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THE SEVENTH MALAYSIA PLAN:

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Productivity  
— for —  
Sustainable  
Development

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Editors

SOON LEE YING  
SHYAMALA NAGARAJ



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# Productivity —for— Sustainable Development

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# Preface

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This book contains a selection of papers presented at the National Convention on the Seventh Malaysia Plan which was jointly organised by the Malaysian Economic Association and the Yayasan Penang Free School from 5 - 7 August 1996 in Kuala Lumpur. The theme of the Convention, "Productivity Growth for Sustained Development" was intended to promote public awareness of the policies underlying the strategy in the Seventh Plan for Malaysia to achieve sustained economic growth through productivity improvements. The Convention aimed to be a forum for a detailed discussion relating to the specific means of implementing the bold and imaginative strategy necessary if Malaysia is to become a full fledged industrial society as envisaged under Vision 2020.

We would like to place on record our gratitude to the many individuals who helped in the publication of the book. The authors have been very cooperative in responding to editing queries. Teh Zainah at the Malaysian Economic Association office has been very helpful in coordinating the editing process between us and the authors. Most importantly, we would like to acknowledge the support of the staff at the University of Malaya Press who have helped with the layout and publication of the book.

*Soon Lee Ying  
Shyamala Nagaraj*

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# Introduction

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The Seventh Malaysia Plan (7MP) covering the period 1996-2000 is the ninth in a series of five-year development plans that has guided the nation's economic growth and development since independence. It comes at a critical time as the economy has been experiencing the longest period of rapid growth in the nation's history with 1996 marking the ninth straight year of growth in excess of 8 per cent. Hence the question foremost on the minds of economists and observers alike, is whether such growth is sustainable.

The outlook is not optimistic as the economy, after a prolonged period of rapid growth, is faced with supply constraints, an increasingly competitive external environment, and macroeconomic fundamentals that are coming under pressure both domestically and externally. The strategy that has been the engine of the remarkable growth over the last decade – export-led industrialisation – is threatened by rising wages, labour shortages and increasing competition from low-cost producers. The tight labour market is also exerting increasing pressure on inflation that would require tighter monetary policy. The current account deficit, which has been deteriorating because of rapid import growth, is another cause for increasing concern.

Notwithstanding these constraints, the 7MP maintains a strong growth stance over the Plan period, targeting growth at 8.0 per cent per annum while preparing to meet the challenges ahead by shifting emphasis towards productivity, specifically total factor productivity (TFP), as the main source of growth. The Plan recognises that much of the growth over the last two decades has been input-driven, the result of rapid capital accumulation and labour force growth; over the Sixth Malaysia Plan (6MP) period (1990-95), out of the 8.7 per cent growth per annum, capital and labour contributed 43 and 29 per cent to growth, respectively, and TFP the remaining 29 per cent (7MP, p. 37). As investment is expected to decelerate and the labour force sees slower growth over the 7MP period, TFP is expected to grow at 3.3 per cent, contributing approximately 40 per cent of growth.

According to the growth accounting framework, there are basically two sources of growth output for an economy: (1) that due to increase in inputs; namely capital (machinery, buildings, roads) and labour; and (2) that due increase in the efficiency with which inputs are utilised. An economy can grow very rapidly and for a considerable length of time by investing in more machinery and infrastructure if accompanied by rapid labour force growth. However mere increases in inputs will eventually run into diminishing returns and growth will grind to a halt. Sustained long run growth can only occur if output per unit of input, that is, total factor productivity, increases. TFP growth can come from two sources: (i) gains due to improvements in allocation of resources, learning by doing, improved organ-

isation and management methods; and (ii) gains from technical progress. Hence, TFP growth depends on the quality of inputs. It is not just the amount of raw labour that is important but the quality of labour; it is not just machinery but machinery with the latest technology. Improving the quality of the work force is critical. Not only must the work force be educated and trained to make them better at using existing technology but they must also be equipped with the ability to absorb new technology, to innovate and create.

The 7MP has therefore identified the right target to keep the economy on the path of sustained growth. In accordance with this shift in emphasis, the Plan has targeted the development of the nation's human resources as the critical input. The commitment of the government to expand education and upgrade the workforce is the most impressive so far. Under the 7MP, education and training will take up 15.1 per cent of development expenditure compared to 13.4 per cent in the 6MP period, an increase of 39.0 per cent (7MP, Table 6-3, p. 177). The share of expenditure on industrial training is increased from 4.9 per cent under the 6MP to 12.9 per cent under the 7MP. Besides a larger budget, the 7MP spells out a variety of measures that will be undertaken to expand and improve the education system and to raise the level of education in science and technology. Most significant is the move to allow the private sector to take a more active role in the provision of higher education and training.

The first paper by Ali Abul Hassan discusses the challenges facing the Malaysian economy and the strategies formulated under the 7MP. The Plan recognises that Malaysia faces a new set of challenges as a result of prolonged growth and the globalisation and integration of the world economy. To sustain growth in the medium and long term, Malaysia must increase her competitive edge vis-a-vis other countries and this must be underpinned by strong macroeconomic fundamentals and a sustainable external balance. The main development thrust of the 7MP is therefore high growth and stability.

Equity will also continue to be a major thrust of the 7MP. Efforts will be directed towards reducing the incidence of poverty, and as part of the long term goal to achieve balanced development as envisaged under the National Development Policy, the Plan will continue with its drive to promote bumiputra participation in the commercial and industrial sectors through the privatisation programme and to build up a community of Bumiputra entrepreneurs through vendor and franchise programmes.

The sectoral changes under the 7MP reflect the strategy to sustain long-term competitiveness. The share of manufacturing in GDP is expected to increase from 35 per cent (in 1995) to 37.5 per cent by the year 2000, with the manufacturing sector restructuring towards capital- and technology-intensive industries. The share of the services sector in GDP is expected to increase to 43.9 per cent in the year 2000. This sector will serve as the engine of growth because of its strong linkages with the manufacturing sector as the latter becomes more technology-intensive, and because the majority of the high technology industries is in the services sector.

To facilitate the drive for higher TFP growth, the Plan has targeted policies to increase investment in education and training, to strengthen education in science and technology, and to promote research and development. The target for enrolment in the science and technical streams at vocational, technical schools and tertiary levels is 232,900 in the year 2000 compared to 89,920 in 1995. The education system, in particular higher education, will be reformed to facilitate the increase in supply; the focus of this reform is the greater participation of the private sector in higher education and training. As a percentage of GNP, research and development is expected to increase, from 0.4 per cent in 1992 to 1 per cent in 2000.

Policies for promoting greater efficiency in the utilisation of agricultural resources will also be introduced. Infrastructure development will continue under the 7MP to enhance efficiency in the various sectors and to serve the needs of the rural population. The Plan emphasises for the first time sustainable development to ensure that the environment and natural resources are preserved for future generations. Youth development continues to be on the policy agenda as investment in the nation's youth is an investment in the nation's future. The importance of women in development is also given due recognition in the 7MP.

Maisom Abdullah's paper provides a general discussion of productivity and some measurement problems commonly encountered in estimating TFP, that is, the appropriate measures of output, capital and labour. The paper contains an extensive discussion of the determinants of productivity, emphasising the complementary roles of the government and the private sector. The government's main role is to foster an environment that is conducive for firms to constantly upgrade; the factors emphasised include stable prices as inflation can result in misallocation due to incorrect perception of relative prices, encouraging firms to invest in research and development, and active involvement with the private sector in industrial and productivity policy formulation. At the firm level, productivity is determined by investment in capital equipment, formulation of strategies to achieve cost efficiency and commitment to quality enhancement. A committed and well-trained workforce is crucial and a system of compensation that rewards productivity is also necessary to motivate workers. Bench-marking and business re-engineering are other approaches taken by firms to enhance productivity and competitiveness.

Gan Wee Beng and Soon Lee Ying's paper builds on the recent debate on the role of TFP in East Asia's growth. For the aggregate economy, they estimated that over the period 1974-94, TFP grew at an average annual rate of 1.6 per cent. TFP growth was highest at 2.2 per cent over the period 1990-95, contributing to 24 per cent of growth but this share is still low compared to the 36 per cent share typical of a developing economy at the mid-stage of industrialisation. Although growth has been largely input-driven, they conclude that the economy can enjoy a fairly long period of strong growth as diminishing returns to capital can be delayed with greater accumulation of human capital, a more

efficient financial sector and wider export opportunities. In an empirical analysis of the determinants of TFP growth, they find that a substantial part of TFP growth in recent years reflects technological catching-up due to foreign direct investment inflows. Education (primary school enrolment) and export-orientation both have positive effects on TFP growth; labour force growth however has a negative effect, a result that reinforces the case for reduced reliance of the economy on foreign labour.

Tham Siew Yean focuses on TFP growth in the manufacturing sector. Using the growth accounting method, she finds that TFP growth in the manufacturing sector averaged 0.1 per cent over the period 1986-93 and out the 28 industries in the manufacturing sector, only 10 experienced average annual growth in TFP of more than 1 per cent. Sub-period estimates show that TFP growth fell from 0.9 per cent in 1986-89 to -0.8 percent for 1990-93, a decline she notes is associated with the fall in skill-intensity of the manufacturing workforce which she links to the government's liberal policy on unskilled foreign workers. She also attributes the weak TFP growth to the lack of technological deepening of the manufacturing sector due to: (i) the low level of technology transfer as a result of the high import content of inputs in key manufacturing industries, and administrative procedures; (ii) low level of R&D expenditure which has been hampered by shortage of skilled and technical manpower and financial resources. She notes that if the manufacturing sector is to stay competitive through TFP growth, government policy towards foreign labour must be consistent with the call for manufacturing firms to upgrade to higher value-added activities and this has to be accompanied by real efforts to not only increase enrolment in higher education, but also to monitor the quality of education and training to ensure that the needs of industry are met.

Another aspect of sustainable growth is sustainable development, which is the focus of Lin See Yan's paper. His paper examines the financing issues of sustainable development and the feasibility of a 'green' budget. The financing requirements of sustainable development are large, which no government can bear alone. He emphasises the need to involve the private sector which ultimately will have to bear the bulk of the costs of environmental investments. The government's main role is to establish clear, credible and stable macroeconomic, sectoral and environmental policies; this is necessary to induce industry to undertake environmentally-friendly production and investment decisions. The pros and cons of the various types of funding instruments that have been undertaken in other countries are examined. These include environmental funds such as pollution abatement funds and conservation trust funds, and environmentally-friendly economic instruments that make producers and consumers bear the cost of actions that damage the environment by reducing subsidies and levying pollution charges. International taxes have been proposed as another source of external financing for sustainable development; the proposed taxes include taxes on carbon emissions, air transport and foreign exchange transactions. There is a variety of instruments available to individual countries but the needs and constraints for each

vary; he suggests the use of a matrix approach to identify policies that are appropriate for sustainable development.

In her paper, Zeti Aziz notes that the services sector is set to play a much bigger role in leading economic growth with the onset of the technological revolution in information technology and the increasing scope for international trade in services. The growth of the services sector is critical at this stage of Malaysia's development for two reasons. Firstly, the development of efficient services especially transportation, telecommunications and utilities, is necessary to enhance the competitiveness of the manufacturing sector and other sectors. Secondly, the development of the services sector is critical to addressing the current account deficit; the services account, which has always been in deficit, increased from RM862 million in 1970 to RM18.8 billion in 1995, with the growth in recent years due to increases in freight and insurance payments associated with export growth. She identifies the challenges facing the development of the services sector which include: meeting the financing requirements to expand infrastructure; the development of manpower with technical skills; investment in information technology among large and small operators of services. Finally, she notes that in accordance with the General Agreement of Trade in Services, the services sector, unlike the manufacturing sector, will have to develop without government incentives and special protection.

Sulaiman Mahbob and Michael Yap analyse the external financing needs under the 7MP. They take issue with the 7MP projection of the current account deficit which the Plan expects will decline from -5.5 per cent (cumulative) in the 6MP period to -3.0 per cent over the 7MP. The projected turnaround, which they note is premised on a projected fall in merchandise imports, a reduction in freight and insurance and in investment income, is too optimistic. They also challenge the projections for savings and investment. The Plan forecasts a decline in the savings-investment gap from -6.7 per cent of nominal GNP under the 6MP to -3.0 per cent under the 7MP on the assumption that national savings will rise and investment will fall. However the projected increase in gross national savings, from 34.2 per cent of nominal GNP in 1995 to 36.5 per cent in 2000, assumes a sharp increase in private savings which they contend is not achievable.

If growth is to be sustained at 8.0 per cent under the 7MP, then continuing dependence on external financing is anticipated. FDI is the best option but attracting FDI will be far more difficult in the future. External factors include technological developments, such as robotics and automation, that will offset comparative advantage due to low labour costs; increasing competition for capital from the former Communist countries in Eastern Europe; the formation of regional groupings; and changing demographics, namely ageing, that will in the long run reduce savings from the industrialised countries, particularly Japan. Domestically, Malaysia's ability to attract FDI will depend on her ability to move up the technological ladder. The supply of skilled manpower is critical in this

effort. They also note that sound macroeconomic management and a stable exchange rate are necessary conditions for continued FDI.

Mohamed Ariff and Leong Kai Hin's paper examines the factors behind the growing external imbalance and evaluates the measures under the 7MP to tackle the current account deficit. While current account deficits are not necessarily bad, persistent and growing deficits are a cause for concern and an indication that a country is living beyond its means. Since 1989, the current account has been in deficit but in 1995, the deficit had swelled to RM17.8 billion and net long-term capital was insufficient to finance the deficit, causing a basic balance of payments deficit for the first time. The widening of the current account deficit is the result of both a worsening merchandise and services balance. The deterioration in the merchandise account is due to the rapid growth of imports, especially of intermediate and capital goods, a situation compounded by strong demand for imported capital goods for large infrastructure and public utility projects. The widening of the services deficit is due to higher freight and insurance payments and higher payments on investment income.

They note that the Government has taken a serious view of the balance of payments judging by the measures drawn up in the 7MP. They caution, however, that measures to reduce imports may introduce distortions. The main target of measures to reduce the current account deficit is in services, which is laudable. These include tourism, the development of Port Klang as a transshipment centre, the development of domestic institutions of higher learning to not only reduce the number of Malaysians studying abroad but potentially as a source of foreign exchange earnings through an increase in the number of foreigners studying locally; reducing the dependence on foreign labour, the remittances of which have become a major component of the services account deficit; and a re-examination of tax incentives for foreign investment which affect the balance of payments through transfer pricing. Finally they take issue with the 7MP growth target, noting that as long as the economy continues to grow at 8.0 per cent, the balance of payments problem will persist.

Clifford Herbert analyses the evolving role of fiscal policy and budgetary operations in promoting macroeconomic stability within the context of the long-run twin objectives of high growth and equity that has characterised the five-year plans since 1970. His account traces the heightened role of the public sector in the nation's economic growth through the 1970s and early 1980s and the changes that have occurred since 1985. While the pre-1985 period was marked by a growing public sector, the post-1985 period has seen an almost equally rapid downsizing of the public sector. The 1985-86 recession forced a rethinking of the role of the public sector and in a dramatic turn, the government started a programme to systematically reduce the size of the public sector by cutting back expenditure and accelerating privatisation. Foreign ownership in the export-oriented manufacturing sector was liberalised and over the years tax policy has been directed towards promoting private investment and savings and enhancing com-

petitiveness. The changes have resulted in the realisation of budget surpluses in recent years.

The measures to expand, upgrade and restructure the education system in order to meet the manpower requirements under the 7MP are discussed in Anuwar Ali's paper. The shift to productivity-driven growth has made the expansion of tertiary education, especially science and technology enrolment and the training of workers with industry relevant skills, a top priority under the 7MP. Anuwar examines the role of liberalisation of higher education among the measures to meet this objective. He highlights two recent changes: the Private Higher Educational Institution Act in 1996 which allows the establishment of private degree-granting institutions and the setting up of branch campuses by foreign universities; and amendment in 1995 of the 1971 University and University Colleges Act which allows public institutions of higher learning to be corporatised. He raises two concerns about private tertiary institutes: firstly, whether private institutions have the capacity to produce the science and technology graduates required by industry; secondly, the need to ensure the quality of education provided by private institutions meets minimum standards.

Tarcisius Chin presents the private sector view of the issues arising from the recent changes in policy towards higher education. Like Anuwar, he warns that liberalising the education sector may result in "a lot more players in the easier but wrong end of the market". The group for which the shortage is most serious, such as sub-professional engineers, may not see sufficient providers because for such courses the fees that can be charged may not be commensurate with the cost of provision. He suggests that the government provide clearer guidelines and incentives for private sector provision if the nation's future manpower needs are to be met. He also emphasises the need to promote quality tertiary education if Malaysia is to develop into a regional centre for learning.

In his paper, Lee Kiong Hock notes that the government's liberalisation of higher education to allow private provision of tertiary education and training, and the change in school curriculum to emphasise more mathematics and science, are all moves in the right direction. However, he expresses concern whether the present system trains workers to meet the challenges of rapid technological changes. In such a world, the worker must be able to adapt to change, to improvise and solve problems on the job. The challenge, he emphasises, is to train the workman, rather than preparing the man for work. The development of communication skills and problem-solving abilities are critical elements of the educational curriculum which the 7MP has not addressed specifically. He suggests adopting benchmarks to set some standard for cognitive ability and taking bold steps to change the present system of teaching.

Tey Nai Peng and Tan Poo Chang present a comprehensive analysis of Malaysia's age structure. Malaysia has a relatively young population as a result of a high rate of population growth estimated at 2.4 per cent per annum. The median age was lowest at 19.8 years for Malays against a median age of 21.6 years for the overall population (1995 figures), reflecting the differential pattern of fertility decline

between the ethnic groups. This has translated into a very high rate of growth of the working-age population – during 1980-91, the working age population grew at 3.9 per cent per annum and over the 7MP period, almost a quarter million workers are expected to enter the labour force annually. While this augurs well for a booming economy, the large increase in the number of children in the schooling ages has already placed considerable strain on existing school facilities, especially in urban areas, a problem that has been compounded by population shifts due to rapid rural-urban migration. As the cohorts move through the education system, the demand for educational facilities is expected to grow at higher levels of education. The proportion of elderly (65+ years) has remained at 3-4 per cent but is expected to reach 7 per cent by the year 2020. In the long-run, the government will have to address the old age dependency problem; rising health care costs and socio-economic support for the elderly will emerge to become issues for the future.

The youth programme drawn up under the 7MP is the most comprehensive so far, reflecting not only the importance of youth in the human resource development effort but also the problems of youth in a rapidly modernising society. The programmes under the 7MP consist of leadership training, skills training, entrepreneurial development, healthy life-style programmes, sports, cultural as well as preventive and rehabilitative programmes. However, Saifuddin Abdullah emphasises that if these programmes are to succeed, more attention must be focused on implementation and coordination of youth activities to ensure greater participation. Among other things, he calls for a fresh approach in designing youth programmes that recognises the changing needs and attitudes of the modern youth, co-operation among government agencies in youth programmes, and greater involvement of the private sector.

Although women have been playing an increasing role in the country's economic development, the Government has been slow to address the needs of women in development. In their paper, Shyamala Nagaraj and Siti Rohani Yahya present a critical examination of the progress made under the various five-year Plans. By all socio-economic indicators – health, education, employment status – women have made significant progress over the last thirty years, but this owes more to the gender-blind policies of education and health, rather than the result of a specific plan to address women's needs. While the Sixth Malaysia Plan has taken a major step towards recognising women's role in development with the incorporation of the National Policy for Women (NPW), the 7MP has merely set out to do more of the same, committing itself to continue with strategies and programmes to enhance the role, position and responsibilities of women, without an evaluation of the provisions of the NPW. What is lacking is an integrated plan that systematically identifies all the issues pertaining to women and formulates the necessary policies in accordance with women's enhanced role in economic development. They also propose a re-examination of the current bureaucratic structure which they argue is woefully inadequate to meet future needs when a more pro-active role is required of the agency in charge of women affairs.

Notwithstanding the laudable efforts of the Plan in addressing the critical constraints to long-run growth, realising 8.0 per cent growth will present a big challenge as reflected in the papers in this volume. There is considerable potential for TFP growth given Malaysia's relatively young and trainable labour force, but realising the targets is a challenging task. One of the questions raised is the quality of higher education with the acceleration of programmes to produce more graduates; another concern is whether even with private sector participation, sufficient numbers of engineers and workers with technical skills will be trained. A prevailing concern is that continued strong growth will make the external imbalance unsustainable. Restoring the current account deficit to more sustainable levels is crucial. In the short run, growth may have to slow down. In the long run, it will depend on the success of programmes to cut imports especially in services (education, freight, insurance) and on efforts to reduce the import content of the manufacturing sector. To the extent that the current account deficit is likely to persist for some time to come, a continuation of foreign direct investment inflows is necessary to finance the savings-investment gap, which in turn will depend on Malaysia's competitive edge. The task of maintaining growth and stability is further burdened by the growing demands from a more aware public to ensure that development is sustainable, and that it provides for the needs of a population striving to maintain its social fabric amidst the often rather severe adjustments required by rapid development.

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