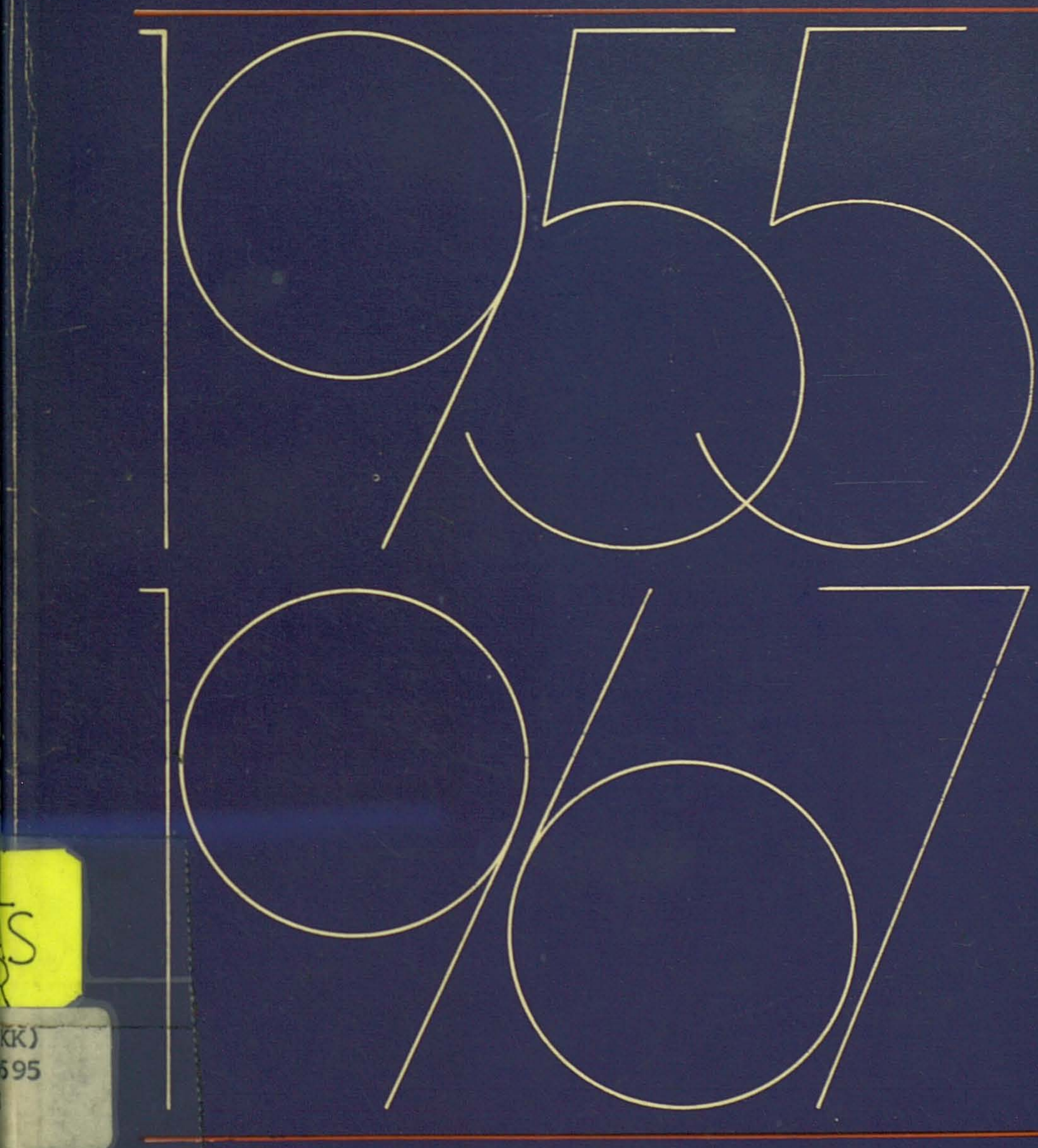
THE DEVELOPMENT PERFORMANCE OF WEST MALAYSIA



KK)
595

LO SUM YEE

THE DEVELOPMENT PERFORMANCE OF WEST MALAYSIA

OF WEST MALAYSIA
THE DEVELOPMENT PERFORMANCE

PTR/P

The Development Performance of West Malaysia 1955–1967

WITH SPECIAL REFERENCE TO THE INDUSTRIAL SECTOR

LO SUM YEE

Faculty of Economics, University of Malaya
Research Fellow
U.N. Asian Institute for Economic Development and Planning
Bangkok, Thailand 1969–1970

HEINEMANN EDUCATIONAL BOOKS
KUALA LUMPUR, SINGAPORE AND HONG KONG

Acess. No: 589 229/79
TAR(LLK)
Class. No: 330.9595
LOS

HEINEMANN EDUCATIONAL BOOKS (ASIA) LTD

112–114 Jalan Pudu, Kuala Lumpur
875 Bukit Timah Road, Singapore 10
86 Hung To Road, Kowloon, Hong Kong

LONDON EDINBURGH MELBOURNE TORONTO AUCKLAND
JOHANNESBURG IBADAN NAIROBI NEW DELHI

© Lo Sum Yee 1972

First published 1972

Filmset in Great Britain by
Keyspools Ltd, Golborne, Lancashire
Printed in the Republic of Singapore by
Toppan Printing Co. (Singapore) Pte. Ltd.

TO

Ungku Abdul Aziz

Preface

THIS STUDY was originated and completed at the U.N. Asian Institute for Economic Development and Planning where I spent a year of sabbatical leave (1969–70). I am most grateful to its former Director, Dr P. S. N. Prasad and present Acting Director, Dr P. B. Patnaik not only for the grant of the fellowship but also for their constant encouragement.

I am also grateful to Dr N. A. Khan, Acting Chief of the Research Division at the Institute and Mr V. N. Murti, both of whom were generous in providing research facilities.

Academically and professionally, my greatest debt and gratitude are to Dr D. V. Ramana, Development Economist at the Institute. His advice and help have been always available and often drawn on from the outset to the completion of work.

I would also like to extend my thanks to the Library staff and the secretariat of the Institute for the cooperation and assistance rendered me in one form or another, particularly Mrs Erlinda F. Sitdhipol, who cheerfully concluded the laborious task of typing the tables.

1972 L.S.Y.

Contents

PREFACE *Page* v

INTRODUCTION 1

CHAPTER 1: INCOME AND EXPENDITURE 3
Income and Exports
Expenditure and Imports

CHAPTER 2: SAVINGS AND INVESTMENT 11
Savings and Exports
Investment and the Resource Gap

CHAPTER 3: THE LABOUR STRUCTURE 20
Population and Labour Force
Sectoral Employment

CHAPTER 4: MONEY AND PRICES 26
The Money Supply
Stability of the Price Level

CHAPTER 5: PATTERN OF SECTORAL INCOME 29
Income by Sectoral Origin
Projection of Income by Sectoral Origin

CHAPTER 6: THE STRUCTURE OF SECTORAL PRODUCTION 34
Sectoral Input Structure
Sectoral Interdependence
Accumulated Factor Costs

CHAPTER 7: THE MANUFACTURING SECTOR 60
Growth of Manufactures
The Structure of Manufactures
Industrialization Programme and the Manufacturing Sector

CHAPTER 8: A SURVEY OF GOVERNMENTAL MEASURES TO PROMOTE INDUSTRIAL DEVELOPMENT IN MALAYSIA 74
Evolution of Industrial Policy
Measures for Industrial Development

CHAPTER 9: CONCLUSION 94

APPENDIX I: TABLES 99

APPENDIX II: NATIONAL ACCOUNTS MODEL OF WEST MALAYSIA 188

APPENDIX III: DEVELOPMENT AREAS AND PRIORITY PRODUCTS 191

INDEX 193

List of Tables in Text

		Page
1.	Gross Domestic Product and Exports	5
2.	Consumption and Capital Formation	7
3.	Imports	9
4.	Savings	12
5.	Gross Investment	15
6.	Pattern of Investment	16
7.	Ratio of Savings and Capital Formation to Gross National Product	18
8.	Age Distribution of Population	20
9.	Labour Force and Unemployment	21
10.	Sectoral Employment Targets	23
11.	Distribution of The Labour Force	24
12.	Distribution of The Labour Force and Gross Domestic Product	25
13.	Money, Price Level, and Interest Rates	26
14.	Growth Rates of Sectoral Income	30
15.	National Accounts Estimate of Income by Sectoral Origin	32
16.	Input–Output Estimates of Income by Sectoral Origin	33
17.	Ratio of Interindustry Purchases to Total Production, 1960	35
18.	Ratio of Interindustry Purchases to Total Production, 1965	36
19.	Ratio of Interindustry Sales to Total Demand, 1960	37
20.	Ratio of Interindustry Sales to Total Demand, 1965	38
21.	Ratio of Total Demand to Final Demand	42
22.	Direct and Indirect Demand for Sector Outputs, 1965	43
23.	Forward Linkage, 1960	46
24.	Backward Linkage, 1960	47
25.	Forward Linkage, 1965	48
26.	Backward Linkage, 1965	49
27.	Weighted Forward Linkage	50
28.	Weighted Backward Linkage, 1965	51
29.	Forward and Backward Linkages, 1960	52
30.	Forward and Backward Linkages, 1965	53
31.	Weighted Forward and Backward Linkages in Descending Order, 1965	54
32.	Cumulated Primary Factor Input Coefficients, 1960 and 1965	56

List of Tables in Appendix I

		Page
1.	Expenditure on Gross National Product, 1955–67	100
2.	Prices and Exports of Major Commodities, 1955–69	102
3.	A Comparison with UNCTAD Study	104
4.	West Malaysian Rubber Statistics, 1946–66	105
5.	Savings, Investment and Resource Gap, 1955–67	106
6.	Composition of Gross Capital Formation, 1955–67	108
7.	Population, 1955–67	111
8.	Unemployment and Labour Force, 1962 and 1967	112
9.	Age Distribution of Unemployed, 1962 and 1967	114
10.	Percent Distribution of Unemployed by Educational Attainment, 1962 and 1967	115
11.	Employment by Industry	116
12.	Size and Composition of GDP at Factor Cost	118
13.	The Observed and Estimated Values of Sectoral Income for West Malaysia from 1955 to 1967	121
14.	The Input Coefficient Matrix, 1960	124
15.	The Input Coefficient Matrix, 1965	127
16.	The Inverse Matrix, 1960	130
17.	The Inverse Matrix, 1965	133
18.	Value Added Elasticities, Growth Multipliers and Projected Value Added for 1975 by the Growth Multiplier Process	136
19.	Final Demand Elasticities, Growth Multipliers, Projected 1975 Final Demand Vector and Projected Value Added for 1975 by the Leontief Process	139
20.	Intermediate and Direct Primary Input Coefficients, 1960 and 1965	140
21.	The Structure of Output in the Manufacturing Sector, 1960–66	143
22.	Selected Indices of the Manufacturing Sector in 1965	144
23.	Exports and Imports of the Manufacturing Sector, 1960–66	146

24. Principal Statistics of Manufacturing Industries, 1963 148
25. Distribution of Manufacturing Establishments by Main Industrial Sector, 1963 156
26. Size of Manufacturing Establishments, 1963 157
27. Per cent Distribution of Employment by Main Industrial Sectors, 1963 158
28. Average Annual Earnings and Ratio of Factory to Non-Factory Workers by Industrial Sector, 1963 159
29. Distribution of Factory Employees by Average Annual Earnings, 1963 166
30. Distribution of Non-Factory Employees by Average Annual Earnings, 1963 167
31. Non-Wage Income, Factory and Non-Factory Wages as per cent of Value Added, 1963 168
32. Distribution of Workers by Value Added per Worker, 1963 175
33. Distribution of Establishments of Manufacturing Industries by Major Surveyed Industries, 1962–67 176
34. Distribution of Annual per cent Increase in Establishments of Manufacturing Industries by Major Surveyed Industries, 1962–67 177
35. Distribution of Number of Full Time Workers per Establishment by Major Surveyed Industries, 1962–67 178
36. Distribution of Full Time Paid Workers by Major Surveyed Industries, 1962–67 178
37. Average Annual Compound Growth Rate and Annual per cent Increase in Full Time Paid Workers by Major Surveyed Industries, 1962–67 179
38. Per cent Distribution of Number of Full Time Paid Workers by Major Surveyed Industries, 1962–67 179
39. Gross Output in $'000 by Major Surveyed Industries 1962–67 180
40. Value Added in $'000 by Major Surveyed Industries 1962–67 181
41. Per cent Distribution of Gross Sales by Major Surveyed Industries, 1962–67 182
42. Per cent Distribution of Value Added by Major Surveyed Industries, 1962–67 182
43. Ratio of Value Added to Output by Major Surveyed Industries, 1962–67 183
44. Total Wages and Salaries of Full Time Workers in $'000 by Major Surveyed Industries, 1962–67 184

45. Average Annual Wages and Salaries ($) per Full Time Worker by Major Surveyed Industries. 1962–67 185
46. Average Annual Value Added ($) per Full Time Worker by Major Surveyed Industries, 1962–67 186
47. Index of Average Annual Wage and Salary by Major Surveyed Industries, 1962–67 187
48. Index of Average Annual Value Added per Worker by Major Surveyed Industries. 1962–67 187

Introduction

IN ITS DEVELOPMENT EFFORT, West Malaysia seems to have difficult times ahead. In the past, years of investment in profitable primary products have made it one of the more prosperous countries in Asia. Its per capita income is about US $300, although unevenly distributed. However, over the last few years the export earnings, particularly from rubber and tin, have declined, mainly because of the continual fall in prices. At the same time, development efforts have been accelerated recently as a result of which a significant domestic resource gap has emerged. The prospect of a further worsening of export prices cannot be ruled out; it has implications for a further decline in savings.

Within limits, growth in the economy as a whole, and the industrial sector in particular, is encouraged by maintaining effective demand through government spending—consumption and investment. But, such growth through demand laid bare the constraints on development. The need to rely on external resources was first felt in 1962. Since then, considerable pressures developed inside the country, and the foreign assets accumulated in the past had to be used to fill the resource gap. Indeed, the economy seems to have arrived at a stage where sophisticated economic and financial management is required to enable it to mitigate the rigour of the constraints. The ingredient elements of this strategy may well be:

(i) a controlled release of the accumulated reserves to finance the industrial programme;
(ii) diversification of the industrial sector with a view to taking advantage of the resource endowments and the available supply of labour;
(iii) to regulate the cost of import substitution and safeguard the integrity of the foreign exchange rate of the Malaysian dollar; and
(iv) to give a fillip to private enterprise without letting it develop undue concentration of economic power.

This study attempts to discuss these elements of the strategy of industrial development while reviewing the development performance of the economy of West Malaysia[1] during 1955–67. The choice of the period is dictated by practical considerations. For instance, the First Malayan Plan, *A Plan of Development for Malaya* began in 1956; and official data on national income is available from 1955; and beyond 1967, it is hard to come by data on the major economic magnitudes such as saving and investment.

Chapter I of the study surveys the growth and pattern of income and

[1] For reasons of lack of data, and non-comparability of even the meagre data available for East Malaysia with that of West Malaysia, this study is confined only to West Malaysia.

expenditure during 1955–67, and Chapter II, the behaviour of savings and investment. Chapter III presents the labour structure of the economy while Chapter IV discusses the relationship of money and prices. The pattern of income by sectoral origin is described in Chapter V in which an attempt was also made to project the pattern of sectoral income for 1975. Chapter VI analyzes the structure of sectoral production as derived from the input–output tables, 1960 and 1965. Chapter VII deals with the growth and structure of manufactures. The impact of the industrialization programme on the manufacturing sector is also discussed here. Chapter VIII traces the evolution of industrial policy and describes the existing measures for promoting industrial development.[2] In conclusion, Chapter IX sets out the salient problems of development in West Malaysia; a few recommendations are made here for the future development of the industrial sector.

[2] As the data on policy measures is more readily available than on the structural magnitude of the economy, the description of policy measures goes beyond 1967 and covers the whole of Malaysia.

CHAPTER ONE

Income and Expenditure

Income and Exports

In 1955–67, the West Malaysian economy achieved an annual average compound rate of growth of 4.9 per cent measured in terms of GNP at 1960 prices.[1] This rate of growth, taken by itself, is undoubtedly respectable, if not particularly impressive. However, this performance has to be viewed against the fact that, during the review period, the prices of rubber which happens to be the most important export commodity of West Malaysia had been declining secularly, and by 1967 they had declined by about 52.6 per cent from their 1955 level.[2] Considering the decelerating effect that the sharply adverse movement in the terms of trade of this commodity must have had on the economy, this rate of growth is rather commendable.

A large part of the progress of West Malaysia was achieved in the 1960's, reflecting the 'big push' of the government towards accelerated development during the Second Five Year Plan, 1961–65. The period prior to 1960, corresponding roughly to the First Malayan Plan (*A Plan of Development for Malaya*) was largely characterized by stagnation, if not actual retrogression. Gross national product at 1960 prices expanded no more than 2 per cent per annum on the average between 1955 and 1959, while population in the same period grew at an annual average rate of 2.6 per cent.

The relatively more modest performance of the economy in the late fifties was due to a number of factors. For one thing, this was the period of Communist guerilla insurrection as a result of which a 'State of Emergency' was declared. This 'State of Emergency' which ended officially in 1960, had adversely affected the performance of the economy during 1955–60. Added to the impact of the 'State of Emergency', there was in 1957–58, a world-wide recession which caused important changes in the price relationships in international trade. Prices of rubber and tin, the two commodities which then accounted for more than 60 per cent of the country's exports declined significantly.[3] In particular, the reaction of the tin industry to the recession

---

[1] See Appendix I, Table 1. Officially, GNP data at constant prices are not available. There are however, constant-price GDP data which are used to derive an implicit gross domestic product deflator. This deflator is applied to the GNP at current market prices to obtain GNP data at 1960 prices, on the basis of which the annual average compound rates of GNP growth are calculated.

[2] See Appendix I, Table 2.

[3] See Appendix I, Table 2. The price of rubber declined much more sharply than the price of tin.

was to cut production drastically under the terms of the International Tin Agreement. The result was that in 1958 total exports declined by 3.8 per cent. The downturn in 1958 was further aggravated by deliberate government policy of cutting down public investment.[4]

Among others, the periodical recessions continued through the Second Five Year Plan (1961–65) and later. For instance, the country experienced another setback in its exports similar to, though somewhat less severe, than the shortfalls that occurred in 1958 and 1961. In 1967, palm oil price declined by 6 per cent, the price of tin by 7 per cent, and the price of rubber by 17.3 per cent from the previous year's levels. The impact of the export reversal in 1967 on the economy was offset to a certain extent by a relatively modest expansion of public investment, from M$489 m. in 1966 to M$564 m. in 1967. The net result was that in 1967, there was a 2.4 per cent growth in GNP at current prices as compared with a 0.4 per cent growth in 1961, and a decline of 3.8 per cent in 1958. Thus, it can be seen that, among other things, the overall growth performance of the economy was, to a large extent, affected by the performance of the export sector. The dominant position of the export sector in the country's economy is shown in Table 1.

The share of exports in the GNP fell from a peak of about 53 per cent in 1960 to about 37 per cent in 1967. The overall annual growth rate of exports at current prices was 1.6 per cent between 1955 and 1967; at 1960 prices, however, it is somewhat higher averaging 2.2 per cent.[5] Taking the 1960–67 period alone, there was in fact an annual average export decline of 0.1 per cent, although at 1960 prices there was a small annual growth of 0.8 per cent.[6]

In contrast, domestic expenditures at current prices had been expanding at

---

[4] 'At the time of the recession, it appeared that for financial reasons the development programme would have to be stretched out over six years instead of five. The start of new projects was delayed, others in progress were temporarily halted or slowed down and some of the "development" momentum built up in the first two years of the Plan was lost,' Federation of Malaya, *Second Five Year Plan*, 1961–65, p. 1. The result was that during 1956–60, there was a shortfall in the public investment target by about 15 per cent even though the tempo of development was accelerated in the last two years of the Plan.

[5] Current values of exports are deflated to 1960 prices by the implicit price deflator. It may be of interest to point out that, using the data from 1956 to 1963 at 1960 prices, the UNCTAD had arrived at an annual average compound rate of export growth of 2.6 per cent. For the same period, our calculation gives an export growth rate of 3.0 per cent. For details of the comparison between our findings and those of the UNCTAD for the period 1956–63, see Appendix I, Table 3. Though, professedly, UNCTAD's study is for the whole of Malaysia, the data on which they had based their study covers the years 1956 through 1963. Malaysia was created in September, 1963 and most of the relevant data for East Malaysia is inadequate or unavailable even today. It appears, therefore, that the data used by them is for West Malaysia only and not for the whole of Malaysia.

[6] Behind these aggregate export trends, there lies the phenomenon of a steady increase in the production of rubber and tin. These two commodities continued to dominate the export sector accounting for 38 per cent and 24 per cent respectively of

Table 1

GROSS DOMESTIC PRODUCT AND EXPORTS

M$ million, current prices

	Year													*Annual Average Compound Growth Rates* 1955–56 *(per cent)*
	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	
Gross domestic product at market prices	4 992	5 060	5 126	4 896	5 527	6 134	6 076	6 336	6 742	7 176	7 881	8 300	8 436	4.1
Production for Domestic Use	2 504	2 638	2 775	2 856	2 889	3 040	3 282	3 546	3 862	4 190	4 553	4 969	5 362	6.0
Exports of Goods and Non Factor Services	2 488	2 422	2 351	2 040	2 638	3 094	2 794	2 790	2 880	2 986	3 328	3 331	3 074	1.6
of which:														
Rubber (net)	1 525	1 309	1 247	1 124	1 625	1 691	1 347	1 273	1 300	1 250	1 307	1 339	1 168	−2.0
Tin	231	341	319	236	295	506	550	616	638	723	865	779	743	9.4
Others	732	772	785	680	718	897	897	901	942	1 013	1 156	1 213	1 163	3.6
Exports as per cent of GNP	52.3	50.0	47.5	42.9	49.6	52.8	47.4	45.0	43.8	42.9	43.7	41.5	37.4	—

7.4 per cent a year since 1960; and for the period 1955–67, the rate of expansion averaged 6.0 per cent per annum. The implication seems to be that expansion of domestic expenditure has taken the place of exports as an engine of growth. Such a shift is partly due to the adverse price trends of exports since 1955, and partly due to deliberate government policy of reducing the country's dependence on exports.[7]

Expenditure and Imports

A broad summary of growth of consumption and capital formation during 1955–67 is given in Table 2.

The most significant event during this period has been the increase in the gross capital formation from an average of 11.6 per cent of GNP in 1955–59 to about 17.7 per cent in 1960–67 with a peak of 19.4 per cent in 1962; thereafter, investment as a percentage of GNP levelled off. Investment growth rate averaged 9.1 per cent a year for the thirteen years, 1955–67.

The spurt of investment between 1960 and 1967 took place in both the public and private sectors, with public investment increasing at an average annual rate of 16.2 per cent since 1960. The rise in public investment during this period is a reflection of the massive development effort made by the government under the Second Five Year Plan, 1961–65. Private investment, on the other hand, increased at a modest rate of 3.4 per cent per annum during the same period. It had fallen off both in 1961 and 1967 in response to the export slump. However, an increase in public investment in these two years as part of the anti-cyclical policy of the government had prevented overall investment from falling and slowed the downturn in exports. The share of public investment in the total rose from 19.7 per cent in 1960 to 38.3 per cent in 1967. However, the public sector cannot be expected to sustain such a large share in total investment unless it can continuously

---

the export earnings in 1967. In 1967, in spite of a 3.4 per cent increase in the volume of rubber exported over 1966, there was a drop of 12.8 per cent in export earnings, because of the decline in the f.o.b. unit value of rubber to 54¢ per lb. from 65¢ in 1966. Since 1955, rubber prices had been on a secular decline. The situation was aggravated in recent years by the stockpile-release in the United States. The result was that, by 1967, the price of rubber at 54¢ per lb. reached its lowest level in thirteen years. Similarly, the volume of tin exports in 1967 had gone up by 2.9 per cent from the previous year but the earnings declined by 4.6 per cent due to a fall in tin prices by 7 per cent from their 1966 levels. At the same time, quotas under the International Tin Agreement came into operation. See Appendix I, Table 4.

[7] 'Sluggish export growth is not new to the Malaysian economy. Over the last five years . . . exports also rose slowly. The overall economy, however, grew satisfactorily as production for domestic use increased at a rapid pace. Under the First Malaysia Plan, emphasis will again be placed on expanding production for the domestic market. Opportunities for such expansion are extremely favourable. The nation produces only a part of the food it consumes, leaving a wide range of possibilities for import substitution. For manufactured products, reliance on foreign sources of supply is even heavier. Despite its small population, Malaysia's relatively high income level gives it an attractive market for a wide range of manufactured goods.' Malaysia, *First Malaysia Plan*, 1966–70, p. 8.

Table 2

CONSUMPTION AND CAPITAL FORMATION

M$ million, current prices

	Year													*Annual Average Compound Growth Rates* 1955–67 *(per cent)*
	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	
Private Consumption	2 964	3 156	3 251	3 178	3 385	3 639	3 834	4 023	4 261	4 476	4 715	4 956	5 151	4.3
Per cent of GNP	62.3	65.2	65.7	66.8	63.7	62.1	65.1	64.9	64.7	64.3	61.9	61.7	62.7	—
Public Consumption	647	705	738	768	774	797	871	927	1 063	1 223	1 357	1 538	1 600	7.2
Per cent of GNP	13.6	14.6	14.9	16.1	14.6	13.6	14.8	15.0	16.2	17.6	17.8	19.2	19.5	—
Total Consumption	3 611	3 861	3 989	3 946	4 159	4 436	4 705	4 950	5 324	5 699	6 072	6 494	6 751	4.9
Per cent of GNP	75.9	79.8	80.6	82.9	78.3	75.7	79.9	79.9	80.9	81.9	79.7	80.9	82.2	—
Private Gross Capital Formation						695	631	718	754	796	848	934	909	3.4*
Public Gross Capital Formation						170	337	483	492	486	522	489	564	16.2*
Total Gross Capital Formation	473	578	656	614	520	865	968	1 201	1 246	1 282	1 370	1 423	1 473	9.1
Per cent of GNP	10.0	11.9	13.3	12.9	9.8	14.8	16.4	19.4	18.9	18.4	18.0	17.7	17.9	—
Gross National Product	4 756	4 842	4 948	4 758	5 316	5 863	5 889	6 196	6 583	6 962	7 617	8 028	8 218	4.3

* For the period from 1960 to 1967 only. Prior to 1960 no breakdown is available.

mobilize adequate additional resources, internal and external. Moreover, the rise in public investment was accompanied by a rise in public consumption also. Since 1955, public consumption went up by 7.2 per cent a year while private consumption rose relatively slowly at 4.3 per cent a year. From 1965 onwards, for the first time, the increase of public consumption outstripped that of overall investment and appears to be not yet fully under control. As per cent of GNP, there has been a tendency for private consumption to decline from 1961 onwards though the trend is not particularly pronounced. This is in contrast to the clearer upward trend of public consumption. In view of the sluggish performance of the export sector in the past and its dim prospects in the future, the control of consumption spending is likely to become crucial and more difficult. None the less, the problem should be tackled stout-heartedly, because of the continuous tendency of imports to expand. During the period under review, 1955–67, imports increased at an average rate of 4.7 per cent a year as compared with the growth rates of exports and GNP at 1.6 per cent and 4.3 per cent respectively.

At 1960 prices, imports grew at an average rate of 5.2 per cent while exports increased by only 2.2 per cent a year.[8] However, as mentioned earlier, the performance of the export sector had deteriorated since the later fifties and its growth rate from 1960 to 1967 was only 0.8 per cent a year. For the same period, imports expanded at the rate of 3.7 per cent a year, about four and a half times that of exports. The prognosis for the future is not very encouraging either. The export sector is unlikely to improve much because of the secular adverse price movements;[9] but on the other hand, imports are likely to increase, the marginal propensity to import being 0.44, and higher than the average propensity at 0.42. The income elasticity of demand for imports is 1.12.[10] What is more, the movements in exports generally have the effect of inducing imports to move in the same direction through the income mechanism. This is made particularly evident in the 1960 boom and the 1967 decline. The trend of imports is also influenced by the public sector expenditure level which, for example, in the 1960–63 period caused imports to increase at such a rapid rate that the trade surplus was reduced from $810 million in 1960 to $172 million in 1963.

Finally, the country's industrialization programme and the long-term process of import substitution determine to a significant extent the future trend of imports. The growth of manufacturing industries has so far been

---

[8] Current values of imports have been reduced to 1960 prices by the implicit price deflator.

[9] It may be noted that exports targets for the Second Five Year Plan, 1961–65 actually implied a decline in export earnings.

[10] These ratios are based on data from 1955 to 1967. The gross domestic product at 1960 prices is used to derive the import elasticity. During 1956–63, the ratios were even higher. The marginal propensity to import and income elasticity of demand were 0.65 and 1.50 respectively. The corresponding ratios calculated by UNCTAD were 0.43 and 1.26 for the same period. The annual average rate of growth for imports estimated by UNCTAD is 6.3 per cent at 1960 prices. For the same period we have estimated it to be 6.1 per cent.

Table 3

IMPORTS

M$ million, current prices

	Year													*Annual Average Compound Growth Rate* 1955–67 *(per cent)*
	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	
Total Import	1 580	1 801	1 870	1 704	1 790	2 284	2 391	2 605	2 708	2 791	2 889	2 948	2 862	4.7
Per cent of GNP	33.2	37.2	37.8	35.8	33.7	39.0	40.6	42.0	41.1	40.1	37.9	36.7	34.8	—
Imports of Machinery and Transport Equipment	174	232	245	223	243	330	392	482	500	516	580	644	575	9.6
Per cent of Total Imports	11.0	12.9	13.1	13.1	13.6	14.5	16.4	18.5	18.5	18.5	20.1	21.9	20.1	—
Per cent of GNP	3.7	4.8	5.0	4.7	4.6	5.6	6.7	7.8	7.6	7.4	7.6	8.0	7.0	—

oriented towards the domestic market; import substitution has taken place in some fields like beverages, cigarettes, food products, cement and a number of rubber based goods. As this process of import substitution gathers momentum, import demand for capital goods is likely to replace the imports of foreign consumer goods, but, the overall import demand is unlikely to decline very much because Malaysia does not, as yet have any capacity to produce machinery, equipment, and other capital goods.

In fact, the upward trend of imports of capital goods is already discernible even at this early stage of industrialization. Although no official data on imports by end-use are published, a study of the import composition by commodity groups reveals that the share of the SITC Section 7, viz., machinery and transport equipment, in the total imports has increased from 11 per cent in 1955 to 20 per cent in 1967. As per cent of GNP, it has grown from 3.7 to 7 over the same period. Its annual average rate of growth is 9.6 per cent which is slightly more than twice the growth rate of total imports.

CHAPTER TWO

Savings and Investment

Savings and Exports

THE GROWTH RATE OF WEST MALAYSIA, and the fluctuations thereof, which were described in Chapter I, can be brought into clearer relief by taking into account the domestic mobilization of savings as an indicator of the development effort. As a proportion of GNP, gross domestic savings averaged about 17 per cent a year over 1955–67. However, considerable time variations are concealed in this time series average. The proportion of savings fluctuated from a low of 12.9 per cent of GNP in 1958 to a peak of 20.7 per cent in 1960. These trends[1] are given in Table 4.

The annual fluctuations in savings were mainly influenced by the changes in terms of trade. For example, as a result of the fall in export prices, the savings ratio declined from its peak of 20.7 in 1960 to 14.3 in 1967. In 1965, and to a lesser extent in 1966, the ephemeral boom in the export sector interrupted the generally downward trend of savings.

The reason for the apparent linkage between the export sector and the level of domestic savings seems to be that trade taxes, largely in the form of import and export duties, have always been the principal source of government finance. The export duties, for instance, constituted more than a third of the total trade tax revenue in 1958–62. As the government policy is to insulate current government expenditure from year to year variations of current revenue, it is only the government savings which would be closely correlated to the level of export earnings.

Moreover, export earnings have been, and still are, an important source of income for the private sector, and hence of private savings through the income distribution effect. A rise in export earnings may result in a shift of income distribution in favour of the exporting companies, which on the whole have a greater propensity to save. And, if private consumption is to be explained mainly by the permanent income hypothesis, then annual changes in income which have a tendency to fluctuate with changes in exports, would be greater than changes in consumption. As a result, the level of savings would tend to vary more in line with the depression or prosperity in the export sector.

Whatever the reasons are for the linkage between export earnings and domestic savings, its existence provides a better insight to the behaviour and growth of gross domestic savings in the past. Between 1955 and 1967, the growth rate of total gross savings was about 1.6 per cent at current prices. At 1960 prices, however, it was 2.2 per cent. It is more than sheer coincidence,

[1] See also Appendix I, Table 5.

Table 4

SAVINGS

M$ million, current prices

	Year													Annual Average Compound Growth Rates 1955–67
	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	*(per cent)*
Private Savings (Gross)						629	451	519	576	691	949	964		6.3*
Per cent of GNP						10.7	7.7	8.4	8.8	9.9	12.4	12.0		—
Public Savings (Gross)						585	532	516	483	463	453	426		−4.4*
Per cent of GNP						10.0	9.0	8.3	7.3	6.7	6.0	5.3		—
Total Savings (Gross)	950	777	759	612	951	1 214	983	1 035	1 059	1 154	1 402	1 390	1 173	1.6
Per cent of GNP	20.0	16.1	15.3	12.9	17.9	20.7	16.7	16.7	16.1	16.6	18.4	17.3	14.3	—

* From 1960 to 1966 only.

and therefore of importance to note, that the growth rates of gross domestic savings are identical to those of exports during the same period.

The average propensity to save during 1955–67 was about 18.8 per cent while the marginal rate was 17.6 per cent.[2] The tendency is for the overall rate of savings[3] to decline which does not augur well for the country's future economic growth.

The falling tendency of gross domestic savings is reinforced by the gloomy prospects of the traditional exports, especially rubber and tin, which are expected to grow less rapidly than in the past. Understandably, much of the development effort in the past had been aimed at severing this historical tie between exports and domestic savings. Also, the pattern of future development as envisaged in the First Malaysia Plan, 1966–70 as well as in the Perspective Plan[4] is geared towards this particular end. The emphasis on export diversification and the drive for industrial development may be interpreted as efforts at making domestic saving less dependent on export earnings than it had been in the past.

Taken by itself, the tie-up between exports and savings is not a matter for major concern because, apart from whatever policy measures that may be taken in this direction in the near future, the tie between savings and exports would gradually, but inevitably, be weakened in the course of time, as the relative importance of exports as the major source of the country's income declines. However, the matter for concern is that, over 1960–66, public savings have been declining at an average rate of 4.4 per cent a year without any sign of recovery.[5] In terms of GNP, public savings fell continously from 10 per cent in 1960 to 5 per cent in 1966. Also, in 1960–61, public savings accounted for slightly more than 50 per cent of the total gross domestic savings while in 1965–66 the public sector contributed only about 32 per cent of the total.

On the other hand, private savings had been rising at the rate of 6.3 per cent a year after the 1961 depression, reaching a level of about 12 per cent of GNP in 1965–66. In fact, the buoyancy in the export sector in 1965 had enabled private savings to rise to an extent not only significant enough to offset the deterioration of public savings but also to raise the total savings as a proportion of GNP to 18.4 per cent.

Investment and the Resource Gap

The erosion of public savings during 1960–66 must be seen against the fact that public consumption had been increasing during the same period at an

---

[2] These ratios are computed on the basis of GDP data.

[3] We may note in passing that the UNCTAD had estimated that average and marginal savings ratios were identical at 21 per cent for the period 1956 to 1963. In fact savings did rise in 1964–66 albeit mainly due to the buoyancy of the export sector. For the same period, our calculation shows that the marginal rate is 23 per cent and the average is only 19 per cent.

[4] The Perspective Plan is found in pp. 60–64 of the First Malaysia Plan.

[5] The breakdown between public and private saving is available only from 1960 onwards. Data for 1967 are not available yet.

annual average of 7.2 per cent, which was more than one and a half times that of GNP and public investment at a rate of 14.3 per cent a year which was three times the growth rate of GNP. Thus a stage appeared inevitably set for a gap between over-all investment and savings, which actually emerged in 1962. As a matter of fact, public investment rose by M$277 million in 1960–62. This expenditure was incurred mainly for infrastructure facilities such as transport, power and communications.

The growth of investment had visibly slackened since 1962 largely due to the paucity of public savings, and probably also due to the failure of external finance to materialize as hoped.[6] As a result, the average percentage increase in public investment between 1963 and 1966 amounted per annum to less than 2 per cent.

The economy was able to offset the slow down in the investment activity of the Government largely because of the buoyancy in the private sector. Private investment had been increasing at an annual average rate of 4.1 per cent since 1960. The rise of private investment after the 1961 slump, and till 1966, was caused by the rubber replanting programmes which started in the late fifties, investment in palm-oil development and the impact of the expected 'Common Market' through the creation of Malaysia in 1963. Nevertheless, for the first time in 1965 and 1966, private investment—GNP ratio was lower than that of private savings indicating the inability of private investment to expand at the same rate as private savings. The slackening pace of private investment which reached a decline of 2.7 per cent in 1967 was due to a number of factors, the most important of which were the separation of Singapore in August 1965, the near completion of the rubber estates' replanting programmes, the unfavourable business climate generated by the gloomy prospect of rubber and the loss of export earnings in 1967.[7] Nevertheless, the overall investment performance of West Malaysia was very much better in the 1960's than in 1955–59. Compared to the fifties, there was an increase in the investment ratio since 1960; and the difference in the ratio of investment to GNP in the two periods, reflects an increased development effort in recent years. Moreover, the pattern of fixed capital formation had changed as indicated in Table 6.

The shares of dwellings, commercial buildings and investment in perennial crops in the total declined in 1966 from its position in 1955, while the shares of construction, machinery and transport rose significantly. The shift in the relative importance of construction and machinery in the country's fixed capital formation reflected in part the pursuance of a policy of stepped up industrialization since 1957 with a view to reducing the dependence of the economy on the export sector, and the priority given to infrastructure development in the Second Five-Year Plan. Similarly, the rise in the relative importance of investment in perennial crops between 1955 and 1959 was accounted for by the rubber replanting programme which started in 1955

---

[6] First Malaysia Plan, p. 33.

[7] The international tension created by the Indonesian Confrontation which lasted till 1966 did not assist the growth of private investment.

Table 5

GROSS INVESTMENT

M$ million, current prices

	Year												
	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Private Gross Investment*						659	631	718	754	796	848	934	909
Per cent of GNP						11.2	10.7	11.6	11.5	11.4	11.1	11.6	11.0
Public Gross Investment*						206	337	483	492	486	522	489	564
Per cent of GNP						3.6	5.7	7.8	7.4	7.0	6.9	6.1	6.9
Total Gross Investment	473	578	656	614	520	865	968	1 201	1 246	1 282	1 370	1 423	1 473
Per cent of GNP	10.0	11.9	13.3	12.9	9.8	14.8	16.4	19.4	18.9	18.4	18.0	17.7	17.9
Annual Percentage Increase													
Private Gross Investment							−9.2	13.8	5.0	5.6	6.5	10.1	−2.7
Public Gross Investment							93.6	43.3	1.9	−1.2	7.4	−6.3	15.3
Total Gross Investment		22.2	13.2	−6.4	−15.3	−66.4	11.9	24.1	3.8	2.9	6.9	3.9	3.5

* The breakdown between private and public investment is only available from 1960 onwards.

Table 6

PATTERN OF INVESTMENT[8]

Per cent Distribution of Fixed Capital Formation

Item	*Year*												*Annual Average Compound Growth Rates* 1955–66
	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	
Land	0.4	0.4	0.3	0.3	0.5	0.4	0.3	0.3	0.3	0.3	0.3	0.4	9.6
Dwellings	19.4	18.0	17.6	16.4	13.8	14.8	11.9	10.1	10.9	11.1	10.1	10.7	4.2
Non-Residential Buildings	19.4	17.7	18.9	15.5	16.6	15.2	15.6	14.4	16.9	17.6	21.4	18.5	9.0
Other Construction and Works	14.7	14.9	13.8	14.8	14.3	13.4	16.5	22.2	22.6	21.7	19.8	20.5	12.5
Machinery, transport equipment, etc.	27.0	28.9	29.4	29.8	28.6	33.8	34.1	33.6	30.2	31.7	32.7	35.4	11.9
Planting of Perennial Crops	19.1	20.1	20.0	23.2	26.2	22.4	21.6	19.4	19.1	17.6	15.7	14.5	6.9

while the subsequent relative decline after 1960 was a reflection of the conclusion of the programme.

The growth of the relative importance of residential and commercial construction and infrastructure in the pattern of capital formation carried with it two implications. One is that private capital formation of this type becomes highly sensitive to general business fluctuations because of its postponable nature. The other is that the marginal capital output ratio would tend to grow mainly because the effects of investment in infrastructure on output usually require a long gestation lag to be fully realized. This is also true of private investment in dwelling and construction which in the short run may not exert its full impact on the growth rate of the economy. In essence, however, this point is recognized by the planners, as indicated by the comparatively high marginal capital output ratio of about 4 which was used in the Second Five-Year Plan period.[9] For the current First Malaysia Plan and the period 1970–75, the marginal capital output ratio has been assumed to be 3.9 and 3.5 respectively.[10]

Taking the 1955–67 period as a whole, the estimated marginal capital output ratio is 3.68[11], and for 1970–75, the ratio estimated on the basis of a national accounts model is 3.57 which appears to tally with the ratio assumed in the First Malaysia Plan.[12]

The relatively high investment rate in the 1960's was achieved with strenuous effort. Maintaining the same rate might prove to be even more strenuous in the future in view of the existence of a resource gap ever since 1962. The size of the gap between investment and savings in terms of their ratios to GNP is shown in Table 7.

Since 1962 West Malaysia has moved from the position of a net exporter of capital to one of a net importer. With the exception of 1958, gross domestic savings exceeded gross capital formation every year from 1955 to 1961, and the surplus was being invested abroad. The magnitude of the surplus varied from 0.3 per cent of GNP in 1961 in which there was an export slump, to a height of 10 per cent in 1955, averaging 5 per cent of GNP annually during this period. From 1962 onwards the position was reversed; investment exceeded savings every year and the gap was covered by an inflow of capital from abroad. The only exception was 1965 where an export boom offset the emergence of a gap between investment and savings.

For the entire period, the savings generated within the economy were adequate to finance investment; savings were about 16.8 per cent of GNP and investment was only 15.3 per cent on the average.[13] During the period of the

---

[8] See Appendix I, Table 6.

[9] Federation of Malaya, *Second Five Year Plan*, 1961–65, p. 24.

[10] Malaysia, *First Malaysia Plan*, 1966–70, p. 61.

[11] UNCTAD had estimated the marginal capital output ratio to be 3.10 for the period 1956 to 1963. Our calculation for the same period shows that it is 3.66.

[12] See Appendix II for a description of the National Accounts Model of West Malaysia.

[13] This calculation does not take into consideration the sizable outflows in the form of investment income and private remittances abroad.

Table 7

RATIO OF SAVINGS AND CAPITAL FORMATION TO GROSS NATIONAL PRODUCT

	Year												
	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Gross Domestic Savings	20.0	16.1	15.3	12.9	17.9	20.7	16.7	16.7	16.1	16.6	18.4	17.3	14.3
Private						10.7	7.7	8.4	8.8	9.9	12.4	12.0	
Public						10.0	9.0	8.3	7.3	6.7	6.0	5.3	
Gross Capital Formation	10.0	11.9	13.3	12.9	9.8	14.8	16.4	19.4	18.9	18.4	18.0	17.7	17.9
Private						11.2	10.7	11.6	11.5	11.4	11.1	11.6	11.0
Public						3.6	5.7	7.8	7.4	7.0	6.9	6.1	6.9
Resource Balance	10.0	4.2	2.0	—	8.1	5.9	0.3	−2.7	−2.8	−1.8	0.4	−0.4	−3.6
Private						−0.5	−3.0	−3.2	−2.7	−1.5	1.3	0.4	
Public						6.4	3.3	0.5	−0.1	−0.3	−0.9	−0.8	
Net Factor Income and Net Transfer Abroad	9.1	8.7	7.6	7.1	7.8	7.9	6.6	5.7	5.5	4.6	5.3	5.2	6.2

Second Five Year Plan, 1961–65, however, investment in terms of GNP had gone up to about 18.2 per cent on the average, while savings averaged only 16.9 per cent. It appears therefore that the inflow of foreign resources in the latter period was the result of the increase in investment and not a decrease of savings. The maintenance of the existing volume of investment at about 18 per cent of GNP, required continual recourse to reserves accumulated since 1962. Should the savings rate deteriorate in future, and probably it would in view of the prospect of a further adverse movement in export prices, the maintenance of a satisfactory rate of investment to achieve the development objectives, would require a supplement to savings in the form of additional foreign resources. If external finance is not forthcoming on a reasonable scale, the country will have to cut back the public investment programme or face a balance of payments crisis. Stringent measures should also be taken to control public as well as private consumption in order to release resources for investment.

The search for more investible funds should include some measures to control the current transfer payments abroad which had been draining out of the country at an annual compound growth rate of 3.2 per cent during 1955–67 with an initial volume of M$195 million.[14] Taken by themselves, the volume and the rate of drainage do not appear exorbitant. But, viewed against the rate of domestic savings however, it is relatively high since the domestic savings rate was increasing at only 1.6 per cent a year. In fact the magnitude of the outflow in the nature of current transfers abroad constituted about 20 per cent of the total investment expenditure incurred during the period 1955–67. In terms of GNP, the current transfers amounted to an average of 3.2 per cent over the same period. These current transfers are mainly personal savings remitted to countries like India, Pakistan, Britain and China (Taiwan). It may be argued that it is not practical nor politically desirable to halt such flows in view of the pluralistic society of West Malaysia. Nevertheless, it should be possible to regulate the outflow and keep it at a level which is compatible both with the political stability of the country and its traditional private enterprise economy. Alternatively, fiscal and monetary measures may be employed to induce these out-going funds to be reinvested at home. Apparently, no positive steps were taken so far in this direction, and no special incentives for reinvested earnings were provided in the 1968 Investment Incentives Act. Furthermore, there is still room for using fiscal and monetary policy to mobilize private savings for public investment. The measure of this possibility is given by the excess of private savings over private investment in 1965 and 1966.

[14] See Appendix I, Table 5.

CHAPTER THREE

The Labour Structure

Population and Labour Force

THE TOTAL POPULATION OF West Malaysia at the end of 1967 was 8.655 million.[1] It has been growing at the rate of about 2.9 per cent per annum since 1955. Ethnically, it comprises 50.2 per cent Malays, 36.5 per cent Chinese, 11.1 per cent Indians and Pakistanis and 2.2 per cent of others. The Chinese are concentrated in the West Coast States and mainly in the towns and industrial areas. There are also some Chinese paddy and vegetable farmers scattered all over the country. The Malays are most predominant in the East Coast States and in the rural and agricultural areas. The Indians and the Pakistanis are either town dwellers or workers on rubber estates. Essentially the Chinese are a business community while the Malays are largely landlords, peasant farmers and fishermen.

West Malaysia has more than 40 per cent of its population below the age of 15. As can be seen from Table 8 below, the proportion of population under the age of 15 was about 43.8 per cent in 1957, the census year. In 1967, it was estimated to be of roughly the same percentage with a slight tendency to increase.[2] The tendency for the size of this particular age group to increase is

Table 8

AGE DISTRIBUTION OF POPULATION

Age Group	*Per cent of Population*	
	1957	1967
0–14	43.84	44.2
15–19	9.75	10.5
20–24	8.30	7.6
25–39	18.31	17.4
40–64	17.02	16.6
65 and over	2.76	3.7
Unknown	.02	—
TOTAL	100.00	100.0

[1] See Department of Statistics, Monthly Statistical Bulletin of West Malaysia, April 1969.

[2] The 1967 estimates of population by age were made by Dr. Lee-Jay Cho in a research paper entitled 'Estimates of Population for West Malaysia 1967', published by the Department of Statistics, March 1969.

in the main due to a sharp drop of both infant and toddler mortality rates in recent years. Infant mortality rate per 1 000 live births dropped from 81 in 1955 to 45 in 1967, while crude toddler mortality rate (from 1 to 4 years old) dropped from about 12 in 1955 to about 5 in 1967.[3]

Although there was no marked change in the age structure between 1957 and 1967, it might be worthwhile to note that the size of the age group between 20 and 64 had gone down while that of 65 and over had increased, implying that the dependency rate had on the whole increased slightly.

The relatively large size of the younger age groups in the population structure has two important implications. One is that the burden of providing education and other social services would tend to grow. The other is that the potential additions to the labour force in the years ahead would be substantial, and unless enough job opportunities are created through sustained development efforts the unemployment rate is likely to increase.

Relevant data pertaining to labour force, employment and unemployment are scanty. The main sources are the Census of 1957 and the employment and unemployment surveys conducted in 1962 and 1967.[4] The data from these various sources are put together and presented below but they are strictly not comparable because of differences in concepts and definitions.[5]

Table 9

LABOUR FORCE AND UNEMPLOYMENT

	1957	1962	1967
Total Population (in '000)	6 279	7 494	8 655
Total Labour Force (in '000)	2 165	2 453	2 676
Total Employment (in '000)	2 126	2 305	2 440
Unemployment (in '000)	39	148	236 (181)
Unemployment Rate (per cent)	1.8	6.0	8.8 (6.8)
Labour Force as per cent of Total Population	34.5	32.7	30.9

In particular, the figure for unemployment in the 1957 Census appears to be underestimated to a considerable extent. Some of the unemployed may have been included in the category of economically inactive which constituted about 48.5 per cent of the total population. The population distribution by economic activity status also includes persons of age 10 and above.[6]

[3] Department of Statistics, Monthly Statistical Bulletin of West Malaysia, January 1964 and March 1970.

[4] In addition there is a Report on Employment and Unemployment in Metropolitan Towns published in 1965. Its coverage is, however, limited to five large towns.

[5] Most of them are still provisional in nature.

[6] See Ronald Ma and You Poh Seng, 'The Economic Characteristics of the Population of the Federation of Malaya 1957', Malayan Economic Review, Vol. V, No. 21, October 1960.

The concept of unemployment in the 1967 Survey is somewhat broader than the one used for the 1962 Survey. It includes those not actively looking for a job but willing to accept a job if offered. In addition, the total population of working age in the 1962 Survey refers to persons of age groups from 15 to 70 whereas that of the 1967 Survey refers to the age group from 15 to 65 only.[7] The level and rate of unemployment given in parentheses in Table 9 are for the narrow definition of unemployment used in the 1962 Survey.

The rate of unemployment as a percentage of labour force seems to have increased from 1.8 in 1957 to 6.8 in 1967. Though the overall rate might appear to be only moderately high for a developing country, the level of unemployment varied widely among the rural and urban areas of the country, among different age groups and among different kinds of skill. The principal areas of unemployment were the metropolitan towns.[8] In the towns the unemployment rate in 1967 was 10 per cent as compared with about 5.5 per cent in the rural areas.

Most of the unemployed were youths falling between the age group of 15 and 24. In 1962, the 15–24 age group constituted about 26.1 per cent of the labour force but comprised 63.2 per cent of all the unemployed. In 1967 not only the percentage of this age group in the labour force had gone up to 34.5 but also unemployment among them had risen to 75.8 per cent of all the unemployed.[9]

Surprisingly most of the unemployed were those with a primary education and not those with no formal education. This was borne out by the two surveys taken in 1962 and 1967. In 1962 those unemployed with primary education constituted about 48.8 per cent whereas those with no formal education constituted only 26 per cent. Similarly in 1967, 52.8 per cent of the unemployed had a primary education as compared with 12.7 per cent of those unemployed who were classified as having no formal education. Strange as the findings of the two Surveys may seem, they do suggest that educational development has not been geared to economic needs. In particular, the apparently anomalous findings reflect that the educational emphasis has been on the literary and not on the scientific and the practical levels. This is evident from the overwhelming proportions of academic against technical and vocational areas in the upper secondary output of the educational system.[10] As a result, these youths have yet to learn what their counterparts with no formal education were compelled to do, dirty their hands to earn a living and to gear themselves to a blue collar job instead of a white collar job.

The 1962 Survey also has some interesting information concerning the underemployed defined as persons working less than 25 hours per week but

[7] See 'The Socio-economic Sample Survey' carried out by the Department of Statistics in 1967, the preliminary findings of which are published under the title 'Provisional Data on Employment and Unemployment, West Malaysia 1967'. See Appendix I, Table 8.

[8] See Appendix I, Table 8.

[9] See Appendix I, Table 9.

[10] See Malaysia, *First Malaysia Plan*, p. 83. See also Appendix I, Table 10.

who would like to work more.[11] It was found that in the urban areas, unemployment rate was high but underemployment was low. Conversely, the unemployment rate in the rural areas was low but underemployment was high. For the whole country only 2.4 per cent of the labour force was underemployed. This seemingly low figure is undoubtedly the result of using a twenty-five-hour week as a dividing line between underemployment and 'full-employment'. If a thirty- or thirty-five-hour week is adopted as the yardstick, the percentage of underemployment would be definitely greater. The 4.6 per cent of rural underemployment is also low and it appears to have been underestimated primarily because not enough consideration has been given to the seasonal nature of most occupations in the rural areas.

Sectoral Employment

To alleviate the problems of unemployment and underemployment in the country, the government has aimed to provide jobs for 377 000 additional workers by 1970 mainly through the successful implementation of the First Malaysia Plan. The total number of unemployed is envisaged to remain roughly the same, but the unemployment rate is expected to decline in relation to the growing labour force so that it would be reduced from 6.0 per cent to 5.2 per cent.[12] The sectoral employment targets of the First Malaysia Plan together with the findings of the 1967 Survey are reproduced below in Table 10 for purpose of comparison.

Table 10

SECTORAL EMPLOYMENT TARGETS

Sectoral Employment (in '000)	1965 *(Preliminary)*	1970 *(Target)*	1965–70 *(Increase)*	1967 *(Survey)*
Agriculture	1 388	1 553	165	1 276
Manufacturing	173	209	36	209
Mining	61	61	—	67
Construction, Utilities and Transport	210	252	42	196
Public administration and defence	257	312	55	696
Trade and services	429	508	79	
Total Employment	2 518	2 895	377	2 444

It is important to note that total employment had declined in 1967 as compared to 1965. To the extent that the figures for 1967 can be relied upon to throw some light on the feasibility of achieving the employment targets, it would appear that in all probability the overall Plan target of providing employment for 377 000 additional workers is unlikely to be fulfilled by the end of 1970.

---

[11] Similar information is not available in the 1967 Survey.

[12] Malaysia, *First Malaysia Plan*, p. 80.

In the employment plan the agricultural sector has been relied upon to provide employment for 70 per cent of the farm youth coming to working age. This is expected to be done through opening more lands for cultivation. Yet as the findings of the 1967 Survey revealed total employment in agriculture, the traditional source of employment, instead of increasing had declined in 1967. The indifferent performance of the agricultural sector in respect of employment creation reflects in part the administrative and technical constraints associated with the opening up of new land and in part it reflects the reserved attitude of the State Governments towards the establishment of private plantations. Since land is a State prerogative, the attitude of the State governments would in no small measure determine the success or failure of any land development scheme.

Despite the fact that the manufacturing sector has a small base and is capital intensive relative to agriculture the employment in the sector had already met the plan target in 1967. To what extent its capability of generating employment is underestimated can only be determined at the end of the Plan period when an overall review will be made. As it is, there is a prima facie case for accelerating investment in manufacturing operations so as to create more jobs.

Similarly the performance of the mining sector was much better than expected. In the employment plan mining was expected at its very best to maintain the same level of employment as in 1965, because of the prospect of a decline of its output. Nevertheless, in 1967 mining had not merely succeeded in maintaining the 1965 level of employment but had exceeded it.

Contrary to expectations, the rate of employment growth in construction, utilities and transport has recently been much less rapid as compared with the situation in the early sixties.

Apart from the changes mentioned above, there has been no significant development in the employment structure during the period under review. The per cent distribution of labour force by broad industry groups is given below in Table 11.

Table 11

DISTRIBUTION OF THE LABOUR FORCE[13]

Industry	1957	1962	1967
Agriculture	58.6	54.7	52.2
Mining and Quarrying	2.8	2.0	2.8
Manufacturing	6.4	6.8	8.5
Construction	3.2	2.0	3.4
Transport and Utilities	4.0	3.8	4.6
Other trade and Services	25.0	30.7	28.5

[13] For further details see Appendix I, Table 11.

Agriculture and services have been and still are the major sources of employment in the economy although their relative importance, particularly agriculture, has declined slightly since 1957. Nevertheless more than 80 per cent of the labour force are engaged in agriculture, trade and services. The rest are in mining, construction, manufacturing, transport and utilities. Though the proportion of labour force engaged in manufacturing is still very small, the rate of manufacturing employment growth has been quite rapid especially after 1962.

The percentage distribution of labour force by major industry sectors and the corresponding GDP percentage distribution are given in Table 12. Such a comparison provides some insights into the intersectoral differences in value

Table 12

DISTRIBUTION OF THE LABOUR FORCE AND GROSS DOMESTIC PRODUCT

Sector	*Per cent of Labour Force*			*Per cent of GDP*		
	1957	1962	1967	1957	1962	1967
Agriculture	58.6	54.7	52.2	39.3	36.6	34.4
Mining and Quarrying	2.8	2.0	2.8	6.4	5.9	5.0
Manufacturing	6.4	6.8	8.5	11.1	9.2	11.0
Construction	3.2	2.0	3.4		4.1	4.3
Transport and Utilities	4.0	3.8	4.6	4.7	5.0	5.4
Other trade and Services	25.0	30.7	28.5	38.5	39.2	39.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

added per worker. For example the agricultural sectoral in 1957 absorbed about 58.6 per cent of the labour resources[14] in the economy but generated only 39.3 per cent of GDP. The position has not altered much since then. Mining absorbed about 2.8 per cent of employment and accounted for 6.4 per cent of GDP in 1957. But in 1967, it absorbed the same percentage of labour and produced only 5.0 per cent of GDP. In the case of manufacturing there was an increase of labour intake by 1.7 per cent from 1962 to 1967 but over the same period its gross output increased by 2.7 per cent. In direct contrast, construction increased its labour input by 1.4 per cent from 1962 to 1967 but its output had gone up by only 0.2 per cent. The difference between the percentages of employment and those of GDP for a sector may be attributed to differences in capital used per worker and in labour skills.

[14] In terms of number of workers.

CHAPTER FOUR

Money and Prices

The Money Supply

THE RECORD OF West Malaysia in the field of monetary policy and management between 1959 and 1968 was quite satisfactory.[1] This is reflected in the economy's record of growth with price stability. Expansion of money supply[2] in this period was moderate and at a rate which was fairly stable. As can be seen below in Table 13, the money supply in 1959 was about M$952

Table 13

MONEY, PRICE LEVEL, AND INTEREST RATES

Year	*Money Supply (M$)*	*Currency (M$)*	*Demand Deposits (M$)*	*Retail Price Index* 1959 = 100	*Short Term Interest Rate (3 months) per cent per annum*	*Long Term Interest Rate (16–20 years) per cent per annum*
1959	952.4	555.9	396.5	100	3.05	5.50
1960	1 004.3	586.6	417.7	99.8	3.50	5.50
1961	1 015.1	587.1	428.0	99.6	4.67	5.50
1962	1 086.8	623.3	463.5	99.7	4.25	5.50
1963	1 162.3	651.3	511.0	102.8	4.00	5.50
1964	1 213.5	685.5	528.0	102.4	4.50	5.67
1965	1 306.6	736.2	570.4	102.3	5.00	5.75
1966	1 428.7	790.5	638.2	103.7	5.00	5.75
1967	1 302.2	663.6	638.6	108.0	5.25	5.92
1968	1 450.5	692.5	758.0	108.2	4.40	6.25

million and in 1968 it had gone up to about M$1 451 million. This amounts to about 52 per cent increase for the ten year period 1959–68. During the period as a whole, it had been increasing at annual average rate of 4.3 per cent

[1] The relevant data for this particular section are available only for the period 1959–68, and they are for the whole of Malaysia. Separate data for West Malaysia alone are not available. To estimate the money supply for West Malaysia in this period, the data for the whole of Malaysia as found in the 10th Anniversary Commemorative Issue of Bank Negara Malaysia, are adjusted according to the proportion of population in West Malaysia on an annual basis.

[2] The definition of money supply is restricted to currency plus demand deposits in the private sector.

with the exception of 1967. In 1967, the money supply contracted by about 8.9 per cent which was largely due to the devaluation of the British pound. It happened at the time when the old Malayan dollar was pegged to the pound, and the new national currency, with a parity fixed in terms of gold, were circulating side by side. The old Malayan dollar in circulation shrank in value by 14.3 per cent after the devaluation of the British pound. In addition, the monetary uncertainty which developed subsequently appeared to have caused a flight from money to other financial assets.

The monetary expansion during this period was largely in the form of bank deposits. The relative proportion of demand deposits in the total money supply had increased from 41.6 per cent in 1959 to 52.3 per cent in 1968, reflecting the expansion of banking facilities and the spread of banking habits. Correspondingly, the proportion of notes and coins in the money supply had declined from 58.4 per cent to 47.7 per cent over the same period. Demand deposits grew at an average rate of 6.7 per cent per annum as compared with the 2.2 per cent rate of currency expansion per annum.

The rise in money supply during 1959–68 was not accompanied by a significant rise in prices. Interest rates also were generally stable. Only retail prices rose by 8.2 per cent over the whole period. Considering that the money supply had risen by 52 per cent during this period, the relative stability of the domestic price level is indeed commendable.[3]

Stability of the Price Level

The absence of inflationary price trends in the economy might be attributable to a number of factors, one of which was that deficit financing was scrupulously avoided. Growth with stability had remained throughout an im-

[3] The relationship between money and prices in West Malaysia for the period 1959–67 is summarized below:

$$
\begin{aligned}
rMY &= .96 \\
rMP &= .76 \\
rMy &= .98 \\
rPY &= .87 \\
rMY.P &= .94 \\
rMP.Y &= -.56
\end{aligned}
$$

where M = money supply
Y = GNP in current prices
P = retail price index
y = GNP at constant 1960 prices

The velocity of circulation of money over the same period was fairly constant at a level of 5.8. A regression estimate of marginal velocity is given by

$$
\begin{aligned}
y &= \alpha + \beta m \text{ (where } y = \text{GNP; } m = \text{money supply at 1960 prices)} \\
&= 93.4 + 5.67m \\
rmy &= .99
\end{aligned}
$$

The interest variable is not used to explain fluctuations in velocity since they are insignificant. It may also be noted that the interest rates also were fairly constant over 1958–67.

portant objective of government economic policy. The major part of the budget deficit had been financed domestically through the use of government's accumulated assets, and domestic borrowing. At the same time, the monetary policy of the central bank was aimed at limiting the potential expansion of bank credit and neutralizing the liquidity effect of the commercial bank's acquisition of government securities. Another factor was that monetary expansion during this period had not been excessive. The money supply grew at an annual average rate of 4.3 per cent while GNP at current market prices grew at an average of 5 per cent a year over the same period. Furthermore, average and marginal velocities were found to be very close, and as such velocity of circulation of money during 1959–68 had remained fairly stable. Thus, the growth of money supply was on the whole in conformity with the growth of the economy.

This does not necessarily mean however that relative prices of particular commodity groups had not risen at all in 1959–68. In fact, in 1967 the domestic price level did rise by 5 per cent, but it was not caused by monetary expansion at home; it was primarily due to a rise in the import prices of rice. Changes in relative prices may also have been brought about by many other factors like taxes and industrial inefficiency. In a relatively open economy like West Malaysia, with virtually no restriction on foreign exchange and imports, changes in relative prices are usually caused by changes in the prices of imports. The impact of a rise in import prices however will normally not be strong enough to generate a general price inflation in the country unless it is being aggravated by other domestic factors. On the contrary, the freedom to import has been the traditional safeguard against a general price inflation since domestic aggregate demand has been always matched by domestic production and imports. West Malaysia is fortunate in that it has always had enough foreign exchange to pay for its imports. Its total external reserves, on the average, were equivalent to seven months' imports during 1959–68. Moreover, gross domestic product has been growing at a rate faster than population growth since 1960. Therefore, with goods and services made readily available by domestic production and imports, any inflationary tendency which may have developed from the supply bottlenecks, did not get reflected in a general price inflation; but has shown up in a deterioration of the balance of payments. As a matter of fact, on current account there has been a deficit in the balance of payments ever since 1962 with the exception of 1965. By 1970, the deficit is expected to be of the magnitude of $470 million.[4] To offset the expected deficits and to avoid serious balance of payment problems, a foreign grant of $900 million is envisaged.[5] Should this foreign assistance fail to materialize as hoped, the freedom to import hitherto enjoyed would be restricted in order to improve the current account situation.[6] In that event the traditional safeguard against inflation would be lost and the stability of the domestic price structure would be upset unless the growth of domestic production were fast enough to cope with the domestic aggregate demand.

---

[4] Malaysia, *First Malaysia Plan*, p. 61.

[5] *Ibid.*, *First Malaysia Plan*, p. 63.

[6] *Ibid.*, *First Malaysia Plan*, p. 63.

CHAPTER FIVE

Pattern of Sectoral Income

Income by Sectoral Origin

AS MENTIONED IN CHAPTER I, despite the sluggish growth performance of the export sector during 1955–67, the factor cost gross domestic product at 1960 prices had shown an annual growth of 4.8 per cent, and the per capita gross domestic product an annual growth rate of 1.9 per cent. Much of this progress was due to the accelerated development effort in 1960–67 during which the growth rate of gross domestic product was 5.2 per cent, more than twice the 2.1 per cent growth rate in 1955–59. The sectoral income growth rates[1] which are given in Table 14 broadly reflect the differential overall growth rates of 1955–59 and 1960–67.

In 1955–59, the growth rate of gross domestic product was below the rate at which population was growing, and as a result, per capita gross domestic product declined at an average rate of 0.5 per cent a year. In fact, apart from the transportation and communication sector, all other sectors of the economy achieved much higher rates of growth in 1960–67 compared with 1955–59. The high growth rate of the transportation and communication sector during the period 1955–59 was due to the large emphasis placed on it by A Plan of Malaya, 1956–60 which incurred over the period slightly more than half the total public development expenditure on this sector.

The leading sector both in terms of growth during 1960–67, and also during the entire period 1955–67, was the public utility sector comprising electricity, water and sanitary services. This sector is followed closely by manufacturing and construction. In contrast, agriculture, mining, and dwellings recorded the lowest growth rates during this period. This contrast may be interpreted as reflecting the strong emphasis placed in the Plans, 1956–65 on providing the requisite infrastructure facilities, and for fostering a suitable investment climate for industrial development. To rectify the earlier comparative lack of emphasis on the agricultural sector the First Malaysia Plan, 1966–70 gave the sector first priority with a 24 per cent allocation of the public development expenditure.

Agriculture (including forestry, hunting and fishing), wholesale and retail trade, manufacturing and construction, and services, were the major sectors of the economy, the group as a whole accounting for more than 75 per cent of the total volume of domestic product in 1955. In 1967, the relative

[1] Data on sectoral origin of the gross domestic product are given in Appendix I, Table 12. For the period 1956–63, the annual average compound rate of growth of GDP was 4.5 per cent at 1960 prices. The corresponding finding by UNCTAD was 5.0 per cent. See Appendix I, Table 3.

Table 14

GROWTH RATES OF SECTORAL INCOME[2]

Gross Domestic Product at 1960 *prices*	*Annual Average Compound Growth Rates* 1955–59	1960–67	1955–67	*Growth Elasticities* (1955–67)	*Growth Multipliers*
1. Agriculture, Forestry Hunting and Fishing	1.7	4.0	3.5	.7092	.2616
2. Mining and Quarrying	−4.2	3.1	2.9	.7909	.0438
3. Manufacturing	2.5[3]	9.5 9.6	7.7	1.6577	.2227
4. Construction		10.1			
5. Electricity, Water and Sanitary Services	−0.7	10.5	8.1	1.7206	.0266
6. Transportation, Storage and Communication	5.5	4.5	5.9	1.0936	.0371
7. Wholesale and Retail Trade	2.6	4.4	5.4	1.1596	.1731
8. Banking, Insurance and Real Estate	1.0	8.8	6.9	1.5993	.0238
9. Ownership of Dwellings	2.5	3.3	3.2	.6468	.0290
10. Public Administration and Defence	1.9	5.1	3.9	.7474	.0493
11. Services	4.8	5.9	6.0	1.1764	.1377
Gross Domestic Product at factor cost	2.1	5.2	4.8		
Per Capita Gross Domestic Product at factor cost	−0.5	2.4	1.9		
Population	2.6	2.7	2.9		

contribution of the same group of sectors to the gross domestic output was essentially similar to the position in 1955. However, during this period, some structural changes had taken place in the sectoral distribution of production in this group. In absolute terms, the contributions of agriculture and manufacturing and construction to the total output increased steadily but with the relative share of manufacturing and construction increasing and that of agriculture declining. In percentage terms, the share of manufacturing and construction had gone up from 11.3 in 1955 to 16.2 per cent in 1967, while that of agriculture had fallen from 40.5 per cent to 34.4 per cent over the same period.

The relative performance of the eleven sectors in the economy is reflected in their growth elasticities as estimated by log-regression of the sectoral

[2] The growth rates of sectoral income are calculated from the national income statistics.

[3] In 1955–59, the data on construction are included in those of manufactures.

income on GDP.[4] Growth elasticities of agriculture, mining, dwelling and public administration and defence which had recorded comparatively lower performance rates, are less than unity. Those of public utilities, manufacturing and all other sectors are far in excess of unity.

Projection of Income by Sectoral Origin

On the basis of the estimated elasticities and the corresponding growth multipliers,[5] an attempt is made to project the sectoral distribution of GDP for West Malaysia in 1975. In making this projection, the planned GDP growth rate of 5.7 per cent for the whole of Malaysia has been applied to West Malaysia. The aggregate output for Western Malaysia in 1975 is obtained by compounding the actual 1967 GDP at 5.7 per cent through 1975. The GDP for West Malaysia alone is estimated to be about $12 000 as compared with $13 000 for the whole of Malaysia in 1975.[6] This figure for West Malaysia is equivalent to about 90 per cent of the planned GDP for the whole country. Therefore, a multiplier of 0.9 appears to be quite feasible, also considering the fact that 87 per cent of the population come from West Malaysia.[7]

The estimated size and composition of sectoral income for West Malaysia together with planned estimates for the whole of Malaysia are given in Table 15.

The planned estimates of the size and composition of sectoral output for the whole country in 1975 and those estimated by growth multipliers based on national accounts data for West Malaysia alone, are strikingly similar, particularly in regard to the expected pattern of structural change in output. The Plan does not give separate figures for electricity, water and sanitary services, transportation and communication, wholesale and retail trade, banking, dwelling, defence and services, but has lumped them altogether under the category of 'services', with an overall share of the total output of about 48 per cent. This figure appears to tally with the estimate derived by the growth multipliers, if similar sectors are aggregated into one general sector 'services'.

In addition to the projection by growth multipliers, two other attempts are made to project the sectoral shares of gross domestic product for West Malaysia in 1975. For this purpose, the inter-industry accounts of 1960 and 1965 are used.[8] The first method is to estimate sectoral value added for 1975

---

[4] The appropriate log-regression equations are given in Appendix I, Table 13. For purposes of comparison the predicted and actual values of sectoral income and the per cent deviation are also given in the table.

[5] The growth multipliers are obtained by multiplying the growth elasticities by the proportion of sectoral income to total income i.e. $\left(\frac{\text{dlogy}_i}{\text{dlogy}}\right)\left(\frac{y_i}{y}\right)$ where y is total income and y_i is the income of a sector.

[6] Malaysia, *First Malaysia Plan*, 1966–70, p. 62.

[7] Malaysia, *First Malaysia Plan*, 1966–70, p. 4. A multiplier of 0.9 will be used in this study to derive data for West Malaysia from those given for the whole of Malaysia.

[8] The 1965 input–output table is published separately while the 1960 input–output table is found in the *National Accounts of the States of Malaya 1955–1961*, published by the Department of Statistics, Kuala Lumpur.

Table 15

NATIONAL ACCOUNTS ESTIMATE OF INCOME BY SECTORAL ORIGIN

Sectors	*Malaysia*		*West Malaysia*	
	Plan Estimates		*Estimates by Growth Multipliers based on National Accounts Data*	
	(M$)	*Per cent*	*M$*	*Per cent*
1. Agriculture, Forestry, Hunting and Fishing	3 440	26.4	3 139	26.0
2. Mining and Quarrying	500	3.9	526	4.4
3. Manufacturing and Construction	2 870	22.1	2 672	22.1
4. Electricity, Water and Sanitary Services			319	2.7
5. Transportation, Storage and Communication			445	3.7
6. Wholesale and Retail Trade			2 077	17.2
7. Banking, Insurance and Real Estate			286	2.4
8. Ownership and Dwellings			348	2.9
9. Public Administration and Defence			592	4.9
10. Services	6 190	47.6	1 652	13.7
Projected Gross Domestic Product in 1975	13 000	100.0	12 056	100.0

on the basis of growth multipliers which are obtained by point estimation between 1960 and 1965. The second method is the Leontief process of estimating the 1975 value added. It may be briefly described as follows. Sectoral final demand elasticities obtained by point estimation are used to derive the demand growth multipliers, on the basis of which the final demand vector for 1975 is projected using the planned rate of growth of 5.7 per cent. Multiplying the 1965 Leontief inverse into the 1975 final demand vector, the sectoral total output is obtained, and value added for 1975 is obtained by applying the value added coefficients to the sectoral output. The results of these calculations are given in Table 16.

The projected value added data for the 30 sectors of the 1965 input–output table are aggregated into 10 sectors for comparing the results of these two approaches with the estimates as made by growth multipliers based on national accounts data.[9] It can be seen that the estimates based on input–

[9] The projected value added for the 30 sectors and the scheme of aggregation are given in the Appendix I. The corresponding coefficient and inverse matrices are given in Appendix I, Tables 14, 15, 16, and 17. The value added and final demand growth elasticities (1960–65) are given in Appendix I, Tables 18 and 19 respectively.

Table 16

INPUT–OUTPUT ESTIMATES OF INCOME BY SECTORAL ORIGIN

Sectors	*Estimates by Growth Multipliers based on Input–Output Data*		*Estimates by the Leontief Process*	
	M$	*Per cent*	*M$*	*Per cent*
1. Agriculture, Forestry, Hunting and Fishing	2 088	15.8	1 508	13.8
2. Mining and Quarrying	1 786	13.5	343	3.1
3. & Manufacturing and 4. Construction	2 120	16.0	2 747	25.1
5. Electricity, Water and Sanitary Services	283	2.1	213	1.9
6. Transportation, Storage and Communication	569	4.3	508	4.6
7. Wholesale and Retail Trade	2 757	20.8	1 964	17.9
8. Banking, Insurance and Real Estate	246	1.8	246	2.2
9. Ownership of Dwellings	479	3.6	501	4.6
10. & Public Administration, 11. Defence and Services	2 924	22.1	2 944	26.8
Projected Gross Domestic Product in 1975	13 252	100.0	10 968	100.0

output data yield different results. In particular, the estimates by growth multipliers based on input–output data tend to inflate the shares of mining, wholesale and retail trade, dwellings, defence and services and underestimate those of agriculture, manufacturing and banking. In the case of public utility and transport, there are no significant differences.

The estimates made by the Leontief process appear on the whole to be closer to those projected by growth multipliers based on national accounts. But, the shares of agriculture, public utility and mining are underestimated while those of transport, dwellings, defence and services are overestimated. As the data based on the 1965 input–output table have not been adjusted for the probable changes in weights and patterns of the final demand, the estimates derived from the input–output analysis may not be as reliable as those based on the national income data.[10]

[10] The existing data are inadequate; much more data than are available are required for estimating the final demand vector, taking into consideration not only the probable changes in sectoral weights, but division of each sector's output for final demand into consumption, investment etc. The latter is, however, irrelevant as far as the magnitude of the final demand of a sector (as a multiplicand of the inverse matrix) is concerned; but such changes in the distribution of final demand into consumption, investment etc. are important, for in a detailed analysis, each component of final demand may have to be estimated by different sets of independent variables.

CHAPTER SIX

The Structure of Sectoral Production

Sectoral Input Structure

THIS SECTION ATTEMPTS TO analyse empirically the structure of production in West Malaysia. The analysis is made in terms of an input–output table as it provides for a detailed analysis of production. In itself an input–output table constitutes a systematic and detailed record of economic activity and thus provides an overall picture of the economy. The overall picture which it provides is not only detailed enough to give an idea of the sectoral processes of production and the interrelationship of the sectors but also sufficiently comprehensive to take into account the impact of a change in one sector on the entire economy and vice versa. The utility of a model in which the interactions between the components of the productive process are set out in detail rather than being lost in an aggregate called 'total production' is quite apparent.

Another advantage of analysing the structure of production in terms of an input–output table is that it readily lends itself to estimating the direct and indirect input requirements for production to satisfy a given vector of final demand. Also it is an analysis which is particularly suited for calculating the cumulated labour and other primary factor inputs as proportions of the unit cost of producing the output of a sector. Alternative methods or approaches for doing so, are either cumbersome or ineffective.

For West Malaysia, there are two input–output tables, one for 1960, and another for 1965. The 1960 table is 29×29 sectors while the 1965 table is 30×30 sectors. Both tables are utilized in the analysis, especially for drawing comparisons and studying structural changes over time. But greater reliance is placed on the 1965 table as it is the more recent one.

One striking characteristic of the structure of interindustry transactions as revealed by the 1960 input–output table is that the intermediate supply and demand relationships among sectors are extremely weak. Only five (namely rubber processing, basic metals, wood and cork, chemicals and food industries) out of the 29 sectors purchase more than 50 per cent of their input requirements from other sectors. (See Tables 17 and 18.) This group of five industries has one thing in common: the major part of their input comes from the so-called 'primary sectors' like agriculture, rubber planting, forestry, mining and fishing, while most of their output is destined directly for export or final domestic use. As such the development of these industries mainly depends on demand factors which are outside the internal production framework. (See Tables 19 and 20.) The only exception among them is the

wood and cork sector where about 54 per cent of its output is for intermediate use, supplying mainly the construction and the furniture and fixtures sectors.

The input coefficient structure of the other 24 sectors is made of a high proportion of primary factors of production plus imports.[1] In 13 cases, the proportion of primary factors and imports to the total input value amounts to over 90 per cent. They are agriculture, rubber planting, forestry, fishing, beverages, textiles, printing and publishing, metal products and machinery,

Table 17

RATIO OF INTERINDUSTRY PURCHASES TO TOTAL PRODUCTION 1960

(per cent)

Industry	*Intermediate Inputs*
Rubber Processing	81.5
Basic Metal Industries	70.8
Wood and Cork	63.7
Food Industries	63.2
Chemical Products	53.7
Furniture and Fixtures	43.3
Construction	39.6
Leather and Leather Products	35.3
Rubber Products	34.6
Clothing and Footwear	19.5
Non-Metallic Mineral Products	18.8
Electricity and Water	18.4
Tobacco	12.9
Paper and Paper Products	11.4
Transportation and Communication	10.5
Mining	9.6
Metallic Products, Machinery, etc.	9.1
Agriculture and Livestock	8.0
Dwellings	7.3
Textiles	7.0
Wholesale and Retail Trade	6.6
Misc. Manufacturing Industries	5.5
Printing and Publishing	5.3
Beverages	4.7
Fishing	1.3
Forestry	0.6
Other Service Industries	0.5
Banking, Insurance, etc.	0.4
Rubber Planting	0.2
TOTAL	25.6

[1] See Appendix I, Table 20, for the intermediate and direct primary input coefficients, 1960.

Table 18

RATIO OF INTERINDUSTRY PURCHASES TO TOTAL PRODUCTION 1965

(per cent)

Industry	*Intermediate Inputs*
Rubber Processing	87.9
Basic Metal Industries	83.9
Wood and Cork	55.6
Chemical Products	54.7
Food Industries	49.4
Furniture and Fixtures	42.1
Construction	41.8
Rubber Products	39.9
Non-Metallic Mineral Products	28.3
Electricity and Water	25.4
Paper and Paper Products	15.5
Agriculture and Livestock	15.5
Transportation and Communication	15.3
Textiles	13.8
Clothing and Footwear	13.8
Beverages	13.6
Leather and Leather Products	13.3
Metal Products and Machinery	12.3
Tobacco	11.8
Printing and Publishing	10.4
Mining	9.7
Wholesale and Retail Trade	6.7
Dwellings	5.3
Fishing	4.5
Misc. Manufacturing Industries	4.4
Products of Petroleum and Coal	3.3
Forestry	2.2
Rubber Planting	1.4
Banking, Insurance, etc.	0.9
Other Service Industries	0.9
TOTAL	26.9

Table 19

RATIO OF INTERINDUSTRY SALES TO TOTAL DEMAND 1960

Sectors	*Intermediates*	*Final Domestic Uses*	*Exports*	*Total*
Rubber Planting	90.7	9.3	—	100.0
Non-Metallic Mineral Products	88.2	8.0	3.8	100.0
Mining	75.2	−6.4	31.2	100.0
Forestry	60.8	25.7	13.5	100.0
Wood and Cork	53.6	15.7	30.7	100.0
Electricity and Water	45.0	54.6	0.4	100.0
Agriculture and Livestock	39.3	54.7	6.0	100.0
Transportation and Communication	33.4	62.9	3.7	100.0
Metal Products, Machinery, etc.	31.6	67.1	1.3	100.0
Fishing	24.8	65.5	9.7	100.0
Leather and Leather Products	23.5	76.5	—	100.0
Chemical Products	12.1	35.7	52.2	100.0
Wholesale and Retail Trade	10.2	66.5	23.3	100.0
Construction	8.3	87.5	4.2	100.0
Food Industries	7.5	80.8	11.7	100.0
Rubber Processing	0.8	1.4	97.8	100.0
Banking, Insurance, etc.	0.8	99.2	—	100.0
Other Service Industries	0.4	99.0	0.6	100.0
Printing and Publishing	0.3	97.9	1.8	100.0
Rubber Products	0.3	71.1	28.6	100.0
Basic Metal Industries	0.3	2.5	97.2	100.0
Tobacco	—	99.7	0.3	100.0
Textiles	—	57.0	43.0	100.0
Misc. Manufacturing Industries	—	87.8	12.2	100.0
Furniture and Fixtures	—	99.6	0.4	100.0
Beverages	—	100.0	—	100.0
Clothing and Footwear	—	100.0	—	100.0
Paper and Paper Products	—	100.0	—	100.0
Dwellings	—	100.0	—	100.0
TOTAL	25.6	45.9	28.5	100.0

Table 20

RATIO OF INTERINDUSTRY SALES TO TOTAL DEMAND 1965

Sectors	*Intermediates*	*Final Domestic Uses*	*Exports*	*Total*
Non-Metallic Mineral Products	89.4	3.8	6.8	100.0
Rubber Planting	86.9	13.1	—	100.0
Mining	79.4	−0.1	20.7	100.0
Forestry	58.4	21.2	20.4	100.0
Wood and Cork	54.4	13.8	31.8	100.0
Electricity and Water	46.8	52.8	0.4	100.0
Agriculture and Livestock	40.6	56.5	2.9	100.0
Products of Petroleum and Coal	31.8	35.5	32.7	100.0
Transportation and Communication	31.7	65.3	3.0	100.0
Paper and Paper Products	27.9	58.9	13.2	100.0
Metal Products and Machinery	27.3	68.3	4.4	100.0
Textiles	24.2	52.9	22.9	100.0
Chemical Products	23.2	34.3	42.5	100.0
Wholesale and Retail Trade	19.8	65.7	14.5	100.0
Rubber Processing	14.9	0.3	84.8	100.0
Fishing	13.0	69.2	17.8	100.0
Food Industries	10.0	75.9	14.1	100.0
Construction	6.4	90.4	3.2	100.0
Rubber Products	4.2	72.5	23.3	100.0
Basic Metal Industries	2.7	−5.0	102.3	100.0
Furniture and Fixtures	2.5	96.9	0.6	100.0
Other Service Industries	0.6	99.4	—	100.0
Misc. Manufacturing Industries	0.5	93.9	5.6	100.0
Banking, Insurance, etc.	0.5	99.5	—	100.0
Printing and Publishing	—	95.7	4.3	100.0
Leather and Leather Products	—	96.7	3.3	100.0
Beverages	—	97.2	2.8	100.0
Clothing and Footwear	—	96.5	3.5	100.0
Dwellings	—	97.9	2.1	100.0
Tobacco	—	100.0	—	100.0
TOTAL	26.9	50.5	22.6	100.0

miscellaneous manufacturing, wholesale and retail trade, dwellings, banking and other service industries. In general those sectors engaged in primary production and in services purchase most of their inputs directly from domestic primary factors of production while those engaged in manufacturing activities tend to rely more on imports as the main source of supply for their raw materials inputs. For example the amount of raw materials imported by the textile sector constitutes almost 70 per cent of its total input coefficient.

The 'chainless' type of interindustry relationships as exhibited by the West Malaysian economy in 1960 is quite a common characteristic of most

developing economies with a rather primitive productive structure. Like other developing countries, a greater percentage of output in West Malaysia consists of final goods and only a small proportion consists of unfinished goods or raw materials for domestic production. Furthermore, agriculture is also a sector whose output has a fairly low intermediate component as compared to manufacturing. Consequently, the greater part of the industrialization process has been devoted to the development of raw material production and to the substitution of imported semi-finished products, that is the deepening of the productive process. Therefore it is of interest to compare the 1960 input–output data with that of 1965 and see what structural changes, if any, have occurred over the five intervening years.

In 1965 the number of sectors with a proportion of primary input and import content as high as 90 per cent[2] had been reduced to 10 as compared to 13 in 1960. This was because 16 of the 30 sectors had expanded their production for inputs to other industries. The entire 1960 output of 3 sectors: textiles, miscellaneous manufacturing, furniture and fixtures, was primarily for export and domestic consumption. By 1965 they had increased their relative share of intermediate output substantially. On the other hand, there was a decline in the relative share of intermediate output in 8 sectors among which the most conspicuous was leather and leather products. The cause for the relative decline in these sectors is not at all clear but part of the explanation is probably due to the relative change between the intermediate and primary input in other sectors. As in the case of leather and leather products, the decline in its relative share of intermediate output was mainly because it had ceased to supply the clothing and footwear sector in 1965. The latter had turned directly to imports as a source of supply for most of its inputs.

In fact there were 7 cases where the intermediate input coefficient had declined as compared to that in 1960. Of these, 5 had switched directly to imports as a source of input supply as indicated by the consequent rise in their import coefficients: clothing and footwear, food industries, wood and cork, leather and leather products and miscellaneous manufacturing. The relative change in the intermediate input coefficients of these industries had affected those sectors which supply their inputs. For example the decline in the intermediate input coefficient of the food industries brought about a decline in the relative intermediate output of the fishing industry in 1965. Similarly, the fall in the intermediate component part of the forestry output was largely because the wood and furniture industries purchased more of their inputs from imports and domestic primary factors of production respectively.[3]

On the whole, the proportion of the productive activity which was involved in the production of goods for inter-industry consumption seemed to have increased slightly from 1960 to 1965.

We have thus far concerned ourselves only with the direct input coefficients which do not give a complete picture of the process of production. For

---

[2] Including the new sector products of petroleum and coal.

[3] See Appendix I, Table 20, for the intermediate and direct primary input coefficients, 1960 and 1965.

example the expansion of textile production in 1965 had led to an increase in demand for the services of wholesale and retail trade from about 6 per cent in 1960 to about 13 per cent in 1965. But that was not all, for the demand of the textile sector for the wholesale and retail services generated further demand of the latter for inputs from other sectors. Specifically, to meet the increased demand from textiles, the wholesale and retail trade sector increased its demand for transportation services from 6 per cent in 1960 to 6.4 per cent in 1965 and consumed about 0.2 per cent more of its own products and so on.[4] Thus the demand of one sector for the inputs of another in turn generates further demand in a chain-like reaction throughout the productive system. The total effect of the demand by one sector for the products of another after all the possible chain reactions have been taken into account is given by the Leontief inverse matrix or simply the table of direct and indirect demand for sector output. The inverse table gives a much more comprehensive insight into the structure of production since it takes into account not only the direct input from the wholesale and retail sector for each unit of output of the textile sector, but also incorporates the indirect effect of the textile sector via the productive system on the wholesale and retail sector. For example the total (direct and indirect) coefficient for the input of wholesale and retail trade into the textile sector in 1965 was 0.1251 as against the direct coefficient of 0.1235. Apart from the direct requirements like electricity, water and the services of wholesale and retail trade for the production of one unit of textile, the indirect requirements from the other sectors are for example 0.0007 of oil fuel and 0.0023 of construction. These and all other such indirect connections which hardly could have been envisaged intuitively, are shown by the table of direct and indirect coefficients.

The Leontief inverse matrix is a powerful analytical tool for with its aid, we can measure quantitatively the impact of each sector on every other sector in the economy. In particular, it is possible to measure the impact of total direct and indirect demands on each sector generated by a unit of final demand for any particular sector's output. The columns of the inverse coefficient tables (Appendix I, Tables 16 and 17) represent in fact the values of demand generated in all sectors per unit of final demand for the output of any one sector. For example in the column of rubber processing it is possible to see that in the West Malaysian economy in 1965, an initial increase of $1 million in final demand for the output of the rubber processing sector gave rise to an increase in the total demand for agricultural products of about $2 300; for the output of rubber replanting sector $847 910; and for the output of all sectors including the rubber processing sector itself $2 036 420. The ultimate total demand generated is therefore always greater than the initial final demand, and in this particular case it has exceeded the initial final demand by a substantial proportion—more than twice the original size. (See Tables 21 and 22.)

The demand generation effect differs from sector to sector as illustrated by our calculation for 1960 and 1965. It should be noted that between 1960 and 1965 the capacity of demand-generation of most of the sectors had increased

---

[4] See the inverse matrices for 1960 and 1965, Appendix I, Tables 16 and 17.

generally. The top six sectors in regard to demand generation for 1960 and 1965 are presented below.

Rank	(1960)	*Demand-Generation Effect*
1	Rubber Processing	1.81679
2	Basic Metal Industries	1.78962
3	Food Industries	1.69886
4	Furniture and Fixtures	1.66650
5	Wood and Cork	1.64956
6	Chemical Products	1.59750

Rank	(1965)	*Demand-Generation Effect*
1	Rubber Processing	2.03642
2	Basic Metal Industries	1.93646
3	Chemical Products	1.69217
4	Furniture and Fixtures	1.63011
5	Rubber Products	1.61925
6	Wood and Cork	1.60359

As can be seen, the two sectors which ranked top in regard to demand generation for both the years were rubber processing and basic metal industries. Rubber processing and tin are the traditional sectors of the West Malaysian economy. But, some non-traditional sectors are also becoming important. For example in 1960, the sector of chemical products which was sixth in rank had taken the place of food processing in 1965 and ranked as high as third. Including food processing, there were altogether 8 sectors in which the ratio of total demand to final demand had declined relatively in 1965 as compared to the position in 1960. These were tobacco, clothing and footwear, wood and cork, furniture and fixtures, leather and leather products, miscellaneous manufacturing and dwellings. Again the cause of the weakening of demand-generating capacity in these cases is uncertain. But it is observed that in five cases (food, clothing, wood, leather and miscellaneous manufacturing), the import coefficient had gone up considerably implying that the leakage of demand to foreign suppliers might have been greater than before. As for furniture and dwellings, the total import coefficient had in fact declined since 1960, therefore the weakening of the demand-generation effect could hardly be attributed to the leakage of demand. The cause might, however, have been a change in the composition between intermediate inputs within the productive system and external primary inputs like capital and labour.

Given the demand-generating capacities of the various sectors, the direct and indirect output required from each sector for the production of a given vector of final demand can be estimated. This is done for the 30 sectors in 1965 and the results are presented in Table 22. The table separates out clearly that part of the sector output which reaches the final destination indirectly,

that is via use as inputs, in other sectors. For example, in addition to direct output of $289.4 million, the chemical sector contributed another $200.3 million of its output indirectly to satisfy the given final demand in 1965.

As can be seen from Table 22, the size of the indirect output of different sectors differs considerably. For the rubber processing sector the size of the indirect component is greater than its direct output while the indirect output of the other service sector is negligible. The size of the indirect demand for a sector's output depends to a great extent upon its linkages with the other sectors of the economy. In the case of the rubber processing sector, its linkage with agriculture, industry, infrastructure of the economy etc. undoubtedly account for its dominant position in regard to indirect demand.

Table 21

RATIO OF TOTAL DEMAND TO FINAL DEMAND

Sector	1960	1965
Agriculture and Livestock	1.11384	1.21343
Rubber Planting	1.00193	1.01877
Forestry	1.00689	1.02320
Fishing	1.01408	1.04814
Mining	1.11529	1.11595
Food Industries	1.69886	1.59372
Beverages	1.05137	1.15895
Tobacco	1.14205	1.13701
Textiles	1.07714	1.15318
Clothing and Footwear	1.28275	1.16827
Wood and Cork	1.64956	1.60359
Furniture and Fixtures	1.66650	1.63011
Paper and Paper Products	1.12304	1.17631
Printing and Publishing	1.05831	1.11891
Leather and Leather Products	1.39088	1.14719
Rubber Processing	1.81679	2.03642
Rubber Products	1.59498	1.61925
Chemical Products	1.59758	1.69217
Products of Petroleum and Coal	—	1.03622
Non-Metallic Mineral Products	1.21237	1.34369
Basic Metal Industries	1.78962	1.93646
Metal Products and Machinery	1.10178	1.13959
Misc. Manufacturing Industries	1.06131	1.05058
Construction	1.51170	1.55950
Electricity and Water	1.25748	1.34540
Transportation and Communication	1.12157	1.18148
Wholesale and Retail Trade	1.07650	1.08024
Banking and Insurance, etc.	1.00441	1.00950
Dwellings	1.10913	1.08116
Other Service Industries	1.00549	1.00996

Table 22

DIRECT AND INDIRECT DEMAND FOR SECTOR OUTPUTS, 1965

(in M$ million)

Sector	*Direct Demand*	*Indirect Demand*	*Total Demand*
Agriculture and Livestock	621.7	132.7	754.4
Rubber Planting	142.9	2.7	145.6
Forestry	56.0	1.3	57.3
Fishing	125.9	6.1	132.0
Mining	183.9	21.3	205.2
Food Industries	538.8	319.9	858.7
Beverages	42.8	6.8	49.6
Tobacco	193.9	26.6	220.5
Textiles	25.8	4.0	29.8
Clothing and Footwear	5.8	1.0	6.8
Wood and Cork	83.0	50.1	133.1
Furniture and Fixtures	34.5	21.7	56.2
Paper and Paper Products	9.3	1.6	10.9
Printing and Publishing	68.1	8.1	76.2
Leather and Leather Products	3.0	0.4	3.4
Rubber Processing	1 101.2	1 141.3	2 242.5
Rubber Products	95.5	59.2	154.7
Chemical Products	289.4	200.3	489.7
Products of Petroleum and Coal	93.9	3.4	97.3
Non-Metallic Mineral Products	9.5	3.3	12.8
Basic Metal Industries	825.6	773.1	1 598.7
Metal Products and Machinery	146.2	20.4	166.6
Misc. Manufacturing Industries	61.0	3.1	64.1
Construction	843.2	471.8	1 315.0
Electricity and Water	106.5	36.8	143.3
Transportation and Communication	306.6	55.6	362.2
Wholesale and Retail Trade	1 639.0	131.5	1 770.5
Banking and Insurance, etc.	147.1	1.4	148.5
Dwellings	322.8	26.2	349.0
Other Service Industries	1 535.0	15.3	1 550.3
All Sectors	9 657.9	3 547.0	13 204.9

Sectoral Interdependence

To determine the degree of interdependence of each sector, we have ranked the sectors according to the ratio of interindustry sales to total demand in percentage terms. The relative positions of the sectors ranked according to this criterion in 1960 and 1965 are shown in Tables 19 and 20 respectively. Ranking at the top of both tables are such sectors as rubber planting, non-metallic mineral products, mining and forestry, practically the whole output of which undergoes further processing in other sectors. Non-metallic minerals go primarily to construction while rubber planting is the main source of

supply to rubber processing. Mining supplies the metallic and non-metallic mineral sectors as well as construction. One common characteristic shared by these 4 sectors is that their development depends on the demand of other industries for the marketing of their products.

The importance of this characteristic of dependence on the demand of other industries can be seen when changes of industrial output between 1960 and 1965 are taken into consideration. For example the buoyancy of building activities in the period 1960–65 caused the share of non-metallic minerals going to the construction sector in 1965 to increase by more than two and a half times their share in 1960. This fact expressed itself in an overall increase from 1960 to 1965 in the relative share of intermediate and a corresponding decline in the share of export and of final use in the non-metallic mineral sector. Similarly, the slowdown of rubber processing activities had led to a decline in the share of rubber planting output going to the rubber processing sector from about 91 per cent to about 87 per cent. As a result, the share of intermediates in the rubber planting sector declined by 3.8 per cent while that of final use increased correspondingly in 1965.

At the bottom of both tables are those sectors which produce mainly for household consumption. These are sectors such as tobacco, dwellings, beverages, clothing, and footwear. The development of these industries mainly depends on demand factors not within the inter-industry framework.

Thus far we have only seen the extent to which each sector depends on the demand of other sectors. In addition we would like to know the extent of the influence that any one sector has on those sectors which supply its material inputs. In other words we are interested in inputs derived by one sector from other sectors of the economy. This information is given in Tables 17 and 18 where sectors are ranked by the ratio of interindustry purchase to total production. The sectors which appear at the bottom for both 1960 and 1965 are forestry, rubber planting, banking and other service industries. The last two appear at the bottom because almost all their output is for final domestic use, and at the same time they purchase all their inputs from imports and from primary factors of production. On the other hand, forestry and rubber planting rank near the bottom by the ratio of interindustry purchases to total production and high by the ratio of interindustry sales to total demand because nearly all their output has to undergo further processing before final use while a high proportion of their input is made up of primary factors.

The position of a sector in Tables 17 and 18 determines the extent of the secondary effect that changes in its output may have on the development of those sectors from which it purchases its inputs, whereas its position in Tables 19 and 20 determines its sensitivity to changes in the output of sectors for which it is itself a supplier. By definition, total input of domestic intermediates is equal to the total output of domestic intermediates and it follows from this that the averages which appear at the bottom of Tables 17 and 19 and of Tables 18 and 20 should be the same.

This overall figure which may be called the index of roundaboutness of production provides a measure of the importance of the interdependence of productive industries in the general framework of the economy's transactions. Since to a certain extent this measure is also an indicator of the degree of

industrial development, it may be of interest to compare it with the following developed countries.[5]

Japan	(1951)	46.1
U.S.A.	(1947)	41.9
Italy	(1950)	41.1
Norway	(1950)	30.4
West Malaysia	(1960)	25.6
West Malaysia	(1965)	26.9

Such a measure which is based on an estimate of gross and intermediate output undoubtedly involves some arbitrariness because of the possibility that different sector classification criteria are used in different countries. Nevertheless it does confirm the expectation that the degree of roundaboutness of production is lower in a developing country like West Malaysia than in developed countries.

The interdependence ratios explained above are rather rough indices of the linkage effects because the indirect repercussions of an increase in final demand for any one sector on the other sectors of the economy have not been given due consideration. More refined measures of the linkage effects which take the direct as well as indirect effects into account are provided by the forward and backward linkages. The forward linkage may be defined as an index of sensitivity to dispersion. It is thus a measure of the extent to which a sector can expand for a given unit of expansion of the economy. The backward linkage on the other hand may be viewed as the index of dispersion or deviation, it measures the extent to which the economy develops with a given expansion of a particular sector.

On the basis of the input–output tables for 1960 and 1965, the forward and backward linkages of the sectors are computed.[6] The results are shown in Tables 23, 24, 25, 26, 27, 28, 29, 30 and 31. In these tables, all the sectors are arranged in a descending order of significance in regard to their forward and backward linkages. In general, the sectors which ranked high in terms of forward linkages in 1960 were those concerned with primary production and services such as agriculture, wholesale and retail trade, forestry, rubber planting and mining. Included in the top ten there were only two manufacturing sectors namely wood and cork and rubber processing. The sectors which appeared at the bottom in terms of forward linkages are mostly manufactures like beverages, tobacco, clothing and footwear.

The position in 1965 remained essentially the same although there were some minor changes in the relative places of the first ten sectors. For example the place of transportation was taken by the chemical sector which climbed

---

[5] H. B. Chenery and P. G. Clark, *Inter-Industry Economics*, John Wiley and Sons, New York, 1959, p. 206.

[6] The computation of the forward and backward linkages is based on the following formulae:

$$U_i = \frac{\frac{1}{n}\sum_{j=1}^{n} z_{ij}}{\frac{1}{n^2}\sum_{j=1}^{n} z_j}; \quad U_j = \frac{\frac{1}{n}\sum_{i=1}^{n} z_{ij}}{\frac{1}{n^2}\sum_{j=1}^{n} z_j}$$

up from the fifteenth place in 1960 to be included among the top ten sectors in 1965.

However, forward linkages are not as important as backward linkages because the existence of the former is always accompanied by the latter which in turn is the result of demand pressures. Thus the existence of backward linkages in response to the pressure of demand is often a direct stimulus to setting up of new activities. In contrast forward linkages by themselves cannot be an inducement mechanism independently. They serve, however, as an important reinforcement to backward linkage.

By definition, all primary production should exclude any substantial degree of backward linkage since as a general rule, they tend to purchase only a little from the other sectors. This can be seen from the tables 24 and 26 which ranked the sectors in descending order of significance in regard to backward linkages in 1960 and 1965. The two tables bring out clearly the

Table 23

FORWARD LINKAGE 1960

Sector	*Forward Linkage*
Agriculture and Livestock	2.002386
Wholesale and Retail Trade	1.806347
Rubber Planting	1.623041
Forestry	1.504738
Mining	1.427277
Wood and Cork	1.243302
Rubber Processing	1.025698
Electricity and Water	1.018562
Construction	1.001537
Transportation and Communication	.916045
Leather and Leather Products	.868412
Metal Products, Machinery, etc.	.857031
Fishing	.852007
Food Industries	.849506
Chemical Products	.849414
Non-Metallic Mineral Products	.849115
Other Service Industries	.798912
Printing and Publishing	.794920
Basic Metal Industries	.794301
Banking, Insurance, etc.	.793566
Rubber Products	.792213
Beverages	.791203
Tobacco	.791203
Textiles	.791203
Clothing and Footwear	.791203
Furniture and Fixtures	.791203
Paper and Paper Products	.791203
Misc. Manufacturing Industries	.791203
Dwellings	.791203

superiority of manufacturing in respect of backward linkage effects. The paucity of backward linkage effects which normally characterizes agriculture in general and subsistence agriculture in particular is also exhibited in that all the sectors involving agricultural and mining activities appear near the bottom of both tables.

Table 24

BACKWARD LINKAGE 1960

Sector	*Backward Linkage*
Rubber Processing	1.437441
Basic Metal Industries	1.415942
Food Industries	1.344125
Furniture and Fixtures	1.318542
Wood and Cork	1.305119
Chemical Products	1.264002
Rubber Products	1.261937
Construction	1.196063
Clothing and Footwear	1.014914
Leather and Leather Products	1.100452
Electricity and Water	.994906
Non-Metallic Mineral Products	.959227
Tobacco	.903586
Paper and Paper Products	.888557
Dwelling	.887544
Transportation and Communication	.887387
Mining	.882408
Agriculture and Livestock	.881261
Metal Products, Machinery, etc.	.871716
Textiles	.852236
Wholesale and Retail Trade	.851731
Misc. Manufacturing Industries	.839708
Printing and Publishing	.837322
Beverages	.831838
Fishing	.802331
Forestry	.796641
Other Service Industries	.795540
Banking, Insurance, etc.	.794691
Rubber Planting	.792717

Table 25

FORWARD LINKAGE 1965

Sector	*Forward Linkage*
Wholesale and Retail Trade	2.338814
Agriculture and Livestock	1.585002
Rubber Planting	1.553128
Mining	1.487927
Forestry	1.241106
Wood and Cork	1.143329
Electricity and Water	1.059650
Rubber Processing	1.055271
Construction	.991920
Chemical Products	.967540
Transportation and Communication	.944846
Non-Metallic Mineral Products	.944659
Paper and Paper Products	.898874
Products of Petroleum and Coal	.898452
Food Industries	.876859
Textiles	.862292
Metal Products and Machinery	.860184
Rubber Products	.822455
Basic Metal Industries	.821237
Fishing	.808145
Furniture and Fixtures	.801002
Other Service Industries	.789456
Banking, Insurance, etc.	.782618
Misc. Manufacturing Industries	.780955
Beverages	.780651
Tobacco	.780651
Clothing and Footwear	.780651
Printing and Publishing	.780651
Leather and Leather Products	.770651
Dwellings	.780651

Table 26

BACKWARD LINKAGE 1965

Sector	*Backward Linkage*
Rubber Processing	1.589756
Basic Metal Industries	1.511722
Chemical Products	1.321015
Furniture and Fixtures	1.272559
Wood and Cork	1.251856
Food Industries	1.244151
Construction	1.217429
Electricity and Water	1.050306
Non-Metallic Mineral Products	1.048971
Agriculture and Livestock	.947282
Transportation and Communication	.922340
Paper and Paper Products	.918288
Rubber Products	.913019
Clothing and Footwear	.912012
Beverages	.904752
Textiles	.900232
Leather and Leather Products	.895571
Metal Products and Machinery	.889623
Tobacco	.887609
Printing and Publishing	.873486
Mining	.871168
Dwelling	.844024
Wholesale and Retail Trade	.843298
Misc. Manufacturing Industries	.820136
Fishing	.818239
Products of Petroleum and Coal	.808942
Forestry	.798777
Rubber Planting	.795311
Other Service Industries	.788426
Banking, Insurance, etc.	.788075

Table 27

WEIGHTED FORWARD LINKAGE 1965

Sector	*Weighted Forward Linkage*
Wholesale and Retail Trade	4.644580
Other Service Industries	3.508940
Rubber Processing	2.939550
Rubber Planting	2.476400
Agriculture and Livestock	2.376570
Construction	2.045610
Mining	2.032130
Basic Metal Industries	1.927590
Food Industries	1.360220
Transportation and Communication	1.019040
Chemical Products	.856430
Dwellings	.733336
Metal Products and Machinery	.457195
Electricity and Water	.454943
Tobacco	.440520
Wood and Cork	.413708
Banking and Insurance, etc.	.336028
Fishing	.328689
Products of Petroleum and Coal	.313234
Forestry	.306113
Rubber Products	.226502
Non-Metallic Mineral Products	.204475
Printing and Publishing	.154715
Misc. Manufacturing Industries	.139191
Beverages	.097237
Furniture and Fixtures	.080422
Textiles	.077232
Paper and Paper Products	.029306
Clothing and Footwear	.013177
Leather and Leather Products	.006816

Table 28

WEIGHTED BACKWARD LINKAGE 1965

Sector	*Weighted Backward Linkage*
Rubber Processing	5.094720
Wholesale and Retail Trade	4.022410
Basic Metal Industries	3.632160
Other Service Industries	3.522080
Construction	2.987470
Food Industries	1.950870
Agriculture and Livestock	1.713890
Chemical Products	1.112570
Transportation and Communication	.822970
Dwellings	.792880
Tobacco	.500875
Mining	.466244
Metal Products and Machinery	.378515
Rubber Products	.351388
Banking and Insurance, etc.	.337370
Rubber Planting	.330747
Electricity and Water	.325528
Wood and Cork	.302384
Fishing	.299800
Products of Petroleum and Coal	.221057
Printing and Publishing	.173113
Misc. Manufacturing Industries	.145595
Forestry	.130177
Furniture and Fixtures	.127768
Beverages	.112692
Textiles	.067593
Non-Metallic Mineral Products	.029001
Paper and Paper Products	.024854
Clothing and Footwear	.015394
Leather and Leather Products	.007819

Table 29

FORWARD AND BACKWARD LINKAGES 1960

Sector	*Forward and Backward Linkages*
Agriculture and Livestock	2.883647
Wholesale and Retail Trade	2.658078
Wood and Cork	2.550421
Rubber Processing	2.463139
Rubber Planting	2.415758
Mining	2.309685
Forestry	2.301379
Basic Metal Industries	2.210243
Construction	2.197600
Food Industries	2.193631
Chemical Products	2.113416
Furniture and Fixtures	2.109745
Rubber Products	2.054150
Electricity and Water	2.013468
Leather and Leather Products	1.968864
Non-Metallic Mineral Products	1.808342
Clothing and Footwear	1.806117
Transportation and Communication	1.803432
Metal Products, Machinery, etc.	1.728747
Tobacco	1.694789
Paper and Paper Products	1.679760
Dwellings	1.668747
Fishing	1.654338
Textiles	1.643439
Printing and Publishing	1.632242
Misc. Manufacturing Industries	1.630911
Beverages	1.623041
Other Service Industries	1.594452
Banking, Insurance, etc.	1.588257

Table 30

FORWARD AND BACKWARD LINKAGES 1965

Sector	*Forward and Backward Linkages*
Wholesale and Retail Trade	3.182112
Rubber Processing	2.645027
Agriculture and Livestock	2.532284
Wood and Cork	2.395185
Mining	2.359095
Rubber Planting	2.348439
Basic Metal Industries	2.332959
Chemical Products	2.288555
Construction	2.209349
Food Industries	2.121010
Electricity and Water	2.109956
Furniture and Fixtures	2.073561
Forestry	2.039883
Non-Metallic Mineral Products	1.993630
Transportation and Communication	1.867186
Paper and Paper Products	1.817162
Textiles	1.762524
Metal Products and Machinery	1.749807
Rubber Products	1.735474
Products of Petroleum and Coal	1.707394
Clothing and Footwear	1.692663
Beverages	1.685403
Leather and Leather Products	1.676222
Tobacco	1.668260
Printing and Publishing	1.654137
Fishing	1.626384
Dwellings	1.624675
Misc. Manufacturing Industries	1.601091
Other Service Industries	1.577882
Banking and Insurance, etc.	1.570693

Table 31

WEIGHTED FORWARD AND BACKWARD LINKAGES IN DESCENDING ORDER 1965

Sector	*Weighted Forward and Backward Linkages in Descending Order*
Wholesale and Retail Trade	8.666990
Rubber Processing	8.034270
Other Service Industries	7.031020
Basic Metal Industries	5.559750
Construction	5.033080
Agriculture and Livestock	4.090460
Food Industries	3.311090
Rubber Planting	2.807147
Mining	2.498374
Chemical Products	1.969000
Transportation and Communication	1.842010
Dwellings	1.526216
Tobacco	0.941395
Metal Products and Machinery	0.835710
Electricity and Water	0.780471
Wood and Cork	0.716092
Banking and Insurance, etc.	0.673398
Fishing	0.628489
Rubber Products	0.577890
Products of Petroleum and Coal	0.534291
Forestry	0.436290
Printing and Publishing	0.327828
Misc. Manufacturing Industries	0.284786
Non-Metallic Mineral Products	0.233476
Beverages	0.209929
Furniture and Fixtures	0.208190
Textiles	0.144825
Paper and Paper Products	0.054160
Clothing and Footwear	0.028571
Leather and Leather Products	0.014635

In this respect, however, the position of the agriculture and livestock sector had improved substantially in 1965 as compared to its position in 1960, reflecting to a certain extent the introduction of modern methods of cultivation and considerable outside purchases of fertilizers, insecticides, tools, machines and other inputs.

The linkages of the sectors can serve as a useful guide to investment decisions particularly with regard to sector priorities. But to do so, both forward and backward linkages must be taken into account as they are interrelated. In this respect, it may be interesting to see what are the more important sectors when both the forward and backward linkages are combined and the

sectors are arranged in descending order of significance. This is done in Table 29 for 1960 while Table 30 is for 1965. It can be seen that the top ten sectors in 1960 headed by agriculture included 3 other primary sectors, rubber planting, mining and forestry, and 4 manufacturing sectors which were closely related to agriculture and mining. These were wood and cork, rubber processing, basic metals and food processing. Because of its traditional linkages with the primary and export sectors the wholesale and retail trade sector appears second from the top of the list.

In 1965 however, the position of agriculture in terms of the combined forward and backward linkages dropped to the third place; it was superseded by rubber processing and wholesale and retail trade. In general non-agricultural sectors seemed to have gained in importance over the period 1960–65 as evidenced not only by the changes in the relative position of agricultural and non-agricultural activities but also by the inclusion of a chemical sector among the top ten.

It should be noted that for purposes of comparison the forward and backward linkages of the sectors are calculated on the basis of per unit change in final demand for the product of any sector. As such they do not take into consideration the relative sizes of the sectors in an economy. Because of this, such measurements give an incomplete, and sometimes a distorted picture of the sectoral forward and backward linkages. The extent of distortion can be readily seen when the sectoral linkages are weighted by their respective final demands and a comparison is made with the unweighted sectoral linkages for 1965. Because appropriate weights have been given to the respective sectors in regard to their total (forward and backward) linkages, the weighted total linkages of the other service industries become more prominent while those of the manufacturing sectors tend in general to be of less significance as they are not fully developed in the economy. (See Tables 27, 28 and 31.) The differences are even more pronounced when the weighted backward linkages are compared with the corresponding unweighted ones for 1965. In particular the sectors such as furniture and fixtures and non-metallic minerals which ranked as high as fourth and ninth places respectively when the backward linkages are not weighted, dropped to the twenty-fourth and twenty-seventh places respectively when they are ranked according to the weighted backward linkages.

Accumulated Factor Costs

As mentioned above, one of the advantages of analysing the structure of production in terms of an input–output table is that it enables us to estimate the accumulated labour and other primary factor inputs as proportions of the unit cost of producing the output of a sector. To do this the coefficients in each column of the inverse matrix are pre-multiplied by the rows of primary input coefficient matrix. The sum of the products then gives the direct and indirect primary input components in the production of goods in the sector. The results of our calculation for 1960 and 1965 are shown in Table 32.[7] From

---

[7] See Appendix I, Table 20 for the direct primary input coefficients in 1960 and 1965.

Table 32 CUMULATED PRIMARY FACTOR

	1960				
	Import	*Unspecified*	*Salaries and Wages*	*Entre-preneurial Income*	*Indirect Taxes less Subsidies*
Agriculture and Livestock	0.1036	0.0523	0.0728	0.7322	0.0392
Rubber Planting	0.0101	0.0119	0.4083	0.5512	0.0185
Forestry	0.0007	0.0936	0.2665	0.4889	0.1509
Fishing	0.0568	0.0066	0.1290	0.8010	0.0066
Mining	0.0724	0.0644	0.2134	0.4668	0.1829
Food Industries	0.1598	0.1513	0.1323	0.5176	0.0390
Beverages	0.2887	0.1435	0.1949	0.3566	0.0164
Tobacco	0.6638	0.1037	0.0573	0.1550	0.0203
Textiles	0.7001	0.0499	0.1265	0.0981	0.0253
Clothing and Footwear	0.1742	0.2489	0.2102	0.3436	0.0231
Wood and Cork	0.0216	0.1300	0.3036	0.4211	0.1236
Furniture and Fixtures	0.1431	0.1023	0.4105	0.2711	0.0730
Paper and Paper Products	0.6585	0.1187	0.0710	0.1027	0.0492
Printing and Publishing	0.2445	0.1605	0.2738	0.3021	0.0191
Leather and Leather Products	0.2664	0.1941	0.1462	0.3564	0.0368
Rubber Processing	0.0486	0.0286	0.3811	0.5257	0.0161
Rubber Products	0.1446	0.1658	0.3010	0.3704	0.0182
Chemical Products	0.1600	0.1225	0.0937	0.5609	0.0629
Products of Petroleum and Coal	—	—	—	—	—
Non-Metallic Mineral Products	0.1940	0.1728	0.2122	0.3922	0.0388
Basic Metal Industries	0.3208	0.0502	0.1591	0.3398	0.1300
Metal Products and Machinery	0.2725	0.2177	0.2760	0.1991	0.0347
Mis. Manufacturing Industries	0.1442	0.6592	0.0985	0.0851	0.0130
Construction	0.2692	0.0823	0.3507	0.2364	0.0614
Electricity and Water	0.1500	0.1003	0.2740	0.4465	0.0292
Transportation and Communication	0.1094	0.0805	0.3751	0.2683	0.1666
Wholesale and Retail Trade	0.0111	0.0386	0.1216	0.3987	0.4302
Banking and Insurance, etc.	0.1285	0.0536	0.3047	0.4261	0.0871
Dwellings	0.0193	0.0059	0.0282	0.9160	0.0306
Other Service Industries	0.0211	0.0252	0.7500	0.1797	0.0241

Note: The elements in each row of this table add up to unity apart from rounding-off errors.

INPUT COEFFICIENTS 1960 AND 1965

Total	1965 *Import*	*Unspecified*	*Salaries and Wages*	*Entre-preneurial Income*	*Indirect Taxes less Subsidies*	*Total*
1.0000	0.1143	0.0518	0.0599	0.7339	0.0402	1.0000
1.0000	0.0194	0.0139	0.4439	0.4837	0.0391	1.0000
1.0000	0.0002	0.1295	0.3512	0.3375	0.1814	1.0000
1.0000	0.0186	0.0109	0.1283	0.8274	0.0148	1.0000
1.0000	0.0350	0.0466	0.2077	0.5221	0.1883	1.0000
1.0000	0.2753	0.1346	0.0982	0.4496	0.0424	1.0000
1.0000	0.2816	0.1716	0.1547	0.3569	0.0354	1.0000
1.0000	0.6120	0.1182	0.0440	0.2077	0.0181	1.0000
1.0000	0.5757	0.0768	0.1196	0.1873	0.0405	1.0000
1.0000	0.3568	0.1870	0.1811	0.2423	0.0327	1.0000
1.0000	0.0363	0.1681	0.3361	0.3433	0.1163	1.0000
1.0000	0.1540	0.1729	0.2937	0.3128	0.0665	1.0000
1.0000	0.3180	0.0830	0.1230	0.4487	0.0273	1.0000
1.0000	0.1920	0.2675	0.2937	0.2240	0.0228	1.0000
1.0000	0.4116	0.1781	0.1184	0.2586	0.0334	1.0000
1.0000	0.0272	0.0301	0.4321	0.4743	0.0365	1.0000
1.0000	0.1605	0.1648	0.2559	0.3754	0.0433	1.0000
1.0000	0.1692	0.1369	0.0935	0.5178	0.0828	1.0000
—	0.6966	0.0334	0.0324	0.2272	0.0104	1.0000
1.0000	0.1063	0.1885	0.2004	0.4597	0.0452	1.0000
1.0000	0.1591	0.0406	0.1826	0.4587	0.1589	1.0000
1.0000	0.3311	0.1690	0.2372	0.2275	0.0351	1.0000
1.0000	0.2060	0.5309	0.1068	0.1446	0.0116	1.0000
1.0000	0.2088	0.1154	0.3330	0.2855	0.0580	1.0000
1.0000	0.0643	0.1004	0.3361	0.4711	0.0266	1.0000
1.0000	0.0885	0.0653	0.3899	0.2452	0.2106	1.0000
1.0000	0.0098	0.0863	0.1426	0.4363	0.3248	1.0000
1.0000	0.1231	0.0467	0.4198	0.3263	0.0840	1.0000
1.0000	0.0110	0.0060	0.0175	0.9393	0.0258	1.0000
1.0000	0.0130	0.0353	0.7253	0.2000	0.0263	1.0000

the table it can be seen that the cost per unit of chemical products in 1960 was constituted as follows: imports 16 per cent; salaries and wages 9.4 per cent; entrepreneurial income 56.0 per cent; indirect taxes 6.3 per cent; unspecified 12.3 per cent.

Several other interesting points concerning the cost structure of various industries also emerge from the table. One is that with the exception of 7 sectors, the entrepreneurial income constitutes a greater proportion of the unit cost in all sectors; and in three sectors in particular the proportion of profit content amounts to more than 70 per cent of the unit cost of production. Surprisingly, two of these are from the primary sector namely fishing and agriculture, the third being the dwelling sector. Entrepreneurial income for agriculture in 1960 constituted about 73.2 per cent of its unit cost while for fishing it amounted to about 80 per cent. In 1965, the picture remained essentially the same, with the corresponding ratios for agriculture and fishing being at 73.4 per cent and 82.7 per cent respectively. It may be argued that the high profit ratios in the agricultural and fishing sectors are caused by the high capital intensity of some of their inputs which on the whole are reflected indirectly in the high level of profit ratios. Nevertheless, a closer examination of the *direct* input coefficients of these two sectors reveals that the proportions of entrepreneurial income are equally high there too. For the agricultural sector, the profit ratio was around 69.4 per cent in 1960, and in 1965 it was about 65 per cent. The corresponding ratios for the fishing sector were about 80 per cent and 81 per cent in 1960 and 1965 respectively. While it may be difficult to provide a complete explanation of this strange phenomenon, at least in part it may be attributed to the difficulty of separating the wage element from the entrepreneurial income, particularly in cases of owner-operators, a phenomenon quite common in the primary sectors of the West Malaysian economy. Therefore it is possible that the high profit components in the unit cost structure of the agricultural and fishing sectors may include some of the wages elements. Unfortunately, there is no way of verifying this hunch.

In 1960 the 7 sectors in which the wage element was of a higher proportion than entrepreneurial income, were textiles, furniture and fixtures, metal products and machinery, miscellaneous manufacturing, construction, transportation and other service industries. Of these, the one with the highest wage content was the other service industries constituting about 75 per cent of the unit cost. In 1965 there were also 7 sectors with a higher proportion of wages in relation to entrepreneurial income, but they were not exactly the same 7 as in 1960. The textiles and the furniture sectors with a higher proportion of profit in their unit cost structure in 1965, had apparently become relatively more capital intensive. In contrast, forestry and printing and publishing had a higher proportion of wages in their unit costs in 1965 as compared to their position in 1960. It is tempting to conclude that these industries have become relatively more labour intensive over time. But on the basis of the existing data and in view of the block angularities of the input–output tables such a conclusion would appear rather hasty.

The table also reveals a few interesting facts about the import content of the sectors. The sectors with the highest import content in 1960 were textiles

(70 per cent), tobacco (66.4 per cent) and paper and paper products (65.9 per cent). Though the import content as a proportion of the unit cost of these industries declined slightly in 1965, it was still relatively high as compared to that in other sectors. What is more, a new sector, petroleum, emerged whose import content constituted about 70 per cent of its unit cost.

CHAPTER SEVEN

The Manufacturing Sector

Growth of Manufactures

THE ANALYSIS OF THE STRUCTURE of production in the previous section brings out certain characteristics of the industrial sectors of the economy which may be worth taking into consideration in the formulation of an overall industrial development strategy. It may be useful for example to take account of the forward and backward linkages of at least the major sectors of the economy in evolving a selective set of criteria for directing investments into those fields with promising dynamic growth potential. Furthermore, in selecting the relevant sectors for development, some attention may be given to the unit cost structure of the sectors as it would to a certain extent help to differentiate the labour intensive ones from those which are capital intensive. In general, sectors with a high wage content in their unit cost structure suggest that they are more labour intensive than those whose unit cost is made up of a relatively high proportion of entrepreneurial income. Therefore, if industrialization is expected to create employment opportunities to cope with the rapidly increasing labour force and to alleviate the current unemployment problem, appropriate inducement incentives may be directed to those sectors whose development is considered to be desirable.

However, it must be emphasized that since the analysis of the structure of production has been based on the input–output tables for 1960 and 1965, the conclusions so derived are inevitably affected by the accuracy and comprehensiveness taken into account in the course of constructing such tables. The tables with all the block angularities as such, cannot be completely relied upon for making policy recommendations although they provide some useful insights and point to certain directions where well-devised policy measures are called for. They should be supported by a more detailed analysis of the sectors concerned. As the main focus will hereinafter have to be the manufacturing sector for the future development of the country, this chapter is devoted to its detailed analysis. An attempt is made here to identify and describe some of the more salient features of the manufacturing sector. This is followed by a cross-section analysis of individual sectors based primarily on the data provided by the latest available census of manufacturing industries, 1963. An attempt is also made to compare the crucial variables concerning the manufacturing sectors at different dates and see what sort of structural changes, if any, have occurred over time. For this particular task, the annual surveys of manufacturing industries in West Malaysia are utilized. These surveys concentrate on the larger firms which have a significant growth potential, and as such are likely to be of major importance in the West Malaysian industrialization programme.

Manufacturing in comparison with other activities such as agriculture and services is still a relatively minor activity in West Malaysia although its contribution to GDP, as shown below, increased from 8.7 per cent in 1960 to 11.9 per cent in 1967.[1]

	1960	1967
Agriculture and Mining	43.8	39.4
Manufacturing	8.7	11.9
Construction	3.0	4.3
Services	44.5	44.4

However, it had been growing at an annual average rate of 9.5 per cent in 1960 prices over the same period and with a GDP elasticity of approximately 1.8. In other words, for every 1 per cent increase in the GDP, there has taken place correspondingly a 1.8 per cent increase in the income generated by the manufacturing sector. This rate of growth was faster than those in any other sector except construction and electricity and water. In this connection, it may be of interest to note that manufacturing output is expected to rise at an annual rate of 9.4 per cent in current prices from 1965 to 1970 in the First Malaysia Plan.[2]

The growth of income originating in manufactures has not however been matched by the growth in manufacturing employment. The growth rate of the latter for the period 1962–67 was only 5.9 per cent a year on the average. Although the plan employment target was nearly fulfilled in 1967, the proportion of labour force engaged in manufacturing was still very small. In 1962 about 6.8 per cent of the labour force was engaged in manufacturing and in 1967 it was 8.5 per cent, an increase of about 1.7 per cent over a period of 5 years. Thus it appears that the growth of output was accompanied by a smaller increase in the number of workers engaged suggesting that the capacity to create employment in the manufacturing sector was rather limited and that the rise in output was due to higher capital intensity brought about mainly by investments in the pioneer industries like petroleum and chemicals.

Because of the emergence of several large industries the traditional major industries engaged in rubber processing, printing and publishing, furniture and fixtures, and clothing and footwear have lost their relative importance in the industrial structure.[3] In 1960 the whole manufacturing sector was dominated by the rubber processing sector whose output constituted more than 40 per cent of the total industrial output. By 1966, however, its share in the total industrial production of the country had gone down to 16.9 per cent which in itself was an indication that considerable diversification had been achieved.

---

[1] Prior to 1960, manufacturing is combined with construction. For a more detailed breakdown, see Appendix I, Table 12.

[2] Malaysia, *First Malaysia Plan*, p. 52.

[3] See Appendix I, Table 21.

Apart from the four sectors mentioned above, all other sectors had registered an expansion in their output from 1960 to 1966. Their expansion appeared to be oriented primarily for increase in domestic consumption. Overall, the average proportion of industrial output which went to domestic use was 30.4 per cent in 1965 while the corresponding share for exports was 55.3 per cent.[4] However, if rubber and tin processing were to be excluded, only about 19 per cent of the total output of domestic manufacturing was exported with the consequent rise in the share of domestic use to 60.5 per cent. In 1965, rubber processing and basic metal industries (mainly tin) accounted for more than 80 per cent of the total exports of manufactured products valued at producer's prices. They are however products which involve the least degree of processing as indicated by the ratio of total value added to total value of output. For rubber it was 9.8 per cent in 1965 and for tin it was only 3 per cent as against an average of 26.6 per cent for all other manufactured products. Therefore these two products partake more of the nature of primary products than industrial goods.

Even leaving out tin and rubber, the manufacturing sector is generally dominated by industries with low degrees of processing. Though there are considerable variations in the ratios revealing differences in efficiency and technology, only four industries have a ratio which is above 40 per cent. These are paper and paper products, printing and publishing, beverages and non-metallic minerals.

In regard to manufacturing exports, the main sectors, excluding rubber and tin processing, were the chemical sector which was responsible for 39.7 per cent; food industries 21 per cent; wood and cork 14.3 per cent; petroleum 11.2 per cent; and rubber products 5.8 per cent. For all these sectors with the exception of petroleum, the raw materials import content in their products was very much below the overall average of 25.5 per cent for all manufactured products excluding processed rubber and tin metals. The higher capacity for exports from these sectors was closely related to the comparative advantage which was derived from the use of a higher proportion of domestic raw materials. The significance of this particular aspect of industrialization should be kept in view if it is to serve as a major alternative to the traditional export sector in the long run.

Nevertheless, West Malaysia with a relatively large volume of manufactured imports is still at the stage where a good part of her industrialization process will no doubt take advantage of the home market before entering into exports. As can be seen from the export and import data of the manufacturing sectors in Table 23, import substitution during the period 1960–66 had taken place in a number of sectors of which food manufacturing, beverages, tobacco, rubber products such as shoes and tires, chemical and petroleum products were most apparant.[5] On the other hand, imports of metal products and machinery had been increasing constantly throughout the period revealing that the process of import substitution had been ac-

---

[4] See Appendix I, Table 22.

[5] See Appendix I.

companied by a shift in the demand for capital goods which the country lacked the capacity to produce. On the whole, the progress in import substitution had brought about a diminishing rate of annual percentage increase in total imports of manufactured goods between 1960 and 1966 although in absolute terms total imports did not show a tendency to decline.

At this juncture, it may be pointed out that industrialization is promoted in West Malaysia both in the short run as a source of import savings and in the long run as an alternative source of export earnings. To this end, the manufacturing sector has been nourished by various fiscal incentives and assisted by various degrees of tariff protection. Protection in some form or other is given sporadically and often on an *ad hoc* basis as industrialists come up with certain project proposals, resulting in companies engaged in minor activities such as paper bags, mops, brushes and ice cream receiving pioneer status. Admittedly, the growth of the manufacturing sector as a whole would depend much on the attitude of the government towards enterprises, but a liberal policy would tend to encourage indiscriminate investments, some of which will be less economical in the long run. To avoid the creation of excess capacity and other forms of inefficiency, what is needed urgently is the evolution of a rational set of investment criteria on the basis of which certain industries with greater growth possibilities may be singled out for special treatment.

The Structure of Manufactures

Most of the manufacturing establishments are engaged in food processing, wood and cork, furniture and fixtures, clothing and footwear and metal products. Altogether, they constituted 70 per cent of the 8 856 establishments covered by the 1963 Census of Manufacturing Industries in West Malaysia, but accounted for only 41.7 per cent of the 85,899 workers employed.[6] On average, the number of workers employed by the establishments in these industrial sectors was not more than five per establishment. The only exception was the wood and cork industry whose average was about 15 workers per establishment. On the whole, the majority of the manufacturing establishments were small. About 58 per cent of the total had less than 5 employees per establishment; the larger establishments (50 or more employees per establishment) constituted only 2.1 per cent.[7] The average of all manufacturing sectors was 10 employees per establishment.

From Table 27[8] which shows the per cent distribution of employment among the main industrial sectors, it can be seen that five sectors stood out as being the major source of employment. They were food manufacturing which was responsible for 16.9 per cent; wood and cork 14.1 per cent; processing of agricultural products 11.2 per cent; printing and publishing 8.2 per cent; rubber products 8.0 per cent. On the other hand, there were also five sectors whose contribution to employment was almost negligible. In total,

---

[6] See Appendix I, Tables 24 and 25.

[7] See Appendix I, Table 26.

[8] See Appendix I, Table 27.

basic metal industries, electrical machinery and repairs, paper and paper products, leather and leather products, and plastic products accounted for merely 3.2 per cent of employment in the whole manufacturing sector.

Another characteristic of the pattern of manufacturing employment is provided by the data on the ratio of factory to non-factory total employment and factory to non-factory earnings.[9] In effect, these ratios measure the relative magnitude of factory and non-factory employment and earnings within each industrial sector and thus provide some information on the quality of labour employed. In terms of employment the highest ratio is approximately 52:1 experienced in the hardware, tools and cutlery industry. The lowest is 0.66:1 in the printing and publishing industry. In the former case, the ratio means that for every 52 factory workers, one non-factory is employed; in the latter, for every 0.66 factory workers, one non-factory worker is employed. Although interindustry averages are not particularly meaningful because of the wide variations within each class of industries it may be useful to identify those at the extreme. Among the high ones are:

Hardware, Tools and Cutlery	52:1
Blachan Manufacturing and Canning	45:1
Leather and Leather Products	41:1
Wooden Boxes, Cases and Crates	40:1
Carpentry Shops	38:1

In contrast the industries which have extremely low ratios are the following:

Printing and Publishing	0.66:1
Soft Drinks and Carbonated Beverages	1:1
Distilleries and Wine Manufacturing	1.3:1
Animal Feeds	1.4:1
All Other Machinery and Repair Industries	1.5:1

The same idea can be expressed in terms of earnings. The ratio of total factory payroll to total non-factory payroll within each industry shows some equally interesting results. The carpentry shops rank highest at about 45:1. (For every 45 dollars of factory wage cost, a dollar of indirect salary expense is incurred.) Other high ratio industries are:

Hardware, Tools and Cutlery	43:1
Leather and Leather Products	40:1
Blachan Manufacturing and Canning	39:1

[9] See Appendix I, Table 28.

On the other hand, the low ratio industries are:

Soft Drinks and Carbonated Beverages	0.42 : 1
All Other Machinery and Repair Industries	0.44 : 1
Printing and Publishing	0.45 : 1
Paints, Varnishes and Lacquers	0.49 : 1
Animal Feeds	0.54 : 1
All Other Industries[10]	0.57 : 1
Perfumes, Cosmetics and Toilet Preparation	0.65 : 1
Soaps, Washing and Cleaning Compounds	0.72 : 1
Ice Cream and Other Dairy Products	0.82 : 1
Medicinal and Pharmaceutical Preparation	0.86 : 1

All these ratios cited above are at the very extreme ends as compared to the overall ratios of the entire manufacturing sector which are about 5 : 1 in terms of employment and 2 : 1 in terms of earnings. For all those industries in the low earnings ratio class, total salary payments to non-factory employees exceeds total wage payments to factory employees. In effect, indirect labour costs are greater than direct labour costs. Among manufacturing industries this is not a common phenomenon, but the explanation for it cannot be found in the data available. Moreover, the classification of non-factory paid employees in the 1963 Census is so broad as to include managerial technical, supervisory, general and clerical workers, so that further breakdowns are made impossible. However, some coincidental evidence seems to suggest that these industries may be highly capital intensive requiring very little direct labour. For one thing, the relative degrees of processing in most of these industries are comparatively high, as indicated by their respective ratios of value added to gross value of sales.[11] Except for ice cream and other dairy products, all other machinery and repair, and animal feeds, the rest have a ratio of value added to gross value of sales which is significantly higher than the overall average of the manufacturing sector at 31 : 5 per cent.

For another, the value added per worker in all these industries is very much higher than the average for the entire manufacturing sector. For example, the value added per worker in the perfumes, cosmetics and toilet preparations industry is $22 992 as against the overall average of $4 893, which is almost 5 times higher.[12] Similarly the sector, all other industries, which includes two highly capital intensive industries like breweries and petroleum refineries, has a value added per worker which is roughly four times greater than the average. The only exception among them is the category of all other machinery and repair industries whose value added per worker is slightly below the average. Included in this sector are sewing machine heads, refrigerators, freezers and ice makers and air conditioners. In this particular case, one plausible explanation for indirect labour costs being greater than direct labour costs is that indirect labour may be poorly utilized relative to direct

[10] Includes breweries and petroleum refineries.

[11] See Appendix I, Table 31.

[12] See Appendix I, Table 28.

labour. Alternatively, it may be that indirect labour is over-paid relative to direct labour as suggested by the fact that average annual earnings of non-factory workers are not only 1.6 times higher than that of the entire manufacturing sector but also approximately one and a half times greater than wages in the broad category of machinery and repairs to which it belongs.

In general, the range in average annual earnings both in factory and non-factory employment is extremely wide. In factory employment, the lowest average annual earnings are in other fish preparation and processing at $627; the highest is in printing and publishing at $2 390.

The range of average annual earnings among non-factory employees is even wider than that among factory employees. Perhaps this is to be expected in view of the broad classification scheme adopted. The lowest average earnings for non-factory employees is in the all other wearing apparel industries at $421 per annum, the highest is in the all other industries at $6 983 a year, reflecting the employment of highly skilled technical, engineering and managerial personnel in the breweries and petroleum refinery industries, which are all lumped together in this category.

The distribution of factory and non-factory employees in terms of average annual earnings is shown in Tables 29 and 30.[13] The divisions of class intervals used in these tables are rather arbitrary, but they seem to portray the distribution fairly accurately. Among factory employees, 56.8 per cent work in industries in which average annual earnings per factory employee are between $1 000 and $1 500. An additional 27.4 per cent work in factories in which average annual earnings are between $1 501 and $2 000. In effect slightly more than 84 per cent of the factory workers have an average monthly income between $83 and $166.

Among non-factory employees (again recognizing the diverse make-up of this classification) about 69 per cent have an average annual earnings between $2 501 and $4 000. Another 17 per cent have an average annual earnings over $4 000 as compared to the 14 per cent receiving an average annual income of $2 500 or less. Unfortunately there is no suitable yardstick by which these earnings levels can be judged as being too high or too low, but in comparison with the annual levels of wages of the factory workers, they are slightly more than twice the average.

Another significant feature concerning the manufacturing labour force is that about 76 per cent of them are engaged in industries in which value added per employee is between $2 000 and $5 000 only.[14] Of the remainder, about 19 per cent work in industries producing a value added per employee between $5 001 and $10 000 and only about 5 per cent work in industries where the range of value added per employee is from $10 000 to $15 000 and above. The heavy concentration at the lower end indicates a relatively low level of mechanization and therefore a low level of efficiency in many industries although there is an enormous variation in techniques and efficiency among the enterprises. An indication of the magnitude of variation between industry groups can be seen from the way in which value added per employee varies from $22 992 for perfumes, cosmetics and toilet preparation,

---

[13] See Appendix I.

[14] See Appendix I, Table 32.

through $14 464 for the all other non-metallic products industries and $10 001 for ice cream and other dairy products, to a low of $2 197 in the other fish preparation and processing.[15] As there are limits to the contribution to production which can be made by labour unaided by machinery, it may be assumed that the great variations between industry groups in value added per employee are a reflection of the difference in the degree and quality of mechanization.

Apart from the differences in value added per employee, considerable differences also exist in value added in relation to gross value of sales (expressed in percentage terms) between industry groups, implying that there are considerable variations in the amount of processing done. On the whole, manufacturing in West Malaysia is dominated by industries where the degree of processing is low. For the processing of estate type agricultural products in factories off estates division the ratio is only about 9.6 per cent.[16] The ratio is generally higher for all groups in the other manufacturing industries division, with an overall average for this division of 31.5 per cent. Within the division, the range is very wide, varying from 83.5 per cent for small rice mills to 7.5 per cent for refined coconut oil. Since small rice mills are, by definition, those which are licensed to mill padi for fees, in comparison with large rice mills, which are licensed to buy padi for milling, they consume little or no raw material input. As such, practically all of gross value will then be made up of the contribution of labour and capital, giving it an extremely high net to gross ratio. In the case of refined coconut oil, the position is just the reverse. Raw material input constitutes more than 90 per cent of its gross sales; as a result its ratio is extremely low.

Splitting up the value added of the industry into 3 different component parts such as non-wage income, factory wages and non-factory wages, and using the proportion of value added going to labour as a whole, as a rough yardstick of the industry's labour-intensity, it is found that the manufacturing sector is dominated by non-labour intensive industries with only an overall average of 36.4 per cent of value added as the income share of labour.[17] There are only 8 main industrial sectors which have a ratio significantly above the average and therefore may be regarded as relatively labour intensive. These are:

	per cent
Transport Equipment and Repairs	58.2
Machinery and Repairs	55.9
Printing and Publishing	52.9
Wood and Cork	49.1
Rubber Products	44.4
Basic Metal Industries	42.5
Furniture and Fixtures	41.8
Metal Products	40.7

[15] As part-time workers are also included in the calculations these figures are understated. See Table 28.

[16] See Appendix I, Table 31.

[17] See Appendix I, Table 31.

Except printing and publishing, the bulk of the labour employed in these major industrial sectors is essentially unskilled manual workers.

The reciprocal of these percentages represents the proportion of value added retained to cover overhead items such as rent, power, depreciation, capital charges, selling and promotional expenses (excluding salaries) and to provide the firm with a margin of profits. Nevertheless, the size of the non-wage income may be regarded as a rough indication of the capital intensity of the industry for want of a better measure of capital investment.[18] In general therefore, industries with a high percentage of value added going to non-wage income may be regarded as capital intensive industries. In this context, the following 15 industries may be considered as highly capital intensive as they have a size of non-wage income which is above 75 per cent of the value added:

	per cent
Rubber Latex Processing	77.5
Blachan Manufacturing and Canning	75.5
Other Fish Preparation and Processing	80.0
Other Grain Mills	78.5
Soya Bean Products Factories	88.4
Tobacco Products	79.6
Clothing Factories	77.6
Leather and Leather Products	75.2
Refined Coconut Oil	76.9
Paints, Varnishes and Lacquers	77.1
Soaps, Washing and Cleaning Compounds	76.0
Medicinal and Pharmaceutical Preparation	86.7
Perfumes, Cosmetics and Toilet Preparations	91.9
All Other Non-Metallic Products	82.5
All Other Industries	81.2

It should be noted that the majority of these industries have been given pioneer status and these are industries which do not have a very great potential for absorbing large numbers of employees. Nor do they, judging from annual earnings per employee, pay very many high wages. As a result, the secondary employment effects generated by them are also negligible. Furthermore, these industries can hardly be expected to provide any substantial technical and executive training to local personnel as most of the labour employed by them are mainly unskilled manual workers. The only exceptions are those which are classified under the chemicals and chemical products sector in which the proportion of value added going to non-factory wages is substantially higher than the corresponding proportion going to factory wages.

[18] No data on investments in fixed plants and equipment are given in the 1963 Census.

Industrialization Programme and the Manufacturing Sector

Although the survey data as described above is available from 1959 through 1967, there exists a hiatus from 1962 onwards in a number of industries due to extended coverage. As a result there are two sets of data for 1962; one, comparable with details for previous years (1959 to 1961 inclusive), the other comparable with those from 1962 onwards. It is obvious that importance should be attached to data that forms the basis for comparison with future years; therefore, our analysis is mainly confined to the period of 1962–67.

Even then, not all the data found in the annual surveys from 1962 onwards is comparable. Adjustments for omissions of certain industries which are being introduced year by year, are made as far as possible. Many of these industries which are freshly brought under coverage are conveniently lumped under the category of 'other covered industries' so as to satisfy the secrecy requirements,[19] this has the effect of making this particular category non-comparable. To ensure some degree of comparability, industries like animal feeds, printing and publishing, job and commercial printing and bookbinding, sago and tapioca factories and manufacturing of textiles are omitted. As such, for 1962–66, the 'other covered industries' category includes tea factories off estates; pineapple canning; edible vegetable oils and fats; hydraulic cement; other iron and steel basic shapes; non-ferrous metals rolling, casting and extending; and measuring, controlling, laboratory and scientific instruments. But for 1967, the category 'other covered industries' also includes assembly of automobiles and lorries, as there is no means of extracting the latter from the rest. For this reason the data for this particular sector should be treated with some reservation especially when comparisons are made. This reservation also applies perhaps with greater force to the category of 'pioneer companies not included above'. As new companies are formed under the Pioneer Industries Ordinance, new additions are made to this category, but no details are published concerning the type of manufacturing activities in which they are involved. Therefore, the growth aspects of output, value added and even the number of establishments in this particular category are mainly determined by the rate at which new companies emerge annually.[20]

As can be seen the number of pioneer establishments increased from 27 to 54 between 1962 and 1967 which constituted a 100 per cent increase although on a very small base. However, the increase in pioneer establishments had been accompanied by a decline in the number of establishments in most of the traditional major industries. As a result the overall increase in the number of establishments during the 1962–67 period was only about 4 per cent.

The overall impression derived from the table is that most of the traditional major industries have recorded slight losses in their relative importance

---

[19] Under the Statistics Ordinance, the Department of Statistics is prohibited from making available to any person or body outside the Department itself any information on individual reporting units. This means that information must be published in such a way as to conceal the identity of individual establishments or companies.

[20] See Appendix I, Table 33.

as measured by the number of establishments. To a certain extent it should be realised that most of the decreases shown are of a statistical nature. Since the number of establishments in practically all major industry groups covered by the surveys are so few, the closing down of even one or two establishments resulting from the inability to cope with ordinary business competition, is clearly exhibited as a significant per cent decrease in the number of establishments. Nevertheless the number of establishments engaged in processing agricultural products and in manufacturing tobacco products had been persistently declining since 1962.[21] In the former case it may be that some of the establishments engaged in rubber remilling and latex processing had difficulty in earning sufficient profit to keep going in view of the unabated fall in the price of rubber, and as a result the marginal establishments closed. In the latter, the entry of two large tobacco concerns after 1960 may have caused the exit of some smaller ones because of the resultant competition. To a certain extent this phenomenon is reflected in the growing average size of the establishments in the tobacco industry as measured by the number of full-time workers per establishment.[22]

In 1962 there were 142 establishments in the tobacco industry with an average number of 27 full-time paid employees. In 1967 the number of establishments had gone down to 123 but the number of full-time paid employees per establishment had gone up to 30. Similarly, the number of full-time employees per establishment in the rubber products industry had increased from 120 in 1962 to 176 in 1967 as a result of a reduction in the number of establishments from 46 to 41 over the same period. In the case of the pioneer establishments, however, the growth in the average size of the establishments was closely associated with the increase in the number of large pioneer establishments where the annual per cent increase during the period averaged out at 15.9 per cent. On the whole, the average size of the establishments in most of the major industries surveyed had increased, albeit slowly. The two exceptions were beverage and transport equipment in which the average size of the establishments remained almost stationary but with a general tendency to decline slightly.

Over the period the number of full-time employees had increased by 38.4 per cent with an average annual compound growth rate of 6.5 per cent for all surveyed industries.[23] Hidden behind this overall growth rate were considerable variations in the labour absorption rate between major industry groups. Because of the high annual rate of increase in pioneer establishments, the average annual compound rate of growth in employment in the pioneer companies group was 28.8 per cent which was significantly higher than all the other major surveyed industries. In general high employment growth rate is correlated with high annual per cent increase in establishments and vice versa. For example, the annual decline in the number of establishments in the beverage, tobacco and manufacture of transport equipment industries is

---

[21] See Appendix I, Table 34.

[22] See Appendix I, Table 35.

[23] See Appendix I, Tables 36 and 37.

exhibited in their negative employment growth rates. This is true for practically all major industries except for the wood, rubber products and chemical industries. In these three industries, it appears that there was an overall shortage of workers so that the surplus labour resulting from the closing down of a few small establishments was readily absorbed by other establishments. This is particularly evident in the case of the rubber products industry where a 4.7 per cent reduction in the number of establishments in 1965 was accompanied by a 6.5 per cent increase in employment resulting in a sharp rise in value-added per full-time employee of about 36.8 per cent.

The wide variations in the employment growth rates between the major surveyed industries seem to have changed the relative importance of the industries from the viewpoint of employment over a relatively short period of time. In terms of employment, the relative importance of the traditional major industries engaged in processing agricultural products and in manufacturing beverages, tobacco and transport equipment, had been persistently declining between 1962 and 1967.[24] The only exception was the wood products industry which kept its position as the largest employer since 1962 even in the face of the rising importance of other new and pioneer industries whose share had increased from 3.6 per cent in 1962 to 9.3 per cent in 1967; indeed it ranked fourth in importance in terms of employment. The growing importance of the pioneer industries as an employer is mainly attributed to the high employment growth rate which in turn is closely related to the emergence of newly formed companies every year.

While the share of employment of the pioneer industries expanded by 5.7 per cent among the total surveyed industries, the corresponding share of output expanded by 17.1 per cent over the same period, and had been growing at an average annual compound rate of 61.9 per cent. As output growth of the pioneer industries has been accompanied by a smaller increase in the number of workers employed, the increase in output may be attributed to the capital-intensive nature of these new industries.

In direct contrast is the traditional industry connected with the processing of agricultural products in which the relative share of employment and output has been constantly contracting. By 1967 its share in employment had contracted by 7.9 per cent and output by 17.6 per cent. In growth terms, its employment creation rate is negligible at 0.9 per cent per annum while its output or sales have in fact declined at an average annual rate of 2.0 per cent.[25] In respect of sales, however, the figures may be misleading because rubber processing accounts for the greater part of this group, and as such, the figures are more a reflection of the secular downward trend of rubber prices rather than of output. In fact there was an increase in output.

Apart from the pioneer industries, the greatest annual rate of output growth occurred in the group other covered industries (20.7 per cent) mainly pineapple canning, hydraulic cement, tea and edible fats. Also higher than the average for the total number of industries surveyed at 11.2 per cent a year

---

[24] See Appendix I, Table 38.

[25] See Appendix I, Table 39.

were a group of industries with annual growth rates as follows: rubber products 16.2 per cent; chemicals 13.3 per cent; non-metallic mineral 14.4 per cent; basic metals 13.3 per cent; machinery 11.7 per cent. These reflect the relative buoyancy of constructional activities during the period.

For all the major industries surveyed, output between 1962 and 1967 had increased by 70.3 per cent for the group as a whole.

In terms of value added or net value of output, the increase over the same period was 112.9 per cent and had been accelerating at an average compound rate of 16.3 per cent a year. This increase is very substantial and if it were sustained throughout all manufacturing, the West Malaysian manufacturing sector would be expanding at a phenomenal rate. Unfortunately, the industries covered by the annual surveys are not typical. Most of them were selected because of their 'above-average growth potential'.[26] The pioneer industries whose value added had been expanding at an average compound rate of 63.5 per cent a year, were also included in the survey. Therefore, by implication the increase in value added of the industries which had not been included in the annual survey would be less. Even among the industries which were included in the annual surveys the value added growth rates differed considerably. They varied from 63.5 per cent for the pioneer companies to a negative rate of 2.1 per cent for the manufacture of transport equipment.[27] Also notably higher than the overall rate for all surveyed industries were the rates for the other covered industries (22.2 per cent), rubber products (21.1 per cent) and tobacco (17.2 per cent). On the low side were the traditional industries such as processing of agricultural products (2.5 per cent), food (13.4 per cent), beverage (4.6 per cent), wood (9.0 per cent), chemicals (14.1 per cent), non-metallic minerals (12.1 per cent), basic metals (14.9 per cent) and manufacture of machinery (10.8 per cent) apart from the transport equipment industry.

With the growth of the newer industries, the relative importance of the different major industry groups in terms of value added had also changed considerably.[28] In particular, the high growth rate of the pioneer industries group raised this group's share in total value added from 3.4 per cent in 1962 to 18.2 per cent in 1967, and ranked first among the major industry groups in terms of value added. On the other hand, the predominant position of the traditional industries engaged in processing of agricultural products in terms of value added in 1962 had been eroded under the impact of the high growth rates of the newer industries. In 1962 processing of agricultural products accounted for 16.7 per cent of total value added, but by 1967 its share had declined to 8.8 per cent.

Despite the impressive rise in output and value added of manufactures during the 1962–67 period, two aspects of the pattern of recent industrial growth gave cause for concern. First, most of the industries which had demonstrated high growth potentials were engaged in simple processing and

---

[26] See Federation of Malaya, Survey of Manufacturing Industries, 1960, p. 1.

[27] See Appendix I, Table 40.

[28] See Appendix I, Tables 41 and 42.

had not shown any tendency to advance into higher stages of processing over time.[29] This is true not only for the more traditional industries engaged in processing of agricultural products and food but also for the pioneer industries as a group. For the latter, the ratio of total value added to the value of total output was about 24.3 per cent in 1962 which was slightly above the average for all surveyed industries. In 1967 the corresponding ratio had improved slightly at 24.9 per cent but was much below the overall average of 27.5 per cent for the industries surveyed. By contrast, the ratio for the tobacco products industry had gone up from 18.9 per cent in 1962 to 30.3 per cent in 1967. Similarly in the case of rubber products the ratio had improved appreciably over the same period.

Second, the rise in the output of all the industries surveyed by 70.3 per cent between 1962 and 1967 had been accompanied by a 79.1 per cent increase in total wages and salaries. The element for concern in this respect is that the rate of increase in the total wage bill was faster than the rate of increase in output. Output had been increasing at an average annual compound rate of 11.2 per cent while the wage bill had been expanding at the rate of 12.4 per cent per annum. However, from 1962 to 1967 average annual value added per worker increased by 53.9 per cent and had been expanding at an average compound rate of 9.0 per cent per annum. Average annual wage on the other hand increased by only 29.5 per cent over the same period and was growing at a compound rate of 5.3 per cent on the average.[30]

Nonetheless, for almost half the number of the major industry groups surveyed annually, average annual wage was growing at a faster rate than average annual value added per worker.[31] The industries concerned were processing agricultural products, beverage, chemicals, non-metallic minerals, basic metals and transport equipment. In all these industries, labour productivity had fallen behind as shown by the changes in the indices of wages and productivity by major industries since 1962.[32] Also in the case of wood and the other covered industries, labour productivity only barely managed to keep pace with wages. Thus, it appears that the prospect of a rising labour cost is an imminent problem which most of the industries in West Malaysia will eventually have to face as this past trend is likely to persist into the future. This being so, it does not augur well for the country's industrial development since low labour cost is often, *inter alia*, a necessary condition for a successful launching of an industrialization programme.

---

[29] See Appendix I, Table 43.

[30] The calculation of average annual wage is based on full-time paid workers only, and it includes non-factory workers. No distinction between factory and non-factory workers is made because such breakdown is not available for the other covered industries and the pioneer industries which have been included in the study. See Appendix I, Tables 44 and 45.

[31] See Appendix I, Tables 45 and 46.

[32] See Appendix I, Tables 47 and 48.

CHAPTER EIGHT

A Survey of Governmental Measures to Promote Industrial Development in Malaysia

Evolution of Industrial Policy

HISTORICALLY, Malaya was a typical importer of finished manufactured goods against highly concentrated exports of raw materials. Duties on imports were low and preferential treatment was given to goods from the Commonwealth countries. Since 1957 an overt strategy of industrialization was adopted. The strategy was based upon maintaining conditions in which private enterprise industry could grow virtually without any exchange and other controls, while public investment was devoted to infrastructure development and the advancement of the poorer peoples and areas of the country.

In line with this general strategy various policies were devised to create and maintain a stable investment climate. Taxes and tariff were kept low. Various financial and non-financial inducements were offered to local as well as foreign entrepreneurs. Investment incentive legislation was promulgated, modified, revised and re-enacted from time to time as experience in this direction was accumulated.

The laissez-faire approach to industrial development had originated in the recommendations embodied in the report on the 'Economic Development of Malaya' made by the IBRD Mission at the request of the governments of the Federation of Malaya, the Crown Colony of Singapore and the United Kingdom in 1955.[1] In their discussion on the importance of industry to Malaya's development, the Mission suggested a two-fold role to the government in relation to manufacturing. One aspect was to provide adequate basic services like electric power, water supplies, transport, communications etc. The other was to foster individual enterprise and to create a favourable climate for its development. In particular the Mission recommended the following:

(a) establishment of technological and market research services for secondary industry;
(b) emphasis on industrial and vocational needs in educational and training programmes;

---

[1] I.B.R.D., '*Report on Economic Development of Malaya*', John Hopkins Press, Baltimore, 1955.

(c) active steps to interest overseas firms in Malayan industrial projects where their technical know-how may be important;
(d) improvement of facilities for the financing of sound industrial projects;
(e) close attention to the economic situation of secondary industries in determining fiscal, monetary and other policies;
(f) extension of official services to assist in the acquisition of factory sites and to help new enterprises overcome other initial problems; and
(g) Use of the tariff in the Federation as a means of encouraging development, not to shelter inefficient or hopelessly high-cost industries but as an impetus to enterprises otherwise very near or only just over the margin of profitability or initially handicapped by temporary obstacles.[2]

In connection with the discussion on protective measures for encouraging the growth of industries the Mission mooted the question of income tax exemption to 'pioneer' industries. It noted that several underdeveloped countries including some British colonies adopted this measure in their industrialization programmes; but it was not in favour of a similar step being taken by Malaya then. Instead, it argued that general concessions along the lines of depreciation allowances and tariff protection were likely to be more effective in encouraging industrial development than any attempt to distinguish 'new' industries as such under the pioneer industry legislation. They were of the opinion that new industries would mostly grow out of the wide range of existing enterprises, and special income tax concession to 'new' industries would involve 'invidious comparisons of a very difficult and unnecessary kind'.[3]

The referred depreciation allowances were those provided in respect of capital expenditure on industrial buildings, machinery and plants in any trade, business or industry under the original Malayan Income Tax Ordinance of 1947.[4] In respect of capital expenditure on industrial buildings, the income tax ordinance authorized an initial allowance of 10 per cent and 20 per cent in respect of other capital expenditure. Thereafter, annual depreciation was allowed for the former at the rate of 2 per cent and for the latter at rates varying from 5 per cent to 20 per cent (computed on the basis of the original cost of the asset as reduced by the initial and annual depreciation allowances of previous years).

No specific recommendations were however made to increase the existing initial and annual depreciation allowances. Seemingly, the Mission believed that the existing provisions for depreciation allowance were quite adequate. On the other hand, the Mission recommended that the protective effects and possibilities of the tariff should be deliberately recognised and systematically reviewed. To accomplish this review, to provide for investigation of applications for protection and to safeguard against its abuse a Division of Industrial Development was to be set up.[5]

---

[2] Op. cit., IBRD, p. 123.

[3] Op. cit., IBRD, p. 437.

[4] Federation of Malaya, *Income Tax Ordinance*, 1947 (Malayan Union Ordinance, No. 48 of 1947), Government Press, 1961.

[5] *Ibid.*, IBRD, p. 438.

Other than laying down the aforementioned broad principles of industrial policy and indicating the range of industrial opportunities available, no specific incentive measures for promoting particular industrial ventures were recommended, because the final judgment about particular ventures was thought to rest mainly with the private entrepreneurs who were likely to remain the principal agents and initiators of industrial development. Indeed the latter task was regarded as beyond the scope of the kind of investigation which the Mission was requested to undertake.

The broad principles of industrial policy as outlined in the IBRD Report of 1955 were accepted and incorporated by the Alliance Party in its Election Manifesto which had as its declared aim assisting the development of the country, *inter alia* by:

(1) encouraging investment of local capital;
(2) attracting overseas capital;
(3) amending the income tax law with a view to encouraging the development of new industries;
(4) facilitating the development of industrial sites for new industries;
(5) providing efficient and reliable transport by road, rail and air;
(6) giving full employment to labour, including training facilities.

In May 1956, the Minister for Commerce and Industry directed that preliminary steps should be taken to formulate an industrial development policy in accordance with the declared aims of the Alliance Government. A Working Party was set up with the general aim of recommending the implementation of a policy whose broad outline had already been stated in the Government's electoral platform. On the 24th of January 1957, the Working Party submitted its report endorsing and further spelling out in detail the broad policy guide-lines as laid down by the IBRD Mission in 1955.[6] In addition, the Working Party pointed out that the government could provide some inducements to foreign as well as local capital by allowing free transfer of capital and earnings and guaranteeing that nationalization would not occur.

In respect of the introduction of pioneer industry legislation however, the Working Party took a different stand from the IBRD for the following reasons:

(1) The establishment of a pioneer industry was in the nature of a gamble; and prospective investors, motivated by profits, were more likely to be attracted to a territory which guaranteed some measure of relief from income tax during the period in which the industry was becoming established. Their decision to invest was greatly if not wholly, influenced by the anticipated commercial profitability which in turn was significantly influenced by the potential size of the tax bill.
(2) The cost of providing pioneer industry relief by way of temporary tax exemption was small since it was merely a matter of foregoing tax on profits which would not have risen had the new capital not been

---

[6] Federation of Malaya: Report of the Industrial Development Working Party, Government Printer, Kuala Lumpur, 1957.

invested. Should, however, this form of inducement not be successful in attracting new capital, there would be no cost whatever to the country. Compared to this incentive, the other method of providing increased capital allowances in particular initial allowance, was likely to prove more costly in terms of revenue.

(3) Increased capital allowances as an incentive measure might also be less efficacious than the tax holidays since it was reasonable to suppose that the psychological effect of the former on the potential investor was far less than the feeling of confidence which was likely to be created by the latter. Moreover, if the measure of increased capital allowances did not achieve its objective, there was a material cost to the government.

(4) Since the cost of a tax exemption programme was likely to be small, there would not be much to lose and possibly much to gain from introducing special legislation or amending the existing income tax legislation to provide special inducements of the type of tax holidays for the establishment of new industries.[7]

The case for tax holidays as put forward by the Working Party appears to be based on the claim that it will induce domestic and/or foreign investors to initiate industrial activities which they would not otherwise undertake, or to increase their investments in existing enterprises. The claim is based on two assumptions:

(a) Tax considerations are extremely important in investment decisions;
(b) Tax incentives will publicize and improve the nation's investment opportunities for both domestic and foreign investors.

No careful study of these underlying assumptions had been made by the Working Party. This may be attributed partly to the strong common sense appeal of these simple assumptions and partly to the difficulties involved in the undertaking of such a study. For example, a very rough estimate of the cost to the government of various incentives will require very complicated computation for which the relevant statistics and data are lacking. In addition, the fact that many other countries also give liberal incentives in order to attract new investments in industry might have been a contributory factor which influenced the Working Party's favourable disposition towards the introduction of pioneer industry legislation to promote industrial development.

The Government adopted the Report of the Industrial Development Working Party in *toto* and issued a statement declaring that its policy was to create such an investment climate and provide such inducements as would attract local and overseas capital to develop secondary industries. To implement its industrial development policy the government established an Industrial Development Division within the Ministry of Commerce and Industry which was to provide information service and to act as advisor to prospective industrialists. The government itself had no intention of entering

---

[7] Op. cit., Working Party, pp. 37–38.

industry and only sought to create those conditions wherein private enterprise would flourish. Thus in the Second Malayan Five Year Plan it was stated that 'the basic contribution that Government can make to industrial growth is the preservation of a sound and stable monetary and financial climate, free from all the restrictions, controls and uncertainties which are the inevitable accompaniments of financial instability and inflation'.[8] Beyond this, the following were the measures which the Government considered should be taken to encourage industrial development:

(1) The development of public utility services for industry.
(2) The restructuring of the educational system to meet the necessary manpower requirements for the establishment and operation of modern industry.
(3) The direct development by the Federal Government of industrial sites.
(4) The establishment of industrial credit institutions.
(5) The establishment of additional facilities for industrial research with a view to improving the methods of production of local industries.
(6) The giving of guarantees regarding the security of foreign capital investments and freedom to remit profits and repatriate capital.
(7) The establishment of a Tariff Advisory Board to consider applications for tariff protection and assistance by way of exemption or partial exemption from duties on materials imported for manufacturing purposes.
(8) The introduction of pioneer industry relief.

No statement however could be found in the Second Five Year Plan concerning the aim of the industrialization strategy which had evoked legitimate criticism. It was only in the First Malaysia Plan, 1966–70 that this lacuna was partly filled. According to it, reliance is to be placed on the manufacturing sector, both in the short run as a major source of import—competing goods, and in the long run as a major alternative to the traditional export sector.

Measures for Industrial Development

Public Utility Services

The Government limited its role to fostering a suitable investment climate through the above measures, and hoped that the process of industrialization would be hastened in the country. As such, it gave priority to providing infrastructure facilities during the first two Five Year Malayan Plans, 1956–65.

Under the First Five Year Plan, 1956–60 about 44 per cent of the total expenditure was allocated to transport, communications and utilities, but actual expenditure on improving roads, railways, posts, civil aviation, postal services, telecommunications, electricity and water supplies turned out to be

---

[8]Federation of Malaya, *Second Five-Year Plan*, 1961–65, Government Printer, Kuala Lumpur, 1961, p. 19.

10 per cent higher, amounting to about 52 per cent of the estimated actual public development expenditure.

The emphasis on infrastructure development was continued during the period of the Second Five Year Plan, 1961–65. About 52 per cent of the total public sector investment again went to power and water utilities, transport facilities and communication, in which investment expenditure was $1 467 millions; nearly treble the $496.7 millions in the previous quinquennium. These expenditures resulted in a high standard of basic services.

However, under the First Malaysia Plan 1966–70, a change of emphasis was made, as indicated by the expenditure proposals. Only about 40 per cent of the total expenditure was earmarked for infrastructure development compared with 52 per cent in 1961–65. More emphasis was given to production promotion in agriculture and to related technical training, and less to the maintenance and improvement of transportation and other social amenities.

Although the allocation of investment resources in favour of creating economic and social infrastructure cannot be strictly considered as a specific incentive measure to promote industrial development, the growth of the manufacturing sector as a whole has been considerably encouraged by and benefited from the good infrastructure facilities made available by the Government as part and parcel of its effort to foster the right investment climate in the country.

Expansion of Trade and Technical Training

The Government also took some measures to shift the educational emphasis away from the literary towards the scientific and the practical, not only in respect of vocational education but also the general education that must precede it. The government was aware of the importance of relating educational development to economic needs, and as a result education and training have been accorded very high priority as reflected in the public development expenditure in the Second Malayan Five Year Plan, 1961–65 amounting to $277.4 million, almost five times as much during the First Plan. Under the First Malaysia Plan, 1966–70, $440.8 or about 12 per cent of the total public development expenditure is provided.

The restructuring of the traditional system of education to meet the objectives of nation-building and universal literacy and to meet the needs of manpower requirements was started in the 1961–65 period. Universal free primary education was introduced in 1961 in West Malaysia and in East Malaysia in 1966. A re-organization of the secondary school system was effected through the introduction of the comprehensive system of education in 1965. Under this system, all students completing primary education are offered a further three years of education in lower-secondary classes during which they receive general education with a vocational or technical emphasis on industrial arts (woodwork, metalwork, electricity and power mechanics), agricultural science, commercial studies and home science. At the end of the three-year course, 45 per cent of these students after passing an examination are selected for a further two years of post-comprehensive education. During the two years of post-comprehensive education, the students pursue

courses consistent with their aptitudes and interest in technical, vocational or academic fields.

Steps are already being taken to ensure that science, technical and vocational teaching facilities are available at the upper-secondary level. The assistance of the World Bank was sought in 1969 to establish six vocational schools, three agricultural schools and five technical schools. A further seven vocational schools are to be established by converting three 'continuation schools' and four former trade schools into full vocational schools. Two existing 'continuation schools' are also to be converted into full agricultural schools. For East Malaysia, World Bank assistance has been obtained to establish three new general secondary schools, to extend two existing schools in Sabah and to expand a vocational school in Sarawak.

The Technical College and the MARA Institute of Technology which are intended primarily for the training of technicians to diploma level are to be expanded to meet the nation's demand for technicians. A new Polytechnic is being built in Ipoh with UNDP/SF assistance and a new college called Tunku Abdul Rahman College is established in Selangor. Expansion of the Agricultural College at Serdang is also contemplated. Finally the Central Apprenticeship Board and the Industrial Training Institute in Kuala Lumpur organize specific training arrangements tailored to particular skill requirements. A second Industrial Training Institute is to be constructed at Butterworth with assistance from the government of the Federal Republic of Germany.

In the field of management training, the National Productivity Centre which was established with UN Special Fund assistance in 1961, offers short-term courses in management, management accounting, industrial relations, sales, marketing, industrial engineering and in light industry services.

Two more institutions of higher learning; University of Penang and the National University were established in 1969 in addition to the University of Malaya in Kuala Lumpur which is the twin of the University of Singapore, both having been established in 1962 out of the old University of Malaya in Singapore.

Though the restructuring of the educational system toward a technical and vocational bias has been greatly accelerated during the period of the First Malaysia Plan, there are still three obstacles. One is that there is a great shortage of teachers of the sciences and technical and vocational subjects. The problem is recognized by the Government who negotiated for help in this field with the ILO, Canada, Australia, New Zealand and India under the Columbo Plan. However, these are only temporary measures for it is essential that Malaysia should train its own teachers. Priority is therefore given in the First Malaysia Plan to expanding teacher training facilities. The Technical Teacher Training Colleges were also expanded and a new vocational teacher training college established in Kuantan. Also, a UNDP/SF programme for Trade Instructor Training was launched in 1969 to cater for the considerable need for teachers to support vocational training as well as to meet the needs for trade instructors in other government and quasi-government agencies. A further request has also been submitted to UNDP to assist in establishing

an Agricultural Teacher Training programme at the Teacher Training College in Johore Bahru, to cater for 60 trainees in 1970, raising it to 150 by 1972.

Another obstacle is the conservative attitude of the general public, which traditionally has low esteem for any form of manual, artisan and semi-skilled work. Such an attitude is reflected in a suspicion held by many employers of those trained in vocational institutions.

With the exception of agriculture, there is a further problem in that it is not clearly known at this stage what precise kinds of skills will be needed. Because of the relative lack of industry in Malaysia, it is important that those undergoing training courses should gain experience of work under industrial conditions. On the other hand, because the kinds of industry Malaysia will attract cannot be accurately foreseen, it is equally important that most technical courses given within the country should include general as well as special training.

The extent to which any programme of vocational education can be implemented will therefore largely depend on how quickly all the above problems are solved.

Industrial Estates

The development of industrial estates forms part of the Government's strategy to provide infrastructure facilities for industries. On such estates the basic industry requirements such as land, water supply, electric power and efficient transportation facilities and other necessities like telephone services are made available. Trust funds have been established by the Federal Government to assist State governments to develop such estates. Land plots earmarked for the development of industrial estates, although legally owned by the State governments, can be leased to industrialists for periods up to 99 years. In some cases State governments may in addition grant other concessions, such as reduction in property taxes.

At present there are eight established industrial estates in West Malaysia: Petaling Jaya, Batu Tiga, Mak Mandin, Kamunting, Tasek, Senawang, Larkin and Tampoi—covering an area of about 3 200 acres, of which 1 150 acres, or about 36 per cent, have already been occupied. In addition three other industrial estates embracing approximately 2 500 acres are currently under construction at Prai, Menglembu and Tanah Puteh (Kuantan). In East Malaysia there are three established estates at Kepayan and Likas (Sahab) and Sungei Antu (Sarawak) and another is currently being developed at Bintawa (Sarawak).

All these industrial sites are made readily available for purchase by the prospective industrialists, but the construction of the factories is left to the industrialists themselves. However, facilities exist within the Malaysian Industrial Estates Limited (MIEL), to assist small and medium industries to acquire factories on credit terms. This body, instituted in September 1964 as a subsidiary of the Malaysian Industrial Development Finance Board (MIDF) with an authorized capital of $10 million provides assistance specifically to small industries in purchasing suitable factory buildings and sites.

MIEL may extend loans of up to 80 per cent of the total cost of land and

factory buildings for an agreed long-term period provided certain conditions with regard to factory location, field of operation etc. are met. Factory mortgage loans and arrangements for hire purchase facilities at favourable rates may be made up to 75 per cent of the c.i.f. price of imported goods required.

MIEL itself undertakes considerable preparatory work in the establishment of industrial estates by advising state governments in plotting industrial areas, in the lay-out of infrastructure facilities and the grouping of industries. In several cases MIEL has participated actively in advanced construction of a limited number of factory buildings. On the other hand, it provides advisory services to prospective manufacturers concerning the selection of a suitable site, future extension requirements and the use of technology. Other activities include supply of information about existing facilities for design, quality improvement, market surveys and labour training.

The operating capacity of MIEL, however, is significantly constrained by limited operational funds, which at the beginning of 1968 stood only at $2.2 million more than half of which was loan capital.

The provision of well-serviced industrial estates is an important instrument in the promotion of industrial development because of the many advantages inherent in it. Some of these advantages are:

(1) the economies of scale derived from the overall construction, planning and development of the project;
(2) the external economies resulting from the physical infrastructure and the clustering of industrial enterprise;
(3) the economic feasibility of providing certain services and conveniences resulting from an aggregation of a sufficiently large number of firms;
(4) the benefits from a reduction of risk to the individual firm and the sponsoring authority arising from the clustering of firms.

To individual enterprises, particularly those of small and medium scale, there are large economics of scale which can be obtained from developing an industrial estate. These arise from:

(1) suitable and well-located industrial sites;
(2) the construction of streets and access roads;
(3) the installation of power, water and waste disposal systems and other utilities;
(4) the easy financing of construction of factory buildings;
(5) the reduction in the time required to complete preparations for beginning industrial production.

These contributions of fully developed industrial estates reduce the cost of getting into business.

Industrial Financing

At the end of 1967 there were 37 licensed commercial banks operating through 314 banking offices in Malaysia. Sixteen of the banks were incorporated in Malaysia, five in Singapore, and sixteen in other countries. A breakdown of

loans and advances indicates that from 1961 to mid-1968 credit to industry more than quadrupled, and increased its share in the total from 10 per cent in 1961 to over 15 per cent in 1968. The largest increase in bank lending was for non-traditional industries where most of the industrial growth has taken place, and credit for rubber processing and rice milling showed a decline.

The Malaysian Industrial Development Finance Board (MIDF) was incorporated in 1960 to supplement short-term commercial bank financing of the manufacturing sector. Upon recommendations of the World Bank (IBRD) and the International Finance Corporation (IFC), MIDF underwent reorganization in 1963, which paved the way for an increase in its share capital. At the end of 1967 the institution had a total paid up capital of $25 million, a loan capital of $51 million—of which $13.5 million was provided by IBRD, an interest-free loan of $37.5 million from the government and reserves amounting to $2.6 million.

Private industrialists can apply for MIDF loans to cover part of the costs of land, factory building and machinery needed for their projects. This loan assistance consists of equity participation, debentures or hire purchase facilities.

MIDF also extends other forms of assistance, such as issuing of shares and their underwriting and consulting services in marketing, accounting, finance etc. Apparently, largely owing to limitations of operational funds but partly also because of its conservative loan policy, MIDF's operations, instead of being concentrated on the promotion of selected branches of industry, are generally spread out over a large number of undertakings involving small commercial risk. At the end of 1967 agreed loans for 186 projects amounted to only $63.4 million, whereas the cumulative total underwriting and share subscription totalled about $38.3 million. By any standard this volume of operation within a period of 7 years could not be considered very large, and it appeared to have made only a small impact on the development of industries.

The National Investment Company (NIC) was established in 1961 for the purpose of enabling Malays to participate more effectively in the economic life of Malaysia. Membership of the company was confined exclusively to Malays and shares could not be registered in the name of any non-Malay.

The company was sponsored by a group of persons who subscribed $50 000. Thereafter the general public was invited to take up $2 million in shares, but only about 10 per cent of this amount was subscribed. On this basis, combined with a bank overdraft arrangement, the company started operating by subscribing to public share issues allocated to Malays. At present the authorized share capital is $10 million and the paid-up capital, $2.7 million among 6 200 shareholders.

The operations of NIC have been very profitable due to large capital gains on shares. The company, which started by making equity investments in pioneer companies only, has recently spread into various projects, such as tin mining, oil palms, office buildings, snack bars etc., but it does not engage in any lending business.

The main reason why the company has not received wider acceptance among the Malay investors seems to be that it was unable to create a resale

market for its shares. Any investor who wanted to sell his shares would therefore first have to find a buyer, agree on the price and then have the purchaser approved as a Malay. Had the company instead been operated as a mutual fund, which would buy back its own shares at market prices, the participation in it would probably have been much greater.

The Council of Trust for Indigenous People (Majlis Amanah Ra'ayat: MARA), a statutory body set up in 1965, started operating in 1966 with a Plan allocation of $70 million. Its main purpose is to assist and encourage Malay participation in business and industry. For this purpose, MARA has carried on extensive education and training programmes and provided financial assistance to industry and commerce in which the Malays are a partner, or MARA has itself acted as the Malay partner. Out of a total budget of $18.6 million in 1967, MARA granted loans to industry amounting to $4.7 million, and the balance was for investments in equity, MARA's training programmes and transport activities. Equity financing of industrial companies as of August 1968 amounted to nearly $10 million.

MARA has the responsibility of developing and establishing forest industries consisting of saw mills, veneer and plywood factories to utilize the timber which will come from the Jenka Triangle Project. But it has not been successful in this field so far. MARA is also interested in the promotion of the pulp and paper project and other projects based on the country's forest resources. There are indications that this centralization of power in MARA has delayed investments in this particular sector which *prima facie* would be one of the more important and promising fields of industrialization in the immediate future, given the country's vast timber resources and the large volume of exports of unprocessed wood.

In 1967 the MARA Unit Trust Ltd. (Mutual Fund) was incorporated as a subsidiary with an initial working capital of $2 million. This subsidiary body takes up shares allotted to Malays or purchases shares in the open market. It operates as a mutual fund, sells its own shares to the public and undertakes to buy them back at market value at any time. This undertaking appears to be a good solution to the problem of obtaining Malay participation and should be encouraged. It enables the small investors to liquidate their holdings easily if they want to, in contrast to Malay holding companies, such as the NIC, which has no obligation to buy back its shares, and where the shareholder therefore has to find a buyer and agree on a price before he can realize his holdings.

The Borneo Development Corporation Ltd. was set up in 1958 with a capital of $5.8 million with the purpose of promoting industrial and commercial undertakings in Sabah and Sarawak. Its operations are mainly confined to financing the construction of industrial and commercial buildings as well as the development of industrial estates.

Industrial Research

In the First Malaysia Plan a sum of $5 million was allotted to establish a National Institute of Scientific and Industrial Research (NISIR). Its objective is to provide all industrial enterprises with the necessary scientific and tech-

nical support and to study the possibilities for and the problems associated with the industrial processing of materials available from local sources. Thirty acres of land have been acquired at Batu Tiga to accommodate NISIR and the Standards Institute of Malaysia (SIM), whose main function is to advise industries on standardization of products and control of quality.

NISIR is not yet in operation and SIM for which an allocation of $0.1 million has been made is still at its incipient stage. However, with the establishment of these institutions, the pace of industrial development may in due course get accelerated.

Guarantees for Foreign Investment

The investment of foreign capital in Malaysia is subject to only minimum exchange control for countries outside the Sterling Area. Within the Sterling Area, there is complete freedom to transfer capital and dividends.

The government has guaranteed the security of foreign capital by undertaking to pay fair compensation in the event of any private enterprise being nationalized. To reinforce this guarantee Malaysia is also a member of the World Bank sponsored Convention of International Investment Disputes by virtue of which foreign investors can take their claims against the Malaysian government to an International Arbitration and Conciliation Centre.

In addition to the general undertaking mentioned above, the government has signed investment guarantee agreements with the United States and West Germany and double taxation agreements have been reached with the United Kingdom, Singapore, Japan, Hong Kong, Denmark, Norway and Sweden.

Protection for Industry

The Customs (Dumping and Subsidies) Ordinance 1959, introduced in April 1959, is another measure adopted by the Government to protect industry against unfair competition. This legislation provides for the imposition of anti-dumping and countervailing duties—in addition to normal import duties—on dumped or subsidized goods, if their import is likely to endanger an established industry or retard the establishment of industry in the country.

Tariffs

The economy of Malaysia is open and tariff protection has been used sparingly. Most goods may be imported freely without exchange permits or individual import licenses. Exceptions to this are few and generally found in cases where the government has decided to give protection to domestic manufacturers without introducing tariffs, or in cases where licensing has been introduced in addition to tariff in order to close possible loopholes. In a few instances the government has imposed restrictions on machinery in order to control expansion or curtail establishment of new factories in industries having excess capacity. This is, for instance, the case with regard to grain milling machinery and rolling mills.

The Tariff Advisory Board (TAB) recommended by the Rueff Mission[9] in 1963 was established in 1964, with the dual functions of:

(1) advising the Federal Government on the establishment of the Malaysian Common Market, and
(2) advising the Federal Government on the imposition of protective tariffs.

With regard to the latter function, the Board investigates and advises the Minister of Commerce and Industry on applications by manufacturers and potential industrialists regarding protection, reduction of import duties on raw materials, reduction of excise duties, drawback of taxes, anti-dumping measures and other concessions involving the tariff policy of the government.

For the protection of the domestic industry the use of tariff is preferred when an industry has been able to supply a significant portion of the domestic market. Relief from custom duties on imports of equipment and construction materials is also given to enable firms to reduce their capital requirements and lower their fixed costs. Similarly relief from duties on imports of raw and semi-processed materials and of components is generally given to provide a competitive advantage in establishing a domestic or foreign market. But on the whole tariff policy has been implemented on an ad hoc basis at the request of the domestic manufacturers. Only in a few cases has the initiative come from the government.

Thus the tariff policy has resulted in a complex tariff structure with great variations in the protection accorded various industries and even products within the same industry. The investment pattern has depended on interested entrepreneurs and their success in negotiations with the Government.

The problem is basically to expand the manufacturing industries while maintaining the traditional open economy with low tariff barriers in order to permit the expansion of export industries. The government should therefore consider a tariff policy which would create business opportunities on a wider basis and thus direct investments in desirable directions without need to negotiate each case with the entrepreneur. Initially, it seems feasible for the Government to consider moderate tariff increases across the board on specific categories of manufactured consumer goods which can be produced in the country, and on producer's goods in cases where such tariffs would not seriously affect exporting industries.

Tax Incentives

Government policy was to allow development of manufacturing sector by private enterprise. Industrialists were allowed to carry out their own market surveys for the products they wished to manufacture and were free to determine the size of the undertakings to be established and the capital labour

---

[9] This is another IBRD Mission formed under the chairmanship of Mr. Jacques Rueff at the request of the Federation and Singapore Governments to report and make recommendations on the economic aspects of merger. The Rueff Mission submitted its report entitled 'Report on the Economic Aspects of Malaysia' in July, 1963.

ratio. The government set up industrial estates, adequate infrastructure facilities and gave relief from taxation in the form of tax holidays for periods varying from two to five years under what is commonly referred to as the pioneer industry ordinance.

The first pioneer industry ordinance was the 1958 Pioneer Industries (Relief from Income Tax) Ordinance, which was a fulfilment of the recommendations made by the Industrial Development Working Party. Under this Ordinance, companies which were granted pioneer status received relief from income tax for varying periods depending on the amount of fixed capital they invested. Companies investing less than $100 000 received tax relief for a period of two years. Those investing $100 000 or more received a further year, while those investing not less than $250 000 received a further extension of two years making a maximum of 5 years in all.

With the formation of Malaysia in September 1963, the new Federation inherited four separate income tax legislations and four separate pioneer industry ordinances. The need to harmonize the income tax legislation and the pioneer industry ordinance was recognized from the very beginning especially after the recommendation by the Rueff Mission in 1963 contained in the Report on the Economic Aspects of Malaysia. This stated 'Regarding pioneer status, merger brings the need to introduce new legislation to unify and supersede the legislation now in force in the constituent states of Malaysia'.[10]

The commencement of the exercise to harmonize the income tax legislation culminated in the Income Tax Act of 1967 while the process of harmonization of the incentive legislation led in 1965 to an amendment of the 1958 Ordinance. The amended ordinance known as the Pioneer Industries (Relief from Tax) (Variation) Act, 1965 brought the prevailing pioneer industry ordinances of Malaya, Singapore and Sabah[11] under a common revised tax relief structure which awarded an initial tax relief period of two years to any manufacturing establishment designated as pioneer with an extension to:

(1) three years where a fixed capital expenditure of $250 000 or more had been incurred, or
(2) four years where a fixed capital expenditure of $500 000 or more had been incurred, or

---

[10] IBRD, *Report on the Economic Aspects of Malaysia*, Government Press, Kuala Lumpur, 1963, p. 32.

[11] Prior to the formation of Malaysia, under the Pioneer Industries (Relief from Income Tax) Ordinance, 1956 (No. 30 of 1956) of Sabah, the pioneer industries in the State of Sabah were under the jurisdiction of the Governor-in-Council. However, with the formation of Malaysia in 1963, the powers formerly vested with the Governor-in-Council were transferred to the Yang di-Pertuan Negara of Sabah who retained them until the enactment of the Pioneer Industries (Relief from Tax) (Borneo States) (Modification and Extension) Order, 1966, which transferred the powers of the latter to the Federal Minister of Commerce and Industry in respect of Part II, and the Federal Minister of Finance in respect of Part III of the Sabah pioneer industry ordinance.

(3) five years where a fixed capital expenditure of $1 000 000 or more had been incurred.[12]

The Sarawak Pioneer Industries (Encouragement) Ordinance[13] was not affected by the Variation Act of 1965, for at that time due to certain administrative and legal complications, it was not considered expedient enough to extend the system of income tax relief to Sarawak which largely used accelerated depreciation as an incentive under the original pioneer industry ordinance. These complications, however, were overcome in 1966 and preparations were made to bring the Sarawak pioneer industry ordinance in line with its Malayan counterpart. Accordingly the Pioneer Industries (Encouragement) Ordinance 1957, of Sarawak was repealed and the Malayan Pioneer Industries (Relief from Income Tax) Ordinance, 1958 as amended by the Variation Act of 1965, was extended to Sarawak on January 1, 1966,[14] by means of the Pioneer Industries (Relief from Tax) (Borneo States) (Modification and Extension) Order, 1966.[15] The Sabah Pioneer Industries (Relief from Income Tax) (Ordinance) 1956, was also modified by the same Modification and Extension Order, to harmonize it with the Malayan Ordinance and the new extended ordinance of Sarawak.

Though it was recognized that separate legislations providing for different systems and rates of taxation and differeing forms of investment incentives would cause chaos in administration, the effects of a uniform and standard incentive legislation might be felt in uneven location of industries and unbalanced development of various parts of the Federation.

Moreover, the incentives provided were in the form of exemption from income tax in respect of profits made, and as such there was little encouragement to large scale enterprises which would take several years to become profitable. Further, as the manufacturing companies were set up by enterprises which previously imported finished products into the country, very little use was made of local raw materials in those concerns. Indeed, the major orientation of the Pioneer Industries Ordinance was on import-substituting industries catering for the domestic market.

With a view to remedying the above shortcomings and to strengthening competitiveness in attracting foreign and local investors, a committee of

---

[12] Refer to the Pioneer Industries (Relief from Income Tax) Ordinance, 1958 (No. 31 of 1958) as amended by the Pioneer Industries (Relief from Tax) (Variation) Act 1965 (No. 30 of 1965), Part III, Section 12, p. 11.

[13] The pioneer industries in Sarawak prior to the formation of Malaysia were under the jurisdiction of the Governor-in-Council of Sarawak. With the formation of Malaysia, of which Sarawak is a partner, the powers formerly held by the Governor-in-Council were transferred to the Governor who held them until the Pioneer Industries (Relief from Tax) (Borneo States) (Modification and Extension) Order, 1966. This order then transferred the powers to the Federal Minister of Commerce and Industry in respect of Part II, and the Federal Minister of Finance in respect of Part III of the extended pioneer industry ordinance of Sarawak.

[14] The Modification and Extension Order was actually passed in Parliament in June 1966, but it came into force retrospectively in January 1, 1966.

[15] His Majesty's Government Gazette, Malaysia, May 5, 1966, P.U. 188.

officials, under the chairmanship of Raja Tan Sri Mohar b. Raja Badiozaman, the Permanent Secretary to the Ministry of Commerce and Industry, was appointed to review the adequacy of existing incentives for investment and to make recommendations for the acceleration of the pace of industrial development as well as diversification in the type and location of industries.

The recommendations of the Raja Tan Sri Mohar Committee led to the passage of the Investment Incentives Act of 1968 which 'provides a variety of incentives to induce a greater and more rapid flow of investments not only in the manufacturing and agricultural based industries but also other enterprises and to encourage the expansion of export in manufactures'.[16]

The new Act provides for two alternative investment incentives (1) pioneer status, and (2) investment tax credit for non-pioneer companies as well as various forms of export incentives.

Pioneer status can be granted to an industry or for a product provided that the industry is not already being carried out or the product not being produced in the country on a commercial scale, or if the production facilities to do so are insufficient, and provided further that there are favourable prospects for development of the industry or the product, and it is in the public interest to do so. The pioneer status entitles a company to relief from company, development[17] and payroll[18] taxes for 2–5 years depending on the size of the investment. This period may be extended for one year for the fulfilment of each of the following conditions: (a) establishment of production in development area; (b) manufacturing priority projects, or (c) usage of certain percentage of Malaysian material in the project. Maximum tax holiday is thus eight years.

The pioneer company may carry over losses incurred during the tax holiday to subsequent years. Dividends paid out of profits earned during the tax holiday are also exempted from income tax.

The investment tax credit is intended for companies that do not qualify or do not want to become a pioneer company. The credit shall not be less than 25 per cent of the capital expenditure in any one year and may be carried forward until it has been fully utilized. Dividends paid from the income portion to which the credit is applied are also exempted from income tax. The tax credit may be increased by 5 per cent for each of the following three

---

[16] Vide Text & Speech by the Minister for Commerce and Industry introducing the Investment Incentives Bill 1968 in the House of Representatives on 29th February 1968.

[17] Almost every person carrying on a business or having income from letting of any property situated in Malaysia becomes chargeable to a tax called 'Development Tax'. Development tax at the rate of 5 per cent is payable on the income from businesses and from the letting of property.

[18] A 2 per cent payroll tax is payable by employers on their total payroll for every month that their total payroll for that month in respect of employees rendering services in Malaysia exceeded $500. A pioneer company is exempt from payroll tax on the remuneration paid to employees engaged in the production of the pioneer product. This exemption does not, however, apply in respect of remuneration paid to staff engaged in administration or distribution.

conditions: location in a development area, production of priority products, and usage of a certain percentage of indigenous raw materials.

Double deductions from income tax may be given for certain expenses incurred in the promotion of exports from Malaysia. The Minister of Finance decides which expenses shall qualify.[19] Companies which export more than 20 per cent by value of their production may receive accelerated depreciation on expenditure to modernize. The depreciation is 40 per cent on declining value. Exporters of primary commodities and companies enjoying pioneer status or investment tax credit do not qualify.

The Investment Incentives Act of 1968 applies throughout Malaysia thus replacing and consolidating the legislation existing in West Malaysia, Sabah and Sarawak for promoting industrial and manufacturing industries. Its scope is also wider, no longer confined to manufacturing only as in the previous ordinance but extending to non-manufacturing industries also.

However, the conditions for obtaining the various incentives are in most cases not clearly defined in the legislation and it is not possible from the ordinance alone to find out for which incentives a particular company or project would qualify. Certain other conditions exist for obtaining pioneer status but are not mentioned in the ordinance. There is, for instance, the condition of requiring foreign companies to balance their employment structure so as to reflect the multi-racial composition of the country. While the objective of such a policy is commendable and even desirable, this condition in practice seems to have presented some problems to pioneer companies because of the limited supply of skilled personnel in certain ethnic groups.

Another unwritten condition in the 1968 Act is that pioneer companies shall have a minimum of 51 per cent Malaysian ownership preferably from the start but at least after a certain number of years. Since most investors associate ownership with control of the companies this condition has not served to encourage private foreign investment. The effectiveness of this condition to limit foreign control might even be questioned in view of the fact that Malaysia and Singapore have joint stock exchanges with free movement of shares. As such a 51 per cent Malaysian proportion of the equity can be diluted as soon as trading starts. It might therefore be advisable to reconsider the limitations placed on foreign ownership in pioneer companies in the light of the lack of entrepreneurs and the importance which foreign capital and managerial skills have on the industrial growth in the country.[20]

Finally, such terms as 'approved project', 'development area' and 'priority products' have not been clearly stated in the ordinance and have been left for the government or its appropriate agency like the Federal Industrial Development Authority to define in each case.

[19] The categories of expenses which qualify are the expenses arising from advertisements, provision of free samples, conducting export market research, preparation of tenders for the supply of goods to prospective foreign customers and travelling expenditure incurred in negotiation and conclusion of contracts for sale of goods.

[20] It appears that the government is aware of the ineffectiveness of this condition as it has not really taken serious measures to enforce it.

The establishment of the Federal Industrial Development Authority (FIDA) was approved by Parliament in early 1965 and a director was appointed in early 1967 after a long delay. The main functions of FIDA were to provide and coordinate industrial development and advise the Government on the formulation of policies. FIDA has taken up a wide range of activities which appear to be beyond the capabilities of its management and staff and has resulted in none or very few of the fields being properly covered. This, combined with an interagency rivalry between FIDA and the Industries Division (ID) of the Ministry of Commerce and Industry,[21] which also is responsible for industrial development, has brought confusion and inefficiency to their work.[22] As a result, FIDA has so far had little impact on industrial development.

A 'New' Industrial Development Strategy

After the tragic racial riot which occurred on 13 May, 1969, it was felt that maximum economic growth alone was not enough and an overall review of development needs together with a reappraisal of the concept, approach and method of economic development in the light of national unity was necessary. In short, maximum economic growth from henceforth has to compete with racial and political harmony as a paramount priority.

Accordingly, a new industrial development strategy is to be adopted emphasizing the new role that the government should play in future. The new role of the Government in industrial development is described by Tun Abdul Razak, the Deputy Prime Minister and Director of the National Operations Council as follows:

'In the past, we relied on the initiative of the private sector to carry out investment and establish industries. Now the Government is taking a positive and aggressive approach to industrialization. The Government will identify feasible projects and mount a promotion drive to mobilize local as well as foreign capital. 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. This participation by the Government will enable us to give new direction and to influence the employment policies of these industries. It is Government's intention that the employment structure in these establishments will reflect from top to bottom the multi-racial composition of our country.'[23]

In pursuance of the above, the Government set up a Capital Investment Committee (CIC) composed of ministers and senior government officials with the following terms of reference:

---

[21] This division was formerly known as the Industrial Development Division of the Ministry of Commerce and Industry which handles application of pioneer status.

[22] This has also caused unnecessary delays and frustration to prospective industrialists and investors.

[23] *Malaysia: A New Industrial Development Strategy*—booklet published by the Federal Industrial Development Authority in July, 1969, p. 3.

(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 redeploy existing staff of different organisations 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.[24]

The establishment of the Capital Investment Committee has given new emphasis to the Government's industrialization policy. It was born out of the realization that procedures of the past were very time consuming and cumbersome to the entrepreneurs. In the past, the entrepreneur himself decided on the industry he was to undertake, discussed and negotiated his proposals with the Ministry of Commerce and Industry and other Ministries if necessary for tax concessions and other incentives. When this stage was completed and the project involved had been approved, he had to approach the Tariff Advisory Board in order to seek tariff protection. Then the Board would conduct a public hearing and put up a report to the government which would make a decision on the basis of the report.
Then the Board would conduct a public hearing and put up a report to the government which would make a decision on the basis of the report.

Under the new strategy the Government will take the initiative of identifying the industries which are to be promoted and decide the concessions, both tax and tariff, and/or other incentives be given for their development. Prospective industrialists or investors would then have to decide whether it is worthwhile to go in or not.

Action appears to be the keynote. The list of priority products and development areas and what would constitute the required percentages of local content in manufactured products for the purposes of the Investment Incentives Act, 1968 were announced within one month of the establishment of the Capital Investment Committee,[25] whereas the Committee which was appointed for the specific purpose of studying the matter more than a year ago appears to have been bogged down by its own weight.

The central executive force operating under the CIC is the FIDA. This Authority has now been given the responsibility of actively participating in the setting up of industrial enterprises by preparing pre-investment studies on investment projects and project reports on industries and making these available to potential investors. FIDA also serves as an information centre for interested persons and is responsible for processing applications for incentives under the Investment Incentives Act or to set up other enterprises.

---

[24] *Op. cit.*, A New Industrial Development Strategy, p. 8.
[25] See Appendix III.

The new approach undoubtedly will cut out the protracted negotiations which had to be undergone in the past and reduce to the minimum the delays which such negotiations inevitably entailed. Furthermore, it has also cleared up some of the ambiguities associated with the Investment Incentive Act by giving supplementary guidelines regarding development areas, approved projects and priority products. All the same, other uncertainties are now emerging regarding the types of industry in which the Government is going to participate, the forms of participation etc. A clear and well articulated industrial policy is as important for the creation of a favourable investment climate as are tax and other incentives.

CHAPTER NINE

Conclusion

IN THE FOREGOING CHAPTERS we reviewed the progress made by West Malaysia during 1955–67 and the nature of the difficulties it encountered. We began by examining the income and expenditure pattern during the review period and noted that among other things the development performance of West Malaysia was mainly governed by the export sector. The export sector up to the 1950's gave the economy a level of earnings sufficient to finance all imports, large transfer payments abroad and an increase in reserves. Over the last few years, however, the wheel of fortune seemed to have turned. In spite of increased quantities, export earnings were stagnant due to the secular decline in export prices particularly rubber, tin and palm oil. On the other hand, domestic expenditure and imports had been increasing rapidly partly due to the recent emphasis on accelerated development and partly due to the strategy of placing more emphasis on expansion of production for domestic use rather than for export expansion of primary products. It was thought that this objective could be achieved by maintaining a high level of effective demand at home through the rapid expansion of public investment and current expenditure. This strategy had been reasonably successful, and a satisfactory growth rate ensued; fortunately, it was not accompanied by price inflation.

However, the public sector-oriented investment strategy of the Second Five Year Plan, 1961–65, ran into difficulties in 1962 when savings fell short of investment. Since then the country came to depend on external financial inflows to supplement domestic savings in order to maintain a satisfactory rate of investment for achieving the development objectives. The only exception was 1965 when an export boom offset the appearance of a resource gap. Continual recourse was taken to running down the accumulated foreign assets to sustain the continued expansion of the public sector. But there was a limit to running down the assets and/or reserves without affecting the stability of the economy. In other words, the expansion of the public sector programme with attendant financial constraints prevented the expansion of public investment from being a significant stimulus to demand. As a result, a shift in development strategy, from reliance on the public sector to that on private investment, was made in the First Malaysia Plan, 1966–70.[1]

[1] 'It is expected that private investment will be the main dynamic element producing rapid economic growth during the next five years. The overall aim is to create a level of private investment which rises from about $1 010 million in 1965 to some $1 400 million by 1970.' Malaysia, *First Malaysia Plan*, 1966–70, p. 48.

The target for private investment was growth at 6.8 per cent a year, while no growth was anticipated for the public sector during the Plan period. Exports were expected to expand only at 0.6 per cent per annum from 1965 to 1970. On this basis, the First Malaysia Plan hoped to achieve a growth rate in current price of GNP of about 5 per cent a year for the whole country; and a GDP growth rate at current factor cost of 4.8 per cent a year for West Malaysia alone during 1965–70.[2]

Furthermore, government policy would be aimed towards directing the greater part of the investment into the industrial sector and the related service trades, since it was realized that growth in agricultural activity alone would not be adequate to generate and maintain a high growth rate in income and employment.[3] This point was emphasized earlier in our review of the pattern of sectoral income and employment during 1955–67. The GDP elasticity of agriculture was only about 0.7 which was only forty per cent of that of manufacturing and construction which was about 1.7. In other words, with a ten per cent increase in GDP, manufacturing and construction are likely to increase by 17 per cent while agriculture is likely to increase by only 7 per cent.

In regard to employment, the manufacturing sector had already met the plan target in 1967 although its base was rather small. In direct contrast, the performance of the agricultural sector upon which great reliance had been placed for providing employment and alleviating the current unemployment problem, had been rather disappointing so far in this respect.

Nevertheless, the manufacturing sector is still comparatively small although its proportional share in total GDP had increased from 8.7 per cent in 1960 to 11.9 per cent in 1967 and had been accelerating at an encouraging rate of 9.5 per cent in 1960 prices. Moreover, the programme of industrialization on which a premium was placed officially as early as 1958 with the passage of the Pioneer Industries (Relief from Income Tax) Ordinance, had not so far made any discernible improvement to the industrial base of the country. Nor had it exerted any dynamic impact on the whole economy as yet. For one thing, the inter-industry relationship was extremely weak as revealed by our analysis of the structure of sectoral production. For another, industrial production had been mainly oriented towards import substitution as part and parcel of the strategy of increasing production for domestic use as an engine of growth. Also most of the industries, particularly the so-called pioneer ones, were engaged in simple processing (which consisted of assembling the imported components and parts rather than real manufacturing) without showing any tendency to advance to higher levels of processing overtime. Thus it is not surprising that in some industries the proportion of import content in the unit cost structure was as high as over 60 per cent.

The weaknesses of the prevailing structure of the manufacturing sector could be attributed to a want of coordinated planning in industrial development. In view of the fact that the growth of the manufacturing sector is expected to eventually become the major alternative to the traditional export sector and the principal source of savings, it is time that adequate attention

---

[2] Malaysia, *First Malaysia Plan*, 1966–70, pp. 50 and 52.

[3] Malaysia, *First Malaysia Plan*, 1966–70, pp. 48 and 123.

were given to its development. During the first plan period (1956–60) only a meagre share of about 1.3 per cent of the total public development expenditure was spent on industrial development and mining. In the second plan period (1961–65) although the absolute amount actually spent was about $60 million as compared with $27 million as planned, it was still a rather low sum constituting no more than 2.6 per cent of the total development expenditure incurred during the period. The allocation for industrial developments under the First Malaysia Plan also remained at a relatively low level of about 3.6 per cent. Of the $111 million allocated for industrial development and mining, an amount as high as $70 million went to Majlis Amanah Ra'ayat (MARA), while only $5 million was allocated to the Federal Industrial Development Authority (FIDA) which is regarded as the spearhead of the country's industrialization programme.[4]

An indication of the lack of both coordinated planning and sense of direction, was that the objectives of industrialization were not spelled out at all in the first two plans. This lacuna was supplied in a general way in the *First Malaysia Plan* and later in the Mid-Term Review. The objectives of the industrial programme are now stated to be:

(i) fuller and more efficient use of the country's vast reserves of natural resources, together with greater domestic processing of agricultural raw materials;
(ii) expansion of the economic base of the country and introduction of new lines of activity to reduce Malaysia's dependence upon the present narrow range of traditional raw material exports;
(iii) generation of higher income through expanding production for domestic use as well as increased output of manufactured products for exports;
(iv) provision of employment opportunities for a rapidly growing labour force.[5]

The lack of focus in industrial development planning is also reflected in the haphazard manner in which the various incentive measures were implemented during the period under review. As noted earlier, tax concessions were given sporadically and tariff protection was granted on an *ad hoc* basis depending on the identity of individual entrepreneurs and their success in negotiating with the government. The former had resulted in the award of pioneer status to certain industries, the justification often being highly questionable. The latter had given rise to a complicated tariff structure with great variations in protection accorded to different products in the same industry. All these phenomena point to the lack of a rational set of priorities on the basis of which industries should be selected for investment.

---

[4] Malaysia, *First Malaysia Plan*, 1966–70, pp. 69 and 138.

[5] Malaysia, *Mid-Term Review of the First Malaysia Plan*, 1966–70, p. 61. For the first time the types of industries which are to be encouraged are outlined on p. 73 as follows: '(i) industries which are labour intensive; (ii) industries which utilize domestic raw materials, particularly timber-based and agriculture-based industries, as well as those which can provide further processing of the country's traditional tree crops; (iii) industries which manufactured capital or intermediate goods for which extensive markets already exist or one in prospect, e.g. machinery for rubber and palm oil processing and lumber mills; and (iv) export industries.'

Moreover, the eligibility conditions for concession to industry in this regard, were often not clearly set out in the incentive legislations, but had been left for the appropriate government departments to define in each case. In the course of implementation, certain other unwritten conditions were also introduced. As a result it was impossible to find out from the ordinance alone which project would be eligible for special encouragement.

Also because the line of responsibility among the several agencies involved in industrial development was not clearly defined in the ordinance, inter-departmental rivalry had developed between the Federal Industrial Development Authority and the Industries Division of the Ministry of Commerce and Industries which formerly handled application of pioneer status.[6]

However, some improvement had been made to make good the lack of co-ordination illustrated above with the establishment in 1969 of the Capital Investment Committee whose main function was to collaborate with state governments and departments in the implementation of industrial policy and to speed up the process of decision-making on industrial matters. In addition, it has been entrusted with the specific task of identifying priorities and giving policy guidelines and incentives for the development of certain preferred industries. While some of the ambiguities and delays might have been resolved by the Capital Investment Committee, other uncertainties were being created by the announcement of the so-called 'new' industrial policy. It was announced that government would take an active part in industrial development but the extent and the nature of government participation were not clearly stated. Would government participation imply a radical departure from the traditional laissez faire policy?

Whatever form the 'new' policy may take, a more coordinated planning for industrial development is desirable if not essential. It may be even argued that some kind of 'indicative planning' may be necessary if only to ensure a concerted drive in industrial development. Depending on the degree of indicativeness, the participation by the private sector and other interested groups can be accommodated both in formulating the plan and in devising suitable incentive measures and industrial policies. It appears that the government has been thinking along this line for under the 'new' industrial development strategy a Private Sector Advisory Panel to the Capital Investment Committee is to be set up. It is envisaged to comprise representatives of manufacturing, mining, timber products, petroleum and plantation industries, banking and investment groups, tourism and travel organizations and Chambers of Commerce. 'The government will work closely with this Panel, seek its advice and assistance as often as is necessary, and generally regard the private sector as an important partner in the economic development of this country.'[7] What appears to be still lacking is an overall framework of an industrial development plan.

In making the above suggestion, we have constantly kept in view the need

---

[6] Other agencies which are also involved in some form of industrial promotion and planning are the Economic Planning Unit, the Tariff Advisory Board, Majlis Amanah Ra'ayat and Malaysian Industrial Development Finance Limited.

[7] Malaysia, *A New Industrial Development Strategy*, July 1969, p. 11.

to encourage private enterprise which has been the mainstay of the West Malaysian economy. Nevertheless, we believe that a well-conceived industrial plan together with a clear and well articulated policy may prove to be more effective in encouraging private enterprise.

The implementation of an industrial programme inevitably requires that decisions be taken to implement specific projects. Such decisions, if rationally taken should be based on technical and profitability criteria which are determined by detailed studies of the technical, economic, commercial, managerial and financial aspects of the projects.

However, in assessing the impact of a project on the economy, four main lines of enquiry may be adopted. First, the capacity of the economy to ingest the development project should be ascertained.

A second line of inquiry needed in making an economic assessment of individual projects is to find out the inflationary potential of the project concerned through determining the magnitude of the additional effective demand that is likely to be generated and the probable length of its gestation lag. If the impact of the project is found highly inflationary, policy measures of an effective nature can conceivably be designed to neutralize it. One of these measures which may prove effective is that the investment pattern, if it were to include the project with an inflationary potential, should be shifted in favour of certain quick yielding projects with a view to producing an adequate flow of consumer goods to match the additional effective demand so generated.

Also, suitable monetary policy and fiscal instruments can be devised to absorb the remaining inflationary potential.

A third line of inquiry into the economic significance of the proposed project concerns its impact on the balance of payment. Calculations should be made regarding the cost of saving foreign exchange implied by import substitute development projects. To be worthwhile, the domestic cost of saving foreign exchange arising out of undertaking the proposed project should not exceed the official domestic price of foreign exchange.

Finally, for the major development projects which produce 'international' goods, bunch foreign exchange requirements and bunch capital-output ratios should be calculated to ascertain the overall capital and foreign exchange requirements, i.e. the direct capital and foreign exchange requirements of the projects themselves and the capital and foreign exchange requirements of the 'national' industries the products of which would go into the projects concerned that produce the 'international' goods. For projects of infrastructure type however, it is more relevant to assess their economic significance in terms of forward and backward linkages.

APPENDIX ONE

Table 1 WEST MALAYSIA—EXPENDITURE

M$ million,

	1955	1956	1957	1958	1959
1. Consumption Expenditure	3 611	3 861	3 989	3 946	4 159
(1.1) Private	2 964	3 156	3 251	3 178	3 385
(1.2) General Government	647	705	738	768	774
2. Gross Capital Formation[1]	473	578	656	614	520
(2.1) Private					
(2.2) Public					
3. Net Exports of Goods and Non-factor Services	908	621	481	336	848
(3.1) Exports	2 488	2 422	2 351	2 040	2 638
(3.2) Imports	1 580	1 801	1 870	1 704	1 790
4. GDP at Market Prices	4 992	5 060	5 126	4 896	5 527
5. Net Factor Income from Abroad	−236	−218	−178	−138	−211
(5.1) Receipts	64	76	78	75	77
(5.2) Payments	300	294	256	213	288
6. GNP at Market Prices	4 756	4 842	4 948	4 758	5 316
Annual Rate of Growth in per cent		1.8	2.2	−3.8	11.7

[1] Including inventories.

Source: National Accounts of West Malaysia, 1955–64, Department of Statistics.
National Accounts of West Malaysia, 1960–66, Department of Statistics.
Data for 1967 is preliminary and is taken from Data for the EPU Mid-Plan Review and the IMF Consultations, Department of Statistics, Kuala Lumpur, May 30, 1968.

ON GROSS NATIONAL PRODUCTS, 1955–67

current prices

1960	1961	1962	1963	1964	1965	1966	*Preliminary* 1967
4 436	4 705	4 950	5 324	5 699	6 072	6 494	6 751
3 639	3 834	4 023	4 261	4 476	4 715	4 956	5 151
797	871	927	1 063	1 223	1 357	1 538	1 600
865	968	1 201	1 246	1 282	1 370	1 423	1 473
659	631	718	754	796	848	934	909
206	337	483	492	486	522	489	564
810	403	185	172	195	439	383	212
3 094	2 794	2 790	2 880	2 986	3 328	3 331	3 074
2 284	2 391	2 605	2 708	2 791	2 889	2 948	2 862
6 111	6 076	6 336	6 742	7 176	7 881	8 300	8 436
−248	−187	−140	−159	−214	−264	−272	−218
118	155	185	194	194	196	188	217
366	342	325	353	408	460	460	435
5 863	5 889	6 196	6 583	6 962	7 617	8 028	8 218
10.3	0.4	5.2	6.3	5.8	9.4	5.4	2.4

Table 2

PRICES AND EXPORTS OF MAJOR COMMODITIES—WEST MALAYSIA 1955–69

Year	*Prices of Rubber R.S.S. 1 Cents per pound (f.o.b.)*	*Tin Prices Straits-ex-work $ per picul*	*Palm Oil Quarterly Average f.o.b. ex-installation per ton*	*Rubber*				*Palm Oil*			
				Gross Exports		*Net Exports*		*Gross Exports*		*Net Exports*	
				Tons	*$ Millions*	*Tons*	*$ Millions*	*Tons*	*$ Millions*	*Tons*	*$ Millions*
1955	114.16	365.50	75.57	659 461	1 584.0	626 206	1 524.7	55 227	36.4	53 760	35.8
1956	96.76	387.03	83.68	649 428	1 377.9	605 711	1 309.3	58 619	43.1	55 309	41.2
1957	88.75	373.19	84.01	655 139	1 304.1	617 193	1 247.0	61 476	45.5	57 964	43.7
1958	80.21	369.35	73.72	690 172	1 197.2	634 088	1 124.3	74 339	47.4	58 990	43.5
1959	101.56	396.94	76.89	782 875	1 721.8	729 621	1 624.6	76 968	51.7	71 105	48.3
1960	108.08	393.68	72.48	766 797	1 829.1	696 064	1 690.9	96 027	60.5	90 545	57.7
1961	83.54	446.85	74.25	790 562	1 442.4	725 613	1 347.1	93 427	61.2	86 980	58.1
1962	78.20	447.79	69.18	791 016	1 367.6	723 713	1 272.8	105 686	65.1	100 225	62 3
1963	72.42	455.40	68.80	841 483	1 373.9	788 303	1 300.4	114 892	69.0	113 110	68.0
1964	68.14	619.42	75.72	847 804	1 303.4	807 187	1 250.3	123 269	80.6	122 735	80.0
1965	70.02	702.80	87.95	886 915	1 368.3	840 802	1 307.1	139 243	106.0	138 941	105.6
1966	65.38	645.23	74.88	939 778	1 395.8	893 059	1 338.5	178 418	118.1	178 281	117.9
1967	54.08	600.10	—	974 569	1 216.0	923 010	1 167.9	177 176	110.7	177 128	110.7
1968	53.12	565.54	59.58	1 104 780	1 300.9	1 048 468	1 251.8	263 691	116.8	263 605	116.8
1969	69.82	—	—	1 264 857	1 940.1	1 204 090	1 866.4	323 372	141.0	323 298	141.0

Table 2 (continued)

PRICES AND EXPORTS OF MAJOR COMMODITIES—WEST MALAYSIA 1955–69

Year	*Prices of Rubber R.S.S. 1 Cents per pound (f.o.b.)*	*Tin Prices Straits-ex-work $ per picul*	*Palm Oil Quarterly Average f.o.b. ex-installation per ton*	*Palm Kernels*		*Tin Metal (Primary)*		*Tin—in Concentrates*			
				Exports		*Exports*		*Gross Exports*		*Net Exports*	
				Tons	*$ Millions*	*Tons*	*$ Millions*	*Tons*	*$ Millions*	*Tons*	*$ Millions*
1955	114.16	365.50	75.57	12 224	4.4	37 938	231.3	33 934	202.4	23 133	138.4
1956	96.76	387.03	83.68	14 185	5.3	52 409	340.7	20 587	131.0	9 617	60.8
1957	88.75	373.19	84.01	16 206	5.9	50 364	318.8	19 408	120.6	5 609	32.8
1958	80.21	369.35	73.72	20 931	8.0	38 496	236.4	6 347	38.1	(−)1 565	(−)13.2
1959	101.56	396.94	76.89	19 733	9.2	44 146	294.5	701	4.4	(−)1,001	(−)52.1
1960	108.08	393.68	72.48	25 213	11.1	76 352	505.7	264	1.6	(−)20 828	(−)135.5
1961	83.54	446.85	74.25	21 098	7.2	74 233	550.1	398	3.0	(−)16 182	(−)118.3
1962	78.20	447.79	69.18	20 284	6.8	81 359	616.3	537	4.0	(−)24 590	(−)173.1
1963	72.42	455.40	68.80	19 474	7.3	84 551	638.1	551	4.3	(−)19,552	(−)141.7
1964	68.14	619.42	75.72	18 042	7.1	77 147	722.8	516	5.5	(−)9 741	(−)99.2
1965	70.02	702.80	87.95	18 710	8.7	73 286	864.8	603	7.0	(−)7 183	(−)84.2
1966	65.38	645.23	74.88	22 545	9.1	71 424	779.4	948	12.6	(−)1 412	(−)10.2
1967	54.08	600.10	—	23 266	8.7	73 526	743.7	889	11.7	(−)4 038	(−)25.0
1968	53.12	565.54	59.58	32 063	14.2	86 016	820.4	757	9.3	(−)16 305	(−)138.6
1969	69.82	—	—	34 316	12.1	89 822	932.0	560	7.7	(−)12 807	(−)119.4

Source: Department of Statistics, *Monthly Statistical Bulletin of the States of Malaya*, various issues.

Table 3

A COMPARISON WITH UNCTAD STUDY

	UNCTAD		*Our Findings*		
	Historical[b] *Coefficient*	1963 *$m*	*Historical*[b] *Coefficient*	1963 *M$m*	*US$*
1. Gross Domestic Products	5.0[c]	2 223.6	4.5[c]	6 262	(2 046.4)
2. Gross Domestic Savings		474.8		1 131	(369.6)
3. Gross Domestic Investment		412.5		1 331	(435.0)
4. Savings Gap (= 3−2)		−62.3		200	(65.4)
5. Imports of Goods and Services[d]	6.3[c]	881.8	6.1[c]	2 890	(944.4)
6. Exports of Goods and Services[d]	2.6[c]	944.3	3.0[c]	3 077	(1 005.6)
7. Import Surplus[d]		−62.5		−187	(−61.1)
8. Factor Income Payments (Net)		58.0		170	(55.6)
9. Trade Gap (including factor income payments)		−4.5		−17	(−5.6)
10. Average Savings Ratio	0.21		0.19		
11. Marginal Savings Ratio	0.21		0.23		
12. Marginal Capital—Output Ratio	3.10		3.66		
13. Import Elasticity	1.26		1.50		
14. Marginal Propensity to Import	0.43		0.65		

Source: UNCTAD Secretariat, based on data of the Statistical Office of the United Nations and official national sources.
Department of Statistics, National Accounts of West Malaysia 1955–64.
Department of Statistics, National Accounts of West Malaysia 1960–66.

Notes: [a] Exchange rate: Malaysian $3.06 = US $1.
[b] Data based on experience from 1956 to 1963 in millions of dollars at 1960 prices.
[c] Annual average compound rate of growth (percentages).
[d] Excluding factor income payments.

The UNCTAD figures are taken from Trade Prospects and Capital Needs of Developing Countries—Study prepared by the UNCTAD Secretariat, Reference Number TO/34/Rev.1, 1968.

Table 4

WEST MALAYSIAN RUBBER STATISTICS 1946–66

Year	*Planted Acreage ('000 acres)*			*Production ('000 long tons)*		
	Estates	*Small-holdings*	*Total*	*Estates*	*Small-holdings*	*Total*
1946	1 908	1 500	3 408	173.8	229.9	403.7
1947	1 945	1 580	3 525	360.5	285.9	646.4
1948	1 964	1 582	3 546	403.6	294.6	698.2
1949	1 983	1 584	3 567	400.8	270.7	671.5
1950	1 977	1 587	3 564	376.7	317.4	694.1
1951	1 975	1 593	3 568	328.8	276.5	605.3
1952	2 009	1 600	3 609	341.7	242.5	584.2
1953	2 041	1 614	3 655	341.8	232.6	574.4
1954	2 028	1 629	3 657	345.5	241.0	586.5
1955	2 025	1 650	3 675	352.5	286.2	638.7
1956	2 017	1 686	3 703	351.6	274.4	626.0
1957	2 020	1 710	3 730	368.6	268.9	637.5
1958	1 989	1 766	3 755	390.1	272.8	662.9
1959	1 950	1 839	3 789	408.0	289.8	697.8
1960	1 942	1 892	3 834	414.1	294.3	708.4
1961	1 937	2 035	3 972	428.5	306.1	734.6
1962	1 927	2 130	4 057	438.3	311.2	749.5
1963	1 919	2 235	4 154	458.3	328.4	786.7
1964	1 893	2 325	4 218	476.8	347.3	824.1
1965	1 859	2 400	4 259	490.9	379.4	870.3
1966	1 813	2 529	4 342	501.2	425.9	927.1

Source: Department of Statistics, Monthly Statistical Bulletin of States of Malaya, various issues.

Table 5 WEST MALAYSIA—SAVINGS,

	1955	1956	1957	1958
Generation of Savings				
Gross Domestic Product at current market prices	4 992	5 060	5 126	4 896
Less: Net Factor Income Payment abroad	236	218	178	138
Equals: Gross National Product	4 756	4 842	4 948	4 758
Less: Consumption	3 611	3 861	3 989	3 946
Of which: Private	2 964	3 156	3 251	3 178
Public	647	705	738	768
Less: Net Transfer Payment Abroad Including Official Grants	195	204	200	200
Equals: Gross National Savings (Including Grants)	950	777	759	612
Of which: Private	n.a.	n.a.	n.a.	n.a.
Public	n.a.	n.a.	n.a.	n.a.
Use of Savings				
Gross National Savings	950	777	759	612
Less: Gross Capital Formation[1]	473	578	656	614
Of which: Private	n.a.	n.a.	n.a.	n.a.
Public	n.a.	n.a.	n.a.	n.a.
Equals: Resource Gap Balance on Goods Services and Transfers Including Official Grants	477	199	103	−2
Gross National Savings in Per cent of GNP	20.0	16.1	15.3	12.9
Total Investment in Per cent of GNP	10.0	11.9	13.3	12.9

[1] Includes changes in stocks.
Source: Based on national accounts data as per Table 1.

INVESTMENT AND RESOURCE GAP 1955–67

1959	1960	1961	1962	1963	1964	1965	1966	1967
5 527	6 111	6 076	6 336	6 742	7 176	7 881	8 300	8 436
211	248	187	140	159	214	264	272	218
5 316	5 863	5 889	6 196	6 583	6 962	7 617	8 028	8 218
4 159	4 436	4 705	4 950	5 324	5 699	6 072	6 494	6 751
3 385	3 639	3 834	4 023	4 261	4 476	4 715	4 956	5 151
774	797	871	927	1 063	1 223	1 357	1 538	1 600
206	213	201	211	200	109	143	144	294
951	1 214	983	1 035	1 059	1 154	1 402	1 390	1 173
n.a.	629	451	519	576	691	949	964	n.a.
n.a.	585	532	516	483	463	453	426	n.a.
951	1 214	983	1 035	1 059	1 154	1 402	1 390	1 173
520	865	968	1 201	1 246	1 282	1 370	1 423	1 473
n.a.	695	631	718	754	796	848	934	909
n.a.	170	337	483	492	486	522	489	564
431	349	15	−166	−187	−128	32	−33	−300
17.9	20.7	16.7	16.7	16.1	16.6	18.4	17.3	14.3
9.8	14.8	16.4	19.4	18.9	18.4	18.0	17.7	17.9

Table 6 WEST MALAYSIA—COMPOSITION *by type of capital goods,*

	1955	1956	1957	1958	1959
1. Fixed Capital Formation	460	557	630	580	580
Land	2	2	2	2	3
Dwellings	89	100	111	95	80
Non-Residential Buildings	89	99	119	90	96
Other Construction and Works	68	83	87	86	83
Machinery , Transport , Equipment, etc.	124	161	185	173	166
Planting of Perennial Crops[1]	88	112	126	134	152
Rubber					
Oil Palm					
2. Increase in Stocks	13	21	26	34	−60
Private					
Government					
3. Total Gross Capital Formation	473	578	656	614	520
Annual Increase in Gross Capital Formation, per cent		22.2	13.5	−6.4	−15.3
In per cent of GNP	10.0	11.9	13.3	12.9	9.8

[1] Includes the cost of clearing land, planting of new trees and maintenance of immature trees. Costs of ancillary investments on housing, other building, other construction, machinery and vehicles are excluded.

Source: Department of Statistics, National Accounts of West Malaysia, 1955–64.
National Accounts of West Malaysia, 1960–66.

OF GROSS CAPITAL FORMATION 1955–67

M$ million in Current Prices

1960	1961	1962	1963	1964	1965	1966	1967
755	906	1 130	1 194	1 226	1 311	1 357	1 373
3	3	3	4	4	4	6	6
112	108	114	130	135	133	145	
115	141	163	202	216	281	251	720
101	149	251	270	266	259	278	
255	309	380	360	389	428	480	460
169	196	219	228	216	206	197	187
	(187)	(210)	(216)	(203)	(191)	(176)	(157)
	(9)	(9)	(12)	(13)	(15)	(21)	(30)
110	62	71	52	56	59	66	100
92	49	88	44	37	63	48	
18	13	−17	8	19	−4	18	
865	968	1 201	1 246	1 282	1 370	1 423	1 473
66.4	11.9	24.1	3.8	2.9	6.9	3.9	3.5
14.8	16.4	19.4	18.9	18.4	18.0	17.7	17.9

Table 7

POPULATION IN THOUSANDS—WEST MALAYSIA 1955–67

Population (End-Estimates)	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
Malays	2 991	3 078	3 188	3 293	3 406	3 510	3 629	3 753	3 855	3 965	4 086	4 221	4 351
Chinese	2 229	2 297	2 378	2 445	2 520	2 595	2 678	2 765	2 845	2 920	2 996	3 076	3 157
Indians and Pakistanis	681	704	723	740	767	787	809	832	858	885	908	932	958
Other Races	104	111	116	118	122	126	134	144	149	153	167	186	189
All Races	6 005	6 190	6 405	6 596	6 815	7 018	7 250	7 494	7 707	7 923	8 157	8 415	8 655

Source: Department of Statistics, Monthly Statistical Bulletin of West Malaysia, April, 1969.
Department of Statistics, Monthly Statistical Bulletin of West Malaysia, January, 1964.

Table 8 WEST MALAYSIA—UNEMPLOYMENT

	1962			
	(1) *Unemployment*	(2) *Labour Force*	(3) *Population (Age 15–70)*	(4) *Unemployment Rate per cent* (1)/(2)
West Malaysia				
Males	87 513	1 692 683	1 965 999	5.2
Females	60 048	760 613	1 852 000	7.9
TOTAL	147 561	2 453 296	3 817 999	6.0
Metropolitan Towns				
Males	19 445	262 204	310 981	7.4
Females	14 200	89 101	289 298	15.9
TOTAL	33 645	351 305	600 279	9.6
Other Urban Areas				
Males	14 197	215 884	258 575	6.6
Females	8 724	67 609	245 230	12.9
TOTAL	22 921	283 493	503 805	8.1
Rural Areas				
Males	53 871	1 214 595	1 396 443	4.4
Females	37 124	603 903	1 317 472	6.1
TOTAL	90 995	1 818 498	2 713 915	5.0

[1] The concept of unemployment in 1967 is somewhat broader than in 1962; it includes those not actively looking for a job, but willing to accept a job if offered.

[2] The bracketed unemployment rate is for the narrow definition of unemployment.

Source: Department of Statistics, Provisional Data on Employment and Unemployment, **West Malaysia 1967.**

AND LABOUR FORCE 1962 AND 1967

	1967				
(5) *Labour Force Participation* (2)/(3)	(1)[1] *Unemployment*	(2) *Labour Force*	(3) *Population (Age 15–65)*	(4)[2] *Unemployment Rate per cent* (1)/(2)	(5) *Labour Force Participation* (2)/(3)
86.1	115 235	1 786 817	2 042 140	6.4 (5.7)	87.5
41.1	120 460	888 803	2 107 049	13.6 (9.5)	42.2
64.3	235 695	2 675 620	4 149 189	8.8 (6.8)	64.5
84.3	23 059	288 119	342 533	8.0 (7.5)	84.1
30.8	23 600	115 172	341 992	20.5 (17.0)	33.7
58.2	46 659	403 291	684 525	11.6 (10.1)	58.9
83.5	25 218	299 023	358 071	8.4 (7.7)	83.5
27.6	28 246	127 791	373 446	22.1 (15.8)	34.2
56.3	53 464	426 814	731 517	12.5 (10.0)	58.4
87.0	66 958	1 199 675	1 341 536	5.6 (4.7)	89.4
45.8	68 614	645 840	1 391 611	10.6 (6.9)	46.4
67.0	135 572	1 845 515	2 733 147	7.3 (5.5)	67.5

Table 9

AGE DISTRIBUTION OF UNEMPLOYED 1962 AND 1967

	1962		1967	
Age	*Per cent of Age Group in Total Unemployment*	*Per cent of Unemployed in Age Group Labour Force*	*Per cent of Age Group in Total Unemployment*	*Per cent of Unemployed in Age Group Labour Force*
15–19	39.0	17.3	50.6	23.1
20–24	24.2	8.8	25.2	11.4
25–39	20.2	3.4	16.2	3.1
40–65	16.6	2.9	8.0	1.8
TOTAL	100.0	—	100.0	—

Source: As per Table 8.

Table 10

PERCENT DISTRIBUTION OF UNEMPLOYED BY EDUCATIONAL ATTAINMENT 1962 AND 1967

Educational Attainment of Unemployed—per cent of Total	1962			1967		
	Males	*Females*	*Total*	*Males*	*Females*	*Total*
No Formal Education	18.9	36.2	26.0	6.3	18.6	12.7
Primary	53.8	41.6	48.8	54.3	50.6	52.8
Lower and Middle Secondary	20.6	17.7	19.4	32.9	23.2	27.6
Upper Secondary and University	6.3	4.4	5.5	5.5	4.7	4.9
Others (Unknown)	0.4	0.1	0.3	1.0	2.9	2.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0

Source: As per Table 8.

Table 11 WEST MALAYSIA—

Industry	1957 ('000) *Males*	*Females*	*Total*	*Per cent*
1. Agriculture, Forestry, Hunting and Fishing	413.0	159.8	572.8	26.94
2. Agriculture products, required substantial processing	430.5	241.5	672.0	31.61
3. Mining and Quarrying	49.0	9.5	58.5	2.75
4. Manufacturing	112.9	22.5	135.4	6.37
5. Construction	62.8	5.3	68.1	3.20
6. Electricity, Gas, Water and Sanitary Services	11.1	0.4	11.5	0.54
7. Commerce	176.6	18.6	195.2	9.18
8. Transport, Storage and Communication	75.3	1.5	74.8	3.52
9. Services	258.7	61.0	319.7	15.04
10. Industry not specified	15.0	3.1	18.1	0.85
TOTAL	1 602.9	523.2	2 126.1	100.0

Source: Data for 1957 is based on the Census Report and taken from the Monthly Statistical Bulletin of the States of Malaya, January, 1964. Data for 1962 and 1967 is from Provisional Data on Employment and Unemployment, West Malaysia, 1967.

EMPLOYMENT BY INDUSTRY

1962 *(Provisional)*				1967 *(Provisional)*			
Males	*Females*	*Total*	*Per cent*	*Males*	*Females*	*Total*	*Per cent*
299 938	189 155	489 093	21.21	332 587	188 737	521 324	21.34
478 264	294 651	772 915	33.53	436 743	317 445	754 188	30.86
38 512	7 076	45 588	1.98	59 663	7 783	67 446	2.76
107 848	48 930	156 778	6.80	150 205	58 345	208 550	8.54
42 622	4 069	46 691	2.02	76 656	7 214	83 870	3.43
8 169	194	8 363	0.36	17 437	307	17 744	0.73
263 447	47 748	311 195	13.50	211 263	48 352	259 615	10.62
75 714	2 223	77 937	3.38	91 865	2 614	94 479	3.87
289 911	105 380	395 291	17.14	294 497	136 562	431 059	17.64
741	1 137	1 878	0.08	4 513	726	5 239	0.21
1 605 166	700 563	2 305 729	100.0	1 675 429	768 085	2 443 514	100.0

Table 12 SIZE AND COMPOSITION

Constant

	1955		1956		1957		1958	
	$ *M*	*Per cent*	$ *M*	*Per cent*	$ *M*	*Per cent*	$ *M*	*Per cent*
1. Agriculture, forestry, hunting and fishing	1 742	40.5	1 723	39.3	1 767	39.3	1 831	40.6
2. Mining and Quarrying	270	6.3	292	6.7	288	6.4	203	4.5
3. Manufacturing	480	11.3	487	11.1	500	11.1	515	11.4
4. Construction								
5. Electricity, Water and Sanitary Services	56	1.3	59	1.4	63	1.4	53	1.2
6. Transportation, Storage and Communication	128	3.0	141	3.2	147	3.3	149	3.3
7. Wholesale and Retail Trade	584	13.7	624	14.2	630	14.0	624	13.8
8. Banking Insurance and Real Estate	59	1.4	56	1.3	51	1.2	54	1.2
9. Ownership of Dwellings	205	4.8	211	4.8	218	4.9	228	5.1
10. Public Administration and Defence	308	7.3	317	7.2	330	7.3	331	7.3
11. Services	444	10.4	472	10.8	499	11.1	527	11.6
Gross Domestic Product at factor cost in constant 1960 dollars	4 257	100.0	4 382	100.0	4 493	100.0	4 515	100.0

Source: Based on national accounts data as per Table 1.

OF GDP AT FACTOR COST

1960 Prices

1959		1960		1961		1962		1963	
$ *M*	*Per cent*	$ *M*	*Per cent*	$ *M*	*Per cent*	$ *M*	*Per cent*	$ *M*	*Per cent*
1 879	39.8	1 976	37.9	2 075	37.4	2 132	36.6	2 241	35.8
218	4.6	306	5.9	337	6.1	343	5.9	364	5.8
		453	8.7	489	8.8	533	9.2	606	9.7
544	11.5	611	11.7	680	12.3	773	13.3	880	14.1
		158	3.0	191	3.5	240	4.1	274	4.4
54	1.2	70	1.3	79	1.4	87	1.5	95	1.5
168	3.6	189	3.6	195	3.5	202	3.5	207	3.3
664	14.1	817	15.6	859	15.5	900	15.5	979	15.6
62	1.3	71	1.4	79	1.4	87	1.5	96	1.5
232	4.9	245	4.7	255	4.6	264	4.5	277	4.4
338	7.2	339	6.5	336	6.1	342	5.8	373	6.0
557	11.8	596	11.4	646	11.7	695	11.9	750	12.0
4 716	100.0	5 220	100.0	5 541	100.0	5 825	100.0	6 262	100.0

Table 12 (continued)

	1964		1965		1966		1967	
	$ *M*	*Per cent*	$ *M*	*Per cent*	$ *M*	*Per cent*	$ *M*	*Per cent*
1. Agriculture , forestry, hunting and fishing	2 312	35.0	2 429	34.4	2 583	34.6	2 694	34.4
2. Mining and Quarrying	349	5.3	370	5.2	380	5.1	391	5.0
3. Manufacturing	665	10.1	762	10.8	858	11.5	934	11.9
	954	14.5	1080	15.3	1 188	15.9	1 274	16.2
4. Construction	289	4.4	318	4.5	330	4.4	340	4.3
5. Electricity, Water and Sanitary Services	109	1.6	126	1.7	140	1.8	156	2.0
6. Transportation, Storage and Communication	219	3.3	247	3.5	255	3.4	268	3.4
7. Wholesale and Retail Trade	1 034	15.7	1 086	15.4	1 117	15.0	1 156	14.8
8. Banking Insurance and Real Estate	106	1.6	117	1.7	128	1.7	140	1.8
9. Ownership of Dwellings	291	4.4	295	4.2	297	4.0	310	4.0
10. Public Administration and Defence	428	6.5	462	6.5	484	6.5	505	6.4
11. Services	799	12.1	853	12.1	900	12.0	945	12.0
Gross Domestic Product at factor cost in constant 1960 dollars	6 601	100.0	7 065	100.0	7 472	100.0	7 839	100.0

Table 13

THE OBSERVED AND ESTIMATED VALUES OF SECTORAL INCOME FOR WEST MALAYSIA FROM 1955 TO 1967

	Agriculture			*Mining and Qtuarrying*			*Manufacturing*			*Manufacturing and Construction*		
Year	*Observed $M*	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*
1955	1 742	1 714	1.62	270	250	7.41				480	459	4.38
1956	1 723	1 750	1.57	292	256	12.33				487	482	1.03
1957	1 767	1 781	0.79	288	261	9.38				500	502	0.40
1958	1 831	1 787	2.40	203	262	29.06				515	507	1.55
1959	1 879	1 843	1.92	218	272	24.77				544	544	—
1960	1 976	1 981	0.25	306	294	3.92	453	441	2.65	611	644	5.40
1961	2 075	2 067	0.39	337	309	8.31	489	491	0.41	680	711	4.56
1962	2 132	2 147	0.42	343	321	6.41	533	539	1.13	773	773	—
1963	2 241	2 254	0.58	364	340	6.59	606	614	1.32	880	871	1.02
1964	2 312	2 340	1.21	349	354	1.43	665	676	1.65	954	951	0.31
1965	2 429	2 455	1.07	370	374	1.08	762	765	0.39	1 080	1 064	1.48
1966	2 583	2 555	1.08	380	391	2.89	858	847	1.28	1 188	1 168	1.68
1967	2 694	2 643	1.89	391	406	3.84	934	924	1.07	1 274	1 264	0.78

Table 13 (continued)

Year	Construction			Electricity, Water and Sanitary Services			Transportation, Storage and Communication			Wholesale and Retail Trade		
	Observed $M	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*
1955				56	52	7.14	128	140	9.38	584	601	2.91
1956				59	54	8.47	141	144	2.13	624	622	0.32
1957				63	57	9.52	147	148	0.68	630	640	1.59
1958				53	57	7.55	149	149	—	624	644	3.21
1959				54	62	14.81	168	156	7.14	664	677	1.96
1960	158	178	12.66	70	73	4.29	189	175	7.41	817	762	6.73
1961	191	199	4.19	79	81	2.53	195	187	4.10	859	816	5.06
1962	240	218	9.17	87	89	2.30	202	197	2.48	900	865	3.89
1963	274	248	9.49	95	100	5.26	207	213	2.90	979	941	3.88
1964	289	273	5.34	109	110	0.92	219	226	3.20	1 034	1 000	3.29
1965	318	309	2.83	126	123	2.38	247	243	1.62	1 086	1 082	0.37
1966	330	342	3.64	140	136	2.86	255	259	1.57	1 117	1 154	3.31
1967	340	373	9.71	156	143	5.13	268	273	1.87	1 156	1 220	5.54

The following are the estimating equations for the different sectors:

1. Log Y (A) = 0.660+0.709 Log X (GDP); where A = Agriculture including forestry, hunting and fishing
   S log Y = 0.53
2. Log Y (M+Q) = −0.472+0.791 Log X (GDP); where M+Q = Mining and Quarrying
   S log Y = 0.046
3. Log Y (M) = −4.113+1.818 Log X (GDP); where M = Manufacturing
   S log Y = 0.007
4. Log Y (M+C) = −3.354+1.658 Log X (GDP); where M+C = Manufacturing and Construction
   S log Y = 0.046
5. Log Y (C) = −4.478+1.810 Log X (GDP); where C = Construction
   S log Y = 0.036
6. Log Y (EWSS) = −4.532+1.721 Log X (GDP); where EWSS = Electricity, Water and Sanitary Services
   S log Y = 0.046

Banking, Insurance and Real Estate			*Ownership of Dwellings*			*Public Administration and Defence*			*Services*			*Gross Domestic Products*		
Observed $M	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*	*Observed $M*	*Estimated $M*	*Per cent Deviation*
59	52	11.86	205	212	3.41	308	303	1.62	444	470	5.86	4 257	4 253	0.09
56	55	1.79	211	216	2.37	317	309	2.52	472	487	3.18	4 382	4 375	0.16
51	57	11.76	218	219	0.46	330	315	4.55	499	501	0.40	4 493	4 481	0.27
54	57	5.56	228	220	3.51	331	316	4.53	527	504	4.36	4 515	4 503	0.27
62	61	1.61	232	226	2.59	338	327	3.25	557	530	4.85	4 716	4 698	0.38
71	72	1.41	245	242	1.22	339	353	4.13	596	598	0.34	5 220	5 194	0.50
79	79	—	255	251	1.57	336	369	9.82	646	641	0.77	5 541	5 511	0.54
87	86	1.15	264	259	1.89	342	383	11.99	695	680	2.16	5 825	5 794	0.53
96	96	—	277	272	1.81	373	404	8.31	750	740	1.33	6 262	6 231	0.50
106	105	0.94	291	281	3.44	428	420	1.87	799	788	1.38	6 601	6 575	0.39
117	117	—	295	294	0.34	462	442	4.33	853	853	—	7 065	7 047	0.25
128	128	—	297	305	2.69	484	461	4.75	900	912	1.33	7 472	7 469	0.04
140	138	1.43	310	314	1.29	505	478	5.35	945	964	2.01	7 839	7 848	0.11

7. Log Y (TSC) = −1.823+1.094 Log X (GDP); where TSC = Transportation, Storage and Communication
   S log Y = 0.037
8. Log Y (WRT) = −1.429+1.160 Log X (GDP); where WRT = Wholesale and Retail Trade
   S log Y = 0.078
9. Log Y (BIRE) = −4.088+1.599 Log X (GDP); where BIRE = Banking, Insurance and Real Estate
   S log Y = 0.033
10. Log Y (D) = −0.021+0.647 Log X (GDP); where D = Ownership of Dwellings
    S log Y = 0.071
11. Log Y (PA+D) = 0.231+0.747 Log X (GDP) ; where PA+D = Public Administration and Defence
    S log Y = 0.031
12. Log Y (S) = −1.597+1.176 Log X (GDP); where S = Services
    S log Y = 0.046

Table 14 THE INPUT

	1 *Agriculture and Livestock*	2 *Rubber Planting*	3 *Forestry*	4 *Fishing*	5 *Mining*	6 *Food Industries*	7 *Beverages*	8 *Tobacco*
1. Agriculture and Livestock	—	—	—	—	—	0.5123	—	0.0887
2. Rubber Planting	—	—	—	—	—	—	—	—
3. Forestry	—	—	—	—	—	—	—	—
4. Fishing	—	—	—	—	—	0.0716	—	—
5. Mining	—	—	—	—	—	—	—	—
6. Food Industries	0.0256	—	—	—	—	—	—	—
7. Beverages	—	—	—	—	—	—	—	—
8. Tobacco	—	—	—	—	—	—	—	—
9. Textiles	—	—	—	—	—	—	—	—
10. Clothing and Footwear	—	—	—	—	—	—	—	—
11. Wood and Cork	—	—	—	—	—	—	—	—
12. Furniture and Fixtures	—	—	—	—	—	—	—	—
13. Paper and Paper Products	—	—	—	—	—	—	—	—
14. Printing and Publishing	—	—	—	—	—	—	0.0047	—
15. Leather and Leather Products	—	—	—	—	—	—	—	—
16. Rubber Processing	—	—	—	—	—	—	—	—
17. Rubber Products	—	—	—	—	—	—	—	—
18. Chemical Products	0.0230	—	—	—	—	0.0055	—	—
19. Non-Metallic Mineral Products	—	—	—	—	—	—	—	—
20. Basic Metal Industries	—	—	—	—	—	—	—	—
21. Metal Products and Machinery, etc.	0.0003	—	—	—	—	—	—	—
22. Miscellaneous Manufacturing Industries	—	—	—	—	—	—	—	—
23. Construction	—	—	—	—	—	—	—	—
24. Electricity and Water	—	—	—	—	0.0642	0.0038	0.0047	0.0010
25. Transportation and Communication	—	—	—	—	—	—	—	—
26. Wholesale and Retail Trade	0.0309	0.0018	0.0064	0.0131	0.0321	0.0391	0.0376	0.0390
27. Banking and Insurance, etc.	—	—	—	—	—	—	—	—
28. Dwellings	—	—	—	—	—	—	—	—
29. Other Service Industries	—	—	—	—	—	—	—	—
TOTAL 1–29	0.0798	0.0018	0.0064	0.0131	0.0963	0.6323	0.0470	0.1287
TOTAL 30–34	0.9202	0.9982	0.9936	0.9869	0.9037	0.3677	0.9531	0.8713
TOTAL 1–34	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

COEFFICIENT MATRIX 1960

9 *Textiles*	10 *Clothing and Footwear*	11 *Wood and Cork*	12 *Furniture and Fixtures*	13 *Paper and Paper Products*	14 *Printing and Publishing*	15 *Leather and Leather Products*	16 *Rubber Processing*	17 *Rubber Products*	18 *Chemical Products*	19 *Non-Metallic Mineral Products*	20 *Basic Metal Industries*	21 *Metal Products, Machinery, etc.*
—	—	—	—	—	—	0.2941	—	—	0.4851	—	—	—
—	—	—	—	—	—	—	0.8110	—	—	—	—	—
—	—	0.5298	0.0121	—	—	—	—	—	0.0005	0.0287	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	0.0446	0.7055	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	0.0732	—	0.3482	—	—	—	—	—	0.0016	—	—	0.0024
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	0.0976	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	0.2960	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	0.0012
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	0.0005	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
0.0116	—	0.0057	0.0081	—	0.0088	—	0.0013	0.0199	0.0048	0.0573	0.0004	0.0083
—	—	—	—	—	—	—	—	—	—	—	—	—
0.0581	0.0244	0.1012	0.0648	0.1143	0.0439	0.0588	0.0024	0.0299	0.0441	0.0573	0.0021	0.0794
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
0.0697	0.1952	0.6367	0.4332	0.1143	0.0527	0.3529	0.8147	0.3458	0.5366	0.1879	0.7080	0.0913
0.9302	0.8049	0.3633	0.5668	0.8857	0.9474	0.6471	0.1854	0.6542	0.4633	0.8121	0.2920	0.9088
0.9999	1.0001	1.0000	1.0000	1.0000	1.0001	1.0000	1.0001	1.0000	0.9999	1.0000	1.0000	1.0001

Table 14 (continued)

	22 *Misc. Manufacturing Industries*	23 *Construction*	24 *Electricity and Water*	25 *Transportation and Communication*	26 *Wholesale and Retail Trade*	27 *Banking and Insurance, etc.*	28 *Dwellings*	29 *Other Service Industries*
1. Agriculture and Livestock	—	0.0383	—	—	—	—	—	—
2. Rubber Planting	—	—	—	—	—	—	—	—
3. Forestry	—	0.0194	—	—	—	—	—	—
4. Fishing	—	—	—	—	—	—	—	—
5. Mining	0.0439	0.0031	—	—	—	—	—	—
6. Food Industries	—	—	—	—	0.0039	—	—	—
7. Beverages	—	—	—	—	—	—	—	—
8. Tobacco	—	—	—	—	—	—	—	—
9. Textiles	—	—	—	—	—	—	—	—
10. Clothing and Footwear	—	—	—	—	—	—	—	—
11. Wood and Cork	—	0.1171	—	—	—	—	—	—
12. Furniture and Fixtures	—	—	—	—	—	—	—	—
13. Paper and Paper Products	—	—	—	—	—	—	—	—
14. Printing and Publishing	—	—	—	—	—	—	—	—
15. Leather and Leather Products	—	—	—	—	—	—	—	—
16. Rubber Processing	—	—	—	—	—	—	—	—
17. Rubber Products	—	—	—	—	—	—	—	—
18. Chemical Products	—	0.0075	—	—	—	—	—	—
19. Non-Metallic Mineral Products	—	0.0574	—	—	—	—	—	—
20. Basic Metal Industries	—	0.0031	—	—	—	—	—	—
21. Metal Products and Machinery, etc.	—	0.0279	—	0.0407	—	—	—	—
22. Miscellaneous Manufacturing Industries	—	—	—	—	—	—	—	—
23. Construction	—	—	0.1358	0.0180	—	—	0.0702	—
24. Electricity and Water	—	0.0210	—	—	—	—	—	—
25. Transportation and Communication	—	0.0123	—	—	0.0623	—	—	—
26. Wholesale and Retail Trade	0.0115	0.0809	0.0485	0.0460	—	0.0041	—	0.0051
27. Banking and Insurance, etc.	—	—	—	—	—	—	0.0030	—
28. Dwellings	—	—	—	—	—	—	—	—
29. Other Service Industries	—	0.0077	—	—	—	—	—	—
TOTAL 1–29	0.0554	0.3957	0.1843	0.1047	0.0662	0.0041	0.0732	0.0051
TOTAL 30–34	0.9446	0.6042	0.8157	0.8952	0.9338	0.9959	0.9268	0.9949
TOTAL 1–34	1.0000	0.9999	1.0000	0.9999	1.0000	1.0000	1.0000	1.0000

Table 15

THE INPUT COEFFICIENT MATRIX 1965

	Agriculture and Livestock (1)	*Rubber Planting* (2)	*Forestry* (3)	*Fishing* (4)	*Mining* (5)	*Food Industries* (6)	*Beverages* (7)	*Tobacco* (8)	*Textiles* (9)
1. Agriculture and Livestock	0.0466	—	—	—	—	0.3509	—	0.0696	—
2. Rubber Planting	—	—	—	—	—	—	—	—	—
3. Forestry	—	—	—	—	0.0009	—	—	—	—
4. Fishing	—	—	—	—	—	0.0314	—	—	—
5. Mining	—	—	—	—	—	—	—	—	—
6. Food Industries	0.0403	—	—	—	—	0.0179	0.0117	—	—
7. Beverages	—	—	—	—	—	—	—	—	—
8. Tobacco	—	—	—	—	—	—	—	—	—
9. Textiles	—	—	—	—	—	—	—	—	—
10. Clothing and Footwear	—	—	—	—	—	—	—	—	—
11. Wood and Cork	—	—	—	—	—	—	—	—	—
12. Furniture and Fixtures	—	—	—	—	—	—	—	—	—
13. Paper and Paper Products	—	—	—	—	—	—	—	—	—
14. Printing and Publishing	—	—	—	—	—	—	—	—	—
15. Leather and Leather Products	—	—	—	—	—	—	—	—	—
16. Rubber Processing	—	—	—	—	—	—	—	—	—
17. Rubber Products	—	—	—	—	—	—	—	—	—
18. Chemical Products	0.0313	0.0060	—	—	—	0.0060	0.0047	—	—
19. Products of Petroleum and Coal	—	0.0004	—	0.0104	0.0158	0.0008	—	—	—
20. Non-Metallic Mineral Products	—	—	—	—	—	—	—	—	—
21. Basic Metal Industries	—	—	—	—	—	—	—	—	—
22. Metal Products and Machinery	0.0010	—	—	—	—	—	—	—	—
23. Miscellaneous Manufacturing Industries	—	—	—	—	—	—	—	—	—
24. Construction	—	—	—	—	—	—	—	—	—
25. Electricity and Water	—	—	—	—	0.0466	0.0058	0.0140	0.0026	0.0147
26. Transportation and Communication	—	—	—	—	—	—	—	—	—
27. Wholesale and Retail Trade	0.0357	0.0076	0.0215	0.0346	0.0338	0.0812	0.1051	0.0454	0.1235
28. Banking and Insurance etc.	—	—	—	—	—	—	—	—	—
29. Dwellings	—	—	—	—	—	—	—	—	—
30. Other Service Industries	—	—	—	—	—	—	—	—	—
TOTAL 1–30	0.1549	0.0140	0.0215	0.0450	0.0966	0.4940	0.1355	0.1176	0.1382
TOTAL 31–35	0.8451	0.9861	0.9785	0.9551	0.9034	0.5060	0.8645	0.8824	0.8618
TOTAL 1–35	1.0000	1.0001	1.0000	1.0001	1.0000	1.0000	1.0000	1.0000	1.0000

Table 15 (continued)

(10) *Clothing and Footwear*	(11) *Wood and Cork*	(12) *Furniture and Fixtures*	(13) *Paper and Paper Products*	(14) *Printing and Publishing*	(15) *Leather and Leather Products*	(16) *Rubber Processing*	(17) *Rubber Products*	(18) *Chemical Products*	(19) *Products of Petroleum and Coal*	(20) *Non-Metallic Mineral Products*	(21) *Basic Metal Industries*	(22) *Metal Products and Machinery, etc.*
—	—	—	—	—	—	—	—	0.3639	—	—	—	—
—	—	—	—	—	—	0.7320	—	—	—	—	—	—
—	0.3817	0.0169	—	—	—	0.0001	—	0.0011	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	0.0222	0.8311	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
0.0172	—	0.0028	—	—	—	—	0.0802	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
0.0345	0.0445	0.2373	—	—	—	—	—	—	—	—	—	0.0045
—	—	0.0254	—	—	—	—	—	—	—	—	—	—
—	—	—	0.0698	0.0367	0.0333	—	0.0010	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	0.1367	0.1585	—	—	—	—	—
—	—	0.0141	—	—	—	—	0.0371	—	—	—	—	—
—	—	0.0198	—	—	—	0.0002	0.0090	0.0836	—	—	—	0.0020
—	0.0016	—	—	—	—	0.0022	0.0020	0.0011	0.0007	0.0122	0.0004	0.0015
—	—	—	—	—	—	—	—	0.0003	—	0.0889	—	—
—	—	0.0198	—	—	—	—	—	—	—	—	—	0.0005
—	—	—	—	—	—	—	0.0010	—	—	0.0022	—	0.0040
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	0.0066	0.0056	0.0078	0.0103	—	0.0023	0.0201	0.0048	0.0007	0.0522	0.0005	0.0104
—	—	—	—	—	—	—	—	—	—	—	—	—
0.0862	0.1214	0.0791	0.0775	0.0573	0.1000	0.0060	0.0903	0.0926	0.0320	0.1056	0.0073	0.0999
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—
0.1379	0.5558	0.4208	0.1551	0.1043	0.1333	0.8795	0.3992	0.5474	0.0334	0.2833	0.8393	0.1228
0.8621	0.4443	0.5791	0.8450	0.8957	0.8667	0.1207	0.6008	0.4528	0.9666	0.7167	0.1608	0.8771
1.0000	1.0001	0.9999	1.0001	1.0000	1.0000	1.0002	1.0000	1.0002	1.0000	1.0000	1.0001	1.0000

	Misc. Manufacturing Industries (23)	*Construction* (24)	*Electricity and Water* (25)	*Transportation and Communication* (26)	*Wholesale and Retail Trade* (27)	*Banking and Insurance etc.* (28)	*Dwellings* (29)	*Other Service Industries* (30)
1. Agriculture and Livestock	—	0.0165	—	—	—	—	—	—
2. Rubber Planting	—	—	—	—	—	—	—	—
3. Forestry	—	0.0081	—	—	—	—	—	—
4. Fishing	—	—	—	—	—	—	—	—
5. Mining	—	0.0038	—	—	—	—	—	—
6. Food Industries	—	—	—	—	0.0032	—	—	—
7. Beverages	—	—	—	—	—	—	—	—
8. Tobacco	—	—	—	—	—	—	—	—
9. Textiles	—	—	—	—	—	—	—	—
10. Clothing and Footwear	—	—	—	—	—	—	—	—
11. Wood and Cork	0.0016	0.0904	—	—	—	—	—	—
12. Furniture and Fixtures	—	—	—	—	—	—	—	—
13. Paper and Paper Products	—	—	—	—	—	—	—	—
14. Printing and Publishing	—	—	—	—	—	—	—	—
15. Leather and Leather Products	—	—	—	—	—	—	—	—
16. Rubber Processing	—	—	—	—	—	—	—	—
17. Rubber Products	—	—	—	—	—	—	—	—
18. Chemical Products	0.0016	0.0118	—	—	—	—	—	—
19. Products of Petroleum and Coal	0.0016	0.0046	0.0330	0.0245	—	—	—	—
20. Non-Metallic Mineral Products	—	0.0804	—	—	—	—	—	—
21. Basic Metal Industries	—	0.0245	—	—	—	—	—	—
22. Metal Products and Machinery	—	0.0440	—	0.0296	—	—	—	—
23. Miscellaneous Manufacturing Industries	—	0.0003	—	—	—	—	—	—
24. Construction	—	—	0.1343	0.0310	—	—	0.0508	—
25. Electricity and Water	0.0049	0.0238	0.0359	0.0036	—	—	—	0.0001
26. Transportation and Communication	—	0.0107	—	0.0051	0.0636	—	—	—
27. Wholesale and Retail Trade	0.0343	0.0883	0.0509	0.0588	—	0.0088	—	0.0091
28. Banking and Insurance etc.	—	—	—	—	—	—	0.0025	—
29. Dwellings	—	—	—	—	—	—	—	—
30. Other Service Industries	—	0.0106	—	—	—	—	—	—
TOTAL 1–30	0.0440	0.4178	0.2541	0.1526	0.0668	0.0088	0.0533	0.0092
TOTAL 31–35	0.9560	0.5823	0.7459	0.8473	0.9331	0.9912	0.9467	0.9907
TOTAL 1–35	1.0000	1.0000	1.0000	0.9999	0.9999	1.0000	1.0000	0.9999

Table 16 INVERSE

	1 *Agriculture and Livestock*	2 *Rubber Planting*	3 *Forestry*	4 *Fishing*	5 *Mining*	6 *Food Industries*	7 *Beverages*	8 *Tobacco*	9 *Textiles*
Agriculture and Livestock	1.02502	—	0.00001	0.00003	0.00045	0.52796	0.00011	0.09101	0.00019
Rubber Planting	—	1.00000	—	—	—	—	—	—	—
Forestry	0.00004	—	1.00000	—	0.00073	0.00007	0.00006	0.00002	0.00014
Fishing	0.00189	—	—	1.00000	0.00001	0.07258	0.00001	0.00018	0.00002
Mining	—	—	—	—	1.00007	0.00001	0.00001	—	0.00001
Food Industries	0.02637	0.00001	0.00003	0.00005	0.00015	1.01374	0.00015	0.00249	0.00024
Beverages	—	—	—	—	—	—	1.00000	—	—
Tobacco	—	—	—	—	—	—	—	1.00000	—
Textiles	—	—	—	—	—	—	—	—	1.00000
Clothing and Footwear	—	—	—	—	—	—	—	—	—
Wood and Cork	0.00005	—	—	—	0.00103	0.00010	0.00008	0.00003	0.00019
Furniture and Fixtures	—	—	—	—	—	—	—	—	—
Paper and Paper Products	—	—	—	—	—	—	—	—	—
Printing and Publishing	—	—	—	—	—	—	0.00470	—	—
Leather and Leather Products	—	—	—	—	—	—	—	—	—
Rubber Processing	—	—	—	—	—	—	—	—	—
Rubber Products	—	—	—	—	—	—	—	—	—
Chemical Products	0.02372	—	—	—	0.00008	0.01772	0.00001	0.00211	0.00002
Non-Metallic Mineral Products	0.00002	—	—	—	0.00050	0.00004	0.00004	0.00001	0.00009
Basic Metal Industries	—	—	—	—	0.00003	—	—	—	0.00001
Mineral Products, Machinery, etc.	0.00040	—	0.00002	0.00003	0.00034	0.00032	0.00012	0.00014	0.00020
Misc. Manufacturing Industries	—	—	—	—	—	—	—	—	—
Construction	0.00007	—	0.00001	0.00001	0.00879	0.00060	0.00069	0.00019	0.00165
Electricity and Water	0.00022	—	—	—	0.06443	0.00396	0.00476	0.00103	0.01164
Transportation and Communication	0.00211	0.00011	0.00040	0.00082	0.00237	0.00363	0.00239	0.00263	0.00370
Wholesale and Retail Trade	0.03393	0.00181	0.00642	0.01314	0.03624	0.05813	0.03823	0.04221	0.05903
Banking and Insurance, etc.	—	—	—	—	—	—	—	—	—
Dwellings	—	—	—	—	—	—	—	—	—
Other Service Industries	—	—	—	—	0.00007	—	0.00001	—	0.00001
Summing across rows in each column, i.e. $\Sigma \chi ij$	1.11384	1.00193	1.00689	1.01408	1.11529	1.69886	1.05137	1.14205	1.07714

MATRIX 1960

10 *Clothing and Footwear*	11 *Wood and Cork*	12 *Furniture and Fixtures*	13 *Paper and Paper Products*	14 *Printing and Publishing*	15 *Leather and Leather Products*	16 *Rubber Processing*	17 *Rubber Products*	18 *Chemical Products*	19 *Non-Metallic Mineral Products*	20 *Basic Metal Industries*	21 *Metal Products and Machinery, etc.*
0.02950	0.00026	0.00027	0.00024	0.00015	0.30158	0.00002	0.00019	0.49736	0.00049	0.00033	0.00022
—	—	—	—	—	—	0.81100	0.24006	—	—	—	0.00029
0.03879	0.52987	0.19670	0.00001	0.00010	0.00002	0.00002	0.00023	0.00144	0.02939	0.00052	0.00137
0.00006	0.00003	0.00003	0.00003	0.00001	0.00057	—	0.00001	0.00093	0.00002	0.00001	0.00002
—	0.00001	0.00001	—	0.00001	—	—	0.00002	0.00003	0.04466	0.70555	0.00001
0.00091	0.00042	0.00041	0.00045	0.00018	0.00799	0.00002	0.00013	0.01297	0.00026	0.00012	0.00032
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
1.00000	—	—	—	—	—	—	—	—	—	—	—
0.07321	1.00010	0.34838	0.00002	0.00015	0.00002	0.00002	0.00033	0.00171	0.00097	0.00073	0.00254
—	—	1.00000	—	—	—	—	—	—	—	—	—
—	—	—	1.00000	—	—	—	—	—	—	—	—
—	—	—	—	1.00000	—	—	—	—	—	—	—
0.09760	—	—	—	—	1.00000	—	—	—	—	—	—
—	—	—	—	—	—	1.00000	0.29600	—	—	—	0.00036
—	—	—	—	—	—	—	1.00000	—	—	—	0.00120
0.00068	0.00001	0.00002	0.00001	0.00001	0.00698	—	0.00003	1.01151	0.00007	0.00006	0.00002
0.00001	0.00005	0.00009	0.00001	0.00007	0.00001	0.00001	0.00016	0.00055	1.00047	0.00036	0.00007
—	—	—	—	—	—	—	0.00001	—	0.00003	1.00002	—
0.00011	0.00029	0.00030	0.00029	0.00015	0.00027	0.00002	0.00016	0.00033	0.00039	0.00025	1.00024
—	—	—	—	—	—	—	—	—	—	—	—
0.00010	0.00090	0.00149	0.00013	0.00125	0.00009	0.00018	0.00280	0.00074	0.00827	0.00626	0.00123
0.00043	0.00573	0.01013	0.00001	0.00883	0.00007	0.00130	0.02036	0.00497	0.06038	0.04586	0.00837
0.00243	0.00657	0.00639	0.00715	0.00279	0.00430	0.00025	0.00205	0.00382	0.00402	0.00180	0.00503
0.03892	0.10531	0.10227	0.11469	0.04460	0.06898	0.00395	0.03242	0.06121	0.06289	0.02770	0.08048
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	0.00001	0.00001	—	0.00001	—	—	0.00002	0.00001	0.00006	0.00005	0.00001
1.28275	1.64956	1.66650	1.12304	1.05831	1.39088	1.81679	1.59498	1.59758	1.21237	1.78962	1.10178

Table 16 (continued)

	Misc. Manufacturing Industries 22	*Construction* 23	*Electricity and Water* 24	*Transportation and Communication* 25	*Wholesale and Retail Trade* 26	*Banking and Insurance etc.* 27	*Dwellings* 28	*Other Service Industries* 29
Agriculture and Livestock	0.00004	0.04336	0.00599	0.00089	0.00211	0.00001	0.00304	0.00001
Rubber Planting	—	0.00001	—	0.00001	—	—	—	—
Forestry	0.00003	0.08345	0.01134	0.00156	0.00010	—	0.00586	—
Fishing	—	0.00011	0.00003	0.00002	0.00028	—	0.00001	—
Mining	0.04390	0.00788	0.00107	0.00014	0.00001	—	0.00055	—
Food Industries	0.00005	0.00151	0.00040	0.00022	0.00397	0.00002	0.00011	0.00002
Beverages	—	—	—	—	—	—	—	—
Tobacco	—	—	—	—	—	—	—	—
Textiles	—	—	—	—	—	—	—	—
Clothing and Footwear	—	—	—	—	—	—	—	—
Wood and Cork	0.00005	0.11763	0.01598	0.00223	0.00014	—	0.00826	—
Furniture and Fixtures	—	—	—	—	—	—	—	—
Paper and Paper Products	—	—	—	—	—	—	—	—
Printing and Publishing	—	—	—	—	—	—	—	—
Leather and Leather Products	—	—	—	—	—	—	—	—
Rubber Processing	—	0.00001	—	0.00001	—	—	—	—
Rubber Products	—	0.00003	—	0.00005	—	—	—	—
Chemical Products	—	0.00853	0.00116	0.00016	0.00008	—	0.00060	—
Non-Metallic Mineral Products	0.00002	0.05763	0.00783	0.00104	0.00007	—	0.00405	—
Basic Metal Industries	—	0.00311	0.00042	0.00006	—	—	0.00022	—
Mineral Products, Machinery, etc.	0.00004	0.02879	0.00403	0.04135	0.00258	0.00001	0.00202	0.00001
Misc. Manufacturing Industries	1.00000	—	—	—	—	—	—	—
Construction	0.00040	1.00385	0.13638	0.01817	0.00113	—	0.07047	0.00001
Electricity and Water	0.00283	0.02585	1.00351	0.00081	0.00007	—	0.00181	—
Transportation and Communication	0.00082	0.01879	0.00558	1.00342	0.06253	0.00026	0.00132	0.00032
Wholesale and Retail Trade	0.01313	0.10343	0.06271	0.05129	1.00342	0.00411	0.00727	0.00512
Banking and Insurance, etc.	—	—	—	—	—	1.00000	0.00300	—
Dwellings	—	—	—	—	—	—	1.00000	—
Other Service Industries	—	0.00773	0.00105	0.00014	0.00001	—	0.00054	1.00000
Summing across row s in each column, i.e. $\Sigma \chi ij$	1.06131	1.51170	1.25748	1.12157	1.07650	1.00441	1.10913	1.00549

Table 17

INVERSE MATRIX 1965

	1 *Agriculture and Livestock*	2 *Rubber Planting*	3 *Forestry*	4 *Fishing*	5 *Mining*	6 *Food Industries*	7 *Beverages*	8 *Tobacco*	9 *Textiles*
1. Agriculture and Livestock	1.07942	0.00258	0.00003	0.00005	0.00020	0.38842	0.00674	0.07520	0.00021
2. Rubber Planting	—	1.00000	—	—	—	—	—	—	—
3. Forestry	0.00005	0.00001	1.00000	—	0.00119	0.00007	0.00010	0.00002	0.00010
4. Fishing	0.00140	—	—	1.00000	—	0.03248	0.00039	0.00010	0.00001
5. Mining	—	—	—	—	1.00017	0.00003	0.00006	0.00001	0.00006
6. Food Industries	0.04444	0.00013	0.00007	0.00012	0.00013	1.03449	0.01254	0.00325	0.00042
7. Beverages	—	—	—	—	—	—	1.00000	—	—
8. Tobacco	—	—	—	—	—	—	—	1.00000	—
9. Textiles	—	—	—	—	—	—	—	—	1.00000
10. Clothing and Footwear	—	—	—	—	—	—	—	—	—
11. Wood and Cork	0.00002	—	—	0.00001	0.00063	0.00010	0.00021	0.00005	0.00022
12. Furniture and Fixtures	—	—	—	—	—	—	—	—	—
13. Paper and Paper Products	—	—	—	—	—	—	—	—	—
14. Printing and Publishing	—	—	—	—	—	—	—	—	—
15. Leather and Leather Products	—	—	—	—	—	—	—	—	—
16. Rubber Processing	—	—	—	—	—	—	—	—	—
17. Rubber Products	—	—	—	—	—	—	—	—	—
18. Chemical Products	0.03716	0.00664	—	—	0.00009	0.02005	0.00547	0.00260	0.00004
19. Products of Petroleum and Coal	0.00018	0.00042	0.00003	0.01046	0.01752	0.00157	0.00069	0.00018	0.00072
20. Mon-Metallic Mineral Products	0.00003	—	—	0.00001	0.00058	0.00010	0.00020	0.00004	0.00020
21. Basic Metal Industries	—	—	—	—	0.00016	0.00003	0.00005	0.00001	0.00006
22. Metal Products and Machinery	0.00118	0.00002	0.00004	0.00007	0.00037	0.00063	0.00031	0.00019	0.00034
23. Misc. Manufacturing Industries	—	—	—	—	—	—	—	—	—
24. Construction	0.00016	0.00002	0.00004	0.00007	0.00660	0.00106	0.00219	0.00047	0.00231
25. Electricity and Water	0.00048	0.00004	0.00001	0.00002	0.04857	0.00639	0.01472	0.00276	0.01536
26. Transportation and Communication	0.00294	0.00054	0.00138	0.00224	0.00245	0.00652	0.00695	0.00314	0.00802
27. Wholesale and Retail Trade	0.04597	0.00837	0.02160	0.03509	0.03729	0.10179	0.10833	0.04899	0.12511
28. Banking and Insurance, etc.	—	—	—	—	—	—	—	—	—
29. Dwellings	—	—	—	—	—	—	—	—	—
30. Other Service Industries	—	—	—	—	—	—	—	—	—

Table 17 (continued)

10 *Clothing and Footwear*	11 *Wood and Cork*	12 *Furniture and Fixtures*	13 *Paper and Paper Products*	14 *Printing and Publishing*	15 *Leather and Leather Products*	16 *Rubber Processing*	17 *Rubber Products*	18 *Chemical Products*	19 *Products of Petroleum and Coal*	20 *Non-Metallic Mineral Products*	21 *Basic Metal Industries*
0.00012	0.00020	0.00895	0.00014	0.00011	0.00013	0.00231	0.00460	0.42878	0.00004	0.00035	0.00018
—	—	0.00202	—	—	—	0.84791	0.13957	—	—	—	—
0.01379	0.39953	0.11471	0.00006	0.00007	0.00001	0.00014	0.00018	0.00126	0.00001	0.00040	0.00100
0.00001	0.00001	0.00002	0.00001	0.00001	0.00001	—	0.00002	0.00056	—	0.00001	—
0.00001	0.00003	0.01692	0.00004	0.00004	0.00001	0.00001	0.00009	0.00003	—	0.02459	0.83125
0.00031	0.00045	0.00076	0.00028	0.00020	0.00034	0.00014	0.00055	0.01799	0.00011	0.00041	0.00013
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
0.01720	—	0.00408	—	—	—	—	0.08329	—	—	—	—
1.00000	—	—	—	—	—	—	—	—	—	—	—
0.03613	1.04669	0.25496	0.00013	0.00015	0.00002	0.00004	0.00033	0.00010	0.00002	0.00081	0.00053
—	—	1.02606	—	—	—	—	—	—	—	—	—
—	—	0.00002	1.07504	0.03945	0.03580	—	0.00112	—	—	—	—
—	—	—	—	1.00000	—	—	—	—	—	—	—
—	—	—	—	—	1.00000	—	—	—	—	—	—
—	—	0.00276	—	—	—	1.15835	0.19067	—	—	—	—
—	—	0.01502	—	—	—	—	1.03853	—	—	—	—
0.00001	0.00003	0.02266	0.00002	0.00003	0.00001	0.00589	0.01136	1.10600	—	0.00013	0.00008
0.00022	0.00214	0.00125	0.00043	0.00047	0.00017	0.00301	0.00354	0.00163	1.00078	0.01605	0.01499
0.00002	0.00011	0.00014	0.00012	0.00014	0.00002	0.00004	0.00030	0.00045	0.00001	1.09832	0.00049
0.00001	0.00003	0.02035	0.00003	0.00004	0.00001	0.00001	0.00008	0.00002	—	0.00021	1.00014
0.00019	0.00032	0.00032	0.00022	0.00019	0.00021	0.00005	0.00141	0.00070	0.00007	0.00303	0.00032
—	—	—	—	—	—	—	—	—	—	—	—
0.00026	0.00124	0.00146	0.00134	0.00161	0.00025	0.00041	0.00339	0.00100	0.00016	0.00843	0.00557
0.00054	0.00724	0.00911	0.00876	0.01107	0.00033	0.00281	0.02360	0.00570	0.00074	0.06095	0.04089
0.00598	0.00876	0.00774	0.00540	0.00394	0.00660	0.00092	0.00706	0.00770	0.00206	0.00790	0.00251
0.09347	0.13681	0.12080	0.08429	0.06139	0.10327	0.01438	0.10987	0.12025	0.03222	0.12210	0.03838
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—

	22 *Metal Products and Machinery, etc.*	23 *Misc. Manufacturing Industries*	24 *Construction*	25 *Electricity and Water*	26 *Transportation and Communication*	27 *Wholesale and Retail Trade*	28 *Banking and Insurance*	29 *Dwellings*	30 *Other Service Industries*
1. Agriculture and Livestock	0.00103	0.00075	0.02317	0.00330	0.00084	0.00130	0.00001	0.00118	0.00001
2. Rubber Planting	—	—	—	—	—	—	—	—	—
3. Forestry	0.00188	0.00067	0.04455	0.00621	0.00147	0.00009	—	0.00226	—
4. Fishing	0.00001	—	0.00004	0.00001	0.00001	0.00010	—	—	—
5. Mining	0.00046	0.00002	0.02627	0.00366	0.00085	0.00005	—	0.00133	—
6. Food Industries	0.00038	0.00015	0.00135	0.00037	0.00025	0.00333	0.00003	0.00007	0.00003
7. Beverages	—	—	—	—	—	—	—	—	—
8. Tobacco	—	—	—	—	—	—	—	—	—
9. Textiles	—	—	—	—	—	—	—	—	—
10. Clothing and Footwear	—	—	—	—	—	—	—	—	—
11. Wood and Cork	0.00489	0.00175	0.09529	0.01328	0.00317	0.00020	—	0.00484	—
12. Furniture and Fixtures	—	—	—	—	—	—	—	—	—
13. Paper and Paper Products	—	—	—	—	—	—	—	—	—
14. Printing and Publishing	—	—	—	—	—	—	—	—	—
15. Leather and Leather Products	—	—	—	—	—	—	—	—	—
16. Rubber Processing	—	—	—	—	—	—	—	—	—
17. Rubber Products	—	—	—	—	—	—	—	—	—
18. Chemical Products	0.00225	0.00178	0.01384	0.00193	0.00051	0.00010	—	0.00070	—
19. Products of Petroleum and Coal	0.00206	0.00184	0.00789	0.03544	0.02517	0.00161	0.00001	0.00040	0.00002
20. Mon-Metallic Mineral Products	0.00015	0.00007	0.08868	0.01236	0.00282	0.00018	—	0.00451	—
21. Basic Metal Industries	0.00054	0.00002	0.02464	0.00344	0.00080	0.00005	—	0.00125	—
22. Metal Products and Machinery	1.00428	0.00010	0.04516	0.00640	0.03143	0.00200	0.00002	0.00229	0.00002
23. Misc. Manufacturing Industries	—	1.00000	0.00030	0.00004	0.00001	—	—	0.00002	—
24. Construction	0.00168	0.00076	1.00490	0.14010	0.03199	0.00204	0.00002	0.05105	0.00003
25. Electricity and Water	0.01098	0.00514	0.03218	1.04176	0.00514	0.00035	—	0.00163	0.00011
26. Transportation and Communication	0.00657	0.00226	0.01857	0.00605	1.00977	0.06424	0.00057	0.00094	0.00059
27. Wholesale and Retail Trade	0.10243	0.03527	0.12140	0.07105	0.06725	1.00460	0.00884	0.00619	0.00915
28. Banking and Insurance, etc.	—	—	—	—	—	—	1.00000	0.00250	—
29. Dwellings	—	—	—	—	—	—	—	1.00000	—
30. Other Service Industries	—	—	0.01127	—	—	—	—	—	1.00000

Table 18

VALUE ADDED ELASTICITIES, GROWTH MULTIPLIERS AND PROJECTED VALUE ADDED FOR 1975 BY THE GROWTH MULTIPLIER PROCESS

Sectors	*Value Added Elasticities*	*Growth Multipliers of Value Added*	*Projected Value Added Plus[1] for 1975 ($ Million)*	*Value Added[2] for 1975 by Growth Multiplier Process*	*Scheme of Aggregation*
1. Agriculture and Livestock	0.8380	0.0783	1 444.2	1 225.0	Agriculture, forestry, hunting and fishing
2. Rubber Planting	−0.5840	−0.0817	490.3	475.2	
3. Forestry	0.2200	0.0033	155.4	135.1	
4. Fishing	1.1960	0.0167	257.7	252.6	
5. Mining	2.0700	0.1542	1 911.2	1 786.0	Mining and Quarrying
6. Food Industries	3.1520	0.0801	876.0	301.0	Manufacturing and Construction
7. Beverages	2.1080	0.0072	88.5	44.0	
8. Tobacco	2.2860	0.0352	422.9	80.8	
9. Textiles	4.8340	0.0106	105.1	27.3	
10. Clothing and Footwear	1.4360	0.0007	10.0	4.0	
11. Wood and Cork	2.0980	0.0155	191.8	134.9	
12. Furniture and Fixtures	1.3120	0.0026	39.1	22.7	
13. Paper and Paper Products	4.6620	0.0037	37.4	21.3	
14. Printing and Publishing	2.2240	0.0122	148.3	75.9	
15. Leather and Leather Products	3.0860	0.0006	6.9	2.4	
16. Rubber Processing	−1.7060	−0.0428	−150.1	−122.1	
17. Rubber Products	2.9460	0.0150	167.2	101.9	
18. Chemical Products	2.3680	0.0362	429.6	230.9	
19. Products of Petroleum and Coal	—	0.0096[3]	201.8	50.2	
20. Non-Metallic Mineral Products	3.3460	0.0177	191.1	127.7	
21. Basic Metal Industries	−0.3580	−0.0061	92.8	17.3	
22. Metal Products and Machinery	2.9800	0.0447	496.3	222.4	
23. Miscellaneous Manufacturing Industries	1.2340	0.0073	110.8	26.1	
24. Construction	2.0680	0.0999	1 238.9	751.1	

Table 18 (continued)

VALUE ADDED ELASTICITIES, GROWTH MULTIPLIERS AND PROJECTED VALUE ADDED FOR 1975 BY THE GROWTH MULTIPLIER PROCESS

Sectors	*Value Added Elasticities*	*Growth Multipliers of Value Added*	*Projected Value Added Plus*[1] *for 1975 ($ Million)*	*Value Added*[2] *for 1975 by Growth Multiplier Process*	*Scheme of Aggregation*
25. Electricity and Water	1.6640	0.0238	319.7	282.7	Transportation, Storage and Communication
26. Transportation and Communication	0.9480	0.0375	648.4	568.7	
27. Wholesale and Retail Trade	0.7740	0.1574	3 033.8	2 757.1	Wholesale and Retail Trade
28. Banking and Insurance, etc.	1.4580	0.0210	296.8	246.2	Banking, Insurance and Real Estate
29. Dwellings	0.7400	0.0242	478.7	478.7	Ownership of Dwellings
30. Other Service Industries	1.4300	0.2154	3 071.1	2 924.3	Public Administration, Defence and Services

[1] Value added plus includes unspecified, rest of the world and import trade in addition to salaries and wages, entrepreneurial income and indirect taxes less subsidies.
[2] Value added includes salaries and wages, entrepreneurial income and indirect taxes less subsidies only.
[3] Derived as a residual.

Table 19

FINAL DEMAND ELASTICITIES, GROWTH MULTIPLIERS, PROJECTED 1975 FINAL DEMAND VECTOR AND PROJECTED VALUE ADDED FOR 1975 BY THE LEONTIEF PROCESS

	Final Demand Elasticities	*Final Demand Growth Multipliers*	*Projected Final Demand Vector for 1975 ($M)*	*Projected Value Added for 1975 by Leontief Process ($M)*
1. Agriculture and Livestock	1.0600	0.0677	1 106.0	962.0
2. Rubber Planting	0.5840	0.0091	208.0	202.4
3. Forestry	0.4700	0.0029	76.7	66.8
4. Fishing	1.8320	0.0218	281.8	276.6
5. Mining	1.3860	0.0252	364.2	343.1
6. Food Industries	1.8480	0.0937	1 209.1	335.0
7. Beverages	2.4660	0.0094	110.0	54.8
8. Tobacco	2.2380	0.0394	475.8	91.2
9. Textiles	4.0180	0.0080	83.0	21.4
10. Clothing and Footwear	1.1880	0.0007	10.8	4.4
11. Wood and Cork	1.3040	0.0108	160.3	80.3
12. Furniture and Fixtures	1.1460	0.0040	63.1	34.6
13. Paper and Paper Products	3.5360	0.0028	29.3	16.6
14. Printing and Publishing	2.4440	0.0149	174.7	89.6
15. Leather and Leather Products	2.9900	0.0009	9.4	3.5
16. Rubber Processing	−0.8440	−0.1265	196.3	39.2
17. Rubber Products	3.1120	0.0249	273.6	162.2
18. Chemical Products	1.9520	0.0527	666.4	274.3
19. Products of Petroleum and Coal	2.0000[1]	0.0112	174.0	43.9
20. Non-Metallic Mineral Products	3.4020	0.0027	28.8	18.5
21. Basic Metal Industries	1.6080	0.1283	1 743.4	101.0
22. Metal Products and Machinery	3.3520	0.0406	436.6	195.6
23. Miscellaneous Manufacturing Industries	1.1740	0.0073	113.2	26.8
24. Construction	2.2800	0.1737	2 085.8	1 148.2
25. Electricity and Water	1.8640	0.0186	239.6	212.7
26. Transportation and Communication	1.2300	0.0380	578.4	507.9
27. Wholesale and Retail Trade	0.3840	0.0706	2 144.0	1 964.2
28. Banking and Insurance, etc.	1.4540	0.0209	296.6	246.2
29. Dwellings	0.6680	0.0233	489.5	501.0
30. Other Service Industries	1.4400	0.2174	3 090.2	2 944.5

[1] This is imputed elasticity based on the magnitude of elasticity of demand for a similar product, chemicals.

Table 20 INTERMEDIATE AND DIRECT

Sector	1960				
	Intermediate Input Coefficients	*Import*	*Unspecified*	*Salaries and Wages*	*Entrepreneurial Income*
Agriculture and Livestock	0.0798	0.0954	0.0444	0.0634	0.6936
Rubber Planting	0.0018	0.0101	0.0118	0.4081	0.5505
Forestry	0.0064	—	0.0934	0.2657	0.4863
Fishing	0.0131	0.0566	0.0061	0.1274	0.7958
Mining	0.0963	0.0624	0.0568	0.1919	0.4254
Food Industries	0.6323	0.1008	0.1215	0.0794	0.0648
Beverages	0.0470	0.2864	0.1408	0.1878	0.3380
Tobacco	0.1287	0.6540	0.0975	0.0458	0.0741
Textiles	0.0697	0.6977	0.0465	0.1163	0.0698
Clothing and Footwear	0.1952	0.1463	0.2195	0.1707	0.2683
Wood and Cork	0.6367	0.0196	0.0759	0.1486	0.1192
Furniture and Fixtures	0.4332	0.1336	0.0526	0.2915	0.0891
Paper and Paper Products	0.1143	0.6571	0.1143	0.0571	0.0571
Printing and Publishing	0.0527	0.2427	0.1579	0.2661	0.2807
Leather and Leather Products	0.3529	0.2353	0.1765	0.1176	0.1176
Rubber Processing	0.8147	0.0402	0.0187	0.0494	0.0771
Rubber Products	0.3458	0.1269	0.1542	0.1791	0.1940
Chemical Products	0.5366	0.1084	0.0946	0.0510	0.1849
Non-Metallic Mineral Products	0.1879	0.1815	0.1592	0.1624	0.3089
Basic Metal Industries	0.7080	0.2697	0.0046	0.0083	0.0094
Metal Products and Machinery	0.0913	0.2701	0.2133	0.2630	0.1623
Miscellaneous Manufacturing Industries	0.0554	0.1409	0.6559	0.0878	0.0600
Construction	0.3957	0.2360	0.0395	0.2601	0.0685
Electricity and Water	0.1843	0.1129	0.0873	0.2205	0.3951
Transportation and Communication	0.1047	0.0930	0.0684	0.3520	0.2376
Wholesale and Retail Trade	0.0662	0.0036	0.0330	0.0977	0.3799
Banking and Insurance, etc.	0.0041	0.1285	0.0534	0.3042	0.4245
Dwellings	0.0732	—	—	0.0026	0.8981
Other Service Industries	0.0051	0.0210	0.0250	0.7493	0.1777
Products of Petroleum and Coal	—	—	—	—	—

Note: The Intermediate input coefficient and the total direct primary input coefficient in each row sum to unity apart from rounding-off errors.

PRIMARY INPUT COEFFICIENTS 1960 AND 1965

		1965						
Indirect Taxes less Subsidies	*Total Direct Primary Input Coefficients*	*Intermediate Input Coefficients*	*Import*	*Unspecified*	*Salaries and Wages*	*Entre-preneurial Income*	*Indirect Taxes less Subsidies*	*Total Direct Primary Input Coefficients*
0.0234	0.9202	0.1549	0.0919	0.0364	0.0449	0.6496	0.0224	0.8451
0.0177	0.9982	0.0140	0.0181	0.0124	0.4422	0.4772	0.0362	0.9861
0.1481	0.9936	0.0215	—	0.1277	0.3482	0.3281	0.1745	0.9785
0.0010	0.9869	0.0450	0.0111	0.0077	0.1230	0.8100	0.0035	0.9551
0.1672	0.9037	0.0966	0.0207	0.0385	0.1865	0.4818	0.1760	0.9034
0.0012	0.3677	0.4940	0.2270	0.1052	0.0573	0.1166	—	0.5060
—	0.9531	0.1355	0.2757	0.1589	0.1332	0.2967	—	0.8645
—	0.8713	0.1176	0.6034	0.1104	0.0325	0.1356	0.0005	0.8824
—	0.9302	0.1382	0.5735	0.0647	0.0971	0.1265	—	0.8618
—	0.8049	0.1379	0.3448	0.1724	0.1552	0.1897	—	0.8621
—	0.3633	0.5558	0.0319	0.0999	0.1675	0.1428	0.0022	0.4443
—	0.5668	0.4208	0.1299	0.1130	0.1780	0.1554	0.0028	0.5791
—	0.8857	0.1551	0.2946	0.0698	0.1008	0.3798	—	0.8450
—	0.9474	0.1043	0.1791	0.2584	0.2775	0.1777	0.0029	0.8957
—	0.6471	0.1333	0.4000	0.1667	0.1000	0.2000	—	0.8667
—	0.1854	0.8795	0.0075	0.0150	0.0464	0.0510	0.0008	0.1207
—	0.6542	0.3992	0.0983	0.1364	0.1474	0.2167	0.0020	0.6008
0.0244	0.4633	0.5474	0.1115	0.0979	0.0486	0.1640	0.0308	0.4528
—	0.8121	0.2833	0.0822	0.1556	0.1444	0.3333	0.0011	0.7167
—	0.2920	0.8393	0.1296	0.0012	0.0087	0.0212	—	0.1608
—	0.9088	0.1228	0.3265	0.1576	0.2167	0.1750	0.0015	0.8772
—	0.9446	0.0440	0.2039	0.5269	0.0995	0.1257	—	0.9560
0.0002	0.6042	0.4178	0.1677	0.0615	0.2338	0.1176	0.0027	0.5823
—	0.8157	0.2541	0.0105	0.0759	0.2721	0.3864	0.0010	0.7459
0.1443	0.8952	0.1539	0.0539	0.0502	0.3605	0.1955	0.1872	0.8473
0.4196	0.9338	0.0668	0.0033	0.0817	0.1175	0.4193	0.3113	0.9331
0.0853	0.9959	0.0088	0.1231	0.0460	0.4186	0.3225	0.0811	0.9912
0.0260	0.9268	0.0523	—	—	—	0.9241	0.0226	0.9467
0.0219	0.9949	0.0092	0.0129	0.0345	0.7240	0.1960	0.0234	0.9907
—	—	0.0334	0.6957	0.0305	0.0276	0.2128	—	0.9666

Table 21

THE STRUCTURE OF OUTPUT IN THE MANUFACTURING SECTOR, 1960–1966
at Factor Cost

Manufacturing Sectors	1960		1961		1962		1963		1964		1965		1966	
	$M	*per cent*	*$M*	*per cent*	*$M*	*per cent*	*$M*	*per cent*	*$M*	*per cent*	*$M*	*per cent*	*$M*	*per cent*
Food Industries	50	11.1	49	11.5	58	12.3	62	11.6	72	11.8	97	13.8	107	13.7
Beverages	11	2.4	11	2.6	13	2.8	21	3.9	20	3.3	18	2.6	29	3.7
Tobacco	12	2.7	18	4.2	24	5.1	23	4.3	29	4.7	33	4.7	46	5.9
Textiles	2	0.4	3	0.7	2	0.4	5	0.9	6	1.0	8	1.1	12	1.5
Footwear and Clothing	2	0.4	2	0.5	2	0.4	2	0.4	2	0.3	2	0.3	2	0.3
Wood and Cork Products	33	7.3	26	6.1	30	6.4	32	6.0	43	7.0	57	8.1	57	7.3
Furniture and Fixtures	9	2.0	10	2.3	8	1.7	10	1.9	11	1.8	12	1.7	12	1.5
Paper and Paper Products	1	0.2	1	0.2	1	0.2	2	0.4	3	0.5	6	0.9	7	0.9
Printing and Publishing	23	5.2	24	5.6	26	5.5	28	5.3	33	5.4	31	4.4	33	4.2
Leather and Leather Products	—	—	—	—	1	0.2	1	0.2	1	0.2	1	0.1	1	0.1
Rubber Processing	182	40.3	136	31.8	132	28.0	128	24.0	124	20.3	126	18.0	132	16.9
Rubber Products	15	3.3	16	3.7	17	3.6	21	3.9	26	4.3	36	5.1	39	5.0
Chemical Products	44	9.7	50	11.7	56	11.8	67	12.6	81	13.2	80	11.4	95	12.1
Products of Petroleum and Coal	—	—	—	—	—	—	10	1.9	22	3.6	33	4.7	38	4.9
Non-Metallic Mineral Products	15	3.3	18	4.2	22	4.6	29	5.4	35	5.7	43	6.1	38	4.9
Basic Metal Industries	9	2.0	11	2.6	13	2.8	16	3.0	21	3.4	25	3.6	36	4.6
Metal Products, Machinery, etc.	38	8.4	46	10.8	59	12.5	66	12.4	69	11.3	79	11.4	84	10.7
Miscellaneous Manufacturing Industries	6	1.3	7	1.5	8	1.7	10	1.9	14	2.2	14	2.0	15	1.8
TOTAL	452	100.0	428	100.0	472	100.0	533	100.0	612	100.0	701	100.0	783	100.0

Source: National Accounts of West Malaysia 1960–66, Department of Statistics, Kuala Lumpur.

Table 22

SELECTED INDICES OF THE MANUFACTURING SECTOR IN 1965

At Producers' Prices

Manufacturing Sectors	*Import Component of Input*		*Value Added*[1]		*Domestic Final Uses*		*Exports*		*Total Output*	*Share of exports of each sector in total exports*	
	$M	*Per cent of Total Output*	*$M*	*Per cent of Total Output*	*$M*	*Per cent of Total Output*	*$M*	*Per cent of Total Output*		*Including rubber and tin processing*	*Excluding rubber and tin processing*
Food Industries	135.9	22.7	104.1	17.4	454.2	75.9	84.6	14.1	598.8	3.6	21.0
Beverages	11.8	27.6	18.4	43.0	41.6	97.2	1.2	2.8	42.8	0.1	0.3
Tobacco	117.0	60.3	32.7	16.9	193.9	100.0	—	—	193.9	—	—
Textiles	19.5	57.4	7.6	22.4	18.0	52.9	7.8	22.9	34.0	0.3	1.9
Clothing and Footwear	2.0	34.5	2.0	34.5	5.6	96.5	0.2	3.5	5.8	...	0.1
Wood and Cork	5.8	3.2	56.9	31.3	25.1	13.8	57.9	31.8	182.1	2.4	14.3
Furniture and Fixtures	4.6	13.0	11.9	33.6	34.3	96.9	0.2	0.6	35.4	...	0.1
Paper and Paper Products	3.8	29.5	6.2	48.1	7.6	58.9	1.7	13.2	12.9	0.1	0.4
Printing and Publishing	12.2	17.9	31.2	45.8	65.2	95.7	2.9	4.3	68.1	0.1	0.7
Leather and Leather Products	1.2	40.0	0.9	30.0	2.9	96.7	0.1	3.3	3.0	...	...
Rubber Processing	9.7	0.8	127.0	9.8	4.0	0.3	1 097.2	84.8	1 293.8	46.3	—
Rubber Products	9.8	9.8	36.5	36.6	72.3	72.5	23.2	23.3	99.7	1.0	5.8
Chemical Products	42.0	11.2	91.7	24.3	129.2	34.3	160.2	42.5	376.8	6.8	39.7
Manufacture of Petroleum Products	95.8	69.6	33.1	24.0	48.9	35.5	45.0	32.7	137.7	1.9	11.2
Non-Metallic Mineral Products	7.4	8.2	43.1	47.9	3.4	3.8	6.1	6.8	90.0	0.3	1.5
Basic Metal Industries	110.0	13.0	25.4	3.0	—	—	867.7	102.3	848.5	36.6	—

Table 22 (continued)

SELECTED INDICES OF THE MANUFACTURING SECTOR IN 1965

At Producers' Prices

Manufacturing Sectors	*Import Component of Input*		*Value Added*[1]		*Domestic Final Uses*		*Exports*		*Total Output*	*Share of exports of each sector in total exports*	
	$M	*Per cent of Total Output*	*$M*	*Per cent of Total Output*	*$M*	*Per cent of Total Output*	*$M*	*Per cent of Total Output*		*Including rubber and tin processing*	*Excluding rubber and tin processing*
Metal Products and Machinery	65.7	32.7	79.1	39.3	137.4	68.3	8.8	4.4	201.2	0.4	2.2
Miscellaneous Manufacturing Industries	12.5	20.4	13.8	22.5	57.6	93.9	3.4	5.6	61.3	0.1	0.8
TOTAL	666.7	15.6	721.6	16.8	1 301.2	30.4	2 368.2	55.3	4 285.8	100.0	100.0
TOTAL excluding rubber and tin processing	547	25.5	569.2	26.6	1 297.2	60.5	403.3	18.8	2 143.5		

Source: West Malaysia Inter-Industry Accounts, 1965; Department of Statistics, Kuala Lumpur.

[1] Refers to salaries and wages, entrepreneurial income and indirect taxes less subsidies but excluding imports and unspecified.

Table 23 EXPORTS AND IMPORTS OF

Manufacturing Sectors	1960			1961			1962	
	Export	*Import*	*Export–Import*	*Export*	*Import*	*Export–Import*	*Export*	*Import*
Food Industries	46	480	−434	47	482	−435	50	476
Beverages	—	38	−38	—	40	−40	—	37
Tobacco	—	35	−35	—	28	−28	—	17
Textiles	4	120	−116	5	120	−115	4	116
Footwear and Clothing	—	37	−37	—	39	−39	—	41
Wood and Cork	40	8	32	27	9	18	32	21
Furniture and Fixtures	—	4	−4	—	5	−5	—	5
Paper and Paper Products	—	36	−36	—	43	−43	—	50
Printing and Publishing	1	20	−19	—	22	−22	—	26
Leather and Leather Products	—	3	−3	—	4	−4	—	3
Rubber Processing	1 743	140	1 603	1 375	97	1 278	1 311	96
Rubber Products	13	26	−13	14	27	−13	13	32
Chemical Products	102	162	−60	103	173	−70	102	169
Products of Petroleum and Coal	—	118	−118	—	123	−123	—	136
Non-Metallic Mineral Products	1	33	−32	1	43	−42	1	54
Basic Metal Industries	511	80	431	555	92	463	617	131
Metal Products, Machinery, etc.	1	405	−404	1	483	−482	1	566
Miscellaneous Manufacturing Industries	6	54	−48	8	61	−53	9	66
TOTAL	2 468	1 799		2 136	1 891		2 140	2 042
Annual per cent Increase					5.1			7.9

Sources and Notes: National Accounts of West Malaysia 1960–66, Department of Statistics, Kuala Lumpur.

(a) Exports are at f.o.b. prices.

(b) Imports are at c.i.f. prices.

(c) + means export surplus; − means import surplus.

THE MANUFACTURING SECTOR 1960–66

1963			1964			1965			1966		
Export–Import	*Export*	*Import*	*Export–Import*	*Export*	*Import*	*Export–Import*	*Export*	*Import*	*Export–Import*	*Export*	*Import*	*Export–Import*
−426	66	569	−503	72	598	−526	97	513	−416	122	464	−342
−37	—	29	−29	—	30	−30	—	29	−29	—	23	−23
−17	—	12	−12	—	11	−11	—	11	−11	—	11	−11
−112	4	125	−121	5	128	−123	10	142	−132	13	131	−118
−41	—	43	−43	—	44	−44	—	44	−44	1	43	−42
11	43	22	21	63	16	47	65	19	46	65	12	53
−5	—	6	−6	—	4	−4	—	4	−4	—	3	−3
−50	1	51	−50	—	53	−53	2	61	−59	2	59	−57
−26	1	27	−26	3	27	−24	4	30	−26	4	28	−24
−3	—	5	−5	—	5	−5	—	6	−6	—	5	−5
1 215	1 328	76	1 252	1 262	55	1 207	1 308	63	1 245	1 346	60	1 286
−19	21	23	−2	26	19	7	29	16	13	24	18	6
−67	125	181	−56	135	187	−52	171	219	−48	188	233	−45
−136	3	132	−129	37	144	−107	45	148	−103	52	165	−113
−53	1	57	−56	3	52	−49	7	42	−35	7	40	−33
486	645	128	517	731	134	597	875	154	721	796	166	630
−565	7	590	−583	10	652	−642	9	729	−720	18	821	−803
−57	5	68	−63	2	69	−67	4	79	−75	3	75	−72
	2 250	2 144		2 349	2 228		2 626	2 309		2 641	2 357	
		5.0			3.9			3.6			2.1	

Table 24 PRINCIPAL STATISTICS OF

	No. of Factory Workers— Full and Part-Time	*No. of Non-Factory Workers— Full and Part-Time*	*Wages of Factory Workers* ($1 000)
Processing of Estate-Type Agricultural Products in Factories Off Estates			
1. Rubber Remilling	4 784	759	6 745
2. Rubber Smokehouses	740	67	861
3. Rubber Latex Processing	1 883	358	2 651
4. Coconut Oil Mills	682	181	926
5. All Other Off Estate Processing Industries	107	39	137
TOTAL	8 196	1 404	11 320
Other Manufacturing Industries			
Foods			
1. Ice Cream and Other Dairy Products	475	213	807
2. Pickles and Sauces Factories	525	119	645
3. Blachan Manufacturing and Canning	45	1	39
4. Other Fish Preparation and Preserving	83	12	52
5. Small Rice Mills	1 172	353	923
6. Sago and Tapioca Factories	753	73	1 036
7. Large Rice Mills	1 429	443	2 441
8. Other Grain Mills	61	4	79
9. Biscuit Factories	1 975	220	2 230
10. Bakeries	1 320	115	1 467
11. Chocolate and Confectionary Factories	329	24	295
12. Meehonn and Noodles Factories	806	28	912
13. Spice and Curry Powder Grinding Mills	167	13	154
14. Soya Bean Products Factories	72	6	58
15. Coffee Powder Factories	656	102	736
16. Ice Factories	445	127	936
17. Animal Feeds	188	133	252
18. All Other Foods Industries	1 783	260	4 092
TOTAL	12 284	2 246	17 154
Beverages[1]			
1. Distilleries and Wine Manufacturing	69	52	102
2. Soft Drinks and Carbonated Beverages	1 089	1 045	1 242
TOTAL	1 158	1 097	1 344
Tobacco Products	3 381	695	3 464
Textiles	1 100	179	968

[1] The Industry Breweries in this major group have been included under All Other Industries because of secrecy requirements.

MANUFACTURING INDUSTRIES 1963

Salaries of Non-Factory Workers ($1 000)	*Cost of Material Purchased* ($1 000)	*Gross Sales Value* ($1 000)	*Non-Wage Income*	*Net Value of Output* ($1 000)	*Number of Establish-ments*	*Number of Workers per Establish-ment*
2 217	225 277	252 834	11 526	20 488	70	79
182	25 620	27 917	1 389	2 432	125	6
2 017	130 664	152 253	16 119	20 787	12	187
449	70 129	75 275	3 375	4 750	69	13
127	3 127	3 737	481	745	34	4
4 992	454 817	512 016	32 890	49 202	310	31
989	16 523	22 558	5 086	6 882	59	12
232	4 933	7 426	1 648	2 525	147	4
1	328	469	123	163	20	2
16	805	1 132	273	341	23	4
290	663	4 013	2 138	3 351	905	2
141	10 170	13 309	2 152	3 329	96	9
952	106 735	110 648	5 159	8 552	78	24
6	2 107	2 509	311	396	33	2
695	22 691	28 888	3 893	6 818	180	12
289	15 404	20 656	3 658	5 414	510	3
43	6 674	7 722	881	1 219	42	8
35	8 103	10 572	1 659	2 606	255	3
15	1 103	1 630	372	541	112	2
5	1 081	1 599	463	526	167	5
186	14 632	18 010	2 654	3 576	200	4
421	2 262	6 490	2 872	4 229	52	11
468	20 613	22 729	2 156	2 876	30	11
1 127	29 783	40 617	6 063	11 282	102	20
5 911	264 610	320 977	41 561	64 626	3 011	5
91	733	1 246	364	557	8	15
2 967	12 344	24 313	8 292	12 501	86	25
3 058	13 077	25 559	8 656	13 058	94	24
2 274	143 916	167 604	22 519	28 257	136	30
540	11 625	15 068	2 533	4 041	45	28

Table 24 (continued) PRINCIPAL STATISTICS OF

	No. of Factory Workers— Full and Part-Time	*No. of Non-Factory Workers— Full and Part-Time*	*Wages of Factory Workers* ($1 000)
Footwear (except Rubber Footwear), Other Wearing Apparel, and Made-Up Textiles Goods[2]			
1. Footwear (except Rubber and Wooden)	463	18	532
2. Wooden Clogs and Sandals	112	4	110
3. Clothing Factories	348	25	297
4. All Other Wearing Apparel Industries	144	19	138
TOTAL	1 067	66	1 077
Wood, Rattan, Mengkuang, Attap and Cork Products, except Furniture and Footwear			
1. Sawmills, Plywood and Particle Board Mills	8 708	1 669	16 671
2. Joineries	738	85	1 515
3. Wooden Boxes, Cases and Crates	202	5	230
4. Carpentry Shops	264	7	493
5. Coffin Manufacturing	153	10	226
6. All Other Wood Products Industries	222	63	446
TOTAL	10 287	1 839	19 581
Furniture and Fixtures	2 395	182	3 033
Paper and Paper Products	557	78	559
Printing, Publishing and Allied Industries			
1. Printing and Publishing	1 226	1 860	2 930
2. Job Printing and Bookbinding	3 399	521	4 721
TOTAL	4 625	2 381	7 651
Leather and Leather Products, except Footwear and Wearing Apparel	164	4	161
Rubber Products			
1. Rubber Products, except Retreading and Vulcanizing of Tyres and Tubes	5 565	756	6 518
2. Retreading and Vulcanizing of Tyres and Tubes	489	74	697
TOTAL	6 054	830	7 215

[2] Custom Tailoring and Dress Making was not included in Census. In addition, manufacture of jewellery, gold and silverware and plateware was excluded.

MANUFACTURING INDUSTRIES 1963

Salaries of Non-Factory Workers ($1 000)	*Cost of Material Purchased* ($1 000)	*Gross Sales Value* ($1 000)	*Non-Wage Income*	*Net Value of Output* ($1 000)	*Number of Establish-ments*	*Number of Workers per Establish-ment*
23	2 923	4 393	1 010	1 565	189	3
7	379	788	293	410	101	1
44	4 591	5 905	1 179	1 520	77	5
8	803	1 265	319	465	137	1
82	8 696	12 351	2 801	3 960	504	2
4 186	75 385	117 170	22 132	42 989	388	27
250	3 939	6 649	995	2 760	51	16
10	460	932	228	468	29	7
11	1 792	2 857	561	1 065	170	2
19	851	1 554	458	703	83	2
109	3 264	3 808	611	1 166	96	3
4 585	85 691	132 970	24 985	49 151	817	15
304	13 641	21 396	4 637	7 974	682	4
354	6 229	8 108	2 153	3 066	79	8
6 448	11 416	26 188	5 816	15 194	58	53
1 389	16 980	30 789	7 989	14 099	267	15
7 837	28 396	56 977	13 805	29 293	325	22
4	1 984	2 698	500	665	27	6
2 836	34 033	49 721	10 745	20 099	45	140
173	5 695	8 562	2 050	2 920	162	3
3 009	39 728	58 283	12 795	23 019	207	33

Table 24 (continued) PRINCIPAL STATISTICS OF

	No. of Factory Workers—Full and Part-Time	*No. of Non-Factory Workers—Full and Part-Time*	*Wages of Factory Workers ($1 000)*
Chemicals and Chemical Products			
1. Refined Coconut Oil	162	32	256
2. Paints, Varnishes and Lacquers	241	121	352
3. Soaps, Washing and Cleaning Compounds	736	319	1 348
4. Medicinal and Pharmaceutical Preparations	320	96	240
5. Perfumes, Cosmetics and Toilet Preparations	265	116	279
6. Matches	487	47	389
7. All Other Chemical Products Industries	825	234	1 201
TOTAL	3 036	965	4 065
Non-Metallic Mineral Products, except Petroleum and Coal			
1. Structural Clay Products	2 173	249	3 255
2. Glass Products	191	22	261
3. Pottery, China and Earthenware Products	292	31	367
4. Cement and Concrete Products	1 218	155	1 872
5. All Other Non-Metallic Products Industries	685	111	1 428
TOTAL	4 559	568	7 183
Basic Metal Industries[3]			
1. Iron Foundries	208	8	346
2. All Other Basic Metal Industries	433	82	670
TOTAL	641	90	1 016
Metal Products, except Machinery and Transport Equipment			
1. Architectural Metal Products	862	79	1 225
2. Wire and Wire Products	402	69	480
3. Hardware, Tools and Cutlery	260	5	299
4. Tin Cans and Metal Boxes	843	158	900
5. Tinsmithing	440	16	486
6. Brass, Copper, Pewter and Aluminium Products	507	124	613
7. Blacksmithing and Welding	177	10	254
8. All Other Metal Products Industries	1 229	340	2 353
TOTAL	4 720	801	6 610

[3] Excluding the Tin Smelting Industry.

MANUFACTURING INDUSTRIES 1963

Salaries of Non-Factory Workers ($1 000)	*Cost of Material Purchased* ($1 000)	*Gross Sales Value* ($1 000)	*Non-Wage Income*	*Net Value of Output* ($1 000)	*Number of Establish-ments*	*Number of Workers per Establish-ment*
93	19 094	20 185	1 164	1 513	20	10
713	8 775	12 599	3 582	4 647	10	36
1 882	18 459	31 220	10 202	13 432	56	19
278	3 299	7 159	3 379	3 897	53	8
429	6 422	14 624	8 052	8 760	41	9
188	1 470	2 934	1 159	1 736	3	178
1 081	17 116	23 956	5 718	8 000	117	9
4 664	74 635	112 677	33 256	41 985	300	13
642	4 653	11 796	3 585	7 482	73	33
52	1 714	2 340	464	777	31	7
37	499	1 351	464	868	43	8
573	8 889	15 617	4 408	6 853	79	17
592	11 406	22 932	9 493	11 513	89	9
1 896	27 161	54 036	18 414	27 493	315	16
20	942	1 738	422	788	24	9
491	11 042	11 766	1 640	2 801	15	34
511	11 984	13 504	2 062	3 589	39	19
209	5 761	8 868	1 862	3 296	108	9
146	6 065	6 410	1 181	1 807	28	17
7	1 109	2 296	890	1 196	252	1
601	10 065	12 605	2 339	3 840	26	39
21	2 779	4 578	1 340	1 847	559	1
316	4 449	6 885	1 596	2 525	43	15
30	619	1 463	550	834	98	2
1 306	13 135	19 310	3 732	7 391	83	19
2 636	43 982	62 415	13 490	22 736	1 197	5

Table 24 (continued) PRINCIPAL STATISTICS OF

	No. of Factory Workers—Full and Part-Time	*No. of Non-Factory Workers—Full and Part-Time*	*Wages of Factory Workers* ($1 000)
Machinery (except Electrical Machinery) and Repairs			
1. Industrial Machinery and Parts	2 648	225	4 629
2. General Engineering and Machinery Repair Shops	1 056	89	1 664
3. All Other Machinery and Repair Industries	198	132	317
TOTAL	3 902	446	6 610
Electrical Machinery, Apparatus, Appliances and Supplies, and Repairs	533	119	734
Transport Equipment and Repairs[4]			
1. Shipbuilding and Repairing, and Boat Building and Repairing	734	118	1 514
2. Motor Vehicle Bodies	480	33	975
3. Motor Vehicle Parts and Accessories	78	4	100
4. Bicycle, Tricycle and Trishaw Parts and Accessories	58	6	67
5. All Other Transport Equipment Industries	93	11	151
TOTAL	1 443	172	2 807
Miscellaneous Manufacturing Industries[5]			
1. Plastic Products, n.e.c.	466	65	455
All Other Industries[6]	744	360	1 431
Total Other Manufacturing Industries[7]	63 116	13 183	93 118
Total Off Estate Manufacturing[8]	71 312	14 587	104 438

[4] Excluding Motor Vehicle, Repair and Bicycle Repair establishments.
[5] Other miscellaneous industries in this major group have been included under All Other Industries.
[6] These are: (i) Breweries, (ii) Products of Petroleum and Coal—(a) Petroleum Refineries, (b) Miscellaneous Products of Petroleum and Coal; (iii) All Other Miscellaneous Manufacturing Industries like (a) Repair of Musical Instruments, (b) Toys, Sporting and Athletic Goods, (c) Signs and Advertising Displays, (d) Surgical, Medical and Dental Supplies; (e) Measuring, Controlling, Laboratory and Scientific Instruments; (f) Photographic and Optical Goods; (g) Watches and Clocks; (h) Brooms, Brushes and Mops; (i) Metal Smallwares, Stamps and Stencils; (j) Pens, Pencils, Office and Artists' Supplies; (k) Preparation of Natural Gums and Resins; (l) Other Miscellaneous Manufacturing Industries, n.e.c.
[7] Excluding Processing of Estate-Type of Agricultural Products.
[8] Including Processing of Estate-Type of Agricultural Products.
Source: Census of Manufacturing Industries in the States of Malaya, 1963; Department of Statistics, Kuala Lumpur, Malaysia.

MANUFACTURING INDUSTRIES 1963

Salaries of Non-Factory Workers ($1 000)	*Cost of Material Purchased* ($1 000)	*Gross Sales Value* ($1 000)	*Non-Wage Income*	*Net Value of Output* ($1 000)	*Number of Establish-ments*	*Number of Workers per Establish-ment*
637	10 210	19 561	3 987	9 253	162	18
280	3 367	7 232	1 939	3 883	156	7
716	3 953	5 346	577	1 610	37	9
1 633	17 530	32 139	6 503	14 746	355	12
601	8 001	12 420	3 367	4 702	190	3
515	2 917	7 045	1 425	3 454	24	36
108	2 874	4 389	577	1 660	39	13
6	276	497	121	227	11	7
8	409	636	163	238	10	6
33	758	1 119	210	394	16	7
670	7 234	13 686	2 496	5 973	100	16
158	2 424	4 277	1 238	1 851	27	20
2 514	37 054	50 272	17 006	20 951	96	12
43 241	847 598	1 177 417	234 777	371 136	8 546	9
48 233	1 302 415	1 689 433	267 667	420 338	8 856	10

Table 25

DISTRIBUTION OF MANUFACTURING ESTABLISHMENT BY MAIN INDUSTRIAL SECTOR 1963

Industrial Sector	*Establishment*	*Per cent Distribution*	*No. of Workers per Establishment*
Processing of Estate-Type Agricultural Products in Factories Off Estate	310	3.5	31
Food Industries	3 011	34.0	5
Beverages	94	1.1	24
Tobacco Products	139	1.6	29
Textiles	45	0.5	28
Clothing and Footwear	504	5.7	2
Wood and Cork	817	9.2	15
Furniture and Fixtures	682	7.7	4
Paper and Paper Products	79	0.9	8
Printing and Publishing	325	3.7	22
Leather and Leather Products	27	0.3	6
Rubber Products	207	2.3	33
Chemical Products	300	3.4	13
Non-Metallic Mineral Products	315	3.6	16
Basic Metal Industries	39	0.4	19
Metal Products	1 197	13.4	5
Machinery and Repairs	355	4.0	12
Electrical Machinery and Repairs	190	2.2	3
Transport Equipment and Repairs	100	1.1	16
Miscellaneous Manufacturing Industries	27	0.3	20
All Other Industries	96	1.1	12
Total Other Manufacturing Industries[1]	8 546	96.5	9
Total Off Estate Manufacturing Industries	8 856	100.0	10

Source: As per Table 24.

[1] Total excluding processing of estate-type agricultural products in factories off estates.

Table 26

SIZE OF MANUFACTURING ESTABLISHMENTS 1963

Number of Employees[1] *per Establishment*	*Number of Establishments*	*Per cent Distribution*
Less than 5	5 125	57.9
5–10	1 231	13.9
11–15	843	9.5
16–20	588	6.6
21–25	164	1.9
31–35	569	6.4
36–40	88	1.0
41–45	60	0.7
46–50	—	—
More than 50	188	2.1
TOTAL	8 856	100.0

[1] Including all paid employees, both full and part-time.
Source: As per Table 24.

Table 27

PER CENT DISTRIBUTION OF EMPLOYMENT
BY MAIN INDUSTRIAL SECTORS 1963

Industrial Sector	*Per Cent*
Food Manufacturing	16.9
Wood and Cork	14.1
Processing of Agricultural Products	11.2
Printing and Publishing	8.2
Rubber Products	8.0
Metal Products	6.4
Non-Metallic Mineral Products	6.0
Machinery and Repairs	5.1
Tobacco	4.8
Chemical Products	4.7
Furniture and Fixtures	3.0
Beverages	2.6
Transport Equipments and Repairs	1.9
Textiles	1.5
Clothing and Footwear	1.3
All Other Industries	1.3
Basic Metal Industries	0.9
Electrical Machinery, Apparatus and Repairs	0.8
Paper and Paper Products	0.7
Miscellaneous Manufacturing Industries	0.6
Leather and Leather Products	0.2

Notes and source as per Table 24.

Table 28

AVERAGE ANNUAL EARNINGS AND RATIO OF FACTORY TO NON-FACTORY WORKERS BY INDUSTRIAL SECTOR 1963

Industrial Sector	*Annual Value Added per Employee* ($)	*Annual Non-Wage Income per Employee* ($)	*Annual Wages per Employee* ($)		*Ratio of Factory to Non-Factory Workers*	
			Factory	*Non-Factory*	*Number*	*Earnings*
Processing of Estate-Type Agricultural Products in Factories Off Estates						
1. Rubber Remilling	3 696	2 079	1 410	2 921	6.30	3.04
2. Rubber Smokehouses	3 014	1 721	1 164	2 716	11.04	4.73
3. Rubber Latex Processing	9 276	7 193	1 408	5 634	5.26	1.31
4. Coconut Oil Mills	5 504	3 911	1 358	2 481	3.77	2.06
5. All Other Off Estate Processing Industries	5 103	3 295	1 280	3 256	2.74	1.08
TOTAL	5 125	3 426	1 381	3 556	5.84	2.27
Other Manufacturing Industries						
Foods						
1. Ice Cream and Other Dairy Products	10 003	7 392	1 699	4 643	2.23	0.82
2. Pickles and Sauces Factories	3 921	2 559	1 229	1 950	4.41	2.78
3. Blachan Manufacturing and Canning	3 543	2 674	867	1 000	45.00	39.00
4. Other Fish Preparation and Processing	3 589	2 874	627	1 333	6.92	3.25
5. Small Rice Mills	2 197	1 402	788	822	3.32	3.18
6. Sago and Tapioca Factories	4 030	2 605	1 376	1 932	10.32	3.35
7. Large Rice Mills	4 568	2 756	1 708	2 149	3.23	2.56
8. Other Grain Mills	6 092	4 785	1 295	1 500	15.25	13.17
9. Biscuit Factories	3 106	1 774	1 129	3 159	8.98	3.21
10. Bakeries	3 773	2 549	1 111	2 513	11.48	5.08
11. Chocolate and Confectionery Factories	3 453	2 496	897	1 792	13.71	6.86

Table 28 (continued)

Industrial Sector	*Annual Value Added per Employee ($)*	*Annual Non-Wage Income per Employee ($)*	*Annual Wages per Employee ($)*		*Ratio of Factory to Non-Factory Workers*	
			Factory	*Non-Factory*	*Number*	*Earnings*
12. Meehoon and Noodles Factories	3 125	1 989	1 132	1 250	28.79	26.06
13. Spice and Curry Powder Grinding Mills	3 006	2 067	922	1 154	12.85	10.27
14. Soya Bean Products Factories	6 744	5 936	806	833	12.00	11.60
15. Coffee Powder Factories	4 718	3 501	1 122	1 824	6.43	3.96
16. Ice Factories	7 393	5 021	2 103	3 315	3.50	2.22
17. Animal Feeds	8 960	6 717	1 340	3 519	1.41	0.54
18. All Other Foods Industries	5 522	2 968	2 295	4 335	6.86	3.63
TOTAL	4 448	2 860	1 396	2 632	5.47	2.90
Beverages						
1. Distilleries and Wine Manufacturing	4 603	3 008	1 478	1 750	1.33	1.12
2. Soft Drinks and Carbonated Beverages	5 858	3 886	1 140	2 839	1.04	0.42
TOTAL	5 791	3 839	1 161	2 788	1.06	0.44
Tobacco Products	6 933	5 525	1 025	3 272	4.86	1.52
Textiles	3 159	1 980	880	3 017	6.15	1.79
Footwear (except Rubber Footwear), Other Wearing Apparel, and Made-Up Textiles Goods						
1. Footwear (except Rubber and Wooden)	3 254	2 100	1 149	1 278	28.72	23.13
2. Wooden Clogs and Sandals	3 534	2 526	982	1 750	28.00	15.71
3. Clothing Factories	4 075	3 161	853	1 760	13.92	6.75
4. All Other Wearing Apparel Industries	2 853	1 957	958	421	7.58	17.25
TOTAL	3 495	2 472	1 009	1 242	16.17	13.13

Table 28 (continued)

Industrial Sector	*Annual Value Added per Employee ($)*	*Annual Non-Wage Income per Employee ($)*	*Annual Wages per Employee ($)*		*Ratio of Factory to Non-Factory Workers*	
			Factory	*Non-Factory*	*Number*	*Earnings*
Wood, Rattan, Mengkuang, Attap and Cork Products except Furniture and Footwear						
1. Sawmills, Plywood and Particle Board Mills	4 143	2 133	1 914	2 508	5.22	3.98
2. Joineries	3 354	1 209	2 053	2 941	8.68	6.06
3. Wooden Boxes, Cases and Crates	2 261	1 101	1 139	2 000	40.40	23.00
4. Carpentry Shops	3 930	2 070	1 867	1 571	37.71	44.82
5. Coffin Manufacturing	4 313	2 810	1 477	1 900	15.30	11.89
6. All Other Wood Products Industries	4 091	2 144	2 009	1 730	3.52	4.09
TOTAL	4 053	2 060	1 903	2 493	5.59	4.27
Furniture and Fixtures	3 094	1 799	1 266	1 670	13.16	9.98
Paper and Paper Products	4 828	3 391	1 004	4 538	7.14	1.58
Printing, Publishing and Allied Industries						
1. Printing and Publishing	4 924	1 885	2 390	3 467	0.66	0.45
2. Job Printing and Bookbinding	3 597	2 038	1 389	2 666	6.52	3.40
TOTAL	4 181	1 970	1 654	3 291	1.94	0.98

Table 28 (continued)

Industrial Sector	*Annual Value Added per Employee* ($)	*Annual Non-Wage Income per Employee* ($)	*Annual Wages per Employee* ($)		*Ratio of Factory to Non-Factory Workers*	
			Factory	*Non-Factory*	*Number*	*Earnings*
Leather and Leather Products, except Footwear and Wearing Apparel	3 958	2 976	982	1 000	41.00	40.25
Rubber Products						
1. Rubber Products, except Retreading and Vulcanizing of Tyres and Tubes	3 180	1 700	1 171	3 751	7.36	2.30
2. Retreading and Vulcanizing of Tyres and Tubes	5 187	3 641	1 425	2 338	6.61	4.03
TOTAL	3 344	1 859	1 192	3 625	7.29	2.40
Chemicals and Chemical Products						
1. Refined Coconut Oil	7 799	6 000	1 580	2 906	5.06	2.75
2. Paints, Varnishes and Lacquers	12 837	9 895	1 461	5 893	1.99	0.49
3. Soaps, Washing and Cleaning Compounds	12 732	9 670	1 832	5 900	2.31	0.72
4. Medicinal and Pharmaceutical Preparations	9 368	8 123	750	2 896	3.33	0.86
5. Perfumes, Cosmetics and Toilet Preparations	22 992	21 134	1 053	3 698	2.28	0.65
6. Matches	3 251	2 170	799	4 000	10.36	2.07
7. All Other Chemical Products Industries	7 554	5 399	1 456	4 620	3.53	1.11
TOTAL	10 494	8 312	1 339	4 833	3.15	0.87

Table 28 (continued)

Industrial Sector	*Annual Value Added per Employee ($)*	*Annual Non-Wage Income per Employee ($)*	*Annual Wages per Employee ($)*		*Ratio of Factory to Non-Factory Workers*	
			Factory	*Non-Factory*	*Number*	*Earnings*
Non-Metallic Mineral Products, except Petroleum and Coal						
1. Structural Clay Products	3 089	1 480	1 498	2 578	8.73	5.07
2. Glass Products	3 648	2 178	1 366	2 364	8.68	5.02
3. Pottery, China and Earthenware Products	2 687	1 437	1 257	1 194	9.42	9.92
4. Cement and Concrete Products	4 991	3 210	1 537	3 697	7.86	3.27
5. All Other Non-Metallic Mineral Products Industries	14 464	11 926	2 085	5 333	6.17	2.41
TOTAL	5 362	3 592	1 576	3 338	8.03	3.79
Basic Metal Industries						
1. Iron Foundries	3 648	1 954	1 663	2 500	26.00	17.30
2. All Other Basic Metal Industries	5 439	3 184	1 547	5 988	5.28	1.36
TOTAL	4 910	2 821	1 585	5 678	7.12	1.99

Table 28 (continued)

Industrial Sector	*Annual Value Added per Employee* ($)	*Annual Non-Wage Income per Employee* ($)	*Annual Wages per Employee* ($)		*Ratio of Factory to Non-Factory Workers*	
			Factory	*Non-Factory*	*Number*	*Earnings*
Metal Products, except Machinery and Transport Equipment						
1. Architectural Metal Products	3 503	1 979	1 421	2 646	10.91	5.86
2. Wire and Wire Products	3 837	2 507	1 194	2 116	5.83	3.29
3. Hardware, Tools and Cutlery	4 513	3 358	1 150	1 400	52.00	42.71
4. Tin Cans and Metal Boxes	3 836	2 337	1 068	3 804	5.34	1.50
5. Tinsmithing	4 050	2 939	1 105	1 313	27.50	23.14
6. Brass, Copper, Pewter and Aluminium Products	4 002	2 529	1 209	2 548	4.09	1.94
7. Blacksmithing and Welding	4 460	2 941	1 435	3 000	17.70	8.47
8. All Other Metal Products Industries	4 711	2 379	1 915	3 841	3.61	1.80
TOTAL	4 118	2 443	1 400	3 291	5.89	2.51
Machinery (except Electrical Machinery) and Repairs						
1. Industrial Machinery and Parts	3 221	1 388	1 748	2 831	11.77	7.27
2. General Engineering and Machinery Repair Shops	3 391	1 693	1 576	3 146	11.87	5.94
3. All Other Machinery and Repair Industries	4 879	1 748	1 601	5 424	1.50	0.44
TOTAL	3 391	1 496	1 694	3 661	8.75	4.05
Electrical Machinery, Apparatus, Appliances and Supplies and Repairs	7 212	5 164	1 377	5 050	4.48	1.22

Table 28 (continued)

Industrial Sector	*Annual Value Added per Employee* ($)	*Annual Non-Wage Income per Employee* ($)	*Annual Wages per Employee* ($)		*Ratio of Factory to Non-Factory Workers*	
			Factory	*Non-Factory*	*Number*	*Earnings*
Transport Equipments and Repairs						
1. Shipbuilding and Repairing and Boat Building and Repairing	4 054	1 673	2 063	4 364	6.22	2.94
2. Motor Vehicle Bodies	3 236	1 125	2 031	3 273	14.55	9.03
3. Motor Vehicle Parts and Accessories	2 768	1 476	1 282	1 500	19.50	16.67
4. Bicycle, Tricycle and Trishaw Parts and Accessories	3 719	2 547	1 155	1 333	9.67	8.38
5. All Other Transport Equipment Industries	3 788	2 019	1 624	3 000	8.45	4.58
TOTAL	3 698	1 546	1 945	3 895	8.39	4.19
Miscellaneous Manufacturing Industries						
1. Plastic Products, n.e.c.	3 486	2 331	976	2 431	7.17	2.88
All Other Industries	18 977	15 404	1 923	6 983	2.07	0.57
Total Other Manufacturing Industries	4 864	3 077	1 475	3 280	4.79	2.15
Total Off Estate Manufacturing Industries	4 893	3 116	1 465	3 307	4.89	2.17

Notes and Source as per Table 24.

Table 29

DISTRIBUTION OF FACTORY EMPLOYEES BY AVERAGE ANNUAL EARNINGS 1963

Average Annual Earnings $	*Number of Factory Employees*[1]	*Per cent Distribution*
600– 700	83	0.1
701– 800	1 979	2.8
801– 900	1 894	2.7
901–1 000	1 053	1.5
1 001–1 100	5 046	7.1
1 101–1 200	13 976	19.6
1 201–1 300	3 965	5.6
1 301–1 400	5 746	8.1
1 401–1 500	11 656	16.4
1 501–1 600	2 869	4.0
1 601–1 700	974	1.4
1 701–1 800	4 077	5.7
1 801–1 900	1 000	1.4
1 901–2 000	10 681	14.9
2 001–2 100	2 859	4.0
2 101–2 200	445	0.6
2 201–2 300	1 783	2.5
2 301–2 400	1 226	1.6
TOTAL	71 312	100.0

[1] Including both full and part-time.
Source: as per Table 24.

Table 30

DISTRIBUTION OF NON-FACTORY EMPLOYEES BY AVERAGE ANNUAL EARNINGS 1963

Average Annual Earnings $	*Number of Non-Factory Employees*[1]	*Per cent Distribution*
1 000 and Under	382	2.6
1 001–1 500	138	1.0
1 501–2 000	666	4.6
2 001–2 500	862	5.9
2 501–3 000	5 087	34.9
3 001–3 500	3 242	22.2
3 501–4 000	1 705	11.7
4 001–4 500	378	2.6
4 501–5 000	525	3.5
5 001–5 500	362	2.5
5 501–6 000	880	6.0
6 001–6 500	—	—
Over 6 500	360	2.5
TOTAL	14 587	100.0

[1] Including both full and part-time.

Source: As per Table 24.

Table 31

NON-WAGE INCOME, FACTORY AND NON-FACTORY WAGES AS PER CENT OF VALUE ADDED 1963

Industrial Sector	*Non-Wage Income as per cent of Value Added*	*Factory Wages as per cent of Value Added*	*Non-Factory Wages as per cent of Value Added*	*Ratio of Value Added to Gross Value of Sales (per cent)*
Processing of Estate-Type Agricultural Products in Factories Off Estates				
1. Rubber Remilling	56.3	32.9	10.8	8.1
2. Rubber Smokehouses	57.1	35.4	7.5	8.7
3. Rubber Latex Processing	77.5	12.8	9.7	13.7
4. Coconut Oil Mills	71.0	19.5	9.5	6.3
5. All Other Off Estate Processing Industries	64.5	18.4	17.1	19.9
TOTAL	66.8	23.0	10.2	9.6
Other Manufacturing Industries				
Foods				
1. Ice Cream and Other Dairy Products	73.9	11.7	14.4	30.5
2. Pickles and Sauces Factories	65.3	25.5	9.2	34.0
3. Blachan Manufacturing and Canning	75.5	23.9	0.6	34.2
4. Other Fish Preparation and Processing	80.0	15.3	4.7	30.1
5. Small Rice Mills	63.9	27.5	8.6	83.5
6. Sago and Tapioca Factories	64.7	31.1	4.2	25.0
7. Large Rice Mills	60.4	28.5	11.1	7.7
8. Other Grain Mills	78.5	20.0	1.5	15.8
9. Biscuit Factories	57.1	32.7	10.2	23.6
10. Bakeries	67.6	27.1	5.3	26.2
11. Chocolate and Confectionary Factories	72.3	24.2	3.5	15.8

Table 31 (continued)

Industrial Sector	*Non-Wage Income as per cent of Value Added*	*Factory Wages as per cent of Value Added*	*Non-Factory Wages as per cent of Value Added*	*Ratio of Value Added to Gross Value of Sales (per cent)*
12. Meehoon and Noodles Factories	63.7	35.0	1.3	24.7
13. Spice and Curry Powder Grinding Mills	68.7	28.5	2.8	33.2
14. Soya Bean Products Factories	88.4	11.0	0.6	32.9
15. Coffee Powder Factories	74.2	20.6	5.2	19.9
16. Ice Factories	67.9	22.1	10.0	65.2
17. Animal Feeds	74.9	8.8	16.3	12.7
18. All Other Food Industries	53.7	36.3	10.0	27.8
TOTAL	64.3	26.5	9.2	20.1
Beverages				
1. Distilleries and Wine Manufacturing	65.4	18.3	16.3	44.7
2. Soft Drinks and Carbonated Beverages	66.4	9.9	23.7	51.4
TOTAL	66.3	10.3	23.4	51.1
Tobacco Products	79.6	12.3	8.1	16.9
Textiles	62.6	24.0	13.4	26.8

Table 31 (continued)

Industrial Sector	*Non-Wage Income as per cent of Value Added*	*Factory Wages as per cent of Value Added*	*Non-Factory Wages as per cent of Value Added*	*Ratio of Value Added to Gross Value of Sales (per cent)*
Footwear (except Rubber Footwear), Other Wearing Apparel and Made-up Textile Goods				
1. Footwear (except Rubber and Wooden)	64.5	34.0	1.5	35.6
2. Wooden Clogs and Sandals	71.5	26.8	1.7	52.0
3. Clothing Factories	77.6	19.5	2.9	25.7
4. All Other Wearing Apparel Industries	68.6	29.7	1.7	36.8
TOTAL	70.7	27.2	2.1	32.1
Wood, Rattan, Mengkuang, Attap and Cork Products except Furniture and Footwear				
1. Sawmills, Plywood and Particle Board Mills	51.5	38.8	9.7	36.7
2. Joineries	36.0	54.9	9.1	41.5
3. Wooden Boxes, Cases and Crates	48.7	49.2	2.1	50.2
4. Carpentry Shops	52.7	46.3	1.0	37.3
5. Coffin Manufacturing	65.1	32.2	2.7	45.2
6. All Other Wood Products Industries	52.3	38.3	9.4	30.6
TOTAL	50.9	39.8	9.3	37.0

Table 31 (continued)

Industrial Sector	*Non-Wage Income as per cent of Value Added*	*Factory Wages as per cent of Value Added*	*Non-Factory Wages as per cent of Value Added*	*Ratio of Value Added to Gross Value of Sales (per cent)*
Furniture and Fixtures	58.2	38.0	3.8	37.3
Paper and Paper Products	70.2	18.2	11.6	37.8
Printing, Publishing and Allied Industries				
1. Printing and Publishing	38.3	19.3	42.4	58.0
2. Job Printing and Bookbinding	56.6	33.5	9.9	45.8
TOTAL	47.1	26.1	26.8	51.4
Leather and Leather Products, except Footwear and Wearing Apparel	75.2	24.2	0.6	24.7
Rubber Products				
1. Rubber Products, except Retreading and Vulcanizing of Tyres and Tubes	53.5	32.4	14.1	40.4
2. Retreading and Vulcanizing of Tyres and Tubes	70.2	23.9	5.9	34.1
TOTAL	55.6	31.3	13.1	39.5

Table 31 (continued)

Industrial Sector	*Non-Wage Income as per cent of Value Added*	*Factory Wages as per cent of Value Added*	*Non-Factory Wages as per cent of Value Added*	*Ratio of Value Added to Gross Value of Sales (per cent)*
Chemicals and Chemical Products				
1. Refined Coconut Oil	76.9	16.9	6.2	7.5
2. Paints, Varnishes and Lacquers	77.1	7.6	15.3	36.9
3. Soaps, Washing and Cleaning Compounds	76.0	10.0	14.0	43.0
4. Medicinal and Pharmaceutical Preparations	86.7	6.2	7.1	54.4
5. Perfumes, Cosmetics and Toilet Preparations	91.9	3.2	4.9	59.9
6. Matches	66.8	22.4	10.8	59.2
7. All Other Chemical Products Industries	71.5	15.0	13.5	33.4
TOTAL	79.2	9.7	11.1	37.3
Non-Metallic Mineral Products, except Petroleum and Coal				
1. Structural Clay Products	47.9	43.5	8.6	63.4
2. Glass Products	59.7	33.6	6.7	33.2
3. Pottery, China and Earthenware Products	53.4	42.3	4.3	64.3
4. Cement and Concrete Products	64.3	27.3	8.4	43.9
5. All Other Non-Metallic Products Industries	82.5	12.4	5.1	50.2
TOTAL	67.0	26.1	6.9	50.9

Table 31 (continued)

Industrial Sector	*Non-Wage Income as per cent of Value Added*	*Factory Wages as per cent of Value Added*	*Non-Factory Wages as per cent of Value Added*	*Ratio of Value Added to Gross Value of Sales (per cent)*
Basic Metal Industries				
1. Iron Foundries	53.6	43.9	2.5	45.3
2. All Other Basic Metal Industries	58.6	23.9	17.5	23.8
TOTAL	57.5	28.3	14.2	26.6
Metal Products, except Machinery and Transport Equipment				
1. Architectural Metal Products	56.5	37.2	6.3	37.2
2. Wire and Wire Products	65.3	26.6	8.1	28.2
3. Hardware, Tools and Cutlery	74.4	25.0	0.6	52.1
4. Tin Cans and Metal Boxes	60.9	23.4	15.7	30.5
5. Tinsmithing	72.6	26.3	1.1	40.4
6. Brass, Copper, Pewter and Aluminium Products	63.2	24.3	12.5	36.7
7. Blacksmithing and Welding	65.9	30.5	3.6	57.0
8. All Other Metal Products Industries	50.5	31.8	17.7	38.3
TOTAL	59.3	29.1	11.6	36.4
Machinery (except Electrical Machinery) and Repairs				
1. Industrial Machinery and Parts	43.1	50.0	6.9	47.3
2. General Engineering and Machinery Repair Shops	49.9	42.9	7.2	53.7
3. All Other Machinery and Repair Industries	35.8	19.7	44.5	30.1
TOTAL	44.1	44.8	11.1	45.9

Table 31 (continued)

Industrial Sector	*Non-Wage Income as per cent of Value Added*	*Factory Wages as per cent of Value Added*	*Non-Factory Wages as per cent of Value Added*	*Ratio of Value Added to Gross Value of Sales (per cent)*
Electrical Machinery, Apparatus, Appliances and Supplies and Repairs	71.6	15.6	12.8	37.9
Transport Equipment and Repairs				
1. Shipbuilding and Repairing and Boat Building and Repairing	41.3	43.8	14.9	49.0
2. Motor Vehicle Bodies	34.8	58.7	6.5	37.8
3. Motor Vehicle Parts and Accessories	53.3	44.1	2.6	45.7
4. Bicycle, Tricycle and Trishaw Parts and Accessories	68.4	28.2	3.4	37.4
5. All Other Transport Equipment Industries	53.3	38.3	8.4	35.2
TOTAL	41.8	47.0	11.2	43.6
Miscellaneous Manufacturing Industries				
1. Plastic Products, n.e.c.	66.9	24.6	8.5	43.3
All Other Industries	81.2	6.8	12.0	41.7
Total Other Manufacturing Industries	63.2	25.1	11.7	31.5
Total Off Estate Manufacturing Industries	63.6	24.9	11.5	24.9

Table 32

DISTRIBUTION OF WORKERS BY VALUE ADDED PER WORKER 1963

Value Added per Worker[1] $	*Number of Workers*	*Per cent Distribution*
2 000– 3 000	2 300	2.7
3 001– 4 000	39 116	45.5
4 001– 5 000	24 159	28.1
5 001– 6 000	6 264	7.3
6 001– 7 000	4 219	4.9
7 001– 8 000	2 477	2.9
8 001– 9 000	321	0.4
9 001–10 000	2 657	3.1
10 001–11 000	688	0.8
11 001–12 000	—	—
12 001–13 000	1 417	1.7
13 001–14 000	—	—
14 001–15 000	796	0.9
15 001 and Above	1 485	1.7
TOTAL	85 899	100.0

[1] Including both full and part-time.
Notes and source as per Table 24.

Table 33

DISTRIBUTION OF ESTABLISHMENTS OF MANUFACTURING INDUSTRIES BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Number of Establishments*					
	1962	1963	1964	1965	1966	1967
Processing of Estate Type of Agricultural Products	152	151	151	148	145	138
Food Manufacturing	369	369	365	373	371	354
Beverage Manufacturing	83	86	83	79	79	76
Tobacco Products	142	136	135	129	126	123
Wood Products	480	469	470	479	471	466
Rubber Products	46	45	43	41	42	41
Chemical Products	322	302	312	313	315	312
Non-Metallic Mineral Products	195	197	205	208	205	198
Basic Metals and Metal Products	263	285	289	303	333	355
Manufacture of Machinery	178	166	167	195	212	226
Manufacture of Transport Equipment	89	85	87	89	88	86
Other Covered Industries[1]	24	30	33	35	38	41
Pioneer Companies not included above	27	39	44	44	45	54
Total Surveyed Industries	2 370	2 360	2 384	2 436	2 470	2 470

[1] Includes tea factories off estates; pineapple canning; edible vegetable oils and fats; hydraulic cement; other iron and steel basic shapes; non-ferrous metals rolling, casting and extending; and measuring, controlling, laboratory and scientific instruments only for the period 1962–66. But for 1967, it also includes assembly of automobiles and lorries.

Source: Survey of Manufacturing Industries, various issues from 1962 through 1967.

Table 34

DISTRIBUTION OF ANNUAL PER CENT INCREASE IN ESTABLISHMENTS OF MANUFACTURING INDUSTRIES BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Annual per cent Increase in Establishments*					*Average Annual per cent Increase*
	1963	1964	1965	1966	1967	1962–67
Processing of Estate Type of Agricultural Products	−0.7	—	−2.0	−2.0	−4.8	−1.9
Food Manufacturing	—	−1.1	2.2	−0.5	−4.6	−0.8
Beverage Manufacturing	3.6	−3.5	−4.8	—	−3.8	−1.7
Tobacco Products	−4.2	−0.7	−4.4	−2.3	−2.4	−2.8
Wood Products	−22.9	0.2	1.9	−1.7	−1.1	−4.7
Rubber Products	−2.2	−4.4	−4.7	2.4	−2.4	−2.3
Chemical Products	−6.2	3.3	0.3	0.6	−1.0	−0.6
Non-Metallic Mineral Products	1.0	4.1	1.5	−1.4	−3.4	0.4
Basic Metals and Metal Products	8.4	1.4	4.8	9.9	6.6	6.2
Manufacture of Machinery	−6.7	0.6	16.8	8.7	6.6	5.2
Manufacture of Transport Equipment	−4.5	2.4	2.3	−1.1	−2.3	−0.6
Other Covered Industries	25.0	10.0	6.1	8.6	7.9	11.5
Pioneer Companies not included above	44.4	12.8	—	2.3	20.0	15.9
Total Surveyed Industries	−0.4	1.0	2.2	1.4	—	0.8

Notes and Source as per Table 33.

Table 35

DISTRIBUTION OF NUMBER OF FULL TIME WORKERS PER ESTABLISHMENT BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Number of Full-Time Workers per Establishment*					
	1962	1963	1964	1965	1966	1967
Processing of Estate Type of Agricultural Products	54	55	54	56	62	62
Food Manufacturing	13	14	14	14	15	16
Beverage Manufacturing	23	24	24	23	24	23
Tobacco Products	27	28	27	28	30	30
Wood Products	22	24	27	27	29	32
Rubber Products	120	140	162	181	175	176
Chemical Products	11	13	14	15	15	16
Non-Metallic Mineral Products	18	20	22	22	21	25
Basic Metals and Metal Products	13	16	16	17	17	17
Manufacture of Machinery	15	16	17	17	18	17
Manufacture of Transport Equipment	15	17	16	17	16	15
Other Covered Industries	101	91	114	114	114	117
Pioneer Companies not included above	73	78	114	124	127	128
Total Surveyed Industries	23	25	27	28	29	30

Notes and Source as per Table 33.

Table 36

DISTRIBUTION OF FULL TIME PAID WORKERS BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Number of Full-Time Paid Workers*					
	1962	1963	1964	1965	1966	1967
Processing of Estate Type of Agricultural Products	8 173	8 373	8 099	8 316	8 975	8 548
Food Manufacturing	4 902	5 055	4 928	5 291	5 686	5 583
Beverage Manufacturing	1 941	2 065	1 982	1 779	1 867	1 761
Tobacco Products	3 810	3 773	3 683	3 588	3 758	3 720
Wood Products	10 336	11 077	12 484	13 107	13 768	14 720
Rubber Products	5 524	6 306	6 982	7 436	7 351	7 226
Chemical Products	3 612	3 849	4 227	4 542	4 810	5 037
Non-Metallic Mineral Products	3 514	3 876	4 483	4 561	4 363	4 929
Basic Metals and Metal Products	3 543	4 530	4 683	5 274	5 562	5 988
Manufacture of Machinery	2 680	2 662	2 921	3 312	3 763	3 899
Manufacture of Transport Equipment	1 357	1 443	1 391	1 505	1 442	1 286
Other Covered Industries	2 434	2 738	3 768	3 982	4 319	4 782
Pioneer Companies not included above	1 959	3 057	5 008	5 477	5 698	6 935
Total Surveyed Industries	53 785	58 804	64 639	68 170	71 362	74 414

Notes and Source as per Table 33.

Table 37

AVERAGE ANNUAL COMPOUND GROWTH RATE AND ANNUAL PER CENT INCREASE IN FULL-TIME PAID WORKERS BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Annual per cent Increase in Full-Time Paid Workers*					*Average Annual Compound Growth Rate* 1962–67
	1963	1964	1965	1966	1967	
Processing of Estate Type of Agricultural Products	2.5	−3.3	2.7	7.9	−4.8	0.9
Food Manufacturing	3.1	−2.5	7.4	7.5	−1.8	2.6
Beverage Manufacturing	6.4	−4.0	−10.2	5.0	−5.7	−1.9
Tobacco Products	−1.0	−2.4	−2.6	4.7	−1.0	−0.5
Wood Products	7.2	12.7	5.0	5.0	6.9	7.3
Rubber Products	14.2	10.7	6.5	−1.1	−1.7	5.5
Chemical Products	6.6	9.8	7.5	5.9	4.6	6.9
Non-Metallic Mineral Products	10.3	15.7	1.7	4.3	13.0	7.0
Basic Metals and Metal Products	27.9	3.4	12.6	5.5	7.7	11.1
Manufacture of Machinery	−0.7	9.7	13.4	13.6	3.6	7.8
Manufacture of Transport Equipment	6.3	3.6	8.2	−4.2	−10.8	−1.1
Other Covered Industries	12.5	37.6	5.7	8.5	10.7	14.5
Pioneer Companies not included above	56.1	63.8	9.4	4.0	21.7	28.8
Total Surveyed Industries	9.3	9.9	5.5	4.7	4.3	6.5

Notes and Source as per Table 33.

Table 38

PER CENT DISTRIBUTION OF NUMBER OF FULL-TIME PAID WORKERS BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Per cent Distribution of Full-Time Paid Workers*					
	1962	1963	1964	1965	1966	1967
Processing of Estate Type of Agricultural Products	15.2	14.2	12.5	12.2	12.6	11.5
Food Manufacturing	9.1	8.6	7.6	7.8	8.0	7.5
Beverage Manufacturing	3.6	3.5	3.1	2.6	2.6	2.4
Tobacco Products	7.2	6.4	5.8	5.3	5.3	5.0
Wood Products	19.2	18.9	19.3	19.2	19.2	19.8
Rubber Products	10.3	10.7	10.8	10.9	10.3	9.7
Chemical Products	6.7	6.5	6.5	6.7	6.7	6.8
Non-Metallic Mineral Products	6.5	6.6	6.9	6.7	6.1	6.6
Basic Metals and Metal Products	6.6	7.7	7.2	7.7	7.8	8.1
Manufacture of Machinery	5.0	4.5	4.5	4.9	5.3	5.2
Manufacture of Transport Equipment	2.5	2.5	2.2	2.2	2.0	1.7
Other Covered Industries	4.5	4.7	5.8	5.8	6.1	6.4
Pioneer Companies not included above	3.6	5.2	7.8	8.0	8.0	9.3
Total Surveyed Industries	100.0	100.0	100.0	100.0	100.0	100.0

Table 39

GROSS OUTPUT IN $'000 BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Gross Value of Output or Sales in* $'000						*Average Annual Compound Growth Rate* 1962–67
	1962	1963	1964	1965	1966	1967	
Processing of Estate Type of Agricultural Products	463 999	480 362	469 925	450 450	479 755	419 900	−2.0
Food Manufacturing	154 666	168 729	187 217	215 504	248 960	248 714	9.9
Beverage Manufacturing	21 095	24 313	25 759	20 611	23 271	26 095	4.4
Tobacco Products	147 161	167 501	177 068	185 562	198 007	206 462	7.0
Wood Products	110 367	123 811	150 545	157 200	161 391	174 771	9.7
Rubber Products	40 876	49 344	65 886	83 194	88 043	87 192	16.2
Chemical Products	98 589	120 488	153 552	160 643	203 570	184 599	13.3
Non-Metallic Mineral Products	22 795	28 491	40 381	41 447	42 733	44 685	14.4
Basic Metals and Metal Products	44 942	55 451	64 825	73 144	80 017	84 269	13.3
Manufacture of Machinery	18 666	19 668	22 903	28 351	31 899	32 704	11.7
Manufacture of Transport Equipment	10 417	12 571	10 518	13 499	15 184	10 691	1.9
Other Covered Industries	59 910	70 399	90 808	116 392	123 203	153 530	20.7
Pioneer Companies not included above	37 857	99 494	242 623	384 578	338 187	422 709	61.9
Total Surveyed Industries	1 231 340	1 420 622	1 702 010	1 850 575	2 034 220	2 096 321	11.2

Notes and Source as per Table 33.

Table 40

VALUE ADDED IN $'000 BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Value Added in* $'000						*Average Annual Compound Growth Rate* 1962–67
	1962	1963	1964	1965	1966	1967	
Processing of Estate Type of Agricultural Products	45 234	45 661	46 286	41 435	56 595	50 500	2.5
Food Manufacturing	23 548	26 745	28 631	36 243	46 546	45 079	13.4
Beverage Manufacturing	11 903	12 557	12 029	9 644	12 075	14 758	4.6
Tobacco Products	27 876	28 146	36 907	40 057	54 017	62 460	17.2
Wood Products	40 940	45 222	55 086	57 865	58 952	63 198	9.0
Rubber Products	15 497	19 722	23 826	34 718	38 233	39 009	21.1
Chemical Products	32 289	43 245	55 753	55 298	63 155	61 958	14.1
Non-Metallic Mineral Products	12 773	14 879	20 172	19 910	21 628	23 318	12.1
Basic Metals and Metal Products	14 564	19 302	20 334	25 270	29 438	29 699	14.9
Manufacture of Machinery	9 078	9 290	10 271	12 567	14 293	15 217	10.8
Manufacture of Transport Equipment	5 305	5 583	5 259	6 077	5 825	4 763	−2.1
Other Covered Industries	21 996	23 883	31 853	47 197	40 873	60 065	22.2
Pioneer Companies not included above	9 202	32 937	58 603	76 555	93 910	105 342	63.5
Total Surveyed Industries	270 205	327 172	405 015	462 836	535 540	575 366	16.3

Notes and Source as per Table 33.

Table 41

PER CENT DISTRIBUTION OF GROSS SALES BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Per cent Distribution of Gross Sales*					
	1962	1963	1964	1965	1966	1967
Processing of Estate Type of Agricultural Products	37.6	33.8	27.6	24.3	23.6	20.0
Food Manufacturing	12.6	11.9	11.0	11.7	12.2	11.9
Beverage Manufacturing	1.7	1.7	1.5	1.1	1.1	1.2
Tobacco Products	12.0	11.7	10.4	10.0	9.7	9.9
Wood Products	9.0	8.7	8.9	8.5	7.9	8.3
Rubber Products	3.3	3.5	3.9	4.5	4.4	4.2
Chemical Products	8.0	8.4	9.0	8.7	10.0	8.8
Non-Metallic Mineral Products	1.9	2.1	2.4	2.2	2.1	2.1
Basic Metals and Metal Products	3.6	3.9	3.8	4.0	3.9	4.0
Manufacture of Machinery	1.5	1.4	1.4	1.5	1.6	1.6
Manufacture of Transport Equipment	0.9	0.9	0.6	0.7	0.8	0.5
Other Covered Industries	4.8	5.0	5.3	6.3	6.1	7.3
Pioneer Companies not included above	3.1	7.0	14.2	16.5	16.6	20.2
Total Surveyed Industries	100.0	100.0	100.0	100.0	100.0	100.0

Table 42

PER CENT DISTRIBUTION OF VALUE ADDED BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Per cent Distribution of Value Added*					
	1962	1963	1964	1965	1966	1967
Processing of Estate Type of Agricultural Products	16.7	14.0	11.4	9.0	10.6	8.8
Food Manufacturing	8.7	8.2	7.1	7.8	8.7	7.8
Beverage Manufacturing	4.4	3.8	3.0	2.1	2.3	2.6
Tobacco Products	10.3	8.6	9.1	8.7	10.1	10.9
Wood Products	15.2	13.8	13.6	12.5	11.0	11.0
Rubber Products	5.7	6.0	5.9	7.5	7.1	6.8
Chemical Products	12.0	13.2	13.8	12.0	11.8	10.8
Non-Metallic Mineral Products	4.7	4.6	5.0	4.3	4.0	4.1
Basic Metals and Metal Products	5.4	5.9	5.0	5.5	5.5	5.2
Manufacture of Machinery	3.4	2.8	2.5	2.7	2.7	2.6
Manufacture of Transport Equipment	2.0	1.7	1.8	1.3	1.1	0.8
Other Covered Industries	8.1	7.3	7.9	10.2	7.6	10.4
Pioneer Companies not included above	3.4	10.1	14.4	16.4	17.5	18.2
Total Surveyed Industries	100.0	100.0	100.0	100.0	100.0	100.0

Table 43

RATIO OF VALUE ADDED TO OUTPUT BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Ratio of Value Added to Output in per cent Terms*					
	1962	1963	1964	1965	1966	1967
Processing of Estate Type of Agricultural Products	9.6	9.5	9.6	9.2	11.8	12.0
Food Manufacturing	15.2	15.9	15.3	16.8	18.7	18.1
Beverage Manufacturing	56.4	52.7	46.7	46.8	51.9	56.6
Tobacco Products	18.9	16.8	20.8	21.6	27.3	30.3
Wood Products	37.1	36.5	36.6	36.8	36.5	36.2
Rubber Products	37.9	40.0	36.2	41.7	43.4	44.7
Chemical Products	35.5	35.9	36.3	34.4	31.0	33.6
Non-Metallic Mineral Products	56.0	52.2	50.0	48.0	50.6	52.2
Basic Metals and Metal Products	32.4	34.8	31.4	34.6	36.8	35.2
Manufacture of Machinery	48.6	47.2	44.9	44.3	44.8	46.5
Manufacture of Transport Equipment	50.9	44.4	50.0	45.0	38.4	44.6
Other Covered Industries	36.7	33.9	35.1	40.6	33.2	39.1
Pioneer Companies not included above	24.3	33.1	24.2	25.1	27.8	24.9
Total Surveyed Industries	21.9	23.0	23.8	25.0	26.3	27.5

Notes and Source as per Table 33.

Table 44

TOTAL WAGES AND SALARIES OF FULL-TIME WORKERS IN $'000 BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Total Wages and Salaries of Full-Time Workers in* $'000						*Average Annual Compound Growth Rate* 1962–67
	1962	1963	1964	1965	1966	1967	
Processing of Estate Type of Agricultural Products	14 006	14 749	14 959	15 523	16 781	16 395	2.7
Food Manufacturing	9 062	9 276	9 384	10 132	10 872	11 128	4.2
Beverage Manufacturing	3 704	4 163	4 321	4 001	4 533	4 850	5.5
Tobacco Products	4 721	5 566	5 862	6 130	7 547	8 028	11.2
Wood Products	19 928	22 219	26 290	27 747	28 676	30 674	8.4
Rubber Products	7 490	9 376	11 134	13 561	14 052	14 573	14.2
Chemical Products	7 744	8 644	10 395	11 607	13 298	15 189	13.4
Non-Metallic Mineral Products	4 787	6 512	7 728	8 477	8 559	9 581	14.9
Basic Metals and Metal Products	5 709	8 226	8 740	10 471	10 304	12 249	16.4
Manufacture of Machinery	4 986	5 094	5 680	6 648	7 791	7 721	9.1
Manufacture of Transport Equipment	2 879	3 168	3 094	3 431	3 623	2 843	−0.3
Other Covered Industries	5 704	7 584	9 350	11 190	12 188	13 250	18.4
Pioneer Companies not included above	3 525	7 429	12 702	15 472	16 880	22 273	44.6
Total Surveyed Industries	94 245	112 006	129 639	144 390	156 104	168 754	12.4

Notes and Source as per Table 33.

Table 45

AVERAGE ANNUAL WAGES AND SALARIES ($) PER FULL-TIME WORKER BY MAJOR SURVEYED INDUSTRIES
1962–67

Major Surveyed Industries	*Average Annual Wages and Salaries ($) per Full-Time Worker*						*Average Annual Compound Growth Rate* 1962–67
	1962	1963	1964	1965	1966	1967	
Processing of Estate Type of Agricultural Products	1 714	1 761	1 847	1 867	1 870	1 918	2.3
Food Manufacturing	1 849	1 835	1 904	1 941	1 912	1 993	1.5
Beverage Manufacturing	1 908	2 016	2 180	2 249	2 428	2 754	7.6
Tobacco Products	1 239	1 475	1 592	1 708	2 008	2 158	11.7
Wood Products	1 928	2 006	2 106	2 117	2 083	2 084	1.6
Rubber Products	1 356	1 487	1 575	1 824	1 912	2 017	8.3
Chemical Products	2 144	2 246	2 459	2 555	2 765	3 015	7.1
Non-Metallic Mineral Products	1 362	1 692	1 724	1 859	1 962	1 944	7.4
Basic Metals and Metal Products	1 611	1 816	1 866	1 985	2 032	2 046	4.9
Manufacture of Machinery	1 860	1 914	1 945	2 007	2 070	1 980	1.3
Manufacture of Transport Equipment	2 122	2 195	2 224	2 280	2 512	2 211	0.8
Other Covered Industries	2 343	2 770	2 481	2 810	2 822	2 771	3.4
Pioneer Companies not included above	1 799	2 430	2 531	2 825	2 962	3 212	12.3
Total Surveyed Industries	1 752	1 905	2 006	2 118	2 187	2 268	5.3

Notes and Source as per Table 33.

Table 46

AVERAGE ANNUAL VALUE ADDED ($) PER FULL-TIME WORKER BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Average Annual Value Added ($) per Full-Time Worker*						*Average Annual Compound Growth Rate 1962–67*
	1962	1963	1964	1965	1966	1967	
Processing of Estate Type of Agricultural Products	5 535	5 453	5 715	4 983	6 306	5 908	1.3
Food Manufacturing	4 804	5 291	5 811	6 850	8 186	8 074	10.9
Beverage Manufacturing	6 132	6 081	6 069	5 421	6 468	8 380	6.4
Tobacco Products	7 317	7 460	10 021	11 164	14 374	16 790	18.1
Wood Products	4 961	4 083	4 413	4 415	4 282	4 293	1.6
Rubber Products	2 805	3 127	3 412	4 699	5 201	5 398	14.0
Chemical Products	8 939	11 235	13 190	12 175	13 130	12 301	6.6
Non-Metallic Mineral Products	3 635	3 839	4 500	4 365	4 957	4 731	5.4
Basic Metals and Metal Products	4 111	4 261	4 342	4 791	5 293	4 960	3.8
Manufacture of Machinery	3 387	3 490	3 516	3 794	3 798	3 903	2.9
Manufacture of Transport Equipment	3 909	3869	3 781	4 038	4 040	3 704	−1.1
Other Covered Industries	9 037	8 723	8 454	11 853	9 464	12 561	6.8
Pioneer Companies not included above	4 697	10 774	11 702	13 978	16 481	15 190	26.5
Total Surveyed Industries	5 024	5 564	6 266	6 789	7 505	7 732	9.0

Notes and Source as per Table 33.

Table 47

INDEX OF AVERAGE WAGE AND SALARY BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Index of Average Annual Wage and Salary*					
	1962	1963	1964	1965	1966	1967
Processing of Estate Type of Agricultural Products	100	102.7	107.8	108.9	109.1	111.9
Food Manufacturing	100	99.2	103.0	105.0	103.4	107.8
Beverage Manufacturing	100	105.7	114.3	117.9	127.3	144.3
Tobacco Products	100	119.1	128.5	137.9	162.1	174.2
Wood Products	100	104.1	109.2	109.8	108.0	108.1
Rubber Products	100	109.7	117.6	134.5	141.0	148.8
Chemical Products	100	104.8	114.7	119.2	129.0	140.6
Non-Metallic Mineral Products	100	124.2	126.6	136.5	144.1	142.7
Basic Metals and Metal Products	100	112.7	115.8	123.2	126.1	127.0
Manufacture of Machinery	100	102.9	104.6	107.9	111.3	106.5
Manufacture of Transport Equipment	100	103.4	104.8	107.5	118.4	104.2
Other Covered Industries	100	118.2	105.9	119.9	120.4	118.3
Pioneer Companies not included above	100	135.1	141.0	157.0	164.7	178.5
Total Surveyed Industries	100	108.7	114.5	120.9	124.8	129.5

Notes and Source as per Table 33.

Table 48

INDEX OF AVERAGE ANNUAL VALUE ADDED PER WORKER BY MAJOR SURVEYED INDUSTRIES 1962–67

Major Surveyed Industries	*Index of Average Annual Value Added per Worker*					
	1962	1963	1964	1965	1966	1967
Processing of Estate Type of Agricultural Products	100	98.5	103.3	90.0	113.9	106.7
Food Manufacturing	100	110.1	121.0	142.6	170.4	168.1
Beverage Manufacturing	100	99.2	99.0	88.4	105.5	136.7
Tobacco Products	100	102.0	137.0	152.6	196.5	229.5
Wood Products	100	103.1	111.4	111.5	108.1	108.4
Rubber Products	100	111.5	121.6	166.5	185.4	192.4
Chemical Products	100	125.7	147.6	136.2	146.9	137.6
Non-Metallic Mineral Products	100	105.6	123.8	120.1	136.4	130.2
Basic Metals and Metal Products	100	103.7	105.6	116.5	128.8	120.7
Manufacture of Machinery	100	1 103.0	103.8	112.0	112.1	115.2
Manufacture of Transport Equipment	100	99.0	96.7	103.3	103.4	94.8
Other Covered Industries	100	96.5	93.6	131.2	104.7	139.0
Pioneer Companies not included above	100	229.4	249.1	297.6	350.9	323.4
Total Surveyed Industries	100	110.8	124.7	135.1	149.4	153.9

Notes and Source as per Table 33.

APPENDIX TWO

Method of Estimating the MCOR from a National Accounts Model of West Malaysia[1]

FOR THE PURPOSE OF estimating the MCOR endogenously, a national accounts model of West Malaysia is constructed on the basis of the data found in the National Accounts of West Malaysia for the seven years from 1960 through 1966 at 1964 prices. In addition the estimates of gross national products at market prices, imports and investment requirements for 1970 and 1975 as given in the First Malaysia Plan, 1966–70 are used for estimating the production vectors for West Malaysia in 1970 and 1975.

In the model the economy is disaggregated into four main sectors, viz., production, households and business, government and the external sector. The transactions of these four sectors are further classified into five separate accounts: (1) production, (2) households and business appropriation, (3) government appropriation, (4) capital formation and (5) external transactions.

The national accounts matrices of West Malaysia in 1970 and 1975 are projected at 1964 prices on the basis of an exogenously determined vector of production. Investment requirements for the additional production from 1970 to 1975 are calculated on the basis of an inverse matrix derived from a system of the Leontief type of coefficient matrix, the elements of which are estimated by the time series linear regression.

Inclusive of inventories the implied MCOR is estimated to be 3.57 and the corresponding marginal savings and marginal investment multipliers, again derived by the time series linear regression, are 5.74 and 0.04 respectively.

The following are the social accounts tables of West Malaysia for the years 1960 through 1966 at constant 1964 prices:

THE SOCIAL ACCOUNTS TABLES OF WEST MALAYSIA AT 1964 PRICES

1960

	P	HHB	G	C	X
P	—	3 784.56	828.88	899.60	3 217.76
HHB	5 131.36	—			−257.92
G	950.56	406.64	—		40.56
C	273.52	461.76	527.28	—	−362.96
X	2 375.36	220.48	41.60		—

[1] For details see National Accounts Models of China (Taiwan) and West Malaysia by Lo Sum Yee and Farhat in UNAIEDP, Occasional Papers, May , 1970.

1961

	P	HHB	G	C	X
P	—	3 757.32	853.58	948.64	2 738.12
HHB	4 886.28	—			−183.26
G	791.84	497.84	—		40.18
C	276.36	250.88	436.10	—	−14.70
X	2 343.18	196.98	40.18		—

1962

	P	HHB	G	C	X
P	—	3 902.31	899.19	1 164.97	2 706.30
HHB	5 033.33	—			−135.80
G	814.80	501.49	—		23.28
C	297.79	296.82	409.34	—	161.02
X	2 526.85	196.91	31.04		—

1963

	P	HHB	G	C	X
P	—	4 175.78	1 041.74	1 221.08	2 822.40
HHB	5 419.40	—			−155.82
G	862.40	553.70	—		24.50
C	325.56	337.12	375.34	—	183.26
X	2 653.84	196.98	23.52		—

1964

	P	HHB	G	C	X
P	—	4 476	1 223	1 282	2 986
HHB	5 897	—			−214
G	921	571	—		319
C	358	441	355	—	128
X	2 791	195	233		—

1965

	P	HHB	G	C	X
P	—	4 809.30	1 384.14	1 397.40	3 394.56
HHB	6 588.18	—			−269.28
G	1 057.74	624.24	—		292.74
C	392.70	693.60	343.74	—	−32.64
X	2 946.78	191.76	246.84		—

1966

	P	HHB	G	C	X
P	—	5 055.12	1 568.76	1 451.46	3 397.62
HHB	6 901.32	—			−277.44
G	1 142.40	678.30	—		263.16
C	422.28	697.68	297.84	—	33.66
X	3 006.96	192.78	217.26		—

Legend:
P —Production Account
HHB—Household and Business Appropriation Account
G —Government Account
C —Capital Formation Account
X —External Transactions Account

APPENDIX THREE

Development Areas and Priority Products

Development Areas

(1) The States of Kedah, Perlis, Pahang, Kelantan, Trengganu, Malacca, Sabah and Sarawak.
(2) The industrial estates of Senawang in Negri Sembilan and Kamunting in Perak.

In addition the Minister of Commerce and Industry is empowered to declare any specific area in the States of Selangor, Johore, Perak, Penang and Negri Sembilan as development areas.

Priority Products

(1) Manufacture of food products
Fruit canning excluding pineapple canning
Vegetable canning
Meat canning including meat, poultry, game and preparations thereof but excluding chicken and mutton curries.
(2) Manufacture of animal foodstuffs
Pineapple waste and bran.
(3) Manufacture of wood products
Fibre board
Chip board
Soft board
Hard board.
(4) Manufacture of toys, wooden, metal, plastic, rubber and textiles.
(5) Manufactures from padi husks and straw.
(6) Manufacture of rubber products
Rubberized fabrics
Conveyor belts, transmission belts, V-type belts.
(7) Manufacture of chemicals and chemical products
Titanium dioxide.
(8) Manufacture of hardware tools
Axes
Pliers
Screw drivers
Spanners
Riveting tools.

(9) Manufacture of industrial machinery and parts
Ball bearings
Machine tools
Industrial machinery, all types.
(10) Manufacture of transport equipment
Outboard motors
Pleasure craft.
(11) Manufacture of components, accessories, spare parts, supplies, fitting and garage equipment for motor vehicles
Accessories, all types
Bus and motor-car seat frames
Components, accessories, spare parts, supplies and fittings for tractors and other earth-moving plants
Parts for spring assembly
Parts for engine assembly
Parts for suspension assembly
Parts for transmission assembly
Automotive tune up equipment
Battery charges
Cylinder block crack repairing materials
Front end alignment equipment
Static and electronic wheel balancers
Tension wrenches
Valve seat inserts
Valve seating equipment.
(12) Assembly/Manufacture of electronic components.
(13) Manufacture of electrical machinery
Telephone switching equipment.

Malaysian Content Required in Manufactured Products

The manufactured products should incorporate 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.

Index

Entries marked with an asterisk, as 108–9*, refer to tables in Appendix II

CAPITAL formation 6, 7, 18, 108–9*
Communist guerilla emergency 3
Consumption, rise in 7, 8

DEMAND, direct and indirect 42–3
Development areas 194

ECONOMY, management of 1
Employment 158*
  sectorial 23
    agriculture 24
    manufacture 24
    mining 25
Expenditure 6
Exports 3, 5, 11, 102–3*
  fall in 4
Exports and imports,
  manufacturing sector 146–7*

FACTOR costs, accumulated 55–9
Federal Industrial Development
  Authority 91
Final demand elasticities 139*
Finance, industrial 82–3
Five Year Plan, First 78, 79
  Second 77–8, 79, 94

GROSS Domestic Product 5, 28, 29, 119–
  20*
Gross National Product 18, 100–1*
Gross sales 182*

IBRD mission 74
Imports 6, 8, 9
  capital goods 10
  substitution in 10
  (*See also* Exports)
Income, of W. Malaysia 3
  non-wage and non-factory 168–74*
  sectional 29, 30, 32, 33, 121–3*
    agriculture 29
    manufacturing 29, 30
    projection 31
    public utilities 29
Industrial development 1
Industrial Development Working Party
  76, 86
Industrial estates 81, 195
Industrialization programme 69
  depreciation allowances 75
  evolution 74
  Government measures to promote 74
Industry, number of establishments 176–
  7*
Input coefficient matrix 124–9*
Input–output tables 34
International Tin Agreement 4
Inverse matrix 130–5*
Investment 13, 14, 15, 16, 106–7*

LABOUR force 21, 112–3*, 178–9*
  distribution 24
Leontief estimates 33, 40–1

MCOR, estimation of 190
Malays, employment proportions of 90
Malaysia Industrial Development Finance
  Board 81, 83
Malaysian Industrial Estates Ltd 81
Malaysian Plan, First 1, 3, 13, 23
  Second 79
Manufactures, Malaysian contents re-
  quired 195

Manufacturing, capital-intensive 68
growth of 60
labour-intensive 67
statistics 148–55*, 156–7*
structure 63
Money supply 26
Mortality rates, infants and toddlers 21

NATIONAL account model 190–2
National Investment Co. 83
National Productivity Centre 80

OUTPUT, manufacturing sector 133*, 180*

PALM oil, fall in price 4
Pioneer Industries Ordinance 95
Population and Labour Force 20, 111*
Price level 26, 27, 28
Primary input coefficient 140–1*
Priority products 194–5
Production 34
Public utility services, development 78
Purchases, inter-industry 35–8

RACIAL riot 91
Raja Tan Sri Mohar Committee 89
Resource gap 13, 17, 106–7*
Rubber, decline in export earnings 1
price reduction 3, 4, 70
Rueff Mission 85

SARAWAK Pioneer Industries Ordinance 88
Savings 11, 12, 13, 18, 106–7*
linked with exports 13
public, erosion of 13
Sector outputs 43
interdependence of 43–5, 54–5
backward linkages, 45, 47, 49, 50
forward linkages 45, 46, 48, 50
tables 46–54
State of Emergency 1955–60 3

TARIFF Advisory Board 85
Tax holidays 77
Tax incentives 86
Teachers, shortage of 80
Technical training 79
Tin, decline in export earnings 1
fall in price of 3

UNDEREMPLOYMENT 22–3
Unemployment 21–2, 112–3*
and education 22, 114–5*

VALUE-ADDED, by industries 181*, 182–3*
Value-added elasticities 136–7*
Value-added, per worker 175*, 186*

WAGES 58–9
direct and indirect labour 66
factory and non-factory 64–5, 159–67*
full-time 184–5*, 187*
Workers, full-time 178–9*

One of the most prosperous countries in Asia thanks to years of investment in profitable primary products, Malaysia has had, in recent years, to accelerate its development effort to counterbalance the continual fall in world commodity prices, particularly those of rubber and tin.

This important book reviews the economic progress made by West Malaysia during the period 1955 (the year before the implementation of the First Malayan Plan) to 1967 and analyses the nature of some of the chief difficulties encountered. A great deal of statistical data is included and a special feature of the book is that the structural and behavioural relationships of the West Malaysian economy, including the sectoral forward and backward linkages, are presented concisely in quantitative terms.

Detailed reference is made to the role of the industrial sector in the development process, and the author makes several recommendations for the future development of this sector.

The Development Performance of West Malaysia will be of interest to all students of the Malaysian economy, to teachers and researchers, and also to those who are directly involved in the promotion of industrial development in the country.

Lo Sum Yee has been a Lecturer in Economics at the University of Malaya, Kuala Lumpur, since 1961. Between 1969 and 1970 he was a Research Fellow at the U.N. Asian Institute for Economic Development and Planning, Bangkok, Thailand.

Heinemann Educational Books (Asia) Ltd.