BERSEKUTU BERTAMBAH MUTU

PRODUCTIVITY REPORT 2022

MPC

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CONTENTS

PRODUCTIVITY FOR PROSPERITY

A commitment to sustainable growth and resilience

The theme for Productivity Report 2022 aligns with the aspiration of the Twelfth Malaysia Plan, 2021 – 2025, to achieve the objective of a "Prosperous, Inclusive, Sustainable Malaysia", encompassing the first half of the Shared Prosperity Vision 2030.

The theme echoes Malaysia Productivity Corporation's commitment to driving the nation's productivity, contributing to the national agenda stipulated in the Twelfth Malaysia Plan and Shared Prosperity Vision 2030.

Productivity is the game changer in accelerating national economic recovery. Elevating productivity at the national, sectoral, and enterprise levels means improving performance and profitability, leading to a better quality of life and a prosperous living.

The national recovery journey is ongoing towards sustainability and resilience, a combination for Malaysia to weather the future robustly.

29TH PRODUCTIVITY REPORT 2022

EXECUTIVE SUMMARY

Malaysia Productivity Corporation (MPC) is an agency under the Ministry of International Trade and Industry (MITI), mandated to drive the nation's productivity growth. MPC productivity improvement initiatives affect changes at the national, sectoral, and enterprise levels, leading the country to higher global competitiveness. MPC's functions are guided by Malaysia Productivity Blueprint (MPB) and, in a more extensive parameter, the Twelfth Malaysia Plan (12MP), 2021 – 2025 and relevant government policies.

At the national level, MPC's initiatives are based on four key productivity drivers: talent, technology, business environment, and subsidy. Productivity programmes are implemented at the sectoral and enterprise levels through 11 Productivity Nexus, including two new Nexus established under the 12MP. In addition, productive process improvement affects growth at the enterprise level.

These factors lead to productivity growth, projected at 3.6 per cent in 2022. Subsequently, this contributes to economic recovery and sustainable growth.

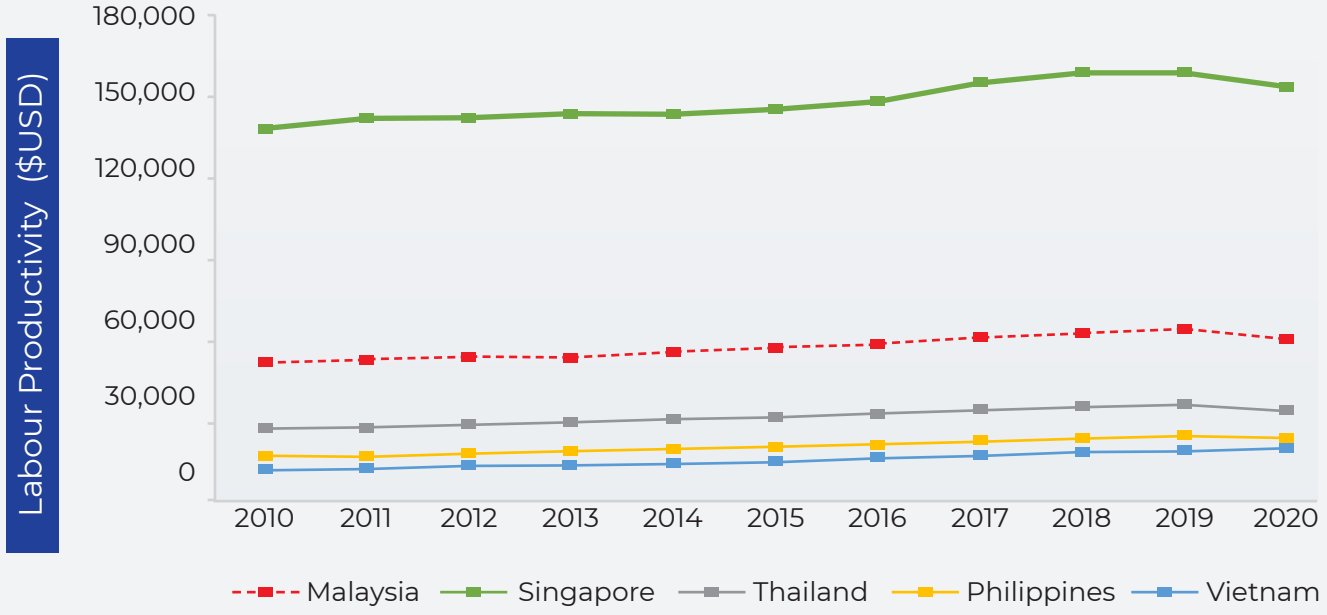
2022 began with a promise for higher productivity, given the signs of recovery in 2021 when productivity grew to 1.8 per cent after a contraction at -5.3 per cent in 2020 due to the impact of the pandemic. Malaysia is still struggling with the repercussions of the COVID-19 pandemic. The country has not returned to its pre-pandemic normalcy. Nevertheless, the future outlook is promising.

Chapter I of this report presents Malaysia's productivity growth and its relevance to competitiveness. Chapter II deliberates the critical drivers for productivity growth at the national level, which can be used as a feasible reference for policymakers and authorities in making informed decisions. Chapter III zooms into the role of the 11 Productivity Nexus in affecting productivity at the sectoral level. A deep dive into the respective industry or subsector, its productivity performance, challenges, and recommendations are presented to give an overall outlook on how these industries and subsectors impact the overall productivity growth. Recommendations in Chapter III may assist the relevant stakeholders in boosting productivity at the sectoral level. Chapter IV deals with process improvement to improve productivity at the enterprise level.

Malaysia is on the right recovery track for the economy and the rakyat to prosper. 2021 ended on a positive note, and 2022 picked up better. Productivity Report 2022 is presented with an air of optimism.

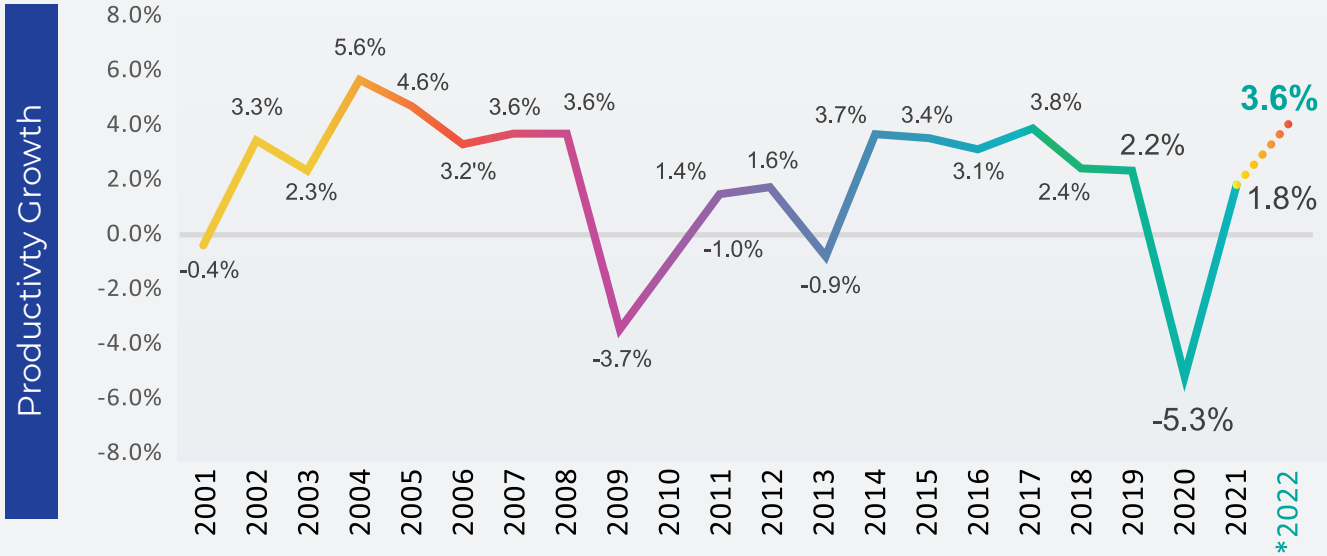
KEY HIGHLIGHTS

MALAYSIA'S PRODUCTIVITY PERFORMANCE AMONG ASEAN-5 COUNTRIES



Source: *World Competitiveness Yearbook (WCY)*

MALAYSIA'S PRODUCTIVITY GROWTH, 2001 – 2022*



Note : 2009: *Global financial crisis; 2013: Financial crisis; 2021: COVID-19 pandemic; *2022: Projection*
Source: *Department of Statistics Malaysia (DOSM)*

MESSAGE FROM THE SENIOR MINISTER

“ MPC’s role in driving the nation’s productivity growth has a commendable impact on Malaysia’s global competitiveness, projecting the country as the preferred destination for investment, trade, and business. ”

Malaysia is recovering robustly. The Ministry of International Trade and Industry (MITI) welcomed 2022 positively as the country moved into the economic revival phase. While the journey has not been easy, Malaysia has shown resilience in battling the pandemic.

Malaysia’s Gross Domestic Product (GDP) rose by 3.1 per cent in 2021, and productivity growth grew by 1.8 per cent. The country attracted a record high of approved investment at RM306.5 billion in 2021, the highest since 2006.

We are on the right recovery track.

The economy is projected to strengthen between 5.5 to 6.5 per cent in 2022. The growth momentum is expected as Malaysia is phasing into the endemic period with the entire economic reopening. Alongside, national productivity is likely to rise by 3.6 per cent. Malaysia Productivity Corporation (MPC) has a massive task at hand.

Arduous and expeditious efforts must be on the critical productivity drivers – talent, technology, regulation, and subsidy to affect productivity. Targeted initiatives should focus on the industries that are still registering negative productivity growth in 2021. An instance, the construction industry recorded a productivity contraction at -4.3 per cent last year, calling for an amplified effort to optimise the industry’s operation.

Productivity Report 2022 sheds light on MPC’s drive for higher national productivity. I applaud MPC’s strong relationship with the private sector to realise its initiatives. This report illustrates how the industry plays a critical role in rebuilding the economy, backed by the government’s support. The right policies and assistance are in place, forming a conducive canvas for businesses to prosper. Nation-building is never a one-man job.

I congratulate MPC on the publication of Productivity Report 2022. It bears good news.

Dato’ Seri Mohamed Azmin Ali
Senior Minister
Minister of International Trade and Industry

MESSAGE FROM THE CHAIRMAN

> “ After rebounding in 2021 at 1.8 per cent from -5.5 per cent in 2020, Malaysia’s productivity growth is on the road to recovery to achieve the target of 3.6 per cent in 2022. MPC is committed to boosting productivity at the national, sectoral, and enterprise level. ”

2021 rebound in productivity growth is a strong indication that Malaysia will fare better in 2022.

Malaysia Productivity Corporation (MPC) is committed to continuously delivering the mandate as envisioned in the Twelfth Malaysia Plan and Malaysia Productivity Blueprint (MPB). We are steadfast in impacting productivity growth and boosting the nation’s global competitiveness. Productivity and competitiveness are two essential areas in the economic sphere which are interrelated. Productivity catalyses growth and translates into better business performance and higher profitability. It leads to a prosperous nation, where its subjects enjoy a better quality of life.

Being at 27th position among 141 countries in the Global Competitiveness Report (GCR) 2019, Malaysia fares a comfortable stature in global competitiveness. This must not summon complacency. Malaysia aims to be the destination of choice for investment, trade, and business activities regionally and internationally. Productivity is the game changer for heightened competitiveness.

MPC delivered remarkable results in 2021. In the construction industry, intervention through Malaysia Mudah or MyMudah yielded 1.75 billion ringgit compliance cost savings per year through “Silence Implies Consent” in the issuance of CCC. This year MyMudah is strengthened by establishing its unit at all government bodies and business associations. As the Secretariat for the Special Taskforce to Facilitate Business or PEMUDAH, MPC continues to affect regulatory reform positively. The success stories include the E10 Project in Kulim, which has expanded to other locations and states. E10 shortened the process to obtain approval for a manufacturing plant from 24 to 10 months, leading to cost savings of around RM500 million.

We learn from past lessons and successes. With this experience, MPC pledges commitment to more vital national productivity and competitiveness.

Ram Ganesan Karthigasu
Chairman
Malaysia Productivity Corporation (MPC)

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CHAPTER 1 | NATIONAL PRODUCTIVITY PERFORMANCE

COUNTRIES GLOBALLY RISE BEYOND THE PANDEMIC

Global productivity is recuperating at a fast speed. Countries globally have shown tremendous economic growth rising beyond the impacts of the COVID-19 pandemic. Restrictive measures were relaxed and eliminated as they moved into the endemic era. As a result, economic activities are more vibrant, and some countries have returned to pre-pandemic growth. Productivity level increases as businesses and workers assimilate the new mode of work.

The future outlook is promising.

Gross Domestic Product (GDP) declined in 2020 across many countries. As of 2021, many economies continued to improve, as shown in Figure 1 by the global economic forecast report. The International Monetary Fund (IMF) projected the global economy to grow 5.9 per cent in 2021 and 4.9 per cent in 2022. The outlook was based on how well the countries managed the pandemic's impact.

Domestically, the Organisation for Economic Co-operation and Development (OECD) projected that Malaysia's economy would grow at 6.1 per cent in 2022, which was expected to be contributed by solid sales of electronics goods and health gear that boost exports and domestic demands and benefits gained from government support.

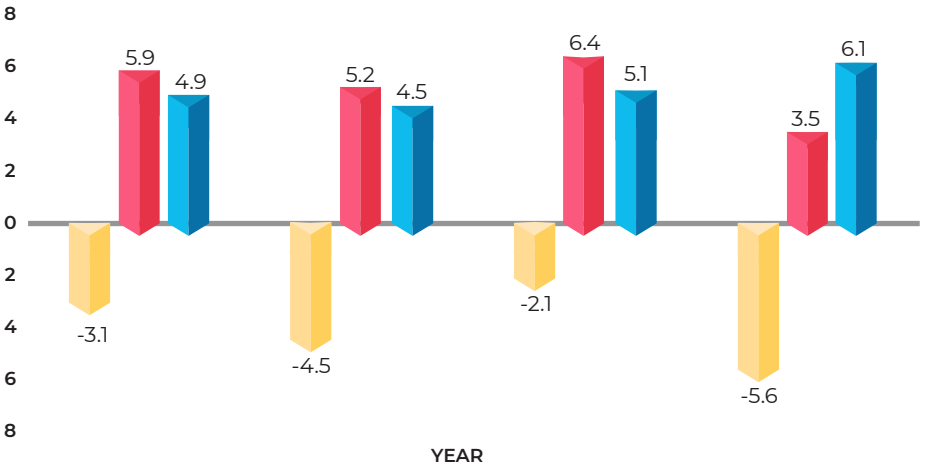
The Ministry of Finance (MOF), Malaysia, projected that the Country's GDP is expected to strengthen between 5.5 and 6.5 per cent in 2022, aligning with OECD's projection. The optimistic forecast was calculated based on significant potential improvement in international trade, stabilised commodity prices, containment of the pandemic, and gradual improvement in consumer and business sentiments.

MOF further projected that the services, manufacturing, agriculture, mining and quarrying, and construction sector were expected to expand by 7.0 per cent (2021:2.6 per cent), 4.7 per cent (2021:8.1 per cent), 3.9 per cent (2021:0.8 per cent), -0.3 per cent (2021:1.5 per cent), and 11.5 per cent (2021:-0.8 per cent) respectively.

FIGURE 1

GDP PROJECTION WORLDWIDE

Percentage change in GDP, 2020-2022



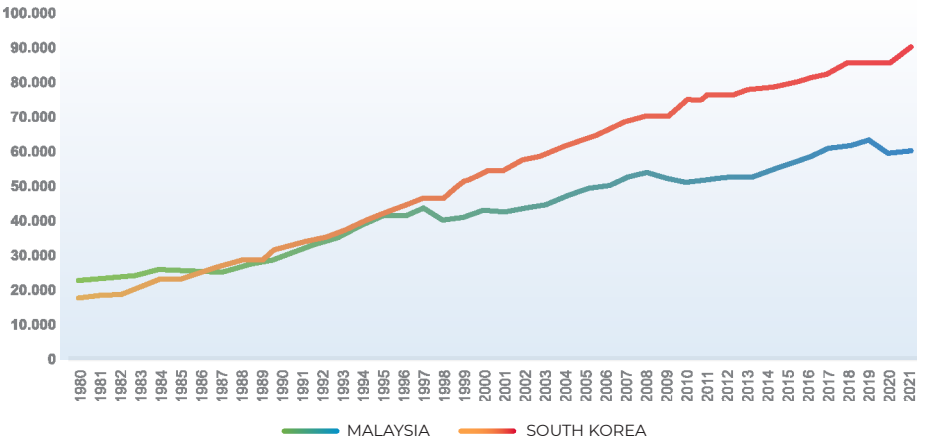
	Global Economy	Advanced Economy	Emerging Market & Developing Economies	Malaysia
2020	-3.1	-4.5	-2.1	-5.6
2021	5.9	5.2	6.4	3.5
2022	4.9	4.5	5.1	6.1

Source: *IMF Economic Outlook Oct 2021; OECD Economic Survey 2021*

FIGURE 2

COMPARISON OF LABOUR PRODUCTIVITY BETWEEN MALAYSIA AND SOUTH KOREA

Labour productivity per person employed in 2020 international dollars, converted using Purchasing Power Parities, 1980-2021



Source: *The Conference Board, The Economy Database August 2021*

As illustrated in Figure 2, between 1980 and 1985, Malaysia's labour productivity was higher than South Korea's productivity. In 1986, Malaysia recorded a similar productivity level as South Korea. However, Malaysia continued to lag for the rest of the period. South Korea's growth has been on steadier transformation and faster recovery after the economic crisis when compared to Malaysia. South Korea's main strengths in driving productivity growth were high research and development (R&D) intensity and university graduation rate for youth. The country has many firms at the technology frontier, and solid support from the government to achieve higher productivity, South Korea introduced policies, such as the 2013 creative economy initiative, which called for "combining science, technology and ICT to energise existing industries".

Malaysia needs to reform the existing policies to narrow the productivity gap to sustain output growth and enhance the living standard.

MALAYSIA'S PRODUCTIVITY PERFORMANCE RETURNED TO POSITIVE GROWTH IN 2021

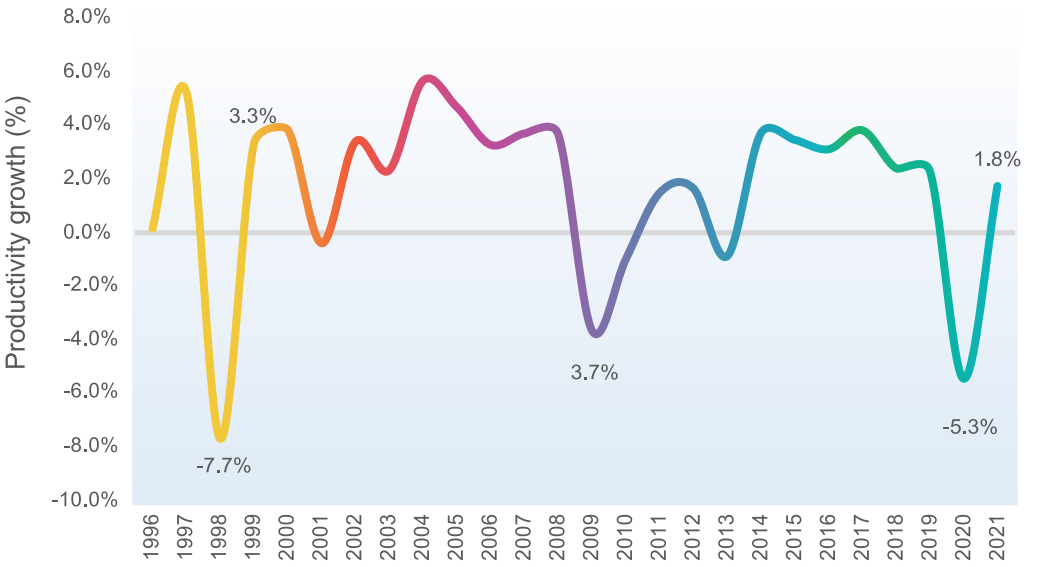
Malaysia's GDP increased at 3.1 per cent in 2021, compared to -5.6 per cent in 2020, contributed by the economic sectors' reopening and resumption of most social activities as the National COVID-19 Immunisation Programme (PICK) gained momentum.

Malaysia's labour productivity increased by 1.8 per cent in 2021, with RM90,697 per person. It was a sharp rebound from 2020 when Malaysia's productivity growth contracted by -5.3 per cent at RM89,106 per person. .

FIGURE 3

MALAYSIA'S PRODUCTIVITY INCREASED IN 2021

Productivity Growth, 1996-2021



Source: *Department of Statistics Malaysia (DOSM)*

TABLE 1

MFP GROWTH IMPROVED

Growth of MFP, labour, capital, and GDP, 2016-2021

	2016	2017	2018	2019	2020	2021
MFP	0.2	1.0	0.7	0.3	-4.6	-3.8
Labour	2.0	3.0	1.8	2.9	-6.8	11.0
Quantity of Labour	1.6	2.3	1.3	2.1	-9.1	10.6
Quality of Labour	0.4	0.7	0.5	0.8	2.3	0.4
Capital	5.8	6.0	5.5	4.7	2.9	3.7
ICT	10.7	10.8	7.5	5.1	2.9	6.4
Non-ICT	5.2	5.5	5.3	4.6	2.9	3.5
GDP	4.4	5.7	4.7	4.2	-5.8	3.0

Source: *The Conference Board, Total Economy Database August 2021*

The performance in labour productivity is driven by two factors, namely Multifactor Productivity (MFP) and capital intensity. MFP is a measure of economic efficiency and innovation with which labour and capital inputs are used together in the production process. MFP growth rate during pre-pandemic years from 2016 to 2019 was estimated at 0.55 per cent, during the pandemic in 2020 at -4.6 per cent and in 2021 at -3.8 per cent, as shown in Table 1. The negative MFP growth resulted from the shrink of GDP rooted in the pandemic crisis. In 2021, the growth rate of GDP was positive (3.0%), but the growth rate of inputs labour (11%) and capital (3.7%) were relatively higher. It is estimated that the MFP will register a negative growth rate.

From 2016 through 2021, ICT capital grew faster than non-ICT capital. Simultaneously the quantity of labour grew faster than the quality of labour. **Therefore, the government could foster innovation by encouraging research and development (R&D) investment in innovation processes and workers' participation in innovative activities to enhance MFP growth.**

PRODUCTIVITY GROWTH OF THE MAIN ECONOMIC SECTORS

As illustrated in Table 2, the services sector (57.19% of GDP) showed productivity improvement at barely 0.5 per cent. In comparison, manufacturing (24.3% of GDP) recorded 6.8 per cent in labour productivity. Agriculture (7.1% of GDP) showed negative GDP and productivity growth in 2021. Mining & Quarrying and Construction indicated negative productivity growth at -1.4 per cent and -4.3 per cent, respectively.

TABLE 2

PRODUCTIVITY PERFORMANCE OF MAIN ECONOMIC SECTORS (2019 – 2021)

Productivity growth 2019 - 2021

Main Sector	2019	2020	2021
Agriculture	0.3%	-2.0%	-0.6%
Mining & Quarrying	-0.3%	-7.6%	-1.4%
Manufacturing	1.7%	-2.6%	6.8%
Construction	3.6%	-15.6%	-4.3%
Services	2.9%	-5.8%	0.5%

Source: *Department of Statistics Malaysia (DOSM)*

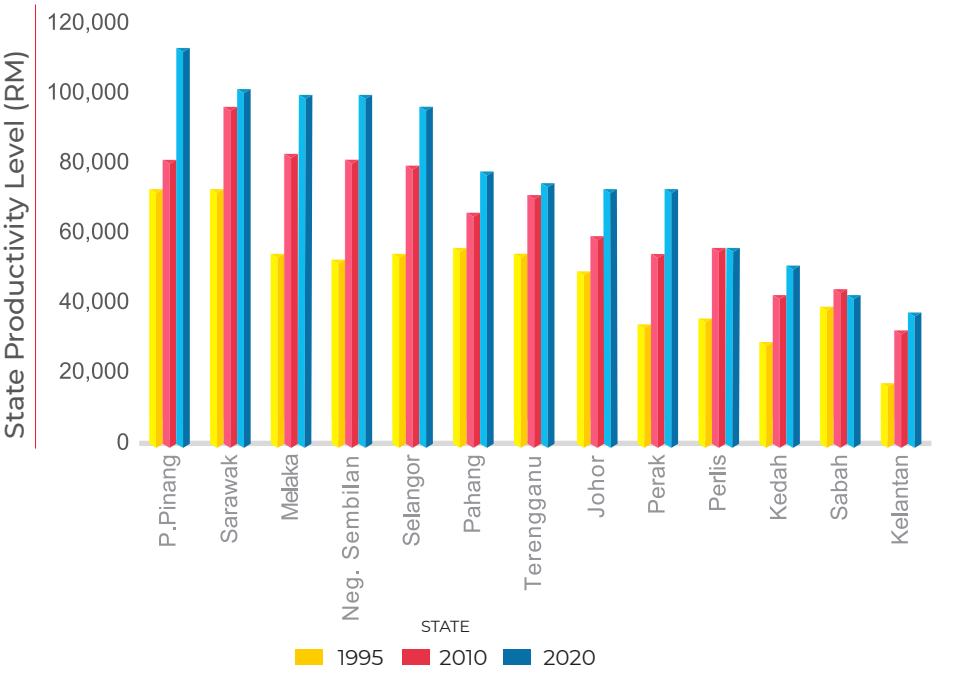
THE CONSIDERABLE GAP IN STATE PRODUCTIVITY PERFORMANCE

In 2021, MPC published the state-level productivity reports for six states – Perlis, Kedah, Pulau Pinang, Kelantan, Terengganu and Johor. By analysing state-level productivity performance, federal and state governments can learn more about regional productivity drivers, the persistence of regional disparity, and which states are driving national productivity trends.

FIGURE 4

GREAT GAP IN PRODUCTIVITY GROWTH BETWEEN THE HIGHEST AND THE LOWEST PERFORMANCE

State productivity level in 1995, 2010, and 2020



Source: *Department of Statistics Malaysia (DOSM)*
Computed by Malaysia Productivity Corporation (MPC)

PRODUCTIVITY CORRELATES WITH COMPETITIVENESS

Data presented in the World Competitiveness Yearbook (WCY) 2021 by the Institute for Management Development (IMD) illustrates a strong correlation between a country's productivity and global competitiveness. The top-performing economies in global competitiveness registered higher productivity growth. As productivity grows, the country's competitiveness increases.

A country's global competitiveness matters as it projects the country's overall competencies and standing internationally as a preferred destination for trade, investment, and business. WCY measures global competitiveness based on Economic Performance, Business Efficiency, Government Efficiency, and Infrastructure factors. A competitive nation is able to compete effectively in the global arena.

The World Economic Forum (WEF) defines "competitiveness" as "The set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be reached by an economy."

FIGURE 5

SELECTED COUNTRIES' GLOBAL COMPETITIVENESS RANKING (VALUE) AND PRODUCTIVITY GROWTH (PPP), 2021

Source: *IMD World Competitiveness Yearbook 2021*

At 73.9 points, Malaysia ranked at 25th position among 64 economies in global competitiveness in 2021, an improvement from 27th place in 2020. Malaysia was the second most competitive economy within the ASEAN region, behind Singapore in the top most position.

The close association between productivity and competitiveness calls for Malaysia to improve its productivity performance to enhance competitiveness. Improving productivity means robust and quality growth.

2022 PRODUCTIVITY OUTLOOK IS PROMISING

Malaysia's productivity growth is expected to register 3.6 per cent growth, aligning with the projected GDP between 5.5 per cent and 6.5 per cent in 2022. The projection was set against several contributing factors. Malaysia's transition into the endemic phase relaxes the restrictions on the movement of goods and people; as such more economic activities resume. Adding to the growth is Malaysia's international border's reopening on 1 April 2022, which enhances investment, trade, and business. The high vaccination rate supports the government's recovery plan, and incentives and assistance are in place to facilitate business revival. Private consumption increases and GDP improves alongside.

In the medium to long-term, as stipulated in the Twelfth Malaysia Plan, the country's productivity growth is set to grow at an average of 3.6 per cent annually during the period of 12MP. In the Eleventh Malaysia Plan, Malaysia recorded 1.1 per cent labour productivity growth per annum against 2.7 per cent GDP growth per annum.

BOX ITEM 1
KEDAH PRODUCTIVE

The E10 - Express Construction Permit project was one of the efforts under Kedah Productive programme. E10 is the fast-track process for dealing with construction permits implemented by the Kulim Municipal Council (MPKK) in Kedah in collaboration with Aspen Glove Sdn Bhd.

The initiative accelerated the building of a high-value factory, reducing the time to start operation to 10 months from 24 months. It boosted the productivity of Aspen Glove Sdn Bhd by 140 per cent.

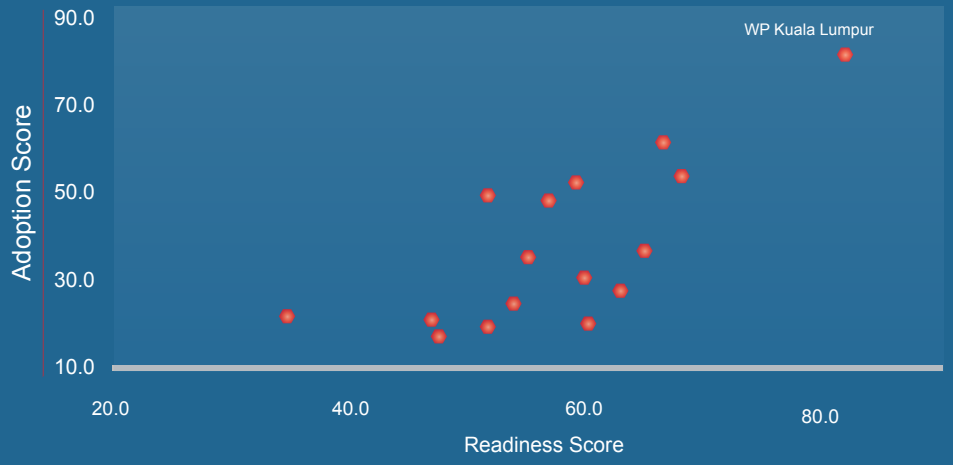
- Within ten months, the plant was ready to operate (after getting the Certificate of Completion and Compliance and business licence); and this led to substantial cost savings for Aspen.
- It also created 2,500 new jobs.

The E10 was a significant factor in making Kedah the highest state to receive investment in Malaysia between January to September 2021, with a total value of RM57.1 billion. The Special Task Force to Facilitate Business (PEMUDAH) has acknowledged the E10 project as an example of best practice collaboration between the government and private sector to ensure the swift recovery of industry operations. Other local authorities should emulate it.

Sources: https://pbt.kedah.gov.my/index.php/what-is-e10/
https://www.mida.gov.my/mida-news/e10-project-accelerates-construction-of-aspen-gloves-factory-in-kulim/

BOX ITEM 2
STATE LEVEL - ADOPTION OF DIGITALISATION

In 2021, MPC conducted the pilot study on State Level – Adoption of Digitalisation for all 13 states and three federal territories. It is reported that there was a large gap between WP Kuala Lumpur and other states in terms of digitalisation readiness and adoption. This study would support the state governments in evidence-based policymaking. MPC intends to improve the indicators and methodology used in this study.



Source: *Malaysia Productivity Corporation (MPC)*

CHAPTER 2 | PRODUCTIVITY KEY DRIVERS

TALENT
TECHNOLOGY
BUSINESS ENVIRONMENT
SUBSIDY

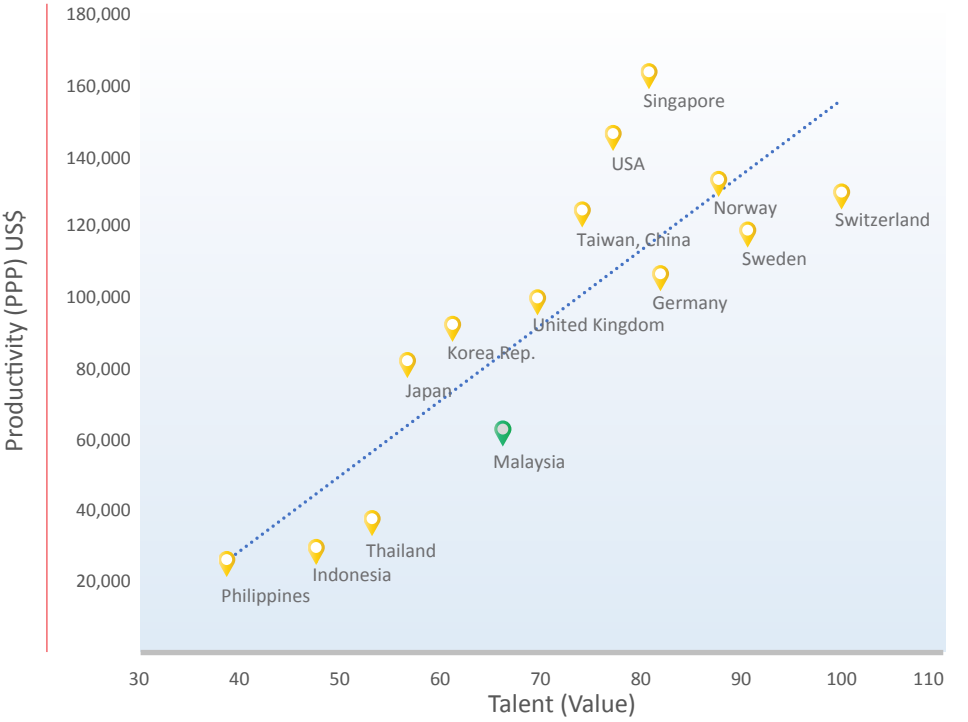
PRODUCTIVE TALENT BUILDS A FUTURE-READY WORKFORCE

Based on the IMD World Talent Ranking 2021 and IMD World Competitiveness Yearbook 2021, economies with high productivity growth recorded commendable positions in the global talent ranking, denoting the significant human resource contribution to productivity performance.

FIGURE 6

TALENT RANKING (VALUE) CORRELATES WITH PRODUCTIVITY GROWTH (PPP, US$), SELECTED COUNTRIES, 2021

Talent and Productivity are highly correlated

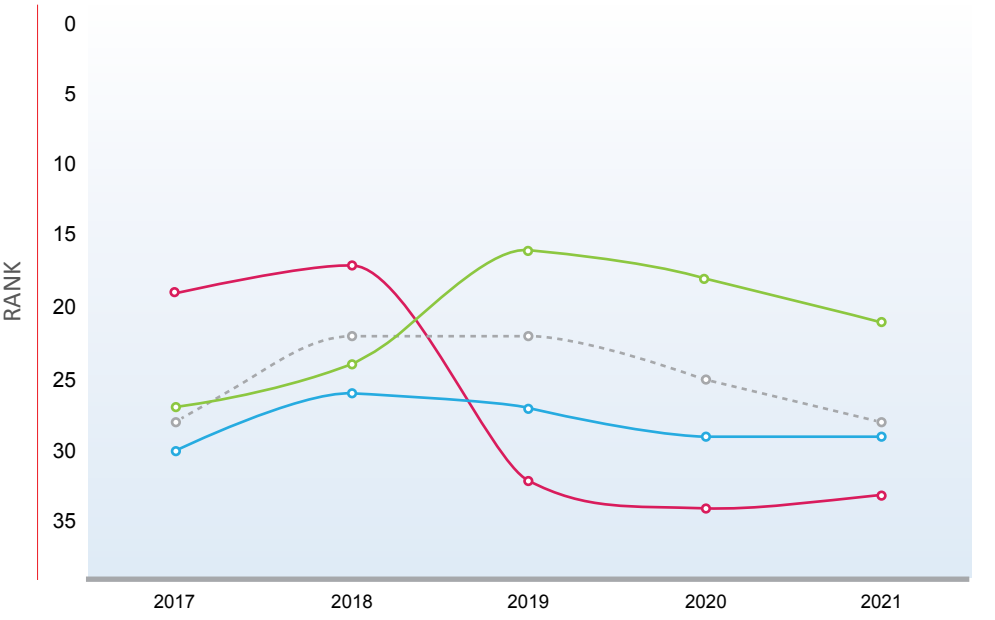


Source: *IMD World Talent Ranking 2021 and IMD World Competitiveness Yearbook 2021*

Malaysia's performance in World Talent Ranking declined from 25th position in 2020 to 28th spot in 2021. According to the IMD, in terms of its factor, Investment and Development in talent recorded a significant plunge in five-year duration from 19th position in 2017 to 33rd spot in 2021. The performance calls for improvement initiatives in talent development.

FIGURE 7

MALAYSIA'S PERFORMANCE IN IMD WORLD TALENT RANKING 2021 (OVERALL AND FACTORS)



	2017	2018	2019	2020	2021
Overall Rank	28	22	22	25	28
Investment & Development	19	17	32	34	33
Appeal	30	26	27	29	29
Readiness	27	24	16	18	21

Source: *IMD World Talent Ranking 2021*

The Malaysian labour market is characterised by the rapid improvement in the education profile of workers. The composition of workers with tertiary education with the degree and diploma certificates and secondary education with Sijil Pelajaran Malaysia certificate or equivalent expanded rapidly compared to other education certifications. The share of workers with tertiary education increased from 11 per cent in 2000 to 25 per cent in 2017, while workers with SPM certificates and equivalent rose from 30 per cent to 39 per cent. The composition of workers with primary education with UPSR certificate or equivalent reduced significantly from 43 per cent to 19 per cent for the same period.

TABLE 3

Occupational category and skill categorisation

Occupations	Education Levels	Skills
Managers	◆ Tertiary education (e.g. diploma and degree) ◆ DLKM 5-8 ◆ SKM 4 / DKM 4	High-skilled
Professionals		
Technicians and associate professionals		
Clerical support workers	◆ STPM ◆ SPM ◆ SKM 1 (level 1) ◆ SKM 2 (level 2) ◆ SKM 3 (level 3)	Semi-skilled
Service and sales workers		
Skilled agricultural, forestry and fishery workers		
Plant and machine operators and assemblers		
1. Craft and related trade workers		
2. Elementary occupations	◆ Primary education (e.g. UPSR, PMR, SRP and LCE) ◆ No formal education	Low-skilled
Notes:		
SPM: Malaysian Certificate of Education STPM: Malaysia Higher Certificate of Education SKM: Malaysia Skills Certificate DKM: Malaysian Skills Diploma DLKM: Malaysia Skills Advanced Diploma		

Source: *Economic Planning Unit (2015).*

Despite the increase in the composition of workers with tertiary education, the International Standard Classification of Education (ISCED) and findings by the UNESCO Institute for Statistics (UIS) in 2018 indicated that only **22.1 per cent of Malaysians had higher education,** while the majority of the Malaysian population at 72.1 per cent were with secondary education. 5.8 per cent was categorised as out of the school system. **The findings implied that the majority of the Malaysian population was semi-skilled workers, indicating the shortage of high- and low-skilled workers.**

Educational mismatch or over-and under-education refer to the difference between education attainment of the employment and the minimum education required for the job. It remains one of the challenges in Malaysia's workforce. This is an important phenomenon because public and private education cost enormous expenditure, causing economists and policymakers to be concerned about the effectiveness of human capital investment in Malaysia. In addition to that, it was well documented in the literature that educational mismatch influenced economic outcomes such as earning and productivity.

The needs for qualifications or abilities are also changing rapidly due to technological progress, making it increasingly difficult to locate the right people for suitable professions. Thus, better allocation of labour resources is more vital for a corporation to be competitive and increase its performance.

The shortage of workers is another predominant issue in Malaysia's workforce and is compounded by the impact of the COVID-19 pandemic. Malaysia's Electrical and Electronic (E&E) industry is a case in point. The World Semiconductor Trade Statistics (WSTS) predicted that the worldwide semiconductor market was projected to grow by 8.8 per cent in 2022, to US$ 601 billion. Malaysia's E&E players have the potential to fulfil the increasing global demands, especially for the semiconductor market, given the country's position as the foremost semiconductor manufacturer globally. Malaysia's E&E subsector requires at least 14,000 local and foreign workers, 2,400 engineers, 1,600 support staff, and 450 expatriates to cater to the industry's labour demand. The inability to build the workforce needed is an opportunity lost for the E&E industry players and Malaysia.

In improving Malaysia's global performance in education attainment, recognition of non-formal or work-based education should be given due consideration. The Labour Force Survey (LFS) by the Department of Statistics Malaysia (DOSM) can be improved to include data on non-formal education in Malaysia. In measuring a country's educational achievements, formal and non-formal education must be taken into account as both have an important place in ensuring labour availability and marketability. In addition to formal education, non-formal education, which includes various programmes offered by industry, training institutions, and public and private higher learning institutions, is considered by the UIS to determine a country's educational achievement. ISCED serves as a good benchmark.

FIGURE 8

MALAYSIA'S EDUCATION ATTAINMENT PERFORMANCE

INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION (ISCED)

2024 35%

2025 45%

2026 52%

INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION (ISCED)

LEVEL	1	2	1	12	L3	L4	L5	L6	L7	L8
ISCED 2011	Early childhood Education (01 Early childhood educational development)	Early childhood Education (02 pre-primary education)	Primary education	Lower secondary education	Upper secondary education	Post-secondary non-tertiary education	Short-cycle tertiary education	Bachelor or equivalent	Master or equivalent	Doctoral or equivalent

43.7% 56.3%

INTERNATIONAL STANDARD CLASSIFICATION OF EDUCATION (ISCED)

LEVEL		ISCED 0	ISCED 1	ISCED 2	ISCED 3	ISCED 4		ISCED 5		ISCED 6
ISCED 1997	None	Pre-primary education	Primary education or first stage of basic education	Lower secondary education or second stage of basic education	Upper secondary education	Post-secondary non-tertiary education	level 5B: First stage of tertiary education	Level 5A: First stage of tertiary education	Level 5A: First stage of tertiary education	Second stage of tertiary education

5.8% 5.8% 72.1% 22.1%

ISCED 1997 – ISCED 5

5B – typically shorter, more practical/technical/occupationally specific programmes leading to professional qualifications
5A (Bachelor & Master equivalent) – largely theoretically based programmes intended to provide qualifications for gaining entry into more advanced research programmes and professions with higher skill requirements.

Source: *UNESCO Institute for Statistics (UIS)*

Addressing skills mismatch should be at the forefront of Malaysia's educational system. The issue has been in the country's workforce for years and is more pronounced by the pandemic crisis. The OECD Productivity Working Papers published in December 2021 on "The Human Side of Productivity: Uncovering the Role of Skills and Diversity for Firm Productivity" indicated various public policy areas that could enhance productivity growth, emphasising the "human side". The report highlighted that successful policy was based on three aspects of Supply Upgrading Matching (SUM): increasing skill **S**upply, reinforcing **U**pgrading, and helping better **M**atching jobs to employees. The OECD added that the educational system is the key to sustaining the quality and supply of higher skills, including quality talent.

Education policies by Malaysia's Ministry of Education and Ministry of Higher Education can benchmark international best practices in formulating a broad-based policy approach in education. In the Twelfth Malaysia Plan, the government focuses on improving the country's entire education system and addressing the skills mismatch in the labour market. This includes improving science, technology, engineering, and mathematics (STEM) education and preparing students for rapid technological evolution.

MPC's talent development initiative through the Academy in Factory (AiF) addresses the shortage of workers and low performance in national education attainment. MPC is currently working with relevant authorities, business associations, and industry players to materialise AiF. The innovation serves as the two-prong solution for consistent talent supply for the manufacturing industry's growth and improving Malaysia's education attainment through work-based education. AiF targets 10,000 enrolments by the end of 2022 and 300,000 by 2025. AiF is also expected to manage the increasing mismatches in specific skills such as digital and technical skills, difficulty in finding talents with socio-emotional skills, and inadequacy in compensation schemes and wages.

The intervention creates the academic, technical, and vocational stream within the education system that is more responsive to labour market demands. AiF modules are prepared by the industry, ensuring the relevance of the curriculum to the industry's needs. AiF grounds its implementation on "the right skill, the right job, the right pay" that an employee receives wages proportional to skills. In elevating Malaysia's position in education attainment performance globally, AiF seeks to contribute to uplifting and recognising non-formal education. Work-based learning programmes such as AiF, which comprise skills upgrading and retraining or upskilling and reskilling courses, are fundamental approaches to building a country's skilled workforce and talent, emphasising lifelong learning.

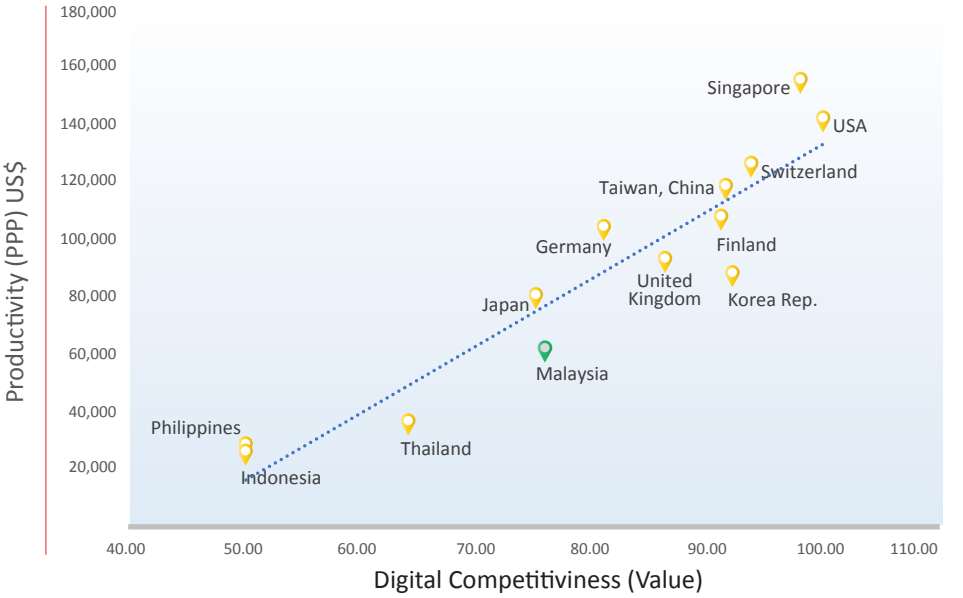
TECHNOLOGY ADOPTION AND DIGITALISATION BOOST PRODUCTIVITY

Based on the data from the competitiveness reports published by the IMD, technology and productivity strongly correlate. Top-performing countries in productivity performance scored high in value in the Digital Competitiveness ranking.

FIGURE 9

DIGITAL COMPETITIVENESS RANKING (VALUE) CORRELATES WITH PRODUCTIVITY GROWTH (PPP, US$), SELECTED COUNTRIES, 2020

Digital Competitiveness and Productivity are highly correlated

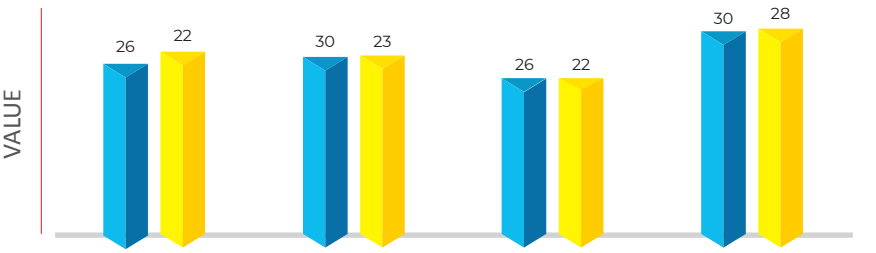


Source: *IMD World Digital Competitiveness 2020 and IMD World Competitiveness Yearbook 2021*

Malaysia's performance in digital competitiveness fluctuated but improved in the last two years. The country recorded improvements in several international technology-related indicators, namely digital transformation, digital tools and technology, big data and analytics, and digital skills and technology. Malaysia's rankings in the World Competitiveness Yearbook (WCY) indicated an increase in these indicators from 2020 to 2021. On the use of digital tools and technology indicator, Malaysia recorded a massive rise from 30th to 23rd position in the global ranking. Digital transformation grew in value from 5.97 in 2020 to 6.43 in 2021, as reflected in its ranking from 26th position in 2020 to 22nd place in 2021. Malaysia also performed well in big data and analytics and digital technology and skills, respectively, at 22nd and 28th positions in 2021. The rankings demonstrated that technology-related government initiatives and policy actions were effective. However, there remains vast room for improvement as Malaysia has yet to break into the top 20 positions among 64 economies.

FIGURE 10

MALAYSIA'S PERFORMANCE IN DIGITAL TECHNOLOGY ADOPTION, 2020 AND 2021



	Digital transformation	Use of digital tools and tech	Big data and analytics	Digital technology and skills
2020	5.97	6.2	5.47	7.18
2021	6.43	6.3	5.48	7.19

2020 2021

Source: *IMD World Competitiveness Yearbook (WCY)*

FIGURE 11

*MALAYSIA'S PERFORMANCE IN DIGITAL INFRASTRUCTURE, 2017 - 2021

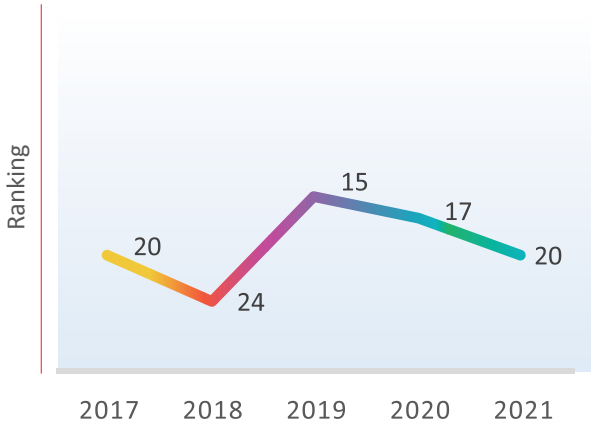
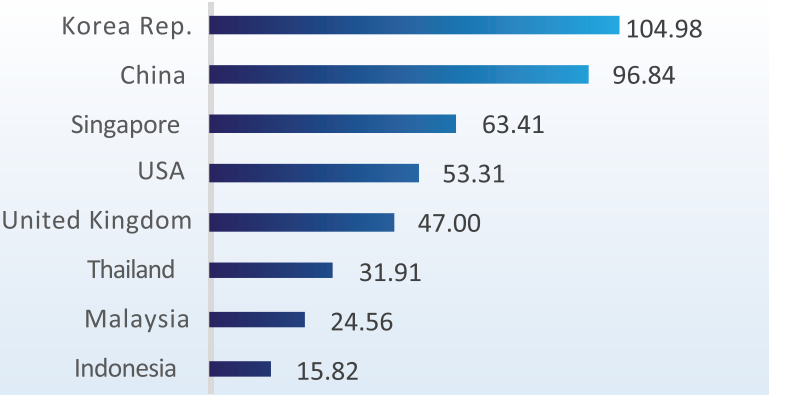


FIGURE 12

**INTERNET SPEED IN MALAYSIA IN COMPARISON WITH SELECTED COUNTRIES



Source: *IMD World Competitiveness Yearbook*;*
*Ookla's Global Median Mobile Download Speeds (November 2021)***

However, in terms of digital infrastructure, Malaysia's performance kept declining over the years, where Malaysia fell from 15th position in 2019 to 20th in 2021. Malaysia still lagged in mobile download speed. Based on Ookla's Global Median Speeds in November 2021, Malaysia's mobile download speed stood at 24.56Mbph, behind South Korea (104.98Mbph), China (96.84Mbph), Singapore (63.41Mbph), and even Thailand (31.91Mbph).

Based on data accumulated from two MPC's flagship digitalisation programmes, namely Productivity1010 and Industry4WRD Readiness Assessment (RA), **80% of the Malaysian companies are still at Level 1 and Level 2 of Technology Adoption.** Level 1 and Level 2 refer to the most basic level in technology adoption, which is equivalent to Beginner and Observer in Productivity1010 and Newcomer and Conventional in Industry4WRD RA.

FIGURE 13

80% OF MALAYSIAN COMPANIES STILL AT LEVEL 1 AND 2 OF TECHNOLOGY ADOPTION IN MALAYSIA

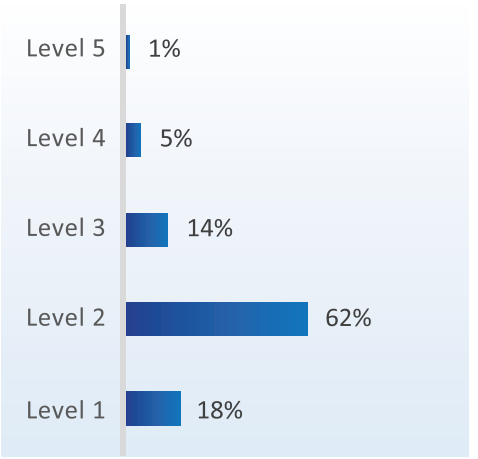


FIGURE 14

69% OF MALAYSIAN COMPANIES STILL AT BEGINNER AND OBSERVER LEVEL (P1010)

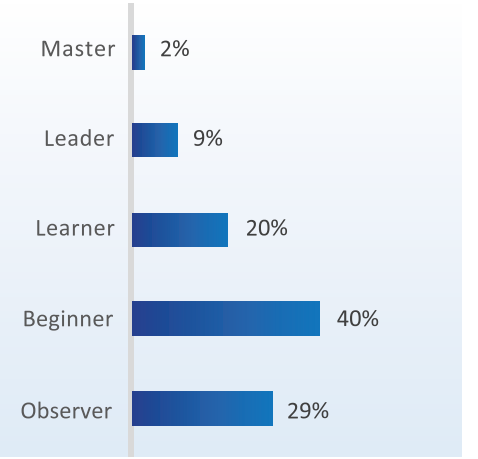
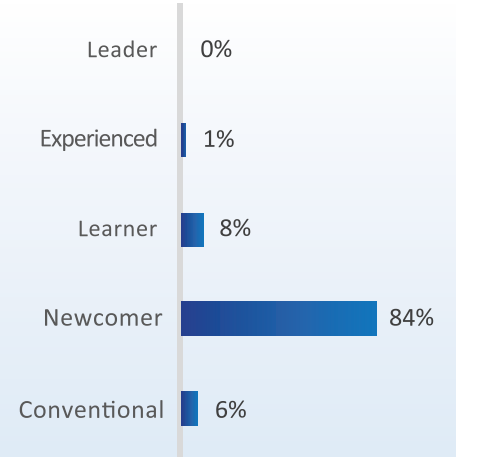


FIGURE 15

90% OF COMPANIES STILL AT THE BASIC LEVEL OF INDUSTRY4WRD READINESS ADOPTION



Source: *MPC's analysis based on Productivity1010 and Industry4WRD Readiness Assessment database, December 2021*

The government is committed to accelerating technology adoption by the public and private sectors. The aspiration is to achieve 50 per cent of technology adoption at levels 3 to 5 by 2025 in Malaysian firms. MyDigital, Malaysia's long-term all-inclusive digitalisation initiative, aims to transform the country into a digitalised nation by 2030. Implementing MyDigital will enable Malaysians to enjoy an improved quality of life, optimise business resources, and provide more quality and effective products and services.

MPC recognises a massive room for improvement in business digitalisation. MPC has identified several challenges: the low take-up rate of digital technology programmes among businesses, the lack of commitment to remain persistent in digital transformation, and limited success stories and best practices among SMEs to inspire and motivate other SMEs to adopt digital technology. The lack of awareness of the benefits gained from digitalisation is widespread among businesses.

In supporting the government's plan, MPC's 'Go B.I.G with Digital' continues its focus on catalysing productivity growth through technology adoption nationwide. The word B.I.G is derived from **B**reakthrough results, strengthening **I**ntegrity and empowering best practices and **G**ood values. Businesses are expected to increase productivity growth from 10X to 100X incremental through the initiative. Go B.I.G with Digital advocates the need for mindset transformation among leaders to unleash the industry's potential. Strong leadership paves the way for knowing precisely what needs to be done to digitalise business. The initiative emphasises three key strategies to promote and boost the adoption of digital technology at the firm level: **Nudging CEO, Advisory Programme, and Experiential Learning.**

Data sharing and analytics must be improved and consolidated by the relevant stakeholders from the public and private sectors. Data sharing is dubbed the key to Malaysia's digital future. Initiatives to amplify data sharing and analytics can be done through an open application programming interface (API) and centralised data access. Improved data sharing and analytics enable more accurate insights and produce faster analysis for effective decision making. At the federal government level, the current data sharing platform by the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) can be expanded to include all ministries and relevant government agencies. Specific data can be shared with industry associations to facilitate the ease of doing business.

The right digital skills should be cultivated to address the needs of the specific industry. This can be achieved through the training programmes by the industry, higher learning institutions, training providers, or government bodies. Human Resource Development Corp. (HRDC), Malaysia Digital Economy Corporation (MDEC), and SME Corp can further strengthen and expand their training programmes to cater for industry-specific digital skills. For example, digital skills trainings can be formulated to address the specific needs in the tourism industry or professional services, rather than the services sector at a general level.

BOX ITEM 3

STRATUS AUTOMATION SDN. BHD.

Stratus Automation is a solution provider for Automated Material Transport System, specialising in material transport and control, ultra-clean systems, automated material loading, vision system integration, plus robotics and motion control. Previously, the company's technician checked and counted the bearing groove manually by using a ruler or pointy object. Having installed the Axiomtek AI Starter Kit, the company managed to identify groove types automatically. This exercise helps Stratus Automation increase output by 64 per cent due to increased work efficiency and zero rework on the production floor.

SWIFT BRIDGE (M) SDN. BHD.

Swift Bridge Technologies develops custom cable solutions for the commercial test and measurement market. The company used to fill temperature and humidity readings manually and could not monitor and capture the readings every hour due to the lack of labour force. The company set up a real-time temperature and humidity monitoring system, thus eliminating manual tracking forms and remotely monitoring the dashboard via desktop or mobile devices. Swift Bridge saves 59 hours per month and maximises the company's yield and productivity by 33%.

HEXA FOOD SDN. BHD.

Hexa Food Sdn. Bhd. specialises in the supplies of spices, herbs and seasoning products for many food retailers and manufacturers in Malaysia. They process spices and seasoning products in their local factories. Previously, the company monitored and recorded working conditions manually. Poor working conditions and environment resulted in human errors and low quality of products. The company invested in real-time environmental monitoring of the sorting process in terms of light density, temperature, and humidity, which minimises human errors and elevates the working condition.

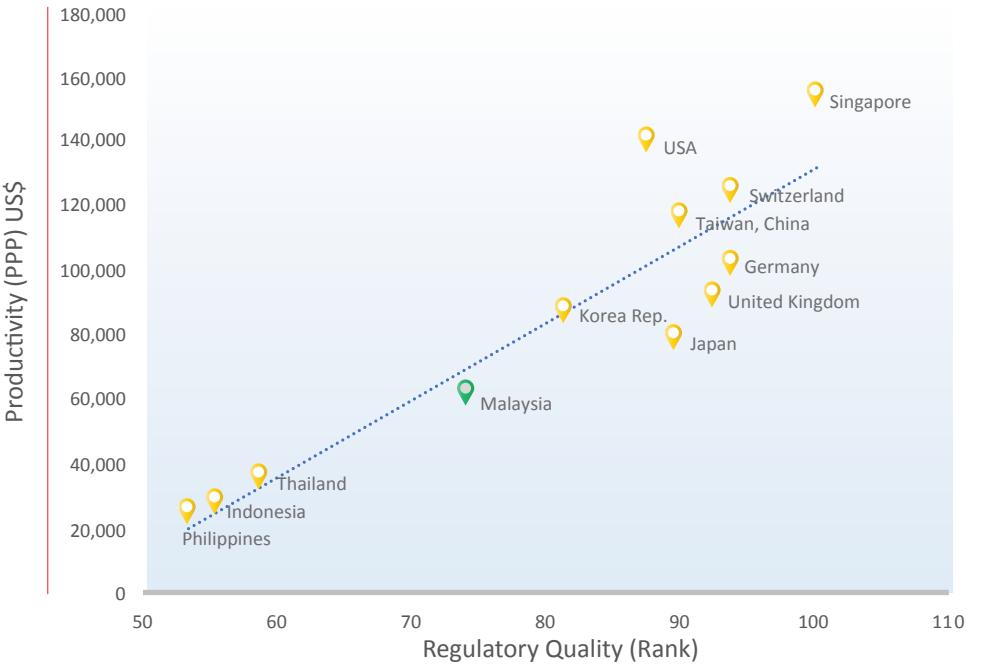
QUALITY REGULATIONS FORM A PRODUCTIVE AND CONDUCIVE BUSINESS ENVIRONMENT

Quality business regulations form a competitive and supportive business ecosystem, leading firms, industry, and the economy in totality to be productive and competitive. Data from the Worldwide Governance Indicators (WGI) 2021 by the World Bank presented a dependency between regulatory quality and productivity growth. WGI Regulatory Quality reflects the perception of a government's ability to formulate and implement sound policies and regulations that enable and promote private sector development. WGI Regulatory Quality Ranking indicates the percentile rank value among all countries, in which 0 indicates the lowest to 100 at the highest rank value.

The chart shows the correlation between WGI ranking in Regulatory Quality and productivity growth. Highly productive countries such as Singapore, Switzerland, and the USA were ranked higher in regulatory quality.

FIGURE 16

REGULATORY QUALITY (RANK VALUE) CORRELATES WITH PRODUCTIVITY GROWTH (PPP, US$), SELECTED COUNTRIES, 2021

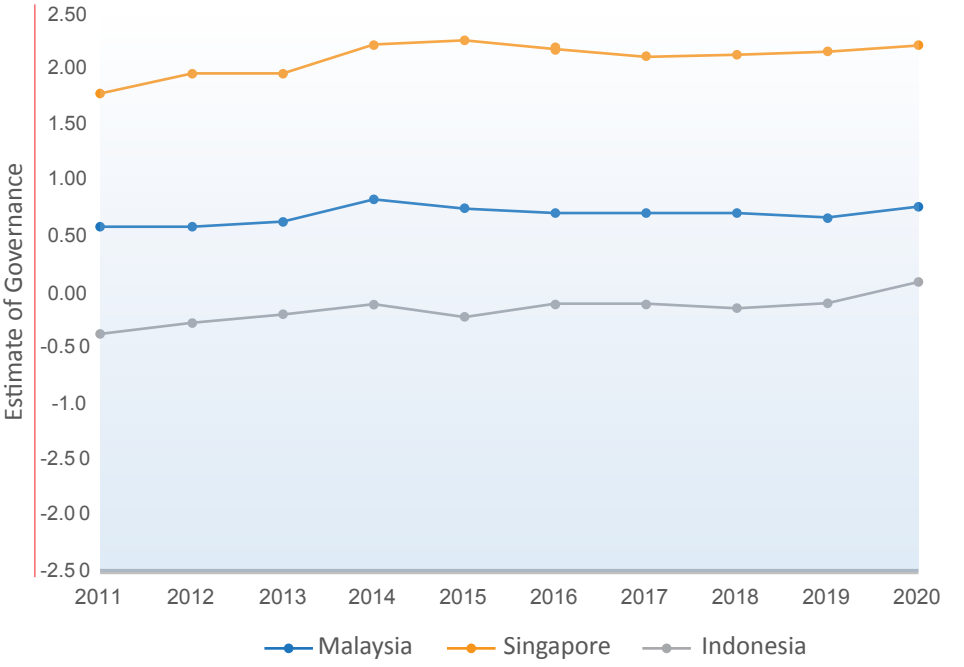


Source: *The Worldwide Governance Indicators (2021 Update) by the World Bank and IMD World Competitiveness Yearbook 2021*

Professor Arturo Bris, Director, World Economic Forum (WEF), likened competitiveness to a cycling race. The cyclist, CEO of the private sector, can compete well when the road, a metaphor for government policies and regulations, is of quality to enable a fast and robust sprint. Winning the race means prosperity for the nation.

FIGURE 17

MALAYSIA'S PERFORMANCE IN REGULATORY QUALITY (ESTIMATE OF GOVERNANCE), 2011 - 2020



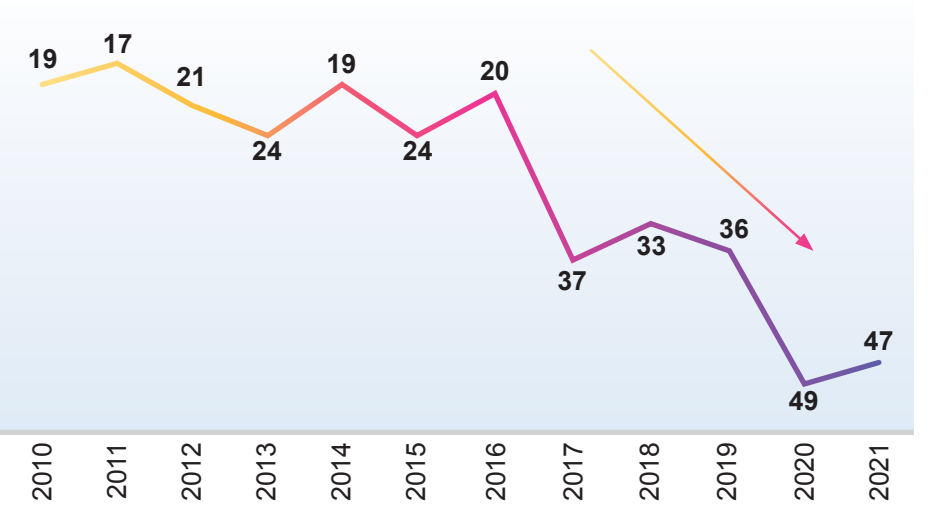
Note: *Estimate of Governance ranges from approximately -2.5 as weak to 2.5 as strong*
Source: *The Worldwide Governance Indicators (2021 Update)*

Based on WGI, Malaysia's performance in regulatory quality registered consistent improvement between 2011 and 2020, implying the effectiveness of the Government's regulatory reform initiatives. Nevertheless, Malaysia is still performing below average, requiring strengthening regulatory reforms. Malaysia fared better within the region, though there is a massive gap in the Estimate of Governance in regulatory quality with Singapore, that is approximating the highest level of regulatory governance.

Business efficiency is greatly influenced by legislation and regulations. Based on the WCY World Competitiveness Yearbook (WCY), over the last ten years, Malaysia's competitive performance in the Business Legislation indicator was consistently declining, evident in its ranking from 19th place in 2010 to 47th in 2021 among 64 economies.

FIGURE 18

MALAYSIA'S GLOBAL RANKING IN BUSINESS LEGISLATION INDICATOR, 2010 – 2021



Source: *World Competitiveness Yearbook (WCY), 2010 (58 economies); 2021 (64 economies)*

TABLE 4

MALAYSIA'S GLOBAL RANKING IN SUB-INDICATORS IN BUSINESS LEGISLATION INDICATOR, 2010 AND 2021

SUB-INDICATORS	2010	2021
Start-up Days	21	51
Start-up Procedures	43	54
Tariff Barriers	46	51
Redundancy Costs	48	53

Source: *World Competitiveness Yearbook (WCY), 2010 (58 economies) ; 2021 (64 economies)*

Among issues contributing to Malaysia's weakening global ranking in Business Legislation are disintegrated and isolated processes and procedures among multiple regulators and agencies, overlapping sequential processes, complexities and overcrowded tariff lines, and high costs of business exit.

In the World Bank's Ease of Doing Business (EODB) Report, Malaysia's Starting a Business indicator was ranked 126th. This is reflected in the WCY 2021. The performance of sub-indicator Start-up Days declined tremendously from the 21st spot in 2010 to the 51st place in 2021. Likewise, the start-up procedures are still burdensome to businesses, as indicated in its dwindling performance from 43rd spot in 2010 to 54th in 2021. Countries with the highest ranking in Starting a Business indicator only have one procedure. This implies that starting a business is still not easy and smooth for companies to gain seamless and fast market entry. Starting a business process and procedures are disintegrated, redundant, and numerous among multiple agencies. The compliance costs are still high in registering a new business.

Systematic and inclusive regulatory reform is paramount for the business ecosystem. MPC's regulatory reform initiative applies systematic and evidence-based regulatory tools to facilitate the formulation and review of regulations, and design regulatory interventions. The application of an evidence-based approach aligns with the Twelfth Malaysia Plan to ensure quality regulations. The Whole-of-Society approach is imperative to ensure efficient and effective regulatory reform efforts.

In 2013, GRP or Good Regulatory Practice was introduced with the endorsement of the National Policy on Development and Implementation of Regulations (NPDIR). GRP Portal was developed as a repository and reference for all regulators and stakeholders. A total of 180 Regulatory Coordinators from 94 ministries and agencies registered with MPC and received training on Regulatory Impact Analysis or RIA. **NPDIR was amended and is now known as National Policy on Good Regulatory Practice (NPGRP).**

GRP is an inclusive, systematic, and comprehensive regulatory tool for designing, developing and reviewing regulations. NPGRP guides the implementation of GRP nationwide. **The Government circular *Pekeliling Am Bilangan 1 Tahun 2021* dated 22 June 2021 on NPGRP issued by the Prime Minister's Department mandated government institutions to apply GRP in developing their policies and regulations.** MPC is mandated to promote, support, and facilitate GRP implementation.

In ensuring a transparent and efficient process in the application of licenses and permits, the Special Cabinet Committee on Anti-Corruption (JKKMAR) Meeting 2/2020 chaired by the Prime Minister on 25 June 2020, mandated MPC to facilitate the process of ensuring ministries and government agencies responsible for issuing licenses and permits publish guidelines online for general information. The initiative creates a more transparent mechanism for issuing licenses and permits, improves the integrity of the public service delivery, and prevents corruption and misconduct. The project supports the implementation of the National Anti-Corruption Plan (NACP) under Initiative 2.1.6, which is to establish a robust and effective mechanism in the permit and licence issuance process.

MPC has been working very closely with the National Centre for Governance, Integrity and Anti-Corruption (GIACC), federal and state governments, and the local authorities in executing the mandate. The published guidelines include all regulatory instruments comprising the issuance of licenses and permits, registration, notification, and inspection. As of September 2021, the close collaboration among 14 Ministries and 70 agencies resulted in 617 business licences being reviewed.

On 8 October 2021, a one-stop Malaysian Licensing Guidelines (MyGP) website was launched. MyGP portal compiles and centralises all business licensing guidelines specifically for the business community as a reference and is accessible to everyone. By the end of 2021, 463 guidelines were uploaded on MyGP portal for easy, quick, and transparent access.

Currently, the exercise is extended to state governments and local authorities. **This extensive exercise in ensuring quality guidelines calls for strong cooperation and support from the state governments and local authorities.** All guidelines for permits and licences by the state governments and local authorities are expected to be uploaded on MyGP portal.

To reduce the unnecessary regulatory burdens on businesses, the government agreed to Malaysia Mudah or MyMudah initiative. MyMudah programme began in 20 July 2020 through the decision by the Economic Action Council (EAC) Meeting chaired by YAB Prime Minister. The programme started as a response to the COVID-19 pandemic to provide a platform for industry players to voice their concerns and challenges on regulations that burdened their business operations.

MyMudah platform facilitates fast-forward solutions to enhance the ease of doing business by improving the regulatory ecosystem. In 2021, its role was since strengthened to escalate national economic recovery. The EAC Meeting chaired by YAB Prime Minister on 24 November 2021 agreed to establish the **MyMudah Units at all ministries, government agencies, state governments, local authorities, and business associations.**

Through MyMudah, businesses register regulatory issues through the Unified Public Consultation (UPC) portal. MPC validates the issues received with the industry through online engagements to ensure that the case received is valid and of public interest. Once the problem is validated, MPC facilitates consultations with the relevant stakeholders and regulators to design and propose implementable solutions to resolve the issue. The appropriate regulator implements the intervention, and its progress is escalated to the Special Taskforce to Facilitate Business (PEMUDAH) and EAC.

MyMudah Units at ministries and agencies have the role of preparing and disseminating annual regulatory review plans, implementing regulatory reviews based on GRP, and measuring implementation achievements at all levels. At business associations, MyMudah Units function to channel regulations for review and contribute to designing and implementing regulatory interventions.

MPC amplifies the implementation of regulatory experimentation (RE) towards quality regulations.

RE tests the designed intervention or solution to an issue on a small scale before it is replicated and proliferated for bigger-scale implementation. RE is materialised through an inclusive public-private partnership between the relevant regulators, ministry/government agencies, and the private sector. Data and observation are used to improve the intervention design to ensure the model is efficient and effective for mass implementation.

During the EAC Meeting on 24 November 2021, the decision was made that **all ministries, government agencies, state governments, and local authorities should participate in regulatory experimentations to improve Malaysia's business environment and regulatory delivery.**

The Government is committed to reducing the unnecessary regulatory burdens on business and the people by 25% per annum. The Twelfth Malaysia Plan aims for Malaysia to be among the top nine economies in government efficiency by 2025, and MPC is committed to achieving the target.

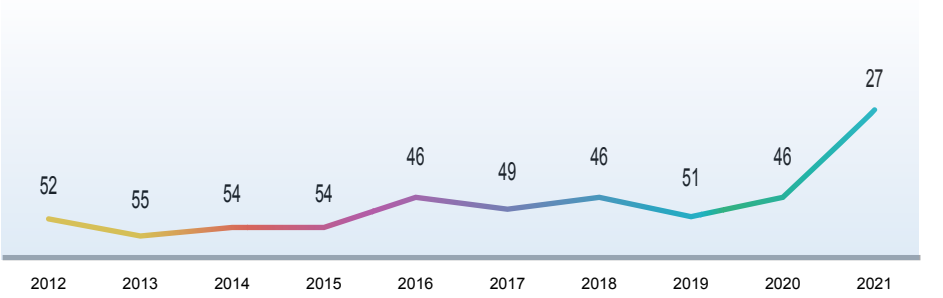
MAKING THE INDUSTRY ACCOUNTABLE FOR PRODUCTIVITY THROUGH EFFECTIVE SUBSIDY PROGRAMMES

In 2021, there were 156 subsidy programmes under various ministries in Malaysia. 65 per cent of the subsidy programmes were managed by the Ministry of Women, Family and Community Development and Ministry of Education.

The World Competitiveness Yearbook (WCY) by the IMD placed Malaysia in 27th position in the performance ranking for the Government Subsidy indicator as part of the WCY Government Efficiency factor. The chart below illustrates Malaysia's ranking in the Government Subsidy indicator as a percentage of GDP over ten years.

FIGURE 19

MALAYSIA'S RANKING IN GOVERNMENT SUBSIDY (% OF GDP) INDICATOR UNDER GOVERNMENT EFFICIENCY FACTOR, 2012 - 2021

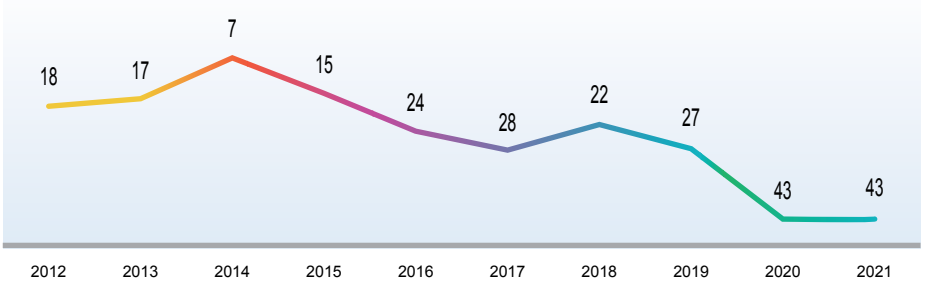


Source: *World Competitiveness Yearbook*

The trend indicated a higher percentage of subsidy to GDP over the said period, implying increased allocation by the government to the private industries, public corporations, and government enterprises to compensate for losses due to the price policies.

FIGURE 20

MALAYSIA'S RANKING IN "SUBSIDY DOES NOT DISTORT COMPETITION AND ECONOMIC GROWTH" INDICATOR UNDER GOVERNMENT EFFICIENCY FACTOR, 2012 – 2021

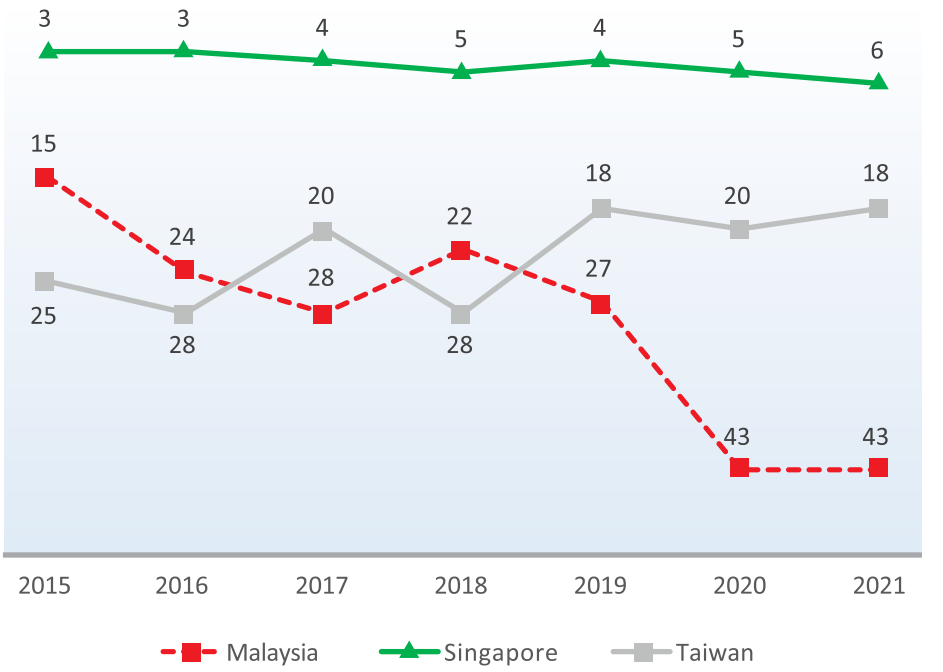


Source: *World Competitiveness Yearbook*

Malaysia's ranking in the WCY indicator on "Subsidy does not distort competition and economic growth" deteriorated from the 18th spot in 2012 to the 43rd position in 2021. The downward trend implies that businesses opined government subsidy interrupts healthy competition and disrupts the level playing field in the marketplace, thus affecting dynamic and fair industry growth.

FIGURE 21

MALAYSIA'S RANKING SUBSIDY AGAINST SINGAPORE AND TAIWAN, 2015 - 2021



Source: *World Competitiveness Yearbook*

Malaysia's ranking in the same indicator is far behind Singapore and Taiwan, respectively, at 6th and 18th. The ranking implies that businesses view subsidies positively in developed economies and they do not distort fair competition.

MPC identifies the dependency on non-critical subsidies related to financial, productivity outcome liberalisation, and the industry's inability to enter higher value chain segments as the challenges within the subsidy ecosystem in Malaysia. The current subsidy and incentive programmes, loans and funds, and funding mechanisms need revision against productivity metrics and outcomes. As such, subsidy programmes should be more targeted to boost firm and sectoral productivity. Malaysia does not have a consolidated framework for the management of subsidies which can guide the relevant regulators. There is also a lack of effort in studying the effectiveness and efficiency of subsidy programmes. As subsidy programmes are currently managed by specific ministries or agencies, Malaysia does not have a one-stop centre for data and information on subsidies.

Management of subsidies necessitates an inclusive framework. Effective management of subsidies is paramount in ensuring that government assistance does not distort fair and healthy competition. MPC conducted consultations and engagements with the Ministry of Finance (MOF), Economic Planning Unit (EPU), Department of Statistics Malaysia (DOSM), National Audit Department, Malaysia Social Protection Council (MySPC), and the experts in subsidy to facilitate the improvement of Malaysia's subsidy ecosystem towards productivity growth and competitiveness.

MySPC Meeting 1/2022, chaired by the Prime Minister on 23 March 2022, has agreed for MPC to spearhead the Working Committee to Modernise Subsidy for Productivity. The Working Committee, led by MPC, is responsible for developing a comprehensive framework for modernising subsidies for productivity, including reviewing the current subsidy programmes through an evidence-based approach, conducting cost-benefit analysis, and consolidating data on subsidy programmes for easy access and monitoring.

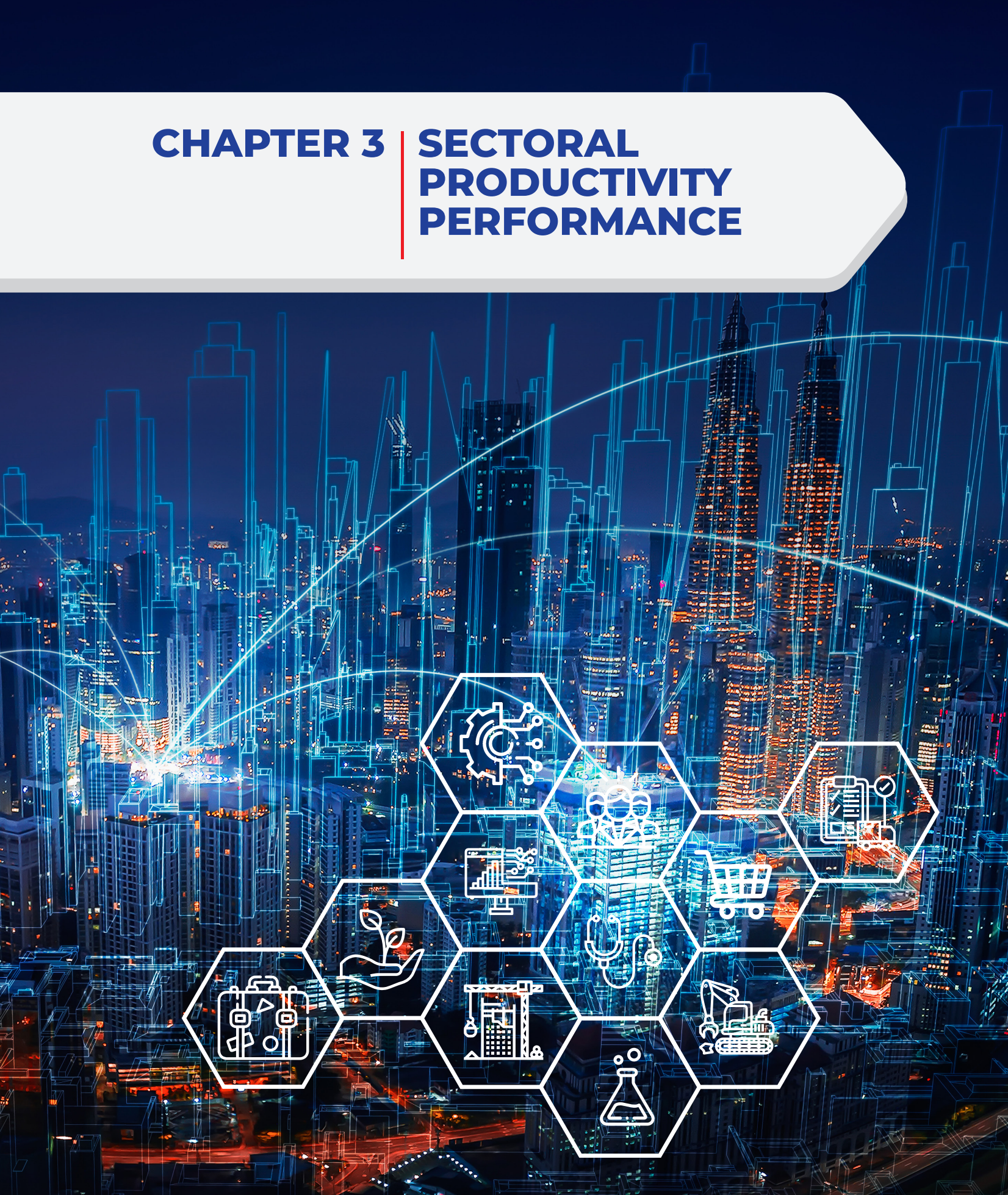
MPC is preparing the *Memorandum Jemaah Menteri* to bring this matter to the Cabinet for approval. Further, MPC will conduct a pilot project on selected subsidy programmes to ensure the designed intervention's effectiveness and feasibility before scaling up the solution for mass implementation. Successful interventions led by the Working Committee are expected to realign subsidy programmes towards generating a more significant multiplier impact within the economy, facilitate businesses to enter the higher value chain, and reduce reliance on non-critical subsidies.

The Working Committee can review the definition of "subsidy" to standardise with the international practices. There are some discrepancies in the definition of subsidy between how Malaysia defines subsidy compared with international practices. This may lead to inaccuracy in data collection, inadequate benchmarking of best practices, and complications in monitoring, measuring, and evaluating subsidies.

The Institute for Management Development (IMD) defines government subsidies as "grants on current account by the public authority to (i) private industries and public corporations and (ii) government enterprises, to compensate for losses which are the consequence of the price policies of the public authorities". According to the IMD, subsidies do not distort fair competition and economic development. The Organisation for Economic Co-Operation and Development (OECD) echoes almost the similar definition that subsidy is a measure to keep prices below market levels for consumers or above market levels for producers; as such subsidy reduces costs for producers and consumers, giving direct or indirect support. The Australian Government Productivity Commission (AGPC) defines subsidy as broader government assistance consisting of programmes, regulations, and policies which help businesses and citizens directly or indirectly.

Malaysia's Ministry of Finance (MOF) characterises subsidy as an allocation by the government to the low-income group to cover part of the costs paid by the citizens. The budget is taken from the current account to stabilise the prices of goods and services. MOF differentiates subsidy from incentives, in which an incentive is defined as an allocation by the government to industry players in selected sectors to increase their production. The Department of Statistics Malaysia (DOSM) has a broader characterisation of subsidy. It refers to the payment by the government to local manufacturers to influence production level, price, or production remuneration factor. According to the System of National Accounts (SNA), subsidy can be classified as a subsidy on products and production. Subsidy programmes in Malaysia also include financial assistance from the government to target groups such as students, women, and the disabled group.

CHAPTER 3 | SECTORAL PRODUCTIVITY PERFORMANCE



SUBSECTORAL PRODUCTIVITY PERFORMANCE

Malaysia Productivity Blueprint (MPB) has mapped the significant contribution of the priority subsectors to Malaysia's productivity and economic growth. In 2017, upon the launch of MPB, nine Productivity Nexus were established in the areas of Agro-food, Chemicals and Chemical Products (C&C), Electrical and Electronics (E&E), Information, Communication and Technology (ICT) or Digital, Machinery and Equipment (M&E), Private Healthcare, Professional Services, Retail and Food & Beverages (F&B), and Tourism. **In 2021, the nine Productivity Nexus conducted more than 60 productivity improvement programmes, benefiting more than 60,000 companies.**

In the Twelfth Malaysia Plan, 2021 – 2025, two more Productivity Nexus have been added for the Construction sector and Logistics subsector, bringing the total number to 11 Productivity Nexus.

During the Eleventh Malaysia Plan Mid-Term Review 2018-2020, the average annual growth rate for labour productivity of nine Productivity Nexus dropped by -0.1 per cent. The decline was attributed to weak productivity performance, especially in the tourism subsector, of -13.2 per cent due to temporary business closedown during the pandemic.

TABLE 5

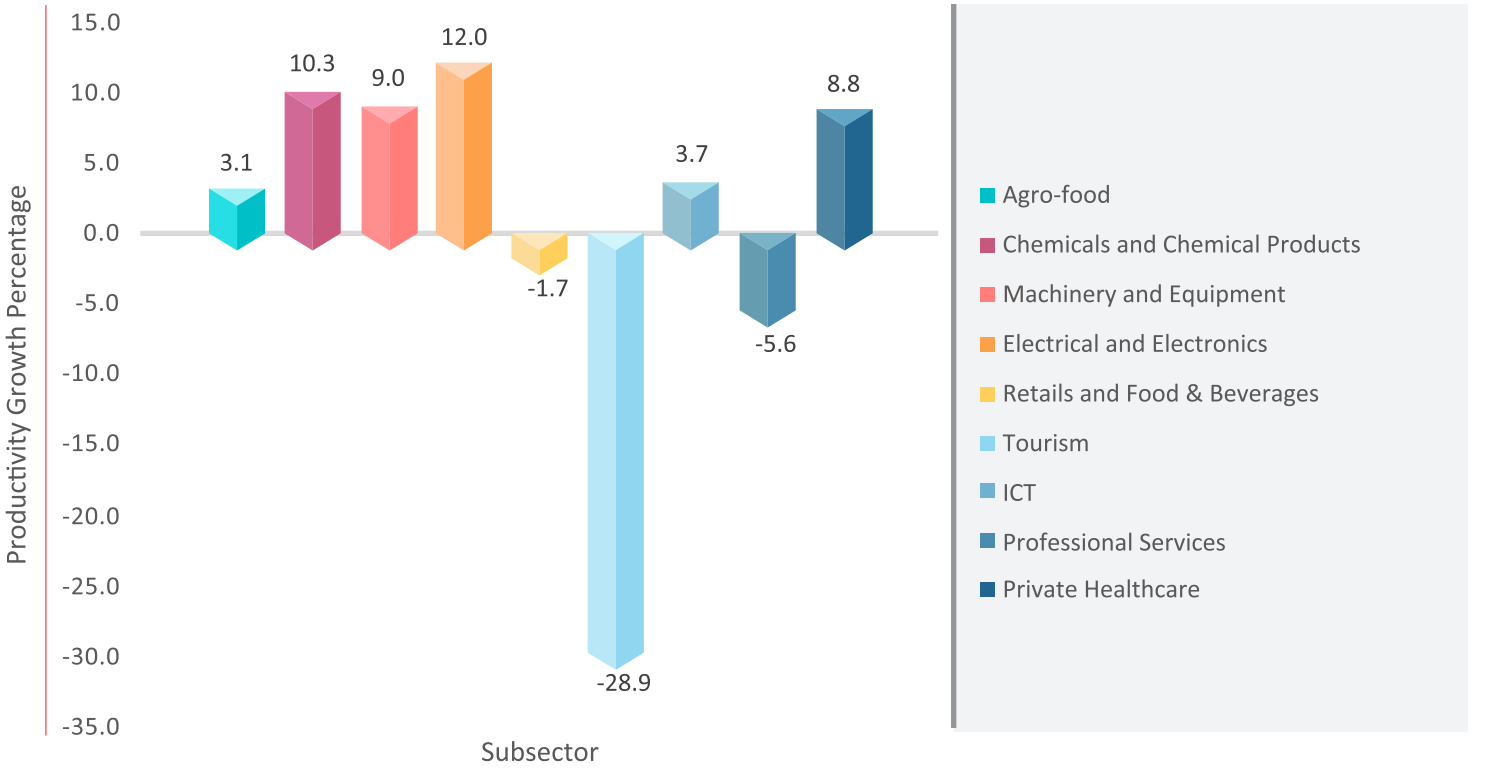
LABOUR PRODUCTIVITY FOR SUBSECTORS UNDER THE NINE PRODUCTIVITY NEXUS, 2017 - 2020

SECTOR	SUBSECTOR[1]	RM '000 PER WORKER, AT CONSTANT 2015 PRICES		AVERAGE ANNUAL GROWTH RATE, %
		2017	2020	2018 - 2020
Agriculture	Agrofood	88.8	91.2	1.0
Manufacturing	Chemicals and Chemical Products	291.1	276.8	-1.6
	Machinery and Equipment	84.5	86.2	0.7
	Electrical and Electronics	163.8	177.2	2.7
Services	Retail and Food Beverages	44.4	42.7	-1.0
	Tourism	66.9	37.1	-13.2
	ICT Services	339.2	366.8	2.6
	Professional Services	76.9	78.0	0.8
	Private Healthcare	61.3	59.1	-1.1
	Overall	**82.6**	**82.2**	**-0.1**

Note : [1] *Subsectors are defines in line with the scope of each Productivity Nexus*
Source: *Department of Statistics Malaysia and the Economic Planning Unit*
Source: *Twelfth Malaysia Plan*

FIGURE 22

2021 PRODUCTIVITY GROWTH OF THE PRIORITY SUBSECTORS UNDER THE NINE PRODUCTIVITY NEXUS (%)



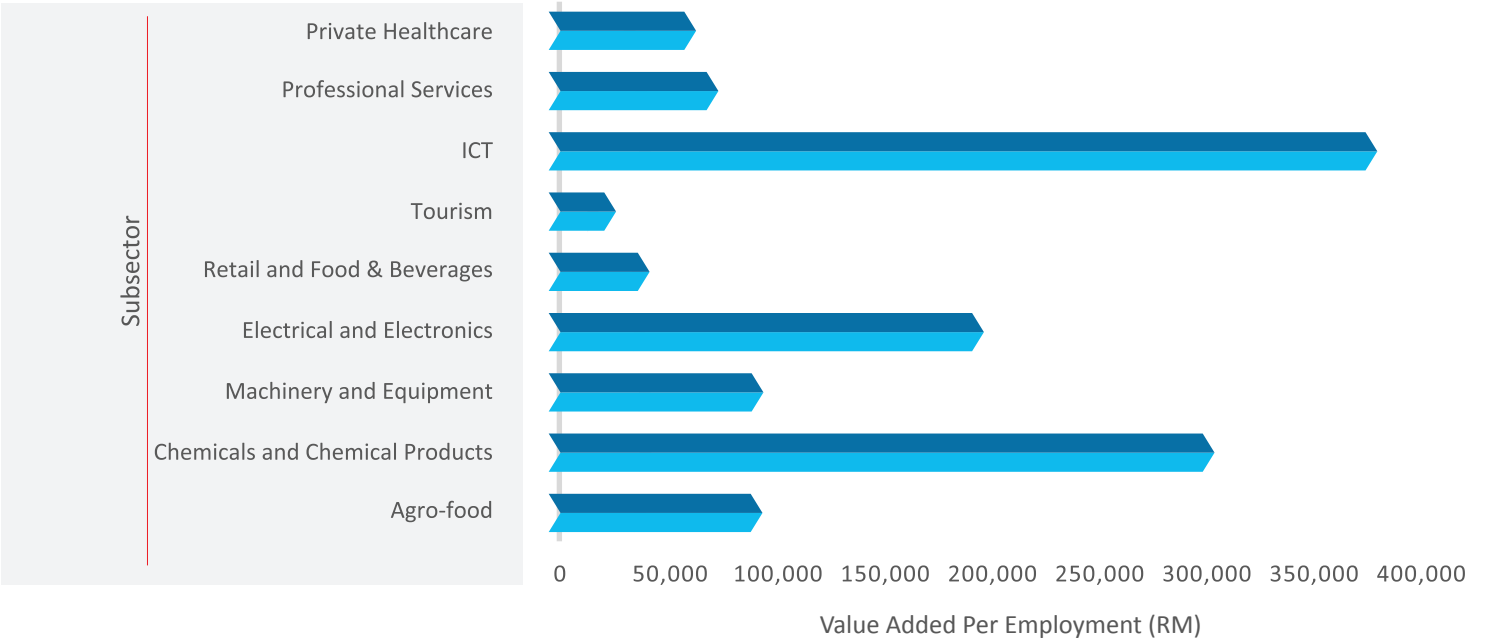
Source: *Department of Statistics Malaysia (DOSM)*

In 2021, the subsectors under the nine Productivity Nexus recorded positive productivity growth, except for the Retail and Food & Beverages, Tourism, and Professional Services subsectors. Malaysia's tourism industry recorded the lowest productivity growth at -28.9 per cent. It was still suffering from the impact of the pandemic in 2021 as Malaysia's international border was still closed to international tourists, and there were still restrictions on the movement of people due to the Standard Operating Procedures (SOP), resulting in minimal tourism activities. The Electrical and Electronics (E&E) subsector registered the highest annual productivity growth at 12 per cent due to the increasing global demand for electrical and electronic components, especially semiconductors. Malaysia was among the significant contributors to the E&E global value chain.

The subsectors' productivity growth was reflected in the value added per employment, in which the tourism industry was at the lowest with RM26,373 per employment. The ICT subsector registered the highest value added per employment at RM380,197 per employment. The subsector's highest productivity level reflected the growing adoption of digital technology and the surge in digital economy activities during the pandemic.

FIGURE 23

2021 PRODUCTIVITY LEVEL OF THE PRIORITY SUBSECTORS UNDER THE NINE PRODUCTIVITY NEXUS (RM)



Value Added Per Employment (RM)	Agro-food	Chemicals and Chemical Products	Machinery and Equipment	Electrical and Electronics	Retail and Food & Beverages	Tourism	ICT	Professional Services	Private Healthcare
	93,990	305,206	93,981	198,439	42,009	26,373	380,197	73,642	64,259

Source: *Department of Statistics Malaysia (DOSM)*

THE AGRO-FOOD SUBSECTOR IS ESSENTIAL TO MALAYSIA'S AGRICULTURE SECTOR AND SOCIAL DEVELOPMENT

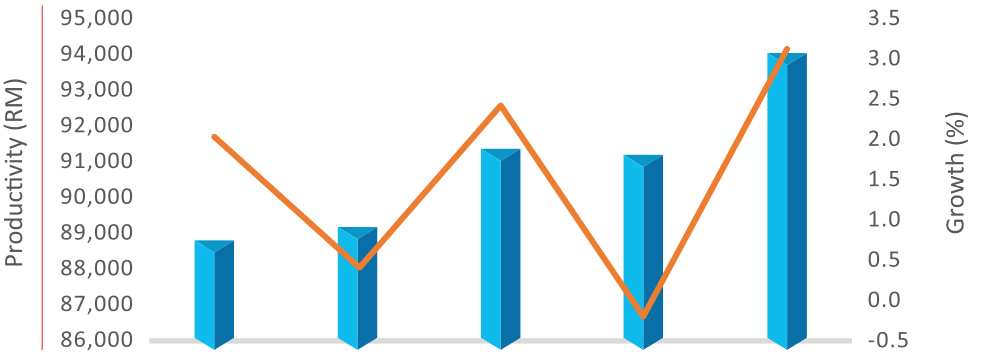
Malaysia's agriculture sector can be classified into the commodities and agro-food subsectors. The agro-food subsector is more fragmented, with small businesses owning most establishments. However, the subsector is expected to contribute more to the overall value added of the agriculture sector.

Dasar Agromakanan Negara (2021 – 2030) indicated that the agro-food subsector employed approximately 500,000 employees in 2019. The number represented about 4 per cent of the total national workforce.

The productivity growth of the agro-food subsector fluctuated between 2017 to 2021. A significant decrease was seen from 2019 to 2020 due to the pandemic. However, in 2021, the subsector rebounded significantly to the pre-pandemic growth at 3.1 per cent. From 2021 to 2025, during the Twelfth Malaysia Plan term, it is projected that the average productivity growth will reach 6.6 per cent, with a higher productivity level of RM57,047. This will contribute to RM263.8 billion in potential agro-food subsector's added value.

FIGURE 24

PRODUCTIVITY PERFORMANCE OF THE AGRO-FOOD SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	88,789	89,145	91,310	91,157	93,990
Productivity Growth (%)	2.0	0.4	2.4	-0.2	3.1

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

The agro-food subsector is essential to Malaysia's economic and social development. However, the subsector is confronted with several challenges. Among the issues and challenges are insufficient focus on value adding activities, disconnections along the value chain, low level of productivity among the small players, problems with quality and standards across the subsector, and low adoption of technology and modern farming techniques.

Efficient implementation of regulations related to building closed poultry houses for modern farming is identified as one of the challenges poultry farmers face in shifting from open system farms. Varying interpretations and implementations of regulations at the state and local authority levels and the high costs of building closed poultry houses impose burdens on farmers.

MPC's Agro-food Productivity Nexus (AFPN) is facilitating a pilot programme on Regulatory Experimentation to Accelerate the Approval of Modern Farming through Agile Regulation Approach: A Case of Closed Poultry House, in Manjung, Perak. This pilot project is a collaboration with the Ministry of Agriculture and Food Industry, the Department of Veterinary Services, Majlis Perbandaran Manjung, Pejabat Tanah dan Galian Perak, Pejabat Daerah dan Tanah Manjung, Department of Environment and Department of Irrigation and Drainage. The pilot project is expected to improve production productivity by 20%, reduce business operation costs by 15% and contribute to the increase of the national self-sufficiency level for poultry products in Malaysia to 140% by 2030.

In supporting micro and small farmers, AFPN is conducting contract farming by establishing a cluster farmers programme. The programme seeks to promote market access for small farmers and reduce their dependency on middlemen by embedding a robust contract farming model between leading industry players and small farmers. The model will improve market access for small farmers and simultaneously build their capabilities by transferring knowledge from frontier farming businesses. For the smallholders, the benefits include increased market access, secure demand from established agro-food players, increased transfer of knowledge, and better access to input and product support. The frontier companies benefit from increased security of supply in terms of quality, quantity and timing. This programme is a collaboration between the industry players, AFPN and relevant agriculture related government agencies.

Efforts should be rallied to increase digital and technology adoption among small-scale agro-food businesses. AFPN collaborates with industry associations, academia, and relevant government agencies to hold Smart Agro-Food Hackaton. The programme aims to accelerate innovation in the agro-food subsector to boost business productivity, produce quality yield, ensure the agro-food businesses stay competitive and relevant in the economy, and bring new and fresh perspectives and prudent solutions. Students from higher learning institutions create technology-based solutions to help small-scale agro-food businesses in their operations.

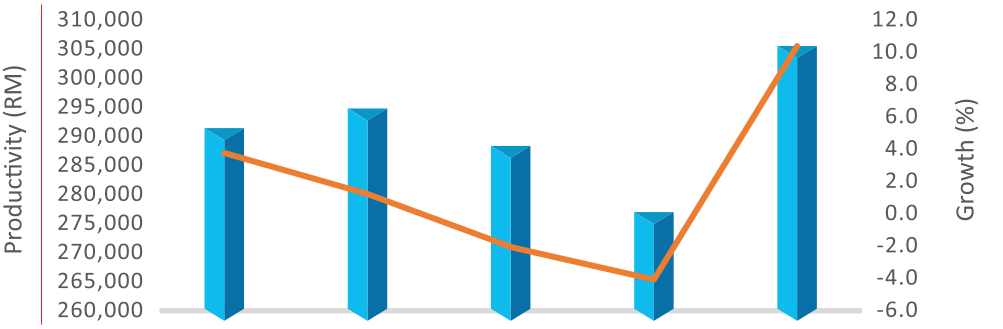
THE CHEMICALS AND CHEMICAL PRODUCTS (C&C) SUBSECTOR CONTINUES AS AN ESSENTIAL SUBSECTOR IN THE MANUFACTURING SECTOR

The chemicals and chemical products (C&C) serve as the pertinent subsector in the manufacturing sector. The subsector comprises products from agricultural chemicals or agrochemicals, industrial gases, inorganic chemicals, paints, soaps and detergents, cosmetics, toiletries and other chemical products. 90 per cent of the subsector's industry players are mainly the small and medium enterprises.

In terms of labour productivity growth in value added per employment of the C&C subsector in Malaysia, the performance was on a downward trend between 2018 to 2020. The growth rebounded to go beyond the pre-pandemic level in 2021. The C&C productivity growth soared to 10.3 per cent in 2021, compared with -4 per cent in 2020. The enormous increase was contributed by the demand in the C&C products for essentials during the pandemic, such as gloves, hand sanitiser, and daily-use products.

FIGURE 25

PRODUCTIVITY PERFORMANCE OF THE CHEMICALS AND CHEMICAL PRODUCTS SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	291,101	294,621	288,306	276,827	305,206
Productivity Growth (%)	3.7	1.2	-2.1	-4.0	10.3

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

A consistent challenge in Malaysia's C&C subsector is the inability of the chemical firms to penetrate the high value added segments. The situation decreases opportunities for significant gain and affects the industry's sustainability in general. Market mapping indicated that 80 per cent of the chemical enterprises operate within the low value add segments. Limited presence in high value add segments may be due to various reasons. Among others are the high cost of product reinvention and marketing, lack of product diversification, updates, and innovation, and limited products to fit market segmentation.

In terms of talent and workforce, issues concerning the supply and demand of talents for the current and future workforce are compounded by the impact of the pandemic. The inability to hire local workers, high reliance on foreign workers, and lack of high skill workers or workers with specific skill sets are the chemical industry challenges, leading to low productivity and performance levels. Skills mismatches also present a barrier for chemical firms to hire graduates who just left universities when skills needed in the industry do not match the education received at higher learning institutions.

Continuous efforts are pertinent to mitigate the current and future challenges and support Malaysia's C&C business community to revive, sustain, and expand operations.

In terms of talent development, the emphasis should be on TVET education and recognition of post-secondary non-formal skill-based training. The effort will produce more talents with C&C specific skills, knowledge, and expertise. Industry-led certification programmes, designed and acknowledged by higher learning institutions, relevant government institutions, and accredited certification bodies, can be developed to produce and recognise industry-specific high-skilled talents. For example, the Chemicals and Chemical Products Productivity Nexus (CPN), in collaboration with Genovasi University College and Politeknik Tun Syed Nasir Syed Ismail, develops the Certification for Chemical Process Technician Programme to upskill C&C process technicians.

Safety and security in transporting C&C cargoes and dangerous goods on Malaysian roads have been among the significant concerns in the industry. The C&C industry players must ensure that drivers and vehicles hired are competent. CPN is currently working with the relevant government agencies and C&C industry players to develop **Malaysia Transport Data Exchange (MyTDX).** The project aims to assist the industry players in optimising operations and managing safety issues in chemical transportation. Its objectives are to address concerns in safety and security aspects; manage the dependency on third-party transport service providers with poor control and management over their drivers and vehicles; mitigate the lack of integration in government agencies' framework and systems, and control the unauthorised and unqualified chemical transporters of schedules wastes and their disposals.

Malaysia's C&C firms must be encouraged to venture into the specialty chemical market segment to increase returns and insulate their businesses from market cyclicality. The movement to higher value segments comprises performance-focused specialties that should be chemistry-driven, less cyclical, trade secret-based, capital light, and by specialised application. Support from the government, such as the Ministry of International Trade and Industry and MATRADE, can expedite high potential C&C firms' entry into a high value added segment.

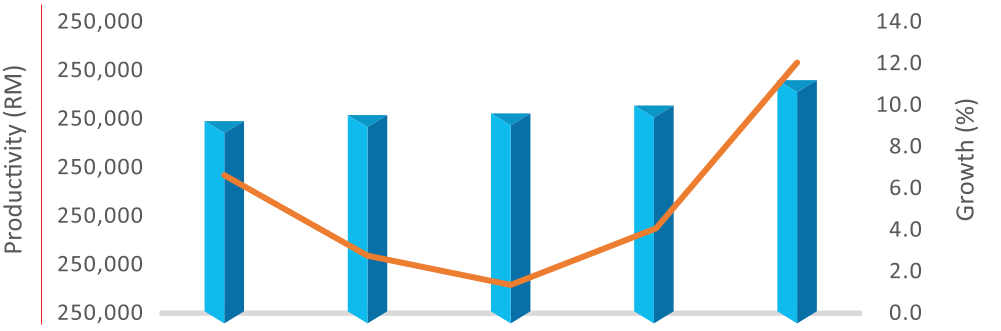
THE ELECTRICAL & ELECTRONICS (E&E) SUBSECTOR CONSTANTLY REMAINS SIGNIFICANT TO MALAYSIA'S ECONOMIC GROWTH

From the economic perspective, the E&E subsector is the leading industry in foreign investment inflow, contribution to employment, output, and exports. In 2021, the E&E industry contributed 6.83 per cent to GDP, valued at RM95 billion. In addition, the E&E subsector dominated the country's exports, with total exports accounting for 36.8 per cent or RM455.73 billion in 2021. The E&E industry received the most investment opportunities, with 94 approved projects worth RM148 billion from the manufacturing sector's secured projects worth RM195.1 billion in 2021.

The E&E subsector recorded an impressive labour productivity growth in 2021 at 12 per cent, with RM198,439 in value added per employment. The growth was the highest among the subsectors under the Productivity Nexus. The high demand for the E&E products worldwide, specifically in the semiconductor market, contributed to the increase. Malaysia is recognised as the primary semiconductor manufacturer in the global value chain.

FIGURE 26

PRODUCTIVITY PERFORMANCE THE ELECTRICAL AND ELECTRONICS SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	163,835	168,258	170,471	177,211	198,439
Productivity Growth (%)	6.6	2.7	1.3	4.0	12.0

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

Business survival is the primary concern for many enterprises hit by the pandemic crisis as production levels decreased tremendously due to shutdown disruptions in 2020. The industry recovers and grows due to the high demand in 2021. For large companies, the decline in production was mainly due to the drop in export demand. Specific buyers cancelled or postponed delivery of their orders. For the mid-tier companies and SMEs, the decline in production was due to poor external and domestic demand. There was a disruption in supply bases, causing a delay in delivery of materials, and manpower issues impacted production capacity.

The E&E industry players highlighted their challenges in talent, including the high attrition rate for new hiring of factory workers, inadequate students studying STEM, and a high percentage of engineers who did not meet the industry's expectations, causing the shortage of engineers. The scarcity of manpower, especially engineers, is compounded by brain drain causing an inconsistent supply of resources for the industry's expansion.

The Twelfth Malaysia Plan has identified the E&E subsector as one of the strategic and high impact industries, in which more focus is given to accelerating the growth of this industry. 2022 is a special year for the pioneers of the E&E companies in Malaysia as they celebrate the 50th anniversary, the half a century of collective efforts with all stakeholders in creating the ecosystem for smart manufacturing and design and development in Malaysia.

Reskilling the E&E local workforce is vital to keep pace with rapid changes in technology advancement and new business models. The focus should also be on retaining talents and attracting high-quality and skilled talent for sustainable development. Higher learning institutions should increase the enrolment of students in STEM related courses to meet the demand from the industry.

Co-designing a practical framework to increase E&E firm-level productivity is imperative to affect growth at the sectoral and national levels. Collaboration with multinational companies (MNCs) brings in global resources, more up-to-date and forward-thinking technologies, as well as drives and aggregates demand to achieve the economies of scale and reduce costs. MNCs can assume a role in developing talent, R&D, and business ecosystem, through technology transfers and sharing best practices. It builds a holistic culture of waterfall effect for Malaysian E&E companies to move forward and cultivate an environment that nurtures R&D activities and participates in the global supply chain.

Partnering with technology centres can enhance the E&E R&D ecosystem. For example, partnering with industry giants has transformed Taiwan's E&E capabilities, from manufacturing semiconductor boards to designing cutting-edge turnkey solutions. The role of the state is to provide the ecosystem to enable firms to effectively adopt crucial technologies, undertake strategic R&D, and create an ecosystem that continuously supports the reskilling and upskilling of the workforce.

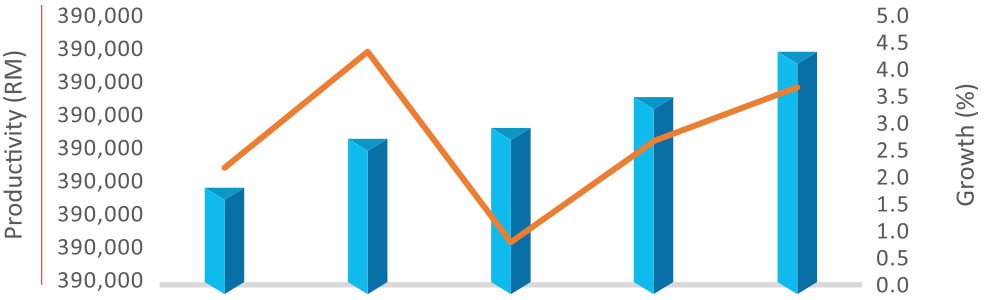
THE PANDEMIC BOOSTED THE INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) SUBSECTOR'S GROWTH

The COVID-19 pandemic has benefited the Information and Communication Technology (ICT) subsector, which can be seen through the digital economy growth and the demand for digital technology. Businesses have shifted from face-to-face interaction-based operations to online mediums.

Labour productivity growth in the ICT subsector rose to 3.7 per cent in 2021 from 2.7 per cent in 2020. The subsector recorded the highest productivity level in value added per employment among the main priority subsectors under the Productivity Nexus at RM380,197 per employment. Its level correlated with the increase in productivity growth. The ICT's upward productivity performance was attributed to the rise in digital adoption during the pandemic. The restriction in movement forced the population to maximise the use of technology and digitalisation.

FIGURE 27

PRODUCTIVITY PERFORMANCE OF THE ICT SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	339,185	354,004	356,995	366,778	380,197
Productivity Growth (%)	2.2	4.4	0.8	2.7	3.7

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

The challenges in the ICT subsector remain in the areas of workforce, technology, and business environment. In terms of workforce, the subsector faces a shortage of ICT professionals, supply gap for new ICT graduates, lack of experienced ICT professionals with specialised skills, such as software development, system application and products, enterprise resource planning, and brain drain of skilled ICT professionals to countries with higher pay.

The level of digital adoption is still low. Businesses indicate that financing or digitalisation costs remain the top challenges. These include costs related to internet connectivity, software subscription fees, and digital hardware. The pandemic severely impacted many small businesses. Hence cash-flow problem hindered their abilities to embark on digital transformation. In terms of infrastructure, Malaysia's internet connectivity is perceived to have lower speed and quality than the neighbouring countries. A conducive business environment supports expanding and upgrading broadband infrastructure through agile regulation.

In building a robust digital workforce, there is a need to develop digital and future skills framework, a model to describe skills and competencies required by professionals in roles involving ICT software engineering and digital transformation. The development of the framework requires involvement and support from Malaysia Digital Economy Corporation (MDEC), HRDCorp, and the ICT industry players. The framework can be the main guidelines for investors in measuring the level of talent competencies in Malaysia.

Higher digital and technology adoption necessitates leadership and change management. MPC's Digital Productivity Nexus (DPN) is conducting the Awakening Digital Leadership programme to influence leaders in spearheading digital transformation. The programme ensures digitally enabled businesses by making the most impact in delivering value to the stakeholders.

DPN is embarking on regulatory experimentation to facilitate the digital infrastructure's improvement. A collaborative effort with the relevant government agencies such as the Malaysian Highway Authority (LLM), Malaysian Communications and Multimedia Commission (MCMC), local governments, and concessionaires are ongoing to improve the cost, time, and procedures involved in developing digital infrastructure, especially in the right of way of highway which provides access to last miles of access.

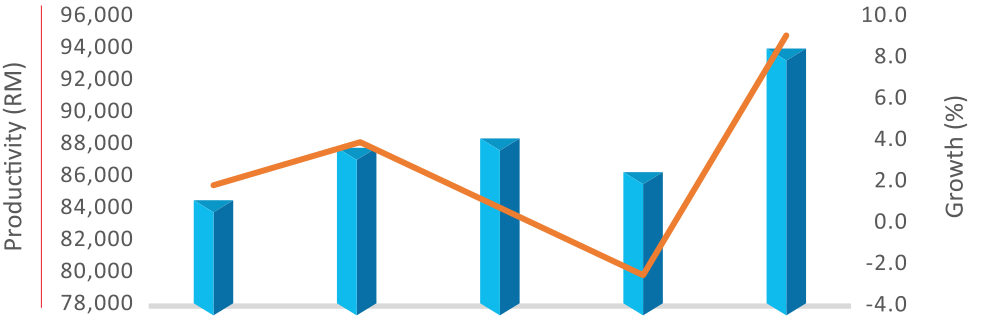
THE MACHINERY AND EQUIPMENT (M&E) SUBSECTOR REBOUNDED, SURPASSING ITS PRE-PANDEMIC PERFORMANCE

The M&E subsector is one of the vital economic industries in Malaysia that play a crucial role in materialising the IR4.0 aspiration. The M&E subsector in Malaysia is typically a labour-intensive subsector. The workforce needs to be equipped with technical and management skills to understand the intricacies of the processes involved. Upskilling the local M&E workforce will increase their income, raise the subsector's productivity levels, and reduce the nation's dependency on low-skilled labour.

The M&E subsector recorded a rebound surpassing its pre-pandemic productivity performance. The subsector's productivity returned to its positive growth in 2021 at 9.0 per cent compared to -2.5 per cent in 2020. The change was consistent with its productivity level in value added per employment, which increased from RM86,229 in 2020 to RM93,981 in 2021.

FIGURE 28

PRODUCTIVITY PERFORMANCE OF THE MACHINERY AND EQUIPMENT SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	84,547	87,834	88,409	86,229	93,981
Productivity Growth (%)	1.8	3.9	0.7	-2.5	9.0

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

The main challenges faced by the M&E industry players are the fear to change and being comfortable with the existing way of doing business. The industry players resist the new way of doing business through digitalisation. The typical incumbent firms perceive digital transformation as optional and delay digital technology adoption. This mentality retards the progress in the industry. In addition, digital transformation comes with high costs. Digital transformation needs to be done gradually with a proper plan and resource distribution to develop a win-win situation.

In terms of talent and manpower, it is evident that the M&E players are facing problems in employing skilled talent. As an industry that deals with advanced technology, human capital development needs to be proactive and provide continuous training so that employees can cope with the latest technology and the new way of operating. From fresh graduates to the senior technical staff, the elements of IR 4.0 constantly challenge business operations. TVET institutions and institutions of higher learning need to be empowered with the most current knowledge in science and technology and their applications to the industry. The adequate talent supply will lessen the burden on the company to upskill or reskill employees.

Malaysia's M&E subsector industry is relatively strong. It assumes the strategic importance of the country's economic transformation in the primary, manufacturing, and services sectors. **Nevertheless, the supporting industries comprising the supply chain are fragmented.** Malaysia's M&E builders are mainly export-oriented and not sustainable if they depend on only the domestic market. Outsourcing parts and components to the supporting industries is the critical strategy to remain competitive globally.

The establishment of the M&E industry cluster is expected to strengthen the M&E supply chain ecosystem. The cluster concept is the answer to a supply of competitively priced parts, components, and services to the M&E industry. The M&E industry cluster aims to form a group of M&E companies, where the cluster members will support each other. The group formed must have the synergy to materialise and develop the cluster and position it as an advantage to the cluster members in terms of business growth, potential investment, productivity and competitiveness.

Successful establishment of the M&E industry cluster is expected to contribute to the expansion and growth of Malaysia's M&E subsector, as stipulated in the Twelfth Malaysia Plan. The M&E industry cluster may give the industry a new breath to compete in higher value chain segments and expand international exports. In collaboration with the M&E industry associations, the Machinery and Equipment Productivity Nexus (MEPN) is piloting the first M&E industry cluster. Successful establishment of the industry cluster requires endorsement and support from MITI.

Boosting digital adoption among the M&E players requires support from the government in the form of grants and incentives, which will help enhance their technologies and specialties towards becoming strong niche market players. Productivity improvement intervention programmes for the M&E players can be in field management, digital mastery, process automation, and the Internet of Things.

In addressing the shortage of skilled production workers and the mismatch between curriculum and industry needs, a partnership between the relevant government bodies and industry associations is necessary to upskill the existing workforce. Potential collaborations may include organisations such as MEIF and its associations, TVET Institutions such as Universiti Teknikal Malaysia Melaka (UTeM), Institut Latihan Perindustrian (ILP) Pedas, German Malaysian Institute (GMI), Universiti Kuala Lumpur (UniKL), Selangor Human Resource Development Centre (SHRDC), Negeri Sembilan Skills Development Centre (NSSDC), Kedah Industrial Skills and Management Development Centre (KISMEC) and Malaysian Welding & Joining Society (MWJS), and government agencies such as Jabatan Pembangunan Kemahiran (JPK), Ministry of Human Resources (MOHR), Ministry of International Trade and Industry (MITI), Malaysian Investment Development Authority (MIDA), Malaysia External Trade Development Corporation (MATRADE), Talent Corp, Pertubuhan Keselamatan Sosial Malaysia (PERKESO), and My Future Job.

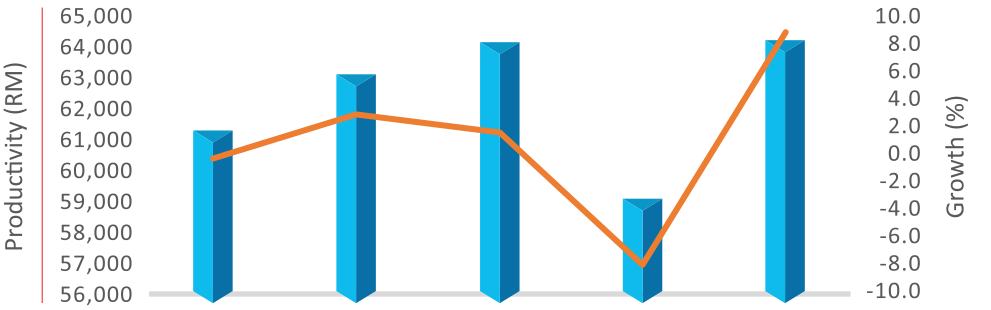
INCREASING THE PRIVATE HEALTHCARE SUBSECTOR'S GROWTH THROUGH MULTIPARTY COLLABORATION

For two years, from 2020 to 2021, the COVID-19 pandemic and the subsequent Movement Control Orders (MCOs) and the border closures had caused a reduction in patient volumes as patients opted to postpone non-urgent non-essential treatments and deferred visits to hospitals.

The productivity growth of the private healthcare subsector increased tremendously in 2021 at 8.8 per cent compared to its negative growth of -7.9 per cent in 2020. This is indicated in its productivity level in value added per employment at RM64,259, increasing from RM59,088 per employment in 2020.

FIGURE 29

PRODUCTIVITY PERFORMANCE OF THE PRIVATE HEALTHCARE SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	61,332	63,121	64,189	59,088	64,259
Productivity Growth (%)	-0.2	2.9	1.7	-7.9	8.8

Note: [e] – *estimated* \ [p] – *preliminary* | **Source:** *Department of Statistics Malaysia (DOSM)*

With the rush to progress much faster with digital transformation because of the new and advanced technologies, the pandemic was pivotal in speeding up the digitalisation of healthcare services to provide efficient and effective treatment and care for the Malaysian population. Accelerating digitalisation in the private healthcare subsector necessitates government support.

Manpower shortage is another challenge in healthcare services. There is a high attrition among healthcare professionals because of the increase in healthcare facilities and demand for treatment due to the high incidence of COVID-19 cases and many non-communicable diseases.

In increasing the efficiency and quality of delivery by the private hospitals, a single national Diagnosis-Related Group or Casemix for Malaysia can help expedite the reimbursement of payment for private healthcare facilities. By looking at the country's current healthcare situation, outsourcing ICU services and non-Covid cases to private hospitals is being discussed. Three critical issues concerning outsourcing are the payment method, cost of payment per case, and method of monitoring quality and efficiency.

The introduction of Casemix is deemed significant, especially since Malaysians would be able to maximise the services, and the tool can improve the overall healthcare system. Implementing Casemix can increase efficiency, save costs, and enhance quality where it can help reduce mortality and complications and generate intelligent data.

A single system to capture and integrate supply and demand data from the private and public hospitals can be a solution to the lack of capability of healthcare services. The Health Facility Briefing System (HFBS) is a technology for mapping the overall situation using the data gathered, producing heat maps geographically, making projections and determining the gaps once targets are set to develop strategic plans. The system can help calculate how the target can be achieved given all the factors involved. It can even calculate considering the disease burden, the number of beds etc. It can present information in dashboard form to view the gaps.

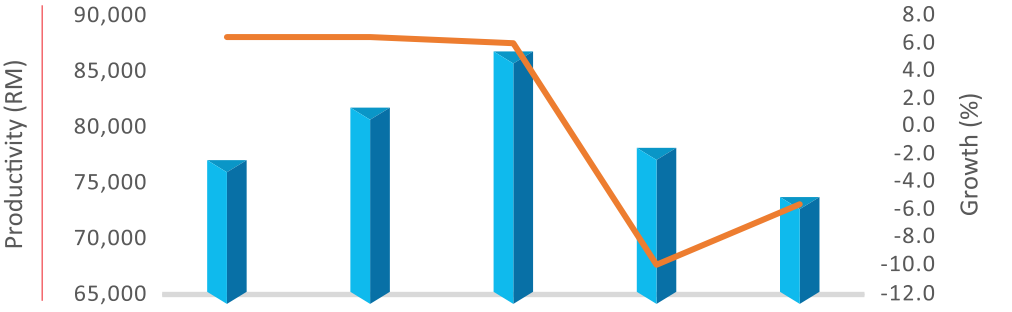
THE PROFESSIONAL SERVICES SUBSECTOR PLAYS A CRUCIAL ROLE IN SUPPORTING TRADE AND BUSINESSES

The professional services subsector plays a crucial intermediary role in supporting business and trade for all sectors of the Malaysian economy. This subsector comprises Accountants, Architects, Advertising Professionals, Engineers, Lawyers and Management Consultants. The professional services subsector is one of the vital contributors to the services sector.

The productivity growth of the professional services subsector in Malaysia recorded a decline in 2020, mainly contributed by the COVID-19 pandemic, as much as it is impacting other industries. **In 2021, the subsector still recorded a negative productivity growth of -5.6 per cent.** The negative growth was reflected in the subsector productivity level, which decreased from RM78,008 in 2020 to RM73,642 in 2021 in value added per employment.

FIGURE 30

PRODUCTIVITY PERFORMANCE OF THE PROFESSIONAL SERVICES SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	76,928	81,831	86,671	78,008	73,642
Productivity Growth (%)	6.4	6.4	5.9	-10.0	-5.6

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

Given the industry's skills, knowledge, and competency readiness, there are issues in mismatched talents to cater to professional services' current and future demands and needs. Competency in demand from employers such as leadership, innovative and strategic thinking, complex problem solving, entrepreneurial skills, and research skills are scarce. Likewise, there is a gap in the supply of high-skilled workers to fit the fast and dynamic changes in the economic landscape. While solutions in the form of upskilling and reskilling programmes equip workers with relevant competencies, funds are limited to ensure programmes delivered are high in impact, effective, and appropriate. Other pertinent issues surrounding the professional services subsector are the lack of professional recognition and inequitable remuneration and compensation schemes. These issues affect hiring and retaining talents, especially among high performing and high skill workers.

Barriers to technology in professional services are inadequate infrastructure, usage of obsolete technology, and the conventional way of operating businesses. These issues curb innovation and expansion to move towards a high-value chain. Nevertheless, onboarding technology and digitalisation require substantial funds and financial capability on the side of enterprises, which seems to be a challenge to many companies. Lack of cost-benefit analysis correlating technology and business expansion, performance, and productivity may also hinder firms from adopting technology and digitalisation.

In the professional services subsector, there is a lack of trust by dominant players among GLCs and GLICs in local professionals. This may be attributed to poor branding, lack of visibility, and the weak presence of the professional services industry domestically and internationally. The domestic professional services industry is marred by fragmented capacity. In terms of business regulations, there is an inadequacy of the legal framework for multidisciplinary companies and the enforcement of professional regulations.

The lack of appropriate incentives, enforcement, and regulations in the professional services subsector minimises the subsector's potential to grow and increase productivity. Professional services in Malaysia are still operating within a fragmented ecosystem. The goal is to double productivity growth by 2025 as envisioned in the Twelfth Malaysia Plan, which subsequently will position Malaysia as a professional hub within the ASEAN region by 2030.

Towards achieving the goals, there is a need to build talents to cater for professional services' current and future demands. With the shift towards a high-income economy and the changing nature of work, there is a need to better identify skills in demand. Ensuring that the education system is responsive to these changes requires increased effort from the Ministry of Higher Education and industry associations to collect and analyse labour market information. Skills and knowledge gaps can be addressed at the industry level through knowledge transfer and sharing among employees, practitioners, firms, and academics.

Forming a cross-country professional services consortium is a viable solution to increase the capability of Malaysian firms to compete abroad. A consortium allows companies to pool resources to benefit from the economies of scale, efficiency and effectiveness. Cross-sectoral expertise is the game changer for professional services providers in improving productivity by leveraging the respective fraternity's strengths.

In improving the efficiency of professional services firms, the adoption of performance-linked key performance indicators (KPIs) by professional services firms is a must. Available digital tools ease operation tracking and performance-linked KPIs monitoring. Professional services firms can gain insights into the KPIs gathered and know precisely how well their strategies are delivered. Overall efficiency and effectiveness can be accessed, and areas that require remedial actions can be identified effectively.

GROWTH IN THE RETAIL AND FOOD & BEVERAGES (RETAIL AND F&B) SUBSECTOR IS PARAMOUNT FOR THE SERVICES SECTOR

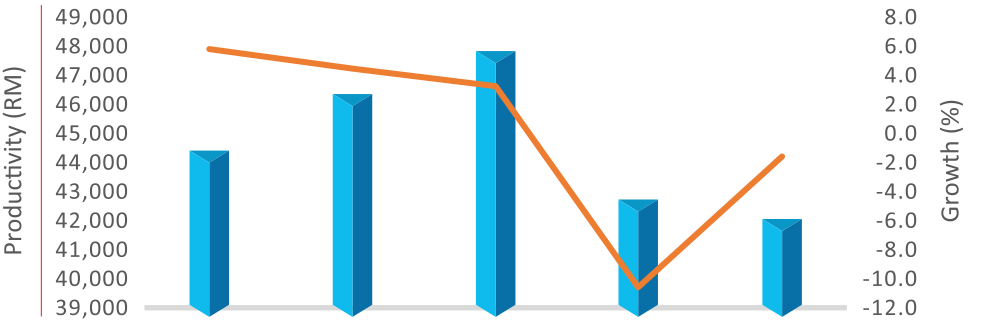
The Retail and Food & Beverages (Retail and F&B) subsector is the most significant component in the services sector. This subsector is dominated by the Small & Medium Enterprises (SMEs), representing 98.5 per cent of the total establishments. Hence, there is a potential to raise overall productivity by targeting SMEs.

The retail and F&B subsector was among the severely affected industries in 2020 due to the MCOs, SOPs, and physical distancing, which could be seen in its value added negative growth. The subsector started to recover in 2021 when there were relaxations in the SOP, and more restaurants and shops reopened.

In 2021, the retail and F&B subsector still recorded a negative productivity growth at -1.7 per cent. Its productivity level contracted from RM42,725 per employment in 2020 to RM42,009 in 2021. The industry has yet to return to its pre-pandemic growth.

FIGURE 31

PRODUCTIVITY PERFORMANCE OF THE RETAIL AND FOOD & BEVERAGES SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	44,371	46,309	47,806	42,725	42,009
Productivity Growth (%)	5.7	4.4	3.2	-10.6	-1.7

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

Between 2020 and 2021, consumers resorted to online shopping due to the closure of physical stores. The trend reinforced the e-commerce market growth in the retail industry in Malaysia. According to the Department of Statistics Malaysia (DOSM), income from e-commerce transactions was at RM896.4 billion in 2020, increasing by 32.7 per cent compared to 2019 at RM675.4 billion. The contribution of e-commerce from this subsector to GDP is expected to increase and will be able to boost labour productivity.

Adoption of technology and digitalisation by industry players in the retail and F&B subsector is still low, leading the businesses to operate not at their full potential. The other factor affecting the retail subsector productivity is its reliance on low-skill and low-wage workers, accounting for over 70 per cent of its workforce. Over relying on low-skilled foreign labour ultimately results in poor subsector productivity performance. Furthermore, enterprises within the retail and F&B subsector do not prioritise productivity performance tracking. Therefore, there is a drastic need to change productivity mindsets and strategically prioritise productivity tracking to drive better operations and returns.

Alongside the recovery initiatives, **the Twelfth Plan also emphasises the modernisation and digitalisation of the retail subsector to move up the value chain.** Improving cost-effectiveness and increasing consumer experience are areas in which digitalisation may have a more significant effect. Other trends, such as IoT, artificial intelligence, robotics, virtual reality, and augmented reality, should be widely used in this subsector.

As for the small retailers, the Retail and Food & Beverages Productivity Nexus (RFBPN) facilitates the adoption of e-payment to increase their operational productivity and efficiency. While the cashless transaction is widely used nationwide, its usage by small traditional retailers is still minimal. RFBPN, through innovative collaborations with the relevant government agencies, Bank Negara Malaysia (BNM), payment gateway, e-wallets and business associations, is conducting several initiatives to accelerate the adoption of cashless payment among retailers such as at Pekan Rabu in Kedah and Padang Besar in Perlis.

Franchising has the high potential to significantly contribute to the national GDP and productivity growth. However, the retail and F&B industry players interested in business franchising face unnecessary regulatory burdens in obtaining franchise certification approval. **RFBPN with the Ministry of Domestic Trade and Consumer Affairs (KPDNHEP) and Malaysia Franchise Association (MFA) are working together to review and facilitate the approval process of franchise certification.**

Among the regulatory challenges are the inconsistencies in the requirements and standards requested in the approval process, resubmission of relevant documents, and the lack of understanding among business owners on the process and procedures involved in obtaining a franchise certificate. Facilitation by RFBPN, KPDNHEP and MFA aims to develop a revised framework for franchise certification approval, standardise the requirements between KPDNHEP and relevant agencies, and assist the industry players to “complete and comply” with the requirements.

In strengthening the retail and food & beverages workforce, RFBPN hopes to undertake more triple helix initiatives among the relevant government bodies, academia, and industry. The initiatives will uplift the subsector's quality of service and efficiency. At the same time, the effort is expected to reduce the talent mismatch between the local graduates and the industry, attract and retain more talent in the industry, and reduce the dependency on low-skilled and low-wage foreign workers.

THE IMPERATIVE NEED TO BRING MALAYSIA'S TOURISM INDUSTRY TO ITS VIBRANCY

Tourism was among the worst affected subsectors due to the repercussions of the COVID-19 pandemic. As the country relaxed more restrictions and allowed domestic travel, tourism businesses began to pick up.

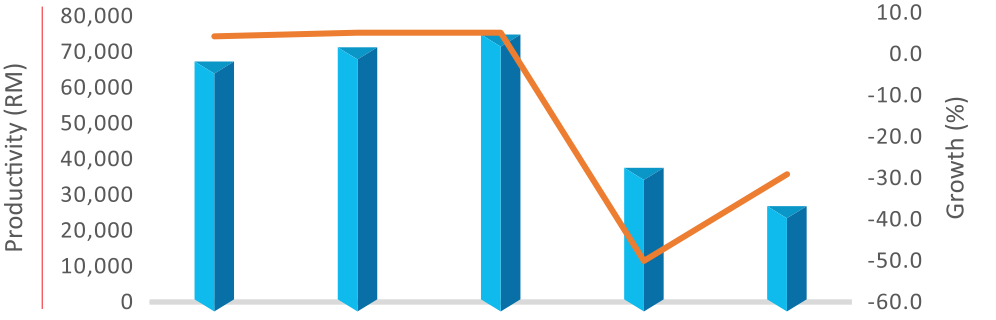
The hike in tourism activities in 2021 was attributed to the implementation of the Tourism Recovery Plan (TRP), starting with the Langkawi Travel Bubble programme beginning on 16 September 2021 for fully vaccinated local tourists, which was later expanded to full interstate travels. The programme was then extended to International Travel Bubble piloted in Langkawi beginning from 15 November 2021. According to Langkawi Development Authority (LADA), the programmes attracted 729,180 tourists to Langkawi with RM750.1 million receipts.

The tourism subsector recorded the worst productivity growth among all the subsectors under the Productivity Nexus at -28.9 per cent in 2021. Productivity level in value-added per employment further decreased from RM37,082 in 2020 to RM26,373 in 2021. The subsector is still far from its pre-pandemic productivity performance in 2019 at 5.3 per cent growth.

However, the outlook looks promising for the subsector to register a positive productivity growth in 2022 and beyond. The reopening of Malaysia's international border and transition into the endemic period are expected to boost tourism activities. This is supported by various strategic plans by the government to revive the tourism subsector.

FIGURE 32

PRODUCTIVITY PERFORMANCE OF THE TOURISM SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	66,895	70,379	74,092	37,082	26,373
Productivity Growth (%)	4.2	5.2	5.3	-50.0	-28.9

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

Among the main challenges in the tourism subsector is the slow adoption of digitalisation to ensure business sustainability. At the forefront is awareness – or the lack thereof. The tourism industry players are still in the dark on how to take the first step to adopt digital technology in their business operation, marketing and promotion, and product innovation. There is no proper reference to guide the industry on the digital transformation journey. As such, many industry players give up before starting the journey.

Secondly is the perception that digitalisation is expensive, that only the big players are entitled and capable of incorporating digitalisation in their businesses. The tourism industry players need to rethink and redesign their businesses and incorporate enablers in their business model by leveraging the availability of social media for a more substantial digital presence, mobile and cloud connectivity, data analytics, artificial intelligence, and cybersecurity. These are new emerging technologies that can propel the tourism subsector further. Digitalisation can help tourism SMEs realise productivity gains, enhance competitiveness, and better understand consumer behaviours. It is vital to encourage the digitalisation of more advanced back-end processes, including worker training and upskilling, to improve technical competencies and spur digitalisation.

The subsector faces a shortage of workers, affecting the quality of service and delivery. Many tourism and hospitality industry players left their employments, were retrenched, or closed their businesses between 2020 and 2021, forcing them to find other sources of income. Employers in tourism businesses did not have enough workers when tourism activities increased in 2021.

Tourism industry players are strongly encouraged to leverage technology and digitalisation to address the shortage of workers, such as in tourist accommodation. Front desk personnel's tasks can be taken over by automated check-in and check-out, and human resources can be reallocated to other areas which require human intervention. Digital tools can also optimise the costs of doing business and use of resources.

The Ministry of Tourism, Arts and Culture (MOTAC)'s commitment to review the Tourism Act 1992 is welcomed by the industry players. The Act was developed when the internet, technology, and digitalisation were in their infancy. The entry of disruptive technology has changed the landscape of Malaysia's tourism. An area to be looked into is regulating the short-term rentals as advertised on many digital platforms such as Airbnb and Booking.com, rendering an uneven playing field with other tourism accommodations. Likewise, some guidelines need a fresh perspective as many travel agencies have moved from operating at physical offices. Digitalisation has tremendously enabled online travel agencies.

In 2022, Tourism Productivity Nexus (TPN) started the efforts to boost the tourism industry under the banner of "Tourism in the New Era", characterised by smart tourism, digitalisation, Industry 4.0, post-pandemic period, and niche and high-yield tourism.

TPN strategises the "Sayangi Malaysia" campaign to revitalise the industry to its vibrancy. It is an all-inclusive programme to boost inbound and domestic travel, focusing on digitalisation, sustainability, and quality service and delivery. It is a campaign to rally all Malaysians to promote the country as the preferred tourist destination by advocating Malaysia's uniqueness. Through the "Sayangi Malaysia" campaign, TPN hopes to propagate respect for Malaysian culture, values, and tradition, instil civic-mindedness, and raise environmental awareness. The multi-pronged sustainability campaign aims to reach out to the industry players, private and public sectors, students and academia, tourists, and the general public to love Malaysia.

Under the Twelfth Malaysia Plan, two new Productivity Nexus in construction and logistics are established to improve the productivity performance and competitiveness of the respective industry.

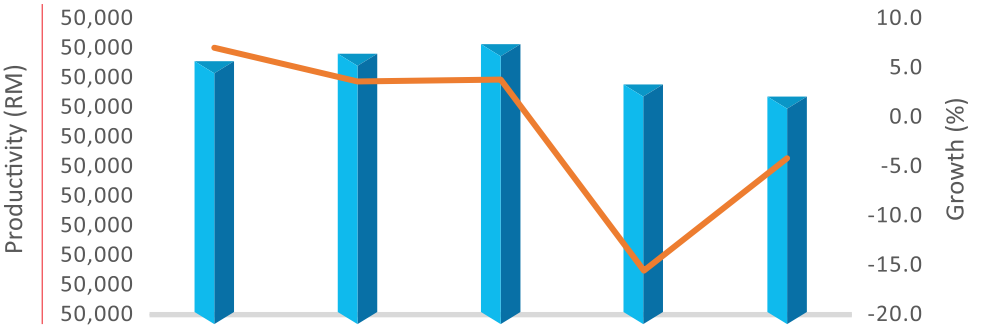
BOOSTING THE CONSTRUCTION SECTOR'S PRODUCTIVITY TO ACCELERATE ECONOMIC RECOVERY

In 2020, Malaysia's construction was severely impacted by the pandemic as most operations halted during the MCO, as reflected in the sector's GDP contraction at -19.4 per cent. Disruption in the construction business continued into 2021 even after the MCO was lifted and SOPs were relaxed. **By the end of 2021, the construction sector had not operated at its maximum capacity, recording negative GDP growth of -5.2.**

The productivity performance of the construction sector still registered a negative growth in 2021 at -4.3 per cent despite an improvement from the year before at -15.6 per cent. The sector's productivity level in value added per employment contracted in 2021 at RM36,699 from RM38,322 in the year before. Malaysia's construction sector has not fully recovered from the plunge in performance due to the impact of the pandemic.

FIGURE 33

PRODUCTIVITY PERFORMANCE OF THE CONSTRUCTION SECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	42,422	43,859	45,421	38,322	36,669
Productivity Growth (%)	6.8	3.4	3.6	-15.6	-4.3

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

Among the challenges in Malaysia's construction sector is the shortage of skilled and non-skilled workers, overreliance on foreign labour and the lack of technology adoption. As the secretariat for the Special Taskforce to Facilitate Business (PEMUDAH), MPC manages issues and challenges in the construction industry through PEMUDAH's Technical Working Group in Dealing with Construction Permits (TWGDCP). The work by the TWGDCP contributed to Malaysia's impressive ranking in the second position among 190 economies in Dealing with Construction Permits indicator in the Doing Business 2020 report by the World Bank.

The establishment of the Construction and Built Environment Productivity Nexus (COBEPN) for the construction sector under the Twelfth Malaysia Plan is expected to boost the industry further, especially in improving the sector's productivity growth and competitiveness.

Improving on-site project execution can boost the construction sector's productivity and performance. Stakeholders raised several issues with on-site execution, including inconsistent application of best practices across all sites, projects, and personnel, and difficulty in identifying and training qualified project managers. In addition, the industry players struggles to find and use hard data to establish a baseline for project and project managers' performance. The construction industry players can adopt four fundamental approaches:

i. Rigorous planning process - A thorough planning approach and adoption of integrated planning tools can result in the improvement in project productivity;

ii. Emphasis on Key Performance Indicator (KPIs) - KPIs detect and reduce variance, and it is necessary to combine common KPIs with forward-looking indicators;

iii. Ensuring all prework is completed - Before beginning on-site work, project owners should complete all prework, such as approvals, permit, and licensing; and

iv. Adoption of different disciplines on-site - Waste and unpredictability can be reduced by careful planning and coordination of diverse disciplines on-site and the adoption of lean principles.

Infusing digital technology, new materials, and advanced automation in the construction sector propels the industry further. The construction sector lags significantly behind other sectors in using digital tools and is slow to adopt new materials, methods, and technology. Significant advances being deployed or prototyped today can transform the effectiveness and efficiency of construction in three areas: digital technologies, advanced materials, and construction automation. Digital technologies, from 5-D building information modelling to advanced analytics, have spread rapidly and should be leveraged by the industry players..

Challenges within the workforce in the construction sector, from ageing managers to increasing numbers of migrant labourers, raise the need to reskill and upskill its workforce. Apprenticeship programmes can train frontline workers in core skills that are currently underdeveloped and with new technologies to help break seasonality and cyclicality, thus improving workforce stability. Collaboration is the key. Funders, educators, and public officials who run workforce-training programmes should collaborate with contractors and traders to ensure skills programmes match the industry's needs. Megaprojects should be long-term catalysts to work with local workforce boards or non-profits and develop regional training programmes.

PAVING THE PRODUCTIVITY IMPROVEMENT EFFORT FOR THE LOGISTICS SUBSECTOR

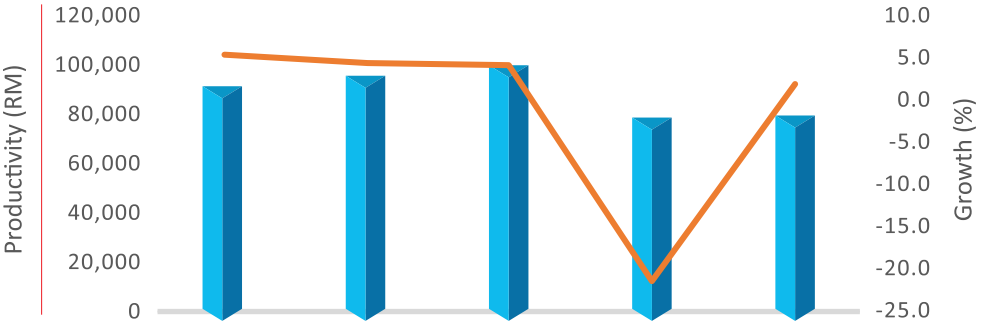
Transportation forms the core component of Malaysia's logistics subsector, whilst other logistics categories cover warehousing, freight forwarding and small package delivery. The latter categories are highly fragmented and mainly operated by small and medium-size logistics companies.

Malaysia's economy has always been trade-dependent, where imports and exports are the core contributing factors. Hence, **the logistics subsector has contributed to Malaysia's economy, supporting the vital industrial sectors, manufacturing, oil and gas, and services.**

In terms of data collection for productivity growth, the logistics industry in Malaysia is subsumed under transportation and storage within the services sector. In 2021, transportation and storage recorded 2.0 per cent productivity growth with RM79,762 productivity level in value added per employment.

FIGURE 34

PRODUCTIVITY PERFORMANCE OF THE TRANSPORTATION AND STORAGE SUBSECTOR, 2017 - 2021



	2017	2018	2019[p]	2020[e]	2021[p]
Productivity Level in Value Added Per Employment (RM)	91,418	95,463	99,432	78,203	79,762
Productivity Growth (%)	5.4	4.4	4.2	-21.4	2.0

Note : [e] – *estimated*
[p] – *preliminary*
Source: *Department of Statistics Malaysia (DOSM)*

The logistics subsector in Malaysia is growing, and its potential looks promising, but the subsector continuously faces complexities and challenges, which can be categorised as:

- Institutional and regulatory mismatches causing a lack of coordination and incurring the unnecessary regulatory burden;
- Processes and procedures in cargo clearance resulting in uncertainties and disruptions and an increase in logistics costs;
- Inefficient road connectivity network resulting in road congestion and low turn-around in delivery planning;
- Incompetence and unskilled manpower affecting non-compliance processes and loss of productive time; and
- Low adoption of digitalisation causing inefficient services and a non-competitive ecosystem.

Logistics Productivity Nexus (LPN) is one of the new Productivity Nexus established under the Twelfth Malaysia Plan. The establishment of LPN is timely as Malaysia is focusing on boosting the digital economy. According to a report by Mordor Intelligence on Malaysia's freight and logistics market, the increasing e-commerce activities are expected to drive the logistics industry in the country. It leads to the rise of logistics activities, mainly storage and transportation.

In building a conducive business environment for the logistics subsector, there is a need to increase the ease of doing business by reviewing relevant regulations. There is room for improvement in enabling smoother regulatory compliance at PUSPAKOM and Road Transport Department (JPJ) to increase the industry's productivity. The relevant authorities may also need to look into the regulations concerning enforcement activities and permit applications for new prime movers to eliminate unnecessary and redundant processes and procedures.

The industry players in the logistics subsector need to mitigate the interfacing Issue impacting haulage productivity. Among the recommendations to address this issue are establishing interface agreements between firms, executing the collaborative implementation of ICT solutions, and intensifying digitisation in the haulage industry.

The substantial growth of the logistics industry requires an adequate workforce in terms of availability, readiness, and competency. Truck drivers, being among the most crucial human resource in the logistics industry, needs a revamp to project a more professional and credible image. In addition, the remuneration system for truckers should be reviewed to link their wages to performance and productivity.

CHAPTER 4 | PROCESS IMPROVEMENT

PROCESS IMPROVEMENT IS IMPERATIVE FOR ENTERPRISE-LEVEL PRODUCTIVITY

Process improvement is a continuous organisation-wide spirit and passion for ensuring business processes are running at near-perfection levels by pushing the existing standards and quality benchmarks towards even better performances. The process involves solving any issue that arises using a cyclic problem-solving approach, which includes strategically identifying and analysing the root cause, designing a feasible counter-measure, controlling its implementation, and monitoring the sustainment of the counter-measure. Process improvement is a positive work culture that increases employee and organisational excellence and is crucial to organisational productivity, competitiveness, and growth.

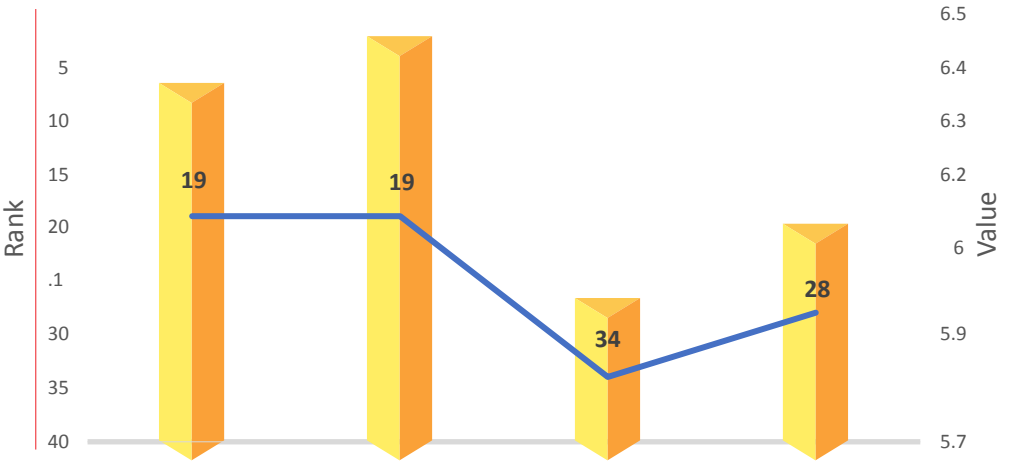
The World Competitiveness Yearbook (WCY) by the Institute for Management Development (IMD) reported Malaysia's improved ranking in responding effectively to meet changing business needs. Malaysia's ranking in the WCY Agility of Companies criterion increased from 34th in 2020 to 28th in 2021. The criterion contributes to the performance ranking of the WCY Sub-Factor on Management Practices under Business Efficiency Factor. Likewise, Malaysia improved its Digital Transformation in Companies criterion from 26th spot in 2020 to 22nd position in 2021.

The increased ranking in both criteria denotes the ability of Malaysian enterprises to respond to changes and technological advancement in enhancing business efficiency. The WCY rankings signify that Malaysian companies have implemented process improvements in line with digital transformation.

Nevertheless, there is room for improvement, especially in innovating processes and embedding technology and digitalisation in business operations. Malaysia's ranking was far behind Singapore at 13th and 9th position in the respective agility of companies and digital transformation criteria.

FIGURE 35

MALAYSIA'S PERFORMANCE IMPROVED IN 2021 IN AGILITY OF COMPANIES CRITERION

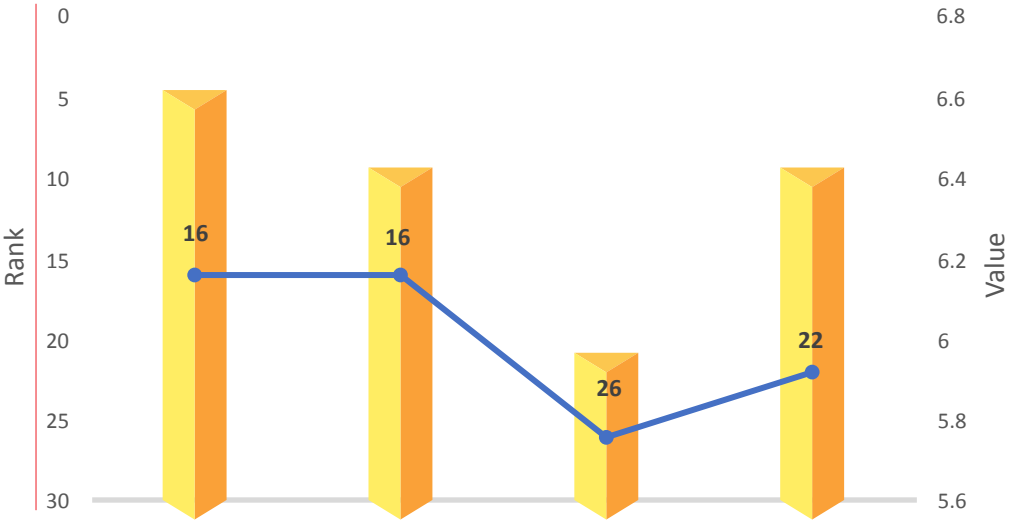


	2018	2019	2020	2021
Rank	6.37	6.46	5.97	6.11
Value	19	19	34	28

Source: *IMD World Competitiveness Yearbook 2021*

FIGURE 36

MALAYSIA'S PERFORMANCE IMPROVED IN 2021 IN DIGITAL TRANSFORMATION IN COMPANIES CRITERION



	2018	2019	2020	2021
Rank	6.62	6.43	5.97	6.43
Value	16	16	26	22

Source: *IMD World Competitiveness Yearbook 2021*

Malaysia Productivity and Investment Climate Survey (PICS-3) by the World Bank Group indicated the need for Malaysian firms to invest more in innovation to enhance productivity gains. PICS-3 reported that Malaysia performed well compared to other developing countries in the innovation indicators, particularly in introducing new products. However, Malaysia's performance fell short in raising new process improvements and innovation. Lack of investment in research and development (R&D) further compounded the deficiency.

FIGURE 37

MALAYSIA PERFORMED WELL COMPARED TO ITS PEERS IN PRODUCT INNOVATION

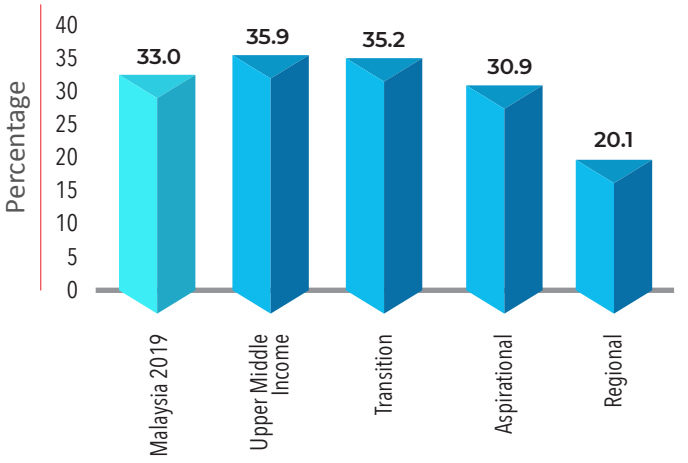
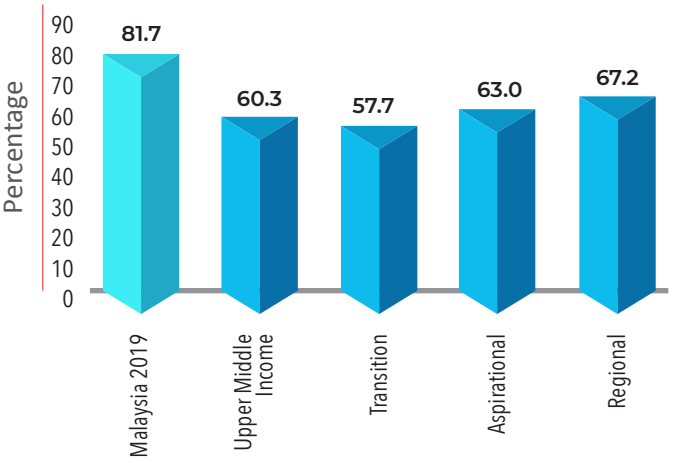


FIGURE 38

NEARLY 82 PER CENT OF THE NEW PRODUCTS WERE ALSO NEW TO THE FIRMS' PRIMARY MARKET



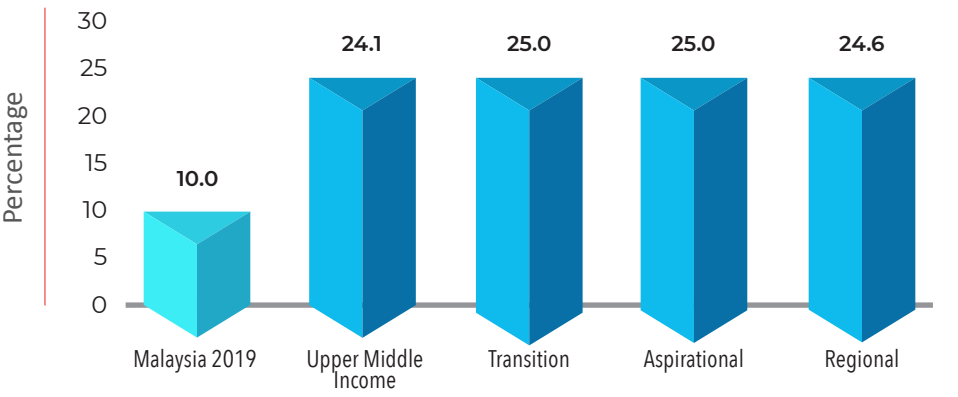
Source: *Malaysia Productivity and Investment Climate Survey (PICS-3) by the World Bank Group*

33 per cent of Malaysian firms introduced new products or services in the last three years. This was close to the shares seen in the transition countries at 35.2 per cent and upper-middle-income countries at 35.9 per cent. Malaysian firms performed above the shares seen in their regional peers at 20.1 per cent and slightly above their aspirational peers at 30.9 per cent.

Nearly 82 per cent of Malaysian enterprises introduced new products, and these products and services were also new to the firms' primary market. The survey results signal a catching up towards the technology frontier for Malaysian firms.

FIGURE 39

MALAYSIA TRAILED ITS PEERS IN ITS PERFORMANCE ON PROCESS INNOVATION



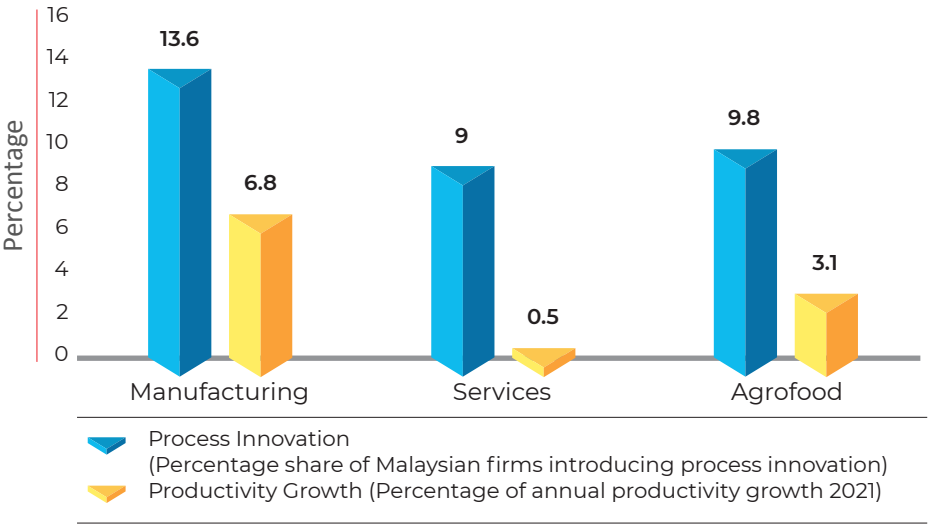
Source: *Malaysia Productivity and Investment Climate Survey (PICS-3) by the World Bank Group*

Based on the data from PICS-3, Malaysia lagged in its performance on process innovation as only 10 per cent of Malaysian enterprises introduced a novel or significant process improvement. This is indicated in Malaysia's lowest share as compared to other comparators.

The performance of process innovation varies across sectors. Sectors with higher process innovation recorded higher productivity growth.

FIGURE 40

ECONOMIC SECTOR WITH HIGHER SHARE OF PROCESS INNOVATION RECORDED HIGHER PRODUCTIVITY GROWTH

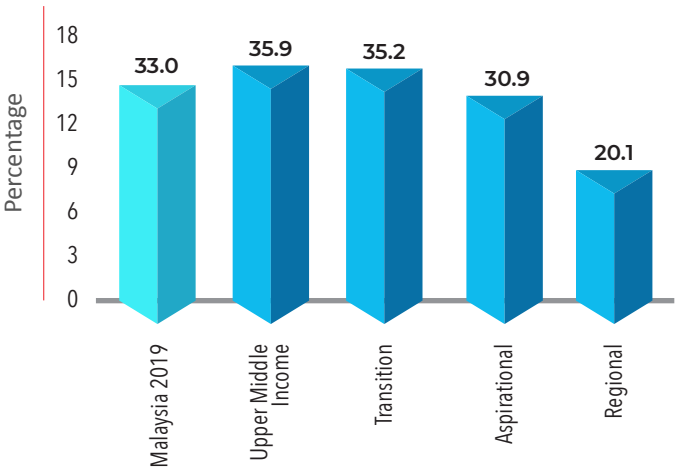


Source: *Malaysia Productivity and Investment Climate Survey (PICS-3) by the World Bank Group and Department of Statistics Malaysia (DOSM)*

Malaysia's performance in total R&D expenditure implied a lack of research and development in technological and innovative products and processes by enterprises. PICS-3 reported that only 5 per cent of Malaysian firms invest in R&D, which was significantly below their comparators. The finding corroborated the National Survey of R&D (2019) results by the Ministry of Science, Technology and Innovation.

FIGURE 41

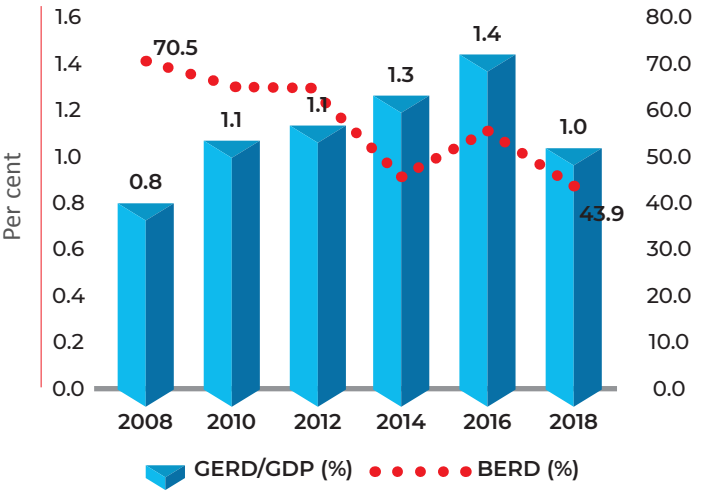
MALAYSIA TRAILED OTHER COUNTRIES ON FIRMS' SPENDING ON R&D



Source: *Malaysia Productivity and Investment Climate Survey (PICS-3) by the World Bank Group*

FIGURE 42

THE NATIONAL R&D SURVEY FINDINGS SHOWED A DECREASED LEVEL OF R&D SPENDING OF GROSS EXPENDITURE ON R&D (GERD) AND BUSINESS EXPENDITURE ON R&D (BERD) IN MALAYSIA



Source: *Malaysia Science & Technology Information Centre 2019*

MANAGERIAL PRACTICES COMPLEMENT PROCESS INNOVATION

Managerial and organisational practices are key complementary factors for continuous process innovation and productivity at the firm level. The World Management Survey (WMS) introduced a comparative quantitative analysis of management practices and their implications for innovation and productivity. The WMS documented that the average score in management practices such as monitoring, employment of just-in-time processes, internal feedback mechanisms, long-run planning and goal stretching, and human resource policies in developing countries were below those in the frontier countries.

According to the World Bank Group, **management practices varied due to the intensity of competition, firm ownership structure, access to foreign direct investment (FDI) and the supply of skilled and well-educated managers and workers.** Firms in Malaysia had not adequately deploy management practices. Less than half of the firms surveyed monitored performance and more than half of the firms cited that they rarely acted in response to underperformance by non-managers.

Both workers' and managers' education and skill levels play a significant role in implementing new procedures and ensuring enough buy-in and support. A considerable gap between managers' self-assessment of performance and their actual performance is one of the main challenges in adopting effective process improvement. When managers fail to recognise the potential of better practices, they may be unlikely to pursue opportunities for improvement.

Among the possible interventions are:

- Improving SMEs' basic managerial and organisational – More effective MNCs-SMEs/ supplier development programmes,
- Improving technological adoption through industry-research collaboration programmes; and
- Improving Learn, Unlearn, Relearn cycle among managers and employees - Strengthening private sector collaboration for internship programmes, offering apprenticeship opportunities, and providing employees with technological skills support.

ANTAC INITIATIVE

MPC is scaling up its Advocate – Nudge – Track – Advise – Coach (ANTAC) initiative to benefit firms in their business recovery journey through innovation, mechanisation and automation, and digitalisation. The initiative stimulates change at the firm level towards better performance, productivity, and profitability.

Advocate

Through advocacy, MPC creates awareness on productivity, that productivity is the game-changer for better delivery of products and services. Through webinars and intellectual discourses featuring highly credible organisations and individuals in productivity, MPC aims to reach out to 40,000 businesses this year.

Nudge

Nudging in Behavioural Insights (BI) is a human-centric approach to influence people to make better choices for themselves and society. BI combines insights from psychology, ethnography, behavioural economics, and neuroscience to understand how people behave, allowing for better design of interventions. Nudging can promote more impactful change.

Track

MPC has developed several tools for firms to track and measure their current state and performance, assisting strategic planning. These are process improvement tools to facilitate firms to increase productivity. What a firm can measure, it can improve. For example, Productivity1010 is for firms to assess digital transformation, and the ezBE Assessment Tool evaluates business practices and operations.

Advise

MPC's Business Virtual Advisory Clinics (BVAC) is a platform for firms to connect with experts in their fields. BVAC facilitates firms to find solutions to business challenges. The advisory platform is scaled up by 11 Productivity Nexus according to main economic subsectors to offer advice to at least 10,000 firms in 2022.

Coach

A more thorough, hand-holding approach through coaching is provided to firms until the intended change is manifested. One of the programmes firms can benefit from is MyReskill IoT for business digitalisation. Participating companies develop Proof of Concept (POC) projects using the Internet of Things as the enabler. The programme is expected to benefit 5000 firms in 2022.

ENTERPRISE PRODUCTIVE INITIATIVE

Malaysia's productivity growth at the enterprise level is relatively low due to the lack of product and process innovation, deficient adoption of technology and digitalisation, and inadequate utilisation of modern and effective process improvement and management tools in managing resources.

As guided by Malaysia Productivity Blueprint (MPB), MPC stipulates that continuous process improvement at the enterprise level is necessary to affect organisational growth and expansion. In turn, it leads to sectoral and national productivity growth and competitiveness. This aligns with the Twelfth Malaysia Plan's target to boost productivity across all economic sectors in reviving the economic growth momentum and enhancing industry competitiveness.

In moving forward to accelerate firm-level productivity growth, **MPC is experimenting with Enterprise Productive initiative.** The initiative is divided into four phases:

1. Phase One: Analysis of the business model and R&D activities on management practices – This is materialised through robust public-private partnership;

2. Phase Two: Development of operating standard and methodology, supported by microlearning and coaching modules;

3. Phase Three: Delivery of the Proof of Concept (PoC) involving 20 enterprises to undertake Productivity Improvement Project, followed by evaluation and analysis; and

4. Phase Four: Registration and assessment throughout a year-duration – Successful enterprises and relevant individuals stand to be recognised as Productivity Champions and Certified Productivity Specialists. Companies will be considered as potential IR4.0 Readiness Assessment (RA) applicants.

MODERNISING ENTERPRISE-LEVEL PRODUCTIVITY IMPROVEMENT PROGRAMMES

MPC underlines three key strategies to modernise enterprise-level productivity improvement programmes, namely:

i. Facilitating enterprises to have access to the industry and subject matter experts in the areas of research, development, and innovation (R&D&I) through Steinbeis Programme, supported by MITI and MOF;

ii. Improving the R&D&I ecosystem by reviewing and enhancing regulations and R&D&I venture capital, which includes regulatory experimentations to enable innovations and expedite investment for Innovative Start-Up; and conducting Start-up Investment Showcase Series as a platform to establish investor-start-up collaboration; and

iii. Increasing the number of frontier enterprises in R&D&I through strategic collaboration with anchor companies under the Productivity Improvement Programme to accelerate technology adoption.

BOX ITEM 4

CONTRACT FARMING IN MALAYSIA'S CHILLI AGRICULTURE

Innovation and productivity improvement at the enterprise level for the agriculture sector were seen in the GrasiCili contract farming initiative.

The GrasiCili approach requires a new business model in agrobusiness. It elevated the traditional idea of contract farming and a transactional relationship between the anchor (contractor) and farmers. In the GrasiCili concept, the micro farmers, especially the B40 community, are recruited into the GrasiCili family and transformed into 'agropreneurs' to increase income and upgrade their skills in agrobusiness.

The programme enables market access to small farmers, enhances compliance with food standards, and reduces gaps within the value chain. GrasiCili works based on the transfer of knowledge and adoption of technology and better access to input and product support.

In an organised system, GrasiCili trains participants, offers business advice, and provides the facility and resources. Once the chillies are harvested, GrasiCili buys the chillies from the farmers at a pre-agreed price. In the long term, farmers who have the financial capacity can make an investment and scale contract farming with GrasiCili. This raises the B40 community's economic status and helps farmers generate a higher income.

ADVANTAGES OF CONTRACT FARMING FOR THE RISING AGROPRENEURS

Contract farming protects agropreneurs from profit loss in open market price as the sale price upon weigh-in is fixed as per contract. The concept reduces the cost of doing business when there is strength in numbers. When agropreneurs work in groups or clusters, the farm's operating costs are lower because resources and facilities are shared. Through contract farming, agropreneurs can meet the supply needs of large-scale customers, leading to long-term business relationships.

BOX ITEM 5

FIRM-LEVEL PRODUCTIVITY IMPROVEMENT PROGRAMME THROUGH CASHLESS TRANSACTION BY RETAILERS

Payments Network Malaysia Sdn. Bhd. (PayNet) has implemented this initiative in collaboration with various government agencies and external stakeholders to increase the adoption of ePayments and cashless transactions among SMEs and micro-sellers, especially in suburban and rural areas, which align with Malaysia Economy Digital Blueprint (MyDigital).

MPC is collaborating with PayNet on a proof-of-concept to improve the cost and speed of payments. The collaboration is built on the success of payment linkages with other transactions that could pave the way for the Realtime Retail Payments Platform (RPP)/DuitNow to connect with other real-time payment systems. This supports the aspirations for faster, cheaper, and more accessible transactions, especially for MSMEs.

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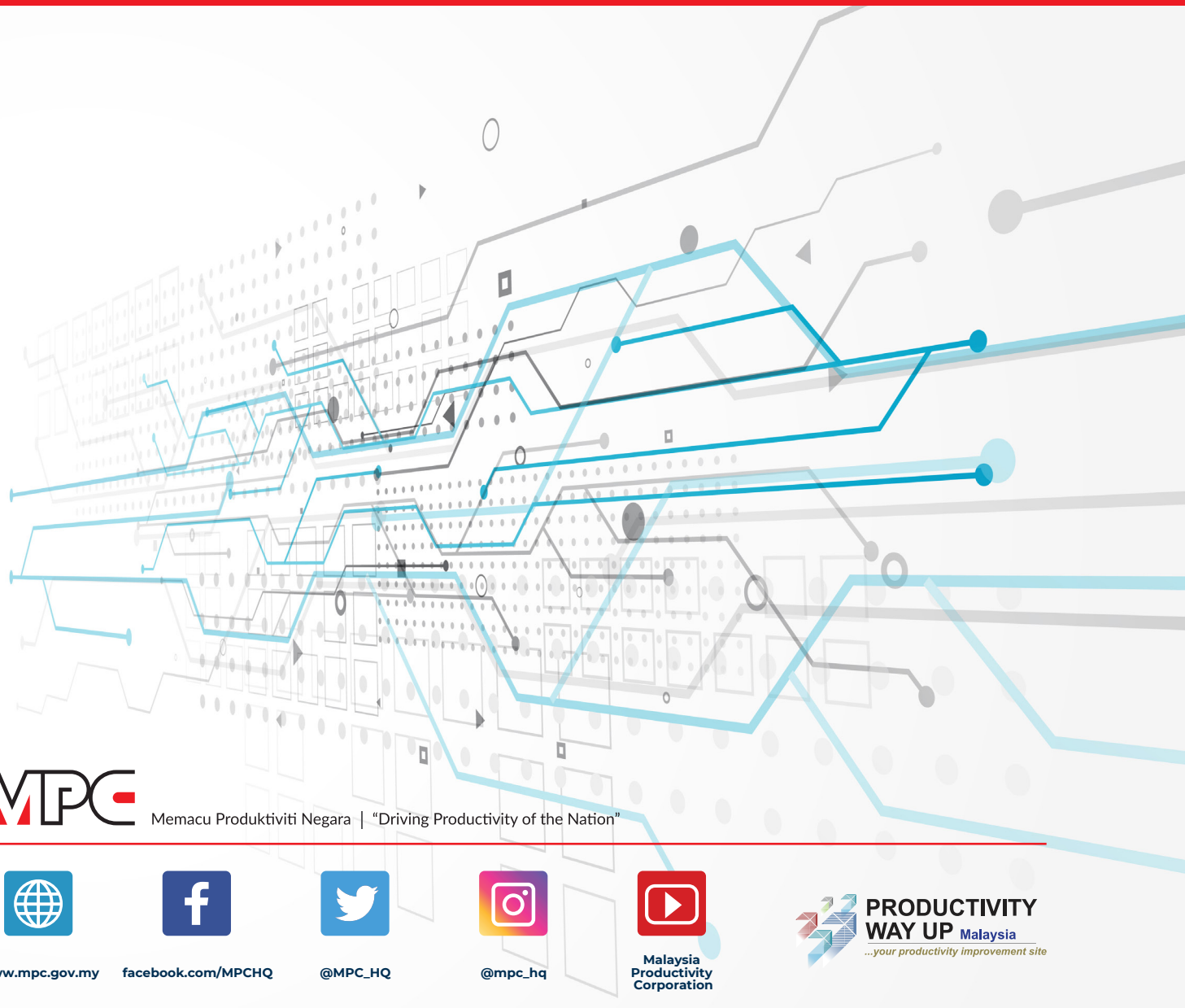

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