for it to be used for mining should there be found economic deposits of minerals on that land. Indeed, it is a statutory requirement for the Chief Inspector of Mines and the Director of Geological Survey to certify that they have examined the land concerned and have found no economic deposits of minerals before such land could be used for agricultural activities.[26]

[24] *The Federal Constitution*, 9th Schedule, List I, Section 8(j).

[25] *Ibid.*, 9th Schedule, List II, Section 2(c).

[26] D. Santokh Singh, "Work and Problems on Tin in Malaysia" in W. Fox (ed), *A Second Technical Conference on Tin, Bangkok, 1969*, London, International Tin Council, 1970, Vol. I, p. 379.

In the review period, there were two developments of some importance to prospecting. The first concerned prospecting and mining in the Malay Reservations and the other the establishment of a proper framework for off-shore mineral prospecting.

The institution of the Malay Reservations was related to the development of the two primary industries in the country, rubber and tin. As discussed in Chapter II, these industries depended for their early growth largely on immigrant labour. In the early decades of the 20th century, it became increasingly clear that a growing part of this immigrant population was settling down in the country.[27] Under the circumstances, the Government considered it desirable that there should be some protection of the interest of the indigenous people, the Malays. To this end, legislations were enacted in all the states except Penang and Malacca, to enable tracts of land to be reserved solely for the use of the Malays.[28] These reserved lands were designated 'Malay Reservations'. The legislations prohibited the transfer, charge or lease of any such land to non-Malays. The position of Malay Reservations was enshrined in the Federal Constitution which provided for i) the continuation as Malay Reservations those lands declared as such before political independence and ii) the possibility of new areas being declared as Malay Reservations by the State Governments after 1957, subject to a) that an equivalent area of undeveloped land be made available for general alienation and b) that the total area of land declared as Malay Reservations in the state should not at any one time exceed the total area which had been made available under general alienation.[29]

Parts of the Malay Reservations had been allocated to the Malay population while others were still undeveloped. As there had been no investigations of mineral resources when the boundaries of these Reservations were drawn, it was therefore believed that there could be mineral deposits within them, especially tin. In 1958, the National Land Council decided that the Federal Government should set up a mineral investigation drilling unit to search for minerals in the Malay Reservations.[30] The unit formed part of the Mines Department. To

[27] A good and brief analysis of the Malayan population may be found in J.C. Caldwell, "The Demographic Background" in T.H. Silcock and E.K. Fisk (ed.), *The Political Economy of Independent Malaya, op. cit.*, pp. 59–92.

[28] The relevant legislations establishing Malay Reservations are: For Negeri Sembilan, Pahang, Perak and Selangor: *Malay Reservations Enactment* (Revised Laws of the Federated Malay States, 1935, cap. 142); Johore: *Malay Reservations Enactment, 1936;* Kedah: *Malay Reservations Enactment (Revised Laws, 1934, No. 63);* Kelantan: *Malay Reservations Enactment, 1930 (No. 18);* Perlis: *Malay Reservations Enactment, 1353 (No. 7);* Trengganu: *Malay Reservations Enactment, 1360 (No. 17),* as amended by the *Malay Reservations (Amendment) Enactment 1951;* and the *Malay Reservations (Amendment) Ordinance, 1954* (Federation of Malaya No. 25). For a good discussion of the legal aspects of Malay Reservations, see Nik A. Rashid, *Land Law and Land Administration*, Kuala Lumpur, Faculty of Economics and Administration, University of Malaya, May 1971 (mimeographed), Chapter 14.

[29] See *The Federal Constitution*, Article 89.

[30] National Land Council Paper No. 10 of 1958.

facilitate the investigation, the Mining Enactment (F.M.S. Cap 147) was amended in 1960 to enable the Senior Inspector of Mines or his agents to prospect in the Malay Reservations with or without the consent of the owners where such lands have been alienated.

By the end of 1970, a total of 263,759 acres had been prospected in the Malay Reservations. This amounted to 6.9 per cent of the total area prospected in 1960–70. Of this, 21,811 acres were found to have mineral potential. But in relation to the total area selected for mining during the period, this constituted 11.0 per cent. In the next two years to 1972, a further 42,511 acres were prospected on Malay Reservations but no land of mineral value had been found.

These achievements appear rather modest in relation to the areas prospected and selected for mining in lands outside the Malay Reservations. Their significance however lies in the fact that for the first time, mineral investigations were being undertaken in areas which had been closed to such activities in the past. And as potential areas elsewhere were more extensively prospected, the significance of prospecting in the Malay Reservations should increase.

However, mining activities in the Malay Reservations had been very limited owing to a number of problems specific to the characteristics of land in these Reservations and the general economic position of the Malays themselves. Of importance so far, an area of about 1,000 acres in Sungei Bakap in Perak had been opened up for mining. In this area, rich tin deposits had been found and there are now ten mines in operation. Altogether one area in Selangor and four in Perak were being exploited by the end of 1971 and in these areas 15 mines were operating.[31] Elsewhere, development had been hindered by the following problems:

i) An economic-size piece of mining land on alienated Malay Reservations land usually would involve many lots and hence, many owners. One great difficulty was to get all the owners concerned to agree to mining operations;

ii) Individual land lots were often characterized by a multiplicity of ownership as a result of the Muslim law of inheritance which applied to most Malays.[32] The problem was further complicated by the fact that it would be difficult in a number of cases to trace the *'wakil'* or the executor of the land;

iii) As an enterprise, mining would require capital investments beyond the means of most Malays. In handling the scout prospecting in the Malay Reservations, the Mines Department in effect wrote off a part of the investigation costs. However, Government financial assistance for mining operations had been extremely limited, as will be discussed later. On the other hand, the conditions on the ownership and use of land in Malay

[31] Bank Negara Malaysia, *Annual Report and Statement of Accounts 1971*, p. 70.

[32] For a readable account of the Muslim law of inheritance, see Ahmad Ibrahim, *Islamic Law in Malaya*, Singapore, Malaysian Sociological Research Institute Ltd., 1965, Chap. III.

Reservations prohibited the participation of non-Malay capital, although it had been observed that many of the mines in the Sungei Bakap area were based on non-Malay capital using Malay nominees.

iv) Malay expertise and experience in mining were very scarce.

Closer attention will have to be given to these problems than in the past if the mineral resources in the Malay Reservations are to be exploited and wider participation of the Malays in the mining industry achieved.

The second important development in the field of mineral prospecting concerned the establishment of a proper framework for off-shore prospecting. This has implications for possible expansion and diversification of the mining sector.

Until the middle of the 1960's, there were no legislations to spell out the rights and obligations of enterprises and individuals intending to explore and exploit the mineral resources in the continental shelf [i.e. the sea-bed and subsoil of the submarine areas adjacent to the coast of West Malaysia which are outside of the territorial waters (beyond the three-mile limit) of the states concerned]. The State Governments had authority only over the sea-beds and subsoil of the areas within the territorial waters of their states. Thus in 1966, the Continental Shelf Act, 1966,[33] was passed to meet this deficiency and accorded the Federal Government with sovereign rights and powers over the mineral and other natural resources in the continental shelf.

The exploration and exploitation of petroleum were considered important enough to be the subject of a separate legislation, the Petroleum Mining Act, 1966.[34] This Act provided for the issue of licences for the exploration and exploitation of petroleum on the continental shelf. Equally important, the Act legislated for the extension of uniform conditions governing the prospecting and mining licences that might be issued by the State Governments in respect of such activities onshore and in the submarine areas within their territorial waters. In 1968, as provided under the Act, the Government framed the petroleum mining rules[35] setting out, among other things, the rights and obligations of and restrictions on the mining company, in the form of a model petroleum agreement that would have to be entered into between the company concerned and the Federal or State Governments, as the case may be.[36]

These legislations and rules were of significance to the further development of the mining sector. Firstly, the legislations clearly established the authority of the Federal Government over mineral rights in the continental shelf. That should, therefore, remove the future possibility of international disputes or even disputes between the Federal and State Governments that could place mining enterprises in an awkward position. Secondly, the legislations and rules assured

[33] This Act was revised in 1972 but remained substantially the same. See *The Continental Shelf Act, 1966* (Revised 1972 – Act 83).

[34] This Act was also revised in 1972 but remained substantially the same. See *The Petroleum Mining Act, 1966* (Revised 1972 – Act 95).

[35] For details see, Annex I and Annex II to *The Petroleum Mining Rules, 1968.*

[36] This depends on where the prospecting and mining areas are located.

the uniformity of treatment of off-shore prospecting and mining activities even though these might be carried out under the jurisdiction of the Federal Government and the State Governments or under more than one State Government.[37] This should facilitate the exploratory and exploitation activities as mineral locations often cut across the boundaries of various authorities. Thirdly, in spelling out clearly the rights, obligations and restrictions to be enjoyed and observed by mining concerns, as under the Petroleum Mining Rules, investment would be facilitated as the parties concerned would then be aware of, in advance, the Government's expectations from them and from their efforts. This was of special importance since the investments involved would be very substantial and of a long-term nature. Above all, these legislations and rules opened forth a new avenue in prospecting and mining activities.

Following on these legislations, the Federal Government entered into agreement with three American companies to prospect for oil in the continental shelf off the East Coast of West Malaysia and in the Straits of Malacca. Esso Exploration Malaysia Incorporation was granted a concession of 28,000 square miles of continental shelf off the East Coast. Drilling commenced in May 1969 in an area about 80 and 130 miles from the coasts of Kelantan and Trengganu. The second concession of 24,000 square miles to the south was granted to the Continental Oil Company. The Company had conducted geo-physical surveys and started drilling in 1970. In these efforts undertaken up to 1971, some of the exploratory wells had encountered oil and gas shaws but more work would have to be done to prove commercial discoveries.[38] The third concession was of 12,150 square miles and was granted to Mobil in January 1971. There are other potential areas in the Straits of Malacca but for the moment the Government has frozen all applications until it has formulated a new policy on petroleum mining.

The explorations in the East Coast have reached an advanced stage. On 30 May 1973, the Prime Minister was able to announce the first oil strike in West Malaysia.[39] This was made by the Continental Oil Company and its partners off Kuantan. The oil flow was estimated at 6,000 barrels a day. In addition, the field was expected to yield about 11 million cu. ft. of associated gases a day. With this event, the prospects now appear good for the emergence of oil as an important output of the mining sector in West Malaysia.

For purposes of prospecting off-shore tin, the off-shore areas of the West Coast were divided into three zones: the northern zone covering the coastal areas of Perlis, Kedah and Penang, the central zone covering the coastal areas of Perak and Selangor and the southern zone covering the coastal areas of Negri Sembilan, Malacca and Johore. Progress had so far been very limited in respect of off-shore tin prospecting. Considerable time was taken up in negotiations with three foreign companies which later proved to be abortive. These companies were unable to meet the conditions set by the Government. It was only in early 1973

[37] In the case of petroleum, the uniformity would extend even to onshore areas.

[38] Malaysia, *Official Year Book 1971*, Kuala Lumpur, Government Printer, 1972, p. 544.

[39] *The Straits Times*, 31 May 1973.

that the first prospecting agreement was entered into. This covered the central zone and involved the Federal Government and the State Governments concerned, on the one hand, and PERNAS on the other.

3.2 *Promotion of Wider Participation of the Bumiputras in the Mining Industry*

No comprehensive data were available on the extent of Bumiputra ownership and participation in the mining industry. But other available indicators showed a very low participation rate. For example, a recent study on the tin mining industry revealed that in 1964, the Malays owned less than 3 per cent of the shares of tin dredging companies while their ownership of gravel pump mines was "even smaller".[40]

The decision of the Government in 1958 to open up the Malay Reservations for mineral prospecting had another objective, namely, to encourage the Bumiputras to own and operate mines. However, as pointed out in the earlier discussions, the progress achieved had been greatly limited by the nature of ownership of the lands for mining and the shortage of capital, expertise and experience.

Another policy measure to encourage Bumiputra participation in mining was in the preference given to Bumiputra applications for prospecting and mining licences. As provided in the Federal Constitution, the authorities for issuing such licences are the State Governments. This policy of preference was generally observed by all the State Governments concerned.

As a support for its policy of opening up the Malay Reservations for mining, the Government set up a special fund in 1968 to provide loan facilities to Malays intending to undertake mining operations in these Reservations. This fund was known as the Exploitation of Minerals in Malay Reservations Loans Fund and Trust Account. An initial allocation of $500,000 was made by the Government to the Fund. By 1970, loans to two Malay mining companies totalling $400,000 had been made. There was no replenishment of the Fund so far. It would appear that assistance in this direction had been discontinued.[41] The effort here can at best be described as experimental. Each mining operation requires a fairly substantial loan. It was estimated that the equipment for a gravel pump mine would cost about $100,000 while the cost of a mining dredge would be about $12 million. Even excluding the possibility of financial assistance for dredge mines, it would still require a substantial allocation to be made if a reasonably large number of Malay miners is to be assisted. The more serious problem, however, is the lack of Malay entrepreneurship and experience in the mining sector. A mere reliance on direct financial assistance to mining operations can only have very limited results under the circumstances.

It is not surprising, therefore, that in recent years, some prospecting and mining activities were undertaken on behalf of Malay interests by the state economic development corporations (SEDCs) or other institutions to promote

[40] Yip Yat Hoong, *The Development of the Tin Mining Industry of Malaya, op. cit.*, p. 377.

[41] No allocation to the fund was made under the Second Malaysia Plan.

Malay economic advancement. This appears to be a promising means capable of overcoming not just the problem of capital but also that of entrepreneurship and management expertise. The SEDCs of four states were quite active in prospecting and mining activities in the early 1970's.[42] The Johore SEDC entered into a joint venture with the private sector to mine silica on 10,000 acres of land. The Selangor SEDC had also engaged successfully in mining and in 1972, it made arrangements to launch a wholly-owned company to undertake tin mining in Malay Reservations areas in Dengkil. The Perak SEDC similarly entered into joint venture with private interests to mine more than 220 hectares of land in the Senggang and Kampar areas. In addition, mineral prospecting was undertaken by the SEDCs of Perak, Negri Sembilan and Johore. The agreement signed by PERNAS to undertake off-shore prospecting for tin in the central zone was another development in the same direction.

Viewed at from the national standpoint, the Government's policy to encourage wider Malay participation in the mining sector is consistent with and potentially contributory to the objective of economic diversification . This point is often overlooked because racially-oriented policies such as this tend to evoke discussions and appraisal centering on social justice, racial opportunities and racial capabilities at the expense of the other implications which have little or no racial content. The acceptance and implementation by the Government of a policy to assist the Malays in mining firstly introduced increasing resources of the public sector for mineral development. Of great significance is that large resources are being applied to open up mining land for exploitation on behalf of a group that will, for a long time, be incapable of initiating and financing these developments. Secondly, the policy is increasingly making available a hitherto closed, unexploited and untapped resource namely, the mineral deposits of the Malay Reservations. The earlier discussions have shown the limited achievements of the policy but important groundwork is being laid, especially the practice of exploring the Malay Reservations and the use of development corporations (the SEDCs and PERNAS) as policy instruments. In the long run, public policy in this respect would assist the strengthening of the tin industry and mineral diversification.

3.3 *Provision of Technical Assistance and Service to the Mining Sector.*

The mining industry was provided with technical assistance and service from organizations financed or supported by the Government. Two principal departments of the Government machinery were concerned with this. They were the Mines Department and Geological Survey.

The role of the Mines Department in undertaking mineral prospecting in the Malay Reservations has been discussed. This it did in conjunction with Geological Survey. This important work is continuing. However, the investigations were only largely in the nature of scout prospecting which, even so, had

[42] Bank Negara Malaysia, *Annual Report and Statement of Accounts 1971*, p. 95 and *Annual Report and Statement of Accounts 1972*, p. 121.

stretched the resources of the two departments. Prospecting work had also been undertaken by the Mines Department in conjunction with land development schemes. Lands earmarked for agricultural development would have to be ascertained as to whether they contained mineral deposits in economic quantities.

Less direct but also of importance to mineral development is the task of increasing the store of knowledge and information on the minerals and geology of the country. This is undertaken by Geological Survey. Among the duties of Geological Survey are a detailed geological examination of the whole country, the location of the country's mineral deposits and preparation of geological maps showing the distribution of rocks and of mineral maps showing the distribution of minerals. In connection with the latter, a set of mineral resources maps and reports for all districts in West Malaysia were completed in 1968.[43] These maps, together with geological maps and other relevant information, are initial requisites for the formulation of a sound land use policy or for more intensive investigations on mineral deposits.

Thirdly, the mining industry had benefited from some of the efforts of the Research Division of the Mines Department. The Division, which was set up in 1951, had been concerned largely with providing a consultancy service to the mining industry and with investigations on possible improvements to mining methods, mineral dressing and allied problems. A notable contribution to technological development within the tin mining industry was the hydroclonic jig designed by the Division in the latter half of the 1950's.[44] The jig was a relatively simple device to separate tin from alluvial soil and was reported to be 30 per cent more efficient than the traditional methods. It opened up the possibility of mining and re-mining areas with lower grade ores.

Furthermore, in the field of research, the tin industry benefited from the work of two other bodies. The first was a statutory body, the Tin Industry (Research and Development) Board which was set up in 1953.[45] The Board was financed by a cess on tin exports and the Government was represented in it together with members of the tin industry. The Board had been concerned with research and improvements in tin production in the country,[46] although when it was first established, research work was not envisaged.[47] The early function of the Board was to undertake publicity for tin in the consumer countries in order to stimulate consumption and this it continued to do through the Malayan Tin Bureau in Washington. The other body was the International Tin Research Council based in London which had been conducting research for the tin

[43] This project was carried out in connection with the Land Capability Classification Programme.

[44] Federation of Malaya, *Second Five-Year Plan, 1961–1965, op cit.*, p. 4..

[45] *The Tin Industry (Research and Development) Fund Ordinance, 1953.*

[46] Federation of Malaya, *Official Year Book 1962, op. cit.*, p. 323.

[47] See speech of Mr. V.E. Davies in taking the *Tin Industry (Research and Development) Fund Bill, 1953,* through its Second and Third Reading in the Federal Legislative Council on 27 November 1953.

producing countries since the 1930's. To this Council, Malaysia had contributed $685,000 annually since 1962; prior to that its annual contribution was $500,000. Of the annual contribution since 1962, the Government provided $200,000 and the balance was financed from a cess levied on tin exports.

For a sector facing so many problems in the near future, it is obvious that considerably more activity could be undertaken by both the Mines Department and Geological Survey in the field of technical assistance and service. Even basic data about the sector such as estimates of reserves of various minerals are still not available and large parts of the Malay Reservations remained to be prospected. There is a case for devising new means of reducing prospecting costs, some possibilities being for the Mines Department (with Geological Survey) to undertake more detailed prospecting than scout prospecting in the Malay Reservations and, for prospecting in general, for these Departments to provide reasonable technical assistance and co-operation On mining methods, the success of the hydroclonic jig shows the large benefits that could come from very modest investment in research.

However, for the review period, the Government had kept the expenditures of both the Mines Department and Geological Survey not only small but remarkably steady. This can be seen in Table 12.11. Except for 1969 and 1970 for Geological Survey, the actual recurrent expenditures of these Departments increased very little since 1957. Allocations made under the various development plans were also small and from 1966, there were no more allocations for the Mines Department (Table 12.11). These small financial provisions of the Government contrasted very sharply with the substantial revenue it raised from the sector each year, the latter varying from $38 million to $144 million a year during 1957–70 (Table 12.11). Under the Constitution, the Federal Government is charged with the responsibility of developing the country's mineral resources. These two departments are obviously the major means for implementing its policies for minerals. But the brief review made above of the work of these departments and the sizes and growth patterns of their expenditures point to a rather limited role of the Federal Government in mineral development. The slow and small gains made during the review period to arrest the trend towards depletion of known mineral resources justifies a more dynamic philosophy of Government participation in mineral development for the 1970's. The expansion of the two departments should assist in achieving this new outlook. The need to maintain the revenue earning capacity of the mining sector provides further justification for this new philosophy. Like the renewal problem in the rubber industry, this undertaking must commence early while the industry is still capable of providing financial assistance for the purpose.

3.4 *Fiscal Instruments Favourable to the Development of the Mining Sector.*
Unlike manufacturing activities, the products of the mining sector had always enjoyed a ready market overseas. Furthermore, the long history of mining in the country had demonstrated the profitability of mining ventures generally. Therefore, given a price level that would enable economic mining operations and reasonable price expectations for the future, investments in the mining sector

Table 12.11

West Malaysia – Direct Revenue from Mining and Expenditures of the Mines Department and Geological Survey
($ million)

Year	Direct Revenue from Mining*	Recurrent Expenditure	
		Mines Department	Geological Survey
1957	64.9	1.1	0.8
1958	38.4	1.1	0.8
1959	47.9	1.2	0.9
1960	71.4	1.1	0.9
1961	82.6	1.1	1.0
1962	94.6	1.2	1.0
1963	92.8	1.0	1.0
1964	117.2	1.1	1.1
1965	139.7	1.2	1.1
1966	135.1	1.2	1.1
1967	129.7	1.2	1.1
1968	125.0	1.2	1.1
1969	135.3	1.2	1.4
1970	143.9	1.2	1.6

Plan Period	Remarks	Development Expenditure	
		Mines Department	Geological Survey
1961–65	Allocation	0.5	1.0
1966–70	Allocation	0.5	0.8
1966–70	Actual	-	0.7
1971–75	Allocation	-	0.7

Sources: 1. Same as for Table 12.1
2. Federation of Malaya, *Second Five-Year Plan, 1961–1965.*
3. Malaysia, *First Malaysia Plan, 1966–1970.*
4. Malaysia, *Second Malaysia Plan, 1971–1975.*
5. Federation of Malaya, *Financial Statements for the Year,* 1957 to 1962.
6. Malaysia, *Financial Statements for the Year,* 1963 to 1970.
7. Malaysia, *The Expenditure Budget of the Federal Government,* 1970 and 1971.

*The most important are receipts from export duties; other notable items are proceeds from royalty, premia and rent on lease and permits and licences.

had invariably been forthcoming. The basic constraint was the availability of new ore reserves.

Thus, it is not surprising that there had been little use of fiscal inducements to encourage mining activities. Nevertheless, the existing income tax legislation, the Income Tax Act 1967, had provisions that should assist prospecting and mining operations in three respects.

The first provision allowed for deduction of certain specified capital expenditures by the mining enterprise or individual in the ascertainment of adjusted income for tax purposes.[48] These should be expenditures on:

i) the acquisition of the mine or the rights over the mine;
ii) prospecting and winning access to the mineral deposits;
iii) works and buildings of value only during the life of the mine concerned;
iv) development, general administration or management before the commencement of production of the mine or during periods when the mine temporarily ceased production.

The deductions would be spread out over the estimated economic life of the mine. The amount of deduction to be made each year could be obtained by dividing the balance of the total amount of the specified capital expenditure by the remaining life of the mine at the beginning of the period on which the tax assessment is based.

The second provision concerned expenditures in respect of plant and machinery in the tin mining industry used for getting tin ore, for extracting and, for dressing tin concentrates. As with plant and machinery used for other purposes, the tax legislation permitted deduction for an initial allowance and annual allowances during the expected life of the equipment. Before 1962, an initial allowance of 20 per cent applied to the total expenditure on the above-mentioned plant and machinery in the tin mining industry. From 1962, the Government decided to accelerate the allowance for such expenditures and to this end, raised the initial allowance to 60 per cent.[49] This would have the effect of reducing the tax liability of the mining enterprise or individual at the time the expenditures on the plant and machinery were incurred. However, the tax liability of the taxpayer was merely being postponed and not being relieved of. This provision could be one of the contributory factors for the increasing trend towards more capital-intensive methods in mining as noted earlier.

The third provision accorded recognition to the fact that some prospecting would yield no results. Thus, expenditures incurred in prospecting that should prove to be abortive were also permitted to be deducted for tax purposes. This provision was incorporated into the then existing tax legislation in 1956.[50]

[48] *The Income Tax Act, 1967*, Section 34(6)(c) and Schedule 2.

[49] *The Income Tax Act, 1962*, Section 8. This provision was later incorporated into the *Income Tax Act, 1967*, Schedule 3, para. 11.

[50] *The Income Tax Ordinance, 1947*, Section 14A. This provision was incorporated in Section 44(1)(b) and Schedule 4 of the *Income Tax Act, 1967*.

These provisions in the tax legislation reflected an awareness of the conditions specific to mining operations, while recognizing the importance of expenditures of a capital nature for the industry. But it must be pointed out that these provisions did not, *in principle*, accord a more favourable tax treatment for the mining sector compared with the other sectors. Just as for the mining sector, deductions for capital expenditure had also been allowed, for example, in the plantations industry and in the timber extraction industry.[51] Furthermore, allowances for expenditures on plant and machinery applied to other sectors as well, although the rates might differ between sectors and among the different types of plant and equipment. At the same time that the rate of initial allowance for these expenditures was raised for tin mining, the rate of allowance for clearing and planting new areas of land was also raised.[52] The only provision where there was no exact parallel elsewhere was in the treatment of abortive prospecting expenditure, an item peculiar only to the mining sector. Nevertheless, there can be no doubt that these tax provisions have been beneficial to the development of the mining sector as they have been to the other sectors.

[51] *The Income Tax Act, 1967*, Schedule 3, paras. 20–25 (for plantations) and paras. 28–31 (for timber extraction).

[52] This rate was raised from 10 per cent per annum for 10 years (in force since 1956) to 50 per cent for two years under Section 7 of the *Income Tax Act, 1962*. This provision was incorporated in Schedule 3, para. 23 of the *Income Tax Act, 1967*.

PART V

THE OVERALL VIEW

CHAPTER XIII
SUMMARY OF MAJOR FINDINGS AND OBSERVATIONS

This chapter presents a summary of the major findings and observations. In the process, it will also try to provide a better perspective view of these.

Basically, this study has examined the role of the Government in initiating and facilitating the process of economic diversification in West Malaysia and attempted a critical appraisal of the performance of its policies and measures in this area of endeavour. The study focussed largely on the period 1957–70 and was limited to the three important sectors of the West Malaysian economy namely, agriculture and forestry, manufacturing and, mining.

Economic diversification, as observed in Chapter I, was one of the important objectives of the country's development plans since 1950. But this objective was motivated by an evolving set of rationale. In the first development plan of 1950–55, the objective was largely a declaration of intent. The 1956–60 plan showed a greater awareness of the need to diversify but the major concern of the plan was the rejuvenation of the ageing rubber industry. The 1961–65 plan was drafted in the midst of the success achieved in rubber replanting and renewed confidence in the rubber industry. However, by the third year of its implementation, the optimism about the future of rubber was shattered with the emergence of the stereo-regular rubbers. One outcome was the first serious attempt to study the problem of agricultural diversification. The plan period also coincided with the formation of Malaysia with its planned common market and the large emphasis on industrialization. Although the common market did not materialize because of the separation of Singapore from Malaysia, certain attitudes and institutions remained which proved to be favourable to more rapid industrial development for West Malaysia. The 1966–70 plan was formulated in the light of clear evidence of declining prices for rubber. There was admission for the first time that rubber and, also tin, could no longer provide the motivating force for the country's development. The objective of diversification thus assumed a new degree of urgency and pressure. Agricultural diversification, industrial growth and import substitution were, among other things, given emphasis. The 1971–75 plan had, for its principal theme, the New Economic Policy which stressed on the eradication of poverty and the correction of the racial economic imbalance. Both the goals of this Policy assured an important role for economic diversification in the plan.

All these developments were reflected in one way or another in the nature of the policies and measures that emerged during the period.

The study found it necessary first of all to assess the importance of the rubber and tin industries in the West Malaysian economy as well as the nature of the problems confronting them, in order to view more clearly the rationale for economic diversification. This was done in Chapter II. The importance of exports was noted and although the share of exports to the gross domestic product tended to decline, it nevertheless remained substantial. Rubber and tin made up the bulk of the exports. The contribution of the rubber and tin industries to the gross domestic product, Government revenue and, total employment had been very large in the past. Sharp declines occurred, especially in the contributions of the rubber industry (which was the more important of the two industries) to the gross domestic product and total Government revenue. The share of employment in these two industries in relation to total employment also fell.

Large price fluctuations characterized both commodities. For rubber, the year-to-year movements were substantial in the 1950's but these were considerably reduced in the 1960's. Export volumes also fluctuated and often these reinforced the fluctuations in prices to give rise to even larger fluctuations in foreign exchange receipts especially before 1956. However, the Government had never regarded short-term price fluctuations as a problem serious enough to warrant significant action on its part during the review period, although it would have much preferred a more stable price situation. There was evidence to suggest that the existence of built-in stabilizers in the West Malaysian economy had helped to cushion off the short-term instability in exports and, therefore, there appeared little adverse effects on long-term growth.

The tin industry also had large year-to-year fluctuations in prices. But since 1956, the international market for tin had been regulated by four international tin agreements. Fluctuations in export proceeds thus tended generally to be smaller in the 1960's.

Of grave implications for long-term growth was firstly the development of a new kind of price problem for rubber. From 1960, although rubber prices continued to bear their characteristic short-term fluctuations, there was now clear evidence of a long-term declining trend. This decline became so marked that although output continued to rise significantly, it was not enough to offset the decline in export proceeds.

The underlying factor was, of course, the emergence of the synthetic rubber industry in the post-war years. Important technical advances had been achieved by the industry, particularly in the 1960's, which resulted in the stereo-regular rubbers. An even more trying period of competition thus appeared inevitable for the natural rubber industry in the 1970's. Apart from the technical achievements, the synthetic rubber industry enjoyed two further advantages, namely, price stability of its products and, the extensive ownership of the industry by the major users of its products.

The impact of synthetic rubber in the world usage of rubbers of all types had already been profoundly felt. By 1963, natural rubber had lost out to its

synthetic counterpart as the predominant type of rubber used in total rubber consumption.

The tin industry was also being undermined by serious problems. However, there were no immediate effects as yet. During the review period, prices were generally bouyant. But world consumption of tin had already been growing very slowly. The tin plate industry which accounted for about half of total tin consumption, was reducing the amount of tin it used per unit of output. In the other traditional areas of tin usage, there was increasing substitution of tin with other materials like plastics, aluminium, etc. Perhaps even more serious was the growing evidence of decline in the tin reserves of West Malaysia. And there had hardly been any addition of new ore-bearing land for a number of reasons.

These problems of the two key industries of the economy provided very eloquent grounds for pursuing a policy of economic diversification. They also suggested that the policy would have to be an abiding one.

The next important question the study addressed itself to was the extent of economic diversification that had been achieved by the end of the 1960's. The observations made served two purposes. Firstly, they indicated the efficacy of public policies and measures and the efforts of the private sector towards the diversification objective. Secondly, they revealed the magnitude of the task ahead. Three key areas were observed in assessing the progress of diversification. These were the structure of output, employment and foreign trade. Chapter III analyzed the structure of output and employment while Chapter IV examined structural changes in both imports and exports.

On the output side, the observations focussed on changes in the structure of the gross domestic product during 1960–70. The evidence was clear that the structure of the gross domestic product had undergone important changes during the period. These changes followed very closely the experience of economies that had become progressively more diversified. In particular, the share of the agriculture and forestry sector in the gross domestic product declined markedly between 1960 and 1970. On the other hand, the share of the industry sector in total product showed a significant increase. To a lesser extent, there was also an enlargement in the share of the services sector.

The decline in the share of the agriculture and forestry sector in the gross domestic product was caused solely by the declining contributions of the rubber industry. However, this was offset to some extent by the expansion of other activities in the sector. This process in agricultural diversification was clearly confirmed by tests made on the important items of output of the sector as well as on the crop areas.

The cause for the substantial shift in the share of the industry sector was the growth of manufacturing. Indeed, the growth of manufacturing in West Malaysia was among the fastest compared with the developing countries examined. One other observation is noteworthy however. Unlike the experience of the industrial countries, there was as yet no evidence of increasing concentration of manufacturing activities on producers' goods. No doubt the relatively short history of industrialization in West Malaysia was an important reason.

For the services sector, an important cause for the increase in its share of the gross domestic product was the rise in Government activities. This took the form of sustained efforts of the Government during the review period to improve and expand the country's education and health facilities as well as the expansion of public administration and defence. Some help was also provided by the rising income levels achieved when these created a rise in the demand for entertainment and recreation services.

The magnitudes of the shifts in the shares of these three major sectors in the gross domestic product appeared to be large in comparison with experiences elsewhere, including those of the advanced countries during their early stages of industrialization. Even so, the structure of the West Malaysian economy in 1970 was still similar to those of developing countries. Much work therefore remains to be done.

On the structure of employment, data were available from the three population censuses conducted in 1947, 1957 and 1970. Again, the shifts in the sectoral distribution of the employed population corresponded closely to the experience noted for countries that were diversifying their economies. The bulk of the population was employed in the agriculture and forestry sector but the share of this sector in total employment declined markedly during 1957–70 due to its sluggish rate of labour absorption. There was a large increase in the proportion employed in the services sector was well as in the industry sector. The rate of labour absorption was similar for both of these sectors.

In the agriculture and forestry sector, employment expanded markedly during 1957–70 in activities encouraged by agricultural diversification policies such as oil palm, padi planting and livestock rearing. But on the whole, the employment opportunities generated by these activities were not successful even in arresting the decline in the share of total employment in the agriculture and forestry sector. The expansion in the share of employment in the industry sector during 1957–70 was very largely due to the growth of manufacturing activities. But there was less evidence of the influence of diversification efforts on the growth of employment in the services sector.

Economic diversification policies also produced some notable effects on the structure of exports and imports of West Malaysia. In general terms, new lines of exports had emerged. On the imports side, there were obvious trends towards import replacement of many items and the emergence of a number of new import items to support the changing output structure.

On exports, the coefficients of commodity concentration of exports computed for a number of years during 1955–70 indicated very clearly that the exports of West Malaysia had become more diversified. Furthermore, an analysis of the aggregate of the export commodities other than rubber and tin during the period revealed that for most of the years, these grew faster than total exports.

In the light of these, the study found it useful to make a detailed examination of the changes that occurred to exports during 1955–69.

During the 1960's, there was an increase in the number of export items of significance. Most of these were items of manufactures. The number of items of crude materials also showed some increase during the period and, to a lesser

extent, those in the category of foodstuffs, beverages and tobacco. The values of many of the items rose markedly during 1960–69, indicating their further development as exports.

In terms of values, exports of crude materials remained the principal source of export earnings although their share had fallen from 92 per cent of total export receipts in 1960 to 84 per cent in 1969. Their values fluctuated considerably and were also characterized by slow growth. These occurred largely to rubber sheets, crepe and latex, the export values of which fell sharply, even to levels substantially below that of 1955/57. Some increase was noted in the exports of unprocessed timber and oil palm nuts and kernels. On the other hand, there was a marked increase in the value of processed agricultural and forestry products from 1966. There were four dynamic items in this category namely, processed timber, palm oil, superior processed rubber and Standard Malaysian Rubber. But the main source of growth of the crude materials exports was provided by tin metal and iron ore.

The export of foodstuffs, beverages and tobacco represented a small but growing component of total exports. A dynamic item of this group comprised exports of fresh fish and prawns. There was also a substantial increase in the export value of the processed or manufactured items in this group. These comprised a number of small and recently established items, representing the growing impact of industrialization.

Exports of manufactures other than items of foodstuffs, beverages and tobacco, expanded even faster than the foodstuffs, beverages and tobacco group. As a result, these increased their share of total export receipts from 3 per cent in 1960 to 8 per cent by 1969. If all the manufactured exports were grouped together, they would account for 4 per cent of total export receipts in 1960 and 11–12 per cent by the end of the 1960's. This was a notable achievement for the manufacturing sector.

On the imports side, the effects of diversification efforts were also widely felt. A simple measure of import substitution at the aggregate level confirmed the achievement of large import substitution. However, as aggregate imports continued to grow, it was felt useful to examine in detail the underlying trends in import composition. To this end, imports were categorized into three groups: i) those with generally rising trend compared with 1955/57, ii) those which were above their levels in 1955/57 but were showing a generally falling trend and, iii) those which were clearly showing a generally falling trend compared with 1955/57. The analysis showed quite clearly that as many as 142 significant items of imports had a generally rising trend in their values during 1960/69, using 1955/57 as the base period. No doubt some of the more important contributory factors were income growth and public and private development programmes. Another factor, which was linked to the diversification efforts, was the increase in the demand for inputs and equipment, particularly by the manufacturing sector. But a major and tangible evidence of the impact of economic diversification on imports was the large number of significant items of imports which were losing their hold on the Malaysian markets [i.e. those that fall into categories (ii) and (iii) above.] There were 94 of such items.

The analysis also attempted to view these import items in terms of consumer goods, intermediate goods and, investment and related goods. It was observed that of those items with generally rising values during 1960–69, 42 per cent were items of consumer goods while the other 58 per cent were items of intermediate goods and, investment and related goods. On the other hand, of the items with declining import values during 1960–69, 60 per cent were consumer goods and the other 40 per cent were intermediate goods and, investment and related goods. In general terms, the above pattern suggested the following:

a) Industrialization and agricultural diversification had larger effects on imports of consumer goods. This was seen in the predominant share of consumer goods among those import items with a generally falling trend in values. Furthermore, the relatively smaller percentage of consumer goods among the import items with generally rising values was a reflection of the success of import replacement in the consumer goods sector, which therefore depressed the growth of this percentage.

b) Efforts in import replacement of intermediate goods and, investment and related goods had obviously been less successful. These two categories of goods thus comprised the greater portion of import items with generally rising values. Furthermore, among the declining import items, these two categories of goods were much less important than consumer goods.

As a result, there had been significant changes in the distribution of the import bill among these three categories of imports between 1955/57 and 1969. The share of consumer goods in total imports fell by 11 percentage points to 48 per cent in 1969. On the other hand, imports of investment and related goods rose by 8 percentage points to 23 per cent of total imports in 1969 and imports of intermediate goods by 3 percentage points to 29 per cent.

More light was thrown on the process of economic diversification when changes in the individual import items of significance were observed. For consumer goods, the large decline in their share of the total import bill occurred among items of foodstuffs, beverages and tobacco. Among the items in manufactured forms in this category which declined were condensed milk, refined sugar, milled wheat, stout and porter, beer and ale and, biscuits. These were items for which domestic manufacturing facilities had been established. On the unprocessed or little processed items which also declined, the more notable were a number of agricultural and livestock products, including rice. This represented in particular, the effects of agricultural diversification which had, among its more prominent achievements, the success of both the livestock industry and the rice self-sufficiency programme. On the other hand, certain items of consumer goods increased during the review period but their total value of course was not enough to prevent a decline in the share of consumer imports in the total import bill. In the foodstuffs category, these items expanded to serve as inputs for the local manufacturing activities [e.g. unrefined sugar (for the sugar refineries), powdered milk (for the condensed milk industry) and malt and malt flour (for the breweries)] and the livestock industry [e.g. animal feedstuffs, unmilled maize]. One group of items however emerged in response to normal growth in consumption, some of these being cereals, canned meat and preparations, canned

fish and preparations, chocolate and chocolate preparations. The other category of consumer imports with generally rising trend covered the non-food items e.g. motor vehicles, textile materials, certain chemical products and machinery and equipment.

The intermediate goods category, as noted, increased its share of the import bill somewhat during the review period. The prominent items that caused this increase could be traced to demand created by the establishment of domestic manufacturing facilities. These items included crude petroleum, unmanufactured tobacco, plastic materials and, paper and paper products. Even for the few important items that were declining, the principal cause was also increasing industrialization. Some of these items were tyres and some finished petroleum products. Others such as crude rubber and copra, declined because of Indonesian policy to process more of their own raw materials.

The sharp expansion in the share of investment and related goods in the total import bill reflected efforts at development in both the public and private sectors, including the pursuit of the diversification objective. Some of the items that had large increases were machinery and equipment, materials of iron and steel and, transport equipment and other motor vehicles. Against the large expansion of these, some import saving had occurred for a few items. The more important of these were building materials (cement, asbestos), galvanized sheets, iron wire netting and barbed wire. Generally, the domestic manufacturers tended to show little interest in the production of investment and related goods.

The appraisal of public policies and measures took up the remaining eight chapters of this study. Four of these chapters were devoted to the agriculture and forestry sector, three to the manufacturing sector and one to the mining sector.

Two general observations may be made. Firstly, the achievements in economic diversification in West Malaysia during the review period could, in large measure, be attributed to the policies and actions of the public sector. However, in certain areas, the efforts of the private sector made important contributions, especially where private interests happily coincided with the diversification objective. Secondly, despite the results, the appraisal revealed a number of deficiencies which adversely affected the performance of the public sector. It was quite usual to see one or more of these marring many of the endeavours. Among the more obvious were: i) lack of a sense of urgency; ii) shortness of vision resulting in hardly any long-term planning which, in turn, raised problems associated with inadequacy or absence of basic data, applicable research results, facilities, and expertise; iii) lack of initiative resulting in important opportunities missed; iv) incapability or incompetence; v) inexperience; and vi) lack of consensus among the Federal and State Governments in their objectives and interests. Most of these however, were well within the powers of the Government to correct. Some it did with success, but many remained unattended to. The impression gained was that a greater degree of diversification could have been achieved if these deficiencies had been more effectively dealt with.

The discussions on policies and measures commenced with the Government's rubber policy in Chapter V. This is obviously appropriate. It was the

deteriorating situation in the rubber industry that pressed for the adoption of the various diversification policies and naturally, the character and effects of the rubber policy would have important implications for economic diversification as a whole. Firstly, in reinvigorating the rubber industry, the policy had purchased time for the introduction and implementation of other diversification policies. This also enabled the industry to provide resource support for the development of other sectors. The study also argued that the rejuvenation of the industry introduced new production units in the old rubber areas and this was in effect a form of diversification, it having virtually all the effects of a conventional endeavour at diversification except that the crop still remained as rubber. Finally, the Government's rubber policy itself also contributed directly to diversification in that the schemes of assistance to the rubber industry also provided for crops other than rubber to be planted and that some encouragement was given to vertical diversification within the rubber industry.

The study attempted to view the Government's role in the rubber industry in a manner different from that generally accepted. It argued that the Government's basic contribution was in mapping out a programme of renewal for the industry in terms of rate and direction and providing the appropriate machinery to mobilize resources from the industry to channel them back in accordance with this programme. The rubber industry not only financed its own renewal but also generated enough resources to assist the financing of development in other sectors.

Although the Government's interest in rubber replanting commenced as early as 1948, the full commitment of public policy to renew the rubber industry did not emerge until 1954, that is, after the authoritative studies of the situation in the industry by the Mudie Mission and the World Bank mission. Both of these stressed the highest priority to be given to the renewal of the industry. The rubber policy became the backbone of development policy in the years to come. In retrospect, there appeared hardly any choice of policy options, considering the importance of the industry, the country's factor endowments, the past neglect in developing opportunities in other sectors and the interest of the Colonial Government. And many of these factors remained relevant even after Merdeka.

The schemes for the renewal of the industry during 1954–59 were governed by four principles. These were: i) recognition of the inadequacy of the existing replanting cess for financing the new renewal programmes and, therefore, the provision of a substantial grant by the Government; ii) recognition of the special position of smallholders and the need for more attractive financial incentives to be given than in the past in order to induce them to replant; iii) provision of financial incentives to encourage replanting on estates; iv) provision of financial assistance for new planting. The fourth principle was particularly interesting. While it represented a move towards further dependence on rubber, the fact that it involved highly productive trees made a difference, however.

The next major phase of the rubber policy extended over the period 1960–67. Basically, the direction taken was a full endorsement of the policy in its earlier phase. The replanting/new planting schemes for estates and small-

holdings were extended under further arrangements. But during this period, the spread of synthetic rubber producing plants and the development of the stereo-regular rubbers lent a greater sense of urgency to the task of renewing the industry. Thus, important improvements were made to the replanting/new planting schemes for smallholdings which had so far made rather limited progress. Another scheme for estates was also established. The Government made another substantial grant to assist the replanting/new planting schemes.

After 1967, it was a period of consolidation for the replanting/new planting schemes. The schemes for smallholders were further extended. There was no new scheme for estates.

The achievements of the replanting/new planting schemes were impressive. Of the replanting/new planting undertaken on estates during the period the schemes operated (1953–67), 67 per cent of the area were assisted by the schemes. In the smallholdings, the proportion of replanted/new planted rubber undertaken with grant assistance during 1953–70 was also 67 per cent. The extent of total replanting/new planting was likewise impressive. In the estates, a total of slightly over 1 million acres were replanted and another 0.2 million acres new planted during 1951–70. These represented 77 per cent of total estate acreage in 1970. In the smallholdings, renewal was slower but still at a good pace. During 1951–70, replanted smallholdings totalled slightly over 1 million acres while the new planted areas amounted to 0.6 million acres. These represented 59 per cent of the smallholdings acreage in 1970. The effects on yields had become evident. On the estates, productivity increased by 2¼ times in 1969 compared with that of 1951. This increase is continuing. Yield data for smallholdings were not available but the trend in productivity should be similar.

The rubber policy also allowed for grant assistance to be made for the re-planting and new planting of rubber land with 12 other crops. These grants were of the same amounts as applied to rubber for estates and smallholdings respectively. But the switch from rubber to these crops was limited largely because of the eminent suitability of rubber to the Malayan factor endowments. In all, a total of 161,000 acres were planted with these crops or only about 8½ per cent of the area replanted/new planted with rubber and the selected crops under grant assistance. Of the 12 crops, oil palm was the most important, it accounting for 48 per cent of the area under approved crops planted with grant assistance. Three other crops, coconut, fruit trees (citrus and non-citrus) and pineapple made up another 38 per cent. However, the impact of these grant assistance was more significant than what was revealed by the size of the area assisted by the grants. These subsidies in fact assisted in financing the bulk of the increase in acreage of three types of crops up to 1970, namely, pineapple, fruit trees and coffee. Elsewhere the impact was less.

The Government's rubber policy had also contributed to vertical diversification in the industry. In February 1970, the Government agreed to allow all capital expenditures on the setting up of new process factories for rubber to be written off for tax purposes in one year. In 1965, two central processing factories were taken over by the Rubber Research Institute and converted into heveacrumb factories for smallholders. These were subsequently passed on to the

Malaysian Rubber Development Corporation, a public body. A target for the establishment of 40 such factories was set under the Second Malaysia Plan; most of these would be operated by the Corporation, FELDA and the SEDCs.

One of the important objectives of agricultural diversification in West Malaysia was the expansion of food production. Self-sufficiency in foodstuffs was a goal of the Government since 1955. Chapter VI thus examined the role of public policy for the three major items of essential foodstuffs: rice, fish and livestock products.

In the 1½ decades to 1970, considerable and sustained assistance and attention had been accorded on rice production, much more than for the other agricultural activities. As a result, the area under padi increased by more than 50 per cent during 1955–70. Output during the period expanded by more than 100 per cent. The primary reasons were the expansion in acreage and rising productivity, especially from 1960.

A notable point was the achievement of an increasing degree of self-sufficiency in rice during the review period. In 1956, domestic production made up only 56 per cent of estimated consumption but by the end of the 1960's, it was 77–80 per cent. Further increases can be expected in the 1970's with the full operation of the Muda and the Kemubu irrigation projects.

The local padi farmers were generally higher costs producers compared with their counterparts abroad. In order to achieve its objective in rice production, the Government insulated the padi sector from these low costs producers. Thus, a minimum guaranteed price for padi was maintained for a long time, even during the pre-Merdeka period, while on the other hand, imports of rice into the country were subject to quantitative controls. After Merdeka, the guaranteed minimum price for padi was used as a means to subsidize the farmers in times of large price declines for rice, although the interest of rice consumers was also given due weight in determining the extent of the support. During the review period, the protection of the local farmers was further assured by the growing and more intensive use of import restrictions of rice as production expanded.

To an important extent, the expansion in padi acreage was the result of the Government's efforts in improving and maintaining a good and efficient system of irrigation works. During 1956–70, there was a continuous increase of Government investments in irrigation facilities. Also evident was a growing shift of emphasis to irrigation facilities that enabled double-cropping of padi. It was essentially due to this shift that the off-season crop was able to achieve the remarkable expansion from about 1½ per cent of total padi production in the 1958/59 season to 21 per cent by the 1967/68 season. The irrigation policy also provided for the use of irrigation water at subsidized rates. The availability of irrigation facilities played a notable part in raising yields.

Two other major measures of the Government were seen to have contributed to the achievements of higher productivity. They were the efforts at seed development and seed distribution and, the fertilizer subsidies. From 1960, padi breeding and selection were vigorously pursued. Among the achievements were the development of four short maturation varieties which in turn assisted and accelerated the introduction of double-cropping. Schemes for the distribution of

the new seeds were also established with Government finance. The Government had subsidized the use of fertilizers since 1955.

In recent years, the marketing of padi improved with the establishment of marketing schemes under the Padi and Rice Marketing Board in almost all the padi producing areas. Among the objectives of these schemes were the assurance of fair prices to the farmers and the removal of malpractices in the weighing and grading of padi. In the field of credit, very little had been initiated by public policy. The Agricultural Bank, a rural credit institution, was established only in 1969. Its impact on meeting the credit needs of the padi farmers was still negligible at the end of the review period.

The fishing industry was one of the most dynamic of the food producing industries. Between 1957–59 and 1968–70, the volume of marine fish landed increased by nearly 3 times. Growth was especially rapid from 1960 onwards and from 1967, production levels rose sharply to around 300,000 tons a year. From 1964, there was also a large expansion in the net exports of fish, the two items of importance being tuna and prawns. Employment in the industry was also large. But the fishermen as a group remained one of the poorest in the country.

Three factors largely accounted for the impressive output growth of the industry. Firstly, there was the extensive replacement of traditional vessels using sails and oars with mechanically-powered boats. In 1957, three-fourths of the fishing fleet were of traditional vessels but by 1970, three-fourths of the fleet comprised vessels fitted with engines. Secondly, there was the switch over to synthetic fishing lines and nets. This was completed by 1964. Thirdly, trawler fishing was introduced in 1965 and it gained in importance since then.

After 1957, the Government accorded more attention to the fishing industry than in the past. But it cannot be said that the large expansion in output arose mainly from this closer attention. Rather, this was the case of an industry that developed largely at the initiative of the private sector. The factors were favourable. Demand for fish was assured and this continued to expand with population growth. The adoption of improved technology proved to be easy. Then, there was the ready interest and involvement of the private sector in developing the industry on the lines outlined earlier.

The limited role of the Government left virtually unresolved the issue of distribution between entrepreneurship and capital on the one hand and labour on the other. Government policy for the fishing industry started on the premise that the Government would not be in a position to replace, even merely in part, the private capitalists for ideological, financial and administrative reasons. Thus, the policy measures that emerged had only marginal effects on the industry. The Government's scheme of financial assistance to the fishermen was to be effected through co-operatives but the problems of poor management of many of these societies limited any large use of Government funds. By 1967, only $3 million had been channelled through the co-operatives. Its other measures included the development of fishing ports (of which little was realized by 1970), the establishment of some cold rooms (of limited impact anyway), the training of fishermen (the number was small) and the construction of enforcement vessels

to ensure that trawling did not encroach on the grounds of the inshore fishermen. The effects of these were at best indirect. A more direct involvement of the Government was urged.

On fresh water fisheries, output was only a small fraction of the landings of marine fishermen. Considerable interest was shown by the Government after 1957. It operated a number of fish fry breeding stations for distribution of fry to farmers free of charge. Advice was also given to farmers on pond construction and management and assistance provided for clearing predator fish. The area of ponds thus increased very sharply between 1957 and 1970.

The livestock industry had contributed significantly to a more diversified agricultural sector. Developments within the industry during 1957–70 resulted in:

i) import replacement of pigs, poultry and eggs;
ii) supply of a high proportion of animal slaughter from local sources for mutton, beef and buffalo meat.

Production of all livestock products increased by about 3 times between 1960 and 1970. Output of poultry rose by 4 times during the period, that of eggs by 3½ times and that of pork by 1¾ times. Consequently, net imports of animals for food and eggs fell from an average of $22 million in 1957–62 to about one-fifth of this amount by 1967–70. Net imports of chilled frozen meat showed some increase, however, but most of these were beef and veal and to some extent, mutton and lamb. Available data for 1960–70 showed that the production of pigs was able to meet over 90 per cent of the known slaughter of pigs. The known slaughter of goats was met by local sources. There was some improvement in the supply of buffaloes for slaughter. Only for cattle was there a decline in the share of local supply to known slaughter.

The poultry and eggs industries were the most important and dynamic components of the livestock sector. Possibly the most significant measure of public policy was the successful control of the Ranikhet disease by the Government through its free vaccination programmes. This measure was originally started by the Colonial Government but was continued after Merdeka. Tariff protection had been accorded but only in the later stages of development. The initial tariff on eggs in 1960 had little effect and it was only after its revision in 1965 that the tariff succeeded in reducing imports. The duty on killed poultry imposed in 1967 had the effect of reducing imports by only a few hundred thousand dollars. On the other hand, the Government had done little to assist stock improvement.

Once the Ranikhet disease came under control, other factors appeared to have been predominant in fostering the growth of the poultry and eggs industries. Unlike other livestock products, poultry and eggs enjoyed an unfragmented market since they were consumed by all racial groups in the country. These industries offered quick and early returns on investment. Outlay of capital was generally small. Finally, the development of the local animal feed mills enabled the industries to adopt more intensive systems of management and to utilize balanced rations at reasonable prices (the cost of imported feed had been an obstacle in the past).

For the pig industry, its rapid development was again largely due to private initiative. However, there were some significant contributions from public policy. The most important were the 1959 decision to rescind the liberal import policy for pigs and the measures taken to stop pig smuggling along the Thai/Malaysian border. These assured reasonable and steady pig prices and there was thus an expansion of pig production after 1959. Other measures included the supply of improved breeds of boars by the Government at nominal prices, the provision of artificial insemination at a small charge and the operation of a *pawah* scheme for pigs.

A number of factors had made pig rearing an attractive proposition without other Government assistance. Pork enjoyed a large market. The foreign breed of pigs adapted well to the country. Pig rearing was also a short maturity investment. The development of the local animal feedmills had also helped, as in the poultry industry.

In contrast, there had been relatively little development in the cattle and dairying industries. The Government gave some attention to these industries but it proved inadequate in the light of their problems. In any case, the Government began to develop a deep interest in these industries only towards the end of the 1960's.

The efforts of the Government during the review period were largely in upgrading the cattle population. These it did through the hiring out of bulls, sales of bulls at subsidized prices, provision of artificial insemination, compulsory castration of bulls unsuitable for breeding and the operation of the *pawah* scheme. But four areas crucial to the development of the cattle and dairying industries received little attention from the Government. These were i) the development of pastures; ii) the development of supply of expertise for large scale cattle rearing; iii) the problems of disease and management; and iv) the provision of finance. On the other hand, the private sector was unwilling or unable to deal with these problems.

On buffaloes and goats, public policy was largely concerned with multiplication of stock through the *pawah* schemes and stock improvement.

Looking at the livestock industry as a whole, it would appear that there was a lack of a bold and definite plan for the development of the industry. Initiative of the public sector had been limited. Another conspicuous omission was the lack of interest of the Government in the development of animal processing industries and the use of animal by-products.

An important aspect of the diversification process was naturally the extent to which public policy had been contributing to the development of exports other than rubber. Chapter VII examined four principal export products from this standpoint. These were oil palm products, pineapples, coconut products and, products of the forest industries.

During 1957–63, the growth in palm oil production was relatively small. But output grew substantially from 1964. Thus, by 1970, output was 6¾ times larger than in 1957 compared with 1963 when it was 2 times larger. Being virtually export-oriented, export growth followed closely. These developments made West Malaysia a key producer at the world level. The West Malaysian output rose from

4½ per cent of world output in 1952–56 to nearly 23 per cent in 1970. However, these figures represented only part of the achievements in the industry. The extensive planting undertaken in the 1960's had so expanded capacity in the industry that the output achieved by 1970 came from only about half of the total planted acreage while the other half would start to yield only in the 1970's.

The larger part of the increase in acreage was undertaken by the private sector until 1969. However, from 1963, the acreage expansion had been increasingly and substantially assisted by efforts of the Federal Land Development Authority (FELDA), the major Government land development institution.

A number of factors favoured the rapid development of the oil palm industry in the 1960's. Of great importance were the generally good prices of palm oil while rubber prices were declining. Rubber and oil palm were competing crops for investments. Secondly, the oil palm was eminently suitable for the Malaysian soil and climatic environment. Furthermore, it was a well-tested crop in Malaysia and there had been no serious pests and diseases.

Public policy supported and reinforced the shift to oil palm through two approaches. Firstly, oil palm was among the list of crops eligible for grant assistance under the rubber replanting schemes. Although oil palm was one of the principal crops taken up as a diversification crop in rubber land, the total area planted under this arrangement accounted for only 13 per cent of the increase in oil palm acreage during 1953–70. The second approach involved the policy decision to increasingly emphasize on oil palm rather than rubber as the principal crop in FELDA schemes from 1962. This approach had a wider and more direct impact and was responsible for 23 per cent of the oil palm acreage in 1970. The policy decision became operative in order to ensure that the income objective for settlers on FELDA schemes would not be jeopardized by the falling rubber prices. In turn, the State Governments also encouraged oil palm cultivation on their land development schemes. By 1970, their efforts accounted for nearly another 5 per cent of the total oil palm acreage.

Government policy had, however, shown itself to be lacking in initiative, foresight and boldness in approaching the question of research work for the oil palm industry until the end of the 1960's. Thus, the existing research facilities were fragmented, these being undertaken by the private agency houses, the Division of Agriculture of the Ministry of Agriculture and lately by FELDA. The results of research were not shared and generally, there was wasteful use of scarce resources. Even so, there were other shortcomings. For example, the Government's research facilities were found to be inadequately staffed and deficient in organization. It was only following the establishment of the Malaysian Agricultural Research and Development Institute (MARDI) that Government decided to push through the concept of centralized research. Work was expected to commence in 1971.

In the field of vertical diversification of the oil palm industry, public policy had also shown a lack of initiative. It was only in 1970 that the Government decided to encourage the production of refined edible oil and solid fats in place of the crude oil production that characterized the industry. At the same time, it decided to provide incentive for oil extraction using solvent or chemical means.

The incentives for both categories of activities took the form of tax relief under the pioneer industry scheme. What was rather difficult to understand was the very long delay before the Government decided on such an incentive as the pioneer industry scheme had been in existence since 1958.

Pineapple products made up the second group of export products examined in Chapter VII. These had been long-standing exports and indeed, they were the third largest export in pre-war years. In the post-war years, although overtaken by other commodities such as palm oil, pineapple exports remained substantial and in recent years averaged $45 million a year. The post-war development of the pineapple industry owed considerably to the efforts of the Government.

From 1956 and for about four years, the pineapple industry went through a period of crisis. The crisis placed the smallgrowers' sector of the industry in jeopardy. It was caused by the inability of the canneries to absorb the smallgrowers' fruit owing to poor markets for canned pineapple abroad. At the same time, there were a number of deficiencies within the industry which needed to be corrected. The Government responded well to the situation and its measures made a substantial impression on the problems, although undue delays attended their implementation.

As a principal measure to deal with the crisis, the Government decided in 1960 to set up a $5 million cannery financed by public funds. After considerable delay, the cannery was established and commenced operation in 1965. It was able to absorb the bulk of the smallgrower's fruit. There was a marked expansion in total acreage under pineapple from 1964, this occurring solely in the smallgrowers' sector. While the Government cannery had assisted, a more important factor appeared to be the financial assistance available under the rubber replanting schemes. Pineapple was one of the diversification crops eligible for grant assistance. Another factor was that pineapple was made one of the compulsory intercrops under the Coconut Replanting and Rehabilitation Scheme established in 1963, but data on achievements were not available. With these developments, the pineapple industry had turned from being an industry dominated by estates to one dominated by smallgrowers.

Besides these, the Government also implemented a number of other measures which had assisted the industry. These included: i) the revision of laws governing the industry and ii) the introduction of regulations to achieve a) certain standards for the canned products, b) orderly marketing of canned pineapple and, c) matching of the supply and demand of fresh fruit. To deal with the problem of competitive price cutting among canneries during the crisis and the problem of lack of finance of the canneries which forced them to curtail production (and, hence absorption of fruits) during the slack season, the Government established a central sales organization. There was, however, a gap of about six years between the decision to establish the organization and its realization.

With all these measures, there was a sharp expansion in the exports of canned pineapple after 1965.

However, little had been initiated by the Government in the area of raising the efficiency of the industry. But action in this field had become very urgent in the light of i) increasing competition from efficient producers abroad, ii) the

recent currency realignment which rendered the exports of the more important pineapple producing countries more competitive and, iii) the entry of the United Kingdom, an important market for Malaysian pineapple, into the European Economic Community. Furthermore, within the industry itself, trends were becoming evident of the ageing of the industry as reflected in the declining fruit size. Research work for the industry had been poorly managed and the achievements minimal in relation to the expenditures made. The question of changing the Malaysian variety to other more productive varieties remained unresolved. It was only under the Second Malaysia Plan that provision had been made for replanting assistance. On the processing side, only the Government cannery was relatively new while the others were over 30 years old. Now that the industry was predominantly based on smallgrowers, the onus for initiating most of the these reforms rests more heavily on the Government.

The coconut industry was one of the long-established industries. Among agricultural products, its output was the third largest after rubber and padi but has now slipped to fourth place with the emergence of palm oil. The value of exports of coconut products was the second largest among agricultural exports in the 1950's, remained the third largest until 1961 and was the fourth largest from 1962. The export of coconut oil during 1964–70 fell compared with 1957–63, despite a better average price. This suggested that production capability had failed to meet both increased domestic and export demand. There had been little change in the acreage under coconut. Smallholdings accounted for a substantial and growing share of total acreage. As early as the 1950's, the coconut industry already had the characteristics of a neglected and declining industry.

Several factors contributed to the state of the industry, not the least important of which was the limited role of the Government. Firstly, most of the coconut areas were in derelict coastal regions and hence, were subject to waterlogging. Large areas had no internal drainage. This implied a large financial burden for both the Government and the coconut growers, if the problem was to be solved. So long as it remained, all other efforts to assist the industry could yield little results. The second factor was low productivity which had its roots in the low palm density (although there was some improvement here), the high percentage of non-bearing (excluding immature) palms, the ageing trees especially in Kelantan, and the neglect of holdings. Incomes, therefore, remained low even after account was taken of other receipts. This virtually ruled out the possibility of the smallholders dealing with the problems on their own. Finally, the commitment of public policy to rejuvenate the industry had been half-hearted. On the one hand, there were more attractive opportunities in rubber and oil palm. Coconut planting could not meet all the criteria for a diversification crop and, in particular, the criterion of a good income earner. On the other hand, as the industry was a large source of employment, the Government was under pressure to do something.

It was not surprising to find schemes of assistance, therefore. Firstly, grant assistance had been available since 1953 to facilitate the switch over from rubber planting to coconut under the various rubber replanting schemes. By 1970, such

areas planted with grant assistance amounted to only 4 per cent of the total area under coconut. A more specific scheme of assistance was the Coconut Replanting and Rehabilitation Scheme set up in 1963 to assist only smallholders. Lack of experience and expertise kept the Scheme as a pilot scheme until 1965. It was surprising to find that the grant assistance for replanting under the Scheme was smaller than that available under the rubber replanting schemes, despite the higher cost of coconut replanting. An interesting condition of the Scheme was the requirement to undertake the planting of intercrops such as pineapple and cocoa to supplement the incomes from coconut. Up to 1970, the area improved or replanted under the Scheme amounted to about 8 per cent of the coconut area, a very small achievement indeed.

The Government had provided very limited funds for research in the coconut industry. Nothing of significance had, therefore, been achieved to produce high-yielding varieties, a fact that further hindered efforts to renew the industry. By 1970, the Government still had made no serious move to improve the situation.

In the review period, the forest industries emerged as one of the principal and dynamic productive sectors. The development of the timber industry which formed the backbone of the forest industries, was not the outcome of deliberate efforts to diversify the economy. Log production expanded very rapidly from 1960 and by 1970, it was 4 times larger than the output in 1955. The underlying factors were: i) the growing demand for tropical hardwoods; ii) the close proximity to Singapore which was a large market for timber; iii) the large volume of land development activities undertaken by FELDA and the State Governments during the period; iv) the pressure on the State Governments to develop their financial resources. However, the Government's diversification policies sought to make some impression in two areas: a) the renewal and improvement of forest resources to ensure lasting support for the wood-based industries and, b) the regulation of the timber trade and development of vertical diversification in the forest industries.

The Federal Government failed in its attempt to develop a national policy to renew and improve the forest resources. The constitutional autonomy of the State Governments on forestry matters proved to be a stumbling block, particularly when it became clear that the State Governments did not appear interested in the long-term improvement in their forest resources. Thus, although efforts were made as early as 1957, there had been no success so far. Owing to the relative inexperience of the Federal Government and its inadequate initiative in economic planning, there was for a long time hardly any basic data on land-capability which would be necessary for decisions on the size and siting of the forests and for the resolution of conflict between claims of forestry and other land use. This had no doubt aggravated the difficulties of reaching agreement on a national forestry policy. Such data became available only in 1969. Another contributory factor was the lack of comprehensive studies on the problems, potential and, direction of development of the timber and associated industries. This information gap was only being rectified in the early 1970's.

More tangible results were attained by public policy in its second area of endeavour. The system of quality control of exported sawn timber established

during the colonial period was continued. With the emergence of malpractices in the timber trade in the early 1960's, the Government with the industry moved in to set up the Malaysian Timber Export Industry Board in 1966 to regulate the trade.

The desirability of some domestic processing of the timber logs was recognized even in the colonial period and probihition was thus applied to exports of logs to all countries except Singapore. This policy was continued by the Malayan Government. The exemption of Singapore from this prohibition largely nullified the objective of the prohibition. Even after Singapore left Malaysia in 1965, no attempt was ever made to apply the prohibition to Singapore. However, a duty on logs of 10 per cent was imposed on all log exports in 1967. But this proved ineffective and the duty was raised to 15 per cent in 1972.

Another aspect of development of vertical diversification within the forest industries was the tremendous progress made in the plywood and veneer industries especially from 1963. This was the result of a strong and growing overseas demand. But the Government added further stimulus to these industries by declaring some of their products eligible for tax relief under the pioneer industries scheme. Furthermore, the Malaysian Industrial Development Finance Ltd., a development bank, on which the Government had considerable influence on its lending operations, made available substantial financing at reasonable cost. Incidentally, these efforts constituted one of the rare occasions of fine coordination among public policies.

To have a comprehensive view of the extent of agricultural diversification, it was necessary to examine also the situation and prospects of the minor crops. This exercise was undertaken in Chapter VIII. The overall impression gained was that these crops made negligible contributions to the diversification process during the review period. Two basic reasons were identified. There was the lack of urgency to pursue agricultural diversification until the 1960's, resulting in a late start for the efforts. In 1963, a study to provide direction for agricultural diversification was undertaken for the Government by a team of experts from the Ford Foundation. Among other things, the study stressed the need for considerable research to derive suitable varieties of the minor crops and to determine their appropriateness for different parts of the country. In 1966, FAO made another study on the minor crops for the Government. This study noted a lack of new and applicable knowledge about these crops. The second reason was the shortage of expertise to undertake the necessary research. The Malayanization policy in the public services appeared to have seriously impaired whatever research capability there existed within the Department of Agriculture. It seemed possible for the effects to have been minimized, if only there had been at that time a clearer and more concrete view of agricultural diversification.

A total of 10 minor crops were examined. During 1957–70, it was found that usable species or varieties of 7 out of these 10 crops were not available for crop expansion. The efforts of the Department of Agriculture contributed very little in producing such species or varieties. Furthermore, Government assistance to the minor crops had been very limited. The crops covered were few and the most important form of assistance was that provided under the rubber replanting

schemes. However, a more vigorous policy of encouragement of these crops would be pursued in the 1970's. Under the Second Malaysia Plan, research priorities would be given to five of these crops while crop subsidies would be made available to seven of these. Intensified research would be carried out by MARDI. But MARDI's problem was getting adequate qualified and experienced manpower, an obstacle it had so far found difficulty in overcoming.

Of relevance to agricultural development and agricultural diversification was the Government's land development policy. The extent and pace with which new land was being developed would determine new opportunities for agriculture. This could, in turn, mean greater agricultural diversification if rubber was being de-emphasized at the same time. Land development policy also carried with it a crop policy. For these reasons, the Government's land development policy was scrutinized in Chapter VIII.

In 1961–70, a total of 869,400 acres of land were developed for agriculture. Of these, the public sector accounted for 79 per cent. Under the Constitution, land matters are vested in the State Governments. As the different states had their own objectives and concepts about land development, it proved to be difficult to agree on a national guideline for land use. However, the Federal Government was able to introduce some measure of uniformity in land development policy. Of importance was the establishment of FELDA in 1956. It financed the development and settlement of new land throughout the country. Through it, the Federal Government had control over the pace of land development, its location and other matters such as the size of holdings and crop policy. The other measure was the Land (Group Settlement Areas) Act, 1960, which provided for uniformity of regulations and policy in respect of large blocks of land for group settlements in different states.

Nevertheless, FELDA accounted for only 44 per cent of the land developed by the public sector. In contrast to the comprehensive approach in land development followed by FELDA, the State Governments pursued several types of land development schemes in which public funds only financed part of the development while the settlers bore the rest of the cost. Some of the schemes met with a notable lack of success. Such were the fringe alienation schemes, the controlled alienation schemes and the block planting schemes. With the constitutional powers of the State Governments on land matters and most of the financing provided by the State Governments, it was not possible to have a centralized body to evaluate the various schemes and apply corrective measures. Some of these state schemes received assistance from the Federal Government (e.g. the fringe alienation schemes, the public sector estates and the block planting schemes) but the Federal Government had not utilized this as a means to apply pressure on the State Governments to rationalize the schemes where necessary. Its role so far was only to salvage the schemes that failed.

Land alienation for agriculture had been slow. This was certainly not because of lack of agricultural land. Indeed, the land capability survey of 1969 revealed that the potential agricultural land in the country was slightly more than 2 times larger than the existing area under agriculture. A major problem was that the machinery for alienating and administering land was very inefficient. So far, the

Federal Government had shown a lack of leadership in pressing for effective reforms. Moreover, there was the difficulty of getting the State Governments to undertake these reforms. Another factor for the slow alienation of land for agriculture was the policy generally pursued of restricting the alienation of land to the private sector. In 1961–65, land alienated to the private sector for agricultural purposes amounted to only 16 per cent of all the land alienated for agriculture while in 1966–70, it was 37 per cent. This policy meant that the main burden of land development had to fall on the public sector. The policy appeared unnecessarily conservative in view of the large potential area yet unexploited for agriculture. A change of this policy could lead to a better balance between the estate type of agriculture and smallholdings. As it was, land development undertaken so largely by the public sector had mainly concentrated on smallholdings agriculture.

Finally, the study examined the crop policy of the newly developed land. In the FELDA schemes, the principal considerations underlying their crop policy were the prospects of the crop to enable the achievement of the income target set for the settlers and, the feasibility of the crop. With the fall in rubber prices, therefore, there was the shift from rubber to oil palm. In the schemes of the State Governments, both rubber and oil palm were important but the emphasis on oil palm was much less. On the private estates, the income objective was also important so that their crop policy should be fairly similar to that of the public sector. It thus appeared that the major contribution of the crop policy to agricultural diversification was in the development of the oil palm industry. The other agricultural activities were of hardly any importance in the newly-developed land.

The impressive development of the manufacturing sector had been noted earlier. Undoubtedly, this owed much to the efforts and attention of the public sector throughout the review period. Despite many shortcomings in the public policies and measures governing the sector, it can be said that on no other sectors of the economy had the Government accorded such detailed attention. Three chapters of the study, Chapters IX, X and XI, were therefore devoted to an evaluation of these policies and measures.

Chapter IX examined the industrial development strategy of the Government. Three broad phases were identified. Each phase was more vigorous and more sophisticated than its predecessor. From 1957 when the Government first proclaimed its industrial policy to about the mid-1960's, the basic philosophy underlying the strategy was to develop a conducive environment for industrial growth. The main concern was to encourage industrial investment. Thus, the principal instrument was the granting of tax relief of varying periods to pioneer industries, depending upon the size of the capital investment. Industrialization was based largely on import-substitution and industrial activities were virtually in the hands of the private sector. There was also a greater awareness of and the use of tariffs as an instrument of industrial promotion, largely brought about by the formation of Malaysia. The second phase covered the mid-1960's to May 1969. It represented a move towards greater urgency in the pursuit of industrialization and more precision in the conduct of industrial policy. Underlying these

changes were the slow industrial growth during the earlier period, the fall in rubber prices and the introduction of more attractive industrial incentives in Singapore. The principal instrument was the Investment Incentives Act, 1968. Under it, new incentives became available to encourage labour intensity, greater use of local inputs, more export of manufactures, production of priority products, new investments that would not qualify for pioneer status, and better industrial dispersion. Furthermore, during this phase, the Government became increasingly concerned with the continued low level of participation of the Bumiputra community in industry and commerce. One important measure was the reorganization of RIDA into MARA with substantial capital reinforcement. One of the tasks of MARA was to undertake direct investment in industrial activities by itself or in joint ventures. The third phase of the industrial strategy commenced from May 1969, after the racial riots. Two major considerations motivated the change in strategy: the need to correct the economic imbalance among the races in order to strengthen national unity and the need to make a more effective attack on the problem of growing unemployment. A new aspect of the strategy was for the Government to take the initiative in industrialization by itself or jointly with others. There was considerable stress on the dispersion of industries to the smaller towns, an industrial work force to reflect the racial composition of the country and, encouragement of labour intensive industries. The pace of industrialization was to be more vigorously pushed.

Among the incentives established to provide encouragement to industrial development, fiscal incentives as a group made up one of the most important. Chapter IX made a detailed examination of their nature, efficacy and contributions to industrial growth.

The earliest fiscal incentive was the pioneer industry scheme. The incentive had two aspects: i) it defined the types of industries to be encouraged and, ii) it linked the tax relief period to the size of the capital investment. Capital investment in pioneer industries since the establishment of the incentive in 1958 had been impressive and could be in the region of $1,000 million. There had been large foreign capital participation, which also reflected the success of the Government's policy in encouraging foreign investment. By 1968, pioneer companies accounted for as large as one-third of the total value added in the manufacturing sector. However, the incentive tended to encourage greater capital intensity. Furthermore, the manner with which a pioneer industry/product had been defined for purposes of eligibility for the incentive resulted in a wide assortment of industries. It thus became necessary to establish a new incentive to foster industries of priority.

From 1968, investments not eligible for the pioneer incentive were encouraged by means of the investment tax credit. Following a poor response in 1969, the results were more encouraging thereafter. To encourage modernization expenditures, the Government also provided for the acceleration of capital allowances for tax purposes. But no assessment of its effects was possible yet.

To encourage the establishment of priority industries, fiscal incentives were given from 1968. An examination of the first list of priority products defined by the Government revealed that essentiality was not a basic criterion nor could

they be commonly grouped as products of key industries. The second list put up by the Government in 1972 represented a more serious attempt to include products with strong linkages to other products. However, the list still included some non-essential products and some products with only very small local value added. A more rational selection was considered necessary.

The concern with greater labour utilization was expressed in earnest only after May 1969. It anything, the past fiscal measures had tended to encourage more use of capital. This was noted of the pioneer incentive earlier. The payroll tax introduced in 1965 was the other such measure. Two incentives to encourage more use of labour were introduced after 1969. These were i) the labour utilization relief which provided for periods of tax relief varying with the size of the labour force employed and, ii) the special incentive for the electronics industry. In the context of existing incentives, it was observed that their overall effect should not lead to an excessive swing towards labour intensive techniques and hence inhibit long-term growth prospects. The continued availability of the pioneer incentive should act as a balancing factor to the labour utilization relief and should assist in a more rational choice of techniques. The electronics industry was a clear case of a labour intensive industry and the special incentive for it should not be a cause of conflict in the choice of techniques. Bút one deficiency of this special incentive was its non-discrimination of enterprises which contributed differently in terms of value added or the use of locally manufactured inputs.

The greater use of domestic inputs had been encouraged since 1968 by fiscal incentives. However, indications suggested that the results were not up to expectations.

It was found that most of the industrial activities were located in four states (Selangor, Perak, Penang and Johore). Fiscal incentives were thus introduced to induce the location of industries outside these states. The study indicated that these incentives had exercised some influence but certainly not large enough to be of much significance. The scarcity of industrial estates in the less industrialized states appeared to be an important obstacle. However, in 1973, the Government introduced a more attractive incentive to deal with the situation.

The Government eventually recognized the limitations of pursuing an industrial strategy based on import substitution. In 1968, it thus introduced a set of three measures to encourage the development of manufactured exports. These were: i) an accelerated depreciation allowance (ADA) to induce investments in new plant and equipment in the export sector; ii) an export allowance and, iii) deductions for purposes of tax for export promotion expenditures. The results for all three proved to be disappointing. A number of shortcomings on these measures were observed. It was also clear that the impressive growth of manufactured exports during the review period had nothing to do with the effects of these incentives. A new export allowance considered to be more attractive was announced by the Government in 1972 but it had still not appeared in the statute books despite the lapse of over a year. The study also urged the search for an incentive that will directly encourage investment in export industries.

On the whole, it would appear that some of the fiscal incentives had not been particularly helpful. A beneficial exercise would be to modify or replace them.

While all these fiscal incentives represented a serious attempt to promote industrial investment, the Government had also taken other fiscal measures which had reduced somewhat some of the favourable effects achieved. Revenue considerations governed these measures. Firstly, since 1958, the rate of company tax had increased from 30 to 40 per cent. Some useful opportunities appeared to have been missed such as withholding the increase (subject to a time limit) for new industrial investments. Secondly, a development tax was imposed from 1967 which had the effect of raising the rate of company tax by another 5 percentage points. Then, there was the payroll tax levied during 1965–70 and even if the existing rate could be accepted as of little consequence in the choice of techniques, the potential of the tax as a further source of revenue for the Government could have tilted the balance in favour of greater capital-intensity. Finally, there was the surtax of 2 per cent on most imports, introduced in 1967. In not sparing imported inputs for industries and replacement machinery, it must have raised the cost of production for the domestic market. These measures represent a lack of co-ordination between the objective of industrial development and the other objectives of the Government. Except for the abolition of the payroll tax, no attempt was made to correct these anomalies.

Fiscal policy was obviously not enough to overcome many of the problems and handicaps facing the emerging manufacturing sector. Chapter X identified four areas where public policy played an important role. These were: i) tariff protection, ii) industrial financing, iii) industrial estates and, iv) initiative of the public sector in establishing and operating industries.

The principle of tariff protection was accepted as early as 1957. But widespread use of protective tariffs came about only from 1965, following the establishment of the Tariff Advisory Board. From 1965, the tariff policy of the country was marked by four characteristics: i) the marked use of tariffs as a protective device for industries; ii) the use of tariffs to integrate the separate markets of the component states of Malaysia in respect of local manufactures; iii) the harmonization of duties to facilitate movements of imports and, iv) the erosion of preferential tariffs. By 1966, manufacturers in West Malaysia already had the benefits of an all-Malaysia market. By 1970, there was little left of the preferential tariff system. Another aspect of protection had its origin even earlier. This was the legislation introduced in 1959 to enable the Government to counter the dumping of goods by foreigners or the entry of excessively subsidized imports.

The study made a close examination of tariffs in West Malaysia. It found that about 33 per cent of the total number of tariffs at the end of 1970 were imposed during 1962–70. The rates of a number of tariffs imposed earlier were raised during 1962–70; these made up another 23 per cent of the tariffs at the end of 1970. On the levels of tariffs, there was evidence that the average nominal tariffs in most industry groups had increased and, in a number of cases, substantially so. There was also a clear and consistent pattern of higher nominal

tariffs on consumer goods compared with those on intermediate goods and, investment and related goods. In terms of effective protection (roughly measured), higher rates of effective protection were also noted for consumer goods. On preferential tariffs, a substantial number was removed and replaced by standard tariffs during 1962–70 while of those that remained, their preferential margins had been reduced.

The study made three observations. Firstly, the common occurrence of uniform rates of nominal tariffs cutting across industries and products suggested a high degree of arbitrariness in tariff-making. Evidently, there was a clear need for the Government to develop sources of data that would enable effective protection to be estimated so that these nominal tariffs could be adjusted to more relevant levels. Secondly, the current pattern of protection favouring consumer goods was undesirable. It enhanced the already formidable difficulties in the way of faster development of intermediate goods and, investment and related goods. Thirdly, the Government should lay down guiding principles for the tariff-making authorities, since initiative in requesting for new tariffs continued to be largely taken by the private sector.

In the field of industrial financing, an institution of importance was the Malaysian Industrial Development Finance Ltd. (MIDFL). The Government exercised considerable influence in its policy. MIDFL filled a gap in industrial financing and, in insisting only on sound projects for financial assistance, its contribution had thus been much more than just finance. In 1970, it commenced consortium financing with commercial banks. This was a matter of great significance as it opened the way for increasing utilization of the resources of commercial banks for industrial financing, an activity the banks had avoided in the past. However, the loans of MIDFL had concentrated mainly on large enterprises which, in ordinary circumstances, should have little difficulty in getting funds elsewhere, while the small enterprises continued to benefit little from MIDFL's operation. Furthermore, while MIDFL operated hire purchase facilities and factory mortgage financing for meeting the needs of small enterprises, the amount of financing provided had been small. The Government deserved credit for continuing to press for more attention for the small industries. As another move to assist the small and medium size industries, MIDFL established a subsidiary, the Malaysian Industrial Estates Ltd., in 1964 to build factories for sale or rental. Progress was fairly satisfactory.

To assist the Bumiputras, RIDA was reorganized into MARA in 1965. Among other things, a better industrial credit facility was an objective. However, the volume of assistance made available to the Bumiputra investors during 1965–70 had been small. In this case, the more fundamental problems appeared to be lack of knowledge, expertise and entrepreneurship among the Bumiputras. Finance was no problem as the Government had transferred to MARA $51 million for all its operations during 1965–70.

In the development of industrial estates, the Federal Government had spent large sums of money during 1956–70, in fact, more than 2 times the amount originally allocated. However, the trend was slowing down. Most of the new industries had been located in these industrial estates. An obvious problem was

the lack of co-ordination in the development of industrial estates, this arising from the autonomy of the State Governments in land matters. Thus, there was no effective body that could lay down appropriate policies for all the industrial estates in order to take account of the wider interest of the national economy as well as the interest of the individual states. There had been instances of development of excess capacity, as in 1966–68. Also, the differences in the 'attracting power' of the different industrial estates could not be effectively 'compensated' to ensure a fairer distribution of industries among the states. Another matter requiring attention was that the Governments of those states with a small share of industrial activities should seriously consider the development of industrial estates with the financial assistance of the Federal Government. Obviously, there would be limits to the efficacy of the fiscal incentives for industrial dispersion.

The fourth area of policy intervention discussed in Chapter X concerned direct public sector participation in manufacturing activities. There were a number of instances of such direct participation in the past. But in the closing years of the 1960's, this approach commenced to be vigorously pursued. The basic objective was to break the constraints that were holding back a more acceptable rate of Bumiputra participation in industry and commerce. These constraints had been identified as capital deficiency, lack of entrepreneurship and skills and, lack of opportunities. Direct public sector participation would thus involve the establishment and operation of industrial enterprises until the Bumiputras would be ready to take them over. So far this approach was still in its initial stages. The means utilized had been mainly MARA, PERNAS (the National Corporation) and the state economic development corporations (SEDCs). The Federal Government provided financing to the first two in the form of loans, equity and grants. However, the approach lacked central direction, co-ordination and a clear division of labour. The institutions involved had overlapping functions and no means appeared in sight for this problem to be sorted out. Furthermore, the consequences of this poorly co-ordinated approach were beginning to emerge. Some of the SEDCs were noted to be badly in need of suitable personnel and to have problems of finance. The direct involvement of the Government in industrial activities was also expected to place a strain on its own scarce managerial and entrepreneurial resources.

In commenting on these endeavours, the study identified three possible areas for action by the public sector. An obvious need was to establish a strong central body to ensure a greater specialization of functions of the various organizations concerned. This should prevent the dispersion of the scarce factors of the Government, the other public sector institutions and the Bumiputra community as well as the wastefulness of rivalry operations. Secondly, there was a need to ensure that in establishing and operating industries, the SEDCs should not be governed strictly by the narrow interests of the states concerned. Finally, the encroachment of the public sector in activities hitherto the preserve of the private sector naturally had given rise to some uncertainties and anxieties which could have adverse effects on the growth of private investment. It thus appeared necessary for the Government to spell out clearly the scope and intentions of the public sector in manufacturing activities. This should be done through a single authoritative body.

Chapter XI examined the role of public policy in four other areas which had a bearing, though largely indirect, on the development of the manufacturing sector. These were i) the supply of industrial skills and management resources, ii) the provision of technical services, iii) the creation of the environment for industrial investment and iv) the development of a machinery for formulating and implementing the Government's industrial policies.

On the supply of industrial skills and management resources, the study observed that there had been no comprehensive manpower planning undertaken in the country. Manpower requirements had so far been met via a fragmented approach. There were therefore many decision-making centres for manpower supply rather than a centralized point. The study stressed that this state of affairs would have to be corrected if industrial development and the development of the other sectors were to proceed smoothly.

The education system was never geared primarily to meeting the manpower needs of economic diversification. The energies of the Government had so far been concentrated on the development of a national system of education. Little had been done by the Government in the field of technical and vocational education at the school level. As a consequence, there was heavy reliance on the private sector. This raised important questions about whether such reliance would be in the best interest of the economy in terms of supply of manpower of the right types and quality. The system of comprehensive education was also examined but it appeared of little significance in preparing children for industrial employment requiring low-level skills. At the tertiary level, there was a heavy bias towards the humanities. However, there was some improvement in the enrolment in science and technology.

Public policy appeared to have achieved some success in the development of Bumiputra manpower resources for industry. The training of Bumiputra manpower was one principal means being used by the Government to increase the participation of Bumiputras in industry. With the establishment of the MARA Institute of Technology in 1966, technical and management training for the Bumiputras received an important boost. Enrolment increased substantially, a large part of which was in science and technology. Supplementing the Institute was the availability of numerous scholarships and loans for studies elsewhere. The number of awards each year had been impressive. MARA also operated some vocational institutes but the results were of relatively little significance. In addition, MARA had an on-the-job training scheme of six months to two years, under which it provided subsistence allowance to the trainees. Its impact remained to be seen.

Outside the education system, the Government had been operating a national apprenticeship scheme since 1957. Output of the scheme however made up less than 2 per cent of the work force eligible for such training. With Government initiative, a national productivity centre was set up in 1961 to train middle and lower level management personnel. It appeared to be fulfilling a need as many of the managerial and supervisory personnel in the smaller enterprises had hardly any training. Another policy measure that had been beneficial was the Malaysianization policy. Its realistic approach had been able to satisfy both the

national aspirations on employment and the needs of the foreign investors for some measure of control over their investments.

On improving the flow of technical services to industry, there were only limited efforts during the review period. It was only towards the end of the 1960's that there were some significant additions to the sources for these services, although their importance had been recognized by the Government as early as 1957. Obviously, the Government had given priority to efforts that yielded more tangible results. Possibly the most important sources of such services during the review period were those associated with industrial credit. Loans from MIDFL carried with them access to technical advice from the company. Since 1965, MARA required that credit given by it be used with the technical assistance it provided. It also provided such services to its existing debtors. On the other hand, there was limited availability of technical services to stimulate industrial development. One of the basic objectives of the Federal Industrial Development Authority (FIDA) was to undertake feasibility studies that would induce new investments. Even by the early 1970's, these studies had not materialized. All that had emerged so far were largely superficial studies. MIDFL noted the urgent need for consultancy services for small industries and in 1971 set up a facility for such. A management consultancy service was established by the National Productivity Centre a year earlier. There were two other notable sources of technical services which also emerged only towards the end of the 1960's. These were the National Institute for Scientific and Industrial Research and the Standards Institution of Malaysia. However, their influence could only be felt some years from now.

In attempting to create a more conducive environment to industrial investment, many measures had contributed. Among these were infrastructural development and proper fiscal and monetary policies. Furthermore, three other measures were taken to enhance the attractiveness of the country for foreign investment. Firstly, the Government entered into investment guarantee agreements with three foreign governments. In October 1965, Malaysia acceded to the Convention on the Settlement of Investment Disputes between States and Nationals of Other States. Thirdly, Malaysia became a party to a number of agreements for the avoidance of double taxation.

Lastly, Chapter XI examined the various institutions concerned with industrial development. The types and character of these institutions were important as they both affected the Government's capability and initiative in policy formulation as well as the efficiency with which the policies could be implemented. During the review period, there was an increase in the number of institutions concerned with industrial development. The earliest body was the Industrial Development Section of the Ministry of Commerce and Industry set up in 1957. Its main preoccupation was the administration of the pioneer industry scheme. Little industrial promotion work was done. With the formation of Malaysia, the World Bank mission recommended the establishment of FIDA and the Tariff Advisory Board (TAB). Both recommendations were implemented. The impact of FIDA proved to be below expectations. It failed to establish itself as the authoritative body to influence the pace of industrial

development. Two other bodies, the Economic Planning Unit and the Industrial Development Division of the Ministry of Commerce and Industry, were also concerned with industrial policy. Obviously, this sharing of responsibilities in policy formulation must have been an obstacle to the development of FIDA's effectiveness. Only a single body (based on FIDA) was therefore urged to deal with industrial policy. On the other hand, FIDA's industrial promotion efforts had only been of a general nature. FIDA still lacked the technical capabilities to do its job fully.

The TAB had exercised extensive influence on the tariff structure. But the Government finally decided that tariff-making via the TAB was a time-consuming and cumbersome process, although in the past, urgent cases had been speedily dealt with by a special committee which operated without the usual procedure of public enquiries. It, therefore, decided to abolish the TAB in 1970, replacing it with two committees of officials, one of which was assigned to deal with urgent requests for tariff protection. The study observed that this was a retrograde step. Among other things, this change in the tariff-making machinery could lead to inadequate consideration of the views of all the parties concerned and that the process of tariff-making was now more open to political and other pressures. Furthermore, the appointment of Government officials to these committees, who have full-time jobs elsewhere, would mean that little time, if any, could be devoted to the important task of periodically reviewing the existing tariff structure. This could lead to undesirable rigidities.

The last institution of importance was the Capital Investment Committee (CIC) established in June 1969 to assist the Government to pursue a more vigorous industrial policy. Some of its terms of reference could be interpreted as a dissatisfaction with the performance of FIDA in industrial promotion. One of its major achievements was in speeding up approvals of applications for the various incentives. Another interesting aspect of its work was to ensure better co-ordination and co-operation between the industrial promotion efforts of the Federal Government and those of the individual State Governments. However, the CIC was still essentially a committee and as such, it would have to depend on FIDA in particular for advice, staff work and research. In other words, even with the establishment of the CIC, the technical weaknesses of FIDA would still have to be corrected.

The last chapter of this study, Chapter XII, scrutinized the role of the Government in the mining sector. Developments in the sector were of interest and concern to economic diversification from two standpoints. Firstly, the developments should reveal the state of the mining sector and, hence, the support that could be forthcoming from it for the process of diversification. Secondly, these developments should show what results policy measures had produced in terms of strengthening the support for the tin industry and in terms of achieving a more diversified mining sector.

The examination of the mining sector showed that its output in the 1960's was about 87 per cent higher than in the 1950's. This was largely because of the better prices of tin during the 1960's together with increased physical output as well as the sharp expansion in iron ore production. Exports followed a similar

pattern. On an annual basis, the values of exports of tin and bauxite showed a rising trend during the 1960's. For iron ore, a declining trend was evident after 1963.

Underlying these output and export data, however, were factors that were beginning to undermine the importance of the sector. Of these, the study revealed the following. By the early 1970's, the mining sector was virtually reduced to only tin mining. Two of the more important minerals, coal and gold, ceased to be mined by the early 1960's while the production of iron ore fell to drastically low levels with the exhaustion of the major ore resources. In the tin industry, the prospect of declining ore reserves had become more real. Since 1965, the area of land under title for tin mining continued to be much below that of past years. During 1961–70, the titles over a very substantial area of tin land were cancelled, obviously following reserves exhaustion. The contributions of the mining sector to employment were limited. In 1969/70, employment in the sector was at about the same level as 20 years earlier. The study noted a rising trend in capital-intensity in the mining of tin and iron ore.

On the whole, the Government had given relatively less attention to the mining sector compared with the manufacturing sector or even the agriculture and forestry sector. But some important policy measures were taken particularly from the mid-1960's. The necessity of prospecting for new minerals had always been acknowledged by the Government. However, a number of difficulties limited the extent of prospecting achieved. Some of these were the Japanese Occupation of the country, the Emergency that followed and the difficult ground conditions. Also of importance was the division of authority between the Federal Government and the State Governments on mining matters under the Constitution. Being responsible for mineral development, the Federal Government had as a matter of policy continued to urge the expansion and diversification of the mining sector but this policy could only be translated into action by the State Governments since the issue of licences for prospecting as well as leases and certificates for mining were all under their control. However, public policy had accorded priority to mining in the event that land being considered for agriculture should possess mineral deposits.

The growing evidence of reserves run-down in the tin industry turned the Government's attention in 1958 to prospecting in the Malay Reservations. For this purpose, a mineral investigation drilling unit was set up and appropriate legislative amendments made. However, the area prospected was still small and in proven areas, the exploitation of the mineral potential was further limited by a number of factors associated with ownership and use of lands in Malay Reservations and, lack of capital and expertise among the Malays.

An important development was the introduction of legislations in the mid-1960's to encourage off-shore mining. Briefly, these spelled out clearly the rights and obligations of the parties concerned (the Federal Government, the State Governments and the mining enterprises) on the exploration and exploitation of off-shore mineral resources. An important outcome was the agreement reached with three American oil companies to prospect for oil off the East Coast. The first oil strike was reported in May 1973. On prospecting for off-shore tin, considerable time was lost in abortive negotiations with three companies. It was

only in early 1973 that the first prospecting agreement was successfully concluded.

The Government's concern with the need for wider participation of the Bumiputras in the mining industry was the other more obvious aspect of public policy in the mining sector. The prospecting and exploitation of Malay Reservations land had been mentioned. Secondly, State Governments as a matter of policy accorded preference to Bumiputras applying for mining licences. A third measure involved the establishment of a special fund to assist mining in Malay Reservations but this had been discontinued. Instead, the emphasis now was for the SEDCs to undertake the prospecting and mining operations on behalf of and in trust for the Bumiputras. This was a more realistic approach as besides finance, the lack of Malay entrepreneurship and experience in mining activities were equally formidable problems.

The provision of technical services and assistance to the mining industry was largely done through the two Government departments, the Mines Department and Geological Survey. They undertook prospecting work in the Malay Reservations. Besides, the Mines Department was responsible for ascertaining whether land for alienation possessed mineral deposits. One principal aspect of the work of Geological Survey was in building up a collection of data on the minerals and geology of the country. Among the important shortcomings in the efforts of these two departments were i) the absence of reliable estimates of mineral reserves in the country; ii) the large extent of prospecting that remained to be undertaken in the Malay Reservations by the two departments. In view of these and the need of the Goverment to develop the mining sector, the policy of the Government in maintaining the expenditures of these two departments at a low and steady level coupled with the small allocations made to them under the development plans was difficult to comprehend.

Finally, there was little use of fiscal inducements to encourage mining activities. Those that operated were concerned with capital expenditures and allowance for abortive mining expenditures. But they did not in principle accord a more favourable tax treatment on the mining sector. This policy appeared sound.

* * * *

A point that emerges very clearly from the whole study is that the task of economic diversification in West Malaysia was very complex. It involved many aspects of the economy. It had to be supported by a strong leadership role from the public sector. Generally, the public sector responded well to fulfil this role. Nevertheless, its performance in many areas left much to be desired. The overall impression gained was that these deficiencies had both stood in the way of an even faster pace of economic diversification and the achievement of a more meaningful kind of the process. For the future, much remains to be done. The task of diversification is still far from complete. Many of the shortcomings of past policies and measures can and should be corrected. But the whole experience gained should provide useful lessons for the endeavours that lie ahead.

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This book would be of value to specialists in the various areas of the Malaysian economy, Government officials, research workers, students and reference libraries on Malaysian economic affairs.

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