

# **RUKUNEGARA**

## **DECLARATION**

*OUR* NATION, MALAYSIA, being dedicated

to achieving a greater unity of all her peoples;

to maintaining a democratic way of life;

to creating a just society in which the wealth of the nation shall be equitably shared;

to ensuring a liberal approach to her rich and diverse cultural traditions;

to building a progressive society which shall be oriented to modern science and technology;

*WE*, her peoples, pledge our united efforts to attain these ends guided by these principles:

**Belief in God**

**Loyalty to King and Country**

**Upholding the Constitution**

**Rule of Law**

**Good Behaviour and Morality**



**PRIME MINISTER  
MALAYSIA**

## **Foreword**

During the last decade, Malaysia made good progress towards achieving wide-ranging economic objectives and social transformation, accompanied with rising prosperity and a high quality of life. Despite experiencing the worst-ever recession during the Asian financial crisis, strong fundamentals enabled the economy to recover and grow at an annual average rate of 7 per cent per annum during the 1990s, thereby achieving the target of the Second Outline Perspective Plan (OPP2). At the same time, the incidence of poverty fell by half and efforts at restructuring the Malaysian society yielded positive results in fostering national unity.

The Third Outline Perspective Plan (OPP3) marks the second phase of the nation's journey to realize Vision 2020 that we embarked upon in 1991. In formulating the policies, we have drawn from our rich experience in economic development and nation building. Since the launching of the New Economic Policy in 1971, the nation underwent rapid economic growth and attained significant improvements in its socio-economy, especially in poverty alleviation and the restructuring of society. The National Development Policy (NDP) took these achievements further in the 1990s by focusing on balanced and equitable development. The success of these policies is evident in the prosperity and harmonious ethnic relations that the nation had been enjoying for the last 30 years.

We are entering another important and challenging phase in the development of the country, and our policies have accordingly to address these concerns. Today, the forces of globalization, liberalization and information and communications technology (ICT) have fundamentally changed the rules and nature of global trade, resource flows and competition. Clearly, countries that are able to rise to the challenge will grow in success and prosperity, while those failing to do so will be marginalized and languish in the backwaters of development. Our track record, coupled with the resolve and ingenuity of the Malaysian people, gives us confidence that we can successfully face the challenge provided we equip ourselves adequately, shore up our national resilience, and enhance our competitiveness in the global marketplace.

The OPP3 focuses on some key strategic thrusts to achieve sustainable growth. To a great extent, our competitive position will be determined by the speed with which we increase the knowledge content of our activities as well as strengthen our capability to develop indigenous technology and create new products. We will need to adopt modern production systems and technology to raise our productivity and value added. Although foreign direct investment (FDI) continues to be important, greater emphasis will be placed on domestic investment to enhance the retention of a greater portion of the wealth created within the country.

High on our priority list is forging a united nation consisting of a progressive and dynamic *Bangsa Malaysia* that lives in harmony and imbued with strong moral and ethical values. Diligence, discipline, credibility, pride in one's work and achievements, as well as the relentless pursuit towards continuous self-improvement and output are important values and attitudes for all Malaysians to develop. It is also important for the Malaysian society to show political maturity by avoiding extremism or parochialism. We must never cease to remember that the vital ingredient for sustainable growth is a harmonious society. With unity and the total commitment of all Malaysians, I am confident that we will be able to achieve our long-term vision of becoming a developed nation, where everyone can enjoy high income and good quality of life.

A key thrust is promoting an equitable society by raising the income and quality of life of those in the low-income groups and reducing economic disparity among ethnic groups as well as between locations. Despite pursuing the strategies for the restructuring of society during the past 30 years, we have still some way to go in achieving effective Bumiputera participation and creating self reliant

and sustainable Bumiputera entrepreneurs. The Government can only go so far in setting the necessary conditions and the enabling environment for the restructuring of society to take place. In the final analysis, it is the Bumiputera community that will have to intensify efforts for the realization and accomplishment of these targets. In the face of challenges ahead, the Bumiputera must be prepared to change their mindset, and even the value system. They must enhance their skills and entrepreneurial capabilities to participate in the knowledge-based economy and take advantage of the opportunities created within and outside the country.

The development of quality human resources will be pursued with vigour to provide a productive workforce and build a learning and knowledge-rich society. Effort will be directed towards creating excellence in the education and training system, upgrading and expanding teacher training, and in particular strengthening the teaching of science, mathematics and English. Lifelong learning will be promoted through distance learning, the establishment of community colleges and open universities. The performance gap between the rural and urban areas as well as among the disadvantaged groups will be reduced through increased accessibility to quality education. During the OPP3 period, growth objectives will continue to be balanced with environmental consideration. Care is taken to ensure that the country's development is environmentally sustainable to safeguard growth and prosperity for the present and future generations.

The policies and strategies of the OPP3 will bring the nation closer to the fulfilment of the Vision 2020 aspirations only if there is the total commitment of all Malaysians to translate these policies and strategies into effective actions. On the part of the Administration, we will be steadfast in ensuring that the goals set for the nation are carried out with a sense of urgency, sensitivity and imagination, while at the same time avoiding inconsistencies in the interpretation of policies and programme implementation. The Government will maintain a conducive environment for enterprise, innovation, and creativity to flourish. The private sector, on its part, should be resourceful, creative and should use knowledge and ICT to generate business dynamism.

The preparation of the OPP3 has benefited from the deliberations of the Second National Economic Consultative Council (MAPEN II). I would like to record the Government's deepest appreciation to the members of MAPEN II for their contributions. Although it is not possible for the Government to accept *in toto* the recommendations of MAPEN II, the numerous ideas proposed and

thoughts expressed by the members have been taken into account in the formulation of OPP3. I also wish to thank the government agencies and organizations, as well as the private sector and non-governmental organizations for contributing to the preparation of this document. The proposals made by various strata of society, including political parties, private organizations and members of the public, greatly facilitated the preparation of this Plan.

A handwritten signature in black ink, consisting of several fluid, overlapping strokes that form a stylized representation of the name Mahathir bin Mohamad.

DR. MAHATHIR BIN MOHAMAD  
Prime Minister, Malaysia

Putrajaya  
3 April 2001

## **CHAPTER 1 - SUSTAINABLE GROWTH WITH RESIL IENCE**

**I. INTRODUCTION**

**II. CHALLENGES TO LONG-TERM GROWTH**

**III. DEVELOPMENT THRUSTS OF THE NATIONAL VISION POLICY**

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## **Chapter 1**

# **Sustainable Growth With Resilience**

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## CHAPTER 1

# Sustainable Growth With Resilience

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### I. INTRODUCTION

1.01 The Third Outline Perspective Plan (OPP3), which constitutes the second decade of development under Vision 2020, focuses on *building a resilient and competitive nation*. During this period, efforts will be made to raise the quality of development and generate high sustainable growth, bringing prosperity for all. National unity remains the overriding goal of development and the diversities of Malaysians - ethnic, lingual, cultural and religious - will be taken into account in forging a harmonious, tolerant and dynamic society. Socioeconomic development policies, which contributed to enhancing the quality of life of Malaysians, will continue to be given priority.

1.02 The formulation of the Plan incorporates a review of the progress of the Second Outline Perspective Plan (OPP2) as well as lessons learnt from the 1997-1998 Asian financial crisis. The policies and strategies are aimed at building upon the country's existing strengths, addressing its limitations and constraints, and facing the challenges of global competition. As in the past, the Government will continue to pursue a holistic approach to economic development, which is essential in ensuring stable growth, promoting harmony among ethnic groups, and enhancing national integration. Various views and contributions were considered, including the report of the Second National Economic Consultative Council (MAPEN II), which comprised representatives from different segments of society.

1.03 The OPP3 has been formulated based on a policy that will be called the National Vision Policy (NVP). The NVP, with national unity as its overriding objective, is aimed at establishing a progressive and prosperous *Bangsa Malaysia* which lives in harmony and engages in full and fair partnership. Economic growth will be promoted alongside efforts aimed at poverty eradication and restructuring of society. Social, economic, and regional imbalances will be narrowed. The development policies to improve material welfare and raise the level of

prosperity will be accompanied by efforts to instill positive social and spiritual values as well as concern for the environment to maintain the long-term sustainability of the country's development.

## **II. CHALLENGES TO LONG-TERM GROWTH**

1.04 Malaysia faces challenges at both the global and domestic fronts. Globally, the rules of competition have changed with the onset of the Information Age and a more integrated global economy as well as greater liberalization of the markets. A country's competitive advantage is no longer dependent on factors such as labour, land and natural resources, but on its potential to produce, acquire, utilize and disseminate knowledge. The availability of knowledge enhances the potential for lower-cost developing countries to move into high value-added products at a faster pace and enables new entrants to compete with established producers. With their huge domestic markets, these countries threaten to undermine the comparative advantage in some areas of manufacturing that Malaysia enjoyed for the last 30 years. On the other hand, the industrialized countries, which are focusing on knowledge as an important input in their production processes, have increased the share of high-technology industries in their total manufacturing value added and exports. They are more advanced in terms of human resource, technology, research and development (R&D), innovative capability and infrastructure. Consequently, Malaysia will have to intensify its efforts to stay ahead of the more dynamic developing countries and catch up with the developed countries.

1.05 In this decade, the move towards greater liberalization will lead to increased market opening by individual countries and benefit those who are in a position to take advantage of the process. With the reduction of tariff barriers, market borders will become technically non-existent. Coupled with the pervasive use of the Internet, businesses will be able to source for inputs, components and services, and get quotes from suppliers at the most competitive price anywhere in the world at a negligible marginal cost. The reduction in communications cost will help to globalize production and capital markets, increase competition and innovation, and speed up the diffusion of new technology through trade and investment. Malaysian industry and trade entities will, therefore, have to urgently build capability to contend with foreign competitors in the domestic market and enhance their export competitiveness. Malaysian businesses will need to become more receptive to know-how, increase their skills and creativity as well as identify their commercial potential.

1.06 Domestically, the contribution of TFP will have to increase at a faster rate and the efficiency of capital will need to be enhanced. This is because the contribution of labour to growth will slow down in the future and the high investment rate in the 1990s is neither sustainable nor efficient. As a long-term strategy for sustained economic growth, it is imperative that the country shifts from input-driven growth to productivity-driven growth so that the sources of economic growth are derived endogenously. Greater emphasis will be placed on building Malaysia's human capital, productivity and capacity for knowledge absorption and utilization. Productivity-driven growth based on rich knowledge content and efficiency will enable the country to achieve sustainable growth with low inflation and price stability. Furthermore, it offers unparalleled opportunity for improving the well-being of Malaysians more rapidly to achieve the goals under Vision 2020.

1.07 The Asian financial crisis in 1997-1998 has highlighted the importance of increasing resilience in an integrated global environment where the flow of capital, trade and information transcend national borders. Events in one country can have tremendous repercussions in another part of the world through complex, criss-crossing networks and lagged effects. Malaysia is exposed to these external effects because its economy is integrated with the rest of the world. While it is not possible to be completely insulated from external shocks, there is a need to strengthen Malaysia's economic, financial and social resilience so that it is able to withstand global volatility and risks without being derailed by them.

1.08 The cyclical downturn in the demand for semiconductors in the mid-1990s highlighted the risks of relying on a narrow range of products or a small group of markets. Although the electronics industry was an important factor in Malaysia's spectacular recovery from the 1997-1998 financial crisis, there is a need to identify new growth areas, while broadening and deepening existing ones, so as to widen the range of exports and strengthen the sources of domestically-generated growth as a strategy to increase economic resilience.

1.09 In building a resilient nation, the tasks of strengthening unity and nurturing a more tolerant and caring society will rank high on the national agenda. In respect of distributional objectives, while major strides were made in bringing down the incidence of poverty, the achievement in the restructuring of society was less satisfactory. The percentage of Bumiputera corporate equity ownership in 1999 declined slightly over the 1990 position, raising the issue of sustainability. Bumiputera are still under-represented in high-level occupations. Although Bumiputera businesses in both the corporate and non-corporate sectors have

grown in number, they are mainly small and proportionately fewer than non-Bumiputera businesses. Bumiputera entrepreneurs are lagging in terms of the level of technology utilization and management expertise. The challenge is to address these weaknesses in a significant way in order to make greater progress with regards to the distributional objectives.

### **III. DEVELOPMENT THRUSTS OF THE NATIONAL VISION POLICY**

1.10 The NVP will build upon the efforts initiated under the country's past development plans and strengthen the basis of transforming Malaysia into a fully developed nation as envisaged under Vision 2020. Besides having an economy that is competitive, dynamic, robust and resilient, Malaysia aims to be a united nation, with a confident society infused by strong moral and ethical values, living in a society that is democratic, liberal, tolerant and caring, equitable, as well as progressive and prosperous.

1.11 While the NVP incorporates the key strategies of the New Economic Policy (NEP), namely, eradicating poverty irrespective of race and restructuring society, and the National Development Policy (NDP), which emphasizes balanced development, it also introduces new policy thrusts. Developments in both the domestic and global fronts necessitate a change in the mindset of policy makers, implementors and all other stakeholders involved in development. It also underlines the need to learn, unlearn and relearn as well as to do things differently including using innovative means, in order to be effective and achieve the developmental goals. The public sector will be more proactive and efficient, and undertake measures that enhance the competitiveness of the private sector.

1.12 The new policy dimensions introduced in the NVP are as follows:

- ❑ developing Malaysia into a knowledge-based society;
- ❑ generating endogenously-driven growth through strengthening domestic investment and developing indigenous capability, while continuing to attract foreign direct investment (FDI) in strategic areas;
- ❑ increasing the dynamism of the agriculture, manufacturing and services sectors through greater infusion of knowledge;
- ❑ addressing pockets of poverty in remote areas and among *Orang Asli* and Bumiputera minorities in Sabah and Sarawak as well as increasing the income and quality of life of those in the lowest 30 per cent income category;

- ❑ achieving effective Bumiputera participation as well as equity ownership of at least 30 per cent by 2010;
- ❑ increasing the participation of Bumiputera in the leading sectors of the economy; and
- ❑ reorientating human resource development to support a knowledge-based society.

1.13 The policy is directed towards strengthening the nation's capacity, capability and resolve in meeting the challenges ahead. It emphasizes the need to build a resilient and competitive nation, as well as an equitable society to ensure unity and political stability. The efficiency and productivity of all economic activities will be increased to enhance Malaysia's competitiveness. In addition, economic disparity among and within ethnic groups, as well as between strata and regions will be addressed to bring about unity and stability within the Malaysian society. The private sector will spearhead economic growth, while the public sector will provide the supportive environment and ensure the achievement of the socioeconomic objectives.

1.14 The key thrusts under the NVP are as follows:

- ❑ *building a resilient nation by fostering unity, inculcating the spirit of patriotism, nurturing political maturity, cultivating a more tolerant and caring society with positive values, raising the quality of life as well as increasing economic resilience;*
- ❑ *promoting an equitable society by eradicating poverty and reducing imbalances among and within ethnic groups as well as regions;*
- ❑ *sustaining high economic growth by strengthening the sources of growth, the financial and corporate institutions as well as macroeconomic management;*
- ❑ *enhancing competitiveness to meet the challenges of globalization and liberalization;*
- ❑ *developing a knowledge-based economy as a strategic move to raise the value added of all economic sectors and optimizing the brain power of the nation;*

- ❑ *strengthening human resource development to produce competent, productive and knowledgeable workforce; and*
- ❑ *pursuing environmentally sustainable development to reinforce long-term growth.*

## **Building a Resilient Nation**

1.15 Malaysia has a good track record of weaving its ethnic and cultural diversity into a cohesive national fabric, which serves as a great source of strength, dynamism and creativity. The central task of development is to continue this mission of forging a united nation, based on fairness and prosperity, with abundant opportunities for all and removing socioeconomic differences among and within ethnic groups on the back of a strong and resilient economy.

### *Fostering Unity and Spirit of Patriotism*

1.16 National unity continues to be the goal of socioeconomic development given the multi-ethnic, multi-religious, multi-lingual and multi-cultural nature of the Malaysian nation. Although the launching of OPP3 coincides with more than four decades of experience in nation building, the duration is short when viewed in the context of the history of nations. Multi-ethnic societies are particularly fragile entities and decades of nation building efforts can be erased should narrow parochial considerations dominate or groups within the polity perceive a sense of alienation or being marginalized.

1.17 To be resilient and internationally competitive, the unity of Malaysia's diverse population is an indispensable precondition. All policies, programmes and projects will be guided by this fundamental requirement as the active and total participation of all groups and regions are essential to ensure the success of socioeconomic development and nation building efforts. Disparities and inequities among and within ethnic groups and regions will be addressed so as to preserve the unity of the Malaysian nation.

1.18 Despite the rapid pace of internationalization of values and practices in the social and cultural domain, Malaysians must preserve their national identity and heritage. Only with the preservation of this identity will the Malaysian population be in a position to cope with the rapid changes and withstand the negative fallout from globalization. The spirit of patriotism will be harnessed

to instill pride of being a Malaysian and in doing things and achieving successes as Malaysians. The commercial practices of Malaysian companies should be beyond reproach whether they operate domestically or internationally. Values that conform to the best traditions and encourage the pursuit of excellence and the highest standards of ethical propriety will be promoted.

### *Nurturing Political Maturity*

1.19 Continued social and political stability will be crucial for the realization of Malaysia's development objectives. It is important for Malaysians to practise a mature consensual, community-oriented democracy without being sidetracked into parochial interests and extremism in views, whether religious, sectarian, political or otherwise. It is through the spirit of greater tolerance and cooperation that Malaysia develops political maturity, which is fundamental for continued stability. In addition, Malaysians should possess a strong desire for the nation to prosper as well as be willing to protect the nation from any form of domestic and international threat. For the country to become a fully developed nation by 2020, all Malaysians must place the interest of the nation above narrow political objectives and strive forward together in order to bring the nation to greater heights.

### *Cultivating a Tolerant and More Caring Society*

1.20 The social institutions will be strengthened by cultivating a more caring society and culture, where individuals place the needs of the social system before themselves and where the welfare of the people revolves around strong and resilient family units. A society that is imbued with caring traits and fosters tolerance and acceptance for diverse traditions will contribute to a united and harmonious Malaysian society. Efforts will be made in moulding civic and national consciousness as well as inculcating values in line with the *Rukunegara*, the national ideology.

1.21 In building a caring society, emphasis will be placed on values such as familial values, neighbourliness, strong religious values, moral integrity, peace, love, cooperation, honesty, punctuality, hard work, discipline, honour, and consideration for others. The family unit, schools, workplace and religious and social organizations must instill and constantly reinforce values that make the individual more caring and respect the rights of his fellow citizens. A caring society has the family as its core, and must entail love for the young and

consideration of the welfare of the elderly and disabled, including through the provision of social services. There should also be greater concern and respect for the environment and public property. At the same time, the spirit of voluntarism will be nurtured. Community-based organizations will be encouraged to pursue activities that involve Malaysians of all ages and ethnic groups in activities that forge bonds transcending ethnic, religious and cultural considerations.

### *Raising Quality of Life*

1.22 The Government will ensure that all Malaysians enjoy and benefit from the opportunities available, including education, employment and access to social services. Every attempt will be undertaken to ensure better coverage and improvement of social amenities for all households. The measures include enhancing access to social and physical amenities, such as education and skills training, improved working conditions and harmonious industrial relations, as well as promoting better health and environmental quality. Malaysians will be encouraged to participate in the creative and performing arts as well as adopt a healthy lifestyle. In addition, sports will be emphasized as a means of building the discipline and character of Malaysians as well as encouraging tourism.

### *Building Economic Resilience*

1.23 Appropriate measures will continue to be introduced to develop greater economic resilience to enable the country to withstand the negative impact from external shocks. Macroeconomic stability will be enhanced by addressing all imbalances and potential areas of vulnerability. Efforts will continue to be made to strengthen Malaysia's economic fundamentals by ensuring stable prices and exchange rate, having adequate level of savings as a source of investible resources, and maintaining surpluses in the fiscal and external accounts. As macroeconomic management will become even more challenging in the borderless global economy, an early warning system to take preventive measures will be established. At the international level, Malaysia will continue to promote the establishment of a regional self-help and support mechanism for crisis prevention and ensure macroeconomic stability. Malaysia will also continue to work towards ensuring that the views of the region are heard in global discussions on the reform of the international financial architecture.

1.24 The corporate sector at large will need to strengthen itself by focusing on their core activity, taking a longer term perspective of their investments, improving efficiency and productivity as well as enhancing their administrative



and financial management capabilities. They must also aspire to achieve a higher standard of professionalism and maintain their credibility and integrity. Corporate sector restructuring efforts initiated at the end of the OPP2 period will be accelerated. Efforts will also be taken to further strengthen the financial sector through better prudential supervision and regulation, enhancing risk management and developing the domestic capital markets. In addition, information on economic and financial affairs will be improved to increase market discipline and enhance decision-making.

## **Promoting an Equitable Society**

1.25 Malaysia will continue the strategy of developing a united and equitable society, which is important for social and political stability and the achievement of national unity. In this respect, the two-pronged strategy of poverty eradication irrespective of race and the restructuring of society will continue to be implemented. This strategy will be pursued within the context of rapid growth so that no particular group or segment of society will experience any loss or feel a sense of deprivation.

### *Restructuring of Society*

1.26 During the OPP3 period, the emphasis of the distributional policy will be to achieve effective Bumiputera participation and equity ownership of at least 30 per cent by 2010. In this regard, measures will be taken to introduce new programmes, and reorientate, consolidate and streamline existing programmes as well as improve the delivery mechanism. This will include the creation and promotion of Bumiputera ventures in the manufacturing and dynamic services sectors. In the manufacturing sector, efforts will be taken to increase Bumiputera participation in electrical and electronics, pharmaceuticals, bio-technology, composite and advanced materials, chemical and petrochemical, transport equipment and food industries, while in the services sector emphasis will be given to wholesale and retail trade, tourism, air and sea transport-related services, education, health, and consultancy and professional services. The enabling environment for Bumiputera to participate effectively and meet the challenges of liberalization and globalization will also be enhanced. At the same time, efforts will be taken to promote effective Bumiputera participation in the knowledge-based economy. Other measures that will be taken to increase Bumiputera ownership include the continued implementation of the privatization programme, the review and streamlining of Bumiputera institutions and trust agencies, the effective management of unit trust schemes and the development of Malay reserve, *wakaf*, *Baitulmal*, native and customary land.

1.27 Employment restructuring will continue in all sectors and occupations to reflect the ethnic composition of the population. Steps will be taken to increase the proportion of Bumiputera in professional and managerial categories. At the same time, non-Bumiputera will be encouraged to apply for jobs in the public sector. As education and training is an important instrument for employment restructuring, the capacity of the higher education institutions will be increased to enhance the accessibility of Bumiputera students to pursue higher education, particularly in professional, management and advanced technical areas.

1.28 In building a Bumiputera Commercial and Industrial Community (BCIC), attention will be directed towards developing Bumiputera entrepreneurs who are resilient, self-reliant and world class. Past efforts in this direction generated modest results because the entrepreneurs were engaged largely in the traditional sectors. There is a need for them to venture into high value-added and high-technology activities. Existing packaged programmes to develop the BCIC will be strengthened, among others, by expanding the vendor and franchise development programmes as well as the venture capital schemes. However, agencies implementing the programmes for developing the BCIC will be required to establish an exit policy to enable entrepreneurs to move out of related programmes to make way for new entrants.

#### *Poverty Eradication and Income Distribution*

1.29 Poverty will be a less pressing issue during the OPP3 period because of the significant progress made in reducing poverty during the earlier perspective plan period. The incidence of poverty will be reduced further to 0.5 per cent by the end of 2005. Efforts will be focussed on tackling pockets of poverty in remote areas and among the *Orang Asli* and other Bumiputera minorities in Sabah and Sarawak as well as increasing the income of those in the low-income group, particularly the lowest 30 per cent. All poverty eradication programmes will be consolidated under the *Skim Pembangunan Kesejahteraan Rakyat*, which will include creating income-generating projects, providing greater access to basic amenities, and inculcating the concept of self-reliance. To reduce the income gap among households, education and training programmes will be made more accessible to those from the lower income group. The private sector and non-governmental organizations (NGOs) will support and complement these efforts.

#### *Regional Development*

1.30 The principal thrust of regional development will focus on enhancing regional balance through rapid development of the less developed states. In the

OPP3 period, efforts will be taken to diversify the economic base of the slower growing states into manufacturing and services. Emphasis will be given to encourage the development of downstream activities in the agriculture sector, especially in the handling, processing, packaging and marketing of agro-products, and the development of agro-based industries.

1.31 The growing urban population is expected to create additional demands for public services and social amenities in the urban centres. New strategies will be required to enhance the capacity and capability of local authorities to face the challenges ahead. This will include strengthening the management of local authorities and the implementation of Local Agenda 21, which was launched in 1999, in line with the Rio Declaration. This programme aims at promoting the participation of local authorities, municipalities and all stakeholders at the local community level in the planning and implementation of sustainable development projects. The Local Agenda 21 which was initially launched in four local authorities, which, initially will be extended to other local authorities by 2002. Greater community participation in promoting urban well-being will also be encouraged. The development of indicators for comparing and evaluating urban quality of life with international benchmarks is expected to improve the provision of quality services by the local authorities.

1.32 Several strategies for rural development will be adopted to reduce the urban and rural disparities. They include strengthening rural institutions, greater use of information and communications technology (ICT) in rural areas and improving the linkages between urban and rural economies. Rural communities will be regrouped into small townships to facilitate the provision of infrastructure facilities and services. Efforts will be undertaken to improve the supply of water and electricity to the remote areas through innovative ways. In addition, the development of indicators for rural quality of life will facilitate the close monitoring of the quality of life of the rural population.

## **Sustaining Economic Growth**

1.33 There is a need to achieve sustainable rapid economic growth to become a developed nation by 2020 as well as to effectively meet the distributional objectives. The manufacturing and services sectors are expected to lead economic growth by generating new areas of investment as firms expand their activities along the value chain and move up the technology ladder. The performance of the agriculture sector will be enhanced by the substantial expansion in food

production. The development of the knowledge-based economy, while spawning new activities, will also bring productivity improvements and enhance competitiveness as well as contribute towards broadening the economic base and shifting out the production possibility frontier. While FDI will continue to be encouraged in selected areas, domestic investment will become the main driver for growth in line with the shift to an endogenously-led growth strategy.

### *Strengthening Sectoral Dynamism*

1.34 The growth of the agriculture, manufacturing and services sectors will be further promoted during the OPP3 period. With regards to the agriculture sector, the focus will be on increasing food production to meet the growing domestic demand as well as for exports. For this purpose, the private sector will be encouraged to undertake medium- and large-scale commercial farming, facilitated by the establishment of permanent food production areas and agro-technology parks. The use of modern technology and farming methods will be intensified to enhance productivity and quality as well as reduce the cost of production. Market research will also be intensified in order to identify customer preferences and establish new marketing channels as well as to venture into export markets. In addition, special emphasis will be given to the restructuring of the smallholder sector particularly those engaged in uneconomic size holdings both in food as well as plantation crops with the view of increasing their income.

1.35 In the manufacturing sector, new growth areas in high technology manufacturing will be identified for further development, taking advantage of the infrastructure that has already been put in place. Product innovation and R&D will be emphasized. The cluster-based industrial development approach will also be applied to the new growth areas. The focus will be on raising value added by developing indigenous design and branding, as well as expanding into downstream activities such as marketing, distribution, packaging, product customization and delivery, and the development of other manufacturing-related activities.

1.36 In services, efforts will be intensified to develop the tourism, education, health, finance, ICT and transportation sectors to become internationally competitive and world-class. The development of the knowledge-based economy is also expected to accelerate the creation of new service industries such as in software and content development as well as enable the country to develop its strength in internet-based delivery systems, such as in commerce, banking, brokerage,

news, entertainment and courier services. The rapid development of the services sector during the OPP3 period is expected to significantly narrow the deficit in the services account of the balance of payments and further strengthen the external position of the economy.

### *Promoting Domestic Private Investment*

1.37 Domestic private investment will be promoted to unleash its growth potential so that a greater portion of wealth creation and profits will be retained in the country. While strengthening economic resilience, this will also set the stage for shifting to an endogenously-driven growth strategy by building indigenous capability to develop advanced technology as well as new products and services. To support the rapid increase in private domestic investments, the Government will provide a conducive environment in terms of the institutional and legislative framework as well as an efficient physical infrastructure. It will also ensure a stable macroeconomic environment and a more comprehensive financing infrastructure as well as provide customized incentive packages for strategic investments. The privatization programme will continue to serve as a vehicle to increase the proportion and scope of private sector participation in the economy. In addition, domestic investors will be encouraged to collaborate and forge strategic alliances with foreign partners in order to gain expertise, market access and specialized services.

1.38 To raise the level and quality of domestic investment, the private sector will be encouraged to expand into downstream and upstream activities; innovate by offering new and superior value in existing and new markets; build customer allegiance with customer-oriented production and marketing; acquire and use more technology; and develop a more creative and skilled workforce. The role of science and technology (S&T) as well as R&D will be emphasized in order to increase overall productivity and develop a strong industrial base.

### *Encouraging FDI*

1.39 Malaysia continues to be an attractive location for FDI in view of its substantial manufacturing base that is becoming increasingly sophisticated, as well as political stability, good legal framework, excellent infrastructure and telecommunications system, pro-business policies, good public administration, and a skilled and educated workforce with facility in foreign languages. The country will build on these strengths and continue to attract FDI, not only in

the manufacturing and related sectors, but also in strategic sectors such as in ICT, energy, port management and the financial sector. In addition, foreign investors will be encouraged to invest in human capital and undertake technology transfer, as well as provide expertise in management to raise national competitiveness and strengthen the country's position in the international value chain.

### *Pursuing Prudent Fiscal and Monetary Policies*

1.40 The Government will continue to pursue a prudent fiscal policy. The overall fiscal deficit will be kept at a sustainable level so that the country's external debt servicing ratio remains within a manageable level. The Government will return to the fiscal surplus policy with the recovery in private demand. Government expenditure will continue to focus on infrastructure for capacity expansion and the provision of social services. The tax system will be further strengthened to generate revenue, promote growth, savings and investment as well as achieve equity and efficiency. In addition, tax administration and compliance will be improved to expand the revenue base of the Government so as to enable it to raise the quality of social services and attract high calibre personnel into the public service.

1.41 The monetary policy will be directed towards promoting long-run growth with price and financial stability. In coping with the global environment characterized by uncertainty, monetary policy will be flexible and proactive in order to respond to new challenges effectively. The challenges will include managing the rapid movement of speculative and destabilizing short-term capital flows and adapting to the structural transformation of the economy and financial system, financial innovations and the emergence of new payment mechanisms such as e-money. Accordingly, monetary policy will be increasingly conducted through market-based instruments to enhance effectiveness. Steps will also be taken to improve the dissemination of information to the market to increase transparency in relation to the conduct of monetary policy. In addition, the development of the bond market will allow more effective open market operations and reduce reliance on the more direct instruments of monetary policy. The Government will continue to maintain an exchange rate regime that is non-distortionary and provides a stable environment for trade, investment and growth.

### *Strengthening the Banking Sector*

1.42 A strong and resilient banking sector is a prerequisite for sustainable economic growth. A three-pronged approach will be adopted, which includes

creating stronger domestic banking institutions, strengthening the supervisory framework and instilling market discipline by market players and consumers. The consolidation of domestic banking institutions into 10 banking groups raised their capital base and size to improve the ability of the financial institutions to absorb risk, achieve economies of scale, and enhance the risk management expertise of the banking system. The supervisory framework and prudential guidelines governing the banking system will be continually enhanced to promote prudence and minimize systemic risk.

1.43 To instill market discipline in the banking system, greater product and institutional transparency will be introduced, which will enable consumers to make informed decisions on banks and banking products. New modalities in bank regulation will be explored, including using a market-driven approach in allocating risks and resources. Market participants will be required to provide greater disclosure and increase transparency and discipline. In addition, the supervisory authority will be vigilant in containing excessive risk-taking activities, minimizing moral hazard and protecting consumer interests.

1.44 To chart the strategic direction of the banking sector, the Financial Sector Master Plan (FSMP) will be implemented. The FSMP proposes the necessary regulatory framework to increase the resilience, competitiveness and dynamism of the Malaysian financial system. There will be a gradual and progressive liberalization of the sector at a pace that is consistent with the institutional and regulatory framework as well as the requirements of the economy in order to create a more efficient, competitive and market-driven financial sector.

1.45 Measures to identify and remove impediments to progress will be implemented, beginning with infrastructure improvements and increasing the intensity of domestic competition, so as to allow best institutions to flourish. This will be accomplished by building the capabilities of domestic institutions and increasing the incentives for these institutions to drive performance. In addition, steps will be taken to meet the socioeconomic objectives with the least possible distortion as well as to promote a more market-driven consumer protection infrastructure.

1.46 The programme under the FSMP will be implemented in phases over the OPP3 period, subject to achieving specified milestones and safeguards. This is to allow domestic banks to grow in capacity and strengthen their infrastructure before introducing new foreign competition. In the case of the insurance sector, deregulatory measures will be initiated to build domestic capabilities and strengthen

financial resilience, corporate governance and consumer protection mechanisms. The deregulation of incumbent players will be accelerated in order to promote greater competition within the domestic market. Development of the Islamic banking and *takaful* sector will first involve the strengthening of the operational and institutional infrastructure. This will be followed by greater competition and upgrading of the infrastructure, as well as raising the performance standards through progressive liberalization.

### *Broadening and Deepening the Capital Markets*

1.47 An important lesson from the 1997-1998 financial crisis was the need to diversify risks in the economy by developing alternative sources of financing and reducing over reliance on the banking sector. Private debt securities and secondary trading in the Government securities market will be further improved to complement the stock market. An active private debt securities market will be able to accommodate large and more complex funding arrangements to allow companies to obtain long-term fixed rate of financing at a lower cost than bank credit. In addition, the venture capital industry will be further developed to provide equity capital to knowledge-based start-ups with high risks but yield good returns.

1.48 In terms of the stock market, efforts will be taken to improve the dissemination of corporate information and educate investors, particularly the retail players, so that investment decisions are made based on fundamentals. The players in the capital market will also need to understand fully the risks involved and adopt effective risk management systems to deal with new risks that may arise. Capital market activities will be supported by strong and internationally competitive intermediaries and institutions. To address these areas and chart the strategic directions for the capital market development over the longer term, the Capital Market Master Plan (CMP) will be introduced.

1.49 Under the CMP, Malaysia is envisaged to establish a world-class capital market that is internationally competitive in all core areas to support the country's capital and investment needs, as well as to be a highly efficient conduit for the mobilization and allocation of funds. This effort is supported by a strong and facilitative regulatory framework that enables the capital market to perform its functions effectively and provides a high degree of confidence to its users. To develop internationally competitive market institutions, a single Malaysian exchange and a single Malaysian clearing house will be established. The funding instruments and markets will be broadened and deepened through the development and enhancement of alternative capital raising avenues such as the corporate bond



market and venture capital. The stockbroking industry will be consolidated and a new category of intermediaries known as universal brokers will be created to develop a more competitive market for integrated financial services and prepare the industry for liberalization. Malaysia will be developed as an international Islamic capital market centre as part of the effort to build upon the country's competitive advantage.

1.50 The investment management industry will be further deregulated to increase its effectiveness. The pension funds will be reviewed to allow for the development of a higher number of industry players with greater access to funds available for management. To promote a more conducive environment for investors, the framework for corporate governance will be strengthened and shareholder value recognition will be enhanced. A full market-based regulatory framework across all capital market segments will be adopted to ensure that market processes and disciplines complement the broad regulatory objectives as well as facilitate greater competition and innovation in the market place.

### *Strengthening Corporate Governance*

1.51 Measures introduced by the Government to reduce corporate abuses and stock market volatility as well as to strengthen the position of minority shareholders were aimed at improving transparency and overall corporate governance. In recognition of the need to further enhance the standards of corporate governance, the Malaysian Code on Corporate Governance was adopted to bring about stronger, more responsible, transparent and accountable management in line with international best practices. The Code contains recommendations on the principles and best practices for good governance; strengthening the overall regulatory framework for listed companies; training and education of corporate participants in Malaysia to prepare them for the implementation of the recommendations as well as measures to protect minority shareholders. During the OPP3 period, the Government will create greater awareness of the Code and encourage the private sector to conform to this. With the adoption of the Code, the corporate sector will move towards greater self-regulation, and this will be supported by improvements in the legal and regulatory environment to promote the culture of corporate excellence.

### **Meeting Global Competition**

1.52 Competition at the global and regional levels is expected to intensify following implementation of the World Trade Organization (WTO) and the

ASEAN Free Trade Area (AFTA) commitments as well as the intensification of bilateral initiatives. Rapid advancements in ICT will intensify competition. Malaysia will continue to participate actively in these multilateral arrangements and fulfill its commitments for market openings. While it will continue to support the process of liberalization, it will be committed to do so at a pace that it is comfortable with and consistent with the institutional capacity of the country and its development objectives, so that the process is mutually beneficial. In this regard, Malaysia will participate in consensus-building initiatives with like-minded countries to be able to negotiate effectively.

1.53 Domestic industries will need to enhance their productivity, efficiency and innovative capability to meet global competition. Policies relating to trade, industry and technology will be streamlined so that domestic industries and enterprises can respond more effectively by producing goods and services that can successfully compete in the local and overseas markets. FDI will be leveraged upon to improve efficiency, enhance competitiveness and gain access to international markets. To monitor and provide direction for increasing Malaysia's competitiveness, a National Council on Competitiveness will be established.

#### *Increasing Productivity*

1.54 Productivity improvement is central to Malaysia's economic growth and competitiveness. To raise productivity, greater efforts will be made to upgrade skills, adopt better management and organizational techniques, upgrade R&D and S&T as well as produce high quality and customized goods. The private sector will also be encouraged to seek internationally recognized quality standards including the accreditation by the International Standards Organization and other bodies. The knowledge content of products, services and internal processes must be substantially enhanced and accompanied by strong work culture and positive attitudes. The culture of excellence and the quest for continuous improvements will be promoted and targeted at individuals as well as business entities. Wage increases will have to be supported by improvements in productivity and work performance so that Malaysians can enjoy a higher standard of living without inflation. Initiatives will also be taken to reduce the cost of doing business so as to enhance competitiveness and productivity. The Government will continually assess and review the various cost components, including taxes, utility rates and fuel, transportation and labour costs to ensure that Malaysia remains cost-competitive.

### *Strengthening S&T and R&D*

1.55 To maintain the competitiveness of Malaysian industries and to benefit from the knowledge-based economy, it is crucial to strengthen the environment for innovation and knowledge. The Government will re-examine existing innovation systems to be in line with future requirements. Attention will be given to improving creativity and innovativeness of the education and training delivery system, enhancing S&T and R&D, and ensuring the availability of financing facilities. The Government will promote a culture of innovation as well as networking and clustering among stakeholders to enhance technology infusion. Efforts will be made to increase collaboration between public sector research institutions and the private sector for effective development, dissemination and commercialization of R&D.

1.56 In order to encourage S&T and R&D activities, the Government will provide the appropriate environment and active support to nurture and accelerate the growth of patents, trademarks and copyrights. Appropriate regulation will also be introduced to protect intellectual property rights in the context of the rapid development in computer-mediated networks and global information infrastructure which will enable the downloading of copyright materials.

### *Developing Entrepreneurial and Technopreneurial Capacity*

1.57 As a traditional trading nation, Malaysians have been endowed with entrepreneurial skills. These skills, however, are inadequate to meet the requirements of an economy in an environment of increasing globalization and rapidly changing technology. Malaysian enterprises will face increasing competition from entrants in the domestic market as well as in the international market. To succeed, Malaysian businesses and corporations will need to be quick to access know-how as well as be able to identify the commercial potential of the opportunities that arise and take calculated risk. Entrepreneurs must be prepared to use the latest knowledge and technologies, operate and manage businesses in different cultural milieus, have superior negotiation skills and be able to forge strategic alliances. They will need to marshal their knowledge, skills and creativity to improve their products and services and raise their productivity. In this connection, the Government will support private sector initiatives to strengthen entrepreneurial capacity as well as encourage the growth of technopreneurs. In addition, the ongoing efforts to develop Bumiputera entrepreneurs will focus on enhancing resilience and self-reliance so that they can compete in the domestic and international markets.

### *Developing World-Class Companies*

1.58 Malaysian firms should think global and look beyond the domestic market. During the OPP3 period, the focus will be on developing world-class Malaysian companies that can act as role models for other Malaysian companies to pursue excellence. These companies should benchmark against world-class standards, adopt international best practices and promote a culture of excellence and productivity within their organizations. The competitiveness of firms depends on their ability to seek opportunities and source for inputs, components and services at the most competitive costs. Domestic businesses will be encouraged to establish symbiotic relationships with foreign partners to gain market access, technologies and know-how as well as other inputs including packaging and brand identification to enable Malaysian goods to compete in global markets.

### *Developing Local SMEs*

1.59 Small- and medium-scale enterprises (SMEs) serve as a strong foundation to anchor the nation's industrial sector and provide the necessary base upon which future industries can be developed. In the development of industrial clusters as envisaged under the Second Industrial Master Plan (IMP2), SMEs will evolve as key suppliers and service providers to leading industries. For SMEs aspiring to go into the global market or become suppliers to multinational companies, they must be committed to meet the highest standards of performance on a sustainable basis and move their manufacturing processes to a higher level through continuous R&D and skills and technology upgrading. To stimulate the growth of SMEs, the investment threshold under the Industrial Coordination Act (ICA) will be reviewed.

1.60 SMEs will be encouraged to quickly integrate into IT-based manufacturing, focusing on all key segments of the manufacturing value chain, from designing to marketing. They must adopt the best manufacturing practices that are universally recognized and accepted, so that they can excel in their core strengths and be able to integrate with cross-border collaborations that characterize the international production network. In that integration process, Malaysian SMEs will be encouraged to work towards establishing and strengthening their own niches in the market and emerge as market leaders in their own right.

### *Establishing a World-Class Public Sector*

1.61 A world-class public sector is important to support rapid economic growth and ensure improvements in the standard of living and quality of life. It is, therefore, necessary to take steps to attract and retain personnel of high calibre so that public administration, public services, economic management as well as the protection of national interest at international fora can be conducted at the highest level of proficiency. There will be selective recruitment of personnel including those with specialized skills, experience and outstanding track record. The capability of existing workers will be upgraded to raise the quality of public service to be world-class. A competency-based human resource management approach will be adopted.

1.62 The programme to reform the public sector will be further strengthened during the OPP3 period. It will be aimed at inculcating a culture of excellence in the public sector, based on the core values of quality, productivity, innovation, integrity, discipline, accountability and professionalism. Efforts will be made to continuously increase productivity, improve the delivery system and discard procedures and regulations that become inappropriate. Emphasis will be given to strengthening the monitoring mechanism as well as the capacity to ensure that projects are implemented according to schedule and meet their intended objectives. Efforts will also be taken to improve the administration of the regulatory and approving bodies at the Federal, state and local levels so as to facilitate private sector growth and wealth creation, protect public interests, and improve the well-being of Malaysians. The role of the public sector as a regulator to safeguard public interest will also be strengthened in the context of further privatization during the Plan period.

1.63 Principal strategies to advance administrative reforms in the Malaysian public service include providing more customer-oriented services, improving system and work procedures, upgrading the use of ICT, strengthening public-private sector cooperation, improving organizational structures and human resource development, enhancing accountability and discipline and inculcating values of excellence. The public sector administrative reform agenda will continue to incorporate a wide range of best practices that have been applied and tested worldwide. The various initiatives under the quality movement as well as the e-government project will ensure that the public service keeps abreast with service-oriented developments internationally and incorporates the best management practices.

## **Developing a Knowledge-based Economy**

1.64 The knowledge-based economy is where the acquisition, utilization and dissemination of knowledge provide the basis for growth. The development of a knowledge-based economy involves enhancing the value-added of all productive activities through knowledge utilization, in addition to creating new knowledge-intensive industries. It will strengthen Malaysia's competitiveness and open up new opportunities for the country. Among the opportunities are increased global trade and investment, better access to technology, the possibility for leapfrogging to catch up with developed countries, the availability of a platform to build strategic alliances with key players in selected industries as well as expanding existing and generating new areas of investment. The increased use of knowledge, coupled with a better skilled workforce will also contribute towards improving productivity levels and shifting the production possibility frontier outwards.

1.65 The developments in and utilization of ICT and e-commerce will facilitate the establishment of an efficient and up-to-date information system to support trade and investment. This will allow Malaysians to seek new markets and trading partners for their exports, source the most competitively-priced inputs, and set up their enterprises abroad to enhance competitiveness. The knowledge-based economy will generate new activities for investment within existing and new industries as a result of the introduction of high-technology and knowledge-intensive production processes.

1.66 To develop a knowledge-based economy, a master plan to facilitate the process will be introduced. Among the critical areas that will be addressed are human resources, S&T and R&D, infostructure and financing. In addition, efforts will be taken to change the mindset of all segments of society, particularly the corporate sector to be more receptive to the adoption of ICT in business transactions and in-house operations. The culture of acquiring knowledge on a continuous basis will be promoted to develop a learning society. While efforts are taken to build a knowledge-based economy, parallel measures will be introduced to ensure that this development does not lead to a knowledge divide, particularly between the rural and urban communities and different income groups.

1.67 The knowledge-based economy will require the public and private sectors and the NGOs to work in a close collaborative partnership. The platform for such collaboration already exists under the Malaysia Incorporated mechanism, with the Malaysian Business Council at the apex. The public sector will assume a supportive role by providing a conducive environment as well as acting as a

catalyst for the private sector to spearhead the development of the knowledge-based economy. The protection of the intellectual property rights as well as privacy and security will be strengthened to encourage innovation and improve information flow. The Government, private sector and NGOs will collaborate to narrow the digital divide between the rural and urban areas as well as different income groups so that those who are less privileged have equitable access to the new opportunities generated by the knowledge-based economy.

## **Strengthening Human Resource Development**

1.68 Malaysia's capability and capacity in acquiring and utilizing new knowledge and technologies will be determined by the quality of its human resource. A competent, disciplined and highly skilled labour force with strong ethical and moral values and commitment to excellence must be developed. To face the challenges of globalization, Malaysians will have to be equipped with a strong base in education and training and possess a range of generic skills, including communication and linguistic abilities. Efforts will be made to increase accessibility to education and training and reduce the performance gap between urban and rural schools. More schools with better teaching and learning facilities as well as hostels will be built in rural and remote areas to provide a more conducive environment for students. Besides maintaining a high level of competency in *Bahasa Malaysia* among students, the level of proficiency in English as well as other foreign languages will be raised.

1.69 To meet the requirements of the knowledge-based economy, there will have to be a paradigm shift in the policies and strategies of human resource development. The education and training system will be reoriented to be more effective in imparting skills as well as focus on areas required by the economy. The Government will give priority to improving facilities and infrastructure and intensifying the use of ICT in all schools and institutions. Greater emphasis will also be given to raising the standard of the teaching and learning of mathematics, science and foreign languages.

1.70 Private sector participation will be further encouraged to complement public sector efforts in the area of tertiary education to provide greater number of places to meet the increasing demand from qualified students as well as to meet the human resource requirements particularly in the area of S&T. The Government will, however, ensure that these institutions provide quality education at reasonable rates.

1.71 Malaysia will also be developed into a regional centre of educational excellence. The capacity of public tertiary institutions will be increased and they will concentrate on programmes in new technologies and disciplines. While the private institutions will be encouraged to develop niche areas to attract foreign students, the public universities will develop centres of excellence and act as the springboard for innovation and development of indigenous technology. Universities will be encouraged to collaborate with industry in order to undertake research with commercial potential. To ensure that all tertiary institutions have international standing, a rating system based on norms comparable to reputable universities will be developed to rank these institutions.

1.72 Lifelong learning will be introduced to continuously upgrade the quality of the workforce which must keep pace with changing technology so that structural unemployment is minimized. Distance education and virtual learning will be developed as an important element in continuing education in the workplace. In this regard, the private sector will be encouraged to provide enterprise-based training, distance learning programmes and web-based learning, especially in technical areas.

1.73 The Government will also promote the development of the creative and performing arts and nurture talents in these areas. This is in line with efforts to preserve and promote the rich Malaysian cultural heritage as well as cultivate a society that is appreciative of the arts. The development of the arts will not only provide the avenue for talented individuals to excel in their fields but also contribute to the vibrancy of the Malaysian lifestyle. Outstanding Malaysian artists and performers will also be given the opportunity to fully develop their talents and achieve international recognition.

### *Developing a Generation of Resilient Youths*

1.74 To meet the challenges arising from rapid economic development and globalization, and contribute effectively to nation building, youths will need to be equipped with appropriate skills and knowledge as well as the right values. Their access to education and training will be improved with particular emphasis on achieving a high level of literacy in information technology (IT) so that they can participate in the opportunities that are generated in the process of development. Efforts will be taken to enhance the entrepreneurial and management skills of youths to instil interest in business at an early stage and increase the number of youths involved in commerce and industry. Emphasis will also be given to nurturing a generation of young and dynamic leaders who are able to mobilize youths to contribute positively to the nation.



1.75 Youths will be properly guided to develop the right values and attitudes. They will be taught to respect their parents, elders, teachers, the institutions and laws of the country. While striving for self-improvement, they must be imbued with the spirit of volunteerism and the eagerness to contribute to society and the nation. Their level of civic-consciousness must also be raised. The pursuit of knowledge and the quest for excellence will need to be nurtured as core values. Youths should also be instilled with strong moral and ethical values and abstain from activities that work against their personal well-being and the welfare of the nation. Efforts will be intensified to ensure that they do not involve in vices such as drug abuse, gambling, gangsterism and other criminal activities.

1.76 In addition, youths should participate more actively in sports as well as excel to achieve international standards, bringing glory to the nation. Basically, these core values will hold youths in good stead to withstand negative influences and exercise good judgement in the choice of lifestyle and social practices. Towards this end, the family and community as well as the NGOs and youth organizations will need to play a more active role to complement the efforts of the Government.

### *Enhancing the Role of Women in Development*

1.77 A resilient and competitive economy cannot be created unless the full potential of all its members is utilized. Towards this end, opportunities in employment, business and social activities will be made available without gender bias. Greater access to training and retraining will promote employment opportunities and greater occupational mobility. Information pertaining to the labour market and opportunities for advancement in education and business will be made more accessible through the use of ICT. At the same time, the participation of women, particularly those with family commitments, will be enhanced by more extensive use of flexible working hours, the provision of crèches at workplaces as well as enabling them to work from home.

1.78 Entrepreneurship among women will be promoted actively by providing greater access to information on starting businesses. Banks and financial institutions will be encouraged to provide credit to assist women who want to venture into business. This will be complemented by efforts to develop women entrepreneurs through the provision of assistance to develop home-based business. The relevant Government organizations at the Federal, state and local levels as well as women organizations will organize courses to promote entrepreneurship among women.

All forms of gender-based discrimination and bias that inhibit the fullest contribution of women will be identified and progressively eased out either by legislation or education.

## **Pursuing Environmentally Sustainable Development**

1.79 During the OPP3 period, the Government will strive to ensure that the environment is clean, healthy and productive as well as capable of sustaining the nation's needs and aspirations. The Government will explore opportunities for multiple benefits, identify and implement measures that are prudent and cost-effective, in order to move Malaysia towards a more sustainable and resilient future. Socially and environmentally sustainable economic development will be realized by adopting an appropriate mix of policies, practices and technologies that will build upon the synergies between the environmental and economic systems. In addition, the Government will continue to closely monitor developments taking place on global environmental issues as they may have a bearing on Malaysia, including imposing restrictions on our development and trade policies. Domestically, Malaysia will take steps to fulfil its Conventions, Protocols and other international environmental obligations and to ensure that its programmes and projects are in line with its commitments.

### *Integrated Approach and Strategies*

1.80 During the OPP3 period, emphasis will be placed on addressing environmental and resource issues in an integrated and holistic manner. The challenge will be to identify prudent, cost-effective, and adaptive management approaches that yield multiple benefits for a more sustainable future. These approaches will, among others, be geared towards addressing the challenges of providing access to clean water, providing adequate food without excessive use of chemicals, using more organic fertilizers, providing energy services without environmental degradation, developing healthy urban environments, and conserving critical natural habitats and resources.

1.81 The management of land resources will be further improved through more integrative land-use planning. The National Biodiversity Policy will form the basis for integrating and consolidating biodiversity programmes and projects in the country. Efforts to manage forests sustainably will be intensified and multiple-use forestry expanded. Steps will be taken to formulate integrated river basin

management plans to improve water quality and supply as well as manage water resources. To ensure sustainability of coastal resources, integrated coastal management plans will be introduced in all states.

### *Reducing Pollution Intensity*

1.82 A critical challenge will be to reduce energy, materials, pollution and waste intensity of urban-industrial activity. Measures to influence the choice in technology and management of new urban and industrial investments will be put in place, including steps to promote the reduction, re-use and recycling of materials. The Government will go beyond controlling pollution at source and adopt preventive measures that include the policies that drive down energy, materials, pollution and waste intensity of urban-industrial activity in a process of continuous improvement. This will require moving from the current pollution abatement and clean-up paradigm and technology-retrofit approach to one where technology itself is the source to prevent pollution and cut resource intensity. Efforts will also be taken to encourage the recycling of materials.

### *Increased Use of Economic Instruments*

1.83 The Government will continue to implement the Polluters Pay Principle, and intensify enforcement efforts to ensure that environmental laws and regulations are complied with. However, these measures will be complemented by the use of innovative economic and tax instruments, including the removal of distortions and barriers that impede efforts in improving environment quality and optimal natural resource use.

### *Environmental Performance Standards*

1.84 Efforts will also be channelled at promoting environmental performance measurement as a basis for harnessing market forces and community engagement in addressing environmental issues. Once environmental and resource issues are identified, measured and tracked, including through the use of sustainable development indicators and various environmental standards such as ISO 14000 and other standards, then the environmental intensity of economic activity becomes more susceptible to the force of the market and society at large, through consumer demand, community pressure or supply-chain management.

#### **IV. CONCLUSION**

1.85 For the success of the OPP3, there should be total commitment of all Malaysians, a change in the mindset and a sense of urgency in the face of increasing competition in the years ahead. To build a resilient and competitive economy, the Government will continue to be responsive and business-friendly and adopt appropriate market-oriented policies and incentives. The business community should be willing to take risk, invest in R&D, be able to adapt quickly to changes and adopt new technology, particularly in the context of the knowledge-based economy. The workforce should be disciplined, productive, committed and willing to learn and improve continuously. The Government, complemented by the private sector, will continue to ensure a united and equitable society through its poverty eradication and distributional policies. Above all, the society should stand united and remain resilient in facing the challenges of the decade.

## **CHAPTER 2 - REVIEW OF THE SECOND OUTLINE PERSPECTIVE PLAN, 1991-2000**

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- II. THRUSTS OF THE NATIONAL DEVELOPMENT POLICY**
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## **Chapter 2**

# **Review of the Second Outline Perspective Plan, 1991-2000**

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## **CHAPTER 2**

# **Review of the Second Outline Perspective Plan, 1991-2000**

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### **I. INTRODUCTION**

2.01 The Second Outline Perspective Plan (OPP2), 1991-2000 provided the platform for the implementation of the National Development Policy (NDP), which was aimed at achieving balanced development. The broad economic development framework set forth in the NDP strengthened Malaysia's position as a modern industrial-based economy and as a result brought significant economic and social progress. In 1998, the economy suffered the worst-ever recession due to the Asian financial crisis. The Government then introduced measures, which succeeded in turning around the economy and setting it on a stronger footing to face future challenges.

### **II. THRUSTS OF THE NATIONAL DEVELOPMENT POLICY**

2.02 The primary thrusts of the NDP entailed striking an optimum balance between the goals of economic growth and equity; ensuring balanced development of the major sectors of the economy; reducing and ultimately eliminating the social, economic and regional inequalities and imbalances; and ensuring material welfare while instilling positive social and spiritual values. The NDP also gave priority to human resource development; making science and technology an integral component of development planning; and ensuring the protection of the environment to maintain the long-term sustainability of the country's development.

2.03 While the NDP maintained the basic strategies of the New Economic Policy, it also introduced several new dimensions. The dimensions included



shifting the focus of the anti-poverty strategy to address hardcore poverty; emphasizing on employment and the rapid development of an active Bumiputera Commercial and Industrial Community (BCIC) as a more effective strategy to increase the meaningful participation of Bumiputera in the modern economic sectors; relying more on the private sector to achieve the restructuring objective; and strengthening human resource development.

### **III. PROGRESS AND ACHIEVEMENTS, 1991-2000**

2.04 During the OPP2 period, the Malaysian economy continued to undergo structural transformation. The country witnessed the strengthening of its manufacturing base both in terms of its contribution to growth as well as composition of industries. The services sector expanded in size and improved in qualitative terms. The change in the structure of production was also reflected in the employment pattern and export composition of the economy.

#### **Macroeconomic Performance**

2.05 Overall, the economy grew at an average rate of 7.0 per cent per annum and achieved the target for the OPP2 period, despite the economy experiencing the financial crisis in 1997-1998, as discussed in *Box 2-1*. The high growth rate was attained in an environment of low inflation and unemployment. The per capita income increased at an average rate of 7.8 per cent per annum and doubled from RM6,298 to RM13,359 at the end of the OPP2 period. The purchasing power parity (PPP) per capita grew by 5.3 per cent per annum to reach USD8,852 or 2.5 times higher than the per capita income of USD3,516.

2.06 During the OPP2 period, *total factor productivity* (TFP) contributed 25.5 per cent to total growth, while the major sources of growth were labour and capital, as shown in *Table 2-1*. The high contribution of capital was attributed to the rapid growth of investment during the first seven years of the Plan period, which led to an expansion of installed capacity that was not fully translated into output. Some investments had a long gestation period, particularly infrastructure projects, which were built to meet future demand. In the second half of the OPP2 period, the sharp fall in domestic demand following the financial crisis gave rise to excess capacity, resulting in a decline in TFP.

## BOX 2-1

### FINANCIAL CRISIS AND RESPONSE

In 1997-1998 the Malaysian economy was affected by the contagion effect of the East Asian financial crisis. The full impact was felt in 1998, causing the economy to undergo a severe contraction, due to the significant decline in aggregate demand.

#### Managing The Crisis

The National Economic Action Council (NEAC) was established on 7 January 1998 as a consultative body to deal with the economic crisis. Under the NEAC, the National Economic Recovery Plan (NERP) was prepared as the blueprint for economic recovery. The Recovery Plan contained over 580 recommendations to stabilize the currency, restore market confidence, maintain financial market stability, as well as address medium-term issues such as improving economic fundamentals and addressing the equity and socio economic agenda. The four components that were central in the recovery measures were:

- ❑ fiscal stimulus package directed towards priority sectors to prevent further contraction and jumpstart the economy;
- ❑ easing monetary policy to lower interest rates;
- ❑ establishing Danaharta to address the rising non-performing loans in the portfolios of the banking sector, Danamodal to recapitalize and consolidate the banking sector, and the Corporate Debt Restructuring Committee to facilitate voluntary debt restructuring of viable companies; and
- ❑ introduction of the selective capital control measures as a pre-emptive step on 1 September 1998, which included making the Ringgit non-tradable outside the country and pegging the Ringgit at RM3.80 to USD1.00.

The stability accorded by the pegged Ringgit facilitated business decision-making process and enabled Malaysia to capitalize on the recovery in external demand. This resulted in unprecedented levels of current account surpluses of 13.9 per cent of GNP for 1998 and 17.1 per cent of GNP for 1999. The surpluses contributed to the sharp rise in international reserves, increased the monetary base and provided the liquidity to support economic growth. The collateral values of loans were strengthened with the improving stock market prices, thereby facilitating the resolution of NPLs of the banking system.

#### Lessons Learnt

The experience gained from the crisis was useful in providing the direction and thrust for the country's future development. Some of the lessons learnt were:

- ❑ efforts to strengthen economic fundamentals must be continuous. Malaysia needs to further intensify the resilience of domestic economy and enhance its competitiveness, not only to mitigate adverse external economic development but also to reap the opportunities available;
- ❑ monetary and fiscal policies must be directed towards promoting sustainable growth, while keeping inflation at a low level;
- ❑ strong economic fundamentals must be supported by sound financial and corporate sectors;
- ❑ develop the capital market to diversify risks and lessen the reliance on bank financing; and
- ❑ strong corporate governance to increase resilience and sustain investor confidence in the event of a crisis.

| TABLE 2-1                                    |                     |                   |                     |                   |
|--|---------------------|-------------------|---------------------|-------------------|
| CONTRIBUTION OF FACTORS OF PRODUCTION<br>(%) |                     |                   |                     |                   |
| <i>Factor</i>                                | <i>1971-1990</i>    |                   | <i>1991-2000</i>    |                   |
|  | <i>Contribution</i> | <i>% of Total</i> | <i>Contribution</i> | <i>% of Total</i> |
| <b>GDP</b>                                   | <b>6.7</b>          | <b>100.0</b>      | <b>7.0</b>          | <b>100.0</b>      |
| Labour                                       | 2.4                 | 36.1              | 1.7                 | 24.3              |
| Capital                                      | 3.4                 | 50.9              | 3.5                 | 50.2              |
| TFP  | 0.9                 | 13.0              | 1.8                 | 25.5              |

2.07 The growth of TFP in the manufacturing sector for the period 1990-1999 was estimated to be 5.1 per cent, as shown in *Table 2-2*. The food and beverages, furniture, glass and clay products, general machinery, electrical machinery and other manufacturing industries recorded higher TFP growth during the first half of the OPP2 period, while the general machinery industry as well as resource-based industries such as textile and apparel, wood products and furniture, experienced higher increases in TFP growth during the second half of the OPP2 period.

| TABLE 2-2   |                  |                  |                              |                              |
|---|------------------|------------------|------------------------------|------------------------------|
| TFP GROWTH RATES BY MANUFACTURING INDUSTRY, 1985-1999<br>(%)  |                  |                  |                              |                              |
| <i>Industry</i>   | <i>1985-1990</i> | <i>1990-1995</i> | <i>1995-1999<sup>1</sup></i> | <i>1990-1999<sup>1</sup></i> |
| Food & Beverages  | 5.6              | 9.7              | 2.5                          | 6.5                          |
| Textile & Apparel   | 10.1             | 2.2              | 8.7                          | 5.1                          |
| Wood Products   | 8.3              | -1.5             | 6.3                          | 2.0                          |
| Furniture   | -2.6             | 7.3              | 9.8                          | 8.4                          |
| Paper & Printing  | 2.5              | 2.6              | 1.2                          | 2.0                          |
| Chemicals   | -4.1             | -7.8             | -4.5                         | -6.3                         |
| Rubber & Plastic Products                                     | 0.3              | 3.7              | -6.3                         | -0.7                         |
| Glass & Clay Products   | 4.4              | 11.1             | 0.4                          | 6.3                          |
| Basic Metals  | 4.3              | 3.3              | 0.9                          | 2.3                          |
| Fabricated Metals   | 6.1              | 6.1              | 2.4                          | 4.5                          |
| General Machinery   | 7.6              | 11.0             | 13.3                         | 12.0                         |
| Electrical Machinery  | 7.7              | 8.6              | 3.6                          | 6.4                          |
| Transport Equipment   | 22.3             | 0.7              | -10.1                        | -4.1                         |
| Other n.e.c. <sup>2</sup>                                     | 12.9             | -19.2            | -9.1                         | 6.6                          |
| <b>Total Manufacturing</b>                                    | <b>2.6</b>       | <b>6.6</b>       | <b>3.2</b>                   | <b>5.1</b>                   |
| Notes:  |                  |                  |                              |                              |
| <sup>1</sup> Estimates for 1999 are based on preliminary data |                  |                  |                              |                              |
| <sup>2</sup> n.e.c. Not elsewhere classified                  |                  |                  |                              |                              |

During the 1990-1999 period, the food and beverages, furniture, glass and clay products, general machinery, electrical machinery and other manufacturing industries recorded faster TFP growth rates compared with the overall TFP growth of the manufacturing sector. The performance of TFP at the firm level is discussed in *Box 2-2*.

## BOX 2-2

### TOTAL FACTOR PRODUCTIVITY

Total factor productivity (TFP) refers to the additional output that would result from improvements in the methods of production, with the inputs of labour and capital unchanged. They include the improvement of technology and know-how, innovation, superior management techniques, gains from specialization, increased efficiency as well as workers education, skills and experience. The Corporate Sector Survey, which was conducted in 1998/99 to provide the micro perspective on the impact of the financial crisis at the firm level, also shed some light on firm-level TFP. The survey covered six major subsectors within the manufacturing sector, namely, electrical and electronics; textiles, garments and footwear; food and beverages; chemicals, rubber and plastic products; construction-related manufacturing; and auto-parts. The following results were obtained:

#### *Firms that reported a higher TFP*

- ☐ Export-oriented with FDI and higher capital intensity;
- ☐ Little or no foreign control (less than 10 per cent foreign-owned) but with a large share of their output exported (more than 50 per cent);
- ☐ Lower inventory in proportion to their sales;
- ☐ Utilized new machinery (i.e. less than six years old);
- ☐ Predominantly semi-automated;
- ☐ More than 30 per cent of its workers had higher education (diploma/degree); and
- ☐ Conducted training and R&D.

#### *Firms that reported a lower TFP*

- ☐ Those that faced a lack of quality local suppliers, shortage of skilled labour, constraint on the availability of credit and had poorer corporate governance; and
- ☐ Those with heavy debt burden.

#### **Lessons Learnt**

The lessons learnt from the 1997-1998 financial crisis at firm level

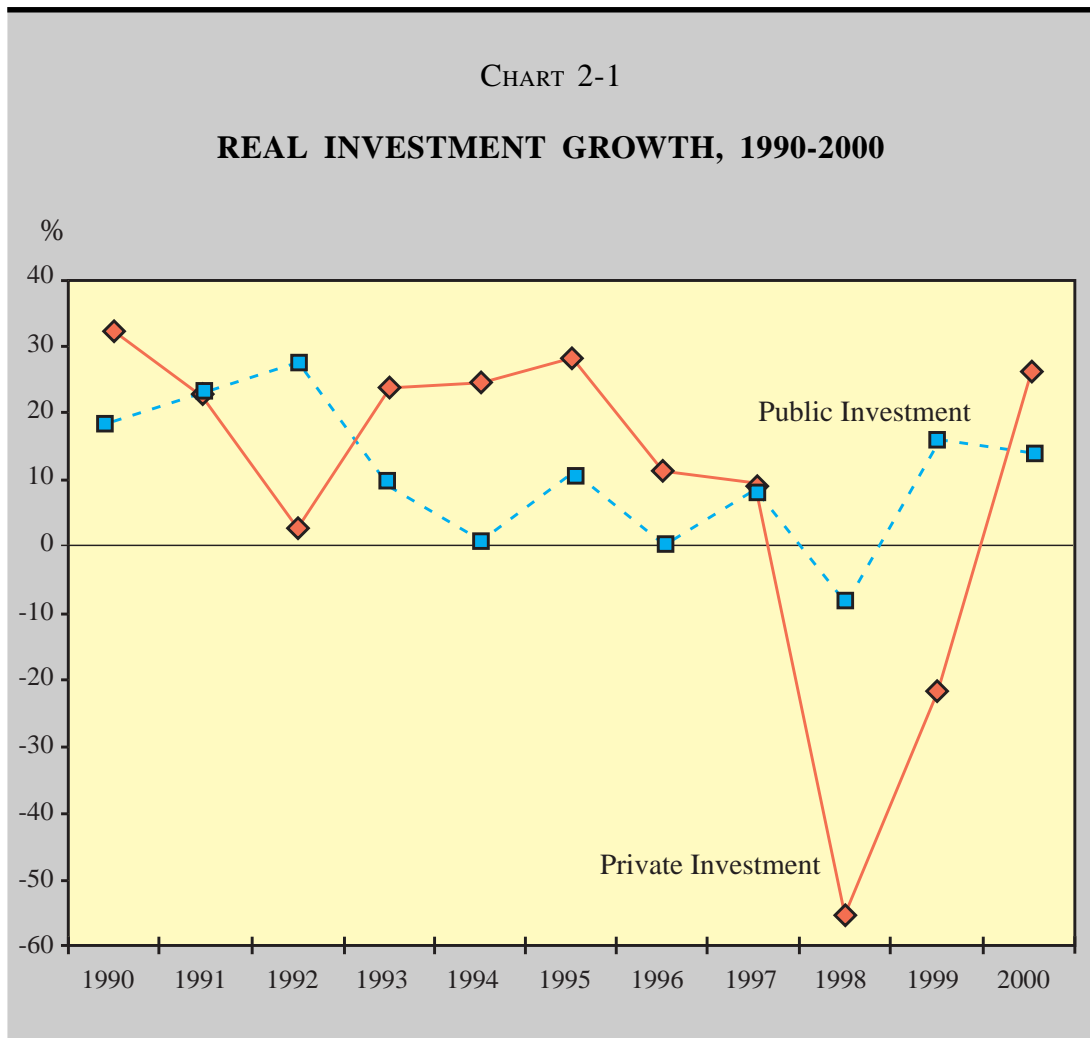
- ☐ Firms should gear-up their competitiveness to face increasing competition from low cost countries;
- ☐ Firms with higher TFP were in a better position to withstand a crisis; and
- ☐ Firms must spend more on training and R&D.

2.08 The *incremental capital output ratio* (ICOR) rose from an average of 3.3 in 1990 to 3.5 in 2000 and averaged 6.1 for the whole OPP2 period. The high ICOR indicated a sharp decline in capital efficiency due to low capacity utilization during the economic downturn. Large investments in infrastructure projects and heavy industries with long gestation periods also contributed to high ICOR.

2.09 On the demand side, the major contributors to economic growth were private expenditure and exports of goods and non-factor services, as shown in *Table 2-3*. *Private investment* grew at an average rate of 2.9 per cent per annum, well below the target of 8.0 per cent per annum, on account of the severe economic contraction in 1998, as shown in *Chart 2-1*. During the first seven years of the OPP2 period, private investment was the main catalyst for growth,

| TABLE 2-3  |                        |                          |
|--|------------------------|--------------------------|
| OPP2 MACROECONOMIC TARGETS AND ACHIEVEMENTS<br>(%) |                        |                          |
|  | <i>Target<br/>OPP2</i> | <i>Achieved<br/>OPP2</i> |
| <i>Average Annual Growth Rate</i>                  |                        |                          |
| GDP  | 7.0                    | 7.0                      |
| Private Consumption                                | 7.2                    | 5.5                      |
| Public Consumption                                 | 5.8                    | 5.5                      |
| Private Investment                                 | 8.0                    | 2.9                      |
| Public Investment                                  | -0.4                   | 10.5                     |
| Export of Goods & Non-factor Services              | 6.3                    | 12.4                     |
| Import of Goods & Non-factor Services              | 5.7                    | 11.4                     |
| Employment   | 3.1                    | 3.3                      |
| Labour Force                                       | 2.9                    | 3.1                      |
|  | <i>Target<br/>2000</i> | <i>Achieved<br/>2000</i> |
| <i>Share to GNP</i>                                |                        |                          |
| Savings  | 36.2                   | 39.0                     |
| Investment   | 34.5                   | 29.0                     |
| <i>Unemployment Rate</i>                           | 4.0                    | 3.1                      |

expanding rapidly at 17.0 per cent per annum, attributed largely to better economic conditions, lower corporate tax rate and the increase in reinvestment allowance. The accelerated privatization programme generated domestic investment, particularly in the utilities, transportation and social services sectors. In addition, the large inflow of foreign direct investments (FDIs) into the manufacturing sector for building capacity in the export-oriented industries, including the oil and gas sector and investments in capital-intensive and high-technology areas, contributed to the high rate of private investment. The promotion of FDI was reinforced with the adoption of an additional set of incentives in 1996 to attract information and communications technology (ICT) companies to establish their operations in the Multimedia Super Corridor (MSC).



2.10 *Private consumption* grew at an annual rate of 5.5 per cent, lower than the target of 7.2 per cent per annum, mainly due to prudent consumer spending. Efforts by the Government to encourage domestic savings as well as to control inflation also contributed to lower spending. In addition, the negative wealth effect of the financial crisis affected consumer sentiments, which resulted in the contraction of spending in 1998.

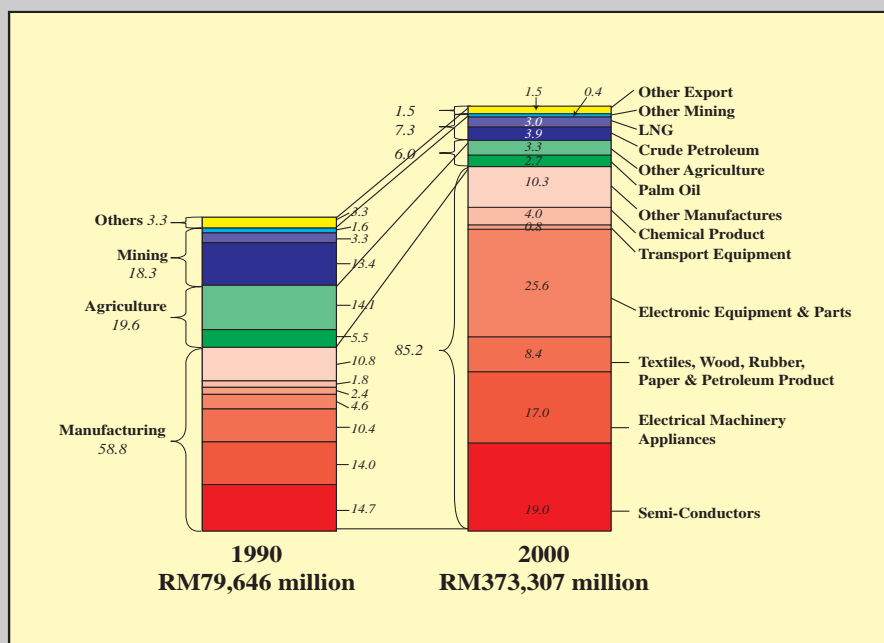
2.11 *Public investment* expanded by 10.5 per cent per annum in contrast with the targeted reduction of 0.4 per cent per annum under the OPP2. The bulk of public investment was by the Non-Financial Public Enterprises (NFPEs), particularly *Petroleum Nasional Berhad* (Petronas), *Tenaga Nasional Berhad* (TNB) and *Telekom Malaysia Berhad*, to finance their expansion and modernization programmes, especially during the first seven years of the OPP2. The increase was also due to the fiscal stimulus package launched by the Government beginning 1998 to initiate economic recovery. The focus of public sector investment was to enhance productivity and efficiency to support private sector initiatives and fulfill the rising demand for better services from an increasingly affluent society. *Public consumption*, which accounted for 20.5 per cent of total consumption spending, grew at a relatively moderate rate of 5.5 per cent per annum, in line with the Government's policy of fiscal prudence.

2.12 *Exports* assumed an increasingly important role in propelling economic growth during the OPP2 period, particularly in leading the economic recovery from the financial crisis. The sector grew at an average rate of 16.7 per cent during the OPP2 period. Electronics and electrical machinery appliance and parts contributed an increasing proportion of exports, accounting for more than 61.6 per cent of total exports in 2000 compared with 33.3 per cent in 1990, as shown in *Chart 2-2*. Strong demand for these products was largely due to concerns about the Year 2000 (Y2K) problem, the rapid growth in the Internet, mobile telephones and telecommunications as well as the need to upgrade technology for competitiveness reasons. *Imports* grew at an average rate of 14.7 per cent per annum during the OPP2 period. As a result of the high import content in the production structure, the boom in the manufacturing sector generated higher imports of capital and intermediate goods, which grew by 12.1 per cent and 16.2 per cent, respectively, as shown in *Chart 2-3*.

2.13 The *balance of payments* position strengthened towards the latter part of the OPP2 period following significant growth in merchandise exports, as shown in *Table 2-4*. The merchandise account was in surplus throughout the whole OPP2 period, with the largest surplus of RM86.5 billion recorded in 1999. The

CHART 2-2

**STRUCTURE OF EXPORT, 1990 AND 2000**  
(%)



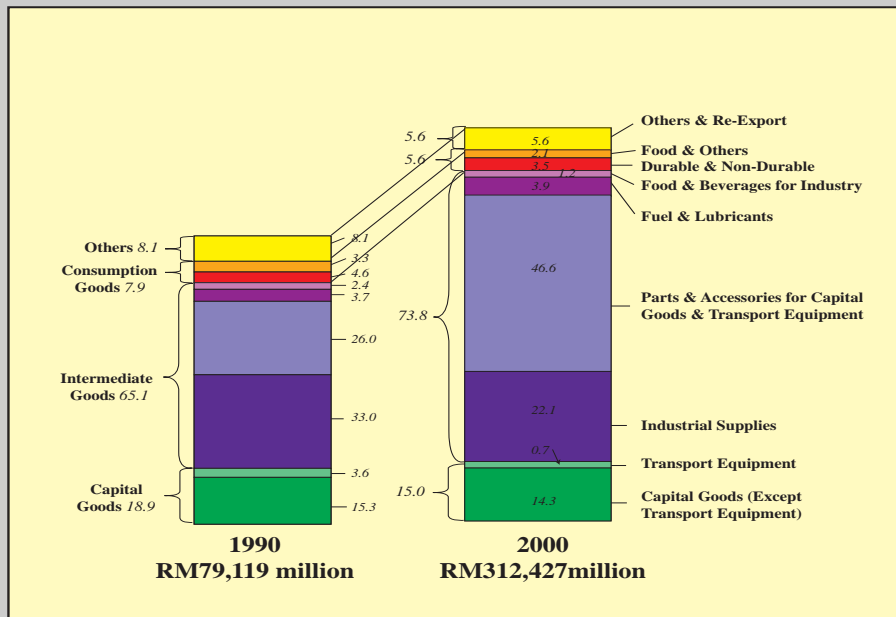
services account was, however, in deficit due mainly to the net outflows of investment income arising largely from the repatriation of profits and dividends by foreign investors. In addition, the higher payments for freight and insurance, contract and professional charges as well as repatriation of income by foreign workers also contributed to the deficit. However, policy measures taken to strengthen the services account led to some favourable structural changes particularly in the travel and education and other transportation subsectors. The other transportation subsector turned around since 1994 to generate surpluses while the net inflows of travel improved significantly. The merchandise surplus, however, was able to offset the services deficit, thereby resulting in a notable improvement in the current account with the shift to a surplus position beginning 1998, as shown in *Chart 2-4*.

2.14 The long-term capital account of the balance of payments registered a net inflow of RM130.1 billion during the OPP2 period. This was attributed to the net inflow of private long-term capital that amounted to RM107.5 billion due to the strong inflow of long-term direct investment. In addition, the official long-



CHART 2-3

**STRUCTURE OF IMPORTS, 1990 AND 2000**  
(%)

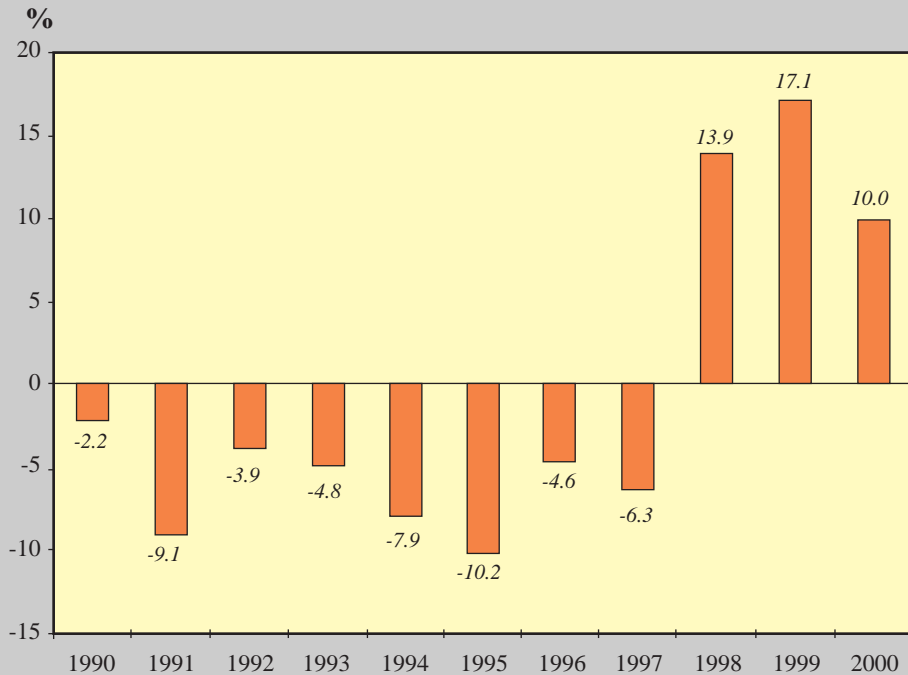


term capital amounted to RM22.6 billion, reflecting mainly the large external borrowings by the NFPEs to finance their expansion and modernization programmes. In contrast, the Federal Government recorded net repayments during the OPP2 period. The Federal Government had selectively prepaid its more expensive external loans during the first half of the OPP2 period, reflecting the strong financial position of the Government as well as its commitment to contain the external debt at a manageable level. Accordingly, the external debt of the Federal Government declined from RM24.7 billion at the end of 1990 to RM13 billion at the end of 1997. However, as a result of the financial crisis, the Government raised some external loans amounting to RM3.9 billion during 1999-2000 to finance its fiscal stimulus package. Consequently, the overall balance of the balance of payments, which takes into account the current account as well as the short- and long-term capital flows, recorded a surplus of RM86.5 billion. The Central Bank reserves increased to RM113.5 billion or 4.5 months of retained imports at the end of the Plan period.

| TABLE 2-4                      |               |               |               |                |                |                |             |             |             |              |              |              |
|--------------------------------|---------------|---------------|---------------|----------------|----------------|----------------|-------------|-------------|-------------|--------------|--------------|--------------|
| BALANCE OF PAYMENTS, 1990-2000 |               |               |               |                |                |                |             |             |             |              |              |              |
| (RM million)                   |               |               |               |                |                |                |             |             |             |              |              |              |
| Item                           | 1990          |               |               | 2000           |                |                | % of GNP    |             |             |              |              |              |
|                                |               |               |               |                |                |                | 1990        |             |             | 2000         |              |              |
|                                | Credit        | Debit         | Net           | Credit         | Debit          | Net            | Credit      | Debit       | Net         | Credit       | Debit        | Net          |
| <b>Mechandise Account</b>      | <b>77,458</b> | <b>70,365</b> | <b>7,093</b>  | <b>372,778</b> | <b>293,256</b> | <b>79,522</b>  | <b>67.9</b> | <b>61.7</b> | <b>6.2</b>  | <b>119.9</b> | <b>94.4</b>  | <b>25.6</b>  |
| <b>Service Account</b>         | <b>15,897</b> | <b>25,620</b> | <b>-9,723</b> | <b>60,721</b>  | <b>101,345</b> | <b>-40,624</b> | <b>13.9</b> | <b>22.5</b> | <b>-8.5</b> | <b>19.5</b>  | <b>32.6</b>  | <b>-13.1</b> |
| Freight & Insurance            | 1,523         | 5,360         | -3,837        | 5,698          | 18,548         | -12,850        | 1.3         | 4.7         | -3.4        | 1.8          | 6.0          | -4.1         |
| Other Transportation           | 2,182         | 2,207         | -25           | 7,901          | 5,913          | 1,988          | 1.9         | 1.9         | 0.0         | 2.5          | 1.9          | 0.6          |
| Travel & Education             | 4,555         | 3,923         | 632           | 17,716         | 7,978          | 9,738          | 4.0         | 3.4         | 0.6         | 5.7          | 2.6          | 3.1          |
| Net Investment Income          | 4,500         | 9,572         | -5,072        | 6,907          | 34,892         | -27,985        | 3.9         | 8.4         | -4.4        | 2.2          | 11.2         | -9.0         |
| Government Transaction         | 242           | 245           | -3            | 363            | 384            | -21            | 0.2         | 0.2         | 0.0         | 0.1          | 0.1          | 0.0          |
| Other Services                 | 2,895         | 4,313         | -1,418        | 22,136         | 33,629         | -11,493        | 2.5         | 3.8         | -1.2        | 7.1          | 10.8         | -3.7         |
| <b>Transfers</b>               | <b>673</b>    | <b>526</b>    | <b>147</b>    | <b>3,229</b>   | <b>10,964</b>  | <b>-7,735</b>  | <b>0.6</b>  | <b>0.5</b>  | <b>0.1</b>  | <b>1.0</b>   | <b>3.5</b>   | <b>-2.5</b>  |
| <b>Current Account</b>         | <b>94,028</b> | <b>96,511</b> | <b>-2,483</b> | <b>436,728</b> | <b>405,565</b> | <b>31,163</b>  | <b>82.5</b> | <b>84.6</b> | <b>-2.2</b> | <b>140.5</b> | <b>130.5</b> | <b>10.0</b>  |
| <b>Capital Account</b>         |               |               | <b>4,829</b>  |                |                | <b>-21,670</b> |             |             | <b>4.2</b>  |              |              | <b>-7.0</b>  |
| Official Long-Term Capital     |               |               | -2,836        |                |                | 3,961          |             |             | -2.5        |              |              | 1.3          |
| Corporate Investment           |               |               | 6,309         |                |                | 7,510          |             |             | 5.5         |              |              | 2.4          |
| Central Bank Reserves          |               |               | 27,025        |                |                | 113,541        |             |             | 23.7        |              |              | 36.5         |
| Months of Retained Imports     |               |               | 4.3           |                |                | 4.5            |             |             |             |              |              |              |

CHART 2-4

**CURRENT ACCOUNT OF THE BALANCE OF PAYMENTS,  
1990-2000**  
(% of GNP)



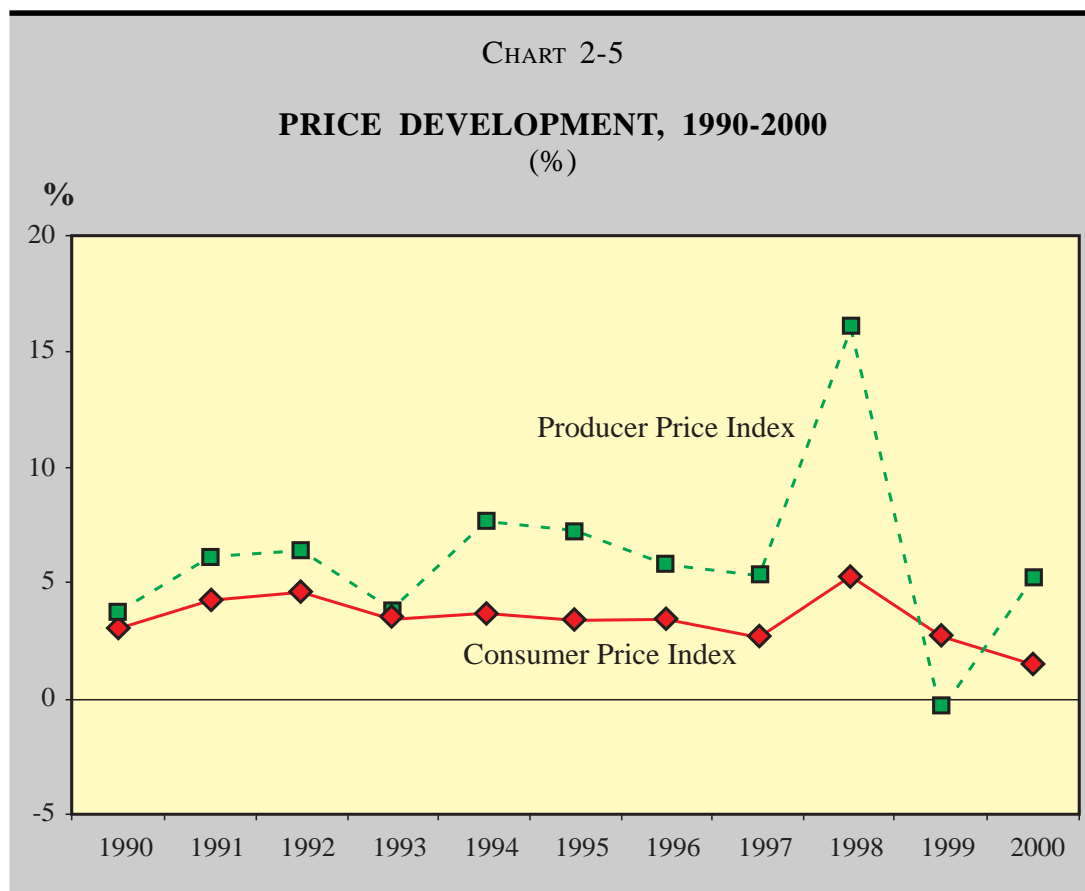
2.15 The *terms of trade* during the OPP2 period improved marginally at an average rate of 0.5 per cent per annum due to higher prices of major export commodities, such as palm oil, saw logs, sawn timber, petroleum and liquefied natural gas. In line with this trend, the Gross Domestic Product (GDP) in terms of real purchasing power grew by 7.8 per cent per annum, higher than the rate of output growth of 7.0 per cent per annum.

2.16 The consolidation of *public finance* continued into the OPP2 period, resulting in a fiscal surplus between 1993-1997 on account of prudent fiscal management and the privatization programme. The financial crisis made it necessary for the Government to launch a fiscal stimulus package in 1998 to compensate for the sharp contraction in private investment. The public sector account, nevertheless, registered an overall surplus of 1.3 per cent of Gross National Product (GNP). At the same time, the overall deficit of the Federal Government account stood at 1.0 per cent of GNP. Although Federal Government revenue,

as a percentage to GNP, declined from 25.9 per cent in 1990 to 19.9 per cent in 2000, it increased at an average rate of 7.7 per cent per annum. This was attributed to the higher revenue collected in the form of company and petroleum income taxes, sales and service taxes as well as non-tax revenue in tandem with the impressive economic performance during the first seven years of the OPP2 period as well as the recovery in aggregate demand and better crude oil prices during 1999-2000. The size of the Federal Government operating expenditure, as a percentage of GNP, also declined from 21.9 per cent in 1990 to 18.2 per cent in 2000. Emoluments, which constitute a large component of the operating expenditure, increased moderately from 8.0 per cent of GNP in 1990 to 8.1 per cent in 2000. In addition, the proportion of public servants, including the Army and Police forces, to the population declined from 4.7 per cent to 4.2 per cent during the same period.

2.17 Economic growth during the OPP2 period was achieved in an environment of low *inflation* and price stability, averaging 3.4 per cent per annum, as shown in *Chart 2-5*. In the first half of the OPP2 period, the Government launched a comprehensive anti-inflationary package to keep prices low and stable. The Government, among others, undertook a prudent fiscal policy by restraining operating expenditure and focusing development expenditures on projects that alleviated infrastructure and supply constraints. Import duties on more than 3,000 items were reduced or abolished to lower the price of goods and reduce the cost of doing business. In addition, an anti-inflation campaign was launched to educate the public on the causes and impact of inflation. The sharp depreciation of the Ringgit during the crisis, however, led to higher producer and consumer prices. To address this, the Government implemented a mix of fiscal, monetary and administrative measures, which successfully contained the inflation rate at 2.2 per cent between 1999-2000.

2.18 During the OPP2 period, the country achieved a high level of *savings*, averaging 38.0 per cent of GNP compared with 36.8 per cent for investment. Savings as a percentage of GNP rose from 31.6 per cent in 1990 to 39.0 per cent in 2000 as a result of the successful campaign to increase domestic savings. Factors contributing to the rise in the savings rate were higher disposable income, increased contributions to the Employees Provident Fund, expansion in unit trust schemes, introduction of new savings instruments and private debt instruments, the increase in deposits in the Islamic banking system and lower dependency ratio. In addition, the public sector surplus also contributed to the increase in domestic savings. This resulted in an overall surplus in the country's resource position.



## Employment, Wage and Productivity

2.19 Employment opportunities expanded during the OPP2 period with an average annual growth rate of 3.3 per cent. As the demand for labour grew faster than the growth of the labour force, unemployment rate remained low at 3.1 per cent at the end of the period. The labour market situation was tight, particularly in the construction and manufacturing sectors. Consequently, as a temporary measure, the Government allowed the import of foreign workers on a selective basis.

2.20 The OPP2 period also saw structural changes in employment due to increasing capital intensity and the use of new technology. There was an increase in the demand for workers who were highly skilled and educated. The fastest growing occupations were in the professional and technical as well as managerial and administrative categories, which accounted for 28.8 per cent of the new jobs created during the OPP2 period.

2.21 Labour productivity, as measured by GDP per worker, improved at a rate of 3.6 per cent per annum, especially towards the end of the OPP2 period largely due to the shift towards higher technology production processes and improvement in labour utilization. Wage increase for most of the economic sectors was marginal with the largest increase in the other services subsector, which recorded a growth of 2.7 per cent per annum. However, the overall wage increase of 1.5 per cent per annum was lower than the productivity growth for all sectors, indicating a decline in unit labour cost.

2.22 To ensure a closer link between wage and productivity performance, the Government introduced the Guidelines for a Productivity-Linked Wage Reform System in 1996. A total of 114 companies adopted elements of the productivity-linked wage system (PLWS) in their collective agreements. Seminars, workshop and company visits were conducted to encourage firms to adopt the PLWS. In addition, the National Productivity Corporation provided an online database to benchmark productivity in the manufacturing and agriculture sectors.

## **Sectoral Growth and Transformation**

2.23 During the OPP2 period, the *manufacturing sector* grew at 10.4 per cent per annum and led economic growth, as shown in *Table 2-5*. The sector witnessed improvements in productive efficiency and capability, continued expansion of export-oriented industries as well as greater diversification of its market. There was greater focus on product quality and design, automation and mechanization, competitive pricing and delivery system. Progress was made in promoting the capital-intensive and high-technology industries as reflected by approved manufacturing investments. In line with the policy to promote capital-intensive industries, the ratio of employees to every RM1 million investment declined from 6.03 in 1990 to 2.62 in 2000.

2.24 The electrical and electronics products subsector became more capital-intensive, especially in the manufacture of computer motherboards, hard disk media and silicon wafers. The electrical and electronics subsector diversified into higher value-added products, particularly consumer and industrial electronics, and underwent a change in the structure of exports. The exports of electronics equipment and parts grew by 38.6 per cent per annum between 1991-2000 and overtook the exports of semi-conductors, both in terms of growth rate and size. The share of electronics equipment and parts to total electronics exports increased from 23.9 per cent in 1990 to 57.4 per cent in 2000, while the share of semi-conductors decreased from 76.1 per cent to 42.6 per cent. In addition, the industrial chemical and other chemicals subsector was an important contributor to the output of the manufacturing sector.

2.25 Growth of the *construction sector* was particularly rapid during the 1991-1997 period. The civil engineering subsector was boosted by the privatization of large infrastructure and civil engineering projects, such as roads, highways, airports, power transmission, telecommunications, rail transport and ports. Increased activity in the residential subsector was supported by buoyant demand as a result of higher disposable income. The promotion of the tourism industry contributed to the rapid development of the non-residential subsector, particularly hotels, resorts and golf courses. However, following the financial crisis, the construction sector contracted by 23.0 per cent in 1998 and 5.6 per cent in 1999, before recording a growth of 1.1 per cent in 2000.

2.26 The *agriculture sector* recorded 0.5 per cent growth per annum, mainly contributed by the palm oil and food crop subsectors. During the OPP2 period, there was a shift in land and labour from rubber and cocoa subsectors to oil palm subsectors. In line with the Third National Agriculture Policy, the development of the sector was reoriented towards the optimum utilization of resources in both the industrial commodity and food subsectors through improvements in productivity and competitiveness.

2.27 During the OPP2 period, the *services sector* grew at an average rate of 8.3 per cent per annum and increased its share to GDP to 51.7 per cent. The Government took steps to develop the services sector as a new source of growth as well as improve the competitiveness of the services industries in preparation for an increasingly liberalized environment. The policies included the promotion of export-oriented services in tourism, education, health, consultancy as well as air and maritime transportation. In addition, the development of advanced communications, computer-related and financial services was accelerated.

2.28 Within the services sector, the finance and transportation subsectors grew rapidly in line with the strong expansion in domestic and international trade. The completion of various infrastructure projects, such as highways, electrified commuter train service, light rail transit, KL International Airport (KLIA), and Port Klang and Port of Tanjung Pelepas, as well as the rapid development in telecommunications contributed to the impressive growth of the transportation and communications subsector. Energy and water became an important support service for the rapidly growing industrial sector. In addition, the growth of the wholesale and retail trade, hotels and restaurants subsector was more pronounced, reflecting the increase of tourist arrivals and higher consumer spending on account of improved incomes arising from economic growth.

| TABLE 2-5                                     |      |                |                  |
|---|------|----------------|------------------|
| OPP2 SECTORAL TARGETS AND ACHIEVEMENTS<br>(%) |      |                |                  |
|   | 1990 | Target<br>2000 | Achieved<br>2000 |
| <i>Share to GDP</i>                           |      |                |                  |
| Agriculture & Forestry                        | 16.3 | 13.4           | 8.7              |
| Mining  | 9.4  | 5.7            | 6.6              |
| Manufacturing                                 | 24.6 | 37.2           | 33.4             |
| Construction                                  | 3.5  | 3.5            | 3.3              |
| Services                                      | 46.8 | 45.4           | 52.4             |
| Import Duties Less<br>Bank Service Charges    | 0.7  | -5.2           | -4.5             |
| <i>Proportion to Total Employment</i>         |      |                |                  |
| Agriculture & Forestry                        | 26.0 | 20.0           | 15.2             |
| Mining  | 0.5  | 0.5            | 0.4              |
| Manufacturing                                 | 19.9 | 23.9           | 27.6             |
| Construction                                  | 6.3  | 7.4            | 8.1              |
| Services                                      | 47.3 | 48.2           | 48.7             |
|   |      | Target<br>OPP2 | Achieved<br>OPP2 |
| <i>Average Annual Growth Rate</i>             |      |                |                  |
| Agriculture & Forestry                        |      | 3.5            | 0.5              |
| Mining  |      | 1.5            | 3.4              |
| Manufacturing                                 |      | 10.5           | 10.4             |
| Construction                                  |      | 7.0            | 6.4              |
| Services                                      |      | 8.1            | 8.3              |

## Progress of Distributional Objectives

2.29 There were mixed results with regard to the attainment of the distribution objectives. In terms of poverty eradication and restructuring of employment, the nation achieved significant progress during the OPP2 period. There were also some improvements in the development of the BCIC. However, the corporate equity ownership held by Bumiputera declined below the 1990 level.



2.30 *Poverty Eradication.* The incidence of poverty among Malaysians was reduced from 16.5 per cent in 1990 to 7.5 per cent in 1999, as shown in *Table 2-6*. The number of poor households decreased by about 39 per cent to 351,100 in 1999. The incidence of poverty in rural and urban areas declined by almost half their levels in 1990. The incidence of hardcore poverty among Malaysians decreased from 3.9 per cent or 137,100 households in 1990 to 1.4 per cent or 64,100 households in 1999.

| TABLE 2-6   |               |                |                |                |                   |                |                |
|---|---------------|----------------|----------------|----------------|-------------------|----------------|----------------|
| POVERTY ERADICATION ACHIEVEMENTS <sup>1</sup> , 1990 AND 1999   |               |                |                |                |                   |                |                |
|   |               | 1990           |                |                | 1999 <sup>2</sup> |                |                |
|   |               | Total          | Urban          | Rural          | Total             | Urban          | Rural          |
| Incidence of Poverty <sup>2</sup>   | (%)           | 16.5           | 7.1            | 21.1           | 7.5               | 3.4            | 12.4           |
| Number of Poor Households   | ('000)        | 574.5          | 82.0           | 492.5          | 351.1             | 86.8           | 264.3          |
| Incidence of Hardcore Poverty <sup>3</sup>  | (%)           | 3.9            | 1.3            | 5.2            | 1.4               | 0.5            | 2.4            |
| Number of Hardcore-Poor Households  | ('000)        | 137.1          | 15.5           | 121.6          | 64.1              | 13.5           | 50.6           |
| <b>Total Households</b>   | <b>('000)</b> | <b>3,486.6</b> | <b>1,149.3</b> | <b>2,337.3</b> | <b>4,681.5</b>    | <b>2,548.0</b> | <b>2,133.5</b> |
| <i>Notes:</i>   |               |                |                |                |                   |                |                |
| <sup>1</sup> The poverty data refer to Malaysian citizens.  |               |                |                |                |                   |                |                |
| <sup>2</sup> Poverty Line Income (PLI) for 1999 was RM510 per month for a household size of 4.6 in Peninsular Malaysia; RM685 per month for a household size of 4.9 in Sabah; and RM584 per month for a household size of 4.8 in Sarawak. |               |                |                |                |                   |                |                |
| <sup>3</sup> Hardcore poverty is estimated using half of the PLI.   |               |                |                |                |                   |                |                |

2.31 *Income Distribution.* The mean monthly gross household income for Malaysians doubled to RM2,472 in 1999. The mean income of the bottom 40 per cent of households grew at 11.7 per cent per annum, lower than the rate registered by the top 20 per cent and middle 40 per cent of households income categories. In 1999, the top 20 per cent of households held 50.5 per cent of income compared with 14.0 per cent held by the households in the bottom 40 per cent. The Gini coefficient, a summary measure of income disparity, increased marginally from 0.4421 in 1990 to 0.4432 in 1999, indicating a slight worsening of income distribution during the OPP2 period.

2.32 *Quality of Life.* There was a steady increase in the overall quality of life for the period under review where the Malaysian Quality of Life Index improved by 12.0 points, as shown in *Table 2-7*. Except for public safety and environment quality, there were substantial improvements in working life, transport and communications, education, housing and culture and leisure due to better access to improved facilities and amenities.

2.33 Significant improvements were achieved in raising the quality of life in all states through the continued provision of adequate social and infrastructure facilities and amenities for the rural as well as the urban population. This was reflected in socioeconomic indicators such as registered cars and motorcycles per 1,000 population, telephones per 1,000 population, infant mortality rates and doctor per 10,000 population. In terms of basic amenities, Kelantan, Sabah, Sarawak and Terengganu are still below the national average of 91.2 per cent for piped water coverage while only Sabah and Sarawak were below national average for electricity provision. Difficult terrain and the remoteness of many settlement areas constrained the supply of piped water and electricity.

2.34 *Equity Restructuring.* Bumiputera ownership of share capital in the corporate sector increased from 19.3 per cent in 1990 to 20.6 per cent in 1995 but declined subsequently to 19.1 per cent in 1999, as shown in *Table 2-8*. In absolute terms, Bumiputera equity ownership increased from RM20.9 billion in 1990 to RM59.4 billion in 1999. At the end of the OPP2 period, a total of 19.6 per cent of companies registered with the Registrar of Companies were controlled by Bumiputera. The proportion of Bumiputera companies in all sectors of the economy remained low, ranging from 8.7 to 32.6 per cent, mainly concentrated in agriculture, construction and transportation.

2.35 During the first half of the OPP2 period, non-Bumiputera equity ownership increased substantially from about RM50.8 billion in 1990 to RM125 billion, although their share of corporate equity decreased from 46.8 per cent in 1990 to 40.3 per cent in 1999. The promotion of foreign investment to stimulate growth and accelerate recovery resulted in the foreign ownership of share capital in the corporate sector increased markedly from 25.4 per cent to 32.7 per cent during the same period. Foreign ownership was the highest in sectors such as manufacturing, utilities as well as wholesale and retail trade.

2.36 The privatization programme continued to be a vehicle to enhance Bumiputera participation in the corporate sector. In this regard, various guidelines were formulated, including the provision of at least 30 per cent equity to Bumiputera

TABLE 2-7  
**THE MALAYSIAN QUALITY OF LIFE INDEX, 2000**  
(1990=100)

| <i>Area</i>                            | <i>Indicator</i>  | <i>2000</i>   |
|--|---|---------------|
| Income & Distribution                  | Real Per Capita GNP                                     | 111.46        |
|  | Gini Coefficient  | 110.28        |
|  | Incidence of Poverty                                    | 93.34         |
|  |   | 130.76        |
| Working Life                           | Unemployment Rate                                       | 131.80        |
|  | Trade Disputes  | 138.79        |
|  | Man Days Lost Due to Industrial Actions                 | 130.88        |
|  | Industrial Accident Rate                                | 136.89        |
| Transport & Communications             |   | 124.16        |
|  | Private Motorcars & Motorcycles                         | 121.47        |
|  | Commercial Vehicles                                     | 117.26        |
|  | Road Development Index                                  | 118.62        |
|  | Telephones  | 122.90        |
|  | Cellular phones   | 129.04        |
| Health                                 |   | 119.51        |
|  | Male Life Expectancy at Birth                           | 110.43        |
|  | Female Life Expectancy at Birth                         | 116.77        |
|  | Infant Mortality Rate                                   | 118.81        |
|  | Doctor-Population Ratio                                 | 128.10        |
|  | Hospital Bed-Population Ratio                           | 124.80        |
| Education                              |   | 63.68         |
|  | Pre-School Participation Rate                           | 118.83        |
|  | Secondary School Participation Rate                     | 117.96        |
|  | University Participation Rate                           | 116.25        |
|  | Literacy Rate   | 114.28        |
|  | Primary School Teacher-Student Ratio                    | 129.71        |
|  | Secondary School Teacher-Student Ratio                  | 123.05        |
| Housing                                |   | 111.74        |
|  | Average Housing Price                                   | 120.75        |
|  | % Low-Cost Housing Units to Total Low-Income Households | 101.08        |
|  | % Housing Units With Piped Water                        | 123.27        |
|  | % Housing Units With Electricity                        | 127.04        |
| Environment                            |   | 131.59        |
|  | Air Quality Index                                       | 91.90         |
|  | % of Clean Rivers                                       | 100.98        |
|  | % of Forested Land                                      | 61.48         |
| Family Life                            |   | 113.22        |
|  | % Divorces  | 110.54        |
|  | Crude Birth Rate  | 121.36        |
|  | Household Size  | 121.72        |
|  | % of Juvenile Crimes                                    | 126.39        |
| Social Participation                   |   | 72.70         |
|  | % of Registered Voters                                  | 112.95        |
|  | Number of Registered Non-Profit Organizations           | 86.94         |
|  | Number of Registered Residents' Associations            | 126.58        |
| Public Safety                          |   | 125.32        |
|  | Crimes  | 82.07         |
|  | Road Accidents  | 72.32         |
| Culture & Leisure                      |   | 91.83         |
|  | Membership in Public Libraries                          | 120.10        |
|  | T.V. Viewers  | 130.89        |
|  | Domestic Hotel Guests                                   | 114.82        |
| <b>MALAYSIAN QUALITY OF LIFE INDEX</b> |   | <b>114.59</b> |
|  |   | <b>112.03</b> |

TABLE 2-8  
**ACHIEVEMENTS IN THE RESTRUCTURING OF SOCIETY, 1990-2000**

|   | 1990 | 2000 |
|---|------|------|
| <b><i>Ownership of Equity in the Corporate Sector (%)<sup>1</sup></i></b> |      |      |
| Bumiputera  | 19.3 | 19.1 |
| Non-Bumiputera  | 46.8 | 40.3 |
| Foreigners  | 25.4 | 32.7 |
| Nominee Company   | 8.5  | 7.9  |
| <b><i>Bumiputera Employment by Sector</i></b>                             |      |      |
| <i>(% of total employment)</i>  |      |      |
| Agriculture & Forestry, Livestock & Fisheries                             | 67.9 | 61.6 |
| Mining & Quarrying  | 51.9 | 57.2 |
| Manufacturing   | 46.4 | 49.1 |
| Construction  | 34.9 | 37.4 |
| Electricity, Gas & Water  | 70.2 | 71.2 |
| Transport, Storage & Communications                                       | 49.0 | 56.0 |
| Wholesale & Retail Trade, Hotels & Restaurants                            | 34.5 | 38.3 |
| Finance, Insurance, Real Estate & Business Services                       | 41.1 | 45.3 |
| Other Services  | 64.7 | 63.5 |
| <b><i>Bumiputera Employment in High Occupational Categories</i></b>       |      |      |
| <i>(% of total employment)</i>  |      |      |
| Professional & Technical  | 60.5 | 63.8 |
| Administrative & Managerial   | 28.7 | 36.9 |
| <b><i>Bumiputera Registered Professional<sup>1</sup></i></b>              |      |      |
| <i>(% of each profession)</i>   |      |      |
| Accountant  | 11.2 | 15.9 |
| Architect   | 27.6 | 28.9 |
| Doctor  | 27.8 | 36.7 |
| Dentist   | 24.3 | 34.8 |
| Veterinary Surgeon  | 35.9 | 42.6 |
| Engineer  | 13.1 | 26.5 |
| Surveyor  | 44.7 | 47.8 |
| Lawyer  | 22.3 | 31.3 |

*Note:* <sup>1</sup> Refers to the year 1999

by companies undertaking privatized projects; provision of at least 30 per cent of contract-works of major privatized projects to Bumiputera contractors; and the requirement for large privatized projects to establish vendor development programmes. As at April 2000, a total of 180 companies were given concessions by the Federal Government of which 61.0 per cent were managed and controlled by Bumiputera. The Bumiputera-controlled privatized projects were mainly in the construction, manufacturing, transportation as well as wholesale and retail sectors.

*2.37 Employment Restructuring.* Efforts by the Government to increase the Bumiputera share of employment in higher occupational levels was complemented by the private sector initiatives in creating more job opportunities for qualified Bumiputera. As a result, the proportion of Bumiputera in the professional and technical category, which includes teachers and nurses, increased from 60.5 per cent in 1990 to 63.8 per cent in 2000. The proportion of Bumiputera in the administrative and managerial category also increased from 28.7 per cent to 36.9 per cent during the same period which was still low compared with other ethnic groups. The proportion of Bumiputera registered in eight professional occupations, namely, accountant, architect, doctor, dentist, engineer, lawyer, surveyor, and veterinary surgeon increased from 20.7 per cent in 1990 to 28.9 per cent in 1999.

*2.38 Bumiputera employment in several major sectors continued to increase,* reflecting the consolidation and shift in the structure of Bumiputera employment from agriculture to other sectors of the economy, particularly in manufacturing, finance and transportation. The proportion of Bumiputera in the manufacturing sector was at 49.1 per cent, relatively lower than in the agriculture sector, which was 61.6 per cent. In the manufacturing sector, the majority of Bumiputera employed were in industries such as electrical and electronics, textile and textile products, wood and wood products as well as food products.

*2.39 Development of the BCIC.* During the OPP2 period, emphasis was placed on developing a viable, competitive and resilient BCIC through various entrepreneurship development programmes. The private sector contributed to this effort by implementing programmes such as the vendor and franchise development as well as joint-ventures. The implementation of programmes to develop BCIC also contributed to the increase in the number of Bumiputera enterprises in both the corporate and non-corporate sectors. There were about 697,900 Bumiputera enterprises registered with the Registrar of Businesses during the OPP2 period. In addition, a total of about 57,700 Bumiputera companies were also registered with the Registrar of Companies during the same period. Although a number of Bumiputera ventures was developed in the modern and

dynamic sectors of the economy, the overall impact remained limited due to the narrow base of Bumiputera enterprises as well as inadequate capital, lack of experience and management skills and over-reliance on Government assistance and contracts. In addition, the economic crisis in 1998 adversely affected the performance of Bumiputera enterprises. Despite the increase in the number of Bumiputera business ventures in the modern and dynamic sectors of the economy, a large proportion of them was concentrated in the construction sector and the lower-end services activities such as gas distribution, petrol kiosk operation and travel agency management.

2.40 The thrust of *regional development* was to reduce the imbalance between states as well as rural and urban areas. During the OPP2 period, states that engaged in modern sector activities were able to achieve faster growth than those dependent on agriculture. This widened the economic gap between the more developed states, namely, Wilayah Persekutuan Kuala Lumpur, Pulau Pinang, Selangor, Melaka, Negeri Sembilan, Johor and Perak, and the less developed states comprising Pahang, Kedah, Perlis, Terengganu, Sarawak, Kelantan and Sabah. In addition, the income disparity ratio between rural and urban households widened from 1:1.7 in 1990 to 1:1.81 in 1999. To enhance the development of states rich in land and natural resources, such as Sabah and Sarawak, investments in agriculture production particularly in estate crops were encouraged. Similarly, land consolidation and commercial production of crops were promoted to upgrade the rural economy. A total of 744,350 hectares of land was consolidated, replanted and rehabilitated during the OPP2 period.

2.41 To intensify rural development, the New Rural Development Philosophy was introduced, where the orientation was shifted from physical development to one giving equal emphasis to both human and physical development. In addition, statutory bodies in the agriculture sector were streamlined and strengthened to enable them to contribute more effectively to rural development. In this regard, several agencies were privatized or revamped. Two regional development authorities, namely Pahang Tenggara Development Authority and Jengka Development Authority were privatized, while five project management units of integrated agriculture development projects outside the granary areas were discontinued.

2.42 The relatively greater economic opportunities available in urban centres continued to attract in-migration, thereby increasing the concentration of the population in these centres. In 1991, urban areas were redefined to include conurbations and built-up areas. Consequently, the size of the urban population increased from 8.9 million in 1991 to 14.4 million in 2000 and the urbanization rate increased from 50.7 per cent in 1991 to 61.8 per cent in 2000. The rapid

growth of some cities and large towns placed considerable strain on the local authorities in the provision of good quality infrastructure and social facilities. In response to increased urbanization, efforts were taken to improve urban services and the management capability of local authorities. During the OPP2 period, Kota Kinabalu and Shah Alam were proclaimed as cities, and district councils such as Ampang Jaya, Selayang, Subang Jaya, Temerloh and Kluang were upgraded to municipal councils. In addition, the Government adopted a policy of dispersing development away from present urban centres to their peripheral areas such as Prai, Serdang, Senawang and Pasir Gudang.

2.43 The construction and upgrading of roads and expressways such as the North-South Highway, the North Klang Valley Expressway and the Damansara-Puchong Highway led to the further development of some existing towns such as Nilai, Bandar Baru Kelang and Bandar Bukit Puchong as well as the establishment of new townships such as Kota Kemuning. In addition, the period also witnessed the development of a number of new initiatives, including the development of special feature towns such as the Kulim Hi-Tech Park, Putrajaya, Cyberjaya and Kertih.

2.44 During the OPP2 period, *subregional economic cooperation* with neighbouring countries was further promoted with the formation of three Growth Triangles, namely, the Indonesia-Malaysia-Singapore Growth Triangle, the Indonesia-Malaysia-Thailand Growth Triangle and the Brunei-Indonesia-Malaysia-Philippines East ASEAN Growth Area. The formation of these Triangles opened new opportunities for trade and investment among the participating countries. The private sector was accorded a lead role, while the governments of the participating countries acted as facilitators in the development and implementation of joint-venture projects within the Triangles. A three-tier consultative mechanism involving both public and private sectors was also established to streamline procedures and facilitate trade and business within the Triangles.

#### **IV. CONCLUSION**

2.45 The strategies and policies of the OPP2 contributed towards strengthening and modernizing the industrial base of the country. The nation achieved rapid economic growth despite being affected by the 1997-1998 financial crisis. This was accompanied by significant improvements in the level of income and enhancement in the quality of life of all Malaysians with significant progress made in reducing the incidence of poverty.

## **CHAPTER 3 - MACROECONOMIC PERSPECTIVE**

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## **Chapter 3**

# **Macroeconomic Perspective**

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## CHAPTER 3

# Macroeconomic Perspective

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### I. INTRODUCTION

3.01 During the Third Outline Perspective Plan (OPP3) period, efforts will focus on raising the resilience and international competitiveness of the economy to a new and higher threshold through the adoption of innovative measures. This is to place the economy on a sustainable growth path to achieve the status of a fully developed country as envisaged in Vision 2020. This will allow Malaysia to address the challenges as well as take advantage of the opportunities which will arise with globalization, while being better placed to withstand and manage any external shocks.

### II. MACROECONOMIC PROSPECTS

#### Global Economic Prospects

3.02 The long-term outlook for the global economy is expected to be positive with real Gross Domestic Product (GDP) growth projected to increase in all major regions. The world economy is expected to expand by 2.3 per cent per annum between 2000-2010. This improvement will be spurred by the continued growth of the US economy, robust expansion in Europe and recovery in Japan, as shown in *Table 3-1*. The developing countries are expected to grow at an average rate of 3.7 per cent per annum following the stronger economic fundamentals in most countries, consolidation of recovery in Asia and Latin America and moderate growth in the Middle East and in Africa.

TABLE 3-1  
**GLOBAL ECONOMIC OUTLOOK, 2000-2010**  
(average annual growth rate, %)

|  | 2000 <sup>f</sup> | 2000-2010 <sup>f</sup> |
|--|-------------------|------------------------|
| <b>REAL GROSS DOMESTIC PRODUCT</b>           |                   |                        |
| <b>World Output</b>                          | <b>4.1</b>        | <b>2.3</b>             |
| <b>High-Income Countries</b>                 | <b>3.8</b>        | <b>2.7</b>             |
| OECD Countries                               | 3.7               | 2.6                    |
| United States America                        | 5.1               | 2.5                    |
| Japan  | 2.0               | 2.3                    |
| Euro Area                                    | 3.4               | 3.0                    |
| Non-OECD Countries                           | 6.3               | 4.1                    |
| <b>Developing Countries</b>                  | <b>5.3</b>        | <b>3.7</b>             |
| East Asia & Pacific                          | 7.2               | 5.4                    |
| East Asian Crisis-Hit Countries <sup>1</sup> | 6.9               | 4.2                    |
| <b>Malaysia</b>                              | <b>8.5</b>        | <b>7.5</b>             |
| Europe & Central Asia                        | 5.2               | 4.1                    |
| Latin America & the Caribbean                | 4.0               | 3.0                    |
| Middle East & North Africa                   | 3.1               | 1.7                    |
| South Asia                                   | 6.0               | 3.9                    |
| Sub-Saharan Africa                           | 2.7               | 1.3                    |
| <b>WORLD TRADE</b>                           | <b>12.5</b>       | <b>6.8</b>             |
| <b>EAST ASIA &amp; PACIFIC</b>               |                   |                        |
| Real GDP                                     | 7.2               | 5.4                    |
| Consumption Per Capita                       | 5.9               | 5.8                    |
| GDP Per Capita                               | 6.1               | 5.4                    |
| Population                                   | 1.0               | 0.8                    |
| Median Inflation                             | 3.8               | 4.8                    |
| Gross Domestic Investment (% of GDP)         | 30.8              | 32.6                   |
| Central Government Budget Deficit (% of GDP) | -2.8              | 0.8                    |
| Exports Volume                               | 19.4              | 8.5                    |
| Current Account of BOP (% of GDP)            | 3.3               | 5.5                    |
| <b>CONSUMER PRICES</b>                       |                   |                        |
| <b>World Consumer Prices</b>                 |                   | <b>2.7</b>             |
| High-Income Countries                        |                   | 1.9                    |
| Developing Countries                         |                   | 5.4                    |
| East Asia & Pacific                          |                   | 3.8                    |
| <b>Malaysia</b>                              |                   | <b>2.7</b>             |
| <b>COMMODITY PRICES</b>                      |                   |                        |
| <b>Index<sup>2</sup></b>                     |                   |                        |
| Crude Oil                                    | 58.5              | -6.1                   |
| Non-Oil                                      | 1.9               | 0.3                    |
| <b>Prices (period average)</b>               |                   |                        |
| Crude Oil (USD/bpd)                          | 28.0              | 23.2                   |
| Palm Oil (USD/metric tonne)                  | 322.0             | 400.0                  |

Source: Global Economic Prospects & Developing Countries, World Bank; December 2000

Notes: <sup>f</sup> Forecast

<sup>1</sup> Includes Indonesia, Malaysia, the Philippines, the Republic of Korea and Thailand.

<sup>2</sup> 1990 = 100

3.03 The East Asia and Pacific region is estimated to expand at 5.4 per cent per annum between 2000-2010, boosted by increasing gross domestic investments at 32.6 per cent of GDP and exports at 8.5 per cent per annum. With stable growth in population and moderate inflation, the GDP and consumption per capita in this region are expected to increase by more than 5.0 per cent during the same period, providing an expanding market as well as opportunities for business and industry.

3.04 During the OPP3 period, the volume of world merchandise trade is expected to grow at 6.8 per cent per annum in tandem with the increase in world output. At the regional level, the implementation of the ASEAN Free Trade Area (AFTA) will provide the impetus for trade expansion. The prospects for further trade liberalization remains good with the progress made in the implementation of the Common Effective Preferential Tariff (CEPT), the main instrument for realizing AFTA. AFTA, which was originally targeted for full implementation by 2008, will be realized by 2003, with some flexibility given to its new members. Under the CEPT, ASEAN member countries will reduce intra-regional tariffs and eliminate quantitative restrictions and other non-tariff barriers. A summary of Malaysia's World Trade Organization and AFTA commitments and implications is shown in *Box 3-1*.

3.05 On the downside, however, the presence of economic and financial imbalances in the USD, Euro and Yen currency areas is significant and poses continued risk to global economic expansion. Further, the continued lack of constructive initiatives to strengthen the international financial architecture particularly in respect of the increased movement of speculative short-term capital remains a potential source of instability for international financial markets and the recurrence of financial and economic crises. In addition, the economic recovery in East Asia will depend on the commitment of the countries affected by the financial crisis to continue to undertake comprehensive restructuring of the economy, including their financial sector, as well as restore political stability.

3.06 There are limited prospects for a recovery in commodity prices. Non-oil commodity prices are expected to increase at an average rate of 3.0 per cent in nominal terms (0.3 per cent in real terms) and are not likely to return to the peaks of 1995-1996. Although increased demand in industrial countries will provide the support for higher commodity prices, supply is expected to outpace demand. On the other hand, crude petroleum prices, which reached a 10-year high in 2000, will face constant downward pressure resulting from limited growth in the demand for Organization of Petroleum Exporting Countries crude oil and increasing competition from both oil and non-oil energy producers.

## BOX 3-1

### MALAYSIA'S WTO AND AFTA COMMITMENTS AND IMPLICATIONS

Malaysia's commitments in the WTO and AFTA cover market access in goods and services and the protection of intellectual property. Commitments under WTO are legally binding, monitored and effectively enforced where non-compliance will be subject to dispute settlement with very specific remedial measures. AFTA commitments are made pursuant to negotiated agreements where the enforcement mechanism is more flexible and remedial measures are settled through consultations, usually at the political level.

#### Malaysia's WTO commitments include:

- ☐ *general obligations* as stipulated in the individual WTO agreements cover:
  - periodic notification of legislation, measures undertaken in compliance with specific commitments (agriculture) and the introduction of new measures (subsidies, import licensing, technical standards and regulations, sanitary and phytosanitary measures);
  - enactment or amendment of domestic legislation (anti-dumping, trade related intellectual property rights (TRIPS), and customs valuation); and
  - establishment of enquiry points or focal points phasing out of prohibited measures (trade related investment measures (TRIMS) and subsidies).
- ☐ *specific commitments* related to trade liberalization in goods and services with bound concessions, where breach of levels will require the payment of compensation, cover:
  - goods – binding tariff lines on agricultural and non-agricultural items, reducing import duties on non-agricultural items, converting non-tariff barriers to tariffs and reducing tariffs on agricultural products, granting of minimum market access to agricultural products previously subjected to import restrictions and reducing tariffs to zero duty for selected information technology products;
  - services – allowing foreign equity participation consistent with national policy in telecommunications, audio-visual, health-care, accounting, advertising, architecture and engineering, construction, travel/tourism, sea transport, business and financial services as well as limiting commercial presence of legal services to the Federal Territory of Labuan;
  - TRIMS – addressing WTO inconsistent measures such as local content requirement, trade balancing requirement, foreign exchange restrictions and domestic sales requirements; and
  - TRIPS – adopting and enforcing the WTO TRIPS Agreement providing minimum standards for the protection of intellectual property rights.

Malaysia's commitments under ASEAN include:

- ❑ *AFTA commitments under the Common Effective Preferential Tariff (CEPT)*
  - Reduction of tariffs on industrial, manufactured and processed agricultural products and unprocessed agricultural products as well as the inclusion of rice into the CEPT; and
  - Removal of all quantitative restrictions and non-tariff barriers within five years from the date of inclusion into the CEPT.
- ❑ *The Framework Agreement on the ASEAN Investment Area (AIA)*
  - Opening up of investments in the manufacturing sector to ASEAN nationals by 2003 except for certain sensitive sectors as defined by each member country and the opening of all industries to ASEAN investors by 2010; and
  - Opening up to non-ASEAN investors by 2020.
- ❑ *The ASEAN Agreement on Services Liberalization*
  - Participation in computer reservation system and maritime freight forwarding for air and maritime transport, respectively;
  - Development of convention centres and theme parks for the tourism sector;
  - Limitation of foreign equity for wholesale and retail trade business to 30 per cent and the commercial establishment of MSC status companies in engineering services;
  - Limitation of foreign equity in telecommunications and construction services to 35 per cent and 40 per cent, respectively; and
  - Employment of not more than three foreign experts for operational headquarters for financial and insurance services.

#### **Implications of Malaysia's commitments under WTO and AFTA**

- ❑ Overall improvement in market access as a result of tariff reductions on a WTO wide basis and the phasing in of AFTA;
- ❑ Continued efforts of industries to sustain and expand market share in face of greater competition as tariff barriers are gradually dismantled;
- ❑ Move towards more skills- and technology-driven strategy to enhance competitiveness under the WTO trading regime and the step towards more intra-regional alliances under the AFTA trade and investment regime to intensify industry's resilience and competitiveness;
- ❑ Mechanisms under the WTO and AFTA to safeguard domestic producers against sudden surges of imports that will cause serious injury; and
- ❑ Gradual phasing in of commitments to commensurate with the level of development.

## Macroeconomic Thrusts

3.07 Malaysian's performance will be influenced by developments in the external environment as it is highly integrated with the global economy. It will be exposed to the risks of economic and financial shocks, which transcend national borders and regions and are difficult to predict. The achievement of the growth and structural transformation targets will hinge on Malaysia's ability to strengthen its resilience and competitiveness.

3.08 During the OPP3 period, the focus of macroeconomic management will be to strengthen economic fundamentals so that the economy will continue to grow rapidly, while being able to withstand cyclical downturns or external shocks. Efforts will be taken to ensure that the nation is able to achieve sustainable long-term growth with low inflation and price stability and a healthy resource and external balance position. The development of the knowledge-based economy will also provide a platform to move the country's productivity and potential output along a higher growth path. In this context, the thrusts of the macroeconomic agenda under the National Vision Policy will be as follows:

- ❑ *improving productivity by enhancing the contribution of total factor productivity (TFP) to growth;*
- ❑ *achieving domestic demand-driven growth;*
- ❑ *enhancing private sector-led growth;*
- ❑ *reducing import intensity and increasing services receipt to maintain a sustainable balance of payments account;*
- ❑ *promoting further the growth of the manufacturing, services and agriculture sectors;*
- ❑ *maintaining a low rate of inflation and price stability;*
- ❑ *achieving surplus in the public sector account; and*
- ❑ *maintaining a reasonable level of domestic savings as an important source of investible resource.*

## Prospects for the Malaysian Economy

3.9 During the OPP3 period, Malaysia's GDP is targeted to grow at an average annual rate of 7.5 per cent in real terms, taking into account the projected trends



in the world economy, growth in domestic savings and investment as well as expected productivity improvements. In addition, the development of a knowledge-based economy will equip Malaysia with the capability to develop indigenous technology and create new products, thereby providing the basis for endogenously-driven growth. To support the strategy, measures will be introduced to increase the pool of skilled human resource, accelerate technology adoption and utilization, strengthen hard and soft infrastructure as well as the adoption of pro-business strategies and policies.

### *Sources of Growth*

3.10 To achieve sustainable rapid growth, productivity will be improved with emphasis on increasing the contribution of TFP to output. During the OPP3 period, TFP is targeted to contribute 42.5 per cent of GDP growth, while labour and capital will constitute 20.9 per cent and 36.6 per cent, respectively, as shown in *Table 3-2*. Improvements in technology and the organization of the production process are expected to drive TFP growth. The increased use of computers and information and communications technology (ICT) as well as enhanced capabilities in the Internet, in addition to investment spill-over effects, will contribute significantly to improvements in TFP. The contribution of labour is expected to be derived from quality and productivity improvements following the decline in the growth rate of the labour force and the Government's efforts to reduce dependence on unskilled and semi-skilled foreign labour in the medium and long term. Efforts to improve the level of education, intensify skills training and attract highly specialized foreigners and Malaysians abroad, will contribute to the improvement in the quality of labour. Efficiency of capital, measured in terms of the incremental capital output ratio, is also expected to be better, averaging 4.6 during the OPP3 period compared with 6.1 during the OPP2 period.

3.11 During the OPP3 period, concerted efforts will be taken to stimulate endogenously-led growth, where indigenous capabilities in innovation and technology development as well as human capital will be the main contributors to wealth creation and economic growth. These factors will provide increasing returns to growth and enhance the potential output of the economy. To build a strong base for endogenously-driven growth, efforts will be taken to strengthen science and technology (S&T) and research and development (R&D), enhance technology absorptive capability, improve efficiency in resource utilization and nurture industries where Malaysia has a competitive advantage.

| TABLE 3-2                                     |               |                |            |                       |
|---|---------------|----------------|------------|-----------------------|
| CONTRIBUTIONS OF FACTORS OF PRODUCTION<br>(%) |               |                |            |                       |
| <i>Period</i>                                 | <i>Labour</i> | <i>Capital</i> | <i>TFP</i> | <i>GDP<br/>Growth</i> |
| <b>OPP1 (1971-1990)</b>                       |               |                |            |                       |
| <i>% contribution</i>                         | 2.4           | 3.4            | 0.9        | 6.7                   |
| <i>% to total</i>                             | 36.1          | 50.9           | 13.0       | 100.0                 |
| <b>OPP2 (1991-2000)</b>                       |               |                |            |                       |
| <i>% contribution</i>                         | 1.7           | 3.5            | 1.8        | 7.0                   |
| <i>% to total</i>                             | 24.3          | 50.2           | 25.5       | 100.0                 |
| <b>OPP3 (2001-2010)</b>                       |               |                |            |                       |
| <i>% contribution</i>                         | 1.6           | 2.7            | 3.2        | 7.5                   |
| <i>% to total</i>                             | 20.9          | 36.6           | 42.5       | 100.0                 |

### *Private Sector Expenditure*

3.12 To strengthen the resilience of the economy, domestic demand particularly private investment will be strengthened to drive economic growth, while continuing to promote foreign direct investment (FDI) in strategic areas. *Private consumption* is anticipated to increase by 7.4 per cent per annum during the OPP3 period, as shown in *Table 3-3*, mainly resulting from higher disposable incomes and positive wealth effect. Private consumption per capita in current terms is expected to double from RM6,198 in 2000 to RM13,303 in 2010, accompanied by a low inflation environment.

3.13 *Private investment* is expected to witness strong growth, increasing at 12.7 per cent per annum in real terms and is estimated to total RM1,051.9 billion in nominal terms. While Malaysia will continue to attract FDI into manufacturing and related sectors, emphasis will be placed on capital-intensive and high-technology industries as well as higher value-added activities with strong knowledge and skill content. Foreign investors will also be encouraged to locate their R&D regional headquarters as well as carry out R&D in Malaysia, particularly in the Multimedia Super Corridor (MSC). In addition, re-investments will be encouraged for the expansion and diversification of existing operations.

TABLE 3-3

**GROSS NATIONAL PRODUCT**  
**BY EXPENDITURE CATEGORY, 1990-2010**  
(in current prices with 1987 prices in italics)

| <i>Category</i>                           | <i>RM million</i>                       |   |   | <i>Average Annual Growth Rate (%)</i> |                          |
|---|---|---|---|---------------------------------------|--------------------------|
|   | <i>1990</i>                             | <i>2000</i>                             | <i>2010</i>                             | <i>Achieved<br/>OPP2</i>              | <i>Target<br/>OPP3</i>   |
| Consumption                               | 78,113<br><i>69,573</i>                 | 180,389<br><i>118,780</i>               | 460,149<br><i>235,737</i>               | 8.7<br>5.5                            | 9.8<br>7.1               |
| Private                                   | 61,687<br><i>55,354</i>                 | 144,212<br><i>94,459</i>                | 384,503<br><i>192,559</i>               | 8.9<br>5.5                            | 10.3<br>7.4              |
| Public                                    | 16,426<br><i>14,219</i>                 | 36,177<br><i>24,321</i>                 | 75,646<br><i>43,178</i>                 | 8.2<br>5.5                            | 7.7<br>5.9               |
| Investment                                | 39,348<br><i>35,886</i>                 | 87,144<br><i>64,415</i>                 | 207,005<br><i>140,840</i>               | 8.3<br>6.0                            | 9.0<br>8.1               |
| Private                                   | 26,065<br><i>23,772</i>                 | 42,854<br><i>31,677</i>                 | 154,387<br><i>105,042</i>               | 5.1<br>2.9                            | 13.7<br>12.7             |
| Public                                    | 13,283<br><i>12,114</i>                 | 44,290<br><i>32,738</i>                 | 52,618<br><i>35,798</i>                 | 12.8<br>10.5                          | 1.7<br>0.9               |
| Change in Stocks                          | -813<br><i>-697</i>                     | 4,379<br><i>1,174</i>                   | 2,347<br><i>682</i>                     | —<br>—                                | —<br>—                   |
| Exports of Goods &<br>Non-Factor Services | 88,675<br><i>76,758</i>                 | 426,523<br><i>247,037</i>               | 930,419<br><i>489,792</i>               | 17.0<br>12.4                          | 8.1<br>7.1               |
| Imports of Goods &<br>Non-Factor Services | 86,241<br><i>75,544</i>                 | 359,015<br><i>222,137</i>               | 877,914<br><i>437,306</i>               | 15.3<br>11.4                          | 9.4<br>7.0               |
| <b>GDP at Purchasers' Value</b>           | <b>119,081</b><br><b><i>105,977</i></b> | <b>339,420</b><br><b><i>209,269</i></b> | <b>722,006</b><br><b><i>429,745</i></b> | <b>11.0</b><br><b>7.0</b>             | <b>7.8</b><br><b>7.5</b> |
| Net Factor Payments                       | -5,064<br><i>-4,320</i>                 | -28,606<br><i>-18,777</i>               | -39,590<br><i>-25,087</i>               | —<br>—                                | —<br>—                   |
| <b>GNP at Purchasers' Value</b>           | <b>114,017</b><br><b><i>101,657</i></b> | <b>310,814</b><br><b><i>190,492</i></b> | <b>682,416</b><br><b><i>404,658</i></b> | <b>10.5</b><br><b>6.5</b>             | <b>8.2</b><br><b>7.8</b> |
| Per Capita GNP (RM)                       | 6,298<br><i>5,616</i>                   | 13,359<br><i>8,188</i>                  | 23,610<br><i>14,000</i>                 | 7.8<br>3.8                            | 5.9<br>5.5               |

3.14 During the OPP3 period, greater efforts will be taken to promote domestic investments to accelerate the development of local industries as well as create Malaysian multinational corporations (MNCs) in order to broaden the industrial base and composition. This will also contribute towards increasing economic resilience. Local businesses and institutions will be encouraged to collaborate with foreign businesses to form strategic alliances in R&D, product design, production, distribution and marketing. The manufacture of capital and intermediate goods in which Malaysia has competitive advantage will be intensified, to supplement and substitute for the import of such goods. Malaysian businesses will also be encouraged to strengthen their linkages with MNCs in order to take advantage of global outsourcing and be part of the global value chain. They will need to build their capabilities in niche areas as well as participate in upstream and downstream activities within industrial clusters. The development of small- and medium-scale enterprises (SMEs) will be promoted as an important vehicle to increase inter- and intra-industry linkages and strengthen the industrial base. Concerted efforts will be made to provide a conducive environment for innovation and the generation of new ideas by private enterprise. In this regard, the legal and institutional framework will be reviewed to generate a dynamic environment for enterprise and innovation. Promising local enterprises will be provided appropriate incentives to enable them to compete successfully.

#### *Structure of Exports and Imports*

3.15 The share of manufacturing exports will increase to 90.7 per cent, while the share of the agriculture and mining exports are expected to decline to 4.3 per cent and 2.1 per cent, respectively, by the end of the OPP3 period, as shown in *Table 3-4*. The exports of agro-based manufactured products, however, are expected to increase with the expansion in domestic processing of agricultural products as well as the development of Malaysia as an international *halal* food hub. Within the primary commodities sector, palm oil, petroleum and liquefied natural gas (LNG) will continue to be the main contributors to export earnings. The electrical and electronics subsector will continue to be the major contributor for manufacturing exports accounting for 75.6 per cent.

3.16 With regard to *imports*, the share of capital and intermediate goods are expected to continue to constitute the major portion, at about 87 per cent of total imports. The import of these goods are, however, expected to increase at a lower rate, with the growth rate for capital goods falling from 12.1 per cent per annum

TABLE 3-4

**MERCHANDISE TRADE, 1990-2010**

| <i>Item</i>             | <i>RM million</i> |                |                | <i>% of total</i> |              |              | <i>Average Annual Growth Rate (%)</i> |             |
|-------------------------|-------------------|----------------|----------------|-------------------|--------------|--------------|---------------------------------------|-------------|
|                         | <i>1990</i>       | <i>2000</i>    | <i>2010</i>    | <i>1990</i>       | <i>2000</i>  | <i>2010</i>  | <i>OPP2</i>                           | <i>OPP3</i> |
| <b>Gross Export</b>     |                   |                |                |                   |              |              |                                       |             |
| Agriculture & Forestry  | <b>15,621</b>     | <b>22,914</b>  | <b>34,774</b>  | <b>19.6</b>       | <b>6.1</b>   | <b>4.3</b>   | <b>3.9</b>                            | <b>4.3</b>  |
| Palm Oil                | 4,411             | 9,948          | 15,315         | 5.5               | 2.7          | 1.9          | 8.5                                   | 4.4         |
| Rubber                  | 3,027             | 2,571          | 1,840          | 3.8               | 0.7          | 0.2          | -1.6                                  | -3.3        |
| Sawlogs                 | 4,041             | 2,489          | 1,800          | 5.1               | 0.7          | 0.2          | -4.7                                  | -3.2        |
| Sawn Timber             | 3,065             | 3,020          | 4,000          | 3.8               | 0.8          | 0.5          | -0.1                                  | 2.8         |
| Mining                  | <b>14,573</b>     | <b>26,801</b>  | <b>16,855</b>  | <b>18.3</b>       | <b>7.2</b>   | <b>2.1</b>   | <b>6.3</b>                            | <b>-4.5</b> |
| Crude Oil & Condensates | 10,639            | 14,241         | 3,642          | 13.4              | 3.8          | 0.5          | 3.0                                   | -12.7       |
| LNG                     | 2,635             | 11,300         | 10,578         | 3.3               | 3.0          | 1.3          | 15.7                                  | -0.7        |
| Tin                     | 902               | 435            | 447            | 1.1               | 0.1          | 0.1          | -7.0                                  | 0.3         |
| Manufacturing           | <b>46,841</b>     | <b>317,937</b> | <b>729,377</b> | <b>58.8</b>       | <b>85.2</b>  | <b>90.7</b>  | <b>21.1</b>                           | <b>8.7</b>  |
| Others                  | <b>2,611</b>      | <b>5,657</b>   | <b>22,870</b>  | <b>3.3</b>        | <b>1.5</b>   | <b>2.8</b>   | <b>8.0</b>                            | <b>15.0</b> |
| <b>Total</b>            | <b>79,646</b>     | <b>373,307</b> | <b>803,876</b> | <b>100.0</b>      | <b>100.0</b> | <b>100.0</b> | <b>16.7</b>                           | <b>8.0</b>  |
| <b>Gross Imports</b>    |                   |                |                |                   |              |              |                                       |             |
| Capital Goods           | 14,967            | 47,064         | 106,329        | 18.9              | 15.1         | 13.4         | 12.1                                  | 8.5         |
| Intermediate Goods      | 51,517            | 230,611        | 582,201        | 65.1              | 73.8         | 73.1         | 16.2                                  | 9.7         |
| Consumption Goods       | 6,222             | 17,372         | 49,105         | 7.9               | 5.6          | 6.2          | 10.8                                  | 10.9        |
| Others <sup>1</sup>     | 3,251             | 11,070         | 36,785         | 4.1               | 3.5          | 4.6          | 13.0                                  | 12.8        |
| Retained Imports        | 75,957            | 306,118        | 774,420        | 96.0              | 98.0         | 97.3         | 15.0                                  | 9.7         |
| Imports for re-exports  | 3,162             | 6,309          | 21,490         | 4.0               | 2.0          | 2.7          | 7.2                                   | 13.0        |
| <b>Total</b>            | <b>79,119</b>     | <b>312,427</b> | <b>795,909</b> | <b>100.0</b>      | <b>100.0</b> | <b>100.0</b> | <b>14.7</b>                           | <b>9.8</b>  |

Note: <sup>1</sup> Dual used goods

during the OPP2 period to 8.5 per cent per annum during the OPP3 period and for intermediate goods from 16.2 per cent per annum to 9.7 per cent per annum during the same period. This trend is attributed to increased domestic capability to produce some of these goods, including more SMEs producing intermediate goods.

## **Growth and Structural Transformation of the Economy**

3.17 The manufacturing, services and agriculture sectors will provide the impetus for economic growth during the OPP3 period, as shown in *Table 3-5*. These sectors are expected to be strengthened following the development of the knowledge-based economy which will accelerate the infusion of technology and modern management practices and increase the value added and productivity. The *manufacturing sector* is expected to grow at an average rate of 8.3 per cent per annum with its share to GDP rising to 36 per cent by 2010. Modernization of plant and machinery and the training of knowledge and skilled workers will permit the absorption of a new generation of technologies. Although the manufacturing sector will continue to be heavily concentrated in electrical and electronic products, the subsector is expected to become increasingly diversified and sophisticated, thereby generating higher value added. Efforts will be made to accelerate the shift towards higher-end activities and products as well as strengthen the linkages within the subsector and with the rest of the economy. Resource-based industries, such as petrochemical, pharmaceutical, oleochemical, wood-based and food products will be promoted alongside other industries such as automotive, aerospace and fabricated metal products.

3.18 Policy reforms in the manufacturing sector would focus on removing the constraints and rigidities facing the sector as well as broaden and deepen its base. The aim is to have a more diversified growth within the electronics as well as other subsectors, particularly food processing, industrial chemicals including fertilizers, other chemical and plastic products, and petroleum products, including petrochemicals. Since technology is the key for Malaysia to achieve its aspiration of becoming a developed nation, R&D will be promoted among Malaysian industries. Networking or collaborative linkages between the public sector research institutes and industry will be encouraged. Efforts will be intensified to promote indigenous technology and link technological resources, both from local and foreign sources to markets in Malaysia. With ICT, Malaysian companies will also be engaged in international subcontracting and outsourcing to produce and market goods at competitive prices. There is also greater scope for the customization of products.

3.19 To enhance the contribution of SMEs to economic growth, efforts will be taken to improve their financial management and marketing skills as well as strengthen their links with large-scale industries. A specialized estate with support services will also be established to locate SMEs in order to achieve economies of scale. Efforts will also be made to assist industry clusters to share resources such as information, experience and innovation as well as produce final goods and services in an integrated manner.

TABLE 3-5

**SOURCES OF GROWTH BY INDUSTRY OF ORIGIN  
AND STRUCTURE OF PRODUCTION, 1991-2010**

(in 1987 prices)

| <i>Sector</i>   | <i>Average Annual Growth Rate (%)</i> |             | <i>Sources of Growth (%)</i> |                    | <i>Structure of Production (% of GDP)</i> |              |
|---|---------------------------------------|-------------|------------------------------|--------------------|---|--------------|
|   | <i>OPP2</i>                           | <i>OPP3</i> | <i>Achieved OPP2</i>         | <i>Target OPP3</i> | <i>2000</i>                               | <i>2010</i>  |
| Agriculture & Forestry,<br>Livestock & Fisheries                    | 0.5                                   | 3.5         | 0.1                          | 0.3                | 8.7                                       | 5.9          |
| Mining & Quarrying  | 3.4                                   | -2.7        | 0.3                          | -0.1               | 6.6                                       | 2.4          |
| Manufacturing   | 10.4                                  | 8.3         | 3.0                          | 2.9                | 33.4                                      | 36.0         |
| Construction  | 6.4                                   | 6.6         | 0.2                          | 0.2                | 3.3                                       | 3.1          |
| Electricity, Gas & Water  | 9.6                                   | 7.5         | 0.3                          | 0.3                | 3.4                                       | 3.4          |
| Wholesale & Retail Trade,<br>Hotels & Restaurants                   | 8.3                                   | 9.1         | 1.2                          | 1.5                | 14.9                                      | 17.3         |
| Transport, Storage &<br>Communications                              | 8.9                                   | 9.7         | 0.6                          | 0.9                | 8.0                                       | 9.8          |
| Finance, Insurance, Real<br>Estates & Business Services             | 11.0                                  | 8.9         | 1.1                          | 1.1                | 11.8                                      | 13.5         |
| Government Services   | 4.6                                   | 3.3         | 0.4                          | 0.2                | 7.0                                       | 4.7          |
| Other Services  | 7.4                                   | 9.1         | 0.5                          | 0.7                | 7.5                                       | 8.7          |
| (-) Imputed Bank Services<br>Charges                                | 11.8                                  | 7.0         | 0.7                          | 0.5                | 6.8                                       | 6.5          |
| (+) Import Duties   | 2.1                                   | 3.9         | 0.1                          | 0.1                | 2.3                                       | 1.7          |
| <b>GDP at Purchaser's Value</b>                                     | <b>7.0</b>                            | <b>7.5</b>  | <b>7.0</b>                   | <b>7.5</b>         | <b>100.0</b>                              | <b>100.0</b> |
| Primary Sector  | 1.6                                   | 1.2         | 0.3                          | 0.1                | 15.3                                      | 8.4          |
| Secondary Sector  | 9.9                                   | 8.1         | 3.2                          | 3.1                | 36.7                                      | 39.1         |
| Tertiary Sector   | 8.3                                   | 8.4         | 4.1                          | 4.6                | 52.4                                      | 57.4         |
| <i>Adjusted for Import Duties Less Imputed Bank Service Charges</i> |                                       |             |                              |                    |   |              |
| Primary Sector  | 1.3                                   | 1.2         | 0.3                          | 0.1                | 14.7                                      | 8.0          |
| Secondary Sector  | 9.6                                   | 8.1         | 3.0                          | 2.9                | 35.3                                      | 37.4         |
| Tertiary Sector   | 7.8                                   | 8.4         | 3.8                          | 4.4                | 50.0                                      | 54.5         |

3.20 During the OPP3 period, the Government will continue to promote the *services sector* as a catalyst for growth and potential source of exports to strengthen the balance of payments position. A more efficient services sector will be developed to promote greater industrial efficiency and competitiveness. The services sector is expected to grow by 8.4 per cent per annum and its share to GDP is estimated to increase to 57.4 per cent per annum by 2010. Efforts will continue to develop Malaysia into a regional hub for air and sea transportation as well as a regional centre of educational excellence. The transport and communications sector; the finance, insurance, real estate and business services sector; and the wholesale and retail trade, hotels and restaurants sector are expected to register the fastest growth rates. As the knowledge-based economy develops, a new wave of service activities particularly related to ICT are expected to be generated.

3.21 The transport, storage and communications sector will be driven by more affordable and accessible products and the greater integration in transportation. Developments in this sector will make it possible for the country to build its strength as a major regional trading centre. The finance, insurance, real estate and business services sector will benefit from continued consolidation and restructuring efforts. The Financial Sector Master Plan will guide the development in finance and insurance. The development of the bond market and the greater use of e-commerce will provide the impetus for growth of this sector. The wholesale and retail trade, hotels and restaurants sector will be propelled by the positive wealth effect as well as concerted efforts to make Malaysia a major tourist destination and a shopping haven. The country will continue to be promoted as a centre for international meetings, conventions and exhibitions. In addition, the promotion of tourism products, such as eco- and agro-tourism, cultural attractions, leisure and sports-related activities, as well as education and health tourism, is expected to further boost the tourism sector. The development of the MSC as an information technology and e-commerce hub will see increased development of multimedia products and services, including the development of software required by the contents industry involved in electronic media, animation and post-filming production.

3.22 The *agriculture sector* is expected to register a growth rate of 3.5 per cent per annum with palm oil remaining as the major contributor. Food production is expected to increase substantially through greater involvement of the private sector in modern and large scale farming, particularly in the permanent food production areas including aquaculture zones, and agro-technology and urban horticulture parks. While the sector remains an important supplier of food, new sources of growth will be exploited particularly in the high value herbal-based products, ornamental fish and floriculture as well as agro- and eco-tourism. For



rubber, although its production is expected to continue to decline, efforts will be undertaken to improve its viability by increasing yield, promoting Latex Timber Clones, adopting new technologies and integrating rubber plantation with other viable economic activities. Efforts to promote reverse investments for food and plantation crops will continue to ensure supply of raw materials to industries while taking advantage of the cheaper production cost and the availability of resources overseas.

3.23 The *construction sector* is expected to grow at 6.6 per cent per annum during the OPP3 period. The major contributor to this growth will be the ongoing infrastructure projects initiated towards the end of the OPP2 period, such as the Express Rail Link for Kuala Lumpur International Airport and the development of Putrajaya, as well as other projects to strengthen the social infrastructure. The residential and commercial space subsectors are expected to experience slow growth during the first half of the Plan period mainly due to the supply overhang. The unsold units of residential property stood at 45,500 units and the occupancy rate for commercial space at about 75 per cent as at mid-2000.

3.24 In line with the National Depletion Policy, the mining sector is expected to contract by 2.7 per cent per annum during the OPP3 period, with the anticipated decline in the output of crude oil at 7.5 per cent per annum. The crude oil subsector, however, will still remain important, contributing 79.8 per cent to the mining sector output. In addition, with the full operation of the Malaysia LNG III plant, the gas subsector is expected to expand by 7.9 per cent per annum during the OPP3 period. Malaysia is expected to become a net importer of petroleum during the second half of the OPP3 period.

### **Price Development**

3.25 During the OPP3 period, the rate of inflation is expected to average 2.7 per cent per annum. The imports price index is estimated to record a moderate increase averaging 2.2 per cent per annum. Monetary policy will ensure that the growth of money supply and credit creation does not contribute to higher inflation. The Government will continue to adopt a prudent fiscal policy to achieve a balanced budget during the second half of the OPP3 period. Efforts are also being made to keep wage increases in line with productivity improvements. Measures to encourage automation and labour-saving techniques as well as encourage higher participation of women and retirees in the labour market will moderate labour demand pressures. Efforts to ensure adequate supply of goods and services as well as reduce distribution and marketing costs will ease supply constraints and bottlenecks.

## Financing Development

3.26 With the economy back on track, the public sector is expected to revert to its role as the facilitator for the private sector to lead economic growth. Federal Government operating expenditure will be lower at around 14.0 per cent of GNP during the OPP3 period through prudent fiscal management and efficient use of resources. During this period, Federal Government development expenditure is expected to be RM250.0 billion or 5.1 per cent of GNP, as shown in *Table 3-6*. The Federal Government development expenditure will continue to focus on the provision and maintenance of social and physical infrastructure to further reduce poverty, improve social facilities, modernize the security sector, reduce regional imbalances and facilitate private sector initiatives. High priority will also be accorded to human resource development and the Government will also continue to recruit competent and well qualified people to enhance the quality of the public service.

| TABLE 3-6  |                  |                |                  |                |
|--|------------------|----------------|------------------|----------------|
| FEDERAL GOVERNMENT EXPENDITURE AND FINANCING,<br>1991-2010<br>(RM million) |                  |                |                  |                |
| Item   | Achieved<br>OPP2 | Target<br>OPP3 | % of GNP         |                |
|  |                  |                | Achieved<br>OPP2 | Target<br>OPP3 |
| <b>Total Revenue</b>   | <b>516,660</b>   | <b>925,280</b> | <b>23.5</b>      | <b>18.8</b>    |
| Direct Taxes   | 231,285          | 378,452        | 10.5             | 7.7            |
| Indirect Taxes   | 173,131          | 382,986        | 7.9              | 7.8            |
| Non-Tax Revenue  | 105,543          | 153,457        | 4.8              | 3.1            |
| Non-Revenue Receipts   | 6,701            | 10,385         | 0.3              | 0.2            |
| <b>Total Expenditure</b>   |                  |                |                  |                |
| Operating Expenditure  | 400,587          | 688,784        | 18.2             | 14.0           |
| Development Expenditure  | 153,742          | 250,000        | 7.0              | 5.1            |
| <b>Overall Surplus/Deficit</b>   | <b>-23,025</b>   | <b>-5,204</b>  | <b>-1.0</b>      | <b>-0.1</b>    |
| <i>Sources of Financing</i>  |                  |                |                  |                |
| Net Foreign Borrowing <sup>1</sup>   | -10,875          |                | -0.5             |                |
| Net Domestic Borrowing   | 35,182           |                | 1.6              |                |
| Use of Accumulated Assets<br>& Special Receipts                            | -6,962           |                | -0.3             |                |
| <i>Note:</i> <sup>1</sup> (-) Indicates net repayment                      |                  |                |                  |                |

3.27 For the public sector as a whole, operating expenditure is estimated to be around 16.4 per cent of GNP, as shown in *Table 3-7*. The development expenditure of the public sector is estimated to be higher at RM517.4 billion during the OPP3 period compared with RM364.5 billion in the OPP2. Of this total, 48.4 per cent will constitute the development expenditure of the Federal Government and the balance, largely that of the Non-Financial Public Enterprises (NFPEs). Although in current terms, public sector development expenditure is larger compared with the OPP2 period, in real terms, however, it will be lower. This is in line with the policy of reducing the direct participation of the public sector in economic activities.

3.28 During the OPP3 period, the consolidated public sector account is expected to register an overall surplus of about RM74.1 billion or 1.5 per cent of GNP, resulting from better revenue collection and improvement in the current surplus of the NFPEs. This surplus will be used to finance development expenditure, and the public sector, therefore, will not need to borrow substantially from external sources or crowd out the private sector.

### **Balance of Payments**

3.29 The surplus in the *merchandise account* is expected to decline gradually with exports growing slower than imports throughout the OPP3 period, as shown in *Table 3-8*. The imports are attributed to the high level of private investment activity requiring capital and intermediate goods imports. However, efforts will be taken to reduce the import value of intermediate goods, among others, by encouraging greater domestic sourcing and global sourcing for cheaper imports. In line with this, import elasticity is expected to decline from 1.6 during the OPP2 period to 1.0 during the OPP3 period.

3.30 The *services deficit* is expected to worsen during the first half of the OPP3 period but improve during the second half. The deficit will be largely attributed to higher payments for freight and insurance as well as outflows in investment income. In this regard, the efficiency and capacity of the domestic shipping industry will be increased. For the air transport and insurance industries, efforts will be taken to further enhance their level of efficiency and productivity. In addition, measures will be introduced to improve the quality of foreign investments as well as slow down the repatriation of profits abroad by encouraging reinvestments.

3.31 Efforts to promote Malaysia as a tourist destination and a regional centre

TABLE 3-7  
**CONSOLIDATED PUBLIC SECTOR EXPENDITURE AND FINANCING,  
1991-2010**  
(RM million)

| <i>Item</i>   | <i>Achieved<br/>OPP2</i> | <i>Target<br/>OPP3</i> | <i>% of GNP</i>          |                        |
|---|--------------------------|------------------------|--------------------------|------------------------|
|   |                          |                        | <i>Achieved<br/>OPP2</i> | <i>Target<br/>OPP3</i> |
| General Government Revenue & NFPEs Current Surplus <sup>1</sup> | 850,261                  | 1,399,341              | 38.6                     | 28.4                   |
| Operating Expenditure   | 456,678                  | 807,790                | 20.7                     | 16.4                   |
| Development Expenditure   | 364,469                  | 517,436                | 16.6                     | 10.5                   |
| <b>Overall Surplus/Deficit</b>                                  | <b>29,113</b>            | <b>74,114</b>          | <b>1.3</b>               | <b>1.5</b>             |
| <i>Sources of Financing</i>                                     |                          |                        |                          |                        |
| Net Foreign Borrowing <sup>2</sup>                              | 17,797                   |                        | 0.8                      |                        |
| Net Domestic Borrowing  | -40,148                  |                        | -1.8                     |                        |
| Change in Assets & Special Receipts <sup>3</sup>                | -6,762                   |                        | -0.3                     |                        |

*Notes:*

<sup>1</sup> General Government comprises Federal Government, State Governments, Local Government & Statutory Authorities.

<sup>2</sup> (-) Indicates net repayments.

<sup>3</sup> (-) Indicates build up in assets; (+) draw down in assets.

TABLE 3-8  
**BALANCE OF PAYMENTS, 1990-2010**  
(RM million)

| <i>Item</i>                | <i>1990</i>   | <i>2000</i>    | <i>2010</i>    | <i>% of GNP</i> |              |             |
|----------------------------|---------------|----------------|----------------|-----------------|--------------|-------------|
|                            |               |                |                | <i>1990</i>     | <i>2000</i>  | <i>2010</i> |
| <b>Merchandise Account</b> | <b>7,093</b>  | <b>79,522</b>  | <b>50,891</b>  | <b>6.2</b>      | <b>25.6</b>  | <b>7.5</b>  |
| <b>Services Account</b>    | <b>-9,723</b> | <b>-40,624</b> | <b>-38,176</b> | <b>-8.5</b>     | <b>-13.1</b> | <b>-5.6</b> |
| Freight & Insurance        | -3,837        | -12,850        | -20,082        | -3.4            | -4.1         | -2.9        |
| Other Transportation       | -25           | 1,988          | 11,863         | 0.0             | 0.6          | 1.7         |
| Travel & Education         | 632           | 9,738          | 27,122         | 0.6             | 3.1          | 4.0         |
| Net Investment Income      | -5,072        | -27,985        | -39,090        | -4.4            | -9.0         | -5.7        |
| Government Transaction     | -3            | -21            | -74            | 0.0             | 0.0          | 0.0         |
| Other Services             | -1,418        | -11,493        | -17,915        | -1.2            | -3.7         | -2.6        |
| <b>Transfers</b>           | <b>147</b>    | <b>-7,735</b>  | <b>-4,201</b>  | <b>0.1</b>      | <b>-2.5</b>  | <b>-0.6</b> |
| <b>Current Account</b>     | <b>-2,483</b> | <b>31,163</b>  | <b>8,514</b>   | <b>-2.2</b>     | <b>10.0</b>  | <b>1.2</b>  |

of educational excellence will result in higher receipts in travel and education and this will help to mitigate the services deficit. In addition, the structural changes in the economy, which is expected to result in reduced dependence on foreign labour, is expected to decrease *transfer payments*.

3.32 With the continuing services deficit, the *current account* is expected to register a small surplus in 2010. To maintain a healthy balance of payments position, the Government will, among others, introduce a right mix of fiscal, monetary and exchange rate policies to promote capital formation, export competitiveness and low domestic inflation.

### **Terms of Trade**

3.33 The terms of trade is expected to decline by 1.2 per cent per annum during the OPP3 period. Export prices are estimated to record a smaller annual increase of 1.0 per cent as against 2.2 per cent for import prices. The decline in the terms of trade is associated with the expected fall in prices of major export primary commodities, such as crude petroleum, saw logs, tin and LNG. However, export prices for manufactured goods are expected to increase by 2.5 per cent per annum, thereby improving the earnings for exported manufactured products from 85.2 per cent of total exports in 2000 to 90.7 per cent in 2010. The GDP, in terms of real purchasing power, will increase by about 6.0 per cent, at a rate that is slightly lower than the rate of output growth of 7.5 per cent.

### **Resource Balance**

3.34 The profile of the savings-investment gap during the OPP3 period augurs well for sustained growth of the Malaysian economy. Savings as a percentage of GNP is estimated to average 33.9 per cent, while investment is estimated to be 31.6 per cent, recording a surplus of savings over investment of about 2.3 per cent of GNP, as shown in *Table 3-9*. The public sector is anticipated to have a surplus of 1.6 per cent of GNP while the private sector will have a surplus of 0.7 per cent during the period.

### **Employment**

3.35 The growth of labour supply during the OPP3 period is anticipated to be 3.1 per cent per annum. With GDP projected to grow at 7.5 per cent per annum and labour demand growing by an annual rate of 3.1 per cent, the unemployment rate is expected to decline from 3.1 per cent in 2000 to 2.5 per cent by 2010. The

main sources of employment growth will be from the manufacturing and services sectors, which are expected to grow at a rate of 4.1 and 3.7 per cent per annum, respectively. Employment in the government sector is estimated to record a smaller increase of 2.1 per cent per annum during the OPP3 period against 4.1 per cent for non-government sectors.

3.36 The emphasis of human resource development will be to build a critical mass of skilled manpower and knowledge workers, encourage greater labour mobility and provide market-oriented education and training to reduce structural unemployment. The labour force participation rate is expected to increase with higher participation of women and retirees and increasing work flexibility, such as teleworking and part-time jobs. The dependence on low-skilled immigrant labour will also be reduced, while foreign workers with the appropriate expertise will be recruited on a selective basis.

### III. CONCLUSION

| TABLE 3-9                                 |             |             |            |                  |                |
|---|-------------|-------------|------------|------------------|----------------|
| RESOURCE BALANCE, 1990-2010<br>(% of GNP) |             |             |            |                  |                |
| Sector                                    | 1990        | 2000        | 2010       | Cumulative       |                |
|   |             |             |            | Achieved<br>OPP2 | Target<br>OPP3 |
| NATIONAL                                  |             |             |            |                  |                |
| Savings                                   | 31.6        | 39.0        | 31.9       | 38.0             | 33.9           |
| Investment                                | 33.8        | 29.0        | 30.7       | 36.8             | 31.6           |
| <b>Resource Balance</b>                   | <b>-2.2</b> | <b>10.0</b> | <b>1.2</b> | <b>1.2</b>       | <b>2.3</b>     |
| PUBLIC                                    |             |             |            |                  |                |
| Savings                                   | 12.3        | 15.9        | 8.6        | 16.9             | 11.6           |
| Investment                                | 11.7        | 15.0        | 7.8        | 13.1             | 10.0           |
| <b>Resource Balance</b>                   | <b>0.6</b>  | <b>0.9</b>  | <b>0.8</b> | <b>3.8</b>       | <b>1.6</b>     |
| PRIVATE                                   |             |             |            |                  |                |
| Savings                                   | 19.3        | 23.1        | 23.3       | 21.1             | 22.3           |
| Investment                                | 22.1        | 14.0        | 22.9       | 23.7             | 21.6           |
| <b>Resource Balance</b>                   | <b>-2.8</b> | <b>9.1</b>  | <b>0.4</b> | <b>-2.6</b>      | <b>0.7</b>     |

3.37 The OPP3 period will present considerable challenges to the Malaysian economy. In this context, Malaysia will have to enhance its resilience, productivity and competitiveness to achieve high and sustainable rate of growth. The targeted growth will be in line with the potential output of the economy and accompanied by low inflation and price stability as well as healthy fiscal and external balances. The increase in knowledge intensity of economic activities, productivity enhancements, and efficient resource utilization will be the key drivers of growth. The infusion of knowledge into the agriculture, manufacturing and services sectors is expected to increase their contribution to growth. The foundation for an endogenously-driven growth strategy will also be strengthened during the period. The private sector will continue to be the engine of growth while the public sector will provide the enabling environment.

## **CHAPTER 4 - BUILDING A UNITED EQUITABLE SOCIETY**

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## **Chapter 4**

# **Building a United and Equitable Society**

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## CHAPTER 4

# Building a United and Equitable Society

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### I. INTRODUCTION

4.01 During the Third Outline Perspective Plan, OPP3 (2001-2010), the objectives of the distributional agenda will be re-emphasized through the National Vision Policy (NVP) to ensure balanced and equitable participation among and within ethnic groups as well as regions. The NVP will maintain the basic thrust of the New Economic Policy (NEP) where the two-pronged strategy of poverty eradication irrespective of race and restructuring of society in the context of rapid growth will remain vital to achieve the overriding objective of national unity. The implementation of the NVP will also build upon the successes that were achieved in the past, particularly through the NEP and the National Development Policy (NDP).

4.02 With the significant achievement in poverty reduction under the NEP and NDP, the focus of the poverty alleviation programme will be towards increasing income and quality of life of the poor and low-income groups. However, in order to eradicate pockets of poverty during the OPP3 period, the broad-based approach of the past will be reoriented to target disadvantaged groups and those in remote areas. Meanwhile, programmes under the strategy of restructuring of society will be streamlined towards correcting economic imbalances. To enhance Bumiputera participation, the NVP will re-emphasize the need to achieve numerical targets by end of the OPP3 period while continue instituting qualitative improvements. Measures will also be taken to build a dynamic Bumiputera Commercial and Industrial Community (BCIC), promote active Bumiputera participation in the knowledge-based economy as well as strengthen their resilience and competitiveness to meet the challenges of globalization. To achieve regional balance, efforts will be taken to reduce imbalances between the developed and less-developed states.

## II. FUTURE DIRECTIONS TO ACHIEVE DISTRIBUTIONAL OBJECTIVES

4.03 The main emphasis of the distributional objectives during the OPP3 period will be to ensure a more balanced and equitable participation among the various ethnic groups. Steps will be undertaken to consolidate and streamline restructuring programmes, improve the delivery mechanism as well as introduce new measures. Special attention will continue to be given to improve the quality and ensure the sustainability of Bumiputera participation. The thrusts of the distributional agenda are as follows:

- ❑ *eradicating absolute poverty and raise income share of the lowest 30 per cent of the households irrespective of race;*
- ❑ *increasing the size of middle income group;*
- ❑ *attaining effective Bumiputera participation and equity ownership of at least 30 per cent by 2010 in the context of economic growth without resorting to micro-restructuring of existing ventures;*
- ❑ *creating self-reliant and sustainable Bumiputera entrepreneurs through programmes to develop the BCIC;*
- ❑ *providing an enabling environment for Bumiputera to face the challenges of globalization;*
- ❑ *promoting effective participation of Bumiputera and other disadvantaged groups in the knowledge-based economy;*
- ❑ *ensuring employment participation reflects the ethnic composition of the population;*
- ❑ *improving the quality of life of all Malaysians; and*
- ❑ *enhancing regional balance through rapid development of the less-developed states.*

### Poverty Eradication and Income Distribution

4.04 The success of poverty eradication programmes remains as a prerequisite to create a united and equitable society. The highlight of antipoverty programmes undertaken during the NEP and NDP is as shown in *Box 4-1*. With the overall incidence of poverty being reduced significantly to 7.5 per cent in 1999, the poverty eradication programmes during OPP3 period will be more target-specific.

Measures will be directed towards addressing pockets of poverty in different regions, particularly in remote areas as well as among disadvantaged groups such as the *Orang Asli* and other Bumiputera minorities in Sabah and Sarawak. To facilitate the implementation of the target-specific programmes, a study on the profile of the poor and hardcore poor will be undertaken. Efforts will also be taken to address urban poverty, particularly among those residing in the periphery of urban areas. Absolute poverty is expected to be reduced to 0.5 per cent by the end of 2005. As for income distribution, the thrust of the programme will be to create a larger middle-income group. In addition, efforts will continue to be taken to increase income and improve the quality of life of the lowest 30 per cent of the population. The Government will streamline the eligibility criteria for assistance based on household income, which will be adjusted every three years. For the first three years of the OPP3 period, the income eligibility is set at RM1,200 per month per household.

4.05 As a long-term measure to address poverty and income inequality, education will remain as the main vehicle to promote upward mobility in the society. Efforts will be intensified to ensure that the poor and low-income groups benefit from various measures implemented in the education system. Financial assistance, will be given up to tertiary level to students from poor households. Steps will also be taken to improve the performance of students from poor and low-income households, especially among Bumiputera students in rural schools. Emphasis will be placed on improving their performance on subjects such as the English, mathematics and science. This will include, among others, the establishment of benchmarks and targets in terms of the performance of students and improvements in the delivery mechanism to ensure that the rural schools are at par with urban schools. Efforts will also be undertaken to reduce the incidence of dropouts among students from the poor and low-income households. The Government will also build more schools, including boarding schools, and related infrastructure in rural areas as well as upgrade existing schools.

4.06 Besides education, the provision of health services and other social amenities is also an important long-term measure to alleviate poverty and improve the quality of life. The Government will continue to ensure that the needs of the poor and low-income groups are met when implementing health programmes. The poor and low-income households will be exposed to better nutritional practices to improve their health status. In addition, the coverage of amenities such as electricity, safe water and transportation and communications will be further widened to reach remote and outlying areas, particularly in Sabah and Sarawak. The Government will ensure that more low-cost houses are built by the private

sector to benefit the poor and low-income groups through measures such as the tightening of enforcement on housing developers and improve the distribution of low-cost houses based on needs and eligibility. Loans will be made more affordable and accessible to the poor and low-income groups. On micro-credit financing, the provision of loans through *Amanah Ikhtiar Malaysia* (AIM) will be extended to every state.

4.07 During the OPP3 period, emphasis will be geared towards ensuring that the quality of life of the elderly and the disabled is further enhanced. For the elderly, their welfare will be taken into account in the national development efforts. Among the facilities that will be improved for the benefit of the disabled include public transportation, schooling, housing and sports. All new and existing buildings, shopping complexes, hospitals, banks, offices and public amenities will be made more disabled-friendly. Greater efforts will be undertaken to provide training and education to this group and facilitate their placement and employability. At the same time, the private sector and non-governmental organizations (NGOs) are expected to be more receptive towards meeting the needs of this special group.

#### BOX 4 - 1

##### **POVERTY ERADICATION PROGRAMMES**

Poverty eradication ranks high on Malaysia's development priority. The target for the New Economic Policy (NEP) was to reduce the incidence of poverty in Peninsular Malaysia from 49.3 per cent in 1970 to 16.7 per cent in 1990. Subsequently, under the National Development Policy (NDP), the target was to reduce the incidence of poverty in Malaysia to 7.2 per cent and the incidence of hardcore poverty to 0.5 per cent by 2000.

The incidence of poverty is based on the poverty line income (PLI). The PLI is defined as an income sufficient to purchase a minimum basket of food to maintain household members in good nutritional health and other basic needs such as clothing and footwear, rent, fuel and power, transport and communications, health care, education and recreation. The PLI is updated annually on the basis of the Consumer Price Index.

##### **Strategy and Programmes**

The main strategy for poverty eradication was providing employment opportunities in higher-paying jobs, while welfare handouts were reserved for the aged and disabled who could not find employment. Since the poor were largely engaged in agriculture, they were encouraged to be involved in modern

farming and non-farm or off-farm activities. The programmes implemented under the NEP and NDP are as follows:

- ☐ Resettling the landless and those with uneconomic holdings in new land development schemes. The settlers were provided with single unit houses complete with piped water and electricity;
- ☐ Undertaking in-situ development of existing agricultural land through rehabilitation and consolidation of the land, replanting of old commercial crops with new higher-yielding clones and better planting techniques;
- ☐ Integrating agricultural and rural development with downstream processing of farm products and encouraging village industries and rural entrepreneurship to generate additional sources of income;
- ☐ Introducing double-cropping or off-season cropping for padi, inter-cropping and mixed farming on the same plot of land to supplement the income derived from main crops;
- ☐ Establishing farmers' markets in urban centres so that farm produce can be sold directly and fetch better prices;
- ☐ Providing training and education on topics pertaining to farming as well as work attitudes and values to motivate participants to become more productive farmers;
- ☐ Providing industrial and vocational training for the rural manpower, coupled with credit facilities and related support, to enable them to be employed in non-farm occupations or start their own businesses in rural areas and urban centres;
- ☐ Improving educational access as well as providing text books and financial assistance to children of poor households; and
- ☐ Providing infrastructure and social amenities as part of a broader programme to improve the quality of life of all Malaysians. For the rural population, they include the provision of potable and piped water, electricity, roads, medical and health services and schools, including rural hostels.

During the NDP period, the Development Programme for the Hardcore Poor or *Program Pembangunan Rakyat Termiskin* (PPRT), was introduced to assist the hardcore poor. The programme established a register on the profile of hardcore poor households and contained a package of projects tailored to meet their specific needs, such as increasing their employability and income, better housing, food supplements for children and educational assistance. Direct assistance was given to the hardcore poor who are disabled and aged. In addition, the hardcore poor were provided with interest-free loans to purchase shares in a unit trust scheme (ASB-PPRT) so that the dividends can supplement their income.

Non-Governmental Organizations (NGOs) and the private sector complemented Government efforts in the poverty alleviation programmes. Working in close cooperation with one another, they provided small business loans, industrial training, job opportunities, educational support for children, and better housing.

4.08 Measures will be undertaken to introduce more income-generating activities to increase the household income of the poor and low-income groups. In this respect, specific income-generating strategies for the rural and agriculture sectors will be implemented through integrated, modern and commercial farming as outlined in the Third National Agricultural Policy. It is essential to enhance income-generating activities, particularly among padi farmers, rubber smallholders, fishermen and estate workers, since the incidence of poverty among them is high. In the rice subsector, farmers with small and uneconomical land will be encouraged to participate in land consolidation projects, particularly in the major granary areas. Padi farmers will also be encouraged to diversify into other subsectors such as aquaculture and livestock farming. Income of rubber smallholders will be increased through the promotion of innovative systems of planting latex timber clones (LTC) and also integrating rubber with other agricultural activities such as livestock, fruit and vegetable farming. To increase the income of fishermen, more downstream and other non-fishing activities will be promoted. With regard to oil palm smallholders, the Government will encourage them to utilize the newly established replanting fund. In addition, an income augmentation mechanism for smallholders will also be established to protect low-income farmers during difficult periods. Measures will also be taken to increase the income and improve the quality of life of estate workers. Appropriate programmes will also be introduced to address problems faced by former workers of fragmented estates.

4.09 The Government will conduct specialized household income surveys for Sabah and Sarawak to determine the state of poverty, income levels and quality of life in different locations within the respective states as well as among various Bumiputera groups such as the Kadazandusun, Iban, Bajau, Murut, Bidayuh and Melanau. The findings of the survey will be used to further enhance measures to alleviate poverty and improve quality of life of the population in Sabah and Sarawak, particularly those in the interior and remote areas.

4.10 During the OPP2 period, the income gaps between different income categories increased marginally. The top 20 per cent of the households experienced a marginal increase in income share to 50.5 per cent in 1999 compared with the decrease to 14.0 per cent for the bottom 40 per cent, as shown in *Table 4-1*. In addition, the Gini coefficient, a summary measure of income inequality, increased marginally from 0.4421 in 1990 to 0.4432 in 1999, indicating a marginal widening of income inequality.

4.11 Appropriate measures will be taken to increase the income of the lower and middle-income households. Workers, particularly from the lower occupational category, will be encouraged to upgrade their skills through education and training.



| TABLE 4-1  |              |              |
|--|--------------|--------------|
| MEAN MONTHLY GROSS HOUSEHOLD INCOME AND INCOME SHARE<br>BY INCOME GROUP, 1990 AND 1999 |              |              |
|  | 1990         | 1999         |
| <i>Mean Income (RM)</i>  |              |              |
| <b>Malaysia</b>  | <b>1,169</b> | <b>2,472</b> |
| Top 20%  | 2,925        | 6,268        |
| Middle 40%   | 1,037        | 2,204        |
| Bottom 40%   | 424          | 865          |
| <b>Urban</b>   | <b>1,606</b> | <b>3,103</b> |
| Top 20%  | 3,981        | 7,580        |
| Middle 40%   | 1,255        | 2,844        |
| Bottom 40%   | 558          | 1,155        |
| <b>Rural</b>   | <b>957</b>   | <b>1,718</b> |
| Top 20%  | 2,277        | 4,124        |
| Middle 40%   | 787          | 1,577        |
| Bottom 40%   | 369          | 670          |
| <i>Income Share (%)</i>  |              |              |
| Top 20%  | 50.0         | 50.5         |
| Middle 40%   | 35.5         | 35.5         |
| Bottom 40%   | 14.5         | 14.0         |
| <i>Gini Coefficient</i>  | 0.4421       | 0.4432       |

Another important measure to increase household income is to further encourage female participation in employment. Among the steps that will be taken include the introduction of flexi-hour employment and part-time jobs that will enable them to work and at the same time be a homemaker. To further facilitate women in employment, the establishment of facilities such as child-care centres and kindergartens will be further enhanced. The space for these centres will be included as part of the amenities to be provided by the developers in new housing, office and commercial projects.

4.12 To effectively implement anti-poverty programmes during the OPP3 period, existing programmes will be consolidated and improved, under the *Skim Pembangunan Kesejahteraan Rakyat* (SPKR). The SPKR will encompass the *Program Pembangunan Rakyat Termiskin* (PPRT) and other related anti-poverty programmes to address issues of general and hardcore poverty, irrespective of ethnicity in both the rural and urban areas. The *Program Sepadu Pembangunan Desa Terpencil* will be strengthened under SPKR to address pockets of poverty, particularly in remote areas and among the *Orang Asli* and other Bumiputera minorities in Sabah and Sarawak. To further improve the well-being and quality of life of the poor and low-income households, the SPKR, through its *Program Pembangunan Insan*, will inculcate the concept of self-esteem and self-reliance among the households and communities involved.

4.13 Measures will also be undertaken to ensure that inflation is contained at a low level to make services and goods affordable for the poor and the low-income groups. To gauge the progress of communities in both rural and urban areas, the Government will formulate indicators to measure their quality of life. In addition, NGOs and the private sector are expected to effectively implement their respective anti-poverty programmes and projects as a shared responsibility in nation building.

### **Quality of Life**

4.14 The quality of life for all Malaysians is expected to further improve during the OPP3 period. Real per capita income will increase by more than five per cent per annum as a result of rapid economic growth. With the incidence of poverty falling to a marginal level, more emphasis will be given to increase household income, particularly those in the lowest 30 per cent income category. Substantial investments in the provision and delivery of social services and amenities, particularly education, health and housing, will further contribute to the enhancement of the quality of life. In this respect, the enrolment in pre-schools, secondary schools and universities will be increased. With a more intensive implementation of the student-centred learning approach, creativity and thinking skills development will be emphasized. Efforts to raise the quality of education and training are expected to accelerate human resource development. A larger pool of trained, skilled and IT-oriented manpower will emerge to propel the nation towards an industrialized and knowledge based economy.

4.15 Efforts taken to increase job opportunities as well as provide an improved environment for work, including occupational safety and disputes settlement will

create better working conditions for workers. Improvements in health services and housing will also contribute to better health, longevity and household well-being. The expansion of transport and communication facilities will provide faster and better services for the performance of various economic activities. The overall quality of environment is expected to improve with more concrete efforts taken to ensure a cleaner, healthier and productive environment through new and improved technologies and better environmental management. As for public safety, crime and road accident rates are expected to decline in line with concerted efforts taken by the authorities, including awareness campaigns. With these positive developments, Malaysians are expected to live longer, healthier and more rewarding lives, amidst a greener and safer environment.

### **Equity Restructuring**

4.16 Bumiputera ownership of share capital in the corporate sector decreased marginally from 19.3 per cent in 1990 to 19.1 per cent in 1999, as shown in *Table 4-2*. The Chinese share of capital ownership declined from 45.5 per cent to 37.9 per cent during the same period, while the Indian ownership increased to 1.5 per cent in 1999. Foreign ownership increased significantly from 25.4 per cent in 1990 to 32.7 per cent in 1999. During the OPP3 period, concerted efforts will be taken to increase effective Bumiputera participation as well as equity ownership of at least 30 per cent by 2010. This restructuring will be carried out within the context of a rapidly growing economy with increasing opportunities for all Malaysians and without resorting to micro-restructuring measures for existing ventures. Special attention will be given to increase equity ownership among Bumiputera in Sabah and Sarawak such as the Kadazandusun, Iban, Bajau, Murut, Bidayuh and Melanau. To realize this target, Bumiputera need to double their efforts in various areas including taking advantage of the increased complementarities and synergies created within domestic industries as well as with foreign counterparts. Bumiputera must be prepared in terms of skill, entrepreneurial capabilities and change their mindset to participate effectively in opportunities that arise.

4.17 Efforts will be stepped up to increase the savings and investment of Bumiputera and other disadvantaged groups to ensure their meaningful participation as well as in achieving the qualitative and quantitative targets of the corporate equity ownership. Towards this end, National Unit Trust Funds (NUTF) will be established to ensure a more widespread distribution of equity ownership among Bumiputera and other disadvantaged groups.

| <p>TABLE 4-2</p> <p><b>OWNERSHIP OF SHARE CAPITAL (AT PAR VALUE)</b></p> <p><b>OF LIMITED COMPANIES<sup>1</sup>, 1990 AND 1999</b></p> <p>(RM million)</p>  |                  |              |                  |              |  |
|---|------------------|--------------|------------------|--------------|--|
| <i>Ownership Group</i>  | <i>1990</i>      | <i>%</i>     | <i>1999</i>      | <i>%</i>     | <i>Average Annual Growth Rate (%), 1991-1999</i> |
| Bumiputera <sup>2</sup>   | 20,877.5         | 19.3         | 59,394.4         | 19.1         | 12.3   |
| Other Malaysians  | 50,754.0         | 46.8         | 125,013.3        | 40.3         | 10.5   |
| Chinese   | 49,296.5         | 45.5         | 117,372.4        | 37.9         | 10.0   |
| Indians   | 1,068.0          | 1.0          | 4,752.9          | 1.5          | 18.0   |
| Others  | 389.5            | 0.3          | 2,888.0          | 0.9          | 29.9   |
| Foreigners  | 27,525.5         | 25.4         | 101,279.2        | 32.7         | 15.6   |
| Nominee Companies   | 9,220.4          | 8.5          | 24,389.5         | 7.9          | 11.4   |
| <b>Total</b>  | <b>108,377.4</b> | <b>100.0</b> | <b>310,076.4</b> | <b>100.0</b> | <b>12.4</b>                                      |
| <p><i>Notes:</i></p> <p><sup>1</sup> Excludes Government holdings other than through trust agencies.</p> <p><sup>2</sup> Includes shares held through institutions channeling funds of individual Bumiputera and trust agencies, such as <i>Lembaga Tabung Haji</i> (LTH), <i>Permodalan Nasional Berhad</i> (PNB) and State Economic Development Corporations (SEDCs).</p> |                  |              |                  |              |  |

4.18 In view of the low level of corporate equity ownership among Indians, attention will be given to increase their participation during the OPP3 period. Efforts will thus be undertaken to increase Indian equity ownership to 3 per cent by 2010. At the same time, a study to review the status of the Indian participation in the economy will be undertaken to formulate appropriate strategies and programmes.

4.19 Existing programmes will be reviewed while new and innovative measures will be introduced. Foreign direct investment (FDI) in strategic areas will continue to be promoted and, in this respect, Bumiputera entrepreneurial skills and technological capabilities will be enhanced to benefit from the opportunities that are generated. Bumiputera companies must take advantage of global outsourcing

by the multinational corporations (MNCs) and move into related upstream and downstream activities. The formation of strategic alliances with foreign companies will also be promoted. Meanwhile, effective partnership and collaboration between Bumiputera and non-Bumiputera ventures will be enhanced so as to create strong, resilient and world-class indigenous businesses. In addition, a review of the guidelines under the Foreign Investment Committee will be undertaken to improve its effectiveness.

4.20 *Promoting Bumiputera ventures in the manufacturing and services sectors.* Various measures will be undertaken to promote Bumiputera ventures in the manufacturing and dynamic services sectors. As Bumiputera companies have already made inroads into the construction, transportation and agricultural sectors, they have to diversify into other higher value-added activities. To increase Bumiputera ownership in the manufacturing sector, which is low at 12.5 per cent, as shown in *Table 4-3*, efforts will be taken to increase their participation in the manufacturing subsectors such as electrical and electronics (E&E), pharmaceuticals, chemicals, petro-chemicals, bio-technology, composite and advanced materials, transport equipment and food industries. To facilitate Bumiputera participation, an enabling environment will be created including incentives and financing to assist them acquire appropriate technology as well as management expertise. Agencies such as the Malaysian Industrial Development Authority (MIDA) and the Small and Medium Industries Development Corporation (SMIDEC) will assist in identifying outsourcing opportunities as well as tracking technology trends and seeking potential partners. These agencies will also disseminate information more effectively to assist Bumiputera entrepreneurs.

4.21 With respect to financing arrangement, a special window will be created in the existing funds to enable Bumiputera companies gaining greater access to these facilities, particularly for those with minimum collateral. The capacity of the existing venture capital also needs to be expanded to promote Bumiputera participation in manufacturing and other innovative business deals. In order to make financing available to more Bumiputera, specialized funds established by the Government will be strengthened with expertise in assessing risky business with high potential of success. Attention will be given to shorten the process of approval, as speed is the essence of success in private ventures. The Government will review, consolidate and streamline the existing specialized funds targeted for Bumiputera ventures. Financing from banking system for Bumiputera businesses will be reoriented towards the dynamic sectors. Currently out of the 27.1 per cent of the total loans disbursed by banking institutions that benefited Bumiputera businesses, the largest proportion was for the purchase of landed properties, transport vehicles and securities as well as in the construction sector, as shown in *Table 4-4*.

TABLE 4-3

**OWNERSHIP OF SHARE CAPITAL (AT PAR VALUE) OF LIMITED COMPANIES<sup>1</sup>**  
**BY ETHNIC GROUP AND SECTOR, 1999**  
 (%)

| <i>Ownership Group</i>      | <i>Agriculture</i> | <i>Mining</i> | <i>Manufacturing</i> | <i>Utility</i> | <i>Construction</i> | <i>Wholesale and retail Trade</i> | <i>Transportation</i> | <i>Finance</i> | <i>Others</i> | <i>Total</i> |
|-----------------------------|--------------------|---------------|----------------------|----------------|---------------------|-----------------------------------|-----------------------|----------------|---------------|--------------|
| <b>Bumiputera</b>           | <b>28.5</b>        | <b>19.0</b>   | <b>12.5</b>          | <b>12.2</b>    | <b>26.5</b>         | <b>15.2</b>                       | <b>24.2</b>           | <b>20.5</b>    | <b>20.5</b>   | <b>19.1</b>  |
| Individuals                 | 16.9               | 12.1          | 6.7                  | 10.7           | 11.2                | 8.6                               | 22.7                  | 17.9           | 16.9          | 14.3         |
| Institutions <sup>2</sup>   | 8.8                | 0.1           | 3.7                  | 0.1            | 7.5                 | 4.2                               | 0.0                   | 1.9            | 0.3           | 3.1          |
| Trust Agencies <sup>3</sup> | 2.8                | 6.8           | 2.1                  | 1.4            | 7.8                 | 2.4                               | 1.5                   | 0.7            | 3.3           | 1.7          |
| <b>Non-Bumiputera</b>       | <b>39.3</b>        | <b>58.4</b>   | <b>27.3</b>          | <b>31.1</b>    | <b>50.2</b>         | <b>43.8</b>                       | <b>47.4</b>           | <b>43.2</b>    | <b>46.3</b>   | <b>40.3</b>  |
| Chinese                     | 37.3               | 55.8          | 26.7                 | 30.8           | 48.5                | 42.0                              | 45.2                  | 39.7           | 41.4          | 37.9         |
| Indians                     | 1.2                | 1.5           | 0.3                  | 0.2            | 1.5                 | 1.5                               | 1.8                   | 2.0            | 4.5           | 1.5          |
| Others                      | 0.8                | 1.1           | 0.3                  | 0.1            | 0.2                 | 0.3                               | 0.4                   | 1.5            | 0.4           | 0.9          |
| <b>Foreigners</b>           | <b>23.9</b>        | <b>18.0</b>   | <b>56.3</b>          | <b>32.5</b>    | <b>17.9</b>         | <b>36.4</b>                       | <b>20.2</b>           | <b>26.0</b>    | <b>26.6</b>   | <b>32.7</b>  |
| <b>Nominee Companies</b>    | <b>8.3</b>         | <b>4.6</b>    | <b>3.9</b>           | <b>24.2</b>    | <b>5.4</b>          | <b>4.6</b>                        | <b>8.2</b>            | <b>10.3</b>    | <b>6.6</b>    | <b>7.9</b>   |
| <b>Total</b>                | <b>100.0</b>       | <b>100.0</b>  | <b>100.0</b>         | <b>100.0</b>   | <b>100.0</b>        | <b>100.0</b>                      | <b>100.0</b>          | <b>100.0</b>   | <b>100.0</b>  | <b>100.0</b> |

*Notes:*

<sup>1</sup> As in Table 4-2.

<sup>2</sup> Refers to shares held by institutions such as *Lembaga Tabung Haji* (LTH) and unit trust schemes.

<sup>3</sup> Refers to shares held by agencies such as *Permodalan Nasional Berhad* (PNB) and State Economic Development Corporations (SEDCs).

TABLE 4-4

**PERCENTAGE OF LOANS<sup>1</sup> OUTSTANDING TO  
BUMIPUTERA BY BANKING INSTITUTIONS BY SECTOR,  
AS AT 31 DECEMBER 2000**

| <i>Sector</i>   | <i>%</i>     |
|---|--------------|
| Purchase of Securities                                | 12.0         |
| Purchase of Transport Vehicles                        | 16.3         |
| Purchase of Landed Property                           | 19.8         |
| Personal Use  | 3.2          |
| Credit Card   | 2.3          |
| Purchase of Consumer Durables                         | 0.4          |
| Agriculture, Hunting, Forestry & Fishing              | 3.4          |
| Mining & Quarrying                                    | 0.2          |
| Manufacturing   | 7.2          |
| Utility   | 3.7          |
| Construction  | 11.7         |
| Wholesale & Retail Trade & Hotels                     | 5.6          |
| Transport, Storage & Communication                    | 5.6          |
| Financing, Insurance, Real Estate & Business Services | 5.4          |
| Community, Social & Personal Services                 | 1.7          |
| Others  | 1.5          |
| <b>Total</b>  | <b>100.0</b> |

*Note:* <sup>1</sup> Total Bumiputera loan for all sectors: RM107.5 billion. (Total loan for all sectors: RM397.1 billion).

4.22 In addition, Bumiputera companies must undertake Research and Development (R&D) activities to develop their capability to innovate as well as develop new products. For this purpose, collaboration between Bumiputera companies and universities as well as public sector research institutions will be strengthened. Arrangements will also be made to allow them to use existing research infrastructure and facilities in these institutions. As for Bumiputera participation in the commercialization of research findings, the Commercialization of Research and Development Fund (CRDF) administered by the Malaysian Technology Development Corporation (MTDC) will be increased and a special fund to finance activities at the pre-commercialization stage will be established.

4.23 Bumiputera companies are already widely involved in food manufacturing industries, particularly in small and medium scale operations. During the OPP3 period, they need to increase and improve the manufacturing of *halal*-food products, in line with efforts to make Malaysia as the *halal*-food hub for the world market. As such, they should look beyond the domestic market, since there is a vast potential for *halal* products, particularly in more than 50 Muslim countries worldwide. The appropriate *halal* and health certifications need to be obtained to expand their venture into international markets.

4.24 In the services sector, Bumiputera participation continued to be low, particularly in the utility, wholesale and retail trade, tourism, shipping and financial services. In 1999, Bumiputera ownership of the corporate equity in utility was 12.2 per cent and in wholesale and retail trade was 15.2 per cent, as shown in *Table 4-3*. In the finance sector, the proportion of Bumiputera corporate equity was 20.5 per cent. Bumiputera companies will need to venture into potential areas of the dynamic services sectors, which include information and communication, education, health, tourism, sea and air transport, consultancy and professional services.

4.25 Measures will be undertaken to increase Bumiputera participation in the sea transportation services, including related support services such as haulage, warehousing, managing distri-parks, distribution, packaging and repackaging, and customized delivery services. As for the air transportation, Bumiputera participation will be enhanced in areas such as air cargo handling, freight and forwarding services. Bumiputera participation in these areas is important to ensure that they also enjoy the benefits from the efforts of developing the nation into a regional hub for sea and air transportation. With the increase in participation and new strategic alliances with foreign interests in the sea and air transport, more opportunities will be available for Bumiputera ventures.



4.26 Another service sector for Bumiputera participation is in tourism. Instead of merely specializing in ticketing services, Bumiputera entrepreneurs will have to venture into other activities including operating tour agencies dealing especially with inbound tourists as well as expanding tourist operation into niche markets such as the Middle East, Islamic countries, China and India.

4.27 In the education sector, more Bumiputera need to establish private institutions of higher learning (IPTS). Meanwhile, the existing small Bumiputera-owned IPTS must be merged. To ensure high quality of education, apart from obtaining accreditation from the National Accreditation Board (LAN), Bumiputera IPTS will have to establish network and twinning programmes with credible institutions of higher learning abroad as well as open branch campuses.

4.28 The provision of consultancy and professional services is another area of potential for more Bumiputera participation. To date, the number of Bumiputera professionals with experience, particularly in engineering, accountancy and architecture, has increased and there is a vast potential for them to provide these services both domestically and internationally. More Bumiputera need to attain higher skills and obtain international recognition to be competitive.

4.29 *Increasing Bumiputera ownership through privatization.* Privatization policy will remain as an important instrument to enhance Bumiputera participation in the corporate sector. As of April 2000, the Federal Government privatized a total of 180 companies. Bumiputera managed and controlled 109 or 61.2 per cent of the companies with RM8.1 billion or 28 per cent of the total equity of companies privatized. Non-Bumiputera has also benefited from this program where they controlled 28 companies with equity of RM5.3 billion or 15.6 per cent of the total equity. However, the Government controlled 43 companies with equity of about RM16.5 billion or 56.4 per cent. In order to achieve the restructuring target, the privatization programme will continue to be implemented to create more opportunities for Bumiputera entrepreneurs.

4.30 As at April 2000, there were 40 privatized companies listed on the Kuala Lumpur Stock Exchange (KLSE), representing 5.2 per cent of the total number of listed companies in the bourse. These companies contributed to about RM156.6 billion or 24.7 per cent of the total market capitalization and 15.3 per cent of the total paid-up capital of all listed companies in the KLSE. Bumiputera owned 21 per cent of the equity in the listed privatized companies, while the non-Bumiputera and foreigners owned 27 per cent and 10.2 per cent, respectively. The Government owned about 41.8 per cent of the total equity in these companies. The Bumiputera-owned listed privatized companies were largely in trading and services, industrial and infrastructure businesses. In terms of the controlling

interest in the listed privatized companies, Bumiputera controlled 20 companies with a total paid-up capital of RM5.8 billion or 24 per cent. This amount represents only 3.7 per cent of the total paid-up capital of all the listed companies.

4.31 *Enhancing the role of Bumiputera institutions and trust agencies.* The Government will review and streamline the functions and roles of trust agencies, particularly the State Economic Development Corporations (SEDCs). This effort will strengthen their position in fostering the development of entrepreneurship as well as creating more opportunities for Bumiputera to increase ownership and control in the corporate sector. Steps will also be taken to develop measures and establish specific mechanism for effective monitoring and evaluation of the agencies. The respective agencies are expected to create and acquire new wealth, particularly in the sectors or activities where Bumiputera are lagging behind, and also provide a wider platform as well as opportunities for Bumiputera to own and participate in the corporate sector. They should employ professionals to improve their management capabilities. While consolidating their business activities and resources, these agencies also need to establish strategic alliances through joint ventures and smart partnership with other local partners and foreign counterparts.

4.32 Unit trust schemes are expected to enhance their role in the development of capital market by mobilizing savings and promoting a broad-based participation of all Malaysians. While providing investment opportunities, these schemes will also be an effective instrument to increase Malaysian ownership and control in the corporate sector. Steps will also be taken to ensure that the existing unit trust schemes, particularly the state unit trust schemes, will be effectively managed to maximize returns to investors. A review of the existing unit trust schemes will be undertaken during the OPP3 period.

4.33 The development of potential resources such as Malay reserve, *Baitulmal*, waqaf, native and customary land will be intensified. A study will be undertaken to recommend the *modus operandi* of developing these land assets. Attention will be given towards eliminating administrative bottlenecks that hinder the development of such land and encourage private sector participation. The Government will develop a mechanism to facilitate the process, particularly through the provision of support programmes as well as incentives for the development of such resources. Institutions such as *Majlis Amanah Rakyat* (MARA), *Lembaga Tabung Haji* (LTH) and SEDCs must take an active part in developing this land into viable commercial properties. These commercial properties will then be offered for sale or lease to Bumiputera entrepreneurs. The development of such resources must also take into account the affordability of Bumiputera.

## **Development of the BCIC**

4.34 Programmes for the development of the BCIC will focus on building more sustainable, self-reliant and world-class Bumiputera entrepreneurs capable of competing effectively both in the domestic and international markets. This will be achieved through inculcating good entrepreneurship qualities irrespective of the size of business. As world-class entrepreneurs, Bumiputera should be highly competitive, knowledgeable, innovative, use resources optimally, forward-looking, adopt good practices and consistently generate good returns over a long-term. In addition, Bumiputera entrepreneurs must be equipped with good communication skills, especially in the English language to be successful in a more competitive environment as well as to venture into international markets.

4.35 To create a more sustainable and self-reliant Bumiputera entrepreneur, there is a need to inculcate positive values among the Bumiputera. These include, among others, self-discipline, integrity, reliability, credit worthiness, trustworthiness, diligence, honesty and prudence. The relevant agencies must reorientate their training programmes to include inculcation of positive values.

4.36 The development of a full-fledged BCIC is critical for ensuring effective Bumiputera participation in the economy. The presence of a sufficient number of viable Bumiputera enterprises will greatly enhance efforts to increase Bumiputera involvement in the mainstream economic activities in the country. Although some progress was made in the development of the BCIC, the quality and depth of their business involvement are still limited. To ensure a meaningful presence, Bumiputera entrepreneurs need to be adequately represented in all strategic and dynamic sectors of the economy. In addition, the range of business activities in which they are involved should encompass the higher value-added activities.

4.37 The existing programmes for the development of the BCIC will be further strengthened in order to increase the number of viable Bumiputera entrepreneurs. In this regard, the Ministry of Entrepreneur Development will enhance the participation of Bumiputera in the packaged programmes such as the vendor and franchise development programmes. The Ministry will support the franchise development program through the purchase of selected franchises from overseas and develop Bumiputera franchisees as well as implement R&D on local franchise products. In addition, the implementing agencies will establish exit policies that will determine the time frame for the participants to graduate from the programmes in order to allow other Bumiputera entrepreneurs benefit from such programmes.

4.38 The vendor development programme will be reviewed to be more effective and expanded to cover more industries to generate new opportunities for Bumiputera enterprises. *Petroliaam Nasional Berhad* (PETRONAS), *Perusahaan Otomobil Nasional Berhad* (PROTON), *Perusahaan Otomobil Kedua Berhad* (PERODUA) and privatized corporations such as Malaysia Airlines (MAS), *Tenaga Nasional Berhad* (TNB) and *Telekom Malaysia Berhad* will be urged to improve and expand the scope as well as develop new programmes towards this end. Bumiputera enterprises must establish joint-ventures with strategic local and foreign partners in areas where they lack expertise to produce high quality and high-end products required by these industries and to participate in the Industrial Linkage Programme (ILP) of SMIDEC. The joint-venture arrangements will also facilitate access to a bigger share of the domestic market as well as to foreign markets, to enjoy economies of scale. This arrangement will be important in gaining access to regional markets, particularly with the further market opening expected to result from the ASEAN Free Trade Area (AFTA).

4.39 Emphasis will also be given to the development of Bumiputera entrepreneurs in the distributive trade sector. Concerted efforts will be taken to increase the number of Bumiputera traders in the wholesale subsector. To strengthen their position in the business, Bumiputera traders need to form networks or direct links with producers in the manufacturing and agricultural sectors in order to ensure supplies at a lower cost. They must also form network with the retailers as part of the overall strategy to increase their market share. Bumiputera participation in the retail trade subsector will be enhanced through the newly established *Projek Usahawan Bumiputera Dalam Bidang Peruncitan* or PROSPER. This project will be target-specific and will provide assistance and support services, such as the provision of premises and capital, identification of business opportunities as well as training, particularly in accounting and cash management. Steps will continue to be taken to provide more business premises in strategic locations for Bumiputera entrepreneurs. Agencies such as MARA, UDA Holdings Berhad (UHB) and SEDCs as well as local authorities will construct and purchase more business premises, especially in new townships and residential areas.

4.40 The programmes for the development of the BCIC will also accelerate the creation of a larger number and more prosperous middle-class Bumiputera entrepreneurs. Steps will be taken to increase the effectiveness of existing efforts and a number of new strategies will be employed to strengthen the position of Bumiputera enterprises including the provision of equity financing. More Government-owned companies will develop special programmes to create middle-class Bumiputera entrepreneurs.

4.41 The chambers of commerce and trade associations need to initiate new programmes that can effectively help to create more sustainable, self-reliant and world-class Bumiputera entrepreneurs. They should promote networking among their members as well as disseminate information and market intelligence, introduce best practices and facilitate marketing arrangements. To gain from these private sector initiatives, more Bumiputera entrepreneurs are expected to join these associations and actively participate in their activities.

### **Meeting the Challenges of Globalization**

4.42 In preparing Bumiputera to meet challenges of globalization, measures will be undertaken to nurture competitive Bumiputera companies within the domestic as well as the global markets. There is a need to rehabilitate, consolidate and restructure existing small and weak Bumiputera ventures to achieve greater strength, efficiency and competitiveness. Bumiputera companies need to attain a critical size or industry-efficient scale and become export-oriented.

4.43 Bumiputera companies have to adopt higher standards and institute quality improvements in order to enhance the quality of their products and services through programmes such as zero defects and wastage minimization. In addition, Bumiputera entrepreneurs require good risk management skills and strive for a higher standard by attaining the relevant International Standardization Organization (ISO) certification as well as other international standards. The Government will support this effort by providing assistance on a selective basis through a special window in the Small-and Medium-scale Industries (SMI) Fund.

4.44 Malaysian companies, particularly Bumiputera-owned, need to be aggressive in securing markets in the light of globalization and greater liberalization. Malaysia External Trade Development Corporation (MATRADE) will provide market intelligence as well as facilitate and assist in the promotion of Malaysian products overseas. MATRADE will also conduct special market research and surveys for Bumiputera entrepreneurs to venture into niche international markets.

### **Promoting Bumiputera Participation in the Knowledge-based Economy**

4.45 In line with the emphasis given to the knowledge-based economy, steps will be taken by the Government to reduce the knowledge gap and the digital divide between the rural and urban population. Among the strategies that will be pursued include promoting greater awareness and participation of the poor and the low-income groups in the knowledge-based economy, providing education

and training in information and communication technology (ICT) and increasing access to infostructure, particularly in the rural areas and among the disadvantaged groups.

4.46 As for Bumiputera entrepreneurs, it is essential that they move along the value chain into product design and development as well as packaging, marketing and distribution through collaborations with local universities and other institutions. Bumiputera companies, particularly SMEs, must increase the use and application of ICT in their production processes as well as in the conduct of their internal operations. They must also adapt their businesses, where possible, to go online to source inputs and market their output. The greater application of ICT will increase their accessibility to new sources of financing as well as establishing international market linkages. The Government in collaboration with industry associations will provide training and expertise.

4.47 A recent study on Bumiputera participation in the ICT industry found that they were predominantly small scaled enterprises with an annual revenue below RM500,000. They also operate mainly as resellers of hardware and software products. A large number of Bumiputera entrepreneurs in the ICT industry is single service provider and most of them are dependent on business with the Government. Bumiputera entrepreneurs are faced with difficulties in penetrating into non-Government markets due to their weak customer relationship management skills. The challenges faced by them in this area include obtaining recognition as reliable and capable ICT players in the market, demonstrating ability to compete in the open market and exploring regional market opportunities to broaden their market base.

4.48 To enhance Bumiputera participation in the ICT, a Bumiputera ICT Council will be established to plan and develop as well as monitor the implementation of a Bumiputera ICT Agenda. The Agenda will include strategies such as increasing the awareness of the importance of the ICT industry, developing a sufficient pool of ICT Bumiputera technopreneurs as well as providing greater accessibility to capital and market information. Bumiputera technopreneurs must tap resources from venture capital as well as the seed, start-up, second round or mezzanine financing to finance their business ventures in ICT. The Government will be establishing an ICT fund to encourage participation in the ICT industry.

4.49 Similarly, Bumiputera technopreneurs must take advantage of opportunities created in the multimedia and ICT, health and education as the nation aspires to be the regional centre of excellence for these services. Measures will also be taken to ensure that Bumiputera companies will benefit from the development of the knowledge-based economy by participating in projects such as the building of infostructure, manufacturing of hardware and the development of software.

## **Employment Restructuring**

4.50 During the OPP2 period, policies and strategies for employment restructuring were directed towards increasing the number and percentage of Bumiputera in the modern economic sectors and in higher level occupational categories, particularly in the professional and technical as well as the administrative and managerial categories. Bumiputera employment in the professional and technical category, which includes teachers and nurses, increased from 60.5 per cent in 1990 to 63.9 per cent in 2000. While in the administrative and managerial category, the percentage of Bumiputera increased from 28.7 per cent to 37 per cent for the same period. Despite the increase in the number of Bumiputera in higher level occupations, Bumiputera employment was still concentrated in lower category jobs such as the production and agriculture workers, as shown in *Table 4-5*. In terms of the professional occupations, such as accountant, architect, lawyer and engineer, the proportion of Bumiputera was low, as shown in *Table 4-6*.

4.51 Under the NVP, appropriate mechanisms will be formulated to further increase the participation rate of Bumiputera to ensure employment pattern reflects the ethnic composition of the population. The private sector must employ more Bumiputera professionals and executives in their firms. A study will be undertaken to review the current state of Bumiputera employment in the private sector to facilitate the formulation of remedial measures to overcome the imbalance in participation. Measures will continue to be undertaken to ensure that Bumiputera obtain appropriate education and training in order to be employed in high income jobs. The capacity of the higher education institutions will be expanded to increase accessibility, especially to Bumiputera. Both the public and private institutions of higher learning will be required to increase the number of Bumiputera graduates and ensure that the courses offered meet the market demands in terms of employment. At the same time, the National Higher Education Fund will be increased to provide more loans to Bumiputera students enrolled in private institutions of higher learning. The loan will cover all expenses, including living expenses, for students from the low-income group. In addition, the Government will continue to extend loans to students from Bumiputera and other low-income households to pursue higher education in reputable universities abroad.

4.52 Based on the information obtained from 456 registered IPTS, as at December 1999 the proportion of Bumiputera students enrolled in degree and diploma level courses in IPTS constituted only 36.1 per cent of the total enrolment, as shown in *Table 4-7*. The enrolment of the Bumiputera students in the science and technical courses was low at 36.2 per cent while in the non-science courses, the proportion of Bumiputera students was at 55.7 per cent. Measures will be taken

TABLE

**EMPLOYMENT BY OCCUPATION AND**

| <i>Occupation</i>                     | <i>1990</i>       |              |                |              |                |              |                           |              |                |              |
|---------------------------------------|-------------------|--------------|----------------|--------------|----------------|--------------|---------------------------|--------------|----------------|--------------|
|                                       | <i>Bumiputera</i> | <i>%</i>     | <i>Chinese</i> | <i>%</i>     | <i>Indians</i> | <i>%</i>     | <i>Others<sup>1</sup></i> | <i>%</i>     | <i>Total</i>   | <i>%</i>     |
| Professional & Technical <sup>2</sup> | 354.9             | 10.0         | 170.5          | 7.8          | 44.9           | 7.9          | 16.1                      | 4.0          | 586.4          | 8.8          |
| %                                     | 60.5              |              | 29.1           |              | 7.7            |              | 2.7                       |              | 100.0          |              |
| Teachers & Nurses                     | 152.0             | 4.3          | 54.6           | 2.5          | 14.2           | 2.5          | 1.0                       | 0.2          | 221.8          | 3.3          |
| %                                     | 68.5              |              | 24.6           |              | 6.4            |              | 0.5                       |              | 100.0          |              |
| Administrative & Managerial           | 47.1              | 1.3          | 101.9          | 4.7          | 6.5            | 1.1          | 8.3                       | 2.0          | 163.8          | 2.4          |
| %                                     | 28.7              |              | 62.2           |              | 4.0            |              | 5.1                       |              | 100.0          |              |
| Clerical Workers                      | 341.8             | 9.7          | 252.3          | 11.6         | 56.0           | 9.8          | 2.5                       | 0.6          | 652.6          | 9.8          |
| %                                     | 52.4              |              | 38.6           |              | 8.6            |              | 0.4                       |              | 100.0          |              |
| Sale Workers                          | 229.8             | 6.5          | 449.3          | 20.7         | 52.6           | 9.2          | 37.2                      | 9.1          | 768.9          | 11.5         |
| %                                     | 29.9              |              | 58.4           |              | 6.8            |              | 4.9                       |              | 100.0          |              |
| Service Workers                       | 449.6             | 12.7         | 208.4          | 9.6          | 73.4           | 12.9         | 46.2                      | 11.4         | 777.6          | 11.6         |
| %                                     | 57.8              |              | 26.8           |              | 9.5            |              | 5.9                       |              | 100.0          |              |
| Agriculture Workers                   | 1,305.6           | 37.0         | 261.8          | 12.0         | 138.3          | 24.2         | 185.0                     | 45.5         | 1,890.7        | 28.3         |
| %                                     | 69.1              |              | 13.8           |              | 7.3            |              | 9.8                       |              | 100.0          |              |
| Production Workers                    | 804.6             | 22.8         | 730.8          | 33.6         | 198.9          | 34.9         | 111.7                     | 27.4         | 1,846.0        | 27.6         |
| %                                     | 43.6              |              | 39.6           |              | 10.8           |              | 6.0                       |              | 100.0          |              |
| <b>Total</b>                          | <b>3,533.4</b>    | <b>100.0</b> | <b>2,175.0</b> | <b>100.0</b> | <b>570.6</b>   | <b>100.0</b> | <b>407.0</b>              | <b>100.0</b> | <b>6,686.6</b> | <b>100.0</b> |
| %                                     | 52.9              |              | 32.5           |              | 8.5            |              | 6.1                       |              | 100.0          |              |

*Notes:*

<sup>1</sup> Includes non-citizens.

<sup>2</sup> Refers to the standard definition as provided in the Dictionary of Occupational Classification which includes categories such as draughtsmen, laboratory assistants as well as teachers and nurses.



4-5

**ETHNIC GROUP, 1990 AND 2000**  
(‘000)

| 2000              |              |                |              |                |              |                           |              |                |              |
|-------------------|--------------|----------------|--------------|----------------|--------------|---------------------------|--------------|----------------|--------------|
| <i>Bumiputera</i> | <i>%</i>     | <i>Chinese</i> | <i>%</i>     | <i>Indians</i> | <i>%</i>     | <i>Others<sup>1</sup></i> | <i>%</i>     | <i>Total</i>   | <i>%</i>     |
| 651.3             | 13.6         | 263.4          | 9.6          | 77.5           | 10.1         | 27.6                      | 2.8          | 1,019.8        | 11.0         |
| 63.9              |              | 25.8           |              | 7.6            |              | 2.7                       |              | 100.0          |              |
| 246.1             | 5.2          | 61.9           | 2.2          | 23.2           | 3.0          | 5.0                       | 0.5          | 336.2          | 3.6          |
| 73.2              |              | 18.4           |              | 6.9            |              | 1.5                       |              | 100.0          |              |
| 144.0             | 3.0          | 203.7          | 7.4          | 21.6           | 2.8          | 20.1                      | 2.1          | 389.4          | 4.2          |
| 37.0              |              | 52.3           |              | 5.5            |              | 5.2                       |              | 100.0          |              |
| 584.1             | 12.2         | 338.9          | 12.3         | 88.2           | 11.5         | 17.9                      | 1.9          | 1,029.1        | 11.1         |
| 56.8              |              | 32.9           |              | 8.6            |              | 1.7                       |              | 100.0          |              |
| 380.4             | 8.0          | 507.7          | 18.4         | 69.7           | 9.0          | 62.0                      | 6.4          | 1,019.8        | 11.0         |
| 37.3              |              | 49.8           |              | 6.8            |              | 6.1                       |              | 100.0          |              |
| 631.2             | 13.2         | 238.2          | 8.6          | 93.3           | 12.1         | 131.3                     | 13.5         | 1,094.0        | 11.8         |
| 57.7              |              | 21.8           |              | 8.5            |              | 12.0                      |              | 100.0          |              |
| 1,027.5           | 21.5         | 172.3          | 6.3          | 116.5          | 15.1         | 361.8                     | 37.3         | 1,678.1        | 18.1         |
| 61.2              |              | 10.3           |              | 6.9            |              | 21.6                      |              | 100.0          |              |
| 1,358.2           | 28.5         | 1,029.1        | 37.4         | 303.8          | 39.4         | 349.9                     | 36.0         | 3,041.0        | 32.8         |
| 44.7              |              | 33.8           |              | 10.0           |              | 11.5                      |              | 100.0          |              |
| <b>4,776.7</b>    | <b>100.0</b> | <b>2,753.3</b> | <b>100.0</b> | <b>770.6</b>   | <b>100.0</b> | <b>970.6</b>              | <b>100.0</b> | <b>9,271.2</b> | <b>100.0</b> |
| <b>51.5</b>       |              | <b>29.7</b>    |              | <b>8.3</b>     |              | <b>10.5</b>               |              | <b>100.0</b>   |              |

TABLE 4-6  
REGISTERED PROFESSIONALS BY ETHNIC GROUP, 1990 AND 1999

| <i>Profession</i>   | <i>1990</i>       |                |                |                           |               | <i>1999</i>       |                |                |                           |               |
|---------------------|-------------------|----------------|----------------|---------------------------|---------------|-------------------|----------------|----------------|---------------------------|---------------|
|                     | <i>Bumiputera</i> | <i>Chinese</i> | <i>Indians</i> | <i>Others<sup>1</sup></i> | <i>Total</i>  | <i>Bumiputera</i> | <i>Chinese</i> | <i>Indians</i> | <i>Others<sup>1</sup></i> | <i>Total</i>  |
| Accountants         | 627               | 4,524          | 346            | 77                        | 5,574         | 2,167             | 10,520         | 789            | 185                       | 13,661        |
| %                   | 11.2              | 81.2           | 6.2            | 1.4                       | 100.0         | 15.9              | 77.0           | 5.8            | 1.3                       | 100.0         |
| Architects          | 231               | 728            | 12             | 8                         | 979           | 431               | 1,036          | 23             | 4                         | 1,494         |
| %                   | 23.6              | 74.4           | 1.2            | 0.8                       | 100.0         | 28.9              | 69.3           | 1.5            | 0.3                       | 100.0         |
| Doctors             | 1,951             | 2,430          | 2,410          | 216                       | 7,007         | 4,460             | 3,749          | 3,448          | 484                       | 12,141        |
| %                   | 27.8              | 34.7           | 34.4           | 3.1                       | 100.0         | 36.7              | 30.9           | 28.4           | 4.0                       | 100.0         |
| Dentists            | 406               | 847            | 396            | 21                        | 1,670         | 888               | 1,074          | 534            | 54                        | 2,550         |
| %                   | 24.3              | 50.7           | 23.7           | 1.3                       | 100.0         | 34.8              | 42.1           | 21.0           | 2.1                       | 100.0         |
| Engineers           | 902               | 5,244          | 459            | 260                       | 6,865         | 2,688             | 6,806          | 642            | 4                         | 10,140        |
| %                   | 13.1              | 76.4           | 6.7            | 3.8                       | 100.0         | 26.5              | 67.1           | 6.4            | 0.0                       | 100.0         |
| Lawyers             | 705               | 1,575          | 836            | 37                        | 3,153         | 2,783             | 3,640          | 2,379          | 77                        | 8,879         |
| %                   | 22.3              | 50.0           | 26.5           | 1.2                       | 100.0         | 31.3              | 41.0           | 26.8           | 0.9                       | 100.0         |
| Surveyors           | 573               | 636            | 48             | 26                        | 1,283         | 1,495             | 1,482          | 94             | 56                        | 3,127         |
| %                   | 44.7              | 49.6           | 3.7            | 2.0                       | 100.0         | 47.8              | 47.4           | 3.0            | 1.8                       | 100.0         |
| Veterinary Surgeons | 242               | 160            | 250            | 23                        | 675           | 409               | 258            | 274            | 20                        | 961           |
| %                   | 35.9              | 23.7           | 37.0           | 3.4                       | 100.0         | 42.6              | 26.8           | 28.5           | 2.1                       | 100.0         |
| <b>Total</b>        | <b>5,637</b>      | <b>16,144</b>  | <b>4,757</b>   | <b>668</b>                | <b>27,206</b> | <b>15,321</b>     | <b>28,565</b>  | <b>8,183</b>   | <b>884</b>                | <b>52,953</b> |
| %                   | 20.7              | 59.3           | 17.5           | 2.5                       | 100.0         | 28.9              | 53.9           | 15.5           | 1.7                       | 100.0         |

*Sources:* Professional associations covering both public and private sectors such as Malaysians Institute of Accountants, Board of Architects Malaysia, Malaysia Dental Council, Malaysian Medical Council, Board of Engineers Malaysia, Bar Council Malaysia, The Institution of Surveyors Malaysia and Malaysia Veterinary Surgeons Council.

*Note:* <sup>1</sup> Includes non-citizens.

| TABLE 4-7  |                   |             |                       |             |                |              |
|--|-------------------|-------------|-----------------------|-------------|----------------|--------------|
| ENROLMENT IN PRIVATE INSTITUTIONS OF HIGHER LEARNING, 1999 |                   |             |                       |             |                |              |
| <i>Level of Education</i>                                  | <i>Bumiputera</i> | <i>%</i>    | <i>Non-Bumiputera</i> | <i>%</i>    | <i>Total</i>   | <i>%</i>     |
| Degree   | 6,345             | 20.5        | 24,595                | 79.5        | 30,940         | 100.0        |
| Diploma  | 44,795            | 40.5        | 65,933                | 59.5        | 110,728        | 100.0        |
| <b>Total</b>   | <b>51,140</b>     | <b>36.1</b> | <b>90,528</b>         | <b>63.9</b> | <b>141,668</b> | <b>100.0</b> |

to increase enrolment of Bumiputera students in science and technical courses as well as in management and business studies. Efforts will be undertaken to improve the performance of Bumiputera in technical subjects at school levels to enable them to become high achievers in these subjects in the institutions of higher learning.

4.53 Greater emphasis will also be given towards increasing the number of workers with skills and high technical capabilities, particularly among Bumiputera, through higher and advanced vocational and technical training programmes. Additional higher vocational and technical training institutions will be established. Those with lower qualifications will be provided with opportunities to enhance their skills.

4.54 Employment opportunities will increasingly be based on relevant knowledge and skills. Apart from achieving higher academic excellence, Bumiputera students must acquire market-related knowledge and skills that will enable them compete effectively for job opportunities. The newly created skill development fund, *Tabung Pembangunan Kemahiran*, will continue to provide financial support to Bumiputera. To increase Bumiputera participation in the higher income jobs, the private sector also needs to recruit more Bumiputera graduates from the public institutions of higher learning.

## **Towards Balanced Regional Development**

4.55 A development composite index<sup>1</sup> (DCI), which was derived using a set of economic and social indicators, was used to gauge the development pattern as well as categorize states into the more developed and less developed state,

<sup>1</sup> The composite index of development is an average score of 10 selected socio economic indicators. The indicators include per capita GDP, unemployment rate, urbanization rate, registered cars and motorcycles per 1,000 population, telephone per 1,000 population, incidence of poverty, population provided with piped water, population provided with electricity, number of doctors per 10,000 population and infant mortality rate per 1,000 live birth.

as shown in *Table 4-8*. The economic indicators include per capita GDP, unemployment, urbanization, telephone as well as registered vehicle ownership, while all the remaining indicators are categorized as social indicators. Based on the DCI, Wilayah Persekutuan Kuala Lumpur, Selangor, Penang, Perak, Negeri Sembilan, Melaka and Johor are categorised as the more developed states, while the others as the less developed states.

4.56 Wilayah Persekutuan Kuala Lumpur, Penang and Selangor, registered the highest points in terms of the development composite index, reflecting a higher level of economic activities and income as well as living standards and quality of life. In terms of the change in the index between 1990 and 2000, all the more developed states, with the exception of Wilayah Persekutuan Kuala Lumpur, gained by more than the national average of 29.0 points. As for the less developed states, all the states recorded a higher DCI in 2000 compared with 1990. Kedah, Perlis and Pahang recorded the highest points in 2000, indicating a higher level of economic activities and quality of life. However, Sarawak, Kedah, Terengganu and Perlis attained a larger change in index between 1990 and 2000, which shows that these states are more vibrant economically compared with other less developed states.

4.57 In terms of the real GDP growth, Wilayah Persekutuan Kuala Lumpur, Selangor, Penang, Johor, Negeri Sembilan and Terengganu witnessed rapid growth exceeding the national average of 7.0 per cent during the OPP2 period, as shown in *Table 4-9*. This was largely attributed to the expanding manufacturing and services activities in these states. During the OPP3 period, all the states are expected to grow rapidly in terms of GDP. The proportion of GDP of the more developed states is expected to increase from 67.6 per cent in 2000 to about 68.2 per cent in 2010, while the proportion for the less developed states will decline from 32.4 per cent to 31.8 per cent during the same period.

4.58 As for the per capita GDP, during the OPP2 period, the rate of increase ranged from the lowest at 4.8 per cent recorded by Sabah to the highest at 10.5 by Wilayah Persekutuan Kuala Lumpur, as shown in *Table 4-10*. Overall, the per capita GDP in Melaka, Penang, Selangor, Wilayah Persekutuan Kuala Lumpur and Terengganu were higher than the national average in 2000. These states are expected to maintain the same structure during the 2001-2010 period, with Wilayah Persekutuan Kuala Lumpur recording the highest per capita GDP at RM49,630 in 2010.

TABLE 4-8  
DEVELOPMENT COMPOSITE INDEX  
(1990=100)

| Indicator/State                                  |      | More Developed States |       |        |                 |       |              |                       |                                  | Less Developed States |       |          |        |        |                    |         |            | MALAYSIA |
|--|------|-----------------------|-------|--------|-----------------|-------|--------------|-----------------------|----------------------------------|-----------------------|-------|----------|--------|--------|--------------------|---------|------------|----------|
|  |      |                       |       |        |                 |       |              |                       |                                  |                       |       |          |        |        |                    |         |            |          |
|  |      | Total                 | Johor | Melaka | Negeri Sembilan | Perak | Pulau Pinang | Selangor <sup>1</sup> | Wilayah Persekutuan Kuala Lumpur | Total                 | Kedah | Kelantan | Pahang | Perlis | Sabah <sup>2</sup> | Sarawak | Terengganu |          |
| Per Capita GDP                                   | 1990 | 104.4                 | 97.0  | 100.1  | 94.9            | 95.1  | 106.4        | 113.4                 | 120.6                            | 94.6                  | 88.3  | 84.3     | 94.2   | 90.1   | 96.3               | 99.2    | 108.2      | 100.0    |
|  | 2000 | 133.8                 | 128.5 | 131.2  | 126.8           | 127.4 | 140.0        | 133.7                 | 154.1                            | 123.9                 | 120.9 | 116.8    | 123.1  | 123.7  | 121.2              | 126.7   | 142.3      | 129.5    |
| Unemployment Rate                                | 1990 | 106.2                 | 108.0 | 104.6  | 106.6           | 102.2 | 107.6        | 110.0                 | 104.2                            | 93.8                  | 102.2 | 95.4     | 108.0  | 101.7  | 79.9               | 80.9    | 88.6       | 100.0    |
|  | 2000 | 133.2                 | 132.5 | 132.5  | 131.8           | 128.4 | 138.0        | 130.4                 | 138.7                            | 118.8                 | 131.1 | 112.5    | 124.2  | 128.4  | 108.3              | 111.8   | 115.2      | 125.6    |
| Urbanization Rate                                | 1990 | 106.5                 | 100.0 | 95.7   | 97.2            | 102.7 | 112.7        | 112.8                 | 124.5                            | 93.5                  | 92.8  | 93.2     | 91.8   | 90.0   | 93.1               | 95.2    | 98.4       | 100.0    |
|  | 2000 | 135.9                 | 129.1 | 126.0  | 125.0           | 134.4 | 142.9        | 144.4                 | 149.3                            | 121.8                 | 122.5 | 121.2    | 118.6  | 119.4  | 120.7              | 126.4   | 124.1      | 130.2    |
| Registered Car & Motorcycle per 1,000 Population | 1990 | 108.2                 | 108.3 | 104.8  | 105.3           | 99.3  | 117.8        | 113.7                 | 108.2                            | 91.8                  | 94.5  | 89.5     | 96.3   | 98.1   | 84.4               | 91.0    | 88.9       | 100.0    |
|  | 2000 | 139.9                 | 136.8 | 138.2  | 134.9           | 134.2 | 148.7        | 130.3                 | 156.1                            | 125.4                 | 127.9 | 123.8    | 127.8  | 128.5  | 119.6              | 125.6   | 124.2      | 132.6    |
| Telephone per 1,000 Population                   | 1990 | 106.6                 | 101.2 | 99.0   | 99.7            | 97.9  | 108.6        | 113.3                 | 126.4                            | 93.4                  | 92.0  | 89.6     | 93.2   | 94.7   | 95.9               | 96.9    | 91.6       | 100.0    |
|  | 2000 | 134.2                 | 130.9 | 130.7  | 129.9           | 130.5 | 140.8        | 147.8                 | 128.8                            | 117.8                 | 115.9 | 115.4    | 122.4  | 115.9  | 115.9              | 120.1   | 119.0      | 126.0    |
| Incidence of Poverty                             | 1990 | 107.2                 | 107.3 | 105.1  | 107.9           | 98.3  | 108.5        | 109.6                 | 113.5                            | 92.8                  | 87.8  | 87.9     | 107.1  | 100.3  | 83.5               | 96.6    | 86.5       | 100.0    |
|  | 2000 | 130.3                 | 132.5 | 127.5  | 132.5           | 121.6 | 132.2        | 133.3                 | 132.8                            | 115.7                 | 115.3 | 107.2    | 127.8  | 115.7  | 105.1              | 125.9   | 113.2      | 124.7    |
| Population Provided With Piped Water             | 1990 | 108.1                 | 101.2 | 108.7  | 105.5           | 104.1 | 112.6        | 110.4                 | 114.2                            | 91.9                  | 94.5  | 79.8     | 98.7   | 92.3   | 93.0               | 87.9    | 97.2       | 100.0    |
|  | 2000 | 142.2                 | 141.1 | 142.0  | 142.0           | 142.9 | 142.9        | 142.0                 | 142.9                            | 131.2                 | 141.1 | 115.6    | 136.5  | 138.3  | 111.9              | 137.4   | 137.4      | 135.6    |
| Population Provided With Electricity             | 1990 | 105.0                 | 99.1  | 107.6  | 106.8           | 99.1  | 106.8        | 107.6                 | 107.6                            | 95.0                  | 100.9 | 95.0     | 103.8  | 106.8  | 77.2               | 79.5    | 102.1      | 100.0    |
|  | 2000 | 135.9                 | 135.9 | 135.9  | 135.9           | 135.9 | 135.9        | 135.9                 | 135.9                            | 128.1                 | 135.9 | 135.9    | 135.9  | 135.9  | 107.7              | 109.1   | 135.9      | 132.0    |
| Infant Mortality Rate per 1,000 Live Birth       | 1990 | 106.0                 | 102.5 | 107.1  | 104.3           | 103.4 | 108.9        | 105.9                 | 109.7                            | 94.0                  | 100.8 | 103.1    | 98.7   | 97.1   | 71.2               | 87.6    | 99.9       | 100.0    |
|  | 2000 | 133.4                 | 139.2 | 125.2  | 134.0           | 138.2 | 136.6        | 144.4                 | 116.4                            | 125.1                 | 128.8 | 122.6    | 121.0  | 131.3  | 113.3              | 140.8   | 117.9      | 130.9    |
| No. of Doctor per 10,000 Population              | 1990 | 105.0                 | 97.4  | 99.2   | 100.0           | 98.3  | 104.7        | 101.9                 | 132.9                            | 95.0                  | 94.7  | 95.3     | 96.1   | 97.2   | 93.3               | 93.6    | 95.0       | 100.0    |
|  | 2000 | 133.4                 | 122.6 | 132.1  | 126.0           | 126.3 | 133.9        | 147.4                 | 145.5                            | 119.4                 | 121.1 | 122.6    | 119.9  | 121.1  | 114.1              | 118.0   | 119.0      | 126.9    |
| Economic Development Index                       | 1990 | 106.3                 | 102.9 | 100.8  | 100.7           | 99.4  | 110.6        | 112.6                 | 116.8                            | 93.4                  | 93.9  | 90.4     | 96.7   | 94.9   | 89.9               | 92.6    | 95.2       | 100.0    |
|  | 2000 | 135.5                 | 131.6 | 131.7  | 129.7           | 131.0 | 142.1        | 137.3                 | 145.4                            | 121.7                 | 123.7 | 117.9    | 123.2  | 123.2  | 117.1              | 122.1   | 125.0      | 128.6    |
| Social Development Index                         | 1990 | 106.2                 | 101.6 | 105.5  | 104.9           | 100.6 | 108.3        | 107.1                 | 115.6                            | 93.8                  | 95.7  | 92.2     | 100.9  | 98.7   | 83.6               | 89.0    | 96.1       | 100.0    |
|  | 2000 | 135.1                 | 134.3 | 132.5  | 134.1           | 133.0 | 136.3        | 140.6                 | 134.7                            | 123.9                 | 128.5 | 120.8    | 128.2  | 128.5  | 110.4              | 126.2   | 124.7      | 129.5    |
| Development Composite Index                      | 1990 | 106.3                 | 102.2 | 103.2  | 102.8           | 100.0 | 109.5        | 109.9                 | 116.2                            | 93.6                  | 94.8  | 91.3     | 98.8   | 96.8   | 86.8               | 90.8    | 95.7       | 100.0    |
|  | 2000 | 135.3                 | 132.9 | 132.1  | 131.9           | 132.0 | 139.2        | 139.0                 | 140.1                            | 122.8                 | 126.1 | 119.4    | 125.7  | 125.8  | 113.8              | 124.2   | 124.8      | 129.1    |
| Change in Index                                  |      | 29.0                  | 30.7  | 28.9   | 29.1            | 31.9  | 29.7         | 29.1                  | 23.9                             | 29.2                  | 31.2  | 28.1     | 26.9   | 29.0   | 27.0               | 33.3    | 29.2       | 29.0     |

Notes:

<sup>1</sup> Includes Wilayah Persekutuan Putrajaya.

<sup>2</sup> Includes Wilayah Persekutuan Labuan.

TABLE 4-9

**GROSS DOMESTIC PRODUCT BY STATE, 1990 – 2010**  
(RM million in 1987 prices)

| <i>State</i>                        | <i>1990</i>    | <i>%</i>     | <i>2000</i>    | <i>%</i>     | <i>2010</i>    | <i>%</i>     | <i>Average Annual Growth Rate (%)</i> |                        |
|-------------------------------------|----------------|--------------|----------------|--------------|----------------|--------------|---------------------------------------|------------------------|
|                                     |                |              |                |              |                |              | <i>Achieved<br/>OPP2</i>              | <i>Target<br/>OPP3</i> |
| <b>More Developed States</b>        | <b>67,604</b>  | <b>63.8</b>  | <b>141,492</b> | <b>67.6</b>  | <b>293,077</b> | <b>68.2</b>  | <b>7.7</b>                            | <b>7.6</b>             |
| Johor                               | 11,093         | 10.5         | 23,425         | 11.2         | 49,162         | 11.4         | 7.8                                   | 7.7                    |
| Melaka                              | 3,124          | 2.9          | 6,148          | 2.9          | 12,536         | 2.9          | 7.0                                   | 7.4                    |
| Negeri Sembilan                     | 3,427          | 3.2          | 6,776          | 3.2          | 13,720         | 3.2          | 7.1                                   | 7.3                    |
| Perak                               | 9,582          | 9.0          | 17,153         | 8.2          | 34,235         | 8.0          | 6.0                                   | 7.2                    |
| Pulau Pinang                        | 7,997          | 7.5          | 17,314         | 8.3          | 36,446         | 8.5          | 8.0                                   | 7.7                    |
| Selangor <sup>1</sup>               | 20,103         | 19.0         | 44,708         | 21.4         | 93,878         | 21.8         | 8.3                                   | 7.7                    |
| Wilayah Persekutuan<br>Kuala Lumpur | 12,277         | 11.6         | 25,968         | 12.4         | 53,101         | 12.4         | 7.8                                   | 7.4                    |
| <b>Less Developed States</b>        | <b>38,373</b>  | <b>36.2</b>  | <b>67,777</b>  | <b>32.4</b>  | <b>136,668</b> | <b>31.8</b>  | <b>5.9</b>                            | <b>7.3</b>             |
| Kedah                               | 4,670          | 4.4          | 9,087          | 4.3          | 18,944         | 4.4          | 6.9                                   | 7.6                    |
| Kelantan                            | 3,098          | 2.9          | 5,061          | 2.4          | 9,615          | 2.2          | 5.0                                   | 6.6                    |
| Pahang                              | 4,926          | 4.6          | 8,250          | 3.9          | 17,034         | 4.0          | 5.3                                   | 7.5                    |
| Perlis                              | 712            | 0.7          | 1,362          | 0.7          | 2,648          | 0.6          | 6.7                                   | 6.9                    |
| Sabah <sup>2</sup>                  | 9,268          | 8.7          | 14,947         | 7.1          | 30,004         | 7.0          | 4.9                                   | 7.2                    |
| Sarawak                             | 9,687          | 9.1          | 16,323         | 7.8          | 33,274         | 7.7          | 5.4                                   | 7.4                    |
| Terengganu                          | 6,011          | 5.7          | 12,746         | 6.1          | 25,149         | 5.9          | 7.8                                   | 7.0                    |
| <b>Malaysia</b>                     | <b>105,977</b> | <b>100.0</b> | <b>209,269</b> | <b>100.0</b> | <b>429,745</b> | <b>100.0</b> | <b>7.0</b>                            | <b>7.5</b>             |

*Notes:*

<sup>1</sup> Includes Wilayah Persekutuan Putrajaya.

<sup>2</sup> Includes Wilayah Persekutuan Labuan.

TABLE 4-10

**PER CAPITA GROSS DOMESTIC PRODUCT BY STATE, 1990 – 2010**  
(RM in current prices)

| State                               | 1990         | 2000          | 2010          | Average Annual Growth Rate (%) |                | Ratio to National |            |            |
|-------------------------------------|--------------|---------------|---------------|--------------------------------|----------------|-------------------|------------|------------|
|                                     |              |               |               | Achieved<br>OPP2               | Target<br>OPP3 | 1990              | 2000       | 2010       |
| <b>More Developed States</b>        | <b>7,591</b> | <b>17,410</b> | <b>29,319</b> | <b>8.7</b>                     | <b>5.4</b>     | <b>1.2</b>        | <b>1.2</b> | <b>1.2</b> |
| Johor                               | 5,877        | 13,954        | 24,749        | 9.0                            | 5.9            | 0.9               | 1.0        | 1.0        |
| Melaka                              | 6,598        | 15,723        | 28,100        | 9.1                            | 6.0            | 1.0               | 1.1        | 1.1        |
| Negeri Sembilan                     | 5,394        | 12,791        | 24,249        | 9.0                            | 6.6            | 0.8               | 0.9        | 1.0        |
| Perak                               | 5,435        | 13,183        | 25,524        | 9.3                            | 6.8            | 0.8               | 0.9        | 1.0        |
| Pulau Pinang                        | 8,066        | 21,469        | 37,951        | 10.3                           | 5.9            | 1.2               | 1.5        | 1.5        |
| Selangor <sup>1</sup>               | 9,691        | 17,363        | 25,888        | 6.0                            | 4.1            | 1.5               | 1.2        | 1.0        |
| Wilayah Persekutuan<br>Kuala Lumpur | 11,364       | 30,727        | 49,630        | 10.5                           | 4.9            | 1.7               | 2.1        | 2.0        |
| <b>Less Developed States</b>        | <b>5,326</b> | <b>10,893</b> | <b>19,174</b> | <b>7.4</b>                     | <b>5.8</b>     | <b>0.8</b>        | <b>0.7</b> | <b>0.8</b> |
| Kedah                               | 3,864        | 8,918         | 16,910        | 8.7                            | 6.6            | 0.6               | 0.6        | 0.7        |
| Kelantan                            | 2,940        | 6,241         | 11,735        | 7.8                            | 6.5            | 0.4               | 0.4        | 0.5        |
| Pahang                              | 5,232        | 10,370        | 19,870        | 7.1                            | 6.7            | 0.8               | 0.7        | 0.8        |
| Perlis                              | 4,279        | 10,802        | 20,316        | 9.7                            | 6.5            | 0.7               | 0.7        | 0.8        |
| Sabah <sup>2</sup>                  | 5,729        | 9,123         | 14,335        | 4.8                            | 4.6            | 0.9               | 0.6        | 0.6        |
| Sarawak                             | 6,403        | 12,775        | 23,094        | 7.2                            | 6.1            | 1.0               | 0.9        | 0.9        |
| Terengganu                          | 8,549        | 22,994        | 37,734        | 10.4                           | 5.1            | 1.3               | 1.6        | 1.5        |
| <b>Malaysia</b>                     | <b>6,578</b> | <b>14,584</b> | <b>25,096</b> | <b>8.3</b>                     | <b>5.6</b>     | <b>1.0</b>        | <b>1.0</b> | <b>1.0</b> |

Notes:

<sup>1</sup> Includes Wilayah Persekutuan Putrajaya.<sup>2</sup> Includes Wilayah Persekutuan Labuan.

4.59 During the OPP3 period, the thrust of the regional development policy will be to accelerate the development of the less developed states and reduce the socioeconomic imbalances among regions. Steps that will be taken include promoting the concentration of economic activities by state on the basis of their comparative strength, continuing the industrial dispersal programme, expanding sub-regional cooperation arrangements, and further improving infrastructure and access to quality basic amenities, particularly in the less developed states. Efforts to modernize the rural areas will include increasing the accessibility to ICT infrastructure. To ensure orderly and systematic urban and rural development, spatial development considerations will be given due importance. Thus, all states are expected to register positive growth with significant improvements in the quality of life.

4.60 To promote *concentration of economic activities*, states will be encouraged to build on their existing areas of strength and expand into higher value-added products and related cluster activities. New and potential areas will be identified for all states based on their locational advantage as well as socioeconomic considerations. Among the concentrations identified include electronics, furniture, automotive, chemical and petrochemical as well as mixed industrial activities. Meanwhile, the formation of related clusters will be promoted in states to strengthen the industrial base, increase the value added and generate new investment activities. At the same time, to ensure that the less developed states are able to generate faster growth through agriculture, concerted efforts will be taken to enhance productivity and efficiency by introducing modern methods of farming, using high-yielding varieties and improving post-harvest handling. In addition, appropriate measures will be introduced to intensify agro-based processing activities in these states by initiating the setting up of modern and high tech plants producing higher value-added products for the domestic market as well as for exports.

4.61 Concerted efforts will also be taken to strengthen the economic base of the less developed states by diversifying into manufacturing and selected service activities. In order to promote manufacturing in these states, the *industrial dispersal programme* will be further enhanced. Under this programme, certain industries will be encouraged to relocate in the less developed states. At the same time, supporting cluster industries will also be encouraged to set up their plants in the less developed states, to take advantage of the lower rentals and cost of operations. The Government will improve existing industrial estates and consider setting up new ones with quality infrastructure as well as improve their linkages to port, airports and other developed areas. While the industrial dispersal programme will provide the impetus for growth and generate new employment opportunities in the less developed states, it will also result in a net gain to the nation due



to the synergy that will be generated from this symbiotic relationship. This programme will also reduce the stress placed on the urban centres in terms of resources, infrastructure and space.

4.62 To attract high value-added agro-based activities and manufacturing and selected services investments to the less developed states, among others, the Government will promote the locational advantage of these states. The State Governments will create a conducive and investor-friendly environment by removing unnecessary procedures and regulations and accelerating and simplifying the approval process for investment, including for land. The existing incentive package will also be reviewed and, where necessary, customized incentive packages will be introduced to attract investors to locate in these states.

4.63 While growth of the services sector is expected to be concentrated in the faster growing states, concerted efforts will be taken to develop suitable services activities in less developed states, particularly in states that will not be able to benefit from the industrial dispersal programme. Among the activities that will be promoted are tourism, health and education.

4.64 In addition, the Government will accelerate the *development of infrastructure and amenities* to support the growth of economic activities in the less developed states. This will include upgrading and constructing roads and highways within the less developed states as well as linking with the developed states to further facilitate inter-state economic cooperation and resource sharing for mutual gains. Access to safe water, electricity and telecommunications as well as quality social services such as modern hospitals and clinics, and schools will be improved so as to ensure a better quality of life.

4.65 *Urban and rural areas* are a set of diverse ecosystems that have evolved and been impacted in many different ways. In line with the concept of total development, there is a need to strengthen the existing institutional elements of urban and rural development to ensure sustainable urban and rural societies. Total development will be operationalized by balancing the economic, social, and environmental benefits that accrue from the implementation of development policies, programmes and projects, with its costs. It will include sharing responsibilities among the public, private and local communities to increase efficiency and effectiveness. Many activities will be created throughout rural areas to mobilize local creative energies. In addition, the Government will build upon existing and traditional management structures and processes to strengthen incentives to ensure equitable access to resources and sound environmental management.

4.66 To enhance spatial development, the National Spatial Plan will be introduced during the OPP3 period. The *urbanization programme* will continue to be given emphasis. By 2010, about 78 per cent of the population is expected to reside in the urban areas. Efforts will be undertaken to ensure that 70 per cent of the land area remains rural including forests, national parks and other protected areas, with about 30 per cent being set aside as urban areas. New strategies will be introduced to enhance the capability of local authorities to effectively manage the increased concentration of activities in the urban centres. In this regard, several local authorities will be upgraded. In addition, recognizing that many sustainability issues have their roots in local activities, the Government launched the Local Agenda 21 project to enable local authorities together with local communities to identify programmes and projects for sustainable development. An index on the urban quality of life will also be developed to measure standards and be used as a management tool to improve related services.

4.67 *Rural* areas will be modernized through the provision of high standard social and physical infrastructure facilities. In this respect, among others, existing infrastructure facilities will be improved and upgraded to improve accessibility to ICT including better telecommunications facilities, computers and Internet services. Efforts will also be taken to strengthen the linkage between rural and urban areas to promote greater complementarities and synergy. In addition, efforts will be taken to develop the rural areas as centres of modern cottage industries producing quality local handicrafts to meet the demands of the tourism industry. The rural areas will be promoted as attractive tourist destinations for city dwellers as well as foreigners. A rural quality of life index will be developed to monitor the standard of living and to design appropriate strategies and programmes to ensure continued development of rural areas.

4.68 *Cooperation through the Growth Triangles* will also serve as important means to facilitate further development of the border states. In this respect, border cooperation especially in the Growth Triangles will be enhanced through the development of core economic projects such as wholesale border markets and the development of the Pan-Borneo Highway. The private sector will be encouraged to take an active role in the development of these projects while the Government will provide the necessary support. The Government will also introduce appropriate measures to attract foreign direct investment to the Growth Triangle areas.

### III. CONCLUSION

4.69 The distributional agenda, under the NVP, will be reemphasized to ensure a more balanced and equitable participation among and within the ethnic groups

and regions. With the significant reduction of the incidence of absolute poverty, the poverty eradication programmes will focus on increasing the income of the poor and low-income groups irrespective of race. As for the restructuring strategy, the shift in emphasis will be towards increasing effective Bumiputera participation in the major dynamic sectors while pursuing efforts to attain the minimum target of 30 per cent in terms of effective Bumiputera equity ownership by 2010. The implementation of the distributional strategies will thus contribute towards strengthening national unity.

## **CHAPTER 5 - DEVELOPING MALAYSIA INTO A KNOWLEDGE-BASED ECONOMY**

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- II. CONCEPT OF THE KNOWLEDGE-BASED ECONOMY**
- III. RATIONALE FOR THE KNOWLEDGE-BASED ECONOMY**
- IV. CURRENT POSITION**
- V. MAJOR THRUSTS**
- VI. CONCLUSION**

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## **Chapter 5**

# **Developing Malaysia into a Knowledge-Based Economy**

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## CHAPTER 5

# Developing Malaysia into a Knowledge-Based Economy

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### I. INTRODUCTION

5.01 The knowledge-based economy will provide the platform to sustain a rapid rate of economic growth and enhance international competitiveness so as to achieve the objectives of Vision 2020. It will also strengthen Malaysia's capability to innovate; adapt and create indigenous technology; and design, develop and market new products, thereby providing the foundation for endogenously-driven growth. In addition, the knowledge-based economy will complement and accelerate the change from an input-driven to a productivity-driven growth strategy, a major policy thrust initiated under the Seventh Malaysia Plan. In this respect, the fuller recognition of the role of knowledge input will enhance the productive capacity of the traditional factors of production as well as generate new sources of growth. This, in turn, will expand the production possibility frontier of the Malaysian economy.

5.02 Several initiatives have already commenced to facilitate the smooth development of a knowledge-based economy. Malaysia, however, will accelerate its efforts during the Third Outline Perspective Plan (OPP3) period, particularly in the areas of human resource development (HRD), science and technology (S&T), research and development (R&D), infostructure and financing to position itself prominently in the global map of knowledge-based economies. It will also undertake measures to ensure that all segments of Malaysian society have equitable access to the new opportunities that will be generated.

### II. CONCEPT OF THE KNOWLEDGE-BASED ECONOMY

5.03 The knowledge-based economy is one where the generation and utilization of knowledge contribute to a significant part in economic growth and wealth

creation. While traditional factors of production, that is labour, capital, raw materials and entrepreneurship, remain important, knowledge will be the key factor driving growth, creating new value and providing the basis to remain competitive. While information technology (IT) will be the fundamental enabling tool, the nucleus of the knowledge-based economy will be human capital - essentially the capacity to create, innovate, generate and exploit new ideas as well as apply technology and exercise superior entrepreneurial skills. Existing industries will become more knowledge-intensive, while new knowledge-based and enabling industries will emerge. Accordingly, the economy will be characterized by knowledge-based activities and high-technology industries accounting for a significant share of employment, Gross Domestic Product (GDP) and exports. Besides being a factor of production, knowledge will become a commodity to be traded.

5.04 The knowledge-based economy provides a means to maintain sustainable rapid economic growth and competitiveness in the medium and long term. In this context, Malaysia will develop the enabling tools and nurture industries that have the potential to become knowledge-intensive. The private sector will continue to be the engine of growth in the knowledge-based economy, while the public sector will provide the enabling and supporting environment. The social and equity objectives will remain a crucial element in this new stage of economic development with the added responsibility of narrowing the knowledge gap among various income groups, between urban and rural communities and across regions. A definition of knowledge and the stylized characteristics of a knowledge-based economy are as shown in *Box 5-1*.

### **III. RATIONALE FOR THE KNOWLEDGE-BASED ECONOMY**

#### **To Achieve Sustainable Rapid Economic Growth**

5.05 Until the mid-1990s, Malaysia depended largely on capital investment to spearhead economic growth. It then initiated the strategy to shift from an input-driven to a productivity-driven mode. The basis for this change was the declining marginal productivity of capital, reflected by the increasing incremental capital output ratio. The proportion of investment to GDP was at a high level and the country consistently experienced a resource gap making this position unsustainable in the long term.

5.06 The Seventh Plan endorsed the task of increasing the contribution of total factor productivity (TFP) to output as an important strategy. Nevertheless, during



Box 5-1

**KNOWLEDGE AND CHARACTERISTICS OF A KNOWLEDGE-BASED ECONOMY**

- ❑ Knowledge is information that is interpreted and used by decision-makers to meet their goals. It is a public good, in that, there is no additional cost when shared with other users and others cannot be excluded from using it once it is created.
- ❑ Knowledge is generally divided into two types, namely, knowledge about technology and knowledge about attributes or tacit knowledge. The latter refers to knowledge gained from experience and which is often a source of competitive advantage.
- ❑ Characteristics of a knowledge-based economy:
  - *Has abundant resources.* Unlike most resources that deplete when used, the knowledge input is ever expanding in tandem with technology and innovation.
  - *No location barrier.* Innovation in technology opens access to resources and markets all over the world, creating virtual market places and organizations. There will be increased mobility of workers and capital.
  - *A highly educated labour force.* The knowledge economy comprises a better-informed populace as the government invests more on human development. Workers contribute to ideas, skills and knowledge by using latest technology.
  - *A high level of per capita wealth.* Knowledge-based investments generate increasing returns to scale and therefore, more wealth for all.
  - *Open cosmopolitan society attractive to global talent.* There will be ample opportunities for locals to tap foreign knowledge and learn of best business practices as world-class infrastructure will encourage foreign investment. The population will be willing to accept and put into practice new ideas and technologies and hence, local companies will become fit and fully equipped to face global challenges.
  - *Well connected to other global knowledge nodes.* Connectivity to the rest of the world and technology sharing as well as technology transformation will be made easy with the free flow of information with lower cost, and reliable infrastructure encourage information and technology sharing.
  - *A shift from top-down hierarchical organizational structures to flatter shared-structures such as networks of semi-autonomous teams.* IT development and communications technology will lead to better interaction among workers and there will be active involvement of workers in contributing ideas and decision-making.
  - *Skills and knowledge are key assets.* Skills and knowledge become the main assets for the economy to gain competitiveness.
  - *Information and communications technologies (ICTs) are pillars of the knowledge-based economy.* Access to networking is essential in acquiring and disseminating knowledge and the Internet is a key driver of ICT especially in the development of E-based activities, resulting in new approaches to doing things.

the Seventh Plan period, the transition to a productivity-driven economy was slow partly due to the large investments with long gestation periods as well as the decline in output as a result of the 1997 financial crisis. The lack of skilled manpower and technology advancement also contributed to this phenomenon.

5.07 The knowledge-based economy will complement efforts to improve economy-wide productivity through enhancement in TFP as it will add new value to existing activities and will be accompanied by improvements in technology, greater innovative capability and the input of higher skilled workforce. An assessment using input-output analysis confirms that knowledge-intensive industries have a higher value-added multiplier and higher productivity compared with non-knowledge intensive industries.

5.08 The knowledge-based economy will also spawn new activities for investment within existing industries as well as create new industries. The introduction of high-technology and knowledge-intensive production processes will offer new investment opportunities within existing industries. The need to move along the value chain in terms of product design and development as well as packaging, marketing and distribution will open up investment opportunities in new industries. Knowledge-enabling industries, particularly in the area of information and communications technology (ICT), will also generate green areas of investment in the development of hardware and software as well as infrastructure. The premium given to conceptualizing and testing of new ideas in the knowledge-based economy will also become the seedbed for the creation of completely new products and services. The knowledge-based economy through its contribution to productivity enhancement and the generation of new areas of investment will, therefore, increase the long-term growth potential and provide the basis for continued sustainable rapid growth of the Malaysian economy during the OPP3 period.

## **To Sustain Competitiveness**

5.09 The rapid creation and dissemination of knowledge and information on the back of advances in ICT are altering the manner in which goods and services are produced and marketed, and investments are made. Trade and investment transactions are conducted on-line and are becoming increasingly virtual. This has changed the basis and format for global and regional competitiveness and forced developing nations in particular, to review their policies and strategies. These countries are opening up their markets and economies to encourage freer flow of trade and investment as well as knowledge, technology and expertise. The developing economies that wish to take advantage of ICT are being wired-up at

a rapid pace to facilitate the process. Given these global developments, it is crucial for Malaysia to respond to the external environment to remain competitive by developing into a knowledge-based economy.

5.10 Malaysia is facing increasing competition for its labour-intensive and lower-end manufactured products from the lower-wage and resource-rich developing economies such as China, Indonesia and Thailand. Many of the local manufacturers of these products have been compelled to differentiate their products as well as refocus on specific market segments to remain competitive. With respect to high-technology and knowledge-intensive industries, Malaysia has yet to match the competency of the more advanced economies such as South Korea, Japan and Taiwan.

5.11 To maintain its competitive edge, Malaysia will need to aggressively undertake productivity improvements in traditional industries and at the same time, enhance its technological and knowledge capabilities to move into the mid-range and higher-end products. It is also imperative for local industries to move along the value chain into related upstream and downstream activities. These changes will be necessary so that the manufacturing and services sectors can lead economic growth during the OPP3 period. Towards this end, the knowledge-based economy can provide the platform to accelerate this transition.

#### **IV. CURRENT POSITION**

5.12 Malaysia started to lay the foundation for the knowledge-based economy in the mid-1990s, among others, with the launching of the National IT Agenda (NITA) and the Multimedia Super Corridor (MSC). Some efforts have also been taken in the areas of human resource, S&T and R&D, infostructure and financing, as well as to ensure that the development of the knowledge-based economy does not result in a knowledge divide.

5.13 The objective of NITA is to formulate strategies and promote the utilization and development of IT, the key enabler of a knowledge-based economy. For NITA to be realized, demonstrator applications, crucial for the implementation of IT projects at the national, public sector and community levels, were launched. The demonstrator applications priority areas are e-economy, which covers e-commerce and e-business, e-public services, e-community, e-learning and e-sovereignty.

5.14 The MSC strives to create an ideal IT and multimedia environment as well as a global test-bed to enable Malaysia to be in the mainstream of activities

necessary to attract knowledge workers, technopreneurs and high-technology industries. The basic physical infrastructure, including the telecommunications infrastructure with 2.5 gigabits per second asynchronous transfer mode-based backbone scalable to 10 gigabits per second in the MSC, were completed in mid-1999. This will enable the transfer of voice, image and data. The five designated cybercities of Kuala Lumpur City Centre, Kuala Lumpur Tower, Technology Park Malaysia, Cyberjaya and Malaysian Technology Development Corporation- Universiti Putra Malaysia Incubator Centre have attracted a sizeable number of sophisticated businesses, world-class technology-led companies and R&D investments. The First Wave Flagship Application including e-government, multipurpose card and smart schools are currently being implemented. New programmes and projects for the Second Wave Flagship Application are also being identified.

5.15 In the area of *human resource development*, although the overall level of educational attainment improved, the percentage of those in the labour force with tertiary education, which is critical to drive a knowledge-based economy, is still small at 13.9 per cent, as shown in *Table 5-1*. The enrolment at the tertiary level of the age cohort 17-23 years increased to 25 per cent following the substantial allocation provided for tertiary education, but it is still lower compared with many of the newly industrialized economies (NIEs), as shown in *Table 5-2*. In addition, enrolment at the first-degree level in public institutions continues to be biased towards the arts courses. While it is recognized that the arts courses are also important in the context of a knowledge-based economy, the need to create a critical mass of scientific and technical manpower necessitates higher enrolment in these fields. Enrolment in science and technical fields constituted only 31 per cent of total enrolment in 1999. This was largely due to the lower number of science stream students at the secondary school level, comprising 25.7 per cent of the total number of students in 1998, which was below the targeted 60:40 science to arts ratio.

| TABLE 5-1  |             |          |             |          |
|--|-------------|----------|-------------|----------|
| EDUCATIONAL ATTAINMENT OF THE<br>LABOUR FORCE, 1990-2000<br>(‘000 persons) |             |          |             |          |
| <i>Level of Education</i>  | <i>1990</i> | <i>%</i> | <i>2000</i> | <i>%</i> |
| Primary  | 2,380.2     | 33.8     | 2,607.9     | 27.4     |
| Lower & Middle Secondary   | 4,042.1     | 57.4     | 5,571.8     | 58.7     |
| Tertiary   | 619.7       | 8.8      | 1,319.3     | 13.9     |

TABLE 5-2

**PUBLIC EXPENDITURE IN EDUCATION AND  
TERTIARY ENROLMENT IN SELECTED COUNTRIES**  
(%)

| <i>Country</i>              | <i>Public Expenditure<br/>on Education<br/>(of GNP), 1996</i> | <i>Tertiary Enrolment<br/>(of population<br/>20-24 years), 1993</i> |
|-----------------------------|---|---|
| Australia                   | 5.5   | 42  |
| Canada                      | 6.9   | 103   |
| China                       | 2.3   | 4   |
| India                       | 3.2   | 6   |
| Ireland                     | 6.0   | 34  |
| Japan                       | 3.6   | 30  |
| South Korea                 | 3.7   | 48  |
| <b>Malaysia<sup>1</sup></b> | <b>5.2</b>  | <b>25</b>   |
| New Zealand                 | 7.3   | 58  |
| Singapore                   | 3.0   | 38  |
| United Kingdom              | 5.3   | 37  |
| United States               | 5.4   | 81  |

*Source:* The World Competitiveness Yearbook, 1998, 2000

*Note:* <sup>1</sup> Refers to year 2000 and age cohort 17-23 years.

5.16 S&T and R&D are important determinants of innovation and knowledge generation and need to be given greater emphasis. Malaysia's R&D expenditure was 0.4 per cent of GDP, as shown in *Table 5-3*, and a significant proportion of this expenditure was in the agricultural sector. The proportion of R&D expenditure to GDP in Malaysia was low compared with some countries that have successfully built indigenous capability to innovate, produce new technology as well as design new products. S&T and R&D efforts were partly constrained by the lack of a critical mass of scientists and engineers. In 1998, the number of scientists and engineers per one million population was 500, compared with the Second Outline Perspective Plan (OPP2) target of 1,000 scientists and researchers per one million population by 2000.

5.17 With respect to *infostructure*, Malaysia is an emerging global hub and universal provider in terms of its ICT penetration, quality of services, content

TABLE 5-3

**PUBLIC SECTOR R&D EXPENDITURE AND NUMBER OF  
SCIENTISTS AND ENGINEERS FOR SELECTED COUNTRIES**

| <i>Country</i>   | <i>R&amp;D Expenditure<br/>(% of GDP)<br/>1998</i> | <i>Scientists and Engineers<br/>(per million population)<br/>1985-1995</i> |
|--|--|--|
| Australia  | 1.7  | 3,166  |
| Canada   | 1.6  | 2,656  |
| China  | 0.7  | 350  |
| India  | 0.7  | 149  |
| Ireland  | 1.5  | 1,871  |
| Japan  | 2.9  | 6,309  |
| South Korea  | 2.7  | 2,636  |
| <b>Malaysia</b>  | <b>0.4</b>   | <b>500<sup>1</sup></b>   |
| New Zealand  | 1.0  | 1,778  |
| Singapore  | 1.8  | 2,728  |
| United Kingdom   | 1.9  | 2,417  |
| United States  | 2.5  | 3,732  |
| <i>Sources:</i> The World Competitiveness Yearbook, 2000<br>World Development Report, 1999/2000<br><br><i>Note:</i> <sup>1</sup> Refers to preliminary figures for year 1998 |  |  |

and infrastructure, and access, as shown in *Table 5-4*. While considerable progress was achieved in communications and multimedia, Malaysia lags behind the NIEs in terms of the availability and diffusion of communications infrastructure, ICT penetration rates, development of local content and security of infostructure networks.

5.18 Most of the telecommunications network development is concentrated in the Klang Valley and the urban centres of Ipoh, Pulau Pinang and Johor Bahru, resulting in disparity in terms of accessibility between the urban and rural areas. The telephone penetration rate in 2000 was 28.6 per 100 population for urban areas and 11.7 per 100 population for rural areas.

5.19 With regards to the development of local content in IT and multimedia, several Malaysian portals and sites have been set up. However, local content which reflects the culture and values of the nation that is digitally available and

TABLE 5-4

**KEY PENETRATION PERFORMANCE INDICATORS, 1998**

| <i>Indicator</i>   | <i>Status<sup>1</sup></i> |                |
|--|---------------------------|----------------|
| Teledensity (main lines per 100 population)  | 21.6                      | Level 3        |
| Cellular Mobile Penetration<br>(cellular subscribers per 100 population)   | 10                        | Level 3        |
| Internet Penetration Per Household   | 11.9                      | Level 3        |
| Internet Penetration Per 100 Population  | 6                         | Level 3        |
| ISDN Penetration Per 100 Population  | 0.04                      | Level 3        |
| Internet Host Per 100 Population   | 1.9                       | Level 3        |
| Computers Per 100 Population   | 8                         | Level 3        |
| Computer Power Per 100 Population (MIPS)   | 1,211                     | Level 3        |
| Pay TV Penetration Per Household (%)   | 2.1                       | Level 3        |
| <b>Average Performance</b>   |                           | <b>Level 3</b> |
| <i>Notes:</i><br><sup>1</sup> Level 1 (World Class) - comprises the United States, United Kingdom, Finland and Japan.<br>Level 2 (Advanced) - comprises Germany, South Korea, Taiwan and Singapore.<br>Level 3 (Emerging) - comprises Argentina, Chile, Thailand and China.<br>Level 4 (Rudimentary) - comprises India, Indonesia, Honduras and Nigeria. |                           |                |

accessible for the various application requirements, is inadequate.

5.20 Malaysia has made significant headway in terms of creating a conducive regulatory environment. Several legislations were amended and new ones enacted, including the Digital Signature Act 1997, Computer Crimes Act 1997, Telemedicine Act 1997, Copyright (Amendment) Act 1997 as well as Communications and Multimedia Act 1998. There is, however, a need to further improve the regulatory framework to support the orderly development of the knowledge-based economy.

5.21 The Government initiated the development of the venture capital industry as an alternative source of financing and allocated RM1.1 billion for the purpose. The Malaysian Exchange of Securities Dealing and Automated Quotation (MESDAQ) was established and its rules were liberalized to act as an attractive exit mechanism for technology-based investments of venture capital corporations (VCCs). The Kuala Lumpur Stock Exchange (KLSE) also provided listing facilities

for high-technology companies. The venture capital industry, however, is still at its infancy and will need to be further strengthened.

5.22 In addressing the issue of *digital divide* within the country, several initiatives such as the computerization of rural schools and provision of Internet access in strategic locations, have started. However, there is a need to accelerate the implementation of programmes targeted to improve access and narrow the equity gap. Malaysians with no formal education, senior citizens, people with disabilities and those in the 15-64 age group outside the labour force are particularly at risk of being marginalized by the ICT revolution. In terms of infostructure, gaps exist in telephony development and disparity of Internet access between states. A total of six states was below the national average of 20 per cent in telephone penetration rate while almost 70 per cent of Internet users were concentrated in the Federal Territory of Kuala Lumpur, Selangor, Penang and Johore. In addition, given that the majority of the population is Bahasa Malaysia-literate, the lack of local content restricted access to source of information.

5.23 In order to assess Malaysia's readiness to become a knowledge-based economy, the Knowledge-based Economy Development Index (KDI) was developed. It compares Malaysia's position relative to 21 other countries which are mainly developed. The KDI is derived from selected key factors required to drive a knowledge-based economy, namely, computer infrastructure, infostructure, education and training as well as R&D and technology. The indicators used in the computation of the index are, as shown in *Box 5-2*.

5.24 In terms of the KDI, Malaysia is in 17th position, as shown in *Chart 5-1*. The relatively better position for R&D and technology compared to computer infrastructure, infostructure as well as education and training, as shown in *Table 5-5*, is attributed to Malaysia's large exports of electronic and electrical goods. With regards to its readiness for a knowledge-based economy, Malaysia is better prepared with respect to its telecommunications infrastructure and literacy level but has to intensify efforts to improve its R&D capability, computer usage, Internet connectivity and higher education enrolment, as shown in *Chart 5-2*.



## COMPONENTS OF THE KNOWLEDGE-BASED ECONOMY DEVELOPMENT INDEX

### Computer Infrastructure

Examines the extent of availability of computers, specifically personal computers (PC) and the Internet, as a means of accessing the information superhighway. This is measured through:

- ☐ *share of worldwide computers in use*
- ☐ *computers per 1,000 population*
- ☐ *share of total worldwide Millions of Instructions per Second (MIPS)*
- ☐ *computer power per capita*
- ☐ *connections to the Internet*

### Infostructure

Comprises networks, appliances and legislation necessary to provide the conduit and enabling environment for seamless flow of information for learning and advancement at the personal, organizational and national levels. It includes indicators such as:

- ☐ *investment in telecommunications*
- ☐ *main telephones in use per 1,000 population*
- ☐ *cellular mobile telephone subscribers per 1,000 population*
- ☐ *television sets per 1,000 population*
- ☐ *radios per 1,000 population*
- ☐ *fax machines per 1,000 population*
- ☐ *international call cost*
- ☐ *newspaper circulation*

### Education and Training

Critical to produce the core input of a knowledge-based economy i.e. human resource. This is assessed in terms of:

- ☐ *total expenditure on education per capita*
- ☐ *literacy rate*
- ☐ *student-teacher ratio (primary)*
- ☐ *student-teacher ratio (secondary)*
- ☐ *secondary enrolment*
- ☐ *higher education enrolment*

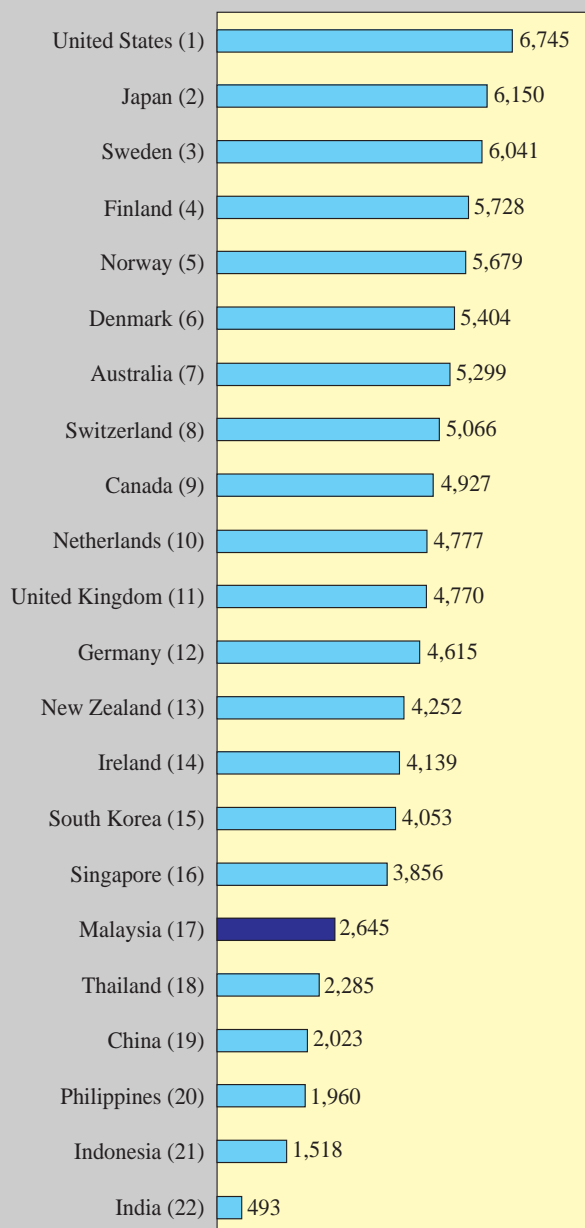
### Research & Development (R&D) and Technology

Looks at the level of R&D and technology development in the country. R&D essentially reflects the capacity to innovate and apply new technologies. This includes:

- ☐ *high-technology exports as a proportion of manufacturing exports*
- ☐ *number of scientists and engineers in R&D*
- ☐ *number of R&D personnel nationwide per capita*
- ☐ *total expenditure on R&D as a per cent of GDP*
- ☐ *average annual number of patents granted to residents*
- ☐ *business expenditure on R&D per capita*

CHART 5-1

**RANKING OF COUNTRIES ACCORDING TO  
KDI, 2000**



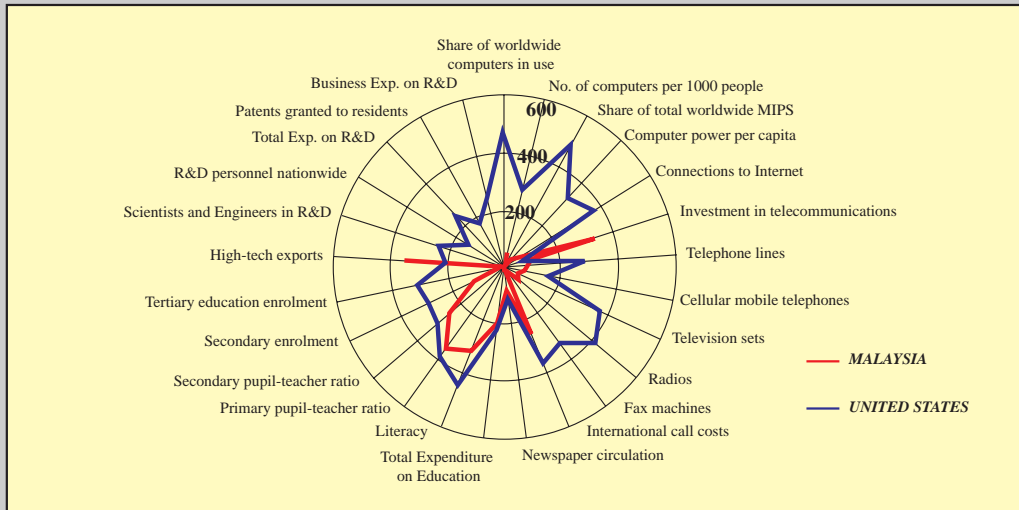
*Note :* The numbers in parenthesis are country rankings.  
The numbers on the right are standardized scores.

TABLE 5-5  
COUNTRY POSITION BY COMPONENTS OF  
KDI, 2000

| <i>Country</i>  | <i>Knowledge<br/>Index</i> | <i>Computer<br/>Infrastructure</i> | <i>Infostructure</i> | <i>Education<br/>and<br/>Training</i> | <i>R&amp;D and<br/>Technology</i> |
|-----------------|----------------------------|------------------------------------|----------------------|---------------------------------------|-----------------------------------|
| United States   | 1                          | 1                                  | 10                   | 8                                     | 3                                 |
| Japan           | 2                          | 8                                  | 3                    | 10                                    | 1                                 |
| Sweden          | 3                          | 5                                  | 2                    | 3                                     | 2                                 |
| Finland         | 4                          | 2                                  | 4                    | 4                                     | 4                                 |
| Norway          | 5                          | 4                                  | 1                    | 1                                     | 10                                |
| Denmark         | 6                          | 7                                  | 5                    | 2                                     | 9                                 |
| Australia       | 7                          | 6                                  | 6                    | 6                                     | 11                                |
| Switzerland     | 8                          | 13                                 | 7                    | 9                                     | 5                                 |
| Canada          | 9                          | 3                                  | 12                   | 5                                     | 15                                |
| Netherlands     | 10                         | 10                                 | 9                    | 13                                    | 8                                 |
| United Kingdom  | 11                         | 9                                  | 8                    | 11                                    | 14                                |
| Germany         | 12                         | 12                                 | 13                   | 12                                    | 7                                 |
| New Zealand     | 13                         | 11                                 | 14                   | 7                                     | 17                                |
| Ireland         | 14                         | 15                                 | 15                   | 15                                    | 12                                |
| South Korea     | 15                         | 16                                 | 11                   | 16                                    | 13                                |
| Singapore       | 16                         | 14                                 | 16                   | 19                                    | 6                                 |
| <b>Malaysia</b> | <b>17</b>                  | <b>17</b>                          | <b>17</b>            | <b>17</b>                             | <b>16</b>                         |
| Thailand        | 18                         | 19                                 | 21                   | 14                                    | 19                                |
| China           | 19                         | 18                                 | 19                   | 18                                    | 20                                |
| Philippines     | 20                         | 22                                 | 18                   | 20                                    | 18                                |
| Indonesia       | 21                         | 21                                 | 20                   | 21                                    | 21                                |
| India           | 22                         | 20                                 | 22                   | 22                                    | 22                                |

CHART 5-2

### KNOWLEDGE WHEEL: MALAYSIA AND UNITED STATES, 2000



*Note:* The 'Knowledge wheel' shows Malaysia's preparedness for the knowledge-based economy. The wider the spread on the wheel, the more prepared it is.

## V. MAJOR THRUSTS

5.25 To develop a knowledge-based economy, concerted efforts must be made to put the building blocks in place. In this respect, Malaysia will focus on strengthening the critical elements to support the knowledge-based economy. The major thrusts of the knowledge-based economy development plan for Malaysia will be as follows:

- ❑ *building the knowledge manpower base, among others, through a comprehensive review of the education and training system, the introduction of a system for life-long learning and a brain-gain programme;*
- ❑ *intensifying S&T and R&D initiatives towards strengthening the national innovation system;*
- ❑ *accelerating the development of infostructure to facilitate the development of the knowledge-based economy;*

- ❑ *restructuring the financial system to provide appropriate types of financing for knowledge activities, avail the tools for macroeconomic management and withstand the challenges associated with the knowledge-based economy;*
- ❑ *raising the knowledge-content in the agriculture, manufacturing and services sectors;*
- ❑ *getting the private sector to prepare themselves with greater urgency for the knowledge-based economy as well as identify and exploit the opportunities that will be generated;*
- ❑ *reinventing the public sector to become more proficient in the acquisition, utilization, dissemination and management of knowledge;*
- ❑ *fostering the ethical utilization of knowledge; and*
- ❑ *taking affirmative action to bridge the digital divide between income, ethnic and age groups, urban and rural communities, and across regions.*

## **Building the Knowledge Manpower**

5.26 Human capital will be the key driver of growth in the knowledge-based economy and will determine the competitive position of the nation. The successful development of the knowledge-based economy will, therefore, largely depend on the quality of the education and training system. The institutional framework to ensure an adequate supply of appropriately qualified and skilled manpower and to continuously retrain them, will be put in place.

5.27 The education system from pre-school to tertiary level will be reviewed to enable it to meet the manpower requirements of the knowledge-based economy. The key areas that will be reviewed include the curriculum, teaching methods, enrolment at the tertiary level and the quality of the teaching profession. The curriculum will emphasize the teaching of core competencies and will be in line with changing manpower requirements. Vocational and technical education and training will be given greater prominence and will be refocused to produce the skills required by the knowledge-based economy. In addition, teaching methods will be transformed to promote creativity, originality, innovation as well as thinking and analytical skills. The use of IT as a tool for teaching and learning will be made more pervasive.

5.28 Concerted efforts will be taken to increase enrolment at the tertiary level, particularly for science and technical courses. Public and private tertiary institutions will need to become more market-driven and proactive by moving beyond traditional areas to new fields of education required by a maturing knowledge-based economy. They will be required to enhance the standard of education and produce highly employable manpower. The quality of the teaching profession will also be improved by attracting better qualified people into the teaching profession, undertaking a programme of continuous training, and reviewing their scheme of service in terms of remuneration and promotion opportunities.

5.29 A system of life-long learning will be promoted to ensure that workers can continuously upgrade their skills and knowledge in order to remain relevant in the environment of rapidly changing technology and work processes as well as to nurture a learning society. Both the public and private sectors will be encouraged to set up the necessary infrastructure to facilitate life-long learning. In this regard, educational institutions will be required to introduce flexible learning approaches in terms of duration of course, entry requirements and mode of teaching as well as ensure affordability. Community colleges and resource centres will be set up to increase accessibility to acquire and disseminate knowledge. Firms and industries will be encouraged to provide incentives to their employees to relearn and continuously upgrade their skills. Towards this end, financial institutions will be encouraged to provide low interest loans to those interested in upgrading their skills.

5.30 To meet the immediate manpower needs of the knowledge-based economy, the Government will review on-going initiatives and undertake a coordinated brain-gain programme to attract qualified Malaysians working abroad as well as highly skilled foreigners. Among others, the programme will seek outstanding Malaysian students, quality Malaysian technopreneurs and highly skilled personnel from abroad as well as liberalize conditions for their recruitment. Appropriate steps will also be taken to ensure that those who set up their operations in Malaysia prior to this programme are not disadvantaged.

### **Intensifying S&T and R&D**

5.31 Malaysia needs to harness its potential to drive the key sectors in S&T and R&D and become a competitive knowledge-based economy. In this context, during the OPP3 period, priority will be accorded to increasing S&T and R&D manpower, improving related infrastructure, strengthening existing mechanisms for supporting R&D and technology development and diffusion, promoting S&T

awareness as well as enhancing S&T management. These will provide the basis for a well-functioning national innovation system and underpin the National Science and Technology Policy.

5.32 To provide the impetus for S&T and R&D initiatives, the public sector will increase the proportion of the budget allocated for this purpose. The funding mechanism for R&D activities will be streamlined to ensure optimum utilization of funds. Proposals for research will be evaluated by a panel of experts, including foreigners, in the proposed area of research. The corporate sector, including the small- and medium-scale enterprises (SMEs), will be provided significant incentives to allocate a greater proportion of their revenue for R&D.

5.33 Greater selectivity will be exercised in terms of the areas for S&T development to maximize benefits to the nation. The areas where Malaysia has already built its strength and where the opportunities for growth and leadership are highest, will be promoted. In line with this, S&T and R&D efforts will be refocused and reprioritized by systematically identifying areas, including those that are emerging and generic, that are strategic for Malaysia to develop into a knowledge-based economy.

5.34 To strengthen the capacity to identify, assimilate and exploit knowledge, the public sector research institutions will enhance their level of expertise and capability. The private sector will be encouraged to do the same. While efforts will be taken to expand the supply of S&T manpower, firms will be encouraged to offer appropriate training to employees to upgrade their skills. FDI will be increasingly used to leverage R&D and technology capabilities from abroad. The private sector will be urged to forge strategic alliances with suitable foreign partners to ensure that R&D activities are not insular. Malaysia will seek out and provide assistance to multinational companies with strong R&D capability in strategic areas to invest in the country. In addition, the incentive mechanism for FDI will be reviewed to pay special attention to those that are supported by new and value-adding R&D activities to be located in Malaysia.

5.35 In order to improve the diffusion of research findings and increase its commercial applicability, efforts will be taken to forge greater collaboration among public research institutions, universities and clusters of industries. Industry associations will be encouraged to take the lead in the implementation of industry-specific programmes.

5.36 In an effort to instil greater awareness and foster greater appreciation for science, the teaching of science in schools and tertiary institutions will be

reviewed regularly to ensure that the content is relevant, up-to-date and is taught in an interactive and lively manner. In addition, the Government in partnership with industry and non-governmental organizations (NGOs) will undertake programmes to popularize and promote S&T.

### **Accelerating the Development of Infostructure**

5.37 Malaysia will upgrade its communications and multimedia infrastructure to be world-class so that it can support the rapid flow and accessibility of information within the country and across countries at competitive prices. Given the increasing importance of the Internet to support e-activities and knowledge-intensive activities, there is a need for an integrated high-bandwidth national backbone. A longer term perspective will be taken in the planning and implementation of this facility to ensure that such communications and multimedia infrastructure is state-of-the-art and will be able to keep pace with the rapid advances expected in ICT.

5.38 Efforts will be directed to ensure equitable distribution and provision of telecommunications infrastructure and services to underserved areas and groups to bring them into the mainstream of the knowledge-based economy. For this purpose, an effective universal service obligation programme will be put in place. The Government will complement private sector contribution to ensure network roll-out to underserved areas and groups. The services offered will be made affordable. Specific targets to enhance penetration must also be set for the medium term as well as for the OPP3 period. In addition, coordinated efforts will be taken to accelerate the setting up of the Internet and multimedia kiosks in strategic locations.

5.39 Local content development will be given a strong push. In addition to catering for the global market, the need to preserve Malaysia's history and heritage and to exploit the local knowledge embedded in communities will be duly recognized. Incentives will be provided to individuals and institutions of learning to produce local content in local languages as well as to produce user-friendly software and appropriate Internet access technology. The private sector and NGOs will be encouraged to play a significant role in the area of content development. Towards this end, among others, the regulatory framework governing the local content industry will be reviewed and local players will be encouraged to undertake R&D and develop their skills as well as form strategic alliances with foreign partners.



5.40 A more integrated and comprehensive approach will be taken in developing the regulatory environment and institutional framework to create a conducive environment for the development of the knowledge-based economy and proliferation of knowledge activities. The legal framework will be fine-tuned to support the orderly operation of electronic activities such as e-commerce, e-government, e-financing and e-education as well as to support a flexi-working system. Legislation relating to intellectual property rights, and protection of privacy and security will be reviewed to improve the flow of information and knowledge. Malaysia will also participate in initiatives to coordinate and harmonize legal and institutional arrangements at the regional and global level to safeguard national interests.

### **Restructuring the Financial System**

5.41 The financial system including the modalities and sources of financing, rules and regulations as well as institutions, will be realigned to support the growth of knowledge-based economy activities and industries. The banking system, which currently serves as the main source for corporate financing will introduce innovative lending instruments and develop capability to assess future cash flow potential of knowledge-based projects. In addition, it will expand the scope of lending beyond core production activities to upstream and downstream activities, particularly for R&D, product development and marketing. In this respect, regulatory agencies will strive to achieve a balance between innovation and prudence.

5.42 Efforts will be taken to strengthen the venture capital industry to become more investor-friendly and responsive to the needs of start-ups. VCCs must enhance their capability to identify and evaluate potential projects as well as be more willing to take risk. The Government will also encourage the inflow of foreign venture capital funds as well as consider increasing foreign equity ownership in VCCs in order to tap foreign expertise and experience in this area. To promote venture capital investment opportunities in Malaysia, among others, the coordination mechanism linking potential investors and financiers will be improved, regular publications, fairs and technomarts will be held and websites will be created. To ensure that the Government venture capital funds will be able to add value, their management will be outsourced to experienced and reputable VCCs including, foreigners. To widen the sources for venture capital funding, the participation of trusts and insurance funds will be considered. In addition, the incentive package for the venture capital industry will be reviewed so as to accelerate high-technology initiatives.

5.43 The capital market will become an increasingly important source for raising funds for new and expanding companies engaged in knowledge-based activities. Initiatives to develop the capital market will be accelerated with the introduction of innovative funding instruments and the development of alternative capital raising avenues to finance high-technology companies.

5.44 Rapid advancements in ICT are expected to further accelerate the volume and speed of capital flows and other financial transactions across borders. In this regard, a comprehensive early warning system, financial sector safety nets as well as related prudential regulation and supervision will be put in place. The financial sector as a whole will reorientate itself to support the needs of the growing e-based transactions in the knowledge-based economy.

### **Raising the Knowledge-content in Agriculture, Manufacturing and Services Sectors**

5.45 While all sectors of the economy are expected to become more knowledge-intensive, efforts will be intensified to increase the knowledge-content in the agriculture, manufacturing and services sectors. The greater application of knowledge will strengthen as well as increase the dynamism and competitiveness of these sectors and contribute to sustained rapid economic growth. These sectors offer great potential in the context of a knowledge-based economy as they have extensive scope for further innovation and application of new technologies. In addition, the rapid advancements in ICT, which will underpin the growth of the knowledge-based economy, will itself spawn new activities and areas of investment in these sectors. Further, Malaysia has already acquired world-class knowledge, technology and skill capabilities in selected industries within these sectors and is, therefore, well placed to build on this advantage to drive the knowledge-based economy. This also places Malaysia in a favourable position to draw foreign expertise as well as investments into these sectors.

5.46 In the agriculture sector, the intensification of knowledge-content particularly through the more extensive application of modern technology and life sciences is expected to increase output substantially. Biotechnology will also contribute towards increases in yield, quality and crop protection. In addition, the development of life sciences will create increased demand for agricultural produce as inputs into the production of items such as edible vaccines, bio-pesticides and bio-pharmaceuticals. To facilitate the optimal utilization of knowledge in the agriculture sector, innovation networks will be established among researchers, producers and extension workers. The concept of innovation networks will also be extended

to permanent food production areas in line with the strategy to increase food output. The establishment of innovation networks, while providing the catalyst for the modernization of the agriculture sector, will enhance Malaysia's position as a leader in agriculture research as well as provide a strong base for developing state-of-the-art technology particularly for tropical food production. Appropriate programmes will be implemented so that smallholders will also benefit from these developments.

5.47 To remain competitive and maintain its position as an important contributor to economic growth, the manufacturing sector will have to undertake rapid structural change. Firms must aspire to move up the technology ladder to produce high-end products that generate greater value added. Within each industry, it will become pertinent to identify niche products where Malaysia has the knowledge-edge and develop them into world-class products. To achieve sustained competitiveness of identified products and industries, the supporting cluster industries and services will have to be developed simultaneously. Malaysian firms will be encouraged to move along the value chain into knowledge-intensive activities.

5.48 In the services sector, efforts will be taken to modernize and enhance its efficiency so that it becomes more competitive as well as supports an advanced industrial sector. While developing the traditional sectors, there is the need to identify and develop new service products that will be generated by the knowledge-based economy.

5.49 In order to ensure that SMEs are brought into the mainstream of the knowledge-based economy, the Government will formulate programmes to accelerate the creation of a critical mass of capable, progressive and efficient SMEs. Specific programmes will be introduced to empower SMEs through knowledge and information, inculcate new management mindsets and IT practices, and encourage R&D through collaborative institutional networking. To facilitate the participation of SMEs in knowledge-intensive activities, particularly in the manufacturing and services sectors, they will be encouraged to establish supply linkages with large high-technology companies as well as form smart partnerships and strategic alliances with foreign high-technology SMEs. The Government will facilitate access of SMEs to venture capital funding as well as funds to carry out R&D so that they can design, innovate and produce components and products and thereby effectively participate in the new industries emerging in the knowledge-based economy. Industry associations will also need to be more active and committed in assisting the development of SMEs so that they will be able to partake in the opportunities that will be generated in the knowledge-based economy.

5.50 The Government will continue to promote investments in high-technology and knowledge-intensive activities, including FDI. It will provide competitive fiscal and non-fiscal incentives as well as customized incentives for highly innovative and strategic activities. The incentive mechanism will favour investments that involve and include R&D, designing, testing, prototyping, packaging and distribution as well as new industries and services associated with a knowledge-based economy.

### **Preparing the Private Sector for the Change**

5.51 The private sector will continue to be the engine of growth in the knowledge-based economy. The private sector including the SMEs, will have to swiftly redefine their production processes by applying appropriate and cost-efficient technology. They must also take a global view as markets will become virtual and borderless. Traditional modes of sourcing inputs and marketing products will have to be complemented by the greater use of e-trading and e-business tools. In addition, the private sector will need to create new value by developing capacity to undertake R&D, product development and innovation, as well as package, market and distribute their products efficiently and speedily. They must identify niche areas in which they have potential and build their competency to world-class standards.

5.52 To succeed and stay ahead, the private sector will have to adopt best practices and benchmark themselves at a higher level than the best firms in their respective industries. Entrepreneurial and managerial skills must be sharpened to handle new challenges. Efforts must also be taken to develop a sufficient number of high quality technopreneurs to drive firms. In addition, the private sector must be more willing to take risk and venture into new areas and opportunities that will be generated by the knowledge-based economy.

5.53 In order to marshal the private sector to respond with urgency, the Government will create greater awareness of the opportunities that will be generated through better dissemination of information. The Government will also avail the necessary infrastructure and conducive climate.

### **Reinventing the Public Sector**

5.54 The public sector will transform itself to propel the development of the knowledge-based economy. It will continue to play a facilitative role by providing

the appropriate environment and more importantly act as a catalyst for the private sector to spearhead the development of the knowledge-based economy. Among the important tasks for the public sector in respect of providing an appropriate environment for private sector participation will be maintaining a stable macroeconomic environment, making available the basic infrastructural facilities, developing an education and training system capable of supplying the knowledge manpower, encouraging as well as undertaking R&D, creating a conducive regulatory framework and initiating the development of flexible financing mechanisms. The public sector will be directly engaged in ensuring the continued achievement of social and distributional objectives, including the critical responsibility of implementing strategies to narrow the knowledge gap.

5.55 The public sector will reinvent itself by using advanced IT and multimedia technology, benchmarking against best practices, and adapting its mind set and operational processes to perform the tasks required of it in the context of the knowledge-based economy. The creation of an e-government will also be expedited. The e-government will be used as a means to improve the internal operations of the Government as well as the delivery of public services. It will improve efficiency, accessibility and quality of its services. In addition, it will facilitate the offering of new services and information, and open up new service levels consistent with the requirements of the knowledge-based economy.

5.56 The skills of the public sector will be continuously upgraded and programmes will be introduced to instil greater resourcefulness and nurture innovative capability within the public sector. The public service, while continuing to right size, will recruit competent and well-qualified people. Efforts will also continue to reorganize the structure of the public sector to become more responsive and flexible as well as more transparent.

### **Fostering the Ethical Utilization of Knowledge**

5.57 With the advent of the Global Information Age, a new code of ethics is needed to ensure that the knowledge which is freely and readily available is positively used to bring well-being and prosperity rather than create havoc and destruction. The advances made by ICT have made the location of learning centres less relevant than before. Students can interact with teachers halfway across the world in real time, while recorded knowledge can be accessed freely, completely and from anywhere. There is an explosion in the volume and variety of information available on the Internet, and it is possible to come into contact

with individuals in different parts of the world who are able to provide opinion and feedback on any particular subject matter. The information available could be useful and constructive, on one hand, or trivial, wrong or even potentially destructive and life threatening, on the other. It is, therefore, important for Malaysians to maintain a high level of ethics and morality so as to be able to handle and use knowledge well.

5.58 Serious consideration will be given to ensure that the knowledge acquired will be utilized in a positive and ethical manner and is beneficial to the individual and nation. As part of the effort to reinforce positive values through the education and training system, students will be taught the importance of using knowledge properly for the purpose of increasing understanding and well-being. Parents will have to provide guidance to their children so that their creative energies are utilised in a wholesome and positive manner. The media and other forms of information dissemination will be encouraged to enhance public awareness on the importance and benefit of maintaining an ethical conduct with regard to the positive utilization of knowledge. The private sector and NGOs will need to complement the efforts of developing a new code of ethics for the Information Age. To deter the abuse of knowledge and computer crimes, the implementation and enforcement of IT-related laws will be strengthened.

### **Bridging the Digital Divide**

5.59 Social and equity objectives will remain a fundamental consideration with the added responsibility of ensuring that the knowledge-based economy does not widen disparities between various sections of Malaysian society. Affirmative action as outlined in the New Economic Policy (NEP) and the National Development Policy (NDP) will be continued to ensure that participation in the knowledge-based economy ultimately reflects the ethnic composition of the population. Strategies will be designed to enable all Malaysians, particularly Bumiputera, to gain from the opportunities created through the knowledge-based economy.

5.60 Telecommunications infrastructure will be expanded throughout the country to achieve total connectivity. The focus will be to ensure widespread diffusion of ICT and access to rural areas and disadvantaged groups. Computers and Internet access will be made more affordable. There will also be a parallel programme to develop local content to increase access to information, particularly in Bahasa Malaysia to reach out to all Malaysians. Efforts will also be taken to foster greater awareness on the importance of English to facilitate maximum

access to information. The Government in partnership with the private sector will introduce ICT literacy programmes to educate targeted population groups based on their needs and capability. They will also provide appropriate opportunities and financial assistance to the disadvantaged to be an active participant in the knowledge-based economy. In addition, efforts will be taken to create greater awareness on the importance of the knowledge-based economy, particularly among the poor and the lower income group as well as to ensure their equitable participation.

## **VI. CONCLUSION**

5.61 The knowledge-based economy presents the way forward to achieve sustainable rapid growth and remain globally competitive in the medium and long term. In order to develop a knowledge-based economy, it is imperative to address the constraints and resolve them swiftly. While Malaysia has set some of the basic foundations of a knowledge-based economy, efforts will be accelerated in the key areas of HRD, S&T and R&D, infostructure, financing and equity, which are fundamental to building Malaysia's knowledge-based economy.

## **CHAPTER 6 - INVESTING IN PEOPLE**

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- II. THE THRUST OF HUMAN RESOURCE DEVELOPMENT**
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## **Chapter 6**

# **Investing In People**

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## **CHAPTER 6**

# **Investing In People**

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### **I. INTRODUCTION**

6.01 Significant achievements were made in human resource development during the Second Outline Perspective Plan (OPP2) period with rapid employment growth and increased accessibility to education and training. The economy attained full employment beginning 1993 and unemployment was maintained at a low level even during the financial crisis in 1997-1998, due to the measures undertaken by the Government. Education and training institutions expanded rapidly to cater to the increasing demand for educated and skilled manpower. The private sector also became a major provider of education and training mainly as a result of the liberalization of education in the latter part of the OPP2 period.

6.02 As Malaysia enters the 21<sup>st</sup> century, human resource development will continue to remain a key strategy in ensuring that all Malaysians share in the nation's prosperity and develop a dynamic labour force that is globally competitive. The development of a knowledge-based economy coupled with emerging technologies and globalization will influence future growth trends in the demand for skills and expertise as well as creating new economic opportunities that can be translated into income improvements for all Malaysians. Priority will, therefore, be given to increase accessibility to quality education and training as well as strengthening the human resource base to support the development of a knowledge-based economy during the Third Outline Perspective Plan (OPP3) period.

### **II. THE THRUST OF HUMAN RESOURCE DEVELOPMENT**

6.03 The thrust of human resource development in the OPP3 will be to prepare a workforce that is capable of meeting the challenges of a knowledge-based economy so as to enhance the productivity and competitiveness of the economy.

The transformation of the economy will increase demand for technological skills and expertise as well as a labour force equipped with tacit knowledge and a high level of thinking skill. Efforts will, therefore, be made to ensure that the education and training system has the capacity to enhance the quality of intellectual capital as well as expand the human resource base.

6.04 The pervasiveness of information technology and increasing knowledge-intensity of the economy will create new employment opportunities but will also result in skill redundancies and job displacements. It is critical that the labour force possesses the ability to adapt and adjust to the changing demands of technological advances in the knowledge-based economy. Lifelong learning will be promoted among Malaysians as it is critical for them to continuously acquire new knowledge to upgrade their skill base after leaving the formal education and training system. Efforts will also be undertaken to retrain and reskill the labour force to minimize the effects of structural unemployment as well as to meet the new skill requirements of the knowledge-based economy.

6.05 The education and training system will be reoriented so that the knowledge, skills and expertise acquired can support the knowledge-based economy. Priority will be given to the teaching of Science, Mathematics and languages as well as the development of extra-functional and critical thinking skills. The inculcation of positive values such as a sense of belonging, drive for excellence, loyalty and love for the country as well as discipline, integrity, dedication and other positive attributes will also be emphasized. Accessibility to quality education and training at all levels will be increased. To prepare a workforce that is capable of meeting the challenges of the knowledge-based economy, efforts will be intensified to encourage the private sector to increase their involvement in providing quality education and training to complement the Government's efforts as well as to develop Malaysia as a regional centre of educational excellence.

6.06 Priority will be given to improve the quality of education in rural and remote areas. Towards this end, education facilities will be expanded and upgraded to reduce the performance gap between schools in urban areas and rural and remote areas. Schools in rural and remote areas will be equipped with better facilities and amenities including the supply of electricity and water as well as adequate educational support services. More schools with hostel facilities will also be established in these areas.

6.07 With increased use of information and communications technology (ICT), work organization is expected to become less hierarchical and management structures flatter, resulting in some structural unemployment and job displacements. In this regard, efforts will be undertaken to minimize the problems arising from structural unemployment through more innovative human resource development and labour market strategies to minimize skill mismatches and facilitate labour mobility. At the same time, to ensure that Malaysia continues to be competitive, wage increases must commensurate with enhancements in productivity brought about by improvements in the quality of the labour force.

### III. POPULATION, LABOUR FORCE AND EMPLOYMENT

#### Population

6.08 The population of Malaysia is projected to increase to 28.9 million in 2010, at an average growth rate of 2.2 per cent per annum. This growth rate is, however, slower compared with the 2.5 per cent per annum achieved during the OPP2 period, as shown in *Table 6-1*. As more women pursue higher levels of education or training, the overall fertility rate, which is the number of children

| TABLE 6-1   |                 |       |                 |       |                 |       |  |
|---|-----------------|-------|-----------------|-------|-----------------|-------|--|
| POPULATION STRUCTURE, 1990-2010<br>(‘000 persons) |                 |       |                 |       |                 |       |  |
|   | 1990            | %     | 2000            | %     | 2010            | %     | Average<br>Annual<br>Growth Rate<br>(%)<br>2001-2010 |
| <b>Total Population</b>                           | <b>18,102.5</b> |       | <b>23,265.9</b> |       | <b>28,904.2</b> |       | <b>2.2</b>   |
| Malaysian Citizen                                 | 17,336.5        | 100.0 | 22,032.8        | 100.0 | 27,348.6        | 100.0 | 2.2  |
| Bumiputera  | 10,586.1        | 61.1  | 14,564.5        | 66.1  | 18,668.2        | 68.3  | 2.5  |
| Chinese   | 4,755.8         | 27.4  | 5,583.8         | 25.3  | 6,509.0         | 23.8  | 1.5  |
| Indian  | 1,332.6         | 7.7   | 1,628.6         | 7.4   | 1,941.7         | 7.1   | 1.8  |
| Others  | 662.0           | 3.8   | 255.9           | 1.2   | 229.7           | 0.8   | -1.1   |
| Non-Citizen                                       | 766.0           |       | 1,233.1         |       | 1,555.6         |       | 2.4  |
| Age Group   |                 |       |                 |       |                 |       |  |
| 0-14  | 6,814.7         | 37.7  | 7,705.2         | 33.1  | 8,595.9         | 29.7  | 1.1  |
| 15-39   | 7,645.4         | 42.2  | 9,776.8         | 42.0  | 11,793.6        | 40.9  | 1.9  |
| 40-64   | 3,134.6         | 17.3  | 4,847.1         | 20.9  | 7,201.8         | 24.9  | 4.0  |
| 65+   | 507.8           | 2.8   | 936.8           | 4.0   | 1,312.9         | 4.5   | 3.4  |
| Dependency Ratio (%)                              | 67.9            |       | 59.1            |       | 52.2            |       |  |

that a woman will bear during her child-bearing age, will continue to decline. In addition, delayed marriages, increasing urbanization, higher cost and improved standards of living is expected to reduce family size.

6.09 It is expected that with the decline in the fertility rate, there will be a change in the demographic structure of the population during the next ten years. The population in the 14 years and below age group is expected to grow at an average rate of 1.1 per cent per annum, slower than that in the OPP2, reflecting the decline in total fertility rate from 3.2 in 2000 to 2.8 in 2010. Consequently, the proportion of this age group to total population will decline to 29.7 per cent in 2010 from 33.1 per cent in 2000. On the other hand, those in the working age group, that is, 15-64 years will increase from 62.9 per cent in 2000 to 65.7 per cent in 2010. Similarly, the proportion of the age group 65 years and above will also increase due to the better life expectancy resulting from improved quality of life.

6.10 These changes in the age-structure of the population will have a significant impact on the economy. The growth in the working-age population implies the need to create more employment opportunities as well as increased provision of education and training facilities. Since the proportion of the working-age population is expected to be greater than that of those below 15 years and those above 65 years, the dependency ratio which is the ratio of dependants to every 100 persons of working age, will decline from 59.1 in 2000 to 52.2 in 2010. This indicates that a high proportion of the population will be economically active and therefore will be a positive factor in contributing to increased output.

6.11 The median age of the population will be 26.7 years in 2010, reflecting a young population. This is expected to result in the formation of more family units and households during the OPP3 period. With improving incomes and increasing urbanization as well as an increasing number of families, the demand will be for better quality housing and related facilities such as telecommunications and Internet connections. The Government will, through appropriate legislation, ensure that housing developers conform to prescribed standards in the construction of houses and provide a conducive living environment. In addition, to meet the requirements of the increased proportion of those aged 65 years and above, policy initiatives will be instituted to expand geriatric care services.

## **Labour Force**

6.12 The size of the labour force is expected to increase by 3.1 per cent per annum or an additional 3.3 million during the OPP3 period, to reach 12.9 million

in 2010. The growth of the labour force is attributed to the increase in the size of the working-age population and in the labour force participation rate (LFPR) from 65.5 per cent in 2000 to 68.1 per cent in 2010. The labour force will be better educated with an increased proportion of 35 per cent attaining tertiary level education, as shown in *Table 6-2*. The expansion in education and training facilities as well as the growth in virtual learning will provide more opportunities for Malaysians to pursue tertiary education.

6.13 With improved levels of education and expanding employment opportunities as well as the institution of more flexible working arrangements, more women are expected to participate actively in the economy. The female labour force participation is expected to increase from 44.5 per cent in 2000 to 49.0 per cent in 2010. As more women attain higher levels of education, they are expected to increase their participation rate in the professional and technical group. In 2000, they constituted only 44.5 per cent of the professional and technical category of which the majority were employed as teachers and nurses. The increase in the female LFPR will increase the supply of local labour and this will reduce the need for foreign workers and professionals.

| TABLE 6-2  |                |              |                |              |                 |              |
|--|----------------|--------------|----------------|--------------|-----------------|--------------|
| PROFILE OF LABOUR FORCE, 1990-2010<br>(‘000 persons) |                |              |                |              |                 |              |
|  | 1990           | %            | 2000           | %            | 2010            | %            |
| <b>Total Labour Force</b>                            | <b>7,042.0</b> |              | <b>9,572.5</b> |              | <b>12,939.6</b> |              |
| <b>Age Distribution</b>                              |                | <b>100.0</b> |                | <b>100.0</b> |                 | <b>100.0</b> |
| 15-24  | 2,014.0        | 28.6         | 2,498.3        | 26.1         | 3,112.2         | 24.1         |
| 25-34  | 2,204.1        | 31.3         | 2,979.2        | 31.1         | 4,118.9         | 31.8         |
| 35-54  | 2,436.5        | 34.6         | 3,611.3        | 37.7         | 4,995.5         | 38.6         |
| 55-64  | 387.4          | 5.5          | 483.7          | 5.1          | 713.1           | 5.5          |
| <b>Educational Structure</b>                         |                | <b>100.0</b> |                | <b>100.0</b> |                 | <b>100.0</b> |
| Primary  | 2,380.2        | 33.8         | 2,604.3        | 27.2         | 1,643.3         | 12.7         |
| Lower & Middle Secondary                             | 4,042.1        | 57.4         | 5,624.5        | 58.8         | 6,767.4         | 52.3         |
| Tertiary   | 619.7          | 8.8          | 1,343.7        | 14.0         | 4,528.9         | 35.0         |
| <b>Labour Force Participation Rate (%)</b>           |                | <b>65.3</b>  |                | <b>65.5</b>  |                 | <b>68.1</b>  |
| Male   |                | 85.6         |                | 85.4         |                 | 86.4         |
| Female   |                | 44.1         |                | 44.5         |                 | 49.0         |

## Employment

### *Employment by Sector*

6.14 During the OPP3 period, the demand for labour will increase at an average rate of 3.1 per cent per annum with the expected rapid Gross Domestic Product (GDP) growth. This will result in an increase in employment from 9.3 million in 2000 to 12.6 million in 2010, as shown in *Table 6-3*. With an average labour force growth of 3.1 per cent per annum during the period, the unemployment rate will be 2.5 per cent in 2010 as compared with 3.1 per cent in 2000. The challenge in the development of a knowledge-based economy will be to ensure that structural unemployment is minimized through retraining and reskilling.

6.15 The services sector will continue to have the largest share of total employment. By 2010, the share of employment in the services sector will increase to 51.5 per cent, accounting for 59.4 per cent of total employment creation. A large portion of the jobs created will be in the other services subsector, which include private education and health, other business activities, recreational, cultural and sporting activities, as well as computer and related activities. The wholesale and retail trade, hotel and restaurants subsector will also be an important generator of employment due to the expansion of the tourism industry.

6.16 Improved capital-labour ratio and efficiency in the production process will lead to lower employment growth in the manufacturing sector. However, it will still be an important sector for employment creation during the OPP3 period. Employment growth in the sector is expected to average 4.1 per cent per annum, increasing from 2.6 million in 2000 to 3.8 million in 2010. It will account for 38.2 per cent of total employment generated in 2010. As the sector moves towards higher value-added products and capital intensity, the demand will be for more highly skilled labour, thus requiring skill upgrading of the labour force.

6.17 The agriculture sector's share of employment is expected to constitute 9.8 per cent of total employment by 2010 compared with 15.2 per cent in 2000. The introduction of high technology cultivation methods and large-scale farming as well as increased mechanization are expected to reduce the demand for labour, particularly for food crops. However, the oil palm, rubber and cocoa plantation subsectors will still require substantial amount of labour until the production and harvesting processes improve to a higher level of mechanization.



TABLE 6-3

**EMPLOYMENT BY SECTOR, 2000-2010**  
(‘000 persons)

| <i>Sector</i>  | <i>2000</i>    | <i>%</i>     | <i>2010</i>     | <i>%</i>     | <i>Average Annual Growth Rate<br/>(%)<br/>2001-2010</i> | <i>Net Job Creation</i> |              |
|--|----------------|--------------|-----------------|--------------|---|-------------------------|--------------|
|  |                |              |                 |              |   | <i>‘000</i>             | <i>%</i>     |
| Agriculture, Forestry, Livestock<br>& Fishing          | 1,407.5        | 15.2         | 1,231.0         | 9.8          | -1.3  | -176.5                  | -5.3         |
| Mining & Quarrying                                     | 41.2           | 0.4          | 41.8            | 0.3          | 0.1   | 0.6                     | 0.0          |
| Manufacturing  | 2,558.3        | 27.6         | 3,833.3         | 30.4         | 4.1   | 1,275.0                 | 38.2         |
| Construction   | 755.0          | 8.1          | 1,012.4         | 8.0          | 3.0   | 257.4                   | 7.7          |
| Electricity, Gas & Water                               | 75.0           | 0.8          | 99.2            | 0.8          | 2.8   | 24.2                    | 0.7          |
| Transport, Storage<br>& Communications                 | 461.6          | 5.0          | 669.7           | 5.3          | 3.8   | 208.1                   | 6.2          |
| Wholesale & Retail Trade,<br>Hotels & Restaurants      | 1,584.2        | 17.1         | 2,159.7         | 17.1         | 3.1   | 575.5                   | 17.2         |
| Finance, Insurance, Real Estate<br>& Business Services | 508.7          | 5.5          | 775.9           | 6.2          | 4.3   | 267.2                   | 8.0          |
| Government Services                                    | 981.0          | 10.6         | 1,206.3         | 9.6          | 2.1   | 225.3                   | 6.8          |
| Other Services   | 898.7          | 9.7          | 1,582.0         | 12.5         | 5.8   | 683.3                   | 20.5         |
| <b>Total</b>   | <b>9,271.2</b> | <b>100.0</b> | <b>12,611.3</b> | <b>100.0</b> | <b>3.1</b>  | <b>3,340.1</b>          | <b>100.0</b> |
| Labour Force   | 9,572.5        |              | 12,939.6        |              | 3.1   |                         |              |
| Local  | 8,823.3        |              | 12,589.6        |              | 3.6   |                         |              |
| Foreign  | 749.2          |              | 350.0           |              | -7.3  |                         |              |
| Unemployment   | 301.3          |              | 328.0           |              |   |                         |              |
| Unemployment Rate (%)                                  | 3.1            |              | 2.5             |              |   |                         |              |

## Occupational Composition

6.18 The future growth and development of the economy will be driven by knowledge-based industries in all sectors, particularly the manufacturing and services sectors. This process of development to a knowledge-based economy will spawn new areas of economic activities entailing a change in the pattern of demand for manpower. In the knowledge-based economy, high technology and science-based industries as well as knowledge-intensive industries such as ICT, pharmaceutical industries and research and development (R&D) activities will generate jobs requiring tertiary education, especially those trained in the science and technology disciplines. The fastest growing occupations will be in the professional and technical as well as administrative and managerial workers categories, as shown in *Table 6-4*. These occupations will account for 32.2 per cent of the new jobs created during the period. The increasing sophistication of production processes due to technological advances will generate demand for 137,200 engineers and 331,700 engineering assistants trained in chemical, mechanical, and electrical and electronics fields as well as ICT and other cutting-edge technologies such as photonics and nanotechnology, as shown in *Table 6-5*.

| TABLE 6-4  |         |       |          |       |              |       |             |
|--|---------|-------|----------|-------|--------------|-------|-------------|
| OCCUPATIONAL STRUCTURE, 2000-2010                                      |         |       |          |       |              |       |             |
| (‘000 persons)   |         |       |          |       |              |       |             |
| Occupational Group   | 2000    | %     | 2010     | %     | Net Increase |       | Average     |
|  |         |       |          |       | 2001-2010    |       | Annual      |
|  |         |       |          |       |              |       | Growth Rate |
|  |         |       |          |       | ‘000         | %     | (%)         |
|  |         |       |          |       |              |       | 2001-2010   |
| Professional & Technical Workers                                       | 1,019.9 | 11.0  | 1,790.8  | 14.2  | 770.9        | 23.1  | 5.8         |
| Administrative & Managerial Workers                                    | 389.4   | 4.2   | 693.6    | 5.5   | 304.2        | 9.1   | 5.9         |
| Clerical & Related Workers   | 1,029.1 | 11.1  | 1,412.5  | 11.2  | 383.4        | 11.5  | 3.2         |
| Sales Workers  | 1,019.7 | 11.0  | 1,526.0  | 12.1  | 506.3        | 15.2  | 4.1         |
| Services Workers   | 1,094.0 | 11.8  | 1,589.0  | 12.6  | 495.0        | 14.8  | 3.8         |
| Agricultural, Animal Husbandry & Forestry Workers, Fishermen & Hunters | 1,678.1 | 18.1  | 2,055.6  | 16.3  | 377.5        | 11.3  | 2.1         |
| Production & Related Workers   | 3,041.0 | 32.8  | 3,543.8  | 28.1  | 502.8        | 15.0  | 1.5         |
| Total  | 9,271.2 | 100.0 | 12,611.3 | 100.0 | 3,340.1      | 100.0 | 3.1         |

TABLE 6-5  
**EMPLOYMENT BY SELECTED OCCUPATION, 2000–2010**  
(‘000 persons)

| <i>Occupation</i>                             | <i>Stock</i><br><i>2000</i> | <i>Employment</i><br><i>2010</i> | <i>Net</i><br><i>Increase</i> | <i>Output (2001-2010)</i> |                |
|---|-----------------------------|----------------------------------|-------------------------------|---------------------------|----------------|
|   |                             |                                  |                               | <i>Public</i>             | <i>Private</i> |
| <b>Engineers</b>                              | <b>64,376</b>               | <b>201,615</b>                   | <b>137,239</b>                | <b>122,651</b>            | <b>6,967</b>   |
| Civil   | 18,828                      | 33,411                           | 14,583                        | 25,008                    | -              |
| Electrical & Electronics                      | 19,149                      | 64,974                           | 45,825                        | 38,858                    | 6,967          |
| Mechanical                                    | 14,620                      | 45,887                           | 31,267                        | 32,255                    | -              |
| Chemical                                      | 2,888                       | 29,418                           | 26,530                        | 26,530                    | -              |
| Others  | 8,891                       | 27,925                           | 19,034                        | n.a                       | n.a            |
| <b>Engineering Assistants</b>                 | <b>139,066</b>              | <b>470,810</b>                   | <b>331,744</b>                | <b>296,658</b>            | <b>36,067</b>  |
| Civil   | 23,436                      | 100,233                          | 76,797                        | 65,728                    | 11,069         |
| Electrical & Electronics                      | 59,412                      | 194,922                          | 135,510                       | 110,512                   | 24,998         |
| Mechanical                                    | 45,473                      | 137,661                          | 92,188                        | 102,104                   | -              |
| Chemical                                      | 1,703                       | 14,074                           | 12,371                        | 18,314                    | -              |
| Others  | 9,042                       | 23,920                           | 14,878                        | n.a                       | n.a            |
| <b>Medical &amp; Health Professionals</b>     | <b>21,270</b>               | <b>45,878</b>                    | <b>24,608</b>                 | <b>11,748</b>             | <b>12,860</b>  |
| Medical Officers,<br>Physicians & Surgeons    | 16,468                      | 35,514                           | 19,046                        | 8,105                     | 10,941         |
| Dental Surgeons                               | 2,001                       | 5,073                            | 3,072                         | 1,393                     | 1,679          |
| Pharmacists                                   | 2,801                       | 5,291                            | 2,490                         | 2,250                     | 240            |
| <b>Allied Health Professionals</b>            | <b>45,052</b>               | <b>147,405</b>                   | <b>102,353</b>                | <b>55,907</b>             | <b>46,446</b>  |
| Physiotherapists &<br>Occupational Therapists | 413                         | 3,947                            | 3,534                         | 1,490                     | 2,044          |
| Radiographers                                 | 645                         | 2,307                            | 1,662                         | 1,225                     | 437            |
| Health Inspectors                             | 1,549                       | 5,376                            | 3,827                         | 1,497                     | 2,330          |
| Medical & Lab. Med. Assts                     | 7,334                       | 20,422                           | 13,088                        | 9,952                     | 3,136          |
| Dental Paramedics &<br>Auxiliary              | 3,537                       | 8,191                            | 4,654                         | 3,819                     | 835            |
| Pharmaceutical Assts.                         | 2,205                       | 5,796                            | 3,591                         | 1,195                     | 2,396          |
| Nurses  | 29,369                      | 101,366                          | 71,997                        | 36,729                    | 35,268         |
| <b>School Teachers</b>                        | <b>298,083</b>              | <b>369,756</b>                   | <b>71,673</b>                 | <b>67,911</b>             | <b>0</b>       |
| Pre-School                                    | 34,271                      | 61,911                           | 27,640                        |                           | -              |
| Primary School                                | 154,920                     | 177,599                          | 22,679                        | 38,941 <sup>1</sup>       | -              |
| Secondary School                              | 108,892                     | 130,246                          | 21,354                        | 28,970                    | -              |

*Note:* <sup>1</sup> Output include both pre-school and primary school teachers.

6.19 In view of the need to continue providing and upgrading health care services for the population, the demand for medical and health personnel will remain high during the period. These personnel will be needed to staff the public health facilities that will be expanded and upgraded to cater to the needs of a growing population. With improved income levels, a large proportion of the population will be seeking treatment, particularly specialist services. However, to ensure every Malaysian has access to quality health care services, the pool of health personnel will be expanded to meet the targeted doctor to population ratio of 1:800 by 2010. The increasing number of foreigners using Malaysian health facilities can form the base for developing the health care services into an industry and tourism product. Measures will be undertaken to facilitate entry of foreign patients and their families. Private hospitals and health facilities will also be encouraged to expand their clientele base and promote their services overseas.

6.20 The widespread application and diffusion of ICT in all sectors will require workers with differing levels of computer skills such as computer design, complex data management systems, data communications and networking as well as multimedia and Internet development. Low skilled and routine jobs will be reduced through automation. New jobs created will require workers with higher education and technical skills in new technologies. The increasing use of computers will facilitate these workers, thus increasing the return on the creative use of ICT. Computer literacy and numeracy are, therefore, essential skills and will have to be acquired by everyone in the workforce. In addition, workers with core ICT skills will be required in all sectors in the economy, particularly in ICT industries. The demand for key ICT personnel comprising systems engineers, software developers, systems analysts, computer programmers and technical support is expected to be 306,600 personnel by 2010, as shown in *Table 6-6*. The projected supply of graduates in ICT will be adequate to meet the demand for ICT personnel as a result of the enormous expansion in ICT education by both the public and private sectors. There will be a greater demand for ICT personnel with post-graduate degrees, especially in hardware and software engineering in the OPP3 period. Measures will be undertaken to increase the supply of these personnel from institutions of higher learning to meet the increased demand.

6.21 There will also be increased demand for scientists and technologists in R&D, particularly in new technologies such as fuel-cell technology, biotechnology and genetic engineering. To remain competitive, Malaysia will intensify R&D activities in these new areas and more concrete measures will be implemented to increase the supply of R&D scientists and technologists from 7 per 10,000

| <p>TABLE 6-6</p> <p><b>EMPLOYMENT OF IT WORKERS, 2000-2010</b></p> <p>(persons)</p> |                |              |                |              |   |
|---|----------------|--------------|----------------|--------------|---|
| <i>Occupation</i>   | <i>2000</i>    | <i>%</i>     | <i>2010</i>    | <i>%</i>     | <i>Average Annual Growth Rate (%) 2001-2010</i> |
| System/Hardware Engineer  | 15,930         | 14.8         | 37,860         | 12.3         | 9.0   |
| Software Developer/Engineer   | 10,410         | 9.6          | 26,680         | 8.7          | 9.9   |
| Business/Systems Analyst  | 25,620         | 23.7         | 71,020         | 23.2         | 10.7  |
| Computer Programmer   | 21,320         | 19.7         | 62,820         | 20.5         | 11.4  |
| Technical Support   | 34,720         | 32.2         | 108,230        | 35.3         | 12.0  |
| <b>Total</b>  | <b>108,000</b> | <b>100.0</b> | <b>306,610</b> | <b>100.0</b> | <b>11.0</b>                                     |

labour force in 2000 to 60 per 10,000 or a total of 77,640 by 2010. Efforts to expand the existing pool of R&D scientists and technologists will be taken through instituting more attractive schemes of service as well as extending the service of outstanding R&D personnel beyond their retirement age.

6.22 To further enhance the country's capability to acquire and use knowledge, it is critical to improve the standard of education with emphasis on science and technology (S&T) and develop skills in information-based technologies for acquiring, diffusing, interpreting and applying knowledge. The education and training system will build upon existing capacity to produce a critical mass of S&T and knowledge workers rich in talents, abilities and creativity to support the transformation of the economy and the growth of new industries. In this regard, efforts will be made to accelerate the achievement of the 60:40 ratio of science to arts students at the school as well as tertiary level.

6.23 To supplement the pool of local skills and talents, the brain-gain programme to recruit top-notch talent, skills and experts from overseas will be expanded during the OPP3 period with better incentives. The programme will initially focus on recruiting highly qualified and talented ICT personnel as well as R&D scientists and technologists. These are knowledge workers who are highly mobile and command an international market for their talents and expertise. Malaysia

will have to compete for them in the global markets, especially ICT personnel where there is a world-wide shortage. To facilitate the recruitment of foreign skills and talents, the registry of Malaysian R&D scientists and engineers working overseas will be expanded to include experts and technopreneurs in other knowledge-related disciplines. In addition, industries will be encouraged to sponsor outstanding Malaysian students pursuing degree programmes in key technologies.

## **Wages and Productivity**

6.24 It is critical that wage increases commensurate with increases in productivity so that the competitiveness of the economy is further enhanced during the OPP3 period. Wage increases, which reflect productivity gains, will ensure that there is no undue pressure on prices and erosion of real incomes. In this regard, the adoption of the Guidelines for a Productivity-Linked Wage Reform System established in 1996, to ensure a closer link between wages and productivity performance, will be intensified through efforts such as seminars, workshops and company visits. In addition, an online network database that provides productivity benchmarking in the manufacturing and agriculture sectors will be expanded to include other sectors.

6.25 Labour productivity growth during the OPP3 period is expected to increase by 4.2 per cent per annum for all sectors, in line with the shift towards the knowledge-based economy. Labour productivity in the manufacturing sector is expected to increase by 4.0 per cent per annum as industries shift towards high technology and knowledge-based activities with emphasis on high value-added products. In the agriculture sector, labour productivity is expected to grow by 4.8 per cent per annum during the OPP3 period due to the greater use of technology and modern agronomic practices. Labour productivity in the services sector is expected to increase by 4.5 per cent per annum. The main contributor to this growth will be the wholesale and retail trade, hotels and restaurants subsector, the productivity of which is expected to increase by an average annual growth of 5.8 per cent, followed by the transport, storage and communications subsector by 5.7 per cent per annum.

## **IV. EDUCATION AND TRAINING PRIORITIES**

6.26 Globalization and rapid technological advances during the OPP3 period will intensify the demand for a quality labour force, which is knowledge-rich and has superior thinking skills. In addition, they must have the capability to

optimize the use of new technologies and materials and to combine them effectively with creativity and innovation. Towards this end, a labour force equipped with higher academic and technical qualifications, multi-skilled and with knowledge in the use of ICT as well as imbued with positive values and work ethics will have to be developed. To meet this demand, the education and training system will be reoriented and the industries must intensify the retraining of their employees to upgrade their knowledge, skills and creativity to match technological advances in production and services.

### **Creating Excellence in the Education System**

6.27 High priority will continue to be given to education, by increasing investment, as it is the key in developing the capability to create, adapt and spread new knowledge. A strong basic education is the foundation for building a healthy, skilled and agile labour force and for competing successfully in world markets. Strategies will be put in place to make schools the platform to nurture creative thinking and learning skills, which are essential for future manpower needs. Overcrowding in urban schools such as those in Wilayah Persekutuan Kuala Lumpur with a class to classroom ratio of 1:0.63, will be reduced through relocation of existing schools and the construction of additional classrooms and schools. The class to classroom ratio of 1:0.90 in primary schools and 1:0.83 in secondary schools is expected to reach the target of 1:1 in 2010.

6.28 The school curriculum will also be reviewed to inculcate thinking skills and generate creativity and independent learning among students, especially at the primary and secondary levels. It will be continuously updated to incorporate new aspects of knowledge and technology as well as innovative methods of teaching Science and Mathematics. In addition, the high level of competency in *Bahasa Malaysia* among students will be maintained while their proficiency in English will be improved. They will also be encouraged to learn other foreign languages, which will enable them to access and contribute to global knowledge. To create a pool of talent in the performing and cultural arts, measures will be taken to tap and nurture potential talents at the school level. The school curriculum and co-curricular activities, will provide opportunities for students to excel in the arts. Sufficient teachers will be trained and adequate facilities will be provided. In addition, schools will be encouraged to nurture talents through participation in national competition in various forms of arts. As ICT is the enabler for acquiring new knowledge, schools will be provided with facilities to allow them to teach more subjects using interactive multimedia technology

and web-based teaching. The majority of schools, including those in rural and remote areas, will be connected to each other through the Intranet and Internet by 2010. To ensure that the school curriculum will remain relevant to industry and include work-based learning components, a mechanism will be set up to link schools with industries. Industries will be encouraged to accept upper secondary school and college students to participate in attachment training or internship during school and college holidays.

6.29 The number of science stream students who can feed into the university system is still low. This low output will be addressed through intensifying the use of contextual learning, the upgrading of facilities for teaching and learning, increasing the quality and quantity of teachers, and measures to motivate students to enrol in the science stream. At the primary school level, the teaching of science will be introduced at an earlier stage.

6.30 Current trends indicate that there is still a disparity in performance between urban and rural schools despite efforts to expand and improve education facilities. Emphasis will continue to be given to provide the necessary facilities to increase accessibility of the rural population to quality education. In addition, the provision of special incentive packages to retain teachers and school staff in remote and inaccessible areas is expected to improve student performance. To ensure that schools in these areas will enjoy the benefits of ICT in learning and teaching, wireless mobile computing technology will be introduced in these schools.

6.31 The rapid expansion in education facilities, especially at the tertiary level, and the extension of universal education to 11 years improved the educational attainment level of the population and labour force substantially. In 2000, the percentage of the population completing tertiary education was 14.0 per cent and secondary education was 58.8 per cent, an improvement to that in the beginning of the OPP2 period. To support the manpower requirements of the knowledge-based economy, a larger proportion of the population and labour force will need to have a higher level of educational attainment, especially at the tertiary level. Measures will be taken to improve the transition rate from lower to upper secondary level as well as the retention and completion rate at the upper secondary level to improve the tertiary-education participation rate. Increased emphasis, therefore, will continue to be given to expand tertiary education so that the enrolment of the age cohort of 17-23 years in tertiary education will be 40 per cent, and at least 35 per cent of the labour force will have attained tertiary education by the end of the OPP3 period. The establishment of new public



universities and expansion of existing institutions will provide additional places to meet expected increasing demand for higher education in the OPP3 period. In addition, private universities and colleges are expected to increase their existing capacities to complement public universities.

6.32 Universities will not only be developing the future workforce but also become centres for the creation of intellectual capital and new knowledge. This will hinge on their ability to produce a pool of high calibre researchers who are actively engaged in R&D as well as undertake research activities that have commercial viability. The number of graduates with post-graduate degrees in local universities will be increased to 25 per cent of total output by 2010. In this regard, a few of the existing public universities will be restructured to become research universities focusing on post-graduate degree programmes. More focus will be given to science and technology areas as there is an urgent need to increase the supply of S&T manpower. The curriculum and degree programmes at the universities will also be reviewed to ensure that they are market-driven, anticipatory of future trends and facilitate the adoption of new technologies. To ensure that their research activities remain relevant and responsive to industry needs, universities will be encouraged to forge closer collaboration and partnerships with industry in research as well as training for their students. Universities will be encouraged to establish more centres of excellence in specific fields to develop and implement their R&D activities. A coordinating mechanism for R&D activities will be instituted to allow the sharing of information and enhancement of R&D activities among institutions of higher learning.

6.33 The private sector will be encouraged to increase their involvement in providing education at all levels to supplement and complement Government's efforts as well as to become the catalyst for developing education and training into an industry and foreign exchange earner. The expansion of private education institutions will form part of efforts to establish Malaysia as a regional centre for education. Private institutions will be encouraged, among others, to upgrade existing facilities and develop purpose-built campuses incorporating both academic and recreational facilities. Incentives will be given to support private institutions that offer courses in technical and medical courses. Measures, including greater flexibility in hiring foreign teaching personnel and less stringent immigration conditions, will be put in place to facilitate the expansion and establishment of new private institutions. To ensure that the private sector provides quality education, the regulatory functions of relevant authorities will be strengthened. The regulations concerning private education will be reviewed regularly to protect consumers' interests and ensure the development of a progressive private education industry.

## **Teacher Development**

6.34 Teaching will become an increasingly challenging profession as the generation of young Malaysians are growing up with a different set of values and expectations. Teachers and educators are expected not only to impart knowledge but are given the responsibility to mould the personality and character of students. In addition to teaching skills, greater emphasis will be given to incorporate ethics and moral values into their training programmes. Continuous efforts, therefore, will have to be made to attract school leavers and graduates who are qualified and interested to pursue teaching as a vocation. Considering their important role, an increasing number of primary school teachers during the OPP3 period are expected to be degree holders and some may have master's degrees as well as qualifications in child psychology. This is to ensure that teachers possess a high level of competence in teaching as primary schooling provides the foundation for a student's learning ability and absorption of knowledge.

6.35 Apart from attracting graduates into the teaching profession, serving teachers will be encouraged to pursue degree courses in critical and relevant areas. Better remuneration and promotion packages as well as terms and conditions of service will be offered to these teachers. All teachers will be equipped with IT knowledge to undertake courses and to design their teaching materials using ICT. In this regard, training programmes to upgrade ICT skills of teachers will be expanded and accelerated.

## **Promoting Lifelong Learning**

6.36 Lifelong learning will become increasingly important in the knowledge-based economy where knowledge and skills need to be continuously updated and upgraded. New skills and expertise will be required to improve employability and productivity. Measures will be taken to promote lifelong learning among all Malaysians, especially those without a strong basic education where lifelong learning will provide them the opportunity to continue their education as well as to learn at their own pace outside the school or in the workplace.

6.37 The Government will initiate efforts to promote and implement programmes for lifelong learning. Affordable accessibility to training courses and education programmes through the Internet or other ICT-related media will be provided so that Malaysians have the opportunity to acquire new competencies and qualifications for career advancement. More IT kiosks and cyber centres will be

set up by the Government, especially in rural areas, to increase accessibility to education and training. In addition, the establishment of community colleges, open universities and distance education will provide another avenue for Malaysians to pursue tertiary education and upgrade their skills and qualifications. The establishment of community colleges will also provide opportunities particularly to those who left the school system to join the labour market to further their education and training. Financial institutions will also be encouraged to provide soft loans to working adults to continue their education. Employers will be encouraged to promote lifelong learning through training and retraining to equip workers with new skills and knowledge so that they can keep up with the steady stream of technological advances.

### **Forging a New Approach to Training and Retraining**

6.38 Increasing investment in capital-intensive and knowledge-based industries will increase the demand for highly skilled manpower as the utilization of new technology creates more jobs with high skills content. In this regard, training and retraining, the critical enabler in equipping the future workforce with suitable skills and facilitating the present workforce in adjusting and adapting to a knowledge-driven economy, will continue to be given priority during the OPP3 period.

6.39 More investment in human capital, especially in training and retraining, will be undertaken to enhance Malaysia's competitiveness in the international market. In this regard, the capacity and capability of the training delivery system will be further strengthened to increase the quantity and quality of skilled manpower. New skills training institutions will be established and the absorptive capacity of existing institutions will be expanded at all levels. In addition, public training institutions will be encouraged to conduct part-time training programmes, particularly in new technologies. Through the implementation of these programmes, the training institutions will be able to optimize the utilization of training equipment and facilities and contribute towards increasing the supply of skilled manpower. It will also create opportunities for skills upgrading and continuous learning for the workforce. The advanced skills training centres will be upgraded and developed into centres of excellence. Apart from expanding and upgrading their facilities, the advanced training institutions will establish consultancy units to provide advisory services and product testing to industries. This will enhance the quality and cost-effectiveness of their training and also provide support to the small- and medium-scale industries.

6.40 Rapid changes in technology in the OPP3 period will affect work organization and will increase the demand for multi-skilled manpower with strong academic foundations, knowledge capabilities and extra-functional skills. In this regard, skills training institutions will give emphasis to the development of social and learning competencies as well as strengthening the academic foundation of trainees in Mathematics, Science and the English language. To enhance further the quality of skills training, the development of the National Occupational Skills Standards (NOSS), which is based on job or occupation will be re-structured towards work processes that are in line with the changing needs of employers. In addition, NOSS will be developed for skills training in agriculture-related areas.

6.41 The adoption of the dual training approach through apprenticeship schemes will be enhanced during this period. Towards this end, more training institutions will be encouraged to adopt this approach in collaboration with industry to enhance the effectiveness of their training programmes. This approach is a combination of work-based training and attendance of part-time vocational training. The focus is on hands-on training at the workplace whereas the training institution provides the theoretical foundations. By acquiring work-related experience, a school leaver with *Sijil Pelajaran Malaysia* can be trained to be a certified skilled worker to meet the needs of industries. As the trainees spend about two-thirds of their time in the workplace, the utilization of training facilities in institutions will be lower, reducing expenditure on infrastructure. Efforts will be made to restructure training programmes in all public training institutions to use this approach, which is market-oriented and responsive to changes in technology and industries. The National Vocational Training Council will be strengthened to enhance its capability so that it can identify the types of training occupations, contents and standards of the training as well as increase collaboration between firms and training institutions. In addition, the apprenticeship training schemes under the Human Resources Development Council (HRDC) will be expanded to cover a wider range of courses such as industrial electronics and computer engineering.

6.42 The implementation of training programmes and courses, in terms of types and levels, in public training institutions will be reviewed regularly to ensure that they are in line with technological changes, as well as to enhance cost-effectiveness. Public training institutions will also strengthen their delivery system by using ICT, including a web-based learning system. The implementation of web-based learning is critical as public training institutions are experiencing a shortage of instructors. It will also improve the cost-effectiveness of training in the long run. Web-based learning can also be an effective means for lifelong learning and provide the environment for self-paced learning.

6.43 Measures will also be undertaken to increase the supply of qualified instructors so as to meet the ratio of instructors to trainees of 1:17. Public training institutions, especially advanced training centres will conduct instructor training programmes to complement the programmes of the Centre for Instructors and Advanced Skill Training (CIAST). To attract and retain experienced instructors in public training institutions, the scheme of service for instructors in these institutions will be reviewed to ensure, among others, better promotion and career prospects, greater opportunities for training and more flexible service conditions. Special incentives will also be provided to attract and retain instructors with industrial experience.

6.44 Technological development and industrial restructuring will displace low skilled workers and will lead to the occurrence of structural unemployment. To minimize the impact of structural unemployment, a proper retraining programme and mechanism for the implementation of the programme will be developed. Collaborative efforts through smart-partnerships between the Government and private sector will be promoted. Greater private sector participation will be encouraged to provide training in new skills and cutting-edge technologies.

## **V. POSITIVE VALUES AND ATTITUDES**

6.45 Efforts to build a resilient nation rests upon human resources imbued with positive values and attitudes, which are crucial in increasing and sustaining productivity as well as enhancing competitiveness. These positive values are inherent in the religions, cultures and traditions of Malaysia's multi-ethnic and multi-cultural society and will be an important facet in nation-building and in expediting the moulding of a *Bangsa Malaysia*.

6.46 The free flow of information arising from an increasingly borderless world poses challenges to the inculcation of positive values, especially among the younger generation. In this regard, a new curriculum combining civics with religious or moral education, will be taught in both primary and secondary schools to inculcate these values, such as discipline, strive for excellence, loyalty and love for the country, unity, good citizenship as well as respect for leaders and elders. In addition, co-curricular activities for character building and development of leadership qualities will be emphasized in schools and tertiary institutions.

6.47 At the work place, efforts will be made to ensure that the workforce adopt

good work ethics including honesty, commitment and diligence. In this regard, the implementation of a common code of good work ethics will be instituted. For the public sector, other related rules and regulation on discipline and work culture, will be continuously revised to meet the changing needs of a modern economy. Among corporate and business organizations, tenets of positive corporate governance such as transparency, accountability and credibility, will be promoted through the formulation of a common code of ethics for trade and business as well as professional practices.

6.48 The family unit will continue to be pivotal in inculcating positive values and its efforts will be supplemented and complemented by non-governmental organizations, community-based organizations and other voluntary organizations. Values such as tolerance, kindness, gratitude, caring and neighbourliness will be integrated as part of programmes to promote national unity and social harmony. Towards this end, motivational- and attitudinal-based family- and society-oriented programmes, which emphasize positive values will be intensified to induce good behaviour and morality in line with the *Rukunegara*.

## **VI. CONCLUSION**

6.49 Human resource development is a prerequisite in preparing Malaysia for the knowledge-based economy and sustaining growth and development during the OPP3 period. Malaysia's capability and capacity in the management of new knowledge and technologies will be determined by the quality of its human resources. A competent and highly skilled labour force will be developed with strong ethical and moral values and commitment to excellence. With globalization, Malaysia will be facing more competition in trade and investment and its workforce will have to be equipped with a strong base in education and training as well as possess a range of generic skills including communications and thinking abilities. In addition, Malaysia's successful entry into the information age and ability to take advantage of the vast opportunities arising from the information and technological revolution will depend on a dynamic and responsive education and training system. Education and training will be crucial in the creation of knowledge manpower to support the new industries and economic activities and to develop an information-rich society, which is progressive, united and creative as well as possesses other positive values that will make Malaysia a developed nation by the year 2020.

## **CHAPTER 7 - SECTORAL STRATEGIES AND PRIORITIES**

### **I. INTRODUCTION**

### **II. DEVELOPMENT THRUSTS FOR 2001-2010**

### **III. CONCLUSION**

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## **Chapter 7**

# **Sectoral Strategies and Priorities**

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## CHAPTER 7

# Sectoral Strategies and Priorities

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### I. INTRODUCTION

7.01 The Third Outline Perspective Plan (OPP3) period will be extremely challenging given the increasing globalization of the Malaysian economy and the intense competition for markets and investments. Taking into cognizance these challenges, Malaysia's sectoral strategies and programmes will be aimed at developing a knowledge-based economy to ensure the continuity of the drive towards achieving the status of a developed country by the year 2020. The sectoral programmes will also be geared towards achieving a broad based, globally competitive and resilient economy. In addition, the emphasis will be to further improve the coverage and quality of social services, utilities and transport services. The successful implementation of the sectoral programmes will increase the opportunities for Malaysians to enhance their income and quality of life as well as facilitate the promotion of an equitable society.

### II. DEVELOPMENT THRUSTS FOR 2001-2010

7.02 The key sectoral development thrusts during the OPP3 period will be to create wealth and promote new sources of growth in the manufacturing, services and agriculture sectors. The sectoral strategies will focus on achieving sustainable growth with resilience. Efforts will be undertaken to strengthen indigenous capabilities and capacities to enhance national competitiveness in the world market. The sectoral thrusts that will be actively pursued include:

- *strengthening the manufacturing sector by developing strong linkages, industrial clusters and small- and medium-scale enterprises (SMEs) as well as improving the technological base;*

- ❑ *restructuring and modernizing the agriculture sector to be dynamic and competitive;*
- ❑ *enhancing the services sector to be a key driver of economic growth;*
- ❑ *expanding the coverage of infrastructure and utilities as well as improving the efficiency and quality of services;*
- ❑ *improving accessibility and quality of social services to enhance the quality of life and meet the expectations of the population;*
- ❑ *accelerating the development capacity and capability in science and technology to further enhance competitiveness and efficiency; and*
- ❑ *increasing the utilization of information and communications technology (ICT) in all sectors to enhance productivity.*

## **Manufacturing**

7.03 The manufacturing sector is targeted to grow at 8.3 per cent during the OPP3 period. The sector will move into a new phase of industrial development in line with the aim to develop a knowledge-based economy. Accordingly, industrial development will focus on efforts to consolidate and strengthen the resilience and competitiveness of the manufacturing sector as well as promote new sources of growth. At the same time, the development of dynamic industrial clusters will be critical to contribute to the further growth of the sector. The Government will continuously fine-tune policies and programmes to maintain and enhance an environment that is conducive for investments and business operations. In this regard, efforts will continue to be undertaken to encourage strategic alliances in high value-added and high-technology industries. Programmes will also be implemented to enhance productivity and improve the competitiveness of industries.

7.04 Manufacturers will need to take into account the significant trends that are shaping industrial development and their impact on industries. To compete globally, industries will need to develop a new competitive advantage by striving towards the achievement of internationally recognized quality and standards of goods and services. The private sector will be encouraged to adopt information-intensive and knowledge-driven processes in manufacturing and related activities

such as research and development (R&D), product design, marketing, distribution and procurement. This approach will enable the diffusion of knowledge at all levels of the enterprise's value chain, thus creating dynamic industrial clusters in the manufacturing sector.

7.05 To meet future challenges, the technological base of the manufacturing sector will be further strengthened. Measures will be undertaken to improve the absorptive and adaptive capabilities of industries to utilize new technologies. In the area of R&D, market-oriented research will be promoted and the private sector will be further encouraged to invest in R&D activities. The Government will also promote the transfer of new and emerging technologies into the country through strategic alliances and technology acquisition.

7.06 Productivity growth will have to be higher than the increase in wage rates to sustain the growth momentum and ensure competitiveness of the manufacturing sector. In this respect, labour productivity will have to be continuously enhanced through a culture of acquiring new skills and capabilities. The existing skills delivery system will be further strengthened and the skills of the workforce will be upgraded through training and retraining. The focus of training will be to supply knowledge manpower to meet the demands of industry.

7.07 The strategy of widening the export base and diversifying export markets will continue to be promoted. Strategies to further reinforce marketing and export performance include improving the quality and modes of providing information, using innovative export promotion tools as well as promoting the use of export quality inspection and certification services. In addition, efforts will be undertaken to upgrade marketing and promotional skills.

7.08 During the OPP3 period, SMEs will have to adopt innovative approaches including benchmarking against international standards to meet the increasingly competitive business environment. SMEs will also have to rationalize their operations with a view to modernizing and automating their production processes. The Government will continue to strengthen the development of SMEs so as to increase their contribution towards the mainstream of industrial activities. In addition, SMEs will be encouraged to be export-oriented to tap market opportunities available in the regional and global markets.

## **Agriculture**

7.09 The agriculture sector is targeted to be an important source of growth during the OPP3 period. Its growth will mainly be derived from the significant increase in industrial crops, food production and contribution from new activities.

Towards this end, efforts will be focused on restructuring and modernizing the agriculture sector to be more dynamic and competitive. Agricultural development will be guided by the Third National Agricultural Policy, covering 1998-2010, which focuses on market driven product-based and agro-forestry approaches to improve productivity and global competitiveness. The development of industrial crops, forestry and wood-based product group will continue to be encouraged and supported by appropriate incentives, infrastructure, R&D, supporting services and human resource development. The thrust of development for this group will focus on restructuring and modernizing the industry through increasing the uptake and commercialization of R&D findings, developing alternative uses such as bio-fuel from palm oil and establishing niche markets for specialized products. The sector will be further diversified with the cultivation of other potential crops as well as the planting of selected tree species on a plantation basis. In addition, efforts will be intensified to promote mechanization and large-scale commercial production of food including fish. The potential of aquaculture will be fully exploited not only to complement the supply of fish from marine catch but also to provide raw materials for downstream industries. Satellite farming will be introduced through the establishment of more food production areas close to major towns and cities.

7.10 Land utilization will be intensified through the adoption of agro-forestry approach, which integrates agriculture and forestry activities and through the wider practice of crop-mix. Integrated systems, such as multiple crop farming and plantation activities combined with livestock rearing, will continue to be encouraged to enable smallholders and plantation owners to maximize land use and increase food production and obtain higher returns. The increase in production of agricultural commodities will be achieved through productivity gains from existing areas rather than expansion in planted hectareage. In addition, *in-situ* development through land consolidation and rehabilitation will be carried out on a commercial and group-farming basis.

7.11 Sustainable forest management will continue to be the main strategy to provide the supply of raw materials for the wood industries and at the same time protect the environment. Greater focus will be given to increase the productivity of forest resources to meet the increasing demand for raw materials by agro-based industries. Towards this end, a multi-resource approach will be adopted, whereby forest plantations will be developed using multi-cropping and periodical harvesting technique. In addition, improved silvicultural treatment, forest rehabilitation, afforestation and R&D will be enhanced. The development of selected timber species and latex timber clones as well as non-wood forest resources and products will also be intensified. The uniqueness of the tropical rainforest will be utilized to promote eco- and agro-tourism.

7.12 In accelerating the modernization of the agriculture sector, the provision of support services including R&D, marketing, extension services, training, and credit facilities will be further strengthened. Greater emphasis will be placed on measures to improve pre- and post-harvest handling of agricultural produce. These include the grading of farm produce and improvements in storage, transportation and marketing to maximize returns from agriculture. R&D efforts will be intensified to improve productivity and efficiency, particularly in reducing cost of production, increasing product quality and marketing, increasing utilization of labour-saving technologies as well as widening end use applications. Collaborative R&D efforts will also be encouraged between public R&D agencies and the private sector to facilitate commercialization of research findings. In order to target niche markets, innovative approaches will be adopted such as the establishment of specialized zones to facilitate the development of specific products, which have higher value added. This will support the development of new industries in food, herbs, specialty natural products, floriculture and biotechnology.

## **Mineral Resources**

7.13 The development of the mineral sector will be guided by the National Mineral Policy, which laid the foundation for the development of both the up-stream and down-stream aspects of the industry. The thrust of the development of the sector is to expand and diversify the sector through competitive regulatory environment, to promote optimum exploration, extraction and utilization of resources using modern techniques as well as improved R&D. Emphasis will also be given to environmental protection, sustainable development and management of the social impact of the industry.

## **Tourism**

7.14 Tourism industry in Malaysia has been identified as a key driver in the growth of the services sector during the OPP3 period. In this regard, tourist arrivals are expected to grow at an average rate of 7.5 per cent per annum. Furthermore, the focus will be to attract more tourists to stay longer, spend more as well as make repeat visits. Towards this end, a more integrated approach to tourism planning and implementation will be adopted. To facilitate these efforts, state tourism and culture authorities will be established. In addition, research and data collection will be intensified to upgrade the tourism database to support a holistic approach to policy formulation and a market-driven approach to product development, marketing and promotion.

7.15 The major programmes that will be implemented include the preservation and conservation of historical sites, provision and upgrading of tourism-related infrastructure as well as improvement in the quality of tourism products and services. Eco-tourism, rural tourism, education, health, culture and heritage, cruise, sports and recreation tourism as well as meetings, incentives, conventions and exhibitions (MICE) will be further developed. To maximize the potential of tourism, product development in niche areas will be emphasized based on the relative strengths and comparative advantage of the respective states. New tourism products, such as the promotion of martial arts practised by the various ethnic groups in the country, will be developed. In addition, more effective customer-focused promotional efforts will be carried out to expand and diversify the tourism market base.

7.16 The development of domestic tourism will remain a key priority and will be actively promoted. In view of the increasing affluence of the population and the accompanied increase in demand for leisure, domestic tourism is expected to experience rapid growth. The expansion of the tourism industry through a wider range of recreational and entertainment activities, better infrastructure and facilities as well as conservation of the environment will further improve the quality of life of Malaysians.

7.17 Developments in ICT will enable the tourism industry to provide better quality services at competitive rates. In this regard, efforts will be undertaken to offer better destination information systems, provide more extensive links with the global travel distribution channels and enhance capacity building on electronic travel. Towards this end, a tourism portal will be developed to facilitate these efforts.

7.18 Human resource development will continue to be a priority in order to enhance the level of competencies and professionalism to facilitate the growth of an efficient and competitive tourism industry. The provision of tourism education to the public and frontliners such as hotel employees, tourist guides as well as immigration and customs personnel will be emphasized. This is to create greater awareness on the benefits of tourism and to inculcate values of being a good host to visitors as well as stressing the importance of preserving the nation's heritage and the environment.

7.19 Regional cooperation through joint tourism programmes among Association of South-East Asian Nations (ASEAN) partners will be rigorously pursued. Collaboration in tourism projects through the Growth Triangle initiative and other strategic partnerships at the regional and international level will be further strengthened. Collectively, more competitive tourism products will be packaged to attract a higher number of tourist arrivals and generate more revenue, thus benefiting all participating countries.

## **Financial Services**

7.20 In moving ahead, the Malaysian economy will face a rapidly changing global and financial landscape. The financial sector will be further strengthened to enable it to mobilize and allocate resources to generate higher growth through productivity-driven investments and knowledge-based activities. Steps will also be taken to increase the resilience of the financial sector to face the challenge of high mobility and volatility of capital flows.

7.21 The Financial Sector Master Plan, together with the Capital Market Master Plan, will provide a comprehensive framework for the strategic development and greater diversification of the financial sector. Underlying the objective of developing an efficient and effective financial sector is the need to develop a core group of domestic banking institutions capable of competing in a dynamic environment of technological change as well as meeting the increasingly diverse customer demands. The Master Plan will also address issues such as the need to inculcate effective risk management, develop an early warning system to enhance surveillance as well as institute measures on customer protection.

7.22 The Capital Market Master Plan provides for the development of competitive intermediaries and institutions in core areas to facilitate efficient mobilization of resources and to build a domestic base for a strong financial services sector. Measures will be taken to further develop the key segments of the capital market such as the bond and derivatives market as well as the fund management industry. Emphasis will also be placed on developing the venture capital industry to facilitate the financing of high-growth technology-related industries. The implementation of the Master Plan will be marked by three distinct phases. The first phase covering 2001 to 2003 will be to strengthen domestic capacity and develop strategic and nascent sectors. The second phase from 2004 to 2005 will be to further strengthen key sectors and gradually liberalize market access while the third phase from 2006 onwards will be geared towards becoming a fully-developed capital market.

7.23 The Government will strengthen and streamline the Islamic banking and financial sector to develop a dynamic and progressive system at par with the conventional system. In addition, efforts will be made to position Malaysia as an international centre for Islamic capital market activities. Measures will be introduced to facilitate the development of competitive products and services.

7.24 During the OPP3 period, Labuan will continue to be developed into a reputable International Offshore Financial Centre (IOFC). Towards this end, the International Islamic Financial Market will be established to tap the enormous



market opportunities in Islamic financing in the global financial markets. Further efforts will be made to position the Labuan International Financial Exchange as a leading international offshore exchange for listing and trading of equities and debt instruments.

## **Distributive Trade**

7.25 The distributive trade sector will have an increasingly important role in the economy during the OPP3 period mainly due to the positive economic outlook, which will lead to a higher level of affluence and consumer demand. The thrust of the sector will be to enhance its competitiveness through measures such as the provision of an enabling administrative and legislative framework as well as the development of electronic-commerce (e-commerce).

7.26 With increasing globalization, there will be an increase in the number of giant foreign retailers setting up hypermarkets and supermarkets. In view of the growing competition, the distributive trade sector will be encouraged to take steps to incorporate foreign technical know-how and expertise to improve productivity and competitiveness. Joint ventures and strategic alliances with foreign partners will also be encouraged. With the trend towards mergers and acquisitions, there is a need to safeguard against anti-competitive behaviour. In this regard, a fair trade law and policy will be formulated and adopted to foster healthy competition to reap the benefits of market efficiency.

7.27 In the quest to increase value added, efforts will be made to promote Malaysia as a regional distribution and warehousing hub. This will enable the processing and trading of goods for a much wider market, thus accruing the benefits from economies of scale. Efficient facilitation measures will be undertaken to accelerate the development of a regional distribution and warehousing hub. Steps will also be taken to position the nation as an international centre for *halal* food to cater for the global Muslim market. Towards this end, measures will be undertaken to leverage on the nation's credibility in producing *halal* food. In addition, R&D on food technology will be intensified.

7.28 The forging of strong linkages between the distributive trade and other sectors of the economy, particularly the agriculture and manufacturing sectors, will continue to be an important strategy. In this regard, the promotion of local products will be intensified to enhance linkages as well as strengthen the economy. Direct sourcing of products through contract manufacturing and farming will be encouraged to contribute towards a more cost-effective distribution link and facilitate feedback of information on the changing consumer preferences to the producers. In addition, the market and cost structure of the distribution of goods

will be examined to improve the logistics chain and reduce unit cost. Support services such as transport, storage, communications and financial services will be strengthened to facilitate closer linkages to improve efficiency of the distributive trade sector.

7.29 E-commerce will be a significant area of growth during the OPP3 period. Efficiency gains will be realized through the use of e-commerce technologies, resulting from lower business costs and a rationalization of business processes. Firms, particularly SMEs, will be encouraged to develop e-commerce to offer a wider range of services and products including customization, reach new customers and suppliers as well as adopt a more efficient supply chain and distribution channel. Besides e-commerce, other modes of distribution such as direct selling, franchising and factory outlets will be encouraged, not only to generate income and employment, but also to promote healthy competition in the distributive trade sector.

## **Infrastructure and Transport Services**

7.30 Infrastructure development will focus on ensuring availability of supply, enhancing efficiency as well as improving the quality of services. The expansion of infrastructure facilities will take into consideration long-term demand, economic growth and competitiveness. The development strategies will also emphasize further expansion of infrastructure facilities to rural areas to enhance accessibility. The expansion, upgrading and integration of roads and highways, railway, ports, airports as well as telecommunications will be undertaken in a more coordinated and integrated approach.

7.31 The emphasis of the transport services during the OPP3 period will be the provision of an efficient and cost effective multimodal transport systems for both passengers and cargo. The speedy movement of passengers will entail seamless transfers between various transport modes while ensuring convenience, comfort and safety. In the case of cargo, carriage will increasingly be on a single liability basis, although a combination of modes is utilized.

7.32 The development of roads will continue to focus on increasing accessibility, which will facilitate the establishment of new growth centres as well as reduce travel time and costs. Higher standards will be applied in the construction of new roads, especially those that link the industrial areas to the ports and airports. Accessibility to rural areas, particularly in Sabah and Sarawak will be further enhanced to promote economic and social activities. Safety aspects will also be emphasized in the construction of new roads as well as the upgrading of existing roads.

7.33 The provision of public transport infrastructure, especially in urban areas, will focus on the need to have a more integrated, efficient, safe and comfortable public transport network. Proactive measures will be undertaken to alleviate traffic congestion and enable the required modal shift from private car usage to patronage of the public transport system. For the Klang Valley, these measures will include the extension of the urban rail network, introduction of a common ticketing system, integrated route and facility networks, more efficient feeder buses, and additional park and ride facilities. Bus services will continue to play a major role in the urban centres and their operations will therefore be further enhanced.

7.34 To increase the efficiency of cargo movement, shippers including exporters, importers and freight forwarders will be encouraged to utilize multimodal transportation to reduce the need for long distance road haulage. In this context, the movement of cargo from seaports to inland ports will be by rail transportation and the distribution of goods from inland ports to the customers will be by road haulage carriers, thereby reducing the maintenance cost of roads and releasing more road space for other vehicles. Emphasis will also be given to the provision of an efficient and safe containerized road haulage.

7.35 Railway infrastructure development will focus on capacity expansion and upgrading of the rail network to provide integrated rail transport services as well as the enhancement of safety and maintenance standards. Railway links to the ports, airports, industrial zones and high density corridors will be enhanced to enable greater accessibility and competitive pricing for the production, transportation and distribution of goods. Haulage and passenger capacity will be further increased by the phased double tracking and electrification of the railway network beginning with the Rawang to Ipoh segment. The phased double tracking and electrification of the national railway network is part of the planned Trans-Asian Railway link between Kunming, People's Republic of China and Singapore. This regional rail project will greatly improve cross-border rail links especially for freight transportation.

7.36 Port development will continue to focus on improving capacity, enhancing the efficiency and productivity of related services as well as the forging of strategic alliances. Continuous efforts will be undertaken to attract more exporters, importers and the shipping community to use local ports. In line with this, a single port authority will be established which, *inter alia*, will perform regulatory functions to ensure that port operators meet the performance standards stipulated as well as comply with the terms and conditions of the licences issued. In

addition, the authority will facilitate an orderly and integrated development of ports and port-related services based on their respective strengths, uniqueness and specialization. Besides Port Klang, Port of Tanjung Pelepas will also be developed as a cargo transshipment centre. Ancillary services such as distriparks, warehousing, bunkering, ship building and repairing will also be encouraged to increase their capacity and productivity to support port development.

7.37 Measures will be undertaken to increase the capacity and upgrade operations to enhance the growth of shipping services. The Malaysian fleet will be expanded through leasing, chartering and the purchase of ships as well as forging strategic alliances such as integration, acquisition and joint ventures between local and foreign shipping companies. Shipping operations will be upgraded through the wider use of computerization, automation and the continuous improvement of the core competencies and skills of personnel.

7.38 Airport development will focus on improving efficiency, productivity and safety while expanding capacity to meet increasing demand. Airports will be developed along a hub and spoke policy to provide effective air links and improve accessibility to rural areas. Efforts will be intensified to promote KL International Airport (KLIA) as a regional aviation hub, shopping and recreation centre as well as a tourist destination. Measures will be instituted to ensure that KLIA conforms to world-class performance standards.

7.39 In an increasingly competitive global environment, the national carrier will have to rationalize its operational network, review operational costs and improve efficiency. With the increasing liberalization of the aviation industry and the trend towards ‘open skies’ especially in Europe and the United States of America, prospects are bright for the national carrier to expand its international network. With strategic alliances and code-share as well as other commercial arrangements, the national carrier will be able to develop and expand its market.

7.40 Recognizing the importance of the aviation industry to facilitate economic growth, trade, investment and tourism, the Government will continue to pursue a liberal approach to Air Services Agreements with other countries. At the same time, sufficient safeguards will be instituted to ensure market access and competitiveness of the national carrier and other local operators. Efforts will be stepped up to obtain additional landing rights for Malaysian carriers as well as attract more foreign airlines to operate flights into Malaysia.

7.41 In order to support communications and multimedia applications as well as to reduce the digital divide, the telecommunications infrastructure will be expanded to increase its capacity and accessibility, particularly to the rural areas.

To meet the challenges of global competition, the communications and multimedia industry will have to be innovative and creative to provide new and differentiated services at competitive rates. The Government will set performance standards as well as monitor the industry to ensure fair competition and protect consumer interests.

7.42 ICT will be utilized as an enabling tool to support the growth of infrastructure facilities and services. The usage of ICT in the transport system for monitoring, tracking and real-time information on traffic flows and volume as well as traffic management will continue to be expanded to enhance transportation efficiency, safety and comfort.

## **Utilities**

7.43 Sustainable development of the *energy* sector is important in ensuring the competitiveness of the economy, particularly the industrial, transportation and commercial sectors. Efforts will continue to be undertaken to manage both depletable and renewable energy resources to cater for the demands of a rapidly growing economy. The main thrust will be to ensure adequate, secure, quality and cost-effective supply of energy, promote its efficient utilization and minimize the negative impact on the environment.

7.44 The development of the oil and gas subsector is expected to undergo a major shift during the OPP3 period. Based on the present oil reserves and the current rate of production and utilization, Malaysia is expected to be a net importer of oil by 2008. In order to increase stock, efforts will focus on deep-sea exploration locally and prospecting for oil resources overseas. As the availability of gas in Peninsular Malaysia is expected to increase during the Plan period, there will be an increase in the utilization of gas by the power sector. However, an optimal generation mix will be determined to ensure system security and reliability. At the same time, the utilization of gas by the non-power sector, such as the transport sector as well as petrochemical industries, will be intensified.

7.45 The main thrust of the electricity subsector will continue to emphasize the adequacy of electricity supply as well as improve its productivity and efficiency. New private investments in the generation activities, including co-generation system connected to the distribution networks, will be encouraged. At the same time, the transmission and distribution systems will be further strengthened to improve coverage, reliability and quality of supply. The Malaysian Grid and

Distribution Codes will be further improved, particularly in terms of frequency limit and reactive power requirement. The electricity supply industry will be restructured to create an efficient industry, in terms of both technical and economic efficiencies. An Energy Commission will be established to regulate the technical and economic efficiencies of the industry.

7.46 To supplement the conventional supply of energy, new sources such as renewable energy will be encouraged. In this regard, the fuel diversification policy which comprises oil, gas, hydro and coal will be extended to include renewable energy as the fifth fuel, particularly biomass, biogas, municipal waste, solar and mini-hydro. Of these, biomass resources such as oil palm and wood waste as well as rice husks, will be used on a wider basis mainly for electricity generation. Other potential sources of energy will include palm diesel and hydrogen fuel.

7.47 Efficient utilization of energy will also be encouraged during the OPP3 period through the enforcement of the Energy Efficiency Regulations and implementation of Demand-side Management, such as retrofitting and district cooling programmes, changing the energy usage pattern and appliance labelling. The establishment of new integrated complexes and townships that are managed on an energy-efficient manner will also be encouraged. Towards this end, the Malaysian standards on efficient lighting, air-conditioning and building envelope systems will be formulated and energy efficiency provisions will be incorporated into the Uniform Building By-Laws.

7.48 Efforts will be intensified to promote the development of domestic energy-related industries and services. In promoting higher local content in the energy sector, the Entrepreneur Development Programmes and the Vendor Development Programmes undertaken by *Tenaga Nasional Berhad* (TNB) and *Petroleum Nasional Berhad* (PETRONAS), respectively, will be intensified. These efforts will contribute towards promoting Malaysia as a regional centre for energy-related engineering services. Major companies, like PETRONAS, TNB and the independent power producers will be urged to expand their participation in energy-related industries and services in other countries.

7.49 There will be greater emphasis on enhancing accessibility to safe drinking water, particularly for rural households. To overcome the problem of water shortage especially in rapidly developing areas, interstate water transfer programmes as well as the utilization of surface downstream water for industrial and non-critical purposes will be implemented. Efforts will also be taken to identify

potential groundwater sources as a supplementary source to surface water, especially during dry seasons. To improve water demand management, programmes to reduce non-revenue water and increase public awareness on conservation will be further intensified.

7.50 In terms of the *sewerage* system, the provision of modern sewerage facilities will be accelerated to reduce water pollution and preserve the environment. To meet these objectives, centralized sewerage projects will be implemented with priority given to state capitals, major towns and tourist resorts. However, in locations where connections to the centralized system are too costly or have adverse impact on the environment such as hilly and isolated areas, individual sewerage systems will be implemented. The refurbishment and upgrading of the sewerage system will also be intensified.

## **Social Services**

7.51 *Health* services programme will continue to be expanded during the OPP3 period, both in the urban and rural areas. The public sector will continue to place emphasis on the provision of promotive and preventive health care, while the private sector and the non-governmental organizations (NGOs) will be encouraged to be more active in the provision of these services. The private sector will continue to expand the provision of curative care and complement the services provided by the public sector. As part of the efforts to ensure the provision of quality health services, the public sector will strengthen its regulatory role to monitor the services provided by the private sector in accordance to relevant laws and regulations.

7.52 The changing pattern of diseases due to changes in lifestyle and behavior had led to increasing incidence of non-communicable diseases and injuries. Thus, health promotive and preventive programmes, including healthy life style campaign, which focus on changing health behavior, will be given emphasis during the OPP3 period. Surveillance and control of emerging and re-emerging infections as well as programmes on immunization, food and nutrition, water quality and sanitation will be strengthened.

7.53 The quality and access to health services will be further improved using ICT and telehealth as the enabler. All new and existing hospitals will be incorporated with ICT and automation services, thus creating an efficient networking of hospitals and clinics services, which will be seamless and client-friendly. The integrated health information system network will further facilitate communication and referrals through the various levels of care in the public and private health facilities.

7.54 Human resource planning and training will be given priority to overcome the shortages of health professionals and meet the needs of the expanding health services. A health care financing scheme will be implemented to ensure universal coverage and access to health services as well as appropriate sharing of costs by the private and public health care providers and consumers. However, the Government will continue to ensure the provision of health care services to the low-income group.

7.55 During the OPP3 period, *housing* development will continue to give emphasis to the provision of adequate, affordable and quality housing to all, particularly the low-income group. In this respect, focus will be on the provision of better quality houses in suitable locations and conducive living environment. Housing development will continue to be closely coordinated with industrial and overall development planning to ensure adequate and timely provision of houses including access to social services and amenities as well as an integrated and adequate public transport system. These efforts will be undertaken within the framework of the National Spatial Plan. The private sector will continue to play an increasingly important role in meeting the overall housing needs, while the public sector will concentrate on providing houses for the low-income group and public sector employees.

7.56 Efforts will be undertaken to promote R&D activities related to production of cheaper building materials and better construction techniques with a view to improving the quality and safety of houses and ensuring their affordability. The housing sector will also address a more broad-based agenda such as fulfilling the needs of the elderly and disabled, energy efficient design as well as implementation of the community based and garden city concept. Emphasis will continue to be given to the maintenance of high-rise buildings especially low-cost and low-medium-cost flats.

7.57 To ensure that the success in rapid economic development is not negated by social problems, efforts will continue to be undertaken to strengthen the *family unit* that forms the basis for social stability and building a caring society. Programmes will be undertaken to equip families to face the challenges arising from rapid development as well as ensure that stability and harmony within the family unit is maintained. In addition, as globalization will have an impact on the family structure and society, including the relevance of cultural values and norms in social integration and nation building, efforts will be undertaken to ensure that the Malaysian society is resilient to withstand such negative influences.



7.58 The continuity and success of the nation's development depends on youths. *Youths* are an important source of manpower, and as such will have to be properly guided and provided with the appropriate skills and knowledge and at the same time inculcated with the right attitudes and values. Youth skills training will focus on acquiring knowledge and skills in new and appropriate fields as well as upgrading existing skills to ensure its relevance to the needs of the industry. More apprenticeship programmes will be implemented to cater for youths who are less academically inclined. In addition, programmes will also be designed to develop creativity and talents among youths. Youth development programmes will also emphasize the importance of harmonious community living and the inculcation of the spirit of patriotism and national pride.

7.59 The promotion of high performance and mass *sports* will continue to be undertaken as it contributes to the building of a disciplined and competitive society. Efforts will be undertaken to ensure effective coordination and management of sports activities between the public and private sectors, including a review of the role and functions of sports associations. Priority will be given to develop Malaysian sportsmen to world-class standards, particularly in high performance sports. More sports and recreation facilities, including world-class sports infrastructure will be provided to ensure greater accessibility for the public and also to enable Malaysia to host international events. These efforts will also contribute towards the growth of the tourism industry, while at the same time contribute towards the enhancement of national unity.

## **Science and Technology**

7.60 The global economy is rapidly developing into a knowledge-based economy where competitiveness and efficiency will be driven by technology, skills and innovation. In order to meet these demands, emphasis will focus on accelerating the development of Malaysia's capacity and capability in science and technology (S&T) knowledge and skills, promoting innovation and intensifying market-oriented R&D within the context of the new environment of a knowledge-based economy. Efforts will also be taken to further strengthen the linkages between the relevant sectors and institutions to evolve an effective national innovation system.

7.61 With regard to R&D, efforts will be taken to increase the amount of Gross Expenditure for Research and Development (GERD) from the current low level of 0.4 per cent of GDP to at least 1.5 per cent by 2010. While the Government

will continue to provide funding for R&D activities through the Intensification of Research in Priority Areas (IRPA) programme, the private sector is expected to raise its contribution in the national R&D expenditure. Measures to increase GERD to at least 1.5 per cent will include the restructuring of the existing institutions, further promoting private sector R&D as well as creating new funds in addition to IRPA. These will further stimulate R&D activities to a higher level and create greater competitive advantage. To further enhance competitiveness, the private sector will need to expand and intensify its R&D efforts to improve on existing products and introduce new ones. In this regard, the Government will provide an enabling environment to promote and facilitate private sector R&D. In particular, the legal framework of intellectual property management will be reviewed and strengthened.

7.62 Recognizing the high risks and costs associated with investments in R&D to develop strategic industries, the IRPA mechanism will be reviewed and fine-tuned to emphasize more on priority setting for R&D in strategic areas that will sustain long-term technology development. Specific research institutions, singly or jointly with industry partners will then be provided with funding to develop targeted areas of technology development in knowledge-based and high-technology industries such as biotechnology and pharmaceuticals, ICT and microelectronics, advanced materials and aerospace technology.

### **Information and Communications Technology**

7.63 The emphasis on the development of ICT is central in the pursuit of productivity-driven growth and the knowledge-based economy. The extent of ICT application will emerge as a significant determinant of competitiveness for firms and countries as there will be increasing reliance on value-creation of information and knowledge. Thus, it is imperative to intensify efforts to enhance capacity building in terms of human resources, infrastructure and institutions. In this respect, the Government and the private sector will step up efforts to leverage on ICT development to increase productivity and growth opportunities in all sectors of the economy.

7.64 A principal thrust will be to facilitate the development of a dynamic and viable e-Malaysia by focusing on people, infostructure and applications development, which will be guided by the National IT Agenda (NITA). Towards this end, programmes will be intensified to promote greater awareness, confidence and

utilization of ICT applications as well as strengthen institutional capacity in the public and private sectors including the community. In addition, expansion of ICT infrastructure will be given priority to enable equitable access to information and knowledge while reducing the digital divide. The provision of equitable and affordable services to rural and remote areas will be intensified. To complement these efforts, all government agencies will implement the Information Technology Strategic Plan (ISP) to ensure a coordinated approach to computerization that will cover the national, state and district levels.

7.65 To take advantage of the progress in ICT development in the nation, efforts will be made to develop Malaysia into a global ICT and multimedia hub. Towards this end, a strategic policy direction aimed at fostering healthy competition in the ICT and multimedia sector will be adopted. Measures that will be undertaken include removing the barriers to entry, nurturing fair competition as well as expanding and upgrading ICT infrastructure.

7.66 During the OPP3 period, concerted efforts will be made to roll out Multimedia Super Corridor (MSC) first-wave flagship applications. In addition, a study will be undertaken for the implementation of the second-wave MSC applications. Efforts will be made to further promote MSC as well as provide a conducive environment to attract top-notch personnel and world-class companies. This will create a synergistic effect and serve as a catalyst to attract a greater number of leading companies to MSC.

7.67 A greater number of ICT-based SMEs including ICT start-up companies will be developed to facilitate increases in productivity and market expansion. Towards this end, an ICT fund will be set up to provide SMEs with better financial accessibility to embark on ICT development. To optimize investment, SMEs will be encouraged to pool their resources to utilize ICT and develop portals for e-commerce. Measures will also be undertaken to develop the necessary skills and competencies of employees and entrepreneurs to facilitate a wider utilization of ICT.

## **Environment**

7.68 During the OPP3 period, the Government will continue to take appropriate actions to keep the balance between growth objectives and environmental concerns. Environmental considerations will increasingly be integrated into development planning taking into account the population's socio-economic needs as well as

the enhancement of the quality of life. To strengthen the empirical base for environmental decision-making, steps will be taken to introduce environmental performance standards and environmental data on a sectoral and cross-sectoral basis. Existing legislative framework for environmental protection will be further complemented by the use of market-based instruments to encourage the adoption and development of environmentally-sound technologies and environment-friendly products.

7.69 The major environmental and natural resource concerns during the OPP3 period, will include improving air and water quality, efficient management of solid waste and toxic and industrial waste, developing a healthy urban environment and the conservation of natural habitats and resources. The Government will continue to undertake appropriate measures to address air pollution caused by various sources. These will include enhancing enforcement of emission controls for motor vehicles, instituting comprehensive traffic management systems, and promoting the use of public transportation and electric vehicles in urban areas as well as increasing the usage of natural gas to reduce total air pollution load. In addition, zero emission technologies will be promoted to reduce energy consumption and facilitate the reuse and regeneration of new materials from waste. The industrial sector will be encouraged to adopt cleaner technology production.

7.70 A National Water Policy, which will provide the framework for water conservation and management to ensure adequate and safe water supply for the nation, will be formulated. This policy will focus on the integrated river-basin approach, the protection of catchment areas and reservoirs and address issues of inter-state and inter-basin water transfers. To contain the discharge of waste water polluting the rivers and water ways, the Government will continue to upgrade and build new sewerage treatment plants, and the industrial sector will be encouraged to reuse and recycle waste water. To further improve the management of solid waste, the Government will consider the adoption of a comprehensive waste management policy including the installation of incinerators for safe and efficient disposal of waste as well as to formulate strategies for waste reduction, reuse and recycling. Local authorities will be provided with assistance through capacity development programme and demonstration projects to integrate environmental considerations into local planning. In addition, community participation in the development planning process based on the principles of Local Agenda 21 will be enhanced.

### **III. CONCLUSION**

7.71 The principal thrusts for the OPP3 period will be the creation of wealth and promotion of new sources of growth in the manufacturing, services and agriculture sectors. Efforts will be undertaken to mobilize and allocate resources more effectively and efficiently to attain a higher growth through productivity-driven investments and greater application of ICT in all sectors of the economy. The provision of better social services, utilities, infrastructure and facilities as well as conservation of the environment will enhance the quality of life. The sectoral strategies and priorities will contribute towards the building of a resilient and competitive nation, in line with the aspirations of becoming a developed country by 2020.

## GLOSSARY OF ACRONYMS

|         |   |   |
|---------|---|---|
| AFTA    | = | ASEAN Free Trade Area   |
| AIA     | = | ASEAN Investment Area   |
| AIM     | = | <i>Amanah Ikhtiar Malaysia</i>  |
| ASEAN   | = | Association of South-East Asian Nations                                     |
| BCIC    | = | Bumiputera Commercial and Industrial Community                              |
| bpd     | = | barrels per day   |
| CBOs    | = | Community-based Organizations   |
| CCGT    | = | Combined Cycle Gas Turbine  |
| cct-km  | = | circuit-kilometres  |
| CDRF    | = | Commercialization of Research and Development Fund                          |
| CEPT    | = | Common Effective Preferential Tariff  |
| CETREEE | = | Centre for Education and Training in Renewable Energy and Energy Efficiency |
| CIAST   | = | Centre for Instructors and Advanced Skill Training                          |
| CMP     | = | Capital Market Master Plan  |
| CUF     | = | Centralized Utility Facilities  |
| DASN    | = | <i>Dana Amanah Saham Nasional</i>   |
| DCI     | = | Development Composite Index   |
| EE      | = | Energy Efficiency   |
| EGAT    | = | Electricity Generating Authority of Thailand                                |
| FDI     | = | Foreign direct investment   |
| FSMP    | = | Financial Sector Master Plan  |
| GDC     | = | Gas District Cooling  |
| GDP     | = | Gross Domestic Product  |
| GERD    | = | Gross Expenditure for Research and Development                              |
| GJ      | = | gigajoule   |
| GNP     | = | Gross National Product  |
| GWh     | = | gigawatt hour   |
| HRD     | = | Human Resource Development  |
| HRDC    | = | Human Resources Development Council   |
| ICOR    | = | Incremental capital output ratio  |
| ICT     | = | Information and Communications Technology                                   |

|          |   |   |
|----------|---|---|
| IMP2     | = | Second Industrial Master Plan   |
| IOFC     | = | International Offshore Financial Centre   |
| IPP      | = | Independent Power Producer  |
| IPTAs    | = | <i>Institut Pengajian Tinggi Awam</i><br>(Public Institutions of Higher Learning)                 |
| IPTS     | = | <i>Institut Pengajian Tinggi Swasta</i><br>(Private Institutions of Higher Learning)              |
| IRPA     | = | Intensification of Research in Priority Areas   |
| ISO      | = | International Standard Organization   |
| ISP      | = | Information Technology Strategic Plan   |
| IT       | = | Information technology  |
| KDI      | = | Knowledge-based Economy Development Index   |
| KLIA     | = | KL International Airport  |
| KLSE     | = | Kuala Lumpur Stock Exchange   |
| kV       | = | kilovolt  |
| kW       | = | kilowatt  |
| kWh      | = | kilowatt hour   |
| LAN      | = | <i>Lembaga Akreditasi Nasional</i><br>(National Accreditation Board)                              |
| LFPR     | = | Labour Force Participation Rate   |
| LLS      | = | <i>Lembaga Letrik Sabah</i><br>(Sabah Electricity Board)  |
| LNG      | = | Liquefied Natural Gas   |
| LPG      | = | Liquefied Petroleum Gas   |
| LTC      | = | Latex-timber Clones   |
| LTH      | = | <i>Lembaga Tabung Haji</i>  |
| MQLI     | = | Malaysian Quality of Life Index   |
| MAPEN II | = | <i>Majlis Perundingan Ekonomi Negara Kedua</i><br>(Second National Economic Consultative Council) |
| MARA     | = | <i>Majlis Amanah Rakyat</i>   |
| MAS      | = | Malaysia Airlines   |
| MATRADE  | = | Malaysian External Trade Development Corporation  |
| MBC      | = | Malaysian Business Council  |
| MESDAQ   | = | Malaysian Exchange of Securities Dealing and Automated Quotation                                  |

|          |   |   |
|----------|---|---|
| MFO      | = | Medium Fuel Oil                                   |
| MICE     | = | Meetings, Incentives, Conventions and Exhibitions |
| MIDA     | = | Malaysian Industrial Development Authority        |
| MIPS     | = | Millions of Instructions Per Second               |
| mmBTU    | = | million British Thermal Unit                      |
| mmscfd   | = | million standard cubic feet per day               |
| MNCs     | = | Multinational corporations                        |
| MSC      | = | Multimedia Super Corridor                         |
| MTDE     | = | Malaysian Technology Development Corporation      |
| MW       | = | megawatt  |
| NAP3     | = | Third National Agriculture Policy                 |
| NBP      | = | National Biodiversity Policy                      |
| NDP      | = | National Development Policy                       |
| NEP      | = | New Economic Policy                               |
| NEAC     | = | National Economic Action Council                  |
| NFPEs    | = | Non-Financial Public Enterprises                  |
| NGOs     | = | Non-governmental Organizations                    |
| NGV      | = | Natural Gas for Vehicles                          |
| NIEs     | = | Newly Industrialized Economies                    |
| NITA     | = | National IT Agenda                                |
| NLDC     | = | National Load Dispatch Centre                     |
| NOSS     | = | National Occupational Skills Standards            |
| NVP      | = | National Vision Policy                            |
| OPEC     | = | Organization of Petroleum Exporting Countries     |
| OPP1     | = | First Outline Perspective Plan                    |
| OPP2     | = | Second Outline Perspective Plan                   |
| OPP3     | = | Third Outline Perspective Plan                    |
| PC       | = | Personal Computer                                 |
| PERODUA  | = | <i>Perusahaan Otomobil Kedua Malaysia</i>         |
| PETRONAS | = | <i>Petroliam Nasional Berhad</i>                  |
| PGU      | = | Peninsular Gas Utilization                        |
| PJ       | = | petajoule   |



|         |   |   |
|---------|---|---|
| PLI     | = | Poverty Line Income   |
| PLWS    | = | Productivity-Linked Wage System   |
| PPP     | = | Purchasing power parity   |
| PPRT    | = | <i>Program Pembangunan Rakyat Termiskin</i><br>(Development Programme for the Hardcore Poor)                            |
| PROSPER | = | <i>Projek Usahawan Bumiputera Dalam Bidang Peruncitan</i><br>(Project For Bumiputera Entrepreneurs in the Retail Trade) |
| PROTON  | = | <i>Perusahaan Otomobil Nasional Berhad</i>  |
| R&D     | = | Research and development  |
| RE      | = | Renewable Energy  |
| S&T     | = | Science and technology  |
| SAIDI   | = | System Average Interruption Duration Index  |
| SCADA   | = | Supervisory Control and Data Acquisition  |
| SEDCs   | = | State Economic Development Corporation  |
| SESB    | = | Sabah Electricity Sdn. Bhd.   |
| SESCo   | = | Sarawak Electricity Supply Corporation  |
| SMIDEC  | = | Small and Medium Industries Development Corporation   |
| SMEs    | = | Small- and medium-scale Enterprises   |
| SPKR    | = | <i>Skim Pembangunan Kesejahteraan Rakyat</i><br>(Scheme for the Development of the People's Well-being)                 |
| TFP     | = | Total factor productivity   |
| TNB     | = | <i>Tenaga Nasional Berhad</i><br>(National Electricity Board)   |
| TRIMS   | = | Trade Related Investment Measures   |
| TRIPS   | = | Trade Related Intellectual Property Rights  |
| tscf    | = | trillion standard cubic feet  |
| UHB     | = | UDA Holding Berhad  |
| VCCs    | = | Venture Capital Corporations  |
| WTO     | = | World Trade Organization  |
| Y2K     | = | Year 2000   |

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