MALAYSIA PRODUCTIVITY CORPORATION

PRODUCTIVITY REPORT 2023

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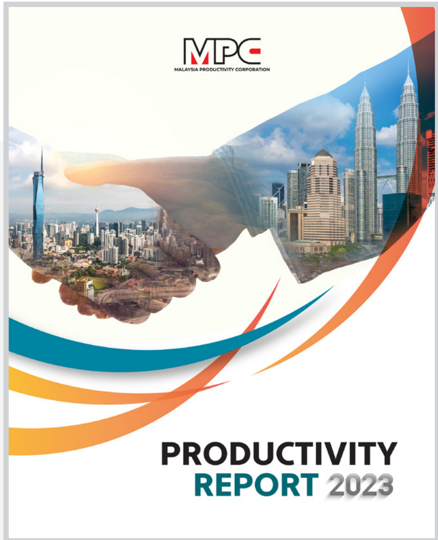


SUSTAINABLE PRODUCTIVITY

The theme for Productivity Report 2023, "Sustainable Productivity", echoes Malaysia Productivity Corporation (MPC)'s commitment to driving Malaysia's sustainable productivity growth by focusing on three key drivers: Talent, Technology, and Regulation.

A technologically savvy and competent future workforce is vital for driving sustainable productivity while Malaysia is transitioning towards Industry 4.0. High-skilled and tech-literate workers cater for the industry's demand, bridging the gap between talent demand and supply.

Digitalisation and technology-infused public and private sectors ensure efficiency, nurture innovation, and optimise costs and resources while minimising environmental footprint. This propels Malaysia towards becoming a high-income nation and regional digital hub.

A quality regulatory ecosystem boosts Malaysia's ease of doing business, forming a sustainable business climate to attract businesses and investments. Agile business regulations and effective bureaucracy support robust national productivity and competitiveness.

Pursuing sustainable productivity aligns with Malaysia MADANI's agenda, which is based on six pillars: Sustainability, Prosperity, Innovation, Respect, Trust, and Compassion. Sustainable productivity, catalysed by technology, digitalisation, and innovation, is necessary towards building a prosperous society. Within a productive community, respect, trust, and compassion are critical values in forming a harmonious existence, leading to a better quality of life.

MALAYSIA PRODUCTIVITY CORPORATION

PRODUCTIVITY REPORT 2023

30th EDITION

EXECUTIVE SUMMARY

Malaysia showed a stronger-than-expected productivity performance at 5.4 per cent growth with RM95,628 per employment in 2022. The positive growth stayed into the 2023 first quarter as productivity grew at 2.4 per cent with RM23,712 per employment. The positive growth is expected to continue with a moderate performance in 2023, projected between 2.0 – 3.0 per cent, in line with the forecasted GDP growth between 4.0 – 5.0 per cent. The economy remains resilient amidst various challenges, domestically and globally.

The country's productivity has recorded an upward resilient performance over the years, rebounding strongly from the pandemic in the recent year. However, it grows slower than some regional counterparts, including Vietnam, Taiwan, and Singapore. Malaysia's shift towards a high-income nation necessitates faster productivity growth. Hence, there is room for improvement.

Sustainable productivity is the game-changer to elevate Malaysia's economic status, breaking away from the middle-income economy trap. Multiplying productivity will lead to higher GDP, translating into better wages for Malaysians. The rakyat will enjoy a better quality of life when the nation is prosperous.

Multiplying productivity for robust economic growth entails three critical elements – building a sustainable pool of skilled local talent for the future workforce, increasing technology adoption and digitalisation across all sectors, and improving ease of doing business through a quality regulatory ecosystem. Talent, technology, and regulation are key productivity drivers.

Sustainable productivity is the game-changer to elevate Malaysia's economic status, breaking away from the middle-income economy trap.
Multiplying productivity will lead to higher GDP, translating into better wages for Malaysians. The rakyat will enjoy a better quality of life when the nation is prosperous.

The current workforce still relies heavily on low and semi-skilled workers. The future of work, characterised by economic complexities, rapid technological and digital advancement, automation, artificial intelligence, and mechanisation, demands skilled workers. In ensuring Malaysia's workforce can cater for the industry's demands, a concerted effort among all parties is crucial to elevate technical and work-based learning into the mainstream.

Technology adoption and digitalisation must be embedded in all sectors to improve productivity and gain a competitive advantage. Innovation should be at the forefront of product and service improvement to compete in high-value market segments.

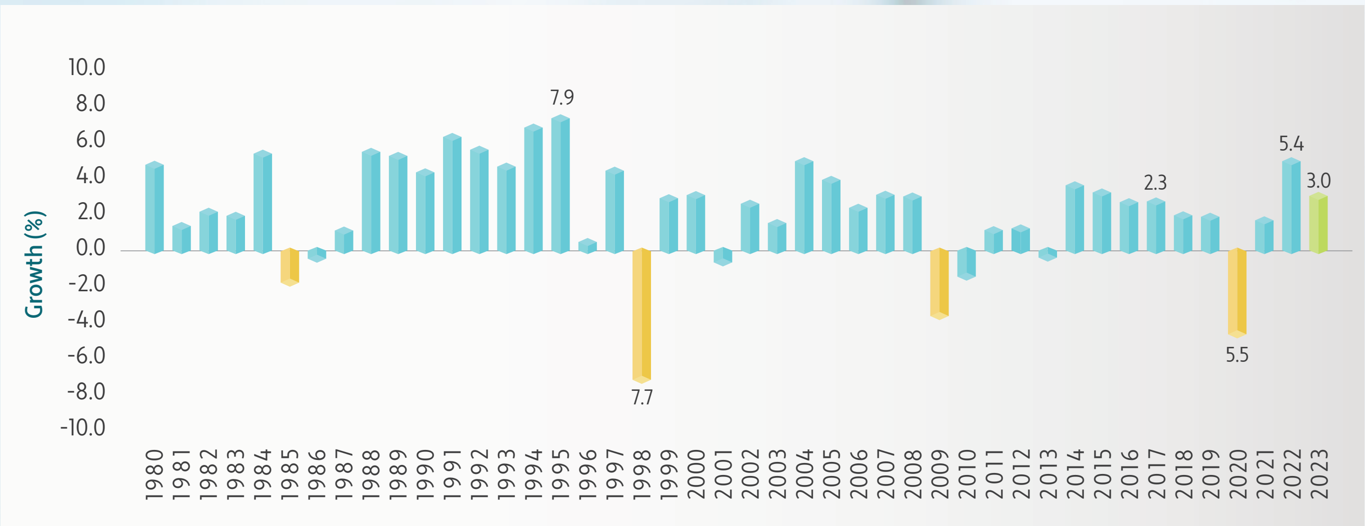
The current state points to sluggish technology adoption, especially among small and medium enterprises (SMEs), which constitute more than 90 per cent of registered businesses in Malaysia.

For investments and businesses to flourish, regulations play a significant role. Unnecessary regulatory burdens rooted in ineffective bureaucracy, outdated regulations, and inefficient regulatory processes and procedures hinder the ease of doing business. This calls for intervention to ensure quality regulations and delivery.

Productivity Report 2023 details the aspects mentioned above, clarifying the pursuit of Malaysia's sustainable productivity.

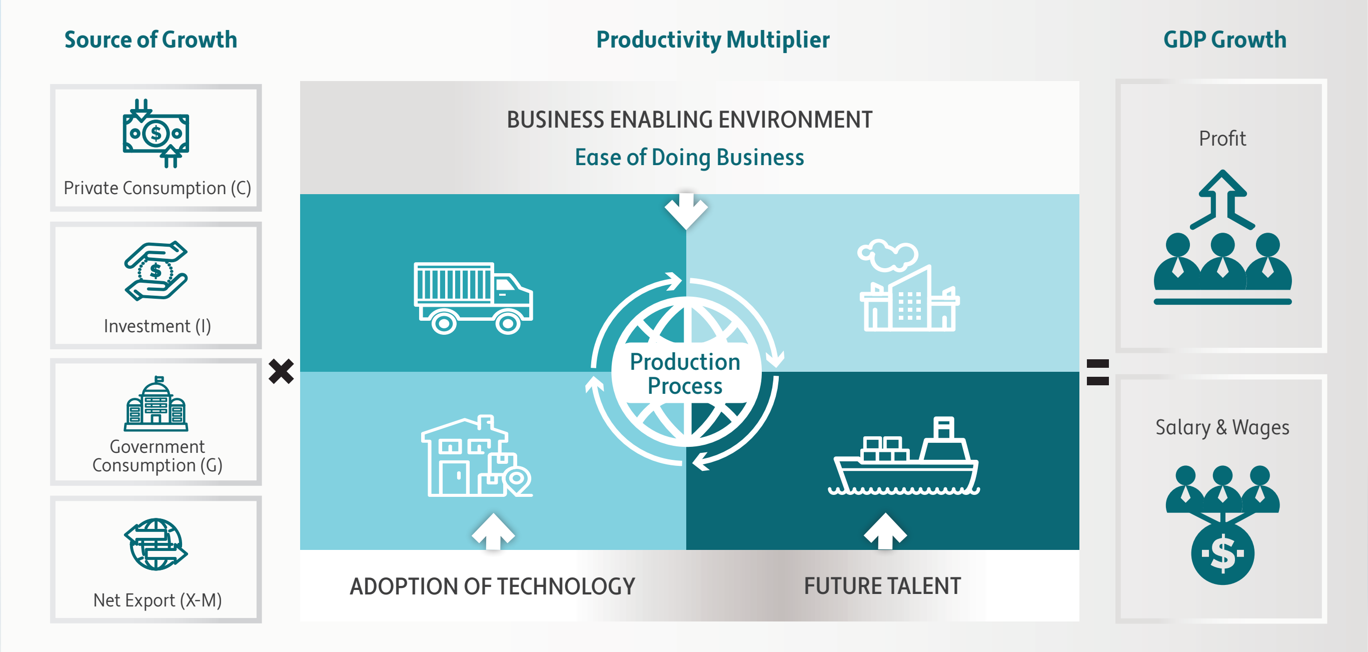
KEY HIGHLIGHTS

MALAYSIA'S PRODUCTIVITY GROWTH, 1980 - 2023



Source: The Conference Board data up to 2022; forecast data 2023* from MPC

SUSTAINABLE PRODUCTIVITY AS THE GAME CHANGER



MESSAGE FROM THE MINISTER

Malaysia's competitiveness climbed five notches to 27th position in the World Competitiveness Ranking (WCR) 2023 by the Institute for Management Development (IMD). This was attributed to the year 2022's Gross Domestic Product (GDP) growth of 8.7%, and stronger-than-expected recovery in productivity growth at 5.4%, or RM95,628 per employment. This positive momentum was carried through to the First Quarter of 2023, with GDP growth at 5.6%, although productivity moderated at 2.4%, or RM23,712 per employment.

The better 2023 annual ranking was attributed to improvements in four WCR competitiveness subfactors i.e., Economic Performance, Government Efficiency, Business Efficiency, and Infrastructure. As commendable as this is, there is plenty of room for further improvements towards accelerating Malaysia's efforts to achieve high-income nation status, as outlined by the recently announced Ekonomi MADANI framework, and which will also be echoed in the upcoming New Industrial Master Plan (NIMP) 2030.

The critical drivers for Malaysia's productivity agenda are clearly laid out in this report. Productivity enhancement efforts centre around addressing challenges in key drivers which are talent, technology and regulations.

On technology, this can be widely embraced by attracting investments into target sectors that are highly complex and relatively a lot more automated and productive such as aerospace, chemicals, digital economy, electrical & electronics, and pharmaceuticals, as defined in Malaysia's New Investment Policy, as well as the NIMP 2030.

Small and Medium Enterprises (SMEs) in particular, must be supported to embrace technology to improve efficiency, as well as create high-value products and services to contribute to our national productivity score. By nurturing nationwide automation, the cost of doing business can be reduced, while enhancing Malaysia's productivity and competitiveness. This in turn, will improve business profits, salaries and wages, resulting in a win-win for both businesses and their workers.

On regulations, we could streamline processes and eliminate bureaucratic red tape to foster a more conducive operational landscape and enhance Malaysia's ease of doing business. We must also invest in our human capital development by incorporating the right digital curriculum and skills development to boost productivity, as well as foster a culture of lifelong learning.

All these are key productivity multipliers for higher and more sustainable performance, profits, and wages in the medium to longer-term, in line with the Ekonomi MADANI aspirations to raise both Malaysia's 'economic ceiling and floor'.
Looking ahead, the MADANI Government has set a medium-term goal for Malaysia to become the 12th most competitive economy globally. With strategies outlined in key policies such as NIMP2030, I am confident this should be within the nation's reach.

I hope the recommendations in this report will guide and inspire policymakers, entrepreneurs, academicians, and business owners to improve upon and implement the most effective measures towards achieving sustainable productivity.

I call upon all stakeholders to prioritise productivity and competitiveness because enhancing productivity is a national agenda. We do not want incremental improvements. Instead, what we must strive for is a whole-of-nation effort to move the productivity needle significantly, not just to improve our future rankings, but more importantly, because this is what it takes for us to remain ahead of our regional competitors.

Tengku Datuk Seri Utama Zafrul Aziz

Minister of Investment, Trade and Industry

CHAIRMAN'S STATEMENT

I am delighted to present Productivity Report 2023, Malaysia Productivity Corporation (MPC)'s insightful exploration of productivity. MPC remains committed to driving sustainable productivity at the national, sectoral, and enterprise levels.

As presented in the report, MPC focuses on productivity improvement initiatives based on key productivity drivers – talent, technology, and regulations. MPC's roles and responsibilities are pronounced as the Secretariat for the Special Taskforce to Facilitate Business (PEMUDAH) and the Special Taskforce for Agency Reform (STAR), emphasising MPC's significant contribution to the nation's growth and development, socially and economically, where productivity cuts across all aspects.

MPC's efforts underline a broad, far-reaching approach. Its macro-level interventions, policy recommendations, and framework are curated to enable a productivity-enhanced environment. MyMudah, Academy in Industry (AiI), Nexus' Productivity Step-up, Enterprise Productive (EP) and e-Shared Prosperity Organisation (eSPO) are among MPC's flagship programmes aimed at amplifying productivity and competitiveness. Within PEMUDAH, MPC works with 10 Technical Working Groups (TWGs) to enhance the ease of doing business in Malaysia.

As we forge ahead, our resolve remains steadfast - to elevate Malaysia's productivity and competitiveness. We understand that this ambition is not ours alone. It is a shared objective that requires all stakeholders' collective efforts. Together, we can ensure that our nation continues to thrive for the prosperity of this generation and the ones to come. I am confident that with all parties' unwavering support, we can continue to achieve new heights of productivity growth.

This report embodies MPC's unwavering commitment to fostering a productivity culture in Malaysia. It presents an exposition of our strategic focus on talent development, technology adoption, and quality regulations. I hope this report will benefit all parties as we collectively strive for sustainable productivity.

Datuk Kamaruzzaman Johari
Chairman
Malaysia Productivity Corporation (MPC)

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Malaysia's productivity performance aligns with its economic dynamism

CHAPTER 1

MALAYSIA'S PRODUCTIVITY PERFORMANCE ALIGNS WITH ITS ECONOMIC DYNAMISM

MALAYSIA'S ECONOMY STABILISES AMIDST GLOBAL ECONOMIC SLOWDOWN

Malaysia's economic growth is forecasted to moderate in line with the expected global economic slowdown. Factors such as the anticipated weakening of international trade, decreasing external demand, rising interest rates, global political crisis and economic uncertainties can impact the country's economy.

Domestically, inflationary pressures, elevated prices of daily necessities, the increasing cost of living, the lingering impact of the pandemic, and tighter financial conditions may affect the economy as businesses and the public are more careful in spending.

Despite the challenges and projected economic slowdown, **Malaysia's economy expanded by 5.6 per cent in the first quarter of 2023 (Q1 2023), exceeding the 4.8 per cent growth in the same quarter in 2022, according to the Ministry of Finance (MoF).**

According to The Conference Board, emerging markets and developing economies, including Malaysia, are expected to grow at a stable pace of about 3.7 per cent in 2022, 2023, and 2024. Malaysia's economy is anticipated to maintain steady growth during this period.

Bank Negara reported that the economy expanded enormously by 8.7 per cent in 2022, driven by the recovery in private and public sector spending following the full reopening of the economy. **Bank Negara projects Malaysia's economy to grow between 4.0 per cent and 5.0 per cent in 2023, supported by strong domestic demand.**

The World Bank and the Organisation for Economic Co-operation and Development (OECD) forecast Malaysia's economic growth to be 4.0 per cent in 2023. These projections indicate a more moderate pace of growth than the previous year but still reflect a positive outlook for the country. The slowdown is attributed to the anticipated slower global economic growth.

Despite the challenges and projected economic slowdown, Malaysia's economy expanded by 5.6 per cent in the first quarter of 2023 (Q1 2023), exceeding the 4.8 per cent growth in the same quarter in 2022, according to the Ministry of Finance (MoF).

Malaysia's economic performance was encouraging compared with other countries, such as China (4.5%), Indonesia (5%), and Vietnam (3.3%). The MOF reported that on a quarter-on-quarter basis, the country's economy grew by 0.9 per cent in Q1 2023 compared to the contraction of 1.7 per cent in Q4 2022. The performance is expected to contribute positively to the 2023 overall economic forecast.

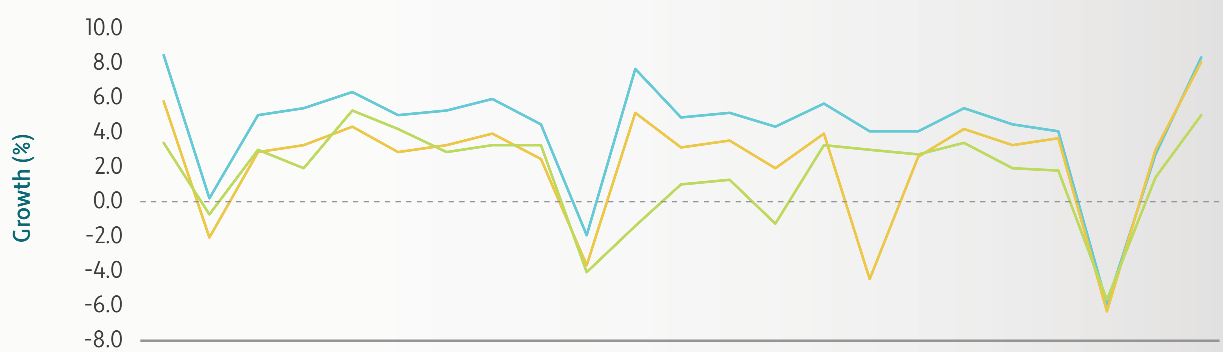
Figure 1: GDP Projection 2023 and 2024

Source: IMF Economic Outlook April 2023. OECD Economic Outlook for Southeast Asia, China and India 2023.

THE ECONOMY AND PRODUCTIVITY REMAIN RESILIENT, INDICATING POSITIVE GROWTH

Between 2000 and 2022, Malaysia's GDP grew consistently with productivity – evidence of a strong correlation between productivity growth and economic dynamism.

Figure 2: Malaysia's GDP and Productivity Growth



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP (%)	8.9	0.5	5.4	5.8	6.8	5.3	5.6	6.3	4.8	-1.	8.1	5.3	5.5	4.7	6.0	4.5	4.4	5.8	4.8	4.4	-5.	3.1	8.7
GDP per capita (%)	6.1	-1.	33.2	3.7	4.7	3.3	3.6	4.3	2.9	-3.	5.5	3.6	3.9	2.3	4.3	-4.	3.0	4.5	3.7	4.0	-6.	3.4	8.4
Productivity (%)	3.7	-0.	3.3	2.2	5.6	4.6	3.2	3.6	3.6	-3.	-1.	1.4	1.6	-0.	3.6	3.4	3.0	3.7	2.3	2.2	-5.	1.7	5.4

Source: Department of Statistic Malaysia (DOSM).

Malaysia's Gross Domestic Product (GDP) in 2022 grew strongly at 8.7 per cent due to population growth rather than productivity growth. Population growth alone is not a sustainable driver of economic growth in the long run. While an increase in population can contribute to GDP growth in the short term by expanding the labour force and increasing consumer demand, sustained and inclusive economic growth relies heavily on productivity growth.

Productivity growth refers to the ability to produce more output with the same or fewer inputs. Supportive regulations, technological advancements, innovation, efficient resource allocation, infrastructure development, education, and skills enhancement drive robust productivity growth. By improving productivity, an economy can achieve higher output levels, increase competitiveness, and generate higher incomes for its citizens.

WHAT IS PRODUCTIVITY?

Productivity, a measure of efficiency, defines the relationship between the output produced and the input used in its production. Higher productivity indicates greater efficiency and economic performance, improving living standards and economic prosperity. Productivity is essential in economic development, potentially driving higher income growth, lower prices, and improved living conditions.

Increasing productivity is crucial for businesses and economies, leading to heightened competitiveness. This can be achieved through investing in technology, enhancing workforce skills, streamlining operations, and adopting best practices. Additionally, there is a strong correlation between productivity and wage growth. When productivity rises, companies can generate more output, allowing potential wage increases for workers.

Productivity growth, the driver of long-term per capita income growth, occurs when the increase in output surpasses that of inputs. This signifies improved efficiency in resource utilisation. Higher productivity also contributes to lower costs and, subsequently, lower prices, increasing consumer purchasing power and real incomes.

Productivity growth and level provide insights into an economy's efficiency and performance. Government, businesses, and policymakers often focus on strategies to enhance productivity to drive sustainable economic growth and improve societal welfare.

Labour productivity growth is influenced by various factors, such as increased availability of machines and equipment, a higher proportion of skilled workers, advancements in operations and technology, increased capital intensity per worker, and government support in reducing inefficiencies. Prioritising investments in technology, education, and training while creating an environment that promotes innovation, reduces regulatory burdens, and supports skilled workers' development, can unlock the potential for higher labour productivity and foster sustainable economic growth.

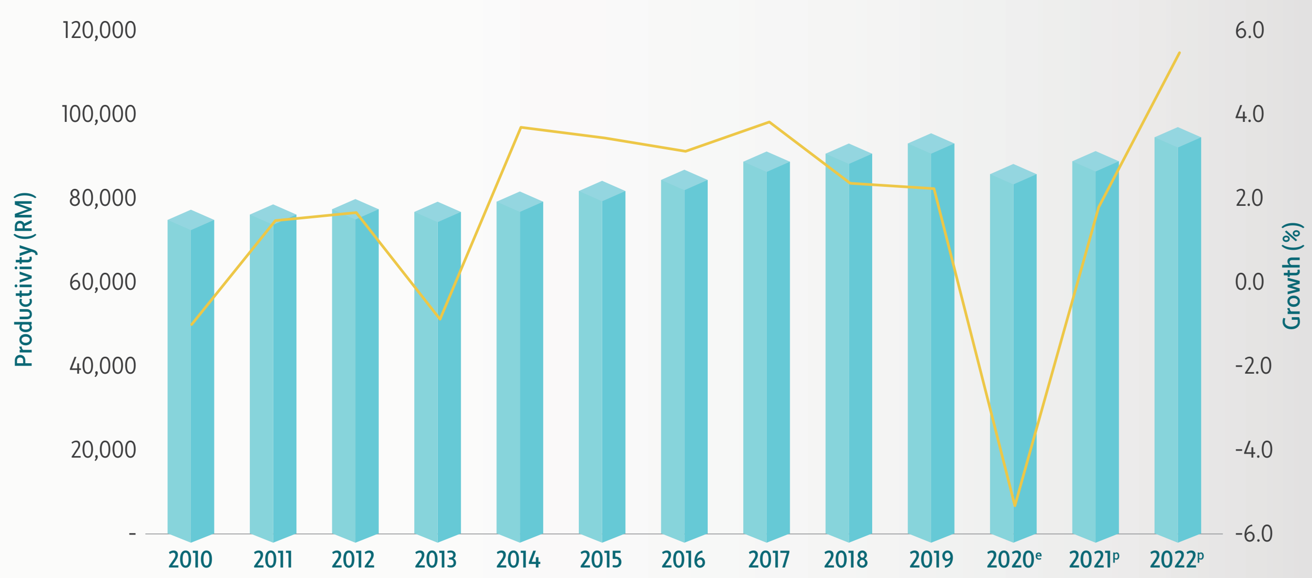
Focusing on strategies that promote sustainable productivity growth is crucial for ensuring long-term economic prosperity. Governments and policymakers can implement various measures to enhance productivity, such as investing in research and development (R&D), supporting entrepreneurship and innovation, improving infrastructure, fostering a skilled workforce, promoting access to education and skills training, and creating a conducive business environment.

By prioritising productivity growth, countries can reduce their dependence on population growth as the sole driver of economic expansion. Sustainable productivity growth leads to higher living standards, increased wages, improved living conditions, and overall dynamic economic development. It enables economies to adapt to changing global conditions, enhance competitiveness, and foster resilience against economic shocks.

Between 2010 to 2019, Malaysia's productivity level and growth fluctuated in an increasing trend. However, there was a plunge in productivity in 2020 due to the pandemic. Malaysia's productivity bounced back strongly in 2021. **In 2022, Malaysia showed a stronger-than-expected productivity recovery at 5.4 per cent growth with RM95,628 per employment.**

Malaysia's productivity performance implied its economic growth over the last decade. Its productivity level per employee increased from RM76,817 in 2010 to RM95,628 in 2022, denoting higher wealth and income created by every worker in Malaysia.

Figure 3: The Level and Growth Rate of Malaysia's Labour Productivity

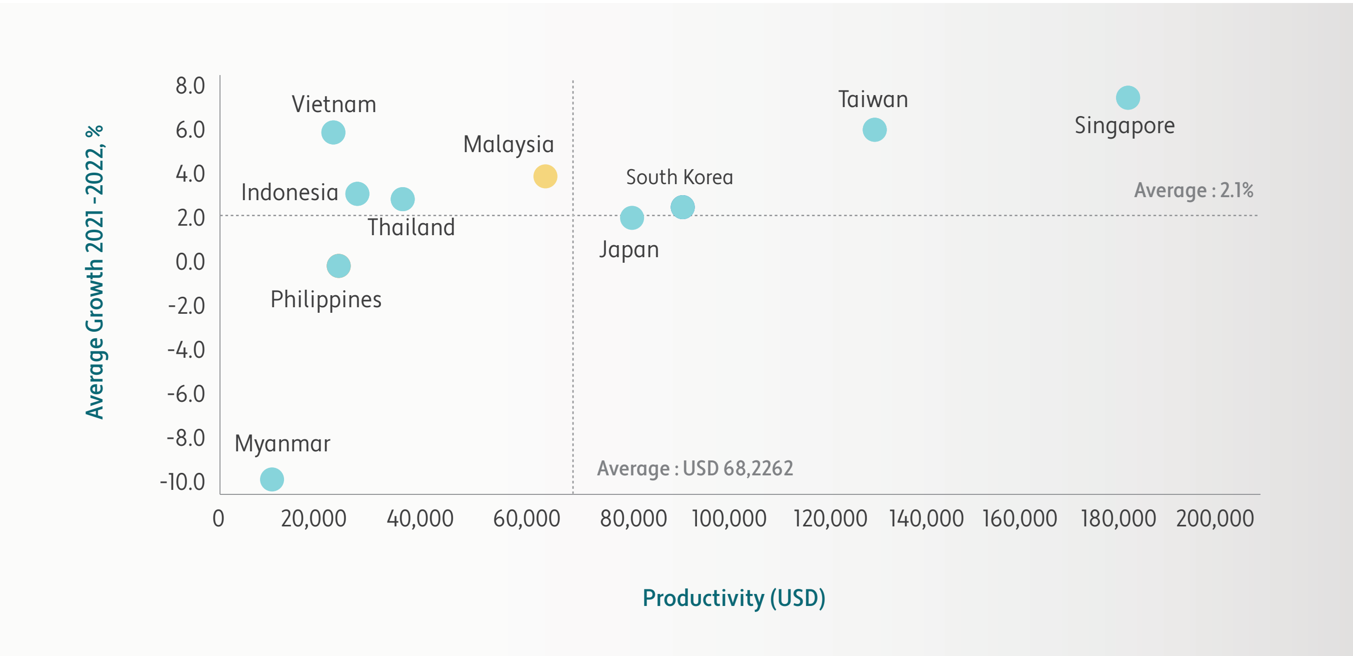


	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020e	2021p	2022p
Level	76,817	77,924	79,183	78,463	81,336	84,115	86,693	89,963	92,084	94,139	89,106	90,697	95,628
Growth	-1.0%	1.4%	1.6%	-0.9%	3.7%	3.4%	3.1%	3.8%	2.4%	2.2%	-5.3%	1.8%	5.4%

Source: Department of Statistic Malaysia (DOSM).

Malaysia's productivity performance has been relatively strong, surpassing countries like Thailand and Indonesia. **While Malaysia's overall productivity growth is above average and has been recording promising improvement, it has been slower than some regional counterparts, including Vietnam, Taiwan, and Singapore.** Malaysia's productivity growth is not fast enough to catch up with regional neighbours such as South Korea and Taiwan. South Korea once approximated Malaysia's productivity performance but has since boosted its growth alongside its economy. This suggests room for improvement in Malaysia's productivity to position the country as the preferred regional destination for investment, trade, and businesses and shift the country into a high-income and developed nation. Higher productivity yields better competitive advantage and robust economic performance for Malaysia. More importantly, higher productivity means higher wages for Malaysians to have a better quality of life.

Figure 4: Productivity Growth Among Selected Asian Countries, 2021-2022



PRIMARY ECONOMIC SECTORS CONTINUED TO RECORD PRODUCTIVITY IMPROVEMENTS

From 2011 to 2022, three sectors in Malaysia, namely manufacturing, construction, and services, performed above the national average productivity growth rate of 1.9 per cent. On the other hand, agriculture and mining and quarry sectors exhibited productivity growth below the national average.

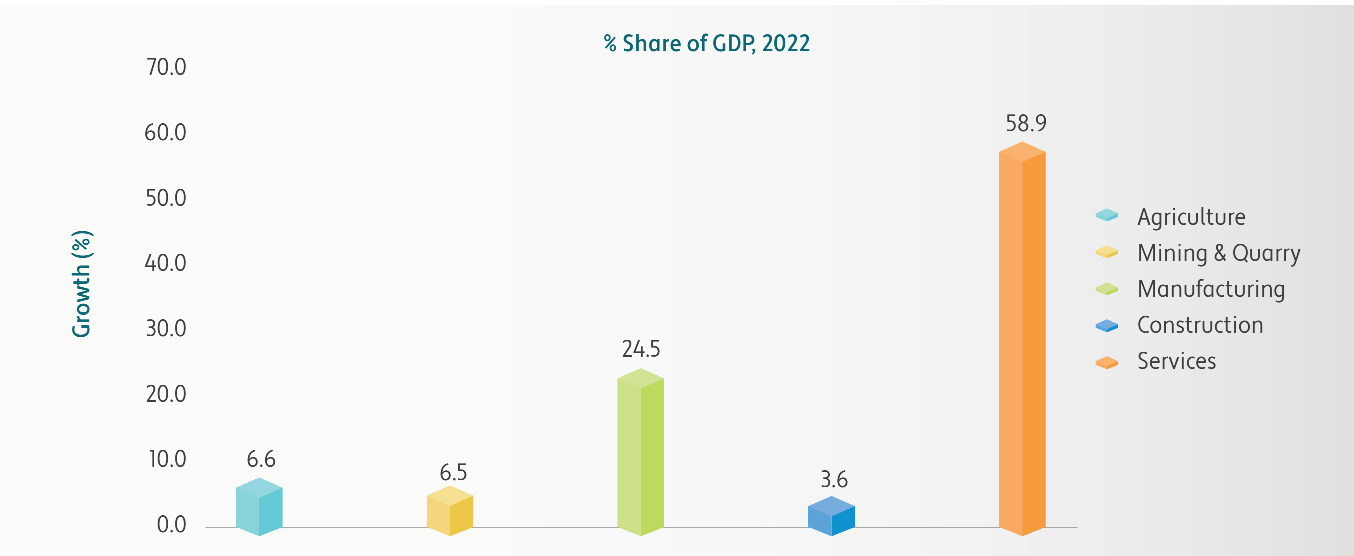
The manufacturing sector in Malaysia has been identified as the most productive and fastest-growing sector over the past ten years. **Manufacturing is often regarded as a critical driver of productivity growth due to its potential for technological advancements, economies of scale, and export-oriented nature.** It typically involves the utilisation of advanced machinery, automation, and skilled labour, which can contribute to higher output per worker and overall productivity gains.

The manufacturing sector has contributed significantly to Malaysia's economic growth, attracting foreign and domestic direct investment and driving exports. The sector's shift to high-value-added activities and producing goods for domestic consumption and export markets potentially enhance productivity. By focusing on the manufacturing sector's productivity growth, Malaysia has benefited from technological advancements, innovation, and process improvements.

Figure 5: Productivity Growth of the Main Economic Sectors, 2011 - 2022

Source: Department of Statistics, Malaysia (DOSM)

Figure 6: Percentage of Main Economic Sectors' Contribution to GDP, 2022

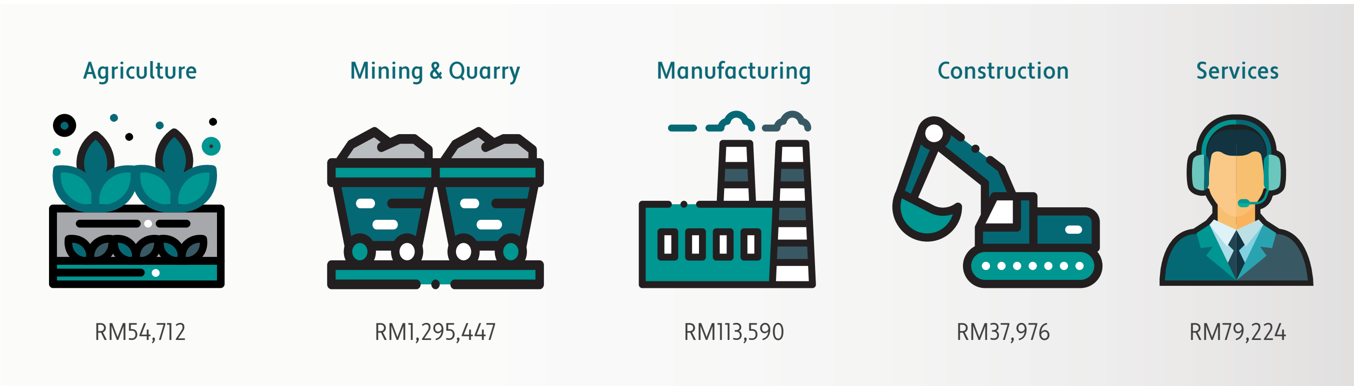


Source: Department of Statistics, Malaysia (DOSM)

The services sector, which contributes the most significant share to Malaysia's GDP, has experienced transformation due to the digital revolution, which received a further boost during the pandemic. These changes in the services sector have been contributing to increased national productivity. Improving productivity in this sector can significantly impact Malaysia's economy.

The services sector employs a considerably larger number of people, with 9.7 million employees compared to the manufacturing sector's 2.7 million employees, making it about 3.6 times more prominent in the workforce. However, many industries in the services sector are still labour-intensive, with low skills and wages, implying its second-place productivity growth behind the manufacturing sector.

Figure 7: Average Productivity by Five Main Economic Sectors 2010 - 2022



Source: Department of Statistics, Malaysia (DOSM)

Between 2010 - 2022, in terms of wealth created by each employee, the mining and quarrying sector recorded the highest productivity level at RM1,295,447. This was because the sector employed the smallest number of workers in Malaysia's total workforce.

Much has to be done to increase the productivity level of the construction sector, which depends mainly on low-skilled foreign workers and labour intensity.

While Malaysia has a diverse economy with solid **sectors, there are challenges to address, including slow productivity growth, the competitiveness of firms, a reliance on low-skilled labour in specific sectors, dependency on foreign workers, and imbalanced industrial development between regions.**

To boost productivity across economic sectors, Malaysia can focus on shifting towards higher value-added activities, moving up the value chain, and scaling up operations. These strategies can promote innovation, technology adoption, skill development, and efficient resource allocation, increasing productivity and competitiveness.

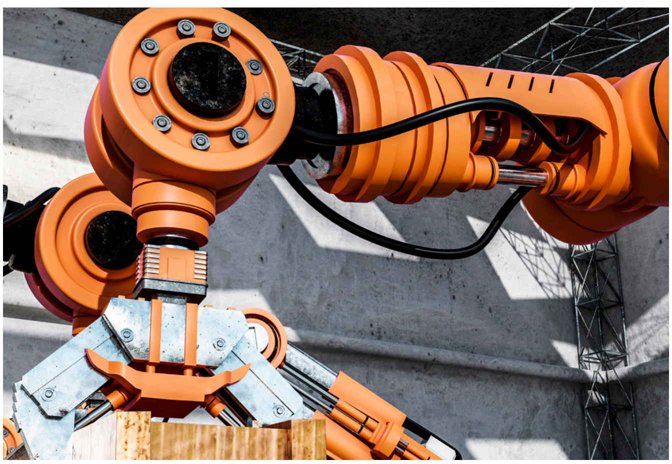
In terms of priority economic activities, most subsectors recorded improvement over the past five years. In 2017, nine Productivity Nexus were established under Malaysia Productivity Blueprint (MPB) to improve productivity at the industry and enterprise levels according to the main economic areas, which were selected based on their significant contribution to Malaysia's economy. Nexus' productivity improvement initiatives focus on talent, technology, and regulation to increase business efficiency, improve processes, and enhance products and services.

Figure 8: Productivity Performance (RM) of Priority Economic Subsectors (2017, 2019 and 2022)

	Information, communication and technology	Chemicals and chemical products	Electrical and electronics	Machinery and Equipment	NATIONAL	Agro-food	Professional services	Private healthcare	Tourism	Retail and food and beverages
2017	339,185	291,100	163,835	84,547	89,964	88,789	76,928	61,332	66,895	44,371
2019	356,995	288,306	170,471	88,408	94,138	91,306	86,671	64,188	74,092	47,806
2022p	383,872	311,496	216,194	99,067	95,858	92,765	82,869	68,220	67,832	47,419

Source: Department of Statistics, Malaysia (DOSM)

In 2022, the productivity levels of the ICT, chemicals and chemical products, electrical and electronics, machinery and equipment, agro-food, and private healthcare subsectors surpassed their pre-pandemic performance. The professional services, tourism, and retail and food and beverages industries were catching up. Improvement in productivity performance per employee could be seen from 2017, when Productivity Nexus were first introduced, until 2022, after five years of their establishment, denoting the impact of Nexus' productivity improvement initiatives. In 2022, ICT, chemicals and chemical products, electrical and electronics, and machinery and equipment surpassed the national productivity level.



The performance in productivity level across all subsectors was reflected in their productivity growth. All subsectors, except the agro-food industry, grew positively in 2022, surpassing their pre-pandemic growth. Significant productivity growth was recorded in the tourism subsector, which indicated a surge to 144.2 per cent in 2022 after two consecutive contractions in 2020 and 2021 due to the pandemic. The five-year evolution in the subsectors' productivity growth somehow fluctuated, indicating productivity gaps among them over a more extended period.

Figure 9: Productivity Growth (%) of Priority Economic Subsectors (2017, 2019 and 2022)

Subsector	2017	2019	2022p
Agro-food	2.0	2.4	-1.4
Chemicals and chemical products	3.7	-2.1	2.1
Machinery and equipment	1.8	0.7	4.7
Electrical and electronics	6.6	1.3	9.1
Retail and food & beverages	5.7	3.2	12.8
Tourism	4.2	5.3	133.6
Information, communication and technology (ICT)	2.2	0.8	1.2
Professional services	6.4	5.9	11.4
Private healthcare	-0.2	1.7	5.8
NATIONAL	3.8	2.2	5.4

Source: Department of Statistics, Malaysia (DOSM)

Under the Twelfth Malaysia Plan (12MP), the Productivity Nexus initiative is expanded to include more sectors and subsectors. This year, Productivity Nexus for the logistics and construction and built environment are taking shape. In 2024, three more Nexus will be created to impact productivity in the aerospace, pharmaceutical, and automotive industries. The existing Nexus are scaling up their high-impact programmes to ensure effective and efficient resource allocation.

MALAYSIA IMPROVED ITS RANKING IN GLOBAL COMPETITIVENESS.

Productivity highly correlates with competitiveness. Countries with high competitiveness rankings, such as Ireland, Switzerland, and Singapore, recorded robust overall productivity in rankings and performance levels.

Malaysia's global competitiveness ranking has increased by five positions to 27th place, according to the World Competitiveness Ranking (WCR) 2023. In 2022, Malaysia was ranked at the 32nd spot. The improved ranking, even though it is still not catching up to the previous years, indicates that Malaysia is on a robust upward trajectory in strengthening its economy, signalling the positive impacts of the Government's post-pandemic policies and actions in positioning the country as the preferred destination for investment, trade, and businesses. **As productivity highly correlates with competitiveness, increasing productivity across all sectors will impact the WCR competitiveness factors.**

Malaysia's regional competitiveness standing rises from 8th in 2022 to 6th place in 2023 among Asia-Pacific countries. In the category of 27 countries with a population totalling more than 20 million, Malaysia is ranked 8th (2022:11).

Malaysia remains the second most competitive nation within the ASEAN region and in the category of 24 countries with GDP per Capita Less Than US$20,000.

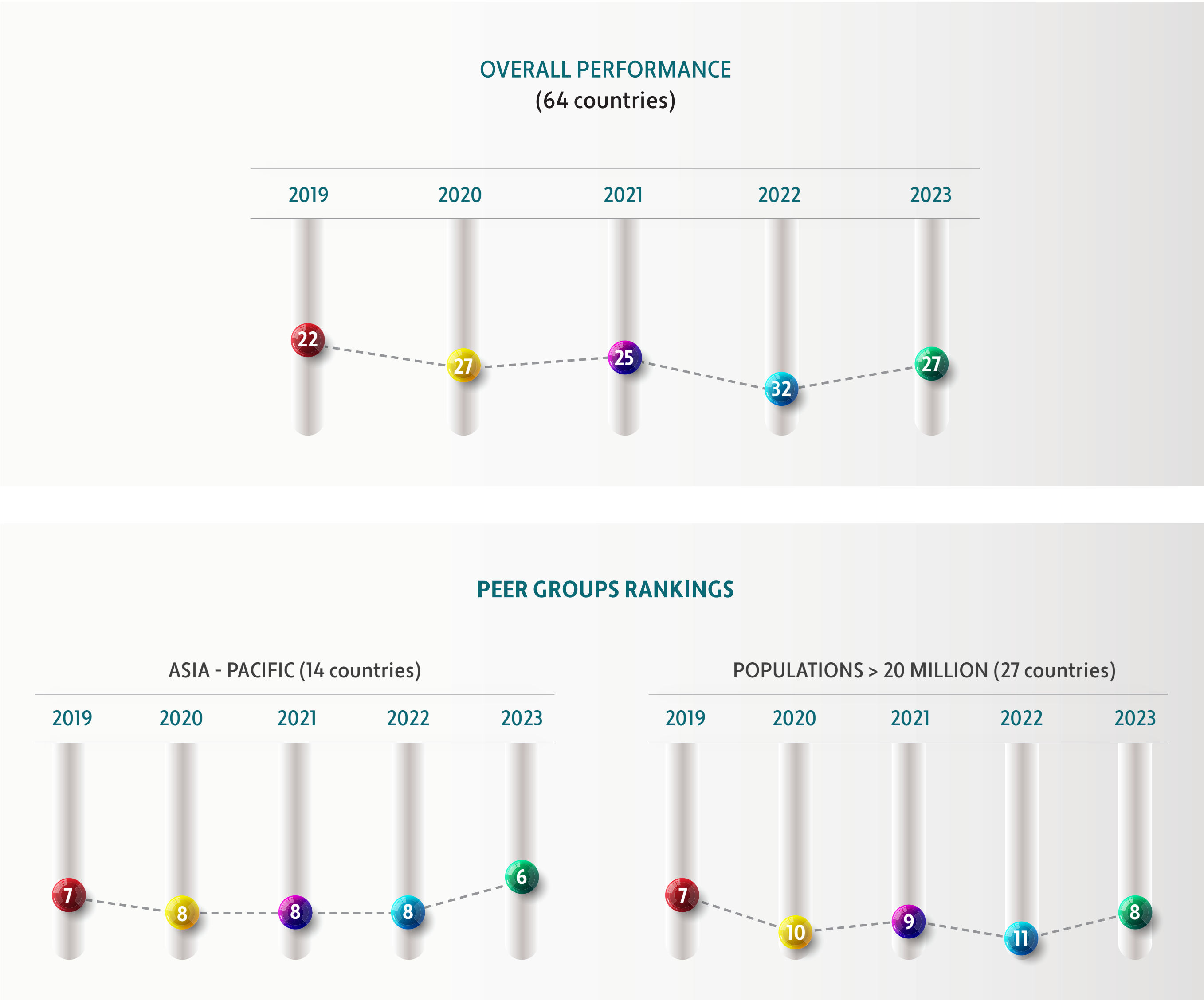
Malaysia ranks 47 of 64 economies in overall productivity performance, reiterating that while the country's productivity is positive and growing, it is not fast enough to catch up with highly competitive economies. Malaysia is performing below average among 64 participating countries.

Figure 10: Global Competitiveness Ranking Correlates with Productivity

Country	2023 Competitiveness Ranking	Overall Productivity (PPP) Ranking	Overall Productivity (PPP) in US$
Ireland	2	3	150,007
Switzerland	3	8	135,642
Singapore	4	1	183,959
South Korea	28	30	93,626
Malaysia	27	47	65,725
Indonesia	34	59	27,963
Philippines	52	61	24,130

Source: World Competitiveness Yearbook 2023, Institute for Management Development (IMD)

Figure 11: Malaysia's World Competitiveness Ranking, 2019 - 2023



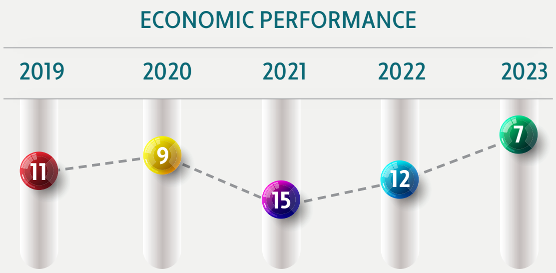
Source: World Competitiveness Yearbook 2023, Institute for Management Development (IMD)

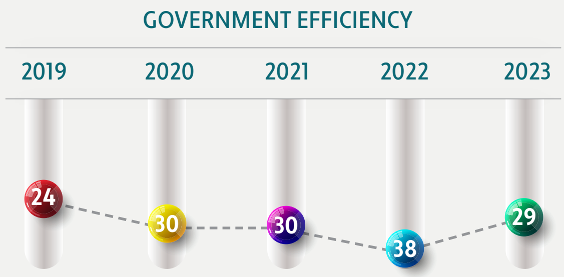
MALAYSIA'S GLOBAL COMPETITIVENESS RANKING IN WCY 2023

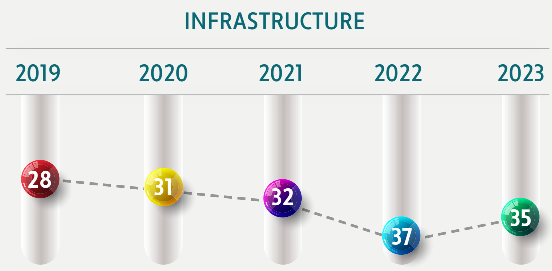
The World Competitiveness Yearbook (WCY) by the Institute for Management Development (IMD)'s World Competitiveness Centre (WCC) is a leading annual report on the competitiveness of countries published since 1989.

The report analyses and ranks the capacity of countries to create and maintain an environment that sustains enterprises' competitiveness across various economic, social, and business indicators. The IMD WCY World Competitiveness Ranking (WCR) is based on 335 competitiveness criteria categorised into four factors: Economic Performance, Government Efficiency, Business Efficiency, and Infrastructure.

In WCR 2023, Malaysia records improvement in all four competitiveness factors, denoting the country's encouraging and resilient progress against the lingering impact of the pandemic, global economic uncertainties and crises, and multi-faceted domestic challenges.







PRODUCTIVITY AND COMPETITIVENESS :
THE CORNERSTONES OF ECONOMIC DEVELOPMENT IN THE MODERN AGE

In the sphere of economic and community development, it is increasingly recognised that the traditional reliance on government, chambers of commerce, and economic development organisations to drive growth and prosperity is no longer adequate. The economic landscape has shifted in the past two decades, transforming from a model primarily fueled by government initiatives to a predominantly private sector-led approach.

This transformation necessitates a more participative and inclusive approach to economic development that actively involves the business community, educational institutions, and the wider population. It is a call to action for business and academic leaders to step up and assume a more active role in driving community development. Bringing together these leaders and securing their commitment to the development process is the first crucial step towards revitalising a region.

Productivity and innovation are the twin engines that drive competitiveness and economic growth. The ripple effects of increased regional productivity and the adoption of advanced technology are far-reaching and significant. Yet it is important to disabuse ourselves of the notion that competitiveness is dictated solely by the industries a region chooses to focus on.

The secret to achieving competitiveness is fostering productivity and efficiency across all industries by capitalising on their unique expertise and specialisations. The modern economy is one where technological advancements have permeated every field, and leveraging existing strengths often reaps more benefits than venturing into new, unexplored domains.

The building blocks of high productivity are high-quality inputs such as a well-trained workforce, robust infrastructure, and access to cutting-edge scientific advancements. The right carrots and sticks must be in place to spur competition and incentivise productivity.

Productivity and competitiveness can be further enhanced by leveraging sophisticated local markets and catering to demanding local needs. Clusters of firms specialising in particular fields can boost productivity and competitiveness by fostering knowledge sharing, innovation, and efficiency.

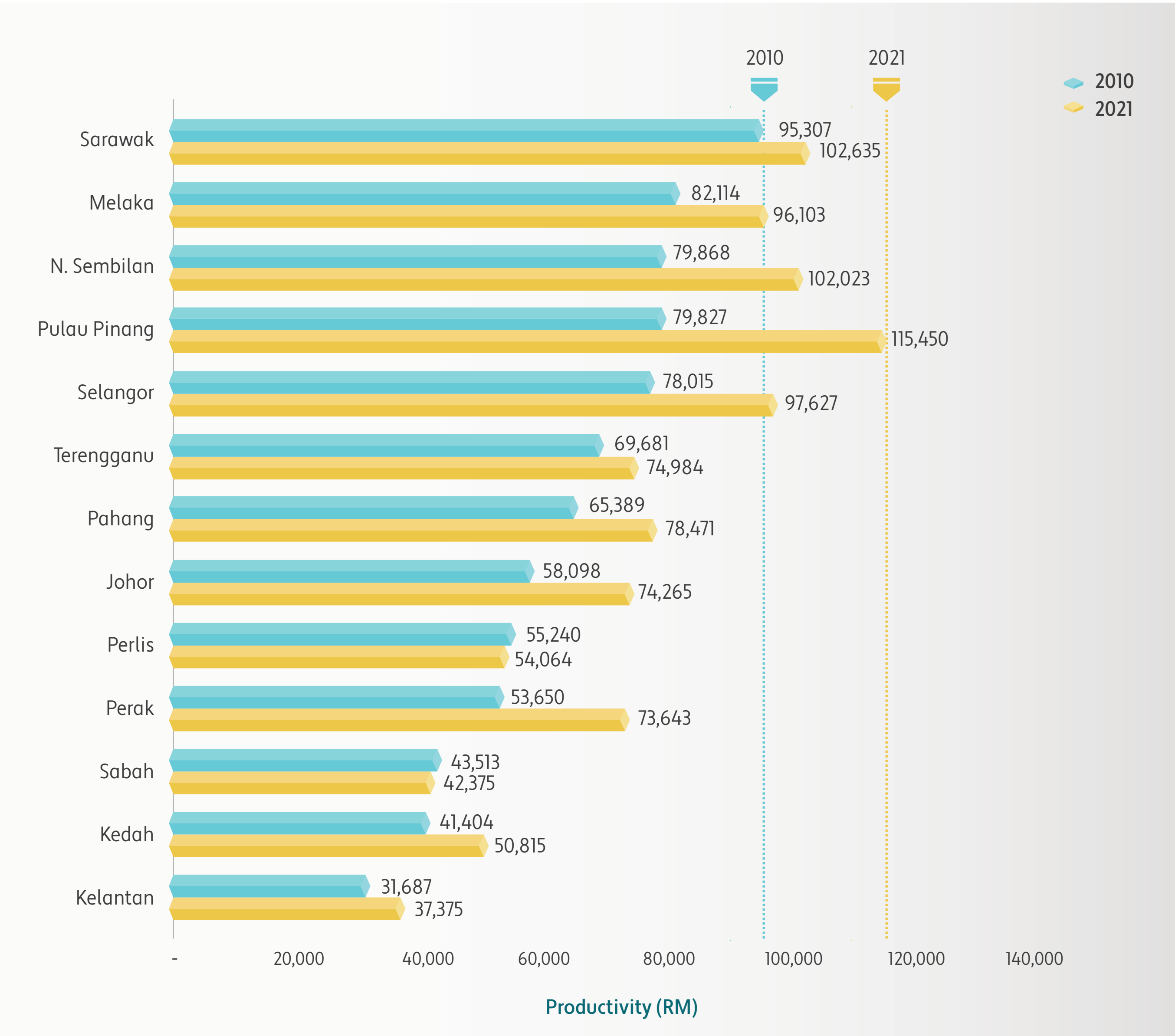
Understanding the ingredients that create regional competitiveness and maintaining a laser focus on productivity, innovation, and leveraging inherent strengths are paramount in achieving economic development. An era where economic development is primarily government-led is rapidly becoming a relic of the past. The mantle has now been passed to the private sector, making it incumbent upon business and academia to collaborate and lead the charge towards creating prosperous communities and robust economies.

Note: The article above is written from excerpts of a lecture by Michael Porter, a Harvard Business School Professor and a leading authority on competitiveness and economic development. The full video is available at https://youtu.be/y5I_cnpP99U.

WIDENING PRODUCTIVITY GAPS AMONG STATES IN MALAYSIA

In 2021, four states in Malaysia made significant progress in productivity, surpassing the productivity frontier established by Sarawak in 2010. Five states, namely Sarawak, Melaka, Negeri Sembilan, Pulau Pinang, and Selangor, were performing above the national average productivity level at RM90,697 in 2021. The productivity performance of these states plays a crucial role in driving the country's overall productivity.

Figure 12: Productivity by State, 2010 and 2021



Source: Department of Statistics, Malaysia (DOSM); Computed by Malaysia Productivity Corporation (MPC).

There is a significant disparity among the states in terms of productivity. Some states, lag and have yet to match their performance from 2010. This indicates a widening gap between the most productive and less productive states. States with higher economic and industrial activities record higher productivity levels.

Addressing the productivity disparities among states is crucial for achieving more balanced economic development and reducing regional inequalities. Efforts should be made to identify the factors contributing to the success of the high-performing states and implement policies and initiatives to support the lagging states in improving their productivity. Improving productivity in underperforming states may involve investing in infrastructure, promoting innovation and technology adoption, enhancing human capital through education and skills development, and fostering a business-friendly environment. By narrowing the productivity gap between states, Malaysia can promote more inclusive and sustainable economic growth, improving living standards and overall economic prosperity.

Within states, productivity gaps also exist among firms. Resource misallocation, inefficient management practices, low adoption of technology, digitalisation, and innovation, lack of R&D&C&I and low-skill workers are among the roots of productivity and competitiveness disparity among firms. Infrastructure quality is another important determinant of productivity. Quality infrastructure enhances connectivity, reduces transaction costs, and facilitates the efficient functioning of markets.

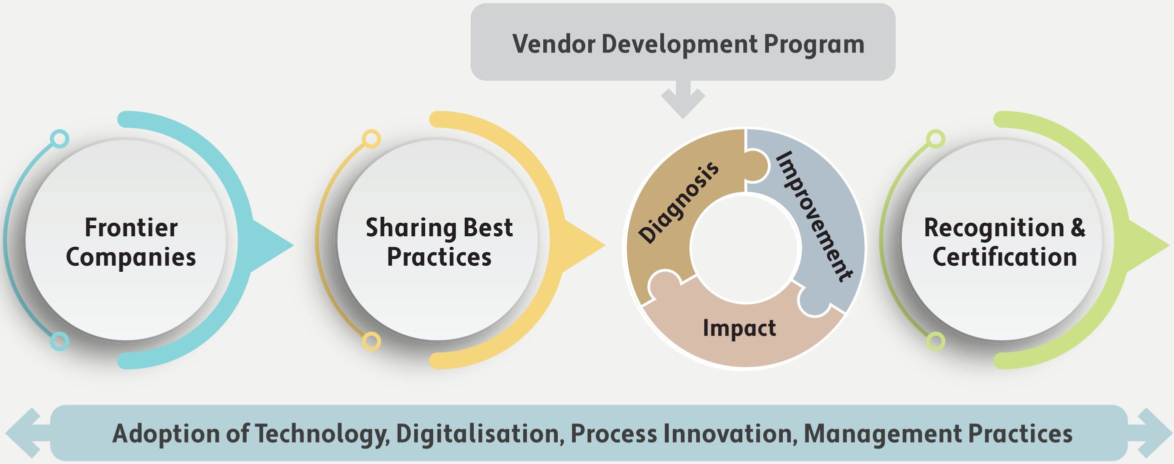
ENTERPRISE PRODUCTIVE

Enterprise Productive (EP) was developed in 2022 to increase productivity and efficiency at the firm level - the most fundamental level in productivity growth. EP foregrounds its projects on the Waterfall Effect Model, where best practices from a frontier company cascade to other business establishments to increase the productivity and competitiveness of the participating companies individually and as an industry cluster. EP bridges the productivity gaps among firms.

Firm-level productivity is enhanced by transferring frontier companies' knowledge, expertise, skills, technology, and experience to local enterprises within their supply chain ecosystem. In its pilot project, a leading international company guided 12 SMEs from the electrical & electronics and machinery & equipment subsectors, leading to 12 productivity improvement projects with a total cost savings of RM1.2 million. In another successful Proof of Concept, a leading global company from the chemical and chemical products subsector assisted 16 SMEs in implementing 32 productivity improvement projects, recording a total operational cost savings of RM2.3 million.

The programme promotes operational excellence, enabling higher awareness and understanding of the importance and benefits of productivity growth at the enterprise level. EP fosters a productive mindset among local companies, leading to consistent work process improvement and enabling cost savings and resource optimisation.

ENTERPRISE PRODUCTIVE



ENTERPRISE PRODUCTIVE APPROACH

Appointment of leading companies based on established selection criteria

Identifying issues ad challenges for productivity improvement

Identifying list of local enterprise involved in the supply chain of the leading company

Diagnostic of local enterprise performance

Identifying impactful productivity ideas and tools

Implementing productivity improvement projects

Providing Proof of Concept (PoC)

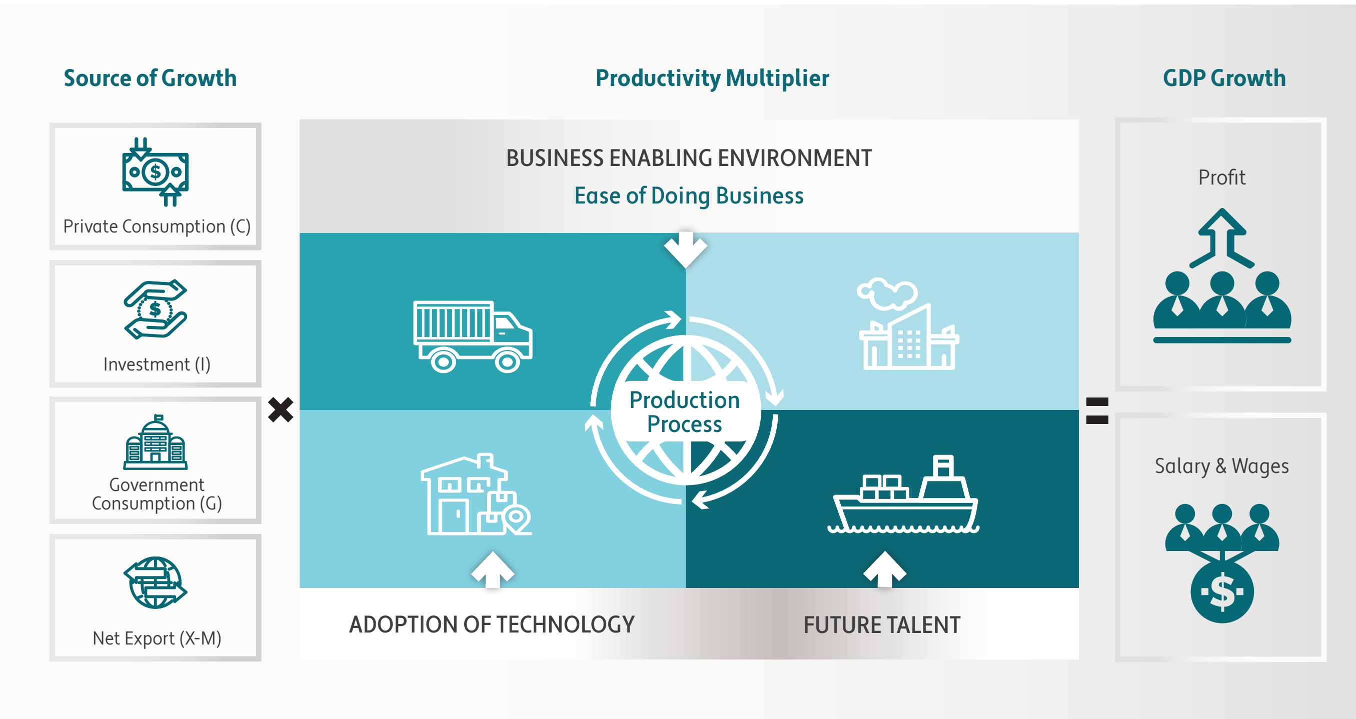
Sharing and disseminating project findings

SUSTAINABLE PRODUCTIVITY IS THE GAME-CHANGER

Sustainable productivity is the game changer for robust economic growth. Multiplying productivity at the sources of economic growth by focusing on talent development, technology adoption, and quality regulations, generates higher GDP and wages.

Growth originates from Government and private consumption, investment and net exports. According to the data tabulated by Malaysia External Trade Development Corporation (MATRADE), Malaysia's exports growth decreased from 26.1 per cent in 2021 to 25.0 per cent in 2022.

Between January – May 2023, Malaysia's exports recorded a negative growth at -2.3 per cent. This marks a plunge from 23.3 per cent and 31.0 per cent growth compared with the same period in 2022 and 2021, respectively. In terms of overall investments, according to Malaysia Investment Development Authority (MIDA), its growth declined by 14.5 per cent in 2022 at RM264.6 billion (2021: RM309.4 billion). As Malaysia's productivity is growing at a relatively slow rate, it can negatively impact investments and exports in the long run.



Productivity multipliers are instrumental in amplifying the sources of growth. It encompasses three elements:

IMPROVING EASE OF DOING BUSINESS

Establishing a business-friendly environment, reducing bureaucratic obstacles, and streamlining regulatory processes bolster productivity and stimulate business growth and investment. Conducive business climate positions Malaysia as a preferred destination for investments, trade, and businesses. Supportive and quality regulations ease business operations and enable investors and businesses to optimise resources, minimise compliance costs, save time, and increase efficiency and effectiveness.

INCREASING TECHNOLOGY ADOPTION AND DIGITALISATION

Embracing technologies and innovations trigger productivity improvements and innovation. By integrating advanced technologies, businesses optimise processes, heighten efficiency, and cultivate competitive advantages. Investments in technology and R&D&C&I enable firms to develop more complex and highly competitive products and services to compete in high-value chain market segments, locally and globally.

DEVELOPING COMPETENT AND SKILLED FUTURE TALENT

Investing in education, skill development, and human capital is fundamental for sustained productivity growth and fostering business growth and expansion. Building a pool of skilled and adaptable workforce responds to the requirements of evolving industries. High-impact investments and exports of complex products necessitate a competent workforce, and thus Malaysia needs to move away from relying on low and semi-skilled workers.

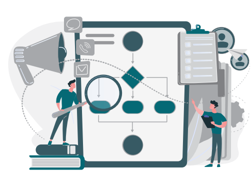
Sources of growth multiplied by the productivity drivers leads to higher GDP growth. It entails the distribution of wealth to businesses in the form of profits and to workers in wages and salaries. GDP expansion signifies an escalation in economic activities and an increment in the wealth generated within an economy. Sustaining robust productivity growth means prosperity for Malaysia.

Collaboration

Managing Efficiency

Managing Change

Managing Complexities



Regulatory Experimentation

Tackling slow productivity requires strategic actions to ensure success. Five success factors to boost productivity are:

COLLABORATION

Strengthening Whole-of-Government and Whole-of-Nation collaboration among state governments, state agencies, the federal government, and local authorities, and working together with the business community, academia, and the society at large;

EFFICIENCY MANAGEMENT

Enhancing efficiency through system improvements, regulations, work processes, and managing their outputs to benefit the people;

COMPLEXITY MANAGEMENT

Coordinating regulators at various levels within departments and agencies, including conducting engagement and consultative sessions;

CHANGE MANAGEMENT

Shifting mindsets to prioritise productivity as a primary agenda within an organisation to foster innovations and improvements; and

REGULATORY EXPERIMENTATION

Improving the business environment through an evidence-based pilot project approach by testing an intervention on a small scale before proliferating it nationwide.

KULAI FAST LANE (KFL)

The Kulai Fast Lane (KFL) pilot project implemented the five success factors: collaboration, efficiency, change, and complexity management, and regulatory experimentation, to boost its location's productivity and competitiveness. KFL is a success story under MPC's State Productive initiative. KFL model is being implemented at all 15 local councils in Johor.

The project focuses on three aspects to increase Johor's ease of doing business – land conversion, movement of goods, and movement of workers. KFL increases the public sector's efficiency and effectiveness in its services and delivery. Kulai was selected as the pilot project for its potential in terms of location neighbouring Singapore and within the Iskandar Malaysia Corridor, land readiness, and air and land connectivity. KFL replicates the E10: Express Construction Permit success in Kulim, Kedah. Majlis Perbandaran Kulai led the KFL initiative and worked with developers, investors, government agencies, and professionals to materialise the project.

In 2023, the impact of KFL is forecasted to create more than 5000 job opportunities and attract RM24.9 billion in investments involving 16 projects.

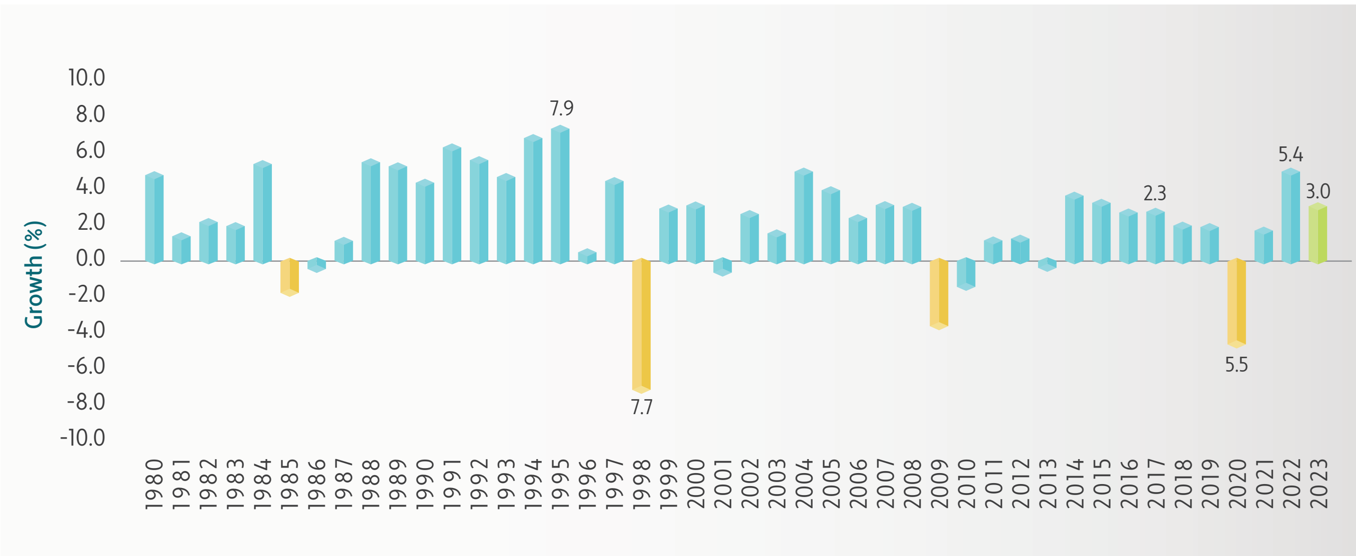
2023 PRODUCTIVITY PROJECTS POSITIVE GROWTH

Based on economic projections, productivity performance for 2023 is estimated to moderate between 2.0 and 3.0 per cent. The MOF also projects that productivity in 2023 will be at a slower but positive growth rate of 2.4 per cent, aligning with expectations of a recession and a slower global economy. **MPC projects that 2023 productivity will grow at 3.0 per cent.**

To achieve the target of reaching RM106,060 by the end of the 12MP and 3.6 per cent annual growth throughout the 12MP duration, productivity needs to record a growth rate of at least 4.0 per cent for 2024 and 2025.

Malaysia can reach the status of a high-income nation as early as 2026 if economic growth from 2023 to 2025 is around 4.0 to 5.0 per cent and population increase remains below 1 per cent.

Figure 13: Productivity Growth (percentage of change)



Source: The Conference Board data up to 2022; forecast data 2023* from MPC

Implementing the policy agenda outlined in the 12MP and the 2023 Budget is crucial. These plans have identified critical focus areas that can drive broad-based productivity and inclusive growth, address climate change, promote digitalisation, enhance governance, and strengthen anti-corruption reforms.

In driving broad-based productivity agenda to benefit Malaysia and its people, the sustainable productivity framework with talent, technology, and regulation as multipliers for growth sources is in place to impact national income and people's wages. This report presents the details.

Figure 14: Actual and Forecast Productivity Performance 2018-2025

Source: Department of Standards, Malaysia (DOSM), Computed by Malaysia Productivity Corporation (MPC)

Demand-driven, skilled talent pool for future workforce

CHAPTER 2

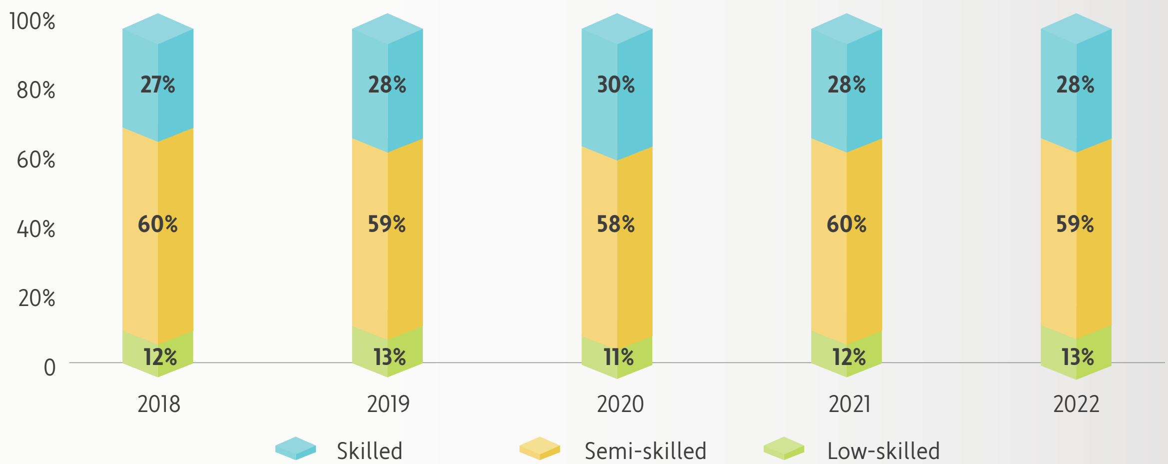
DEMAND-DRIVEN, SKILLED TALENT POOL FOR FUTURE WORKFORCE

BUILDING AN INDUSTRY-READY SKILLED WORKFORCE TOWARDS BECOMING A HIGH-INCOME NATION

Human capital, the endowments of individuals with regard to skills and knowledge, has long been recognised as a critical factor determining an economy's growth potential. **Skills and knowledge contribute directly to economic growth through increased productivity and indirectly by creating superior capacity of workers and firms to adopt new technologies and novel ways of working to spur innovation.** On the contrary, skills shortages and mismatches between demand and supply reduce the growth potential, decrease productivity, and waste resources.

Over the past five years, the composition of workers according to the skills category mostly stayed the same. Low- and semi-skilled workers dominated the Malaysian workforce comprising about 70 per cent. Skilled workers contributed around 30 per cent of the workforce.

Figure 1: Percentage and Number of Employed Persons in Malaysia by Skills Category, 2018 - 2022



Number of Employed Persons by Skills Category ('000), 2018 - 2022

	2018	2019	2020	2021	2022
Skilled	4099.6	4203.8	4558.5	4295.6	4451.1
Semi-skilled	9028.0	8997.7	8861.2	9243.2	9473.1
Low-skilled	1805.7	2053.0	1742.0	1901.6	2017.5

Source: Department of Statistics, Malaysia (DOSM)

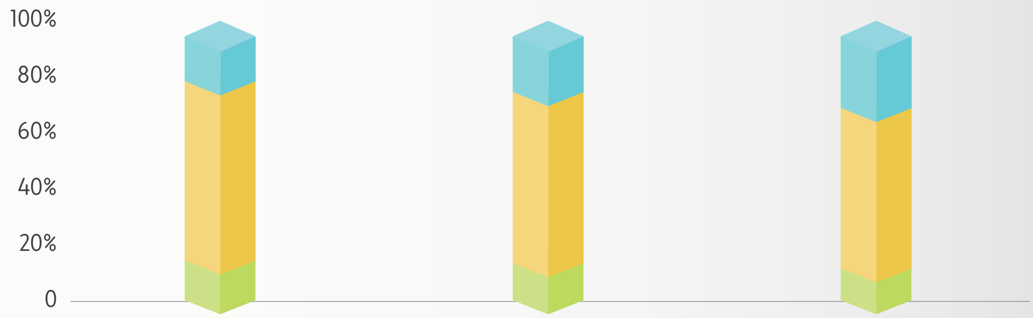
There was an improvement in labour participation from 2018 to 2022 across all skills categories. The number of skilled workers increased from around 4 million in 2018 to 4.4 million in 2022. **Despite the improvement in labour participation, the skilled employment rate needs to be faster to prepare Malaysia to transition smoothly towards a high-income nation.**

The Twelfth Malaysia Plan (12MP) aims to increase the number of skilled workers and reduce the number of low- and semi-skilled workers. There was an improvement in the percentage of skilled workers in the workforce between 2015 and 2020. The rate increased from 25.5 per cent in 2015 to 28.9 per cent in 2020. The percentage of low- and semi-skilled workers decreased, indicating the effectiveness of the Government's and industry's efforts in reducing the dependency on low- and semi-skilled labour.

In 2025, the 12MP projects 35 per cent of skilled workers in the workforce. **The trend supports the goal, and labour participation increases, but the growth rate could be more transformative.** Current statistics and future projections denote that Malaysia highly depends on low- and semi-skilled workers. Shifting into a developed and high-income nation requires more skilled labour. High-income and highly-productive countries like Luxembourg, Singapore, and Switzerland boasted higher percentages of high-skilled employment, comprising more than 50 per cent of their workforce.

Malaysia needs at least 45 per cent of the workforce to be skilled workers by 2030 to realise the goal of becoming a developed nation.

Figure 2: Percentage (%) of Employment by Skills Category, 2015, 2020, and 2025 (Target)



	2015	2020	2025 (Target)
Skilled	25.5	28.9	35
Semi-skilled	60.7	58.8	54
Low-skilled	13.8	12.2	11

Source: Twelfth Malaysia Plan (12MP)

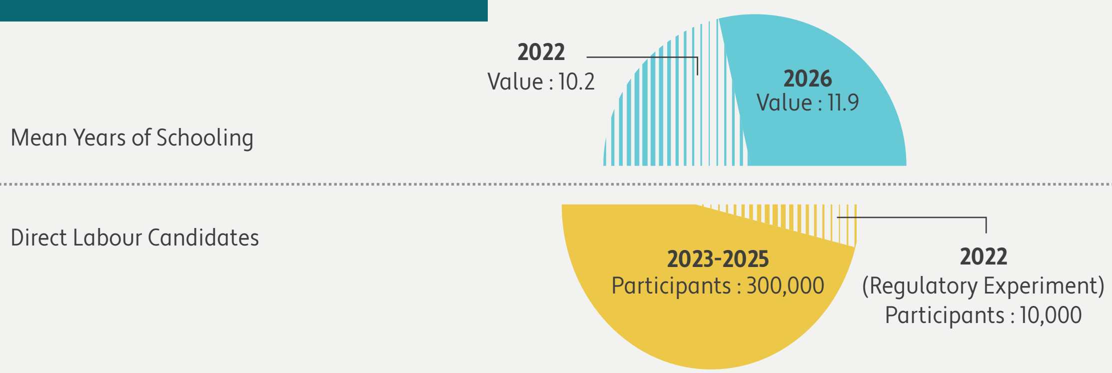
One effective approach is work-based learning, which comprises educational programmes integrating classroom instruction with practical work experience in authentic work environments. The approach enables students to acquire knowledge and skills through hands-on experiences, allowing them to directly apply what they learn in the classroom to real-world work situations. Work-based learning offers benefits in developing skilled workers. It provides individuals with invaluable career development opportunities. Students gain firsthand experience of the skills and competencies necessary for successful employment through direct engagement with professionals in their chosen field.

The Academy in Industry (AiI) is an innovative programme which embeds the work-based learning model. It is a collaborative programme amongst the Government, industry, and academia in addressing challenges to nurture local talents to be skilled workers.

AiI addresses the challenges with the objectives:

- Develop a sustainable skilled workforce based on market demand and industry needs;
- Bridging the gap between labour supply and demand;
- Develop local talent that receives wages which correspond to the skills;
- Reduce dependence on foreign workers;
- Improve the country's educational achievements.

ACADEMY IN INDUSTRY (AII)



The Academy in Industry (AiI) is a government initiative led by Malaysia Productivity Corporation (MPC). Originally known as the Academy in Factory (AiF) during its experimental phase, it was later rebranded as AiI (Academy in Industry) in 2023 to expand its implementation. AiI focuses on providing work-based skills training and certification recognised by the Government. The 18-month programme is designed to enhance the skills and productivity of workers in the industry.

Through collaboration among the Government, industry, and academia with over 200 strategic partners, AiI seeks to elevate work-based learning and non-formal education as preferred pathways for career advancement and qualifications.

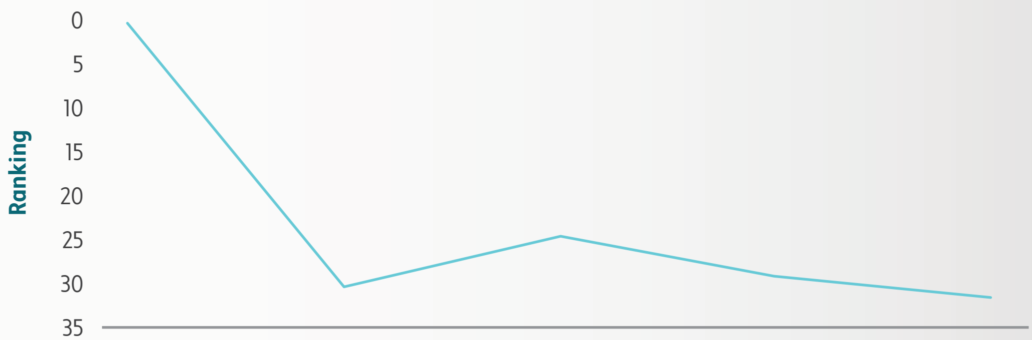
AiI provides an alternative for school leavers who choose to enter the workforce directly after completing their Sijil Pelajaran Malaysia (SPM) and individuals who wish to acquire qualifications while working. The programme aims to produce 300,000 AiI graduates and increase the Mean Years of Schooling for the Malaysian population to 11.9 by 2026.

MALAYSIA'S RANKING IN SKILLED LABOUR HAS ROOM FOR IMPROVEMENT

Malaysia increased its global competitiveness ranking to the 27th spot in WCR 2023. Malaysia's rankings generally recorded improvements in WCR factors, sub-factors, and indicators. Several indicators have room for improvement.

The Skilled Labour indicator ranking recorded a massive downward trend over 2019 – 2023, declining from 5th in 2019 to 31st in 2023. The indicator measures skilled labour readily available in the country. The decreasing trend indicates that Malaysia lacks skilled labour in its workforce compared with other countries, which may hinder high-impact investors and businesses from operating in the country. It also denotes that other countries are fast in building their skilled workforce to align with the changing economic landscape, while Malaysia has been sluggish in developing more skilled employees, as indicated in its skilled-worker growth at between 27 – 30 per cent in 2018 – 2022 duration.

Figure 3: Malaysia's Competitiveness Ranking in Skilled Labour Indicator, 2019 - 2023



	2019	2020	2021	2022	2023
Skilled Labour	5	30	25	29	31

Source: World Competitiveness Yearbook (WCY), Institute for Management Development (IMD)

The Mean Years of Schooling, reflecting the average number of completed years of education of a country's population aged 25 years and older, is a component of the Human Development Index (HDI).

The level of education, as represented by the Mean Years of Schooling, is an important factor in determining the workforce's skill levels. Countries with higher Mean Years of Schooling have a bigger pool of skilled workers, as education plays a crucial role in developing the knowledge, competencies, and skills required for occupations and industries.

Malaysia took 10.6 Mean Years of Schooling compared to the global average of 8.6 years. Malaysia aspires to increase its Mean Years of Schooling to 11.6 by 2026. While Malaysia's latest performance was above average, it has room for improvement towards becoming a high-income nation with a readily available skilled workforce. Developing and high-income countries ranked high in Mean Years of Schooling.

Figure 4: Mean Years of Schooling of Selected Countries

Country	Mean Years of Schooling
Germany	14.1
Switzerland	13.9
Iceland	13.8
Canada	13.8
United States	13.7
Japan	13.4
Australia	12.7
South Korea	12.5
Hong Kong	12.2
Singapore	11.9

Source: 2021/2022 United Nations Development Programme's Special Report on Human Development Report (HDR)

GERMANY'S DUAL TRAINING SYSTEM

The German vocational education and training (VET) system, known as the dual training system, is a highly recognised and successful model worldwide. It combines theory and training in a real-life work environment, making it a prominent feature of the German education system. Almost half of the upper-secondary students in Germany choose a VET programme, indicating its popularity and importance.

The VET in Germany offers qualifications in a wide range of professions and is adaptable to the evolving needs of the labour market. It combines work-based and school-based learning to prepare apprentices for successful transitions into full-time employment. Employers' and other social partners' active involvement and commitment contribute to the system's effectiveness and success. The system operates through a complex network of checks and balances at various levels to ensure employers' needs align with broader educational and economic objectives. Germany's VET system is well-funded, combining public and private financing.

The VET system in Germany benefits from a well-developed and institutionalised research capacity. Institutions study different aspects of the VET system, contributing to ongoing innovation and improvement.

Germany's VET system demonstrates effective stakeholder coordination, adequate funding, and a robust research capacity. These factors contribute to the system's success in preparing students for the labour market and driving continuous development within the VET system.

MISMATCHES BETWEEN TALENT DEMAND AND SUPPLY

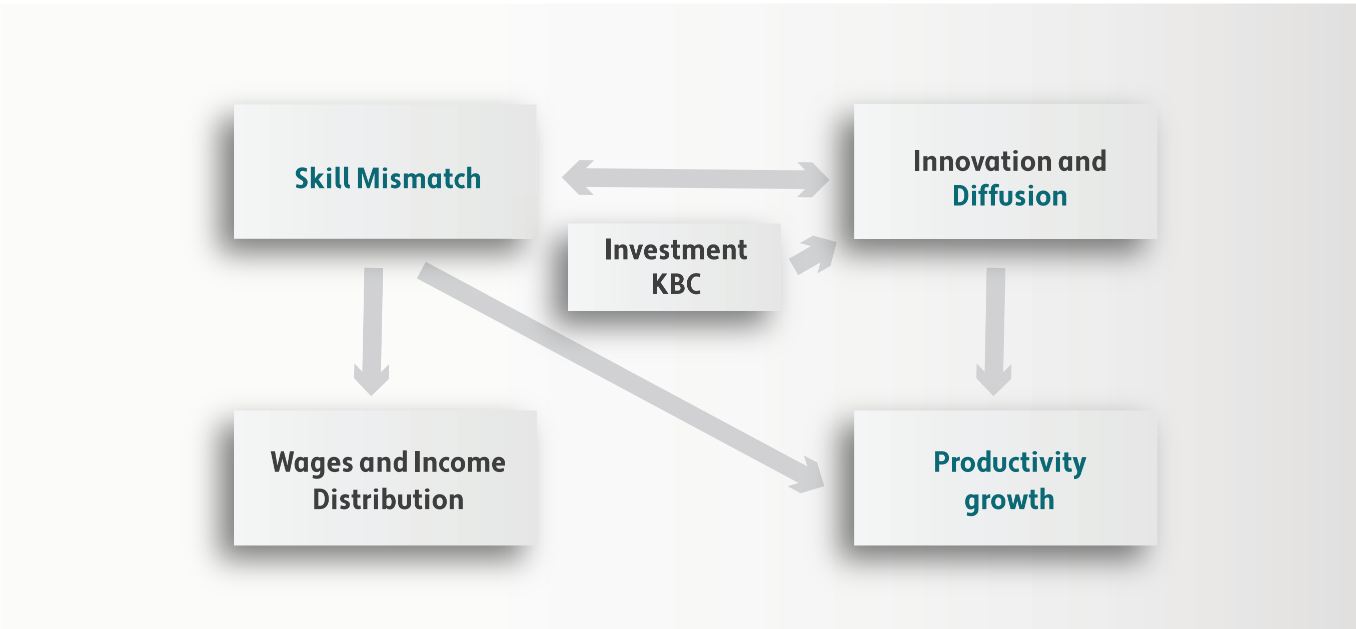
For Malaysia to successfully transition from a middle-income to a high-income nation, the Government must address the task of cultivating a future-ready talent pool that aligns with the demands of a dynamic labour market. This challenge has become increasingly intricate due to the rapid pace of technological advancements and the transformative changes in work, further expedited by the pandemic.

The Graduate Tracer Study by the Ministry of Higher Education (MOHE) reveals that approximately one-third of graduates (31.2 per cent) worked in semi-skilled and low-skilled occupations. There appear to be significant mismatches between skills required by industry and those that workers possess.

High-growth industries are now relying more on technical and vocational education and training (TVET) graduates as their skills are required across various industries to support operations requiring automation and technological transformation.

Skills mismatch impacts wages and income distribution, innovation and diffusion, and productivity growth. Investment of Knowledge-Based Capital (KBC) in innovation and diffusion can influence skills mismatch, affecting productivity and wages. Investment in KBC – assets with no physical embodiment, such as computerised information and economic competencies – promotes skill relevance, provide upskilling and reskilling opportunities, creates demand-driven jobs, and facilitates knowledge spillovers.

Figure 5: The Correlation among Skills Mismatch, Wages, Innovation, and Productivity



Source: The Future of Productivity, Organisation for Economic Co-operation and Development (OECD, 2015

TRANSITIONING EDUCATION POLICIES TOWARDS A DEMAND-DRIVEN, SKILLED WORKFORCE

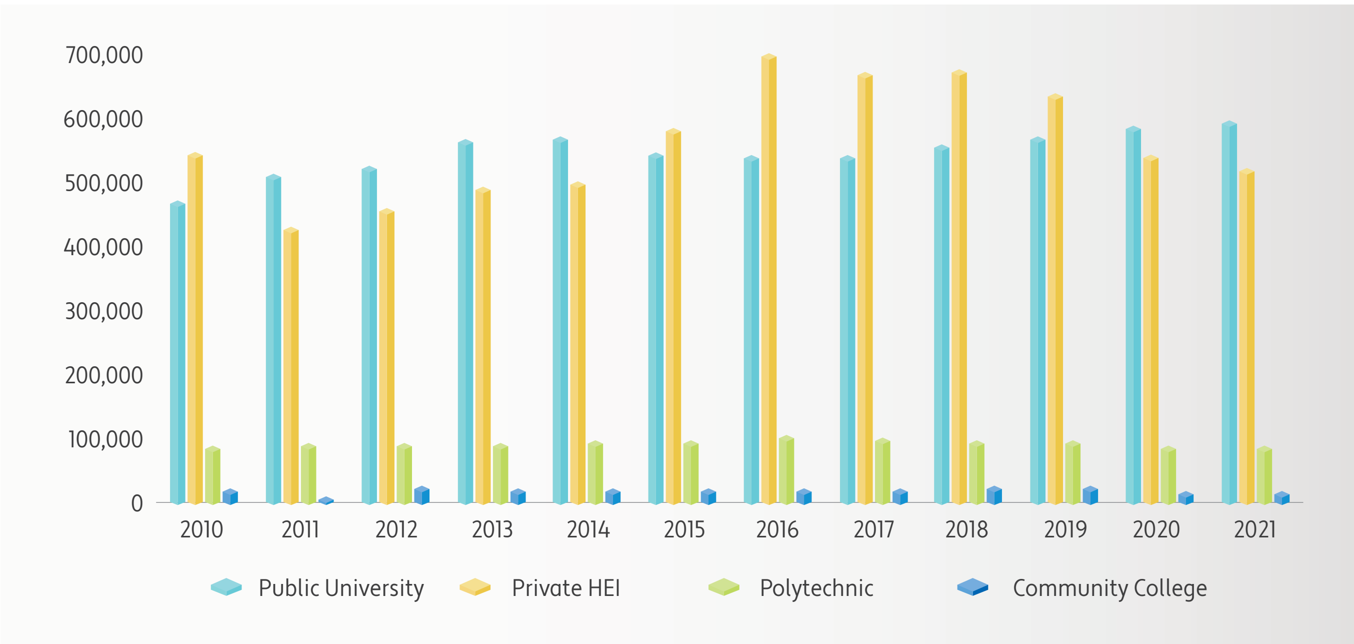
Increasing the number of highly skilled workers in Malaysia is crucial for the country's global competitiveness. It requires concerted efforts to enhance skills development, promote education and training programmes, and align the workforce with the evolving needs of industries.

The enrolment into tertiary education in Malaysia experienced a significant increase between 2004 and 2014, reaching 1.2 million students in both public and private higher education institutions, representing a 70 per cent growth. **However, the overall trend of enrolment stagnated from 2016 onwards.**

Policies should focus on shifting to demand-driven, future-ready talent. The Malaysian Education Blueprint 2015-2025 (Higher Education) emphasises the importance of enhancing collaboration between universities and industries.

The collaboration aims to enable the industry to lead in designing and delivering curricula through various partnership models, including apprenticeships, hands-on training, real-life simulations, and specialised employer training programmes. The goal of involving the industry in curriculum development is to address the skills gap and reduce unemployment rates.

Figure 6: The Number of Enrolment in High Education Institutions (HEIs) in Malaysia, 2010 - 2021



Source: Department of Statistics Malaysia (DOSM)

Malaysian Investment Development Authority (MIDA) has established the MIDA Assessment Development Centre (MADC) HyTalent Programme, a hybrid talent development initiative in collaboration with three prominent public universities. The partnership between the Government, public universities, and industry technologists aims to create a pool of technologically skilled talent aligned with the demands of the industrial landscape, particularly in the Internet of Things (IoT) and industrial Internet of Things (IioT) fields.

It is crucial to address bottlenecks on the demand side to integrate talent effectively in the supply chain and promote productivity and competitiveness. The World Economic Forum's report, "Markets of Tomorrow: Pathways to a New Economy," highlights the need for an inclusive and sustainable economic transformation to drive economic growth in the coming decade.

To achieve this transformation, it is essential to proactively create tomorrow's markets by combining breakthrough technological advancements with socio-institutional innovation. **This requires providing the necessary training and learning opportunities and instilling a mindset shift in the current policies.** The aim is to accelerate the upskilling and reskilling of the workforce, leverage technology in institutional systems, and provide Just-In-Time (JIT) talent that can effectively address the pressing societal issues of the future.

CONSISTENT SUPPLY OF SKILLED WORKFORCE FOR INDUSTRY

Technical and vocational education and training (TVET) is crucial in developing skilled workers for a country's workforce. In developing countries like Malaysia, TVET is particularly important as it provides the necessary skills to support economic growth and development.

Malaysia needs to develop an education framework that integrates academic, technical and vocational education and training (TVET) and non-formal education to prepare its human resources effectively in developing skilled workers and driving economic growth, aligning with the goal of becoming a high-income nation.

TVET is crucial in increasing employment rates and attracting highly skilled workers. It ensures job opportunities and has the potential to foster entrepreneurship and enable individuals to become business owners. To achieve this, **there is a need for enhanced coordination between TVET education providers and industries to facilitate better skills development and align systems effectively**.

Training and upskilling programmes should prioritise digitalisation and knowledge related to the Fourth Industrial Revolution. Knowledge workers must receive rigorous training and development to bridge the gap in the high-growth and high-tier workforce. By instilling digital skills and preparing workers for the demands of the Fourth Industrial Revolution, Malaysia can enhance its human resource capabilities and drive economic success in the evolving technological landscape.

Given the diverse landscape of TVET institutions, with different ministries, state governments, and private entities involved, it is essential to foster cohesive efforts. The aim should be to align these systems and streamline students' pathways to higher education and future careers in TVET. By improving coordination and collaboration among these entities, students can have a more seamless transition between TVET institutions and better opportunities for their educational and career advancement.

Currently, 1,295 public TVET institutions are operated by 11 ministries, 633 private TVET institutions and 22 state-owned TVET institutions. These institutions offer a range of programmes across different levels of the Malaysian Qualifications Framework (MQF), spanning from levels 1 to 6.

Ongoing efforts are also in place to provide relevant cognitive and socio-emotional skills. These socio-emotional skills, such as emotional intelligence and personal growth, are essential for individuals to adapt and harmonise with the requirements of medium and highly digitalised occupations.

Malaysia currently has a lower proportion of researchers employed in the industrial sector, with only 15.8 per cent compared to 40 per cent or more in highly innovative economies. Most researchers in Malaysia, at 79.2 per cent, are based in institutions of higher learning.

Malaysia can foster a vibrant innovation ecosystem and bridge the gaps in innovation performance between different sectors by promoting a more balanced placement of researchers and supporting innovative businesses. This will contribute to the development of a more competitive and resilient economy.

EXPEDITING EXPATRIATE PERMIT APPLICATION PROCESS

Economic Minister YB Rafizi Ramli delivered a speech on the issue at the Special Taskforce to Facilitate Business (PEMUDAH) meeting in Putrajaya on 10 April 2023

The Government is taking steps to simplify and shorten the process for the expatriate pass to address concerns raised by investors and industries regarding the expatriate permit application process. The application process can take up to six months, impacting businesses' manpower planning. Beginning in Jun 2023, the expatriate permit application period is expected to be shortened from 87 to five working days for fast-track approval and 15 days for standard application.

The decision to shorten the application process aims to simplify affairs for investors entering Malaysia. The permit application system will be upgraded, and the procedure will be simplified, integrating data under one system compared to the previous four stages of the application process. Companies with a good track record of expatriate employment and compliance with laws will be eligible for the shortened application process. The decline in expatriate passes issued between 2015 and 2022 is attributed to several issues, including the lengthy application procedure, discrepancies between approved and requested numbers of expatriates, overlapping processes and repeated reviews involving multiple government agencies and committees.

Immediate actions include introducing an integrated single-window system for all agencies involved, adopting a risk-based approach for approval, and providing comprehensive guidelines for applicants and government agencies. These initiatives will streamline the application process and provide a more efficient and transparent system for expatriate permits in Malaysia.

Towards A High Technology-based Economy

CHAPTER 3

TOWARDS A HIGH TECHNOLOGY-BASED ECONOMY

MALAYSIA IS ADAPTING TO RAPID TECHNOLOGICAL CHANGES

The rapid technology adoption during the pandemic significantly transformed the economic landscape around the world. This causes an expansion in internet access and usage across the globe and accelerates the digitalisation of firms, particularly in the use of digital platforms and the uptake of digital payments, which is a crucial entry point into the digital economy.

Malaysia's digital landscape has considerably transformed over the years, and the country has increased access to digital platforms that enable businesses to mitigate and evade crises. However, businesses, especially small and medium enterprises (SMEs)'s rate of digitalisation remains minimal. This suggests a growing risk of digital divide in the country.

The advancement of disruptive technology and digitalisation has significantly impacted industries, business entities, Government and education. Hybrid digital workplaces, which prioritised flexibility, productivity and innovation, are established, where daily functions and tasks could still be done without compromising the final output.

The Malaysian economy is positioned to become a global player in a highly competitive environment against domestic and international economic challenges. **There is no other alternative but to adopt and adapt to fundamental changes in the digital and technology sectors to enhance Malaysia's productivity and competitiveness, ultimately cushioning the impact of an anticipated slowdown.**

Malaysia will lose out in the increasingly competitive global economy if the country is not ready to adapt to changes and take on new challenges. Digitalisation improves the standard of living and prosperity while ensuring sustainable growth in the long term.

The aspiration is to have industries in Malaysia fuelled by innovative ideas and models led by local productivity champions **to boost performance through digital and technological applications.**

In WCR 2023, Malaysia's ranking for Technological Infrastructure sub-factor increased to 16th from 20th place in 2022, indicating improved digital facilities and their access to the people and business community. However, adoption is still low in leveraging technology and digitalisation advantages.

The aspiration is to have industries in Malaysia fuelled by innovative ideas and models led by local productivity champions to boost performance through digital and technological applications. This produces more proactive and vibrant industry players for an innovative economy and develops a holistic and integrated approach that capitalises on digital tools and solutions, enhancing innovation and creativity, providing opportunities for public and private sector collaborations, and setting the pace for a good business environment that supports higher productivity, improved performance and extended outreach.

POLICIES TO ACCELERATE TECHNOLOGY ADOPTION

Acknowledging the significant impact of technology and digitalisation across all sectors and the community, the Government has developed policies and blueprints to boost and scale up technology adoption in the country.

Fourth Industrial Revolution (4IR) Initiative

The National 4IR policy is the basis to drive the nation's Fourth Industrial Revolution (4IR) agenda and to support the Twelfth Malaysia Plan (12MP). It complements MyDIGITAL - Malaysia Digital Economy Blueprint in driving the growth of the digital economy.

4IR aims to change the industrial landscape through digital transformation. Industries can no longer be complacent and rely on old technologies, which are outdated and counter-productive.

There are four policy thrusts in the National 4IR Policy. These are equipping the rakyat with 4IR knowledge and skill sets; forging a connected nation through digital infrastructure development; future-proofing regulations to be agile with technological changes; and accelerating 4IR technology innovation and adoption.

With proper execution of the policy, Malaysians will have better access to learning methods and skills enhancement powered by edutech. These will make them more competitive regionally and globally. Social enterprises will be able to utilise 4IR technology to address socio-economic issues and facilitate digital onboarding to bridge the rural-urban digital gap. In addition, businesses can further develop industry-led and sectoral-based 4IR-powered capacity. At the same time, the public sector could gain by leveraging big data to improve public service delivery towards a fit-for-future government.

> **4IR aims to change the industrial landscape through digital transformation.**
> Industries can no longer be complacent and rely on old technologies, which are outdated and counter-productive.

The Government has also implemented various policies and plans to intensify the application of new and up-to-date technologies and drive digital transformation among industries and related services. **Research & Development and Commercialisation & Innovation (R&D&C&I) are emphasised in providing an enabling environment towards a digital economy.**

Under the 12MP, the Government has approved 99 R&D&C&I projects and programmes worth RM5.6 billion to support innovation in Malaysia for 2021 and 2022. The Government's effort to intensify commercialisation and innovation creates more industry-based products and solutions with high added value. R&D&C&I activities align with national development priorities. As digitalisation, technology adoption and innovation ensure sustainable economic growth.

In the 4IR context, the right talent must be sourced and identified. Talent development programmes in automation, digital technology or entrepreneurship skills, among others, are required to build a conducive ecosystem to accelerate innovation. As such, microenterprises and SMEs should have the opportunity to advance their knowledge and know-how, as they are the backbone of industries.

While the Malaysia Digital Economy Blueprint (MDEB) is the roadmap for Malaysia to be a high-income nation by accelerating digitalisation in all aspects of the economy, the 4IR Policy facilitates the initiation of new technologies such as Artificial Intelligence (AI), Big Data and blockchain in all spectrums of activities.

Nevertheless, **private sector engagement is crucial to accelerate the growth of the digital economy.** In such circumstances, one of MyDIGITAL's focuses is cultivating constructive public-private partnerships. They are defined as private sector-driven projects focusing on new technologies to create an innovative digital ecosystem.

With all these initiatives to facilitate and accelerate technology adoption, more equitable, comprehensive, and **sustainable growth for Malaysia can be achieved as it transitions to the endemic phase of the pandemic.**

To ensure an enabling ecosystem that boosts an industrial revolution, policy and regulatory reforms that cut across ministries and agencies must constantly be reviewed and updated to eliminate bottlenecks and ensure efficiency and smooth implementation. The Government takes a proactive role as the facilitator.

In the effort to intensify robotics technology into the mainstream, Malaysia developed the National Robotics Roadmap (NRR), that provide strategic direction towards strengthening national robotics agenda to become a regional robotics hub in services, agriculture and manufacturing by 2030.

Meanwhile, the Centre for the Fourth Industrial Revolution (C4IR), an affiliated centre with the World Economic Forum (WEF), will be established to support the vision of the 4IR Policy through "inclusive technology governance and responsible digital transformation". With all these initiatives to facilitate and accelerate technology adoption, more equitable, comprehensive, and sustainable growth for Malaysia can be achieved as it transitions towards becoming a regional digital hub.

Driving productivity of the nation through technology adoption

Malaysia Productivity Blueprint (MPB) identifies technology as a crucial driver for productivity growth. Its Productivity Nexus initiative implement various technology-driven programmes to boost productivity at the sectoral and enterprise levels.

PRODUCTIVITY NEXUS' PRODUCTIVITY STEP-UP PROGRAMME

DIAGNOSTICS (Assessment)

Productivity Assessment

- Enterprise performance
- Technology readiness

PROCESS ANALYSIS (Improvement)

1. Understanding productivity concepts & challenges
2. Analysis of the key process
3. Priorities/identify problem statements
4. Improve company indicators
5. Propose solution

DIGITALISATION / INTERVENTION

Handholdling and Monitoring of Projects

- AI
- Dashboard
- IoT
- Big Data
- Lean
- Other means of technology

In early 2023, MPC, through the Productivity Nexus initiative, introduced Productivity Step-up Programme. All Productivity Nexus are executing the programme to implement process improvements to increase productivity. The programmes' objectives are to:

1. Help companies identify current levels of productivity and problem statements within the companies;
2. Train companies in implementing new technologies and software systems to automate and streamline processes to reduce errors and improve productivity;
3. Assist companies in adopting Industry 4.0 among the local industries; and
4. Support, coach, and prepare companies to implement productivity improvement projects within their companies.

Productivity Step-up creates values, measured based on increments and improvement in production, quality, cost optimisation, delivery, safety, customer satisfaction, and environmental awareness. Process improvement projects via the programme have helped participating companies, among others, reduce report preparation time by 50%, achieve real-time reporting and monitoring, reduce customers' waiting time by 60%, minimise wastage, and eliminate machine downtime due to overheating.

The key priority is to shift all sectors towards higher value-added activities, enabling them to move up the value chain, strengthen the financial capability of industry players, and scale up successful Productivity Nexus and green practices. These efforts will enhance the overall competitiveness of businesses.

Strengthening enterprise readiness and technology adoption across sectors, and enhancing digitalisation among SMEs through e-commerce and innovative technology, are considered the game changers that heighten productivity improvement at all levels of the industry.

Adopting digitalisation tools such as e-commerce removes barriers. It provides seamless connectivity of market information, technical assistance, incubation and testing facilities for the entire innovation value chain. It paves the way for greater collaboration among various platform providers and streamlining incentives towards ICT-based business solutions for productivity gains.

One such programme is the Industrial IoT PLUGFEST, developed to accelerate the adoption of the Internet of Things (IoT) and has benefitted over 200 micro, small and medium enterprises (MSMEs) in the E&E subsector.

The Unified Public Consultation portal launched in 2019 provides a platform for the public to voice their views and give feedback on regulations or amendments to existing legislation in the context of improving governance.

At the same time, the Government avoid must expedite the establishment of a single window for business registration and licensing to reduce regulatory burdens. This facilitates targeted interventions to intensify the internationalisation of SMEs through the e-TRADE platform and provide strategic market alliances.

Investments in technology and digitalisation must be accelerated and supported while emphasising more vital industry-academia collaboration to embark on greater innovation and industry-specific R&D.

Industrial IoT PLUGFEST, **developed to accelerate the adoption of the Internet of Things (IoT) and benefitted over 200 micro, small and medium enterprises (MSMEs) in the E&E subsector.**

DIGITAL PLATFORM NETWORK+

Digital Platform Network+ is a comprehensive one-stop centre to bolster productivity through digitalisation. It is a hub for individuals, businesses, and organisations seeking to embrace digital transformation.

The platform offers various segments, each designed to cater to specific needs. The Digital Pledge enables users to commit to embracing digital technologies and practices, fostering digital readiness. The Digital Assessment feature allows users to evaluate their current digital capabilities and identify areas for improvement. Additionally, the Digital Directory provides a comprehensive listing of digital solution providers, facilitating easy access to expert services. The platform also offers digitisation incentives, providing users with incentives and support to adopt digital solutions, thereby accelerating their digital transformation journey.

Through its diverse offerings, Digital Platform Network+ empowers users to enhance their productivity and competitiveness in the digital age.

Malaysia Digital Economy Blueprint (MyDigital)

In the Malaysia Digital Economy Blueprint (MyDigital), MPC is mandated to identify priority regulations to facilitate innovation and expand coverage to include new technologies and business models. These regulations should provide a supportive environment for business revival and the emergence of new firms. They reduce business compliance costs, create more job opportunities, and stimulate the economy. It, therefore, serves as a platform for businesses to highlight unnecessary regulatory concerns that hamper or delay innovation among businesses in the digital economy.

With a more agile approach to regulations, the full potential of new and emerging technologies within the digital economy can be realised. Regulatory frameworks which facilitate technology innovation, ensure an open and non-discriminatory business environment, protect consumers and workers, and tackle the unintended consequences of disruption.

With effective implementation, it is projected to contribute to creating at least 5,000 start-ups by 2025.

National Science, Technology and Innovation Policy (NSTIP)

The National Science, Technology and Innovation Policy (NSTIP) 2021-2030 (Dasar Sains Teknologi dan Inovasi Negara (DSTIN) 2021-2030) was formulated to intensify the development and use of local technology to transform the country from technology users to technology developers. This policy will transform Malaysia into a high-tech nation by 2030, emulating developed countries such as Japan, South Korea and China, utilising homegrown technology for national development. By doing so, socio-economic growth will expand and steer the country towards a higher growth path.

Six (6) thrusts were identified, supported by 20 robust strategies and 46 realistic and comprehensive initiatives that cover the implementation of the Science, Technology, Innovation and Economic (STIE) development agenda in various sectors. The success of implementing NSTIP depends very much on the support, commitment and dedication of all parties involved. Therefore, the full cooperation of the public and private sectors, academia and the community is critical in addressing national issues and challenges and implementing strategic measures to achieve the goals of the national STIE agenda.

“Yayasan Inovasi Malaysia” has embarked on a project that integrates STIE via hands-on training and personalised experiences through the establishment of “Maker space”, known as “Ruang Daya Cipta”. These hubs are meant to be a place where grassroots and social innovators can develop their ideas and work on projects. It is the right place for developing critical thinking, enhancing self-confidence, and developing communication, talent and skill set. The programme caters to students, single parents, academia, start-ups, cooperatives, NGOs, Small Micro-Enterprises (SME) and grassroots / social innovators. It is a strategic effort where the community can make their ideas happen, work on their passion projects, and develop their entrepreneurial and mindset skills to uplift social innovation through science and technology, especially among the B40 and excluded groups, for broader outreach and accessibility to digitalisation and technology.

MALAYSIA'S GLOBAL DIGITAL RANKING CAN BE IMPROVED FURTHER

Malaysia recorded a decline in its ranking to 31st of 63 countries in the 2022 IMD World Digital Competitiveness Ranking (2021: 29th). 54 criteria were categorised into three major factors: Knowledge, Technology, and Future Readiness. The criteria include a combination of Digital Talent, Digital Regulation, Data Governance, Digital Attitudes and Availability of Capital.

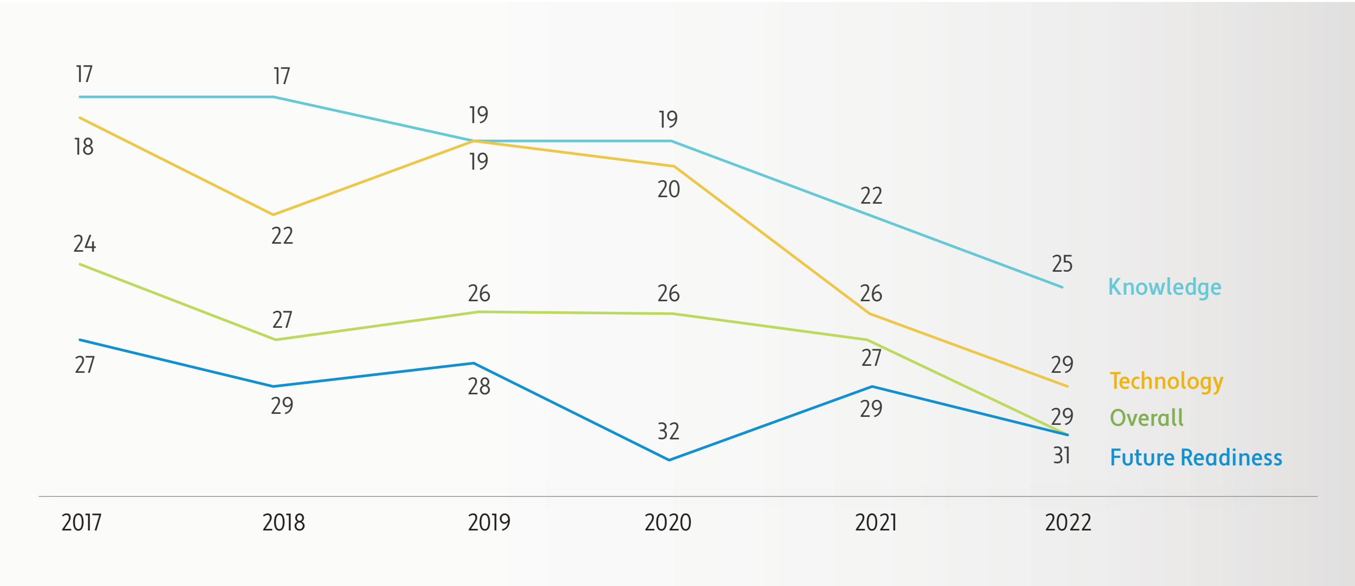
Malaysia's decline in world digital competitiveness ranking calls for more transformative actions to enhance the country's digital adoption and readiness.

In terms of the Knowledge Factor, which is crucial for the development and adoption of technologies, Malaysia ranked 25th (2021: 22nd); while for the Technology factor, which assesses the overall context which enables the development of digital technologies, Malaysia ranked 29th (2021: 26th); and for Future Readiness which examines the degree of preparedness of an economy to assume its digital transformation, Malaysia ranked 31st (2021:29th). All these factors had been declining since 2020, implying sluggish technology adoption and digitalisation in the country.

Figure 1: Malaysia's Overall Performance and in the Asia-Pacific Region (2018-2022)

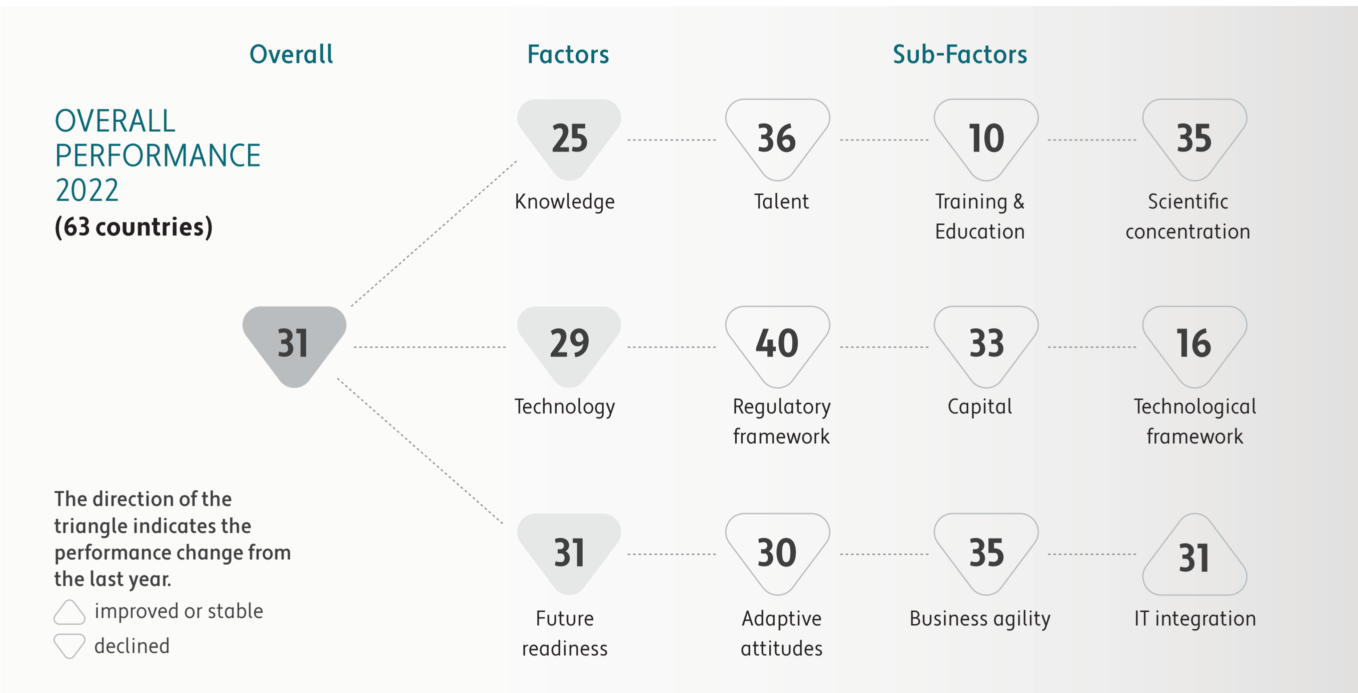
Source: 2022 IMD World Digital Competitiveness Ranking

Figure 2: Malaysia's Score against Asia-Pacific Countries' Scores



Source: 2022 IMD World Digital Competitiveness Ranking

Figure 3: Malaysia's Digital Rankings According to Factors and Sub-factors



Source: 2022 IMD World Digital Competitiveness Ranking

The sub-factor, Talent and Scientific Concentration under the Knowledge factor, recorded a decline. However, Training & Education attained a high score in 10th position for 2022. For the Technology factor: Regulatory Framework, Capital, and Technological Framework rankings declined. As for the Future Readiness factor, the IT Integration sub-factor improved to the 31st spot, but Adaptive Attitudes and Business Agility decreased in their rankings.

The Knowledge factor is critical for new technologies to thrive. Availability of infrastructure, the process of digital transformation through discovery, understanding and learning of new technologies, and the level of investments in education and research are the important criteria. Switzerland, Sweden and Canada were at the top in these criteria.

Singapore, Hong Kong SAR and the UAE were at the top for the Technology factor, which assessed the impact of regulation in encouraging innovation, the availability of capital for investments, and the quality of technology infrastructure,

Denmark, Korea and the US were leading the Future Readiness factor, which examined the preparedness of digital transformation, the agility of the private sector to pursue such adoption, and the level of integration applied by all sectors, including that of Government.

Digital technologies are accelerating at unprecedented levels, driving transformations, reshaping the economy, and altering business and work structures. In this context, Malaysia has to be prepared to adopt and adapt to this fast-paced change and address the issues and challenges that come with it.

The following are the issues and challenges highlighted in the WCC report:

Lack of financial resources and digital skills

Smaller formal firms are highly dependent on traditional methods of payment, especially cash, and vulnerable segments of the population remained unbanked, despite the expansion of digital financial services.

Adoption of rakyat-friendly digital solution

Malaysia has advanced digitalisation of government services, and 70-90 per cent of government services are end-to-end (E2E) online or fully digitalised in 2022.

Malaysia compares relatively well with regional peers in aspects of e-government. However, the country still trails regional peers and high-income countries in the adoption of citizen-centric digital solutions, which would enable a more user-centred delivery.

Widening digital divide

Bridging the digital divide and developing a dynamic and safe digital economy involves the following reforms, which were recommended in five priority areas:

(i) digital infrastructure,
(ii) digital platforms (public and private),
(iii) digital financial services,
(iv) digital literacy and advanced digital skills,
(v) digital safeguards, such as data protection and cybersecurity.

Nevertheless, all these factors must give importance to “cyber security”, which reduces disruptions in business operations and prevent the loss of credibility of services provided.

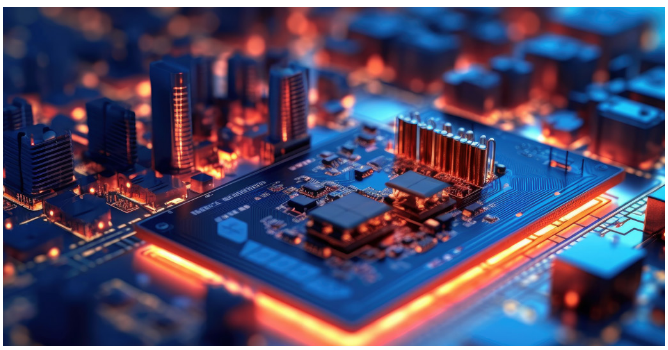
Malaysia’s 2023 budget allocates RM10 million to the National Scam Response Centre (NSRC) to combat cybercrime, which is rising in the country. In 2022, more than 25,000 cybercrimes involving losses worth RM850 million were reported. The allocation aligns with the national agenda on combating fraud and scams. CyberSecurity Malaysia (CSM) offers technical assistance to NSRC, especially in digital forensic investigations concerning online scams and fraud.

One of the initiatives is the ‘kill switch” policy for all banking institutions to empower users to freeze their banking accounts, including ATM cards, immediately should their accounts being compromised. An emergency response hotline through Cyber999 at CSM, where reports can be made regarding online fraud and scams, has also been set up.

MALAYSIA PROGRESSES IN TECHNOLOGY ADOPTION AMIDST CHALLENGES

Since the pandemic, the implementation of digital technology resulted in a shift to online transactions that gave rise to the growth of e-commerce. This led to a 33 per cent increase in the value of e-commerce transactions of RM896 billion in 2020 compared to RM675 billion in 2019.

Malaysia’s digital economy, which includes e-commerce and information technology, contributed RM68.6 billion or 19.1 per cent to the GDP in 2019, based on data from the Department of Statistics Malaysia. Digital trade is projected to account for 22.6 per cent of GDP by 2025, according to MyDigital.



Furthermore, e-commerce alone had contributed nearly RM30.2 billion to GDP, rising from an 8.5 per cent share in 2019 before the pandemic to around 12 per cent in 2020, as the Institute of Strategic & International Studies (Isis) Malaysia reported. The report also indicated that 26 per cent of e-commerce value-added came from the ICT industry. E-commerce in other industries accounted for the remaining 74 per cent.

Digitisations of trade through e-commerce platforms have intensified cross-border trade, making it quicker, easier and cheaper for consumers to shop online and purchase a wide array of products and services from local and international online stores. This resulted in trade expansion which contributed to productivity gains. These well-regulated digital transactions via online platforms provide consumers with greater access to information about details of the products purchased, price structure, extended warranties and other pertinent information related to the product.

The e-commerce platforms drive innovation as demand for their products increases, improve productivity, provide growth for funds and improve their competitive edge as firms compete with each other for their share of the market. Nevertheless, a solid and supportive digital economy ecosystem must be in place. Currently, about 81 per cent of Malaysian internet users utilise online digital services, and businesses are adopting technologies and applying digital tools to enhance customer service.

MSMEs find it difficult, especially in bearing the high costs of digitalisation and seeking financial assistance, and they face the need for an integrated and holistic system to digitalise their operations. Malaysia needs to catch up to countries like Thailand, Philippines, Vietnam and Singapore in digitalisation efforts. Around 77 per cent of SMEs in Malaysia remain at the initial stages of digitalisation. MSMEs' lack of technology adoption and limited diffusion of technological innovation contributed to low productivity. Given the significant presence of MSMEs in the economy, accounting for 97.2 per cent of total establishments as of December 2020, enhancing the productivity performance of MSMEs contribute significantly to improving national productivity.

The digital adoption rate needed to be faster among businesses. These included low web presence of companies, with only 53.9 per cent having a web presence in 2019, and minimal adoption of IoT, cloud computing and data analytics, especially among micro, small and medium enterprises (MSMEs).

A survey commissioned by SME Corp and Huawei Technologies showed that **usage of IoT, cloud computing and data analytics needs to be improved among the MSMEs.** There is also a significant digital divide between firms and regions. While anecdotal evidence may suggest that more businesses are adopting digital technologies because of the pandemic, these are more likely from larger firms. It was also found that many SMEs are ill-equipped and unprepared to shift towards digitisation.

E-commerce alone had contributed nearly RM30.2 billion to GDP, rising from an 8.5 per cent share in 2019 before the pandemic to around 12 per cent in 2020.

A shortage of digital talent and an ill-equipped workforce are also the current challenges. Only 15 per cent of Malaysians have advanced ICT skills. **There were also gaps in digital infrastructure** where 50 per cent of SMEs needed to prepare to adopt new norms of remote working due to difficulties related to a lack of resources, information, infrastructure, integration of systems and internet connectivity.

The digital divide among Malaysians has widened over time due to inequality in economic opportunities. Lack of accessibility and challenging geographical terrain in rural areas contribute to the digital dive as it is challenging to ensure comprehensive coverage of digital infrastructure and service.

This resulted in low participation in the digital economy among rural communities and a lag in business digital adoption. For those that have adopted technologies, only a minority explored frontier technologies like data analytics.

To enhance resilience, all sectors need to improve their efficiency, modernize production processes, and develop new products and services. This involves measures such as improving operational processes, adopting emerging technology for product development, accelerating talent development, and engaging in high-value-added activities. These efforts will boost business competitiveness and improve sectoral productivity.

Investment in R&D&C&I from both the public and private sectors is lacking compared with developed countries. The R&D expenditure of business enterprises declined from RM10 billion in 2016 to RM6.6 billion in 2018, with the share decreasing from 56.6 per cent to 43.9 per cent.

Another challenge is the lack of coordination in governing science, technology, and innovation (STI). It indicates the need for agile governance for STI to synergise actions across ministries, agencies, industries and communities. Additional hurdle is the misalignment of research priority areas with research and development (R&D) output, import and exports. and intellectual property (IP). Inefficient resource allocation and the lack of suitable funding to drive innovation capacity are also the issues in building a dynamic R&D&C&I ecosystem.

To enhance resilience, all sectors need to improve their efficiency, modernize production processes, and develop new products and services. **This involves measures such as improving operational processes, adopting emerging technology for product development, accelerating talent development, and engaging in high-value-added activities.**

THE NATION IS FORGING AHEAD IN TECHNOLOGY AND DIGITALISATION

Malaysia has made progress in its digital journey. The country must shift the economic paradigm and emphasise digitalisation, technology adoption, value-creation, creativity and innovation to enhance its competitive edge. The focus should be on improving skills, developing talent, inculcating a technology mindset, emphasising R&D, and strengthening public-private sector collaborations to expand regulatory reforms to face new regulatory challenges.

The advancement of technology in an ever-changing global economy has highlighted the urgency for the nation to adopt a more agile and proactive approach in moving towards a high technology-based economy. The 4IR, through the intensification of digitisation and the emergence of new technologies, is affecting activities, processes and speed of doing things in unprecedented ways.

The Malaysia MADANI concept also stresses Innovation, Prosperity and Sustainability, among others. Innovation is a continuous and evolutionary process that empowers citizens with infrastructures that support the innovation ecosystem. It is the game changer that will enhance competitiveness while releasing society's potential in shaping a more desirable future. The focus should be programmes that improve business strategies to support economic and productivity growth, build a future workforce, accentuate technology adoption, and manage cost efficiency.

MYRESKILL IOT

MPC initiated the MyReskill IoT Programme for small and medium-sized enterprises (SMEs), targeting 5,000 companies in manufacturing, manufacturing-related services, agriculture, and services to implement IoT projects within their companies. This programme is the brainchild of the Electrical and Electronics Productivity Nexus (EEPN) in collaboration with the Machinery and Equipment Productivity Nexus (MEPN) and the Digital Productivity Nexus.

1. **Assist companies in adopting Industry 4.0 among the local industries.**
2. **Train the Industry IoT knowledge and skill-set for the non-coding workforce so that they can remain relevant in the job market; and**
3. **Support, coach, prepare and enable 5,000 participating companies to carry our IoT project within their companies.**

The MyReskill IoT Programme exposes SMEs to digitalisation and emphasises that digitalisation can be easily incorporated into business functions. The programme nurtures local companies to go global and be global champions, enabling them to move up the value chain and enhance productivity through innovation and outreach programmes led by EEPN. SMEs benefit from improving productivity and becoming more competitive as they acquire knowledge of Industry 4.0 technologies and implementation methodology.

At the same time, applications of IoT and AI, specifically machine connectivity and big data analytics in the manufacturing sector, offer new opportunities for innovation and growth. The participants are also assessed using Productivity1010, a digitisation, self-diagnostic tool, to assist companies in digitising targeted manufacturing processes based on proof-of-concept projects via training and on-site engagement.

Embarking on Green Technology

One of the key themes of the 12MP is "advancing sustainability", which outlines the country's aspirations to become a carbon-neutral country by 2050, requiring robust technology adoption and digitalisation. The pledge places Malaysia among the earliest in ASEAN to support climate action. This ambition is supported by five pillars of deploying renewable energy (RE), managing carbon emissions, water and waste; driving the development of sustainable cities; and accelerating the green economy.

The Government addresses climate change across all sectors to move towards a low-carbon nation. Collaborative efforts between Federal, state and local governments, and the private sector be intensified to support the transition.

More private sector companies will be encouraged to declare their aspiration to achieve net zero carbon emissions by 2050.

The revised Budget 2023 emphasised the importance of good governance in actualising plans aimed at helping everyday Malaysians and MSMEs towards green initiatives and digital advancements. This aligns with fulfilling environmental, social and governance (ESG) standards, which embody the Malaysia MADANI vision where digitalisation and best practices in green technology can serve as great equalisers in Malaysian society.

To pursue this initiative, SMEs are encouraged to drive growth in the green economy by adopting environmentally sustainable practices to attract foreign investors.

Budget 2023 introduced incentives such as the SME Digitalisation Grant Scheme, subsidies, loans, and guarantee facilities to support SMEs in green transition.

Pursuing ESG initiatives

To drive and spur innovation which is the catalyst for Malaysia's productivity to grow in leaps and bounds, the implementation of ESG initiatives (Environmental, Social and Governance) should be at the forefront of any organisation. Socio-economic development that is low-carbon, less polluting and resource-efficient lead to a green economy, create more opportunities for growth and shift people's behaviour towards sustainable consumption and production practices.

ESG takes on a holistic approach to sustainability, significantly as an enabler that promotes economic sustainability, reduces operating costs, enables national development to remain relevant at the global level raises productivity and increases the value of goods and services to a competitive level. Foreign investments in sustainable and green technology sectors such as carbon capture, storage, hydrogen energy and the electric vehicle should be secured to unlock growth areas that support Malaysia's sustainable agenda.

Industries need to reinvent the wheel and play a more proactive role in enhancing technology, promoting talent development, intensifying ecosystem creation, strengthening cooperation with local universities and industry players, nurturing a productive mindset and pushing for digital literacy, which will guide organisations towards digitalisation and innovation.

In addition, four factors have been identified in the ESG initiatives to enhance productivity performance. These are:

- ESG laws and regulations that promote sustainable and inclusive growth;
- ESG as a productivity catalyst for the nexus;
- Corporate cultivation of ESG; and
- Benchmarking ESG implementers.

HOTEL STEP-UP PRODUCTIVITY PROGRAMME FOR ENERGY EFFICIENCY

With the re-opening of Malaysia's international borders and increased tourism activities, hotel room bookings are rising. Hoteliers most welcome this, but it presents a challenge to hoteliers facing high operating costs and increased resource consumption to cater to customers' needs and expectations.

Through Tourism Productivity Nexus (TPN) and in collaboration with the relevant public and private sectors, MPC is conducting the Hotel Step-up Productivity programme to reduce hotel operating costs through increased productivity. The programme is part of TPN Sayangi Malaysia, a holistic sustainable tourism campaign towards building a great tourism nation. The scopes of the Hotel Step-up Productivity programme are:

1. **Efficient and optimal use of electricity;**
2. **Broad adoption of technology and digitalisation; and**
3. **Efficient management practices through process improvement.**

Energy efficiency is the main focus as the cost of a hotel's electricity bill is the second highest from its total operating costs. TPN collaborates with the Energy Commission (ST) and Sustainable Energy Development Authority (SEDA) through their Energy Audit Conditional Grant (EACG) to enable hotels to embark on energy audit exercises at their buildings. Further to this, hoteliers receive reports on areas of improvement for efficient use of electricity. Following the report is the implementation stage, in which hotels execute the recommendations for energy efficiency. 30 hotels are participating in the programme, including five budget hotels. TPN also collaborates with budget hotels and Gading Kencana Sdn. Bhd. for renewable energy.

The programme is ongoing, and at the completion, hotels are expected to reduce their operating costs by up to 20%.

Becoming the Regional Digital Hub

Malaysia is on the right track to become a digital hub, with several companies set up as data processing centres. The recent interest shown by AWS to invest RM25.5bil in Malaysia shows that the country has the potential to become an "Asian Digital Tiger" in the near future. Currently, Malaysia has achieved 50 per cent coverage of 5G and is expected to hit 80 per cent by year-end.

Two game changers are identified for accelerating technology adoption and innovation: enhancing digital connectivity for inclusive development and aligning R&D towards commercialisation, wealth generation and economic growth. The implementation of these game changers will ensure 100 per cent 4G coverage in populated areas, broader 5G coverage, 100 per cent urban and rural households subscribing to the internet, 2.5 per cent Gross Expenditure on R&D (GERD) to GDP, 10.5 per cent contribution of e-Commerce to GDP and 25.5 per cent contribution of the digital economy to GDP.

Recommendations of affirmative actions towards becoming the regional digital hub:

- Intensify digital literacy among the public on the proper use of the internet and strengthen the cyber security ecosystem and regional cooperation on security to safeguard national interest to prevent scams, data breaches and other forms of cybercrime.

- Introduce specific measures to connect MSMEs with knowledge networks in R&D, including multinational corporations, academia, research institutions and innovator communities that can bridge the digital gaps.

- Encourage MSME agropreneurs to increase crop production and food processing through technology adoption, improve the food supply chain through high-tech new agriculture produce for agrofood operators, and enhance agro-logistics facilities.

- Increase high-impact R&D and commercialisation to facilitate innovation and growth and achieve high value-added and industry-driven products and solutions to move up the value chain. Realigning R&D towards commercialisation will accomplish the following objectives:

    - Increase commercialisation as well as spur innovation and growth;
    - Produce more high-value-added and industry-driven products and solutions;
    - Address low investment in R&D&C&I;
    - Improve productivity and move up the value chain; and
    - Address the low percentage of experimental development research.

- Develop digital technology in IoT, Big Data Analytics (BDA) and Artificial Intelligence (AI), which can be applied across all sectors, such as agriculture, manufacturing, services, health, and finance.

- Increase the number of adaptive STI talent and mainstream the enculturation and adoption of technology. In addition, The TVET initiative should leverage emerging technologies such as virtual reality, augmented reality and artificial intelligence to complement existing hands-on teaching and learning, including research & development conducted in laboratories and workshops.

- Improve rankings of poor-performing indicators in the WCR and other international reports through deep dive analysis. This may involve reviewing current legislation that impedes performance and collaborative efforts with other government agencies and the private sector to initiate corrective action.

- Emphasise green technology to achieve net-zero greenhouse gas (GHS) emissions by 2050 and mitigate the country's impact on climate change. Green Investment Tax Allowance and Green Income Tax Exemption are extended until the end of 2025 to spur speedier uptake of ESG initiatives.

ROBOFUN HACKATHON

Robofun Hackathon is a collaborative project through a strategic partnership among Intel, Malaysia Investment Development Authority (MIDA), MPC and SCUTTLE Robotics Asia involving five local universities, namely University Malaya (UM), Universiti Putra Malaysia (UPM), Universiti Sains Malaysia (USM), Universiti Teknologi Petronas (UTP), and Universiti Tunku Abdul Rahman (UTAR).

Robofun aims to put the latest Autonomous Mobile Robot (AMR) into practice. The objectives are to:

1. Cultivate integrated experience around mechanical, electronics, robotics, and AI mindset on students, especially those who are not from the computer science and engineering background, via fun learning experience with AMR;
2. Transfer AMR knowledge to university lecturers and students;
3. Break the myth that robotics, AI, and other technical subjects are only for the techies; and
4. Encourage lecturers and students to develop start-up solutions to help SMEs solve AMR and robotics challenges.

The collaboration produced a robust AMR solution that could accelerate technology advancement. Intel and SCUTTLE developed the programme's physical training curriculum, which covered AMR assembly to solutions development to make it capable of functioning to the need of each AMR use case. MPC and MIDA support the programme's coordination and management. Upon completing the Train-The-Trainer (TTT) stage, the five participating universities enrol participants for Robofun Hackathon.

Quality regulatory ecosystem increases the ease of doing business

CHAPTER 4

QUALITY REGULATORY ECOSYSTEM INCREASES THE EASE OF DOING BUSINESS

MALAYSIA IS COMMITTED TO IMPROVING THE EASE OF DOING BUSINESS

Ease of doing business refers to how easy or difficult for companies, entrepreneurs, investors, and traders to start and operate a business in a country. It measures the conduciveness of a country's regulatory environment for business development and operation. A nation's regulatory environment, and by extension, its ease of doing business, is a crucial determinant of the country's business climate which spurs economic growth and prosperity. Equally important, quality regulations protect a country's citizens. **Malaysia is committed to increasing the ease of doing business in the country and enhancing its pro-business policy.** A high ease of doing business attracts more high-impact foreign and domestic direct investments, courts international trading partners to enter business with Malaysia, and enables businesses to grow and expand seamlessly. This creates a spillover effect in creating more job opportunities and increasing socio-economic activities. At the firm level, a conducive business environment increases innovation, productivity, performance and profit. A supportive business ecosystem for economic sectors and industries fosters robust development and improves products and services. At the national level, enhanced ease of doing business catalyses dynamic economic growth.

Efficacious policymaking and continuous regulatory reforms are the solution for a quality, effective, and efficient regulatory environment for high ease of doing business.

Efficacious policymaking and continuous regulatory reforms are the solution for a quality, effective, and efficient regulatory environment for high ease of doing business. Malaysia recognises the regulatory environment's substantial effect on the behaviour and performance of companies. Unnecessary regulatory burdens hinder businesses from commencing, expanding and growing their operations.

The Special Task Force to Facilitate Business (PEMUDAH) has been active since 2007 in improving the ease of doing business in Malaysia. PEMUDAH, as a public-private partnership platform, brings together senior government officers and captains of industries to collaborate on regulatory reform initiatives to enhance the country's business environment.

In 2023, the Government establishes the Special Task Force for Agency Reform (STAR) to increase public administration delivery and government services for Malaysians, including the business community. STAR comprises the top management from Ministries and Government Agencies and Department to implement interventions to solve issues and challenges the rakyat and businesses face.

THE SPECIAL TASKFORCE TO FACILITATE BUSINESS – PEMUDAH

PEMUDAH
Pasukan Petugas Khas Pemudahcara Perniagaan | The Special Task Force To Facilitate Business

Malaysia's Federal Government established the Special Taskforce to Facilitate Business (PEMUDAH) on 7 February 2007. The Minister of Economy co-chairs PEMUDAH with the Chief Secretary to the Government (KSN) and a private sector business leader. PEMUDAH's members comprise mainly the Secretary Generals and Director Generals of Government Ministries, Agencies, and departments, the private sector's prominent industry leaders and business associations, and non-governmental organisation heads.PEMUDAH aims to elevate the private sector's role as the primary driver of productivity and economic growth by forging a strong strategic relationship with the Government.

In February 2023, Malaysia's Economic Minister Rafizi Ramli, PEMUDAH's co-chair, announced that the Government is strengthening PEMUDAH's functions to enhance communication between the public and private sectors. PEMUDAH focuses on removing administrative red tape for the 4th Industry Revolution (4IR) players to operate and grow their businesses in a healthier environment and position Malaysia as a more business-friendly destination and market.

"This is important from the perspective of investments because the ease of doing business also defines our competitiveness"

YB Rafizi Ramli, Minister of Economy

PEMUDAH is formed by Technical Working Groups (TWGs), which address specific aspects of ease of doing business. As preparation for Malaysia to participate in the World Bank's Business Ready (B-Ready) report in 2025, PEMUDAH is realigning its TWGS according to B-Ready's ten topics covering the stages in starting a business, operating and expanding a business, and closing a business.

THE SPECIAL TASKFORCE FOR AGENCY REFORM – STAR

Beginning in March 2023, Malaysia's Government formed the Special Task Force on Agency Reform (STAR) to improve the delivery of government services, focusing on issues and challenges faced by Malaysians. STAR analyses, implements, and monitors solutions to problems, especially those related to basic necessities, infrastructure, and services, such as public healthcare, education, cost of living, ease of doing business, and daily supplies.

The Chief Secretary to the Government (KSN) chairs STAR, whose members are from the top management of Malaysia's ministries and government agencies and departments. Through the Bitara MADANI initiative, STAR has implemented interventions to reduce patient congestion at public hospitals, expedite the development to improve dilapidated schools, enhance daily raw food supply, accelerate the progress in improving government clinics and facilities, and reduce issues and challenges related to bureaucracy.

Implementation of Bitara MADANI projects is based on several key factors, emphasising the Malaysia MADANI agenda:

1. Minimum cost;
2. Use of readily available resources;
3. Urgent and fast implementation; and
4. High and direct impact on Malaysians

Bitara MADANI is implemented through the Whole-of-Government approach. Project Leaders are selected from among the government senior officials in ministries and agencies/departments different to those that execute the projects. This unique approach ensures cross-ministry/agency cooperation and implementation based on various spectrums of ideas and input.

Malaysia Productivity Corporation (MPC) is responsible for executing the initiative to reduce red tape and bureaucratic hurdles in increasing the ease of doing business through regulatory review and improvement. MPC facilitates a holistic regulatory review at the Federal, State, and Local Government levels.

MPC records that there are 3,295 regulations in Malaysia, comprising acts, regulations, permits and licences at the Federal Government level. This involves RM45 billion in compliance costs yearly. These regulations cover the various aspects and stages from starting, operating, and closing a business.

Depending on the type, size, and nature of the business, a business may go through some of the processes and procedures:

Starting a business

This stage involves, among others, registering the business, choosing a location, land conversion, obtaining relevant permits and licenses, getting planning approval, opening a bank account, hiring workers, complying with the tax and accounting, securing safety and machinery certificates, engaging with utility providers, and managing workers' accommodations. At this stage, investors and entrepreneurs may need to liaise with regulators and technical agencies at the Federal, State, and Local governments.

Efficient and effective processes and procedures in starting a business are crucial to ensure investors and entrepreneurs can enter the market fast to begin generating income. Longer processing time in obtaining the relevant licenses and permits and completing the necessary procedures lead to higher costs and use of resources.

Operating a business

Employers deal with various aspects of operating a business, covering aspects such as securing contracts, hiring and retaining workers, management of daily activities, paying salaries and taxes, maintaining records and accounts, marketing and promotion, dealing with partners and customers, and complying with standards for products and services.

This phase requires employers to comply with relevant laws and regulations that affect business sustainability and continuity, including consumer protection, environmental, health and safety, labour, and intellectual property. Supportive business regulations enable smoother operation and work processes, increasing enterprises' productivity and competitiveness. A conducive regulatory ecosystem also facilitates businesses to expand operations and spur innovation.

Closing a business

Businesses choose to cease operation for various reasons, such as bankruptcy, dissolution, deregistration, or liquidation. At this stage, companies may need to settle debts and liabilities, distribute remaining assets or profits, file final tax returns and accounts, cancel licenses and permits, and notify relevant authorities and stakeholders. Dissolving a business smoothly ensures no further costs incurred to employers.

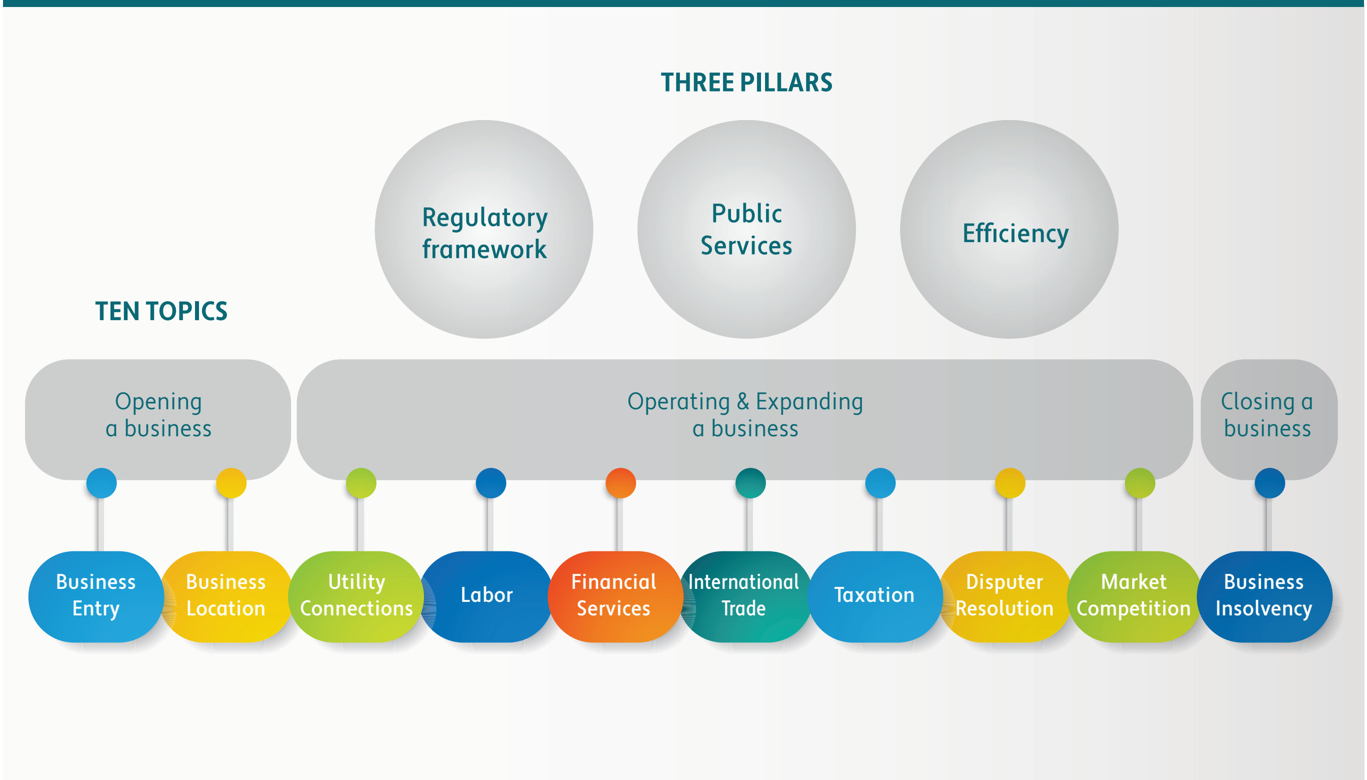
Ease of doing business can be measured by various indicators. **The World Bank measures the time, cost, and procedures required for an enterprise to complete each process, from initial contact with the relevant authority to the approval or final delivery of service or issuance of documents applied.** The procedures are any interactions with external parties. Time is recorded in calendar days to capture the necessary duration to complete a procedure. Cost includes all fees associated with completing the procedures.

Minimum procedures, lower costs, and short processing time constitute high ease of doing business.

Malaysia achieved a milestone in its effort to enhance the ease of doing business when it ranked 12 of 190 economies in the World Bank's 2020 Doing Business (DB) Report. DB captured dimensions of the regulatory environment affecting domestic enterprises. It provided quantitative indicators on regulations for starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency.

The Doing Business Report has been discontinued in September 2021. The World Bank is introducing the Business Ready or B-Ready report as a new flagship which measures the business and investment climates in countries worldwide. The first B-Ready report is expected to be published in 2024, and Malaysia will participate in the report beginning in 2025.

B-READY FRAMEWORK



MALAYSIA IMPROVES ITS COMPETITIVENESS RANKING IN GOVERNMENT EFFICIENCY

Business legislation highly correlates with productivity. Effective and efficient business legislation and regulations contribute to high ease of doing business by increasing productivity and efficiency, deeming a country competitive for investment, trade and industries.

Countries which rank high in the WCR Business Legislation sub-factor also rank high in Productivity and Efficiency sub-factors. Countries such as Denmark, Ireland, Singapore, and Switzerland, which hold the top four spots in the overall competitiveness ranking, recorded equally top rankings in Business Legislation and Productivity & Efficiency. Rankings in both sub-factors approximate each other, implying their strong connection. Therefore, increasing business productivity and efficiency necessitates quality business legislation.

Figure 1: Sub-Factor Business Legislation and Productivity & Efficiency Correlate in Competitiveness Rankings

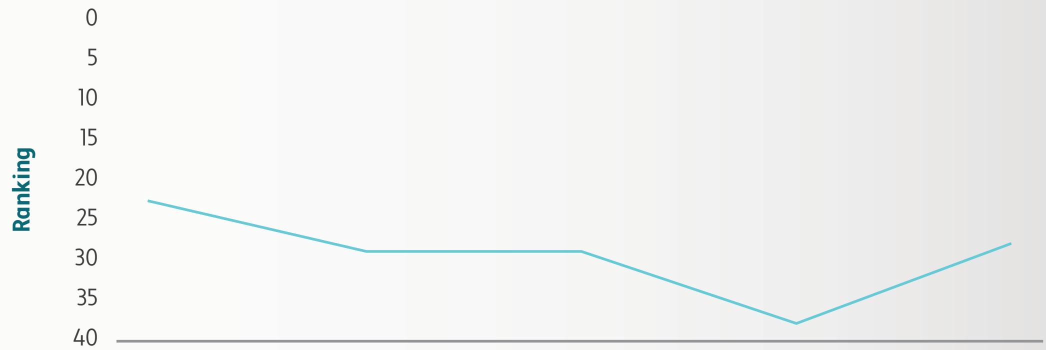
Country	Ranking (n=64)	
	Business Legislation	Productivity and Efficiency
Denmark	2	1
Ireland	3	3
Singapore	6	6
Switzerland	7	2
Thailand	31	38
China	39	31
Malaysia	45	36
Indonesia	46	42
Philippines	57	52

Source: World Competitiveness Yearbook (WCY), Institute for Management Development (IMD)

In WCR 2023, Malaysia has increased its overall ranking to 27 from 32 in 2022. The government Efficiency factor contributes to the improvement.

WCR Government Efficiency factor measures the extent to which government policies are conducive to competitiveness. Malaysia increased its Government Efficiency ranking to 29 in 2023 from 38 in 2022, denoting improvement in government services to the rakyat and business community. The factor's trend was declining between 2019 to 2021.

Figure 2: Malaysia's Competitiveness Ranking in Government Efficiency Factor, 2019 - 2023

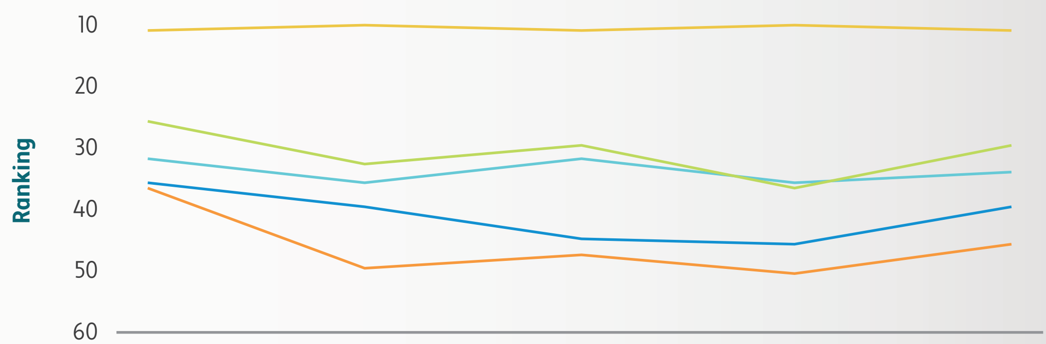


	2019	2020	2021	2022	2023
Government Efficiency	24	30	30	38	29

Source: World Competitiveness Yearbook (WCY), Institute for Management Development (IMD)

The improvement indicates a positive start for Malaysia to increase its ranking further. In terms of value, Malaysia's ranking recorded 59.4 points. Switzerland, which is in the topmost position in Government Efficiency, records 93.53 in value.

Figure 3: Malaysia's Sub-Factors Rankings under Government Efficiency, 2019 – 2023

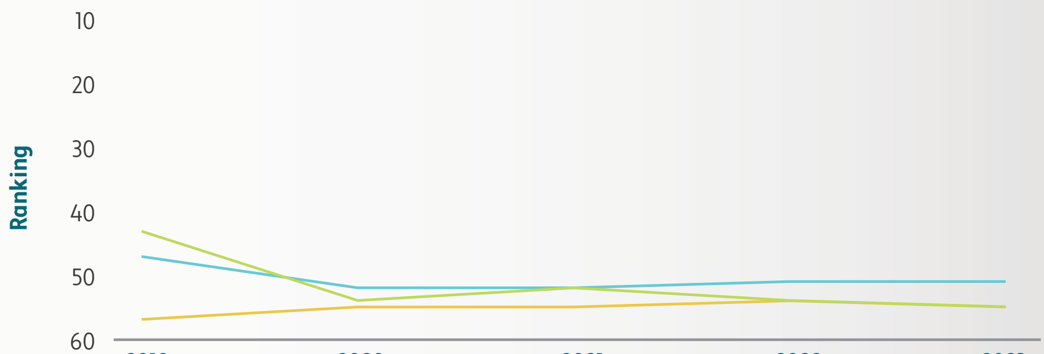


	2019	2020	2021	2022	2023
Government Efficiency	31	35	31	35	33
Tax Policy	10	9	10	9	10
Institutional Framework	25	32	29	36	29
Business Legislation	36	49	47	50	45
Societal Framework	35	39	44	45	39

Source: World Competitiveness Yearbook (WCY), Institute for Management Development (IMD)

The Government Efficiency factor consisted of five sub-factors: Public Finance, Tax Policy, Institutional Framework, Business Legislation, and Societal Framework. All sub-factors, except Tax Policy, recorded an improvement in rankings from 2022. Nevertheless, at the 10th spot, Tax Policy is considered among Malaysia's primary strengths in government efficiency. In all the sub-factors, Malaysia's ranking trend indicates below-average to average performance, except for Tax Policy. This implies room for improvement to break into above-average performance, approximating highly competitive economies.

Figure 4: Malaysia's Rankings of Selected Indicators Based on Hard Data, 2019 - 2023



	2019	2020	2021	2022	2023
Start-up days	46	51	51	50	50
Start-up	56	54	54	53	54
Tariff Barriers	42	53	51	53	54

Source: World Competitiveness Yearbook (WCY), Institute for Management Development (IMD)

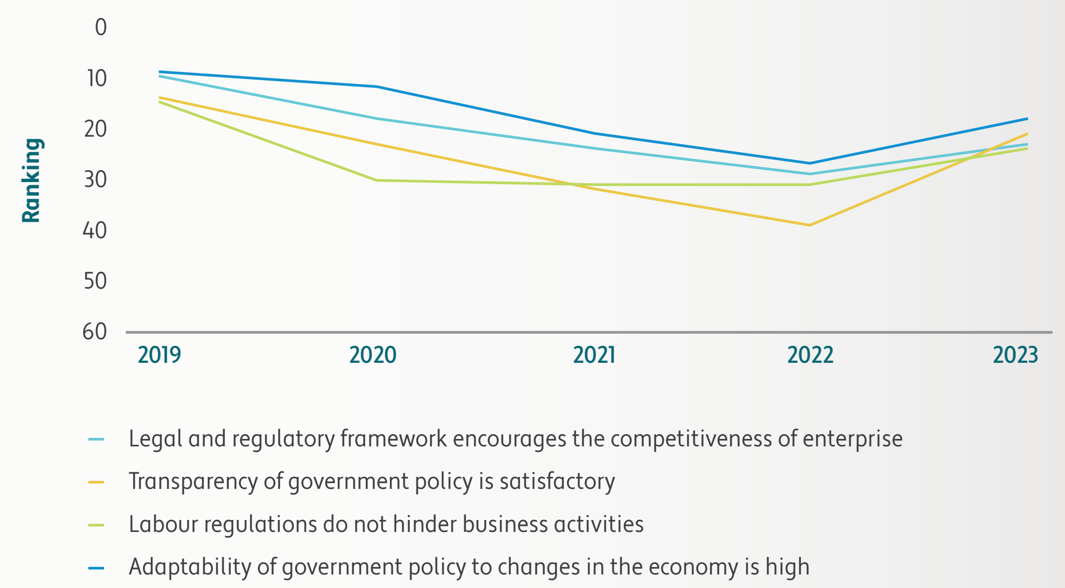
WCR measures competitiveness ranking based on hard data, which analyses competitiveness as it can be measured, or soft data, which analyses competitiveness as it is perceived. Hard criteria represent two-thirds of the overall ranking, whereas the survey data represent a weight of one-third.

On selected indicators based on hard data, three criteria are vital in determining the ease of doing business: Start-up Days, which measures the number of days to start a business; Start-up Procedures, which measures the number of procedures to start a business; and Tariff Barriers, which measures tariff on imports. All three criteria indicated a below-average performance, with ranks between 42 to 56. The ranking trends for the three criteria denote vast room for improvement. Start-up days and procedures are crucial to ensure businesses and investors can enter the market early to generate income. Longer start-up days and complex and many start-up procedures can deter investors from choosing Malaysia as the preferred investment destination.

The IMD Executive Opinion Survey asks mid- and top-level executives about the competitiveness conditions in the country they reside in and a few additional questions related to respondents' concerns about the country where they operate. **Malaysia's rankings in the four most relevant perceptions of the Government's business policies and regulations imply an increase in confidence in Malaysia's regulatory ecosystem and delivery of government services.** All four soft criteria show increased rankings in 2023 after consistent declining trends between 2019 to 2021.

Respondents, who were among the business community operating in Malaysia, perceived that the country's regulatory framework encourages firm competitiveness and that the government policies are transparent enough. They also viewed that labour regulations do not impede business activities. Government policies were also perceived as agile and adaptable to economic changes. **These views are positive indications to the Government that regulatory reform initiatives effectively increase the ease of doing business.**

Figure 5: Malaysia's Rankings of Selected Indicators Based on Executive Opinion Survey, 2019 - 2023



Source: World Competitiveness Yearbook (WCY), Institute for Management Development (IMD)

MANAGING CHALLENGES IN THE REGULATORY ECOSYSTEM ENHANCES EASE OF DOING BUSINESS

Policies and regulations are indispensable to the proper function of economies and societies. They are developed to protect the rights and safety of citizens, regulate the market and businesses, and ensure the effective delivery of public goods and services. Regulations maintain order and compliance, mitigate or eliminate crises and risks, and provide structure for societies. **Policies and regulations must work in the public's interest as they are meant for the public good.**

In a government organisation, effective bureaucracy ensures smooth administration in providing services and producing the best products for its main stakeholder – the people. Bureaucratic affairs refer to the public's dealings with the government at federal, state, and local council levels. Issues and challenges arising from bureaucratic practices are the red tape which hinders the public from receiving services efficiently and effectively.

Red tape refers to policies, regulations, legislative guidelines, administrative procedures and processes, or mandatory standards perceived or claimed to be rigid, redundant, excessive, repetitive, and burdensome to the public and businesses. Often, these result in longer waiting or processing times, additional use of resources and manpower, inaction, and increased compliance costs. They impose unnecessary burdens on the public, businesses, or even the government. Red tape is ineffective in achieving policy goals, thus producing sub-optimal and undesired outcomes. As such, bureaucratic practices and regulations are perceived as counter-productive, troublesome to the public, and hindering businesses from growing and expanding, contradicting the essence of policymaking and regulatory development and implementation.

Red tape is a common issue for economies. As industries and businesses are constrained by red tape, they face difficulties to survive, compete, and grow. This means economies are restricted from seamlessly creating jobs, generating and increasing income, reducing poverty and inequalities, and improving citizens' quality of life.

Addressing red tape creates a butterfly effect, that changes in public administration though seemingly small and insignificant, can have a large consequence for the public, businesses, and the economy. Likewise, if bureaucratic issues are left unattended, they can affect an economy negatively. Ineffective bureaucracy and red tape significantly challenge the ease of doing business in Malaysia. Some specific issues and challenges related to bureaucracy and red tape are:

- **Lengthy processing time**: One of the most common complaints is the lengthy processing time in obtaining approval and documents when applying for business licenses and permits, changing land status to industrial or commercial use, and registering properties. For land conversion, for example, it may take more than one year in some states and localities.

  Lengthy processing time may be rooted in multiple stages of the decision-making process. Delegation of power, for instance, can address this issue. Regulators may also opt for risk-based regulatory delivery, in which low-risk applications from businesses are entitled to fast processing.

- **Complex, numerous, and overlapping procedures:** Lengthy processing time may be rooted in complex and innumerable procedures at multiple regulators and agencies. Similar information sometimes requires submissions to different agencies and regulators using forms and formats particular to their practices.

  Using "superform" with one format applicable to multiple agencies can save time and use of resources. Digitalising processes and procedures tremendously help applicants and increase public service delivery.

- **Sequential work process:** The work process, such as in applying for licenses and permits, at many agencies and regulators, is sequential, and the subsequent step can only be done after completing the procedure before.

  However, in certain cases where no approval from another regulator is needed, steps can be done simultaneously to save time.

- **Lack of transparency and clarity**: Lack of clarity and transparency in the procedures and requirements for regulatory compliance create confusion and unpredictability for businesses, leading to potential misinterpretation of regulations.

  Clear and precise guidelines for regulatory compliance, made easily and readily available online, help to manage this issue. It saves time and resources as applicants do not have to meet with regulators to obtain information and guidance.

- **Obsolete and outdated regulations** pose challenges in today's fast-changing economic landscape, especially with advancements in science, technology, and digitalization. Such regulations can be unclear and ineffective in guiding and facilitating businesses, particularly those adopting disruptive business models. To address this, regulatory review and the "guillotine" approach are employed. The guillotine approach involves a comprehensive review and reform of existing business regulations. It aims to identify and eliminate unnecessary and burdensome regulatory requirements, streamlining the regulatory framework to support current and future business needs, improve ease of doing business, and boost productivity.

- **Corruption and abuse of power**: Corruption increases the cost of doing business and creates an uneven playing field for businesses. Corruption distorts the ease of doing business. Public service delivery can be perceived as inefficient, leading to decreasing trust and confidence in government services.

  Digitalising regulatory processes and procedures decreases the possibility of corruption, as almost all regulatory requirements are processed through systems, minimising in-person dealings.

- **Inconsistent enforcement of regulations:** Inconsistent regulatory enforcement leads to a lack of predictability and reduced business standardised practices. Predictability is particularly significant for investors as they need precise and accurate information before securing a location for investment.

  Centralising various regulatory processes and procedures for a specific purpose, such as land conversion, via a digital end-to-end one-stop-centre platform creates standardisation in enforcing regulatory requirements. Processes and procedures are more streamlined and integrated with real-time monitoring and access by regulators and applicants.

- **Manual processing of regulatory processes and procedures:** Manual processing of documents to comply with regulatory requirements is still widely practised, but digital platforms are readily available. However, their usage can be enhanced. Educating regulators and the public to shift to technology adoption and digitalisation can be done through a strategic communication plan and Behavioural Insights (BI) approach. The emphasis can be on the advantages of utilising digital services and incentivising the proper use of platforms.

BOOSTING EFFORTS TO ENHANCE REGULATORY QUALITY AND DELIVERY

Strengthening the evidence-based policymaking

Starting in 2021, evidence-based policymaking has been implemented through several approaches. Good Regulatory Practice (GRP), Behavioral Insights (BI), and regulatory experimentations form the basis of productivity improvement programmes and projects related to policies and regulations.

Express Construction Permits E10 initiative is one of the high-impact initiatives geared towards evidence-based policymaking. Observations, information and experience from implementing Project E10 gave evidence that the model successfully accelerated the processes and procedures for approving and developing manufacturing plants.

Through the E10 pilot project led by the Kedah Kulim Municipal Council (MPKK), the approval processing period was reduced from 24 to 10 months. The investor company saved compliance costs of RM9 million and generated earlier revenue of RM840 million. 2,500 new job opportunities were offered to the local community. Productivity in the public sector and industry increased by 140 per cent.

The evidence-based policymaking is also used for projects under the Special Task Force on Agency Reform (STAR) and the Special Task Force to Facilitate Business (PEMUDAH) in designing and implementing solutions for several urgent issues faced by the public and businesses. The process involves analysis, recommendations for improvement, regulatory experimentation and scaling up solutions. These phases are used in managing the issues of overcrowding in government hospitals, bureaucratic red tape, and supply chain disruptions.

Structuring and integrating regulatory review and interventions

The MyMudah initiative continues to play an effective role in effective regulatory delivery to improve the "ease of doing business" in Malaysia. Establishing MyMudah Units at ministries, government agencies, state governments, local authorities, and business associations increases efficiency and effectiveness in reviewing business regulations and solving regulatory issues. Administrators or responsible officers in each ministry or agency can access the MyMudah website to update the implementation status of the registered issues.

The platform is a channel for the industry to voice business regulatory issues, which can be handled directly by the appropriate authorities or regulators. The role of industry associations can be strengthened to increase their involvement more effectively in formulating and implementing solutions to business regulatory issues.

Since 2020, MyMudah has received more than 600 issues related to business regulations and successfully resolved more than 50 per cent of the number. Accepted issues are mainly on the unnecessary burden of business regulations and bureaucratic red tape businesses face.

Up to now, 86 Government bodies and 36 business associations have established MyMudah Units in their respective organisations. The MyMudah Unit works to carry out planned, thorough and comprehensive regulatory reviews to improve the business environment. This effort simultaneously increases the efficiency, integrity and effectiveness of regulatory delivery by the public service.

On the industry's side, solving regulatory issues through the MyMudah platform has reduced operating costs and resource consumption and increased productivity, and competitiveness.

Among MyMudah's latest successes was the abolition of documentation charges amounting to between RM100 - RM600 for housing loan agreements imposed by banks, where these costs are borne by home buyers. Bank Negara Malaysia has issued a notice of the cessation of this documentation charge on 1 February 2023. This action will reduce the compliance cost by an estimated amount of around RM50 million.

The Agile Regulation approach

Developed countries have adopted the Agile Regulation approach to solving issues related to implementing and enforcing regulations efficiently and effectively. **Agile regulation focuses on regulators' flexibility, adaptive, and responsive to emerging challenges and opportunities.**

It responds to needs and changes over planning frameworks, encourages broader regulatory participation and fosters more centralised and integrated governance in implementing regulations.

The Agile Regulation approach can assist investors, businesses, and regulators to increase regulatory implementation efficiency, reduce duration, processes and procedures, and optimise costs and resources.

The Agile Regulation approach provides solutions to critical issues in regulatory delivery. It addresses Issues related to bureaucracy, unnecessary regulatory burden, outdated regulations, repetitive processes and procedures, unclear guidelines, non-integrated regulatory implementation, and redundant documentation.

Implementing agile regulation does not necessarily change or override regulatory compliance but involves implementing or enforcing regulations by focusing on customers' needs. For example, some work processes in license application approval can be done simultaneously instead of sequentially. Agile regulation addresses inefficient regulatory governance as regulators integrate their work, especially in delivering cross-ministries regulations, reducing in-silo work processes and improving transparency.

Scaling up Good Regulatory Practice (GRP)

The adoption of Good Regulatory Practice (GRP) as a national policy since 2021 is an important milestone in Malaysia's regulatory reform. The step is timely as the country is going through the recovery phase from the impact of the pandemic on the economy, health, and overall public well-being. As regulations impact almost every aspect of lives, implementing GRP is expected to reduce unnecessary regulatory burdens on businesses and the public.

Among the GRP elements that must be adopted are Regulatory Impact Analysis (RIA), Cost-Benefit Analysis and Regulatory Notification. A holistic implementation of the National Policy for GRP (NPGRP) will ensure an effective, efficient, and accountable regulatory system in strengthening public sector governance, ultimately leading to better economic growth and improved well-being of the people.

The Government mandated MPC as the national oversight body for GRP to promote, facilitate and support GRP implementation by Ministries and Agencies in strengthening evidence-based policy-making and agile regulatory delivery within the public sector. This will resolve productivity challenges and capitalise on productivity growth opportunities.

Embedding Behavioural Insights (BI) in policymaking

Policies and regulations are traditionally developed by assuming humans act logically and sensibly. However, this belief does not always account for the fact that humans' decisions and actions are often influenced by various factors such as social and cultural circumstances, biases, and personal experience.

Recognising this issue, policymakers globally are increasingly applying Behavioural Insights (BI) to understand how people make decisions. BI, a policymaking tool that combines elements from psychology, social science, and cognitive science, allows **policy development based on empirically-tested evidence. BI application has proven to enhance public compliance, reduce compliance costs, and improve policy outcomes, leading to more efficient use of resources and better evidence-based policymaking.**

The OECD described that BI helps identify policy options to tackle the behaviour at the core of the policy problem. These options can be 'soft' behavioural interventions, such as changing the content and presentation of a label on food or appliances. Policy options can also be more traditional, like a regulation.

MPC has been entrusted with implementing BI in public policy since 2020. MPC has been developing modules, conducting studies, experiments, and capacity-building programmes to facilitate the application of BI by government institutions. MPC has driven several initiatives to promote BI adoption in Malaysia, including organising awareness programmes, broadening BI initiatives, developing BI programme evaluations, publishing BI guidelines and case studies, and conducting capacity-building programmes.

The concepts of Nudging and BI have become integral in public policy vocabulary. These concepts form the basis of Behavioural Public Policy (BPP), a field of public policy development. However, as interest in BPP grows, policymakers and practitioners face an emerging challenge to understand the nuances of BI, its methodologies, tools, validation processes, and ethical considerations.

THE WHOLE-OF-NATION APPROACH FOR EASE OF DOING BUSINESS AND COMPETITIVENESS ADVANCEMENT

The Whole-of-Nation approach for high ease of doing business and competitiveness advancement synergises the efforts of all stakeholders, including governments, businesses, and citizens. This strategy focuses on enhancing the regulatory environment to spur economic growth and improve the living standard. Continuous consultation, efficient coordination, transparent communication, and productive cooperation are crucial elements to the Whole-of-Nation approach in overcoming challenges posed by the interconnectedness of various sectors and economies.

The Ministry of Investment, Trade and Industry (MITI) is developing a New Industrial Master Plan 2030 (NIMP2030). This plan aims to overhaul the foundation of Malaysia's manufacturing sector, thereby increasing the country's global competitiveness. The implementation of the plan hinges on the Whole-of-Nation approach. It is designed to ensure that all significant stakeholders, which includes investors, businesses, Small and Medium-sized Enterprises (SMEs), and citizens, are effectively engaged while also considering aspects of sustainability and inclusivity.

This approach allows for the blending of expertise and perspectives of all stakeholders, leading to a more comprehensive, inclusive, and effective regulatory reform process.

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