

Unlocking the Potential of Productivity

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I. INTRODUCTION

1.1. Since the mid-1990s, Malaysia has been focusing on enhancing innovation and productivity to transform from an input-driven to a knowledge-based economy. Despite the numerous initiatives introduced, productivity levels are still wanting by all measurements and the economy remains highly dependent on traditional factor inputs of labour and capital. While these inputs are still necessary for production, higher multifactor productivity will ensure a more sustainable growth in the long run. During the Eleventh Malaysia Plan, 2016-2020, productivity will be one of the game changers, where renewed efforts will be undertaken to boost productivity in a focused and targeted manner with clear outcomes at the national, industry and enterprise levels.

II. TENTH MALAYSIA PLAN, 2011-2015: PROGRESS

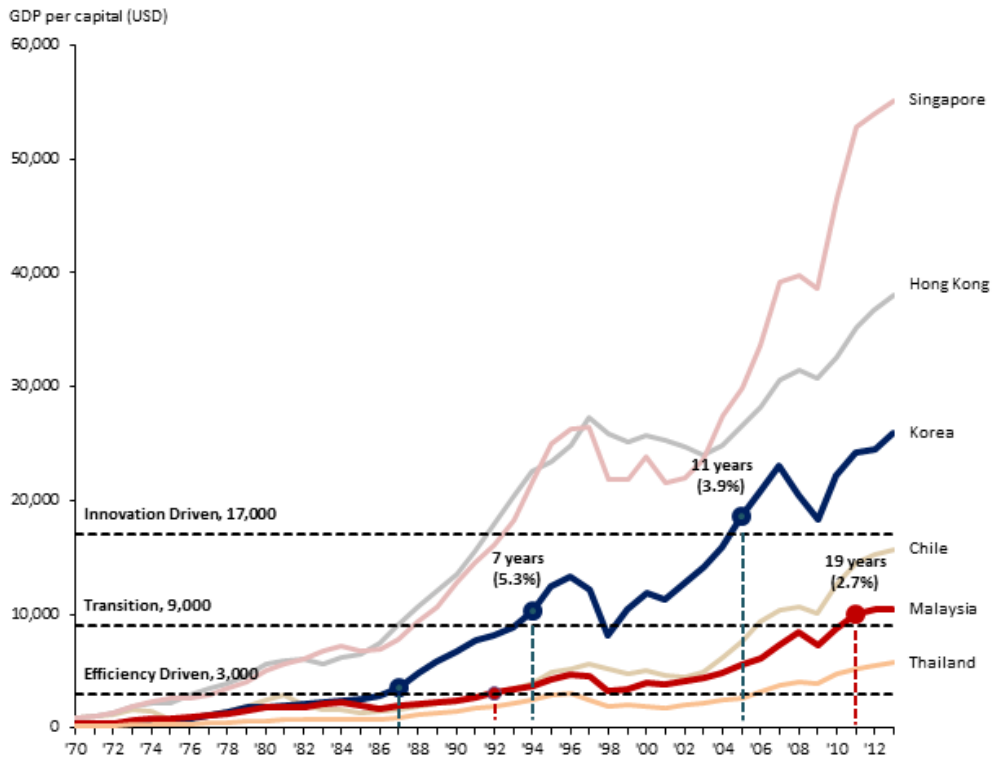
1.2. Productivity as defined by the Organisation for Economic Co-operation and Development (OECD) is the ratio between the output volume and the input volume and it measures how efficiently production inputs, such as labour and capital, are being used in an economy to produce a given level of output. Multifactor Productivity¹ (MFP) measures the part of economic growth that cannot be explained by the increased utilisation of capital and labour. MFP is often interpreted as the contribution to economic growth made by factors such as technological progress, organisation innovation and quality of labour.

1.3. Numerous initiatives undertaken to boost productivity in Malaysia since the mid-1990s are as shown in *Appendix 1-1*. Although there were improvements over the years, productivity progress is relatively slower by international comparison.

1.4. There is a correlation between a nation's stage of development and its level of productivity, as shown in *Exhibit 1-1*. Malaysia graduated to the efficiency-driven stage of development in 1992 and reached the transition-to-the-innovation-driven stage in 2011. For comparison, South Korea took 7 years (1987-1994) from the efficiency-driven to transition-to-the-innovation-driven stage with a productivity growth of 5.3% per annum, while Malaysia took 19 years to do the same with a lower productivity growth at 2.7% per annum. In absolute terms, Malaysia's labour productivity level was 32% of that of the United States of America (US) and 56% of that of South Korea, as shown in *Appendix 1-2*.

¹ The term multifactor productivity (MFP) is synonymous to total factor productivity (TFP).

Exhibit 1-1
Stages of Development by Selected Countries



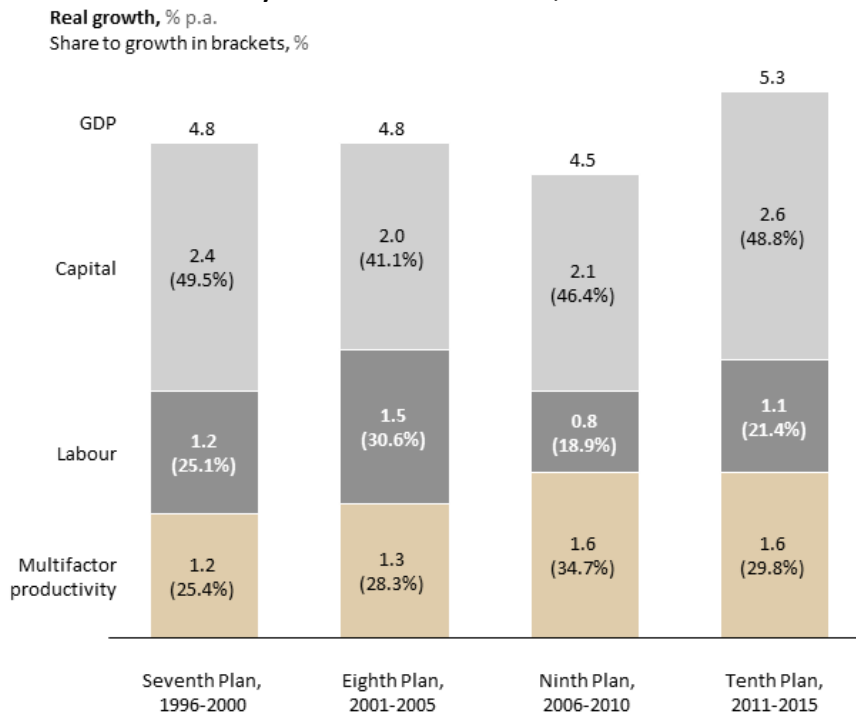
Notes: Annual average productivity growth in bracket

Source: World Bank and The Conference Board

1.5. Since the mid-1990s, about 70% of Malaysia’s growth has been contributed by labour and capital with modest contribution from MFP, as shown in *Exhibit 1-2*. The contribution of MFP is lower when compared with most of the developed economies, as shown in *Exhibit 1-3*. While labour and capital are still necessary for production, higher contribution from the MFP will ensure a more sustainable growth pattern and equitable distribution of wealth among the agents of economy in the long run. Thus, raising MFP is critical if Malaysia is to achieve its growth targets.

Exhibit 1-2

Malaysia: Factors of Production, 1996-2015

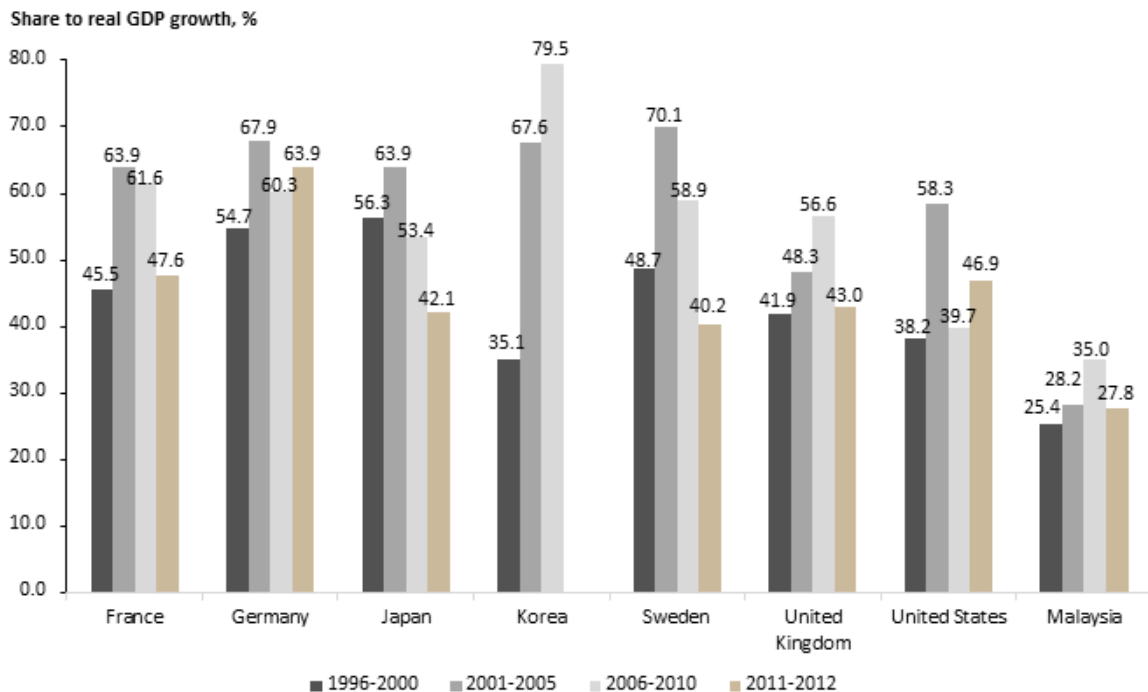


Notes: Based on GDP in 2010 prices

Source: Economic Planning Unit and Department of Statistics Malaysia

Exhibit 1-3

Contribution of MFP to GDP Growth, 1996-2012



Source: Economic Planning Unit; Department of Statistics Malaysia; and Organisation for Economic Co-operation and Development

1.6. During the Tenth Plan, the average contribution of labour and capital to real gross domestic product (GDP) growth is expected to rise to 70.2% from 65.3% during the Ninth Plan. Correspondingly, the contribution of MFP is expected to moderate to 29.8% in the Tenth Plan. At the sector level, MFP is estimated to be the main driver in the construction and the services sectors, contributing 74.2% and 39.2% of the respective sector growth, as shown in *Exhibit 1-4*.

*Exhibit 1-4***MFP by Major Economic Sector, 2011-2020**

	Agriculture			Manufacturing			Construction			Services		
	2006-2010	2011-2015	2016-2020	2006-2010	2011-2015	2016-2020	2006-2010	2011-2015	2016-2020	2006-2010	2011-2015	2016-2020
Growth, % p.a.												
MFP	1.7	0.7	1.7	1.2	0.5	0.8	4.6	8.2	8.1	4.1	2.5	2.8
Capital	1.2	1.6	1.8	0.7	2.9	3.4	1.4	1.9	1.8	2.2	2.3	2.9
Labour	-0.10	0.1	-0.04	0.7	1.4	0.9	0.1	1.0	0.5	1.1	1.6	1.2
GDP	2.8	2.4	3.5	2.7	4.8	5.1	6.2	11.1	10.3	7.4	6.3	6.9
Share to real GDP growth, %												
MFP	60.0	28.5	48.6	45.4	10.7	15.6	75.1	74.2	78.2	54.8	39.2	40.8
Capital	43.6	67.5	52.7	27.3	60.4	66.5	22.8	16.7	17.0	29.8	36.2	41.8
Labour	-3.5	4.1	-1.3	27.3	28.9	17.9	2.2	9.1	4.7	15.4	24.6	17.4
GDP	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Notes: Based on GDP in 2010 prices

Source: Economic Planning Unit and Department of Statistics Malaysia

1.7. Labour productivity is expected to grow at 2.3% per annum during the Tenth Plan, as shown in *Exhibit 1-5*. Sectors with higher labour productivity than the national average growth are the construction and services sectors, while the manufacturing sector is expected to record modest productivity improvement.

*Exhibit 1-5***Malaysia's Labour Productivity by Major Economic Sector, 2005-2020**

Sector	RM '000, in 2010 prices							Growth Rate, % p.a.	
	Actual					Estimate	Target	Estimate Tenth Plan	Target Eleventh Plan
	2010	2011	2012	2013	2014	2015	2020	2011-2015	2016-2020
Agriculture	51.7	55.3	55.8	56.4	57.5	57.7	68.8	2.2	3.6
Mining and Quarrying	1,089	1,064	1,076	1,083	1,114	1,147	1,210	1.1	1.1
Manufacturing	94.4	94.4	94.4	94.8	95.5	98.8	112.1	0.9	2.6
Construction	24.7	25.8	30.0	32.2	35.7	39.1	61.9	9.6	9.6
Services	59.3	60.8	62.4	63.8	66.4	68.1	83.4	2.8	4.1
Total	68.7	69.9	71.4	72.5	75.0	77.1	92.3	2.3	3.7

Notes: Based on GDP in 2010 prices

Source: Economic Planning Unit and Department of Statistics Malaysia

III. ISSUES AND CHALLENGES

1.8. Main challenges in enhancing productivity are in the areas of labour market, market dynamics, regulatory burden and innovation ecosystem.

Labour Market

1.9. Low creation of quality jobs, rigidity in labour regulations, talent mismatch and over-dependence on low-skilled foreign workers, mainly in the low-wage category, have also negatively affected labour market condition and productivity. The structure of the employment with large proportion of low-skilled workers has partly contributed to the low labour productivity. Skilled workers², a crucial factor to drive productivity, made up only 24.7% of total employment in the labour market in 2013, lower than 27.6% in 2010.

1.10. The presence of labour market rigidities, such as restrictive regulation in hiring and firing of workers, has distorted the labour market. For instance, the notice period for redundancy dismissal in Malaysia is equivalent to 6.7 weeks of salary compared with only 3 weeks of salary in Singapore, and the severance pay for redundancy dismissal in Malaysia is equivalent to 17.2 weeks of salary and none in Singapore.

1.11. The lack of interaction between employers and institutions of higher education led to mismatch between local graduates competencies and industry needs. A study³ showed that 80% of firms think that universities should consider reforming university curricula to reflect the current realities of the labour market. The mismatch between graduates and industry needs has suppressed the potential contribution of human capital towards higher productivity.

1.12. Easy access to the relatively lower cost of foreign workers⁴ has contributed to the rise in the number of low-skilled foreign workers in the country, with its share of total employment increasing from 9.9% in 2005 to 13.4% in 2013, as shown in *Exhibit 1-6*. This has served as a disincentive for firms to innovate and automate their work processes, thus affecting their productivity. The correlation was evident from the trend of labour productivity growth for the agriculture, manufacturing, construction and services sectors over the period of 1991-2000 and 2001-2013 that was in tandem with the changes in the intensity of capital of the respective sectors, as shown in *Exhibit 1-7*.

² Defined as managers, professionals as well as technicians and associate professional occupational groups.

³ World Bank Malaysia Economic Monitor, June 2014.

⁴ Malaysia's low-skilled foreign worker levy increased between 0.4% to 0.6% per annum between 2007 and 2014 compared with Singapore's significant increase from 11.7% to 13.3% per annum from 2005 to 2014.

Exhibit 1-6

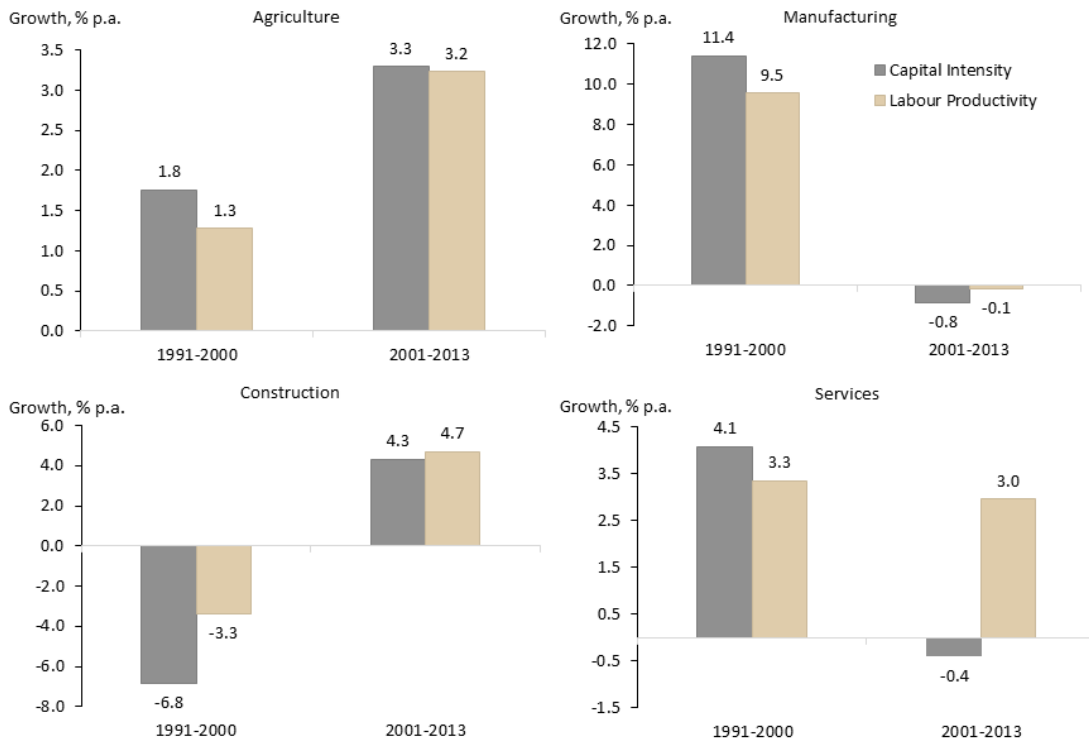
Malaysia's Share of Foreign Workers to Total Employment



Source: Department of Statistics Malaysia

Exhibit 1-7

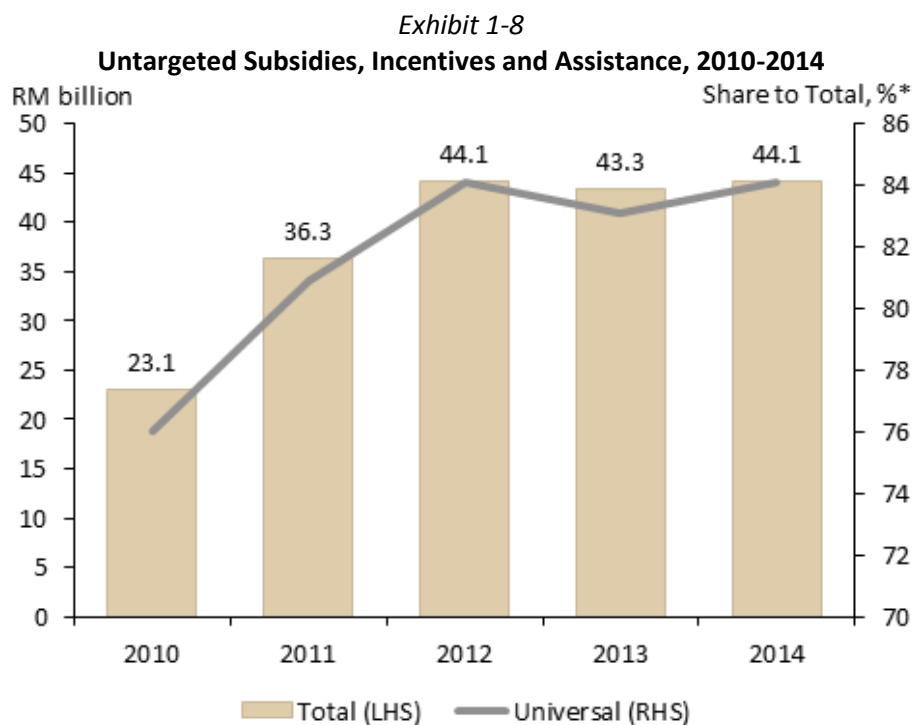
Capital Intensity and Labour Productivity by Selected Economic Sector



Source: Economic Planning Unit and Department of Statistics Malaysia

Market Dynamics

1.13. While it is recognised that government intervention in the form of subsidies and incentives are sometimes necessary based on socio-economic and strategic reasons, the outcome of these subsidies is not linked to any productivity improvement, which may result in allocative inefficiency. From 2010 to 2014, the Government spent RM154.6 billion⁵ on non-performance related incentives and subsidies, representing 81% of total incentives and subsidies, as shown in *Exhibit 1-8*.



Notes: *Total subsidies, incentives, & assistance

Source: Economic Planning Unit and Ministry of Finance

Regulatory Burden

1.14. The Government, through the Special Taskforce to Facilitate Business (PEMUDAH) and the Malaysia Productivity Corporation (MPC), has taken steps to reduce regulatory burden by eliminating unnecessary rules and regulations as well as simplifying administrative processes. These have contributed to the improvement in Malaysia's position in the World Bank's Doing Business ranking from 20th in 2014 to the 18th position in 2015. However, there are still many areas, especially business regulations and procedures that need to be reviewed and streamlined. Regulatory burden raises compliance cost, cost of doing business, impedes efficiency and drives down productivity.

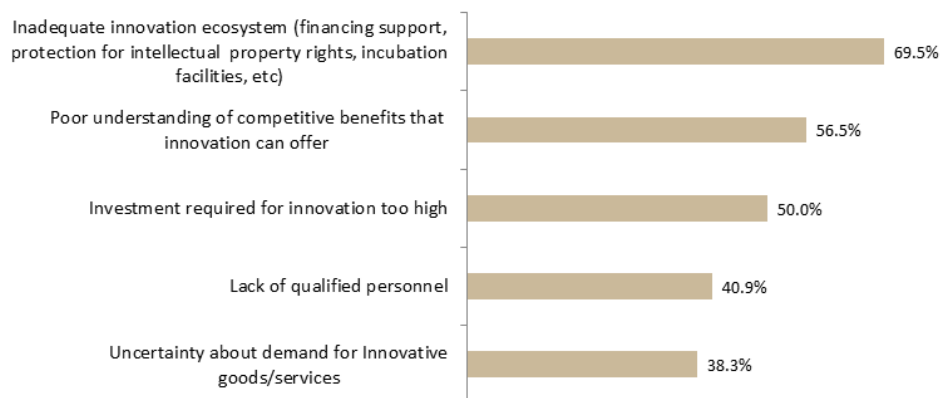
⁵ Untargeted fuel subsidies made up 59.3% of total Government assistance. Malaysia has since introduced a managed floating system for retail petrol and diesel prices in December 2014, aimed at increasing market efficiency.

Innovation Ecosystem

1.15. Innovation is critical to drive productivity enhancement. Malaysia's innovation level is still lacking due to inadequate ecosystem for innovation, low technological readiness as well as low cost and easy access to imported intermediate inputs and foreign workers. There are also factors within Malaysian enterprises that are hindering innovation particularly lack of qualified employees, poor understanding of the benefits of innovation, and lack of leadership and empowerment. This is evidenced by an enterprise-level survey conducted by the MPC on over 200 respondents from the industry in 2014. The survey showed 70% of the respondents felt that the inadequate ecosystem for innovation was the main reason for lack of innovation in their enterprises, as shown in *Exhibit 1-9*.

Exhibit 1-9

Perception of Enterprises on Innovation Challenges, 2014



Source: Malaysia Productivity Corporation

IV. ELEVENTH MALAYSIA PLAN, 2016-2020: WAY FORWARD

Productivity Targets

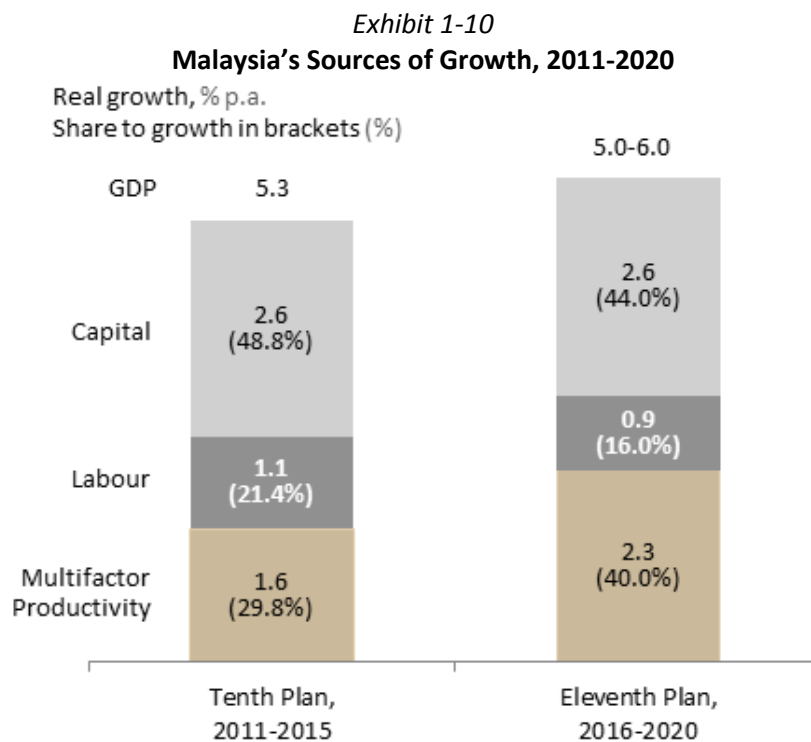
1.16. Economic growth during the Eleventh Plan must be driven by more sustainable sources of growth, particularly improvements in productivity. Targeted initiatives will be introduced at the national, industry and enterprise levels to ensure tangible and significant improvements in productivity. Specific productivity targets will be set and the outcomes will be closely monitored.

Sectoral Targets

1.17. The real GDP growth target set for the Eleventh Plan has to be supported by higher labour productivity growth at 3.7% per annum to RM92,300 by 2020, as shown in *Exhibit 1-5*. Improvement in labour productivity will be led by the construction sector, growing at 9.6%, followed by the services sector at 4.1%, the agriculture sector at 3.6% and the manufacturing sector at 2.6%.

Multifactor Productivity

1.18. The target is to increase MFP contribution to GDP growth to at least 40% by 2020. The contribution of capital and labour will correspondingly reduce to 44% and 16%, as shown in *Exhibit 1-10*. The construction sector is projected to lead the growth in MFP with an 8.1% average annual growth, followed by services sector at 2.8%, agriculture sector at 1.7% and manufacturing sector at 0.8%, as shown in *Exhibit 1-4*.



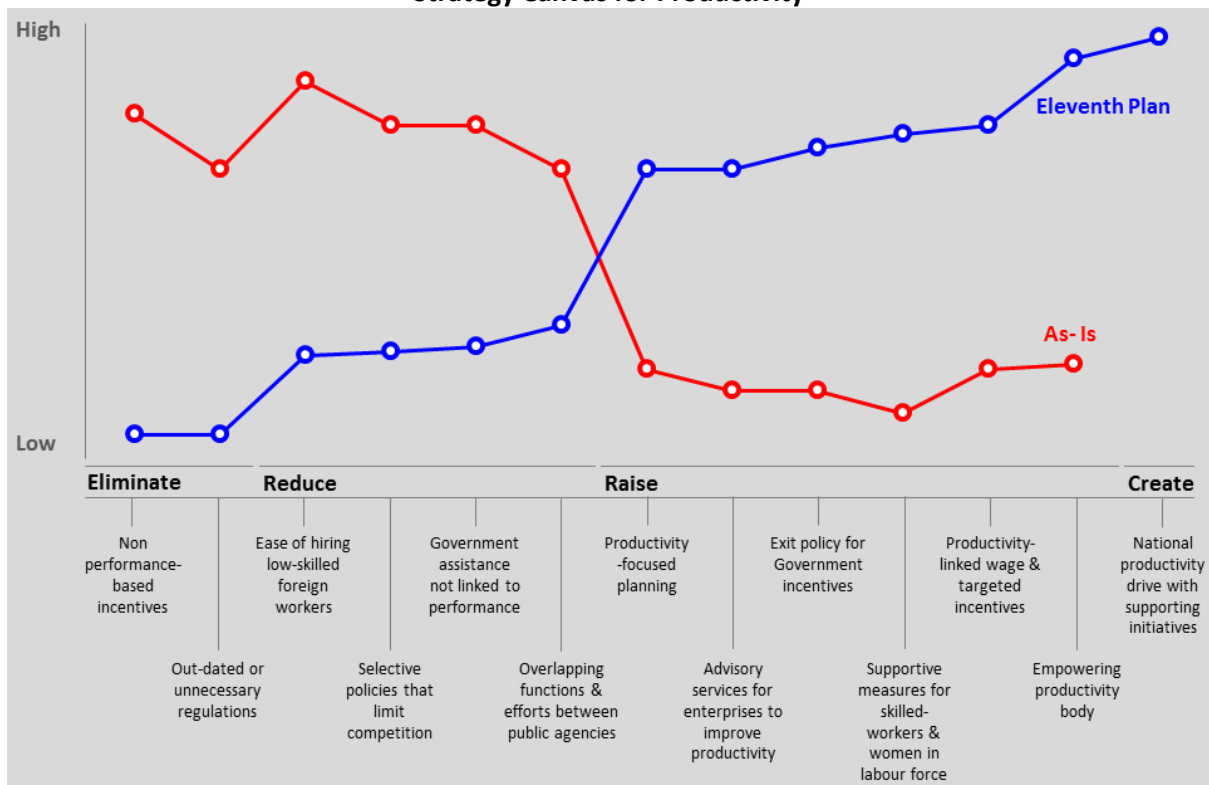
Notes: Based on GDP in 2010 prices

Source: Economic Planning Unit and Department of Statistics Malaysia

Strategies to Increase Productivity

1.19. Comprehensive and cohesive strategies will be introduced at the national, industry and enterprise levels to meet the productivity targets, as shown in the strategy canvas in *Exhibit 1-11*.

Exhibit 1-11
Strategy Canvas for Productivity



1.20. At the national level, nine strategies will be implemented, as follows:

Formulating a Five-year Malaysia Productivity Blueprint

1.21. A five-year productivity blueprint will be introduced to place productivity enhancement at the forefront of the national development agenda. The blueprint will set out a comprehensive set of strategies and detail action plans with specific targets and timelines for implementation. The blueprint will also address the institutional mechanism to drive and monitor the implementation of the productivity strategies and initiatives. The blueprint will be prepared in consultation with industry.

Strengthening the Governance and Institutional Mechanism for Implementation of Productivity Strategies

1.22. A National Productivity Council (NPC), chaired by the Prime Minister, will be established to provide high level leadership to drive the productivity agenda. The NPC will review and formulate policies as well as strengthen cooperation and coordination among ministries and agencies to ensure policy cohesion at all government levels. The MPC will be empowered with the required capabilities and authority to lead and coordinate the implementation of the productivity agenda.

Introducing Productivity Enhancement as a Key Performance Indicator (KPI) for All Development Initiatives

1.23. During the Eleventh Plan, productivity will be introduced as one of the required outcomes in the evaluation of proposals for development budget allocation. This will help mainstream the productivity agenda in all development projects to ensure they are undertaken in the most efficient and cost effective manner.

Accelerating Regulatory Reforms

1.24. Regulation reforms will be accelerated to ensure new and existing regulations as well as their administration and enforcement are aligned with good regulatory practices. This will be done by expanding the adoption of the National Policy on Development and Implementation of Regulations (NPDIR), and conducting regular regulatory review for ministries and agencies. In addition, a “cost-in, cost-out” evaluation will be applied on all new business regulations to reduce regulatory burden. Under this evaluation, the direct cost of each new regulation on the private sector will be determined and the introduction of the new regulation will need to be accompanied by the abolishment of outdated or unnecessary business regulations to ensure that the total regulatory cost to business does not increase.

Strengthening Human Capital

1.25. The quality of human capital will be strengthened by improving the efficiency of the labour market through better coordination between the labour demand and supply mechanisms. Measures will also be focused on re-skilling and up-skilling local talent including through technical and vocational education and training (TVET), attracting foreign talent and leveraging on Malaysia’s diaspora. To ensure a compensation system that corresponds with productivity, the National Wage Index will be introduced and the adoption of the Productivity-Linked Wage System (PLWS) will be further expanded. Female participation rate in the labour force will also be raised through the introduction of more flexible working arrangements. To reduce over-reliance on low-skilled foreign workers, industries will be incentivised to mechanise and automate their operation and the recruitment of foreign workers will be streamlined through a single administration platform⁶.

⁶ Details are in Strategy Paper 8 on labour market and Strategy Paper 9 on TVET.

Enhancing productivity in the public sector

1.26. Productivity in the public sector will be enhanced among others, through the rationalisation of government institutions and adoption of performance-based remuneration system. To reduce overlapping functions and redundancy among government agencies, a regular review of the roles and functions of government institutions will be conducted. Agencies with overlapping functions will be streamlined while the setting up of new agencies will only be considered after a thorough review to increase delivery. To further increase productivity and efficiency in the public sector, a performance-based reward system will be introduced. The key performance indicators (KPIs) of ministries and agencies will be aligned to include measures related to productivity improvements⁷.

Consolidating and Rationalising Government Incentives

1.27. Untargeted subsidies, incentives and assistance will be eliminated. Government incentives will be redesigned to cater for industry specific needs to maximise results. The provision of incentive and assistance will be underpinned by specific outcomes and KPIs, including productivity improvement. An exit policy will also be introduced to avoid continuous and overdependence on Government assistance. Safety net measures, such as a one-off financial assistance, tax incentives and grants, will be considered to provide a cushion if there is a short-term negative impact on enterprises during their productivity improvement process.

Promoting Innovation

1.28. Innovation will be further strengthened by focusing on relational capital, that is, improving collaboration and coordination among all stakeholders involved in research and development, commercialisation and innovation (R&D&C&I) – universities, research institutions, industry and government. To strengthen the linkage between research institutions and industry, and increase returns to investment on R&D&C&I, platforms such as AIM-Steinbeis, SIRIM-Fraunhofer, public-private research network (PPRN) and PlaTCOM, will be scaled up⁸. The funding mechanism for R&D&C&I will also be streamlined. In addition, social innovation will be promoted.

⁷ Details are in Chapter 9 on governance in the Eleventh Plan main document.

⁸ Details are in Strategy Paper 21 on innovation.

Establishing a Dedicated National Productivity Portal

1.29. A dedicated National Productivity Portal (NPP) will be established to disseminate productivity-related information, including to showcase best practices by industries and productivity-related initiatives and programmes. The portal will also provide adequate information for firms to undertake a self-assessment of their productivity level relative to other firms in the same industry.

1.30. At the *industry level*, two strategies will be adopted, as follows:

Appointing Productivity Champions

1.31. Productivity champions will be identified to spearhead productivity initiatives at industry level. Industry associations or market leaders within an industry will be appointed as productivity champions. They will assist in the preparation of the five-year Productivity Blueprint. In addition, they will be responsible for the formulation of industry-specific productivity roadmaps, which will include the setting of productivity targets for their respective industries, and detail initiatives to achieve the targets. The achievement of the productivity targets will be made a key criteria for firms to apply for government assistance and incentives.

Customising Industry-Level Productivity Programmes

1.32. Besides horizontal initiatives, industry-specific customised programmes will be introduced to address pain points and challenges as well as exploit opportunities and strengths in specific industries towards enhancing productivity. This is to ensure programmes are targeted and achieve the desired productivity outcomes. Priority will be given to industry which will have a high impact on the overall economy in terms of productivity and growth.

1.33. At the *enterprise level*, five strategies will be implemented, as follows:

Promoting Productivity Performance Targets

1.34. Provision of incentives and assistance to firms will be contingent upon achievement of specific productivity targets at the firm level.

Introducing Firm-level Intervention Programmes

1.35. Intervention programmes will be introduced to assist firms enhance their efficiency and productivity, including through improvement in work process and application of information and communication technology (ICT). For this purpose, among others, the University Community Transformation Centre (UCTC) programme will be expanded to include productivity improvement initiatives. It will cover areas such as business model, accounting and book keeping, ICT system and general business operating system.

Promoting and Upscaling Productivity Health-Check

1.36. The productivity health-check programme to identify specific issues and assess current operational capacities and capabilities of the enterprises will be expanded. The results of the health-check will be used in formulating programmes that best suit the enterprises. The productivity health-check will be made mandatory for applicants of Government's incentives and assistance.

Undertaking a Biennial Enterprise-level Productivity Surveys

1.37. A biennial enterprise-level productivity survey will be undertaken to assess and monitor productivity performance at the firm level. This will provide the basis to identify gaps and review measures to consistently enhance productivity to achieve set targets.

Fostering a Productivity-based Culture

1.38. Appropriate measures will be introduced to foster a productivity-based culture among Malaysians, both at society and corporate levels. Greater awareness will be created on the importance and benefits of productivity.

V. CONCLUSION

1.39. Unlocking the potential of productivity is a game changer in the Eleventh Plan. Although previous five-year Plans have alluded to productivity improvements, Malaysia continues to lag behind most developed economies. The Eleventh Plan introduces new approaches to achieve productivity improvements, targeting measures at the national, industry and enterprise levels underpinned by clear targets and outcomes.

APPENDIX

1-1. Productivity Related Initiatives by Development Plans, 1991-2015

Focus	Institution/Policy	Training/Technical Assistance/R&D	Financial Support/Incentive	Ecosystem/Regulatory
Sixth Malaysia Plan, 1991-1995				
<ul style="list-style-type: none"> • Efficiency, productivity and quality of labour and capital • Technological improvement • Entrepreneurship • Improve factor productivity • Human resource development • Increase the application of Science & Technology (S&T) and Research & Development (R&D) • Improvement in infrastructure • Institutional development 	<ul style="list-style-type: none"> • Academy of Sciences Malaysia (ASM), 1995 • The National Multimedia Plan, 1995 • Industrial Technology Development: A National Action Plan, 1990-2001 • Restructure National Council for Scientific Research and Development (MPKSN) to supervise Intensification of Research in Priority Areas (IRPA) • Set up: <ul style="list-style-type: none"> – Malaysia Science and Technology Information Centre (MASTIC), 1992 		<ul style="list-style-type: none"> • Industrial Technical Assistance Fund (ITAF) in 1990 to assist SMEs in productivity and quality improvement 	

Focus	Institution/Policy	Training/Technical Assistance/R&D	Financial Support/Incentive	Ecosystem/Regulatory
	<ul style="list-style-type: none"> – Malaysian Technology Development Corporation (MTDC), 1992 			
Seventh Malaysia Plan, 1996-2000				
<ul style="list-style-type: none"> • Shift focus from an investment-driven strategy to a productivity-driven strategy • Increase the rate of innovation • Skill development and managerial efficiency • Private sector as the main engine of growth • Emphasise productivity augmenting policies over the whole spectrum of economic activities • Technological 	<ul style="list-style-type: none"> • Distributive Trade Council, Third National Agricultural Policy (NAP3) and the Second Industrial Master Plan (IMP2) 	<ul style="list-style-type: none"> • Educate enterprises on the latest techniques in productivity and quality improvements (NPC & SIRIM) • Emphasise on industrial training for skilled manpower • INTAN conducted training programmes to enhance the productivity, efficiency and motivation of public sector employees • Encourage farmers to venture into commercial farming, adopting new technologies and increase productivity 	<ul style="list-style-type: none"> • Soft loan scheme for replanting of palm oil • Industrial Research and Development Grant Scheme (IGS) to promote R&D and technology development • Commercialisation of Research and Development Fund (CRDF) and Technology Acquisition Fund (TAF) to accelerate and upgrade the development of indigenous technological capabilities 	<ul style="list-style-type: none"> • Cyberjaya, 1997 • Provision of a comprehensive regulatory framework of cyber laws, intellectual property laws and required infrastructure • Set up: <ul style="list-style-type: none"> ○ Multimedia Super Corridor (MSC), 1996 to provide a comprehensive world-class ICT enabled working and living environment ○ Multimedia Development Corporation (MDeC), 1996 ○ Kulim High Tech Park, 1996 ○ Technology Park Malaysia Corporation Sdn Bhd, 1996

Focus	Institution/Policy	Training/Technical Assistance/R&D	Financial Support/Incentive	Ecosystem/Regulatory
<ul style="list-style-type: none"> • absorption • Enhancement in technological & managerial knowledge • Emphasis on quality investment • Effective and efficient use of resources • Improve the quality & skills of human resource • Strengthen S&T and R&D capabilities 		<ul style="list-style-type: none"> • Promote the use of Low Intensity Tapping System (LITS) 		<ul style="list-style-type: none"> ○ Multimedia Development Corporation (MDC) to promote the overall development of the MSC
Eighth Malaysia Plan, 2001-2005				
<ul style="list-style-type: none"> • Shift from an input-driven strategy to a productivity-driven strategy • Increase productivity, quality and competitiveness of products • Ensure that wage increases are in line 	<ul style="list-style-type: none"> • National Biotechnology Policy, 2005 • National Science and Technology Policy 2 (NSTP 2) and Plan of Action, 2002-2010 • Strengthen the National Innovation System, NIS to enhance productivity and competitiveness 	<ul style="list-style-type: none"> • Undergraduate Skills Programme and MSC Internship Programme • Good Agriculture Practice • Entrepreneurship programmes, including advisory and outreach services for SMEs • Adoption of the National 	<ul style="list-style-type: none"> • One Home One PC project, 2003 • Allocation of more resources for R&D • Introduction of Malaysian Organic Scheme • ICT related R&D projects under Intensification of Research in Priority Areas (IRPA) programme 	<ul style="list-style-type: none"> • Promote e-commerce for businesses to increase productivity • Internet banking services and MSC e-Business Programme • Improve access to all business and transport services • National Information

Focus	Institution/Policy	Training/Technical Assistance/R&D	Financial Support/Incentive	Ecosystem/Regulatory
<p>with productivity growth</p> <ul style="list-style-type: none"> ● Increase investment in R&D ● Expansion of education and training ● Foster and promote technology development ● Improve physical and social infrastructure ● Upgrade workforce 	<ul style="list-style-type: none"> ● Implement National Standard Strategy and Action Plan to further improve productivity and competitiveness ● Introduction of KPIs ● Set-up: <ul style="list-style-type: none"> ○ National Innovation Council (NIC), 2004 ○ Intellectual Property Corporation of Malaysia (MyIPO), 2003 ○ MSC Creative Applications and Development Centre (CADC) ○ Malaysian Biotechnology Corporation lead agency in biotechnology industry ○ National Professional Services Export Council (NAPSEC) 	<p>Pre-School Curriculum for children</p> <ul style="list-style-type: none"> ● <i>Program Pembangunan Pendidikan Luar Bandar</i> Sabah dan Sarawak ● National Dual Training System (NDTS) to strengthen training delivery system in line with industry requirements ● Develop the Malaysian Qualification Framework (MQF) to assure the standards of qualifications and quality of delivery of higher education ● Improvement on the National Occupational Skills Standards (NOSS) for instructors 	<ul style="list-style-type: none"> ● Enhance private sector R&D through the Industry Research and Development Grant Scheme (IGS), MSC Research and Development Grant Scheme (MGS) and Demonstrator Applicants Grant Scheme (DAGS) ● <i>Skim Khas Ibu Tunggal</i> ● <i>Program Pembangunan Usahawan Belia ICT</i> 	<p>Security Framework</p> <ul style="list-style-type: none"> ● The Malaysian Computer Emergency Response Team (MyCERT)

Focus	Institution/Policy	Training/Technical Assistance/R&D	Financial Support/Incentive	Ecosystem/Regulatory
Ninth Malaysia Plan, 2006-2010				
<ul style="list-style-type: none"> ● Enhance productivity, efficiency and innovative capacity ● Enhance competitiveness and focus on transition into higher value added and knowledge-based activities ● Raise the efficiency of capital, productivity of labour and the contribution of TFP ● Reduce the financial burden and promote productivity and competitiveness in public sector ● Develop and upgrade creativity, skills and management capabilities ● Improve the level of educational 	<ul style="list-style-type: none"> ● New Economic Model (NEM), 2010 ● Green Technology Policy, 2009 ● National Creative Industry Policy, 2009 ● National Innovation Model, 2007 ● National Broadband Initiative (NBI), 2007 ● National Cyber-Security Policy (NCSP), 2007 ● Unleash productivity-led growth and innovation ● Intellectual Property (IP) Commercialisation Policy ● Set-up: <ul style="list-style-type: none"> ○ Agensi Inovasi Malaysia (AIM), 2010 ○ National Science Research Council (NSCR), 2010 ○ Malaysian Foundation 	<ul style="list-style-type: none"> ● Greater access to affordable and quality education and training at all levels ● Intake in public technical and vocational training ● Adoption of SME Competitive Rating for Enhancement (SCORE) 	<ul style="list-style-type: none"> ● Market Validation Fund ● Grants under Ministry of Education: <ul style="list-style-type: none"> ○ Fundamental Research Grant scheme (FRGS) ○ Exploratory Research Grant Scheme (ERGS) ○ Long-term Research Grant Scheme (LRGS) ○ Prototype Research Grant Scheme (PRGS) ● Increase participation of women in R&D through the Special Assistance Scheme for Women Entrepreneurs ● Commercialisation of Research and Development Fund (CRDF), Technology Acquisition Fund (TAF) and Working Capital Guarantee Scheme (WCGS) 	<ul style="list-style-type: none"> ● Personal Data Protection Act 2010 ● Competition Act 2010 ● Electronic Government Activities Act 2007 ● Electronic Commerce Act 2006 ● Establishment of NKRAs and Ministerial Key Performance indicators ● Broadband infrastructure ● Investments in new growth areas (e.g: renewable energy, machinery and equipment and medical devices) ● Access to electronic infrastructure ● Upgrade speed of broadband connections

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<p>attainment</p> <ul style="list-style-type: none"> ● Intensify R&D and innovation activities ● Increase utilisation of technology and ICT ● Private sector as a leading role ● Knowledge-based and towards productivity-driven growth ● Ensure wage increase are in line with productivity growth 	<p>for Innovation, 2008</p> <ul style="list-style-type: none"> ○ The Special Taskforce to Facilitate Business (PEMUDAH), 2007 ○ Malaysian Logistic Council (MLC) ○ National Logistic Services Committee 			
Tenth Malaysia Plan, 2011-2015				
<ul style="list-style-type: none"> ● Push for productivity-led growth ● Improve domestic competitiveness and productivity ● Create an enabling environment which encourages productivity, competitiveness and 	<ul style="list-style-type: none"> ● National Policy on Science, Technology and Innovation (NPSTI), 2013 ● Set-up: <ul style="list-style-type: none"> ○ Malaysia Global Innovation & Creativity Centre (MaGIC), 2014 ○ National Committee 	<ul style="list-style-type: none"> ● Vocational Transformation Plan to increase the quality of vocational education and increase the number of seats offered ● Develop a comprehensive set of KPIs that have an increased focus on 	<ul style="list-style-type: none"> ● Year of Science and National Innovation Movement, 2012 ● Launch the Shariah-compliant Commercialisation Innovative Fund, 2012 ● Digital Transformation Program or Digital Malaysia, 2011 ● Innovation Malaysia 2010 programme to encourage 	<ul style="list-style-type: none"> ● Roll out 1BestariNet, a 4G network and virtual learning environment to all 100,000 schools

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<p>innovation</p> <ul style="list-style-type: none"> ● Promote productivity and innovation-led growth through TalentCorp ● Remove distortions within the economy ● Higher levels of input from human capital ● Adoption of new technologies ● Development of entrepreneurship ● Lifelong learning programmes ● Private sector as the primary driver of growth and innovation 	<p>on Investment, 2012</p> <ul style="list-style-type: none"> ○ National Science and Research Council, 2011 ○ Special Innovation Unit (UNIK), 2011 ○ TalentCorp, 2011 ○ National IT Council (NITC) ○ Malaysian Services Development Council (MSDC) 	<p>critical inputs that affect student outcomes</p>	<p>creativity among the public</p> <ul style="list-style-type: none"> ● 1-InnoCERT ● Cradle Fund ● Science Fund ● Fundamental Research Grant Scheme (FRGS) ● Pre-Commercialisation Fund ● Commercialisation of R&D fund (CRDF) ● Business Growth Fund (BGF) ● Technology Acquisition Fund (TAF) ● Venture Capital ● Market Development Grant ● Productivity-based incentives 	
Industrial Master Plan, 2005-2020				
<ul style="list-style-type: none"> ● Upgrade levels of knowledge and skills ● Application of high technology planting methods and 	<ul style="list-style-type: none"> ● Productivity-Linked Wage System (PLWS) to improve labour productivity ● National Agricultural 	<ul style="list-style-type: none"> ● Upgrade of existing agricultural training institutes ● R&D research directly utilised as inputs for key 	<ul style="list-style-type: none"> ● Grant for productivity and quality improvement and certification 	<ul style="list-style-type: none"> ● Improvement in labour cost competitiveness in the manufacturing sector through the PLWS ● Adoption of new

Focus	Institution/Policy	Training/Technical Assistance/R&D	Financial Support/Incentive	Ecosystem/Regulatory
<p>mechanisation</p> <ul style="list-style-type: none"> • Create greater linkages between the manufacturing sector and related support services • Shift towards productivity-driven growth • Productivity improvements through mechanisation and automation • Green productivity, cleaner production processes • Greater investments in knowledge-intensive activities • Strengthen advisory programmes • Undertake internship and exchange programmes • Diversify into the 	<p>Training Centre</p> <ul style="list-style-type: none"> • College of Agriculture in Kedah • Introduction of electronic data interchange (EDI) services to improvement in the productivity of logistics industry 	<p>manufacturing processes to enhance efficiency, productivity and innovativeness of firms</p> <ul style="list-style-type: none"> • Outsource of labour-intensive activities to lower cost producing countries • Nurture the technological capabilities and enhance productivity of SMEs • Skills training to improve the productivity in agriculture and agro-based sectors 		<p>technologies such as computerised numerical control (CNC) and computer-aided manufacturing (CAM)</p> <ul style="list-style-type: none"> • The used of Radio Frequency Identification (RFID) technology to detect multiple products, offering high potential for productivity gains and cost reductions • Computer-aided design (CAD) used in designing for export oriented companies

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<p>production of higher value medical devices and products</p> <ul style="list-style-type: none"> ● Increase automation in production processes ● Promote modern and large scale farming ● Strengthen human resource development ● Create a sufficiently large pool of the required skills ● Enhance services sector ● Improve the quality of the academic staffs ● Shift to performance-based remuneration system that links productivity and performance of employees 				

1-2. Labour Productivity of Selected Countries in 2013, 2013 EKS\$

No	Low-income	EKS\$	Lower-middle	EKS\$	Upper-middle	EKS\$	High-income (non-OECD)	EKS\$	High-income (OECD)	EKS\$
1	Tajikistan	9,236	Guatemala	20,239	Hungary	46,495	Qatar	164,454	United States	114,930
2	Cambodia	5,476	Armenia	18,421	Turkey	42,358	United Arab Emirates	123,289	Luxembourg	111,353
3	Bangladesh	5,300	Ukraine	18,003	Iran, Islamic Rep.	41,700	Singapore	99,880	Norway	106,387
4	Kenya	4,079	Georgia	17,973	Iraq	39,143	Hong Kong SAR, China	97,634	Ireland	100,924
5	Mali	3,935	Sri Lanka	15,904	Malaysia	37,236	Saudi Arabia	95,716	Australia	96,180
6	Uganda	3,800	Morocco	13,660	St. Lucia	36,816	Kuwait	94,224	Belgium	95,590
7	Tanzania	3,598	Moldova	12,761	Mexico	36,042	Barbados	81,496	Austria	89,291
8	Burkina Faso	2,655	Indonesia	12,354	Belarus	35,650	Oman	80,075	Sweden	89,102
9	Mozambique	2,572	Philippines	11,734	Argentina	33,644	Malta	64,959	France	87,509
10	Niger	2,379	Bolivia	10,780	South Africa	32,404	Cyprus	57,939	Canada	86,216
11	Ethiopia	2,092	Pakistan	9,786	Dominican Republic	32,262	Croatia	51,828	United Kingdom	85,323
12	Malawi	2,041	India	9,333	Costa Rica	31,444	Bahrain	51,736	Iceland	84,834
13	Madagascar	1,784	Uzbekistan	8,769	Kazakhstan	28,902	Lithuania	51,131	Netherlands	83,896
14	Congo. Dem. Rep.	840	Zambia	7,700	Jordan	27,652	Latvia	40,835	Spain	82,766
15	Zimbabwe	353	Nigeria	7,582	Romania	27,612	Russian Federation	39,047	Finland	81,157
16			Vietnam	7,419	Bulgaria	27,108	Uruguay	31,266	Switzerland	80,482
17			Ghana	7,116	Algeria	26,333			Germany	79,848
18			Kyrgyz Republic	6,963	Tunisia	25,915			Denmark	79,522
19			Cameroon	5,953	Jamaica	25,518			Italy	78,805
20			Senegal	5,130	Turkmenistan	25,372			Japan	76,741
21			Sudan	5,019	Albania	24,854			Israel	74,610
22					Ecuador	24,142			Greece	66,660
23					Azerbaijan	21,389			Korea, Rep.	66,397
24					Peru	21,090			New Zealand	65,117
25					Colombia	20,093			Slovenia	60,841
26					Brazil	19,821			Slovak Republic	59,064
27					China	19,654			Czech Republic	55,019
28					Thailand	19,054			Poland	52,550
29									Portugal	52,014
30									Estonia	43,942
31									Chile	39,660

Source: World Bank and The Conference Board