

CHAPTER 3

Macroeconomic Outlook

71 OVERVIEW

71 SECTORAL

Feature Article 3.1 – Gig Economy

Feature Article 3.2 – Digitalisation in the Logistics Industry

Feature Article 3.3 – Small and Medium Enterprises: Building Resilience to Weather Crises

Information Box 3.1 – The Importance of Commodity Sector to the Malaysian Economy

92 DOMESTIC DEMAND

Feature Article 3.4 – Shadow Economy in Malaysia

97 EXTERNAL SECTOR

102 PRICES

Feature Article 3.5 – Dynamic Relationship between Consumer and Producer Price Indices

107 LABOUR MARKET

108 CONCLUSION

110 REFERENCES

MALAYSIA'S
ECONOMIC OUTLOOK

2020

Economy is
Expected to
Contract**-4.5%**

2019: 4.3%



GDP AT CONSTANT 2015 PRICES

RM1,357.7 BILLION

GDP AT CURRENT PRICE

RM1,439.4 BILLIONGROSS NATIONAL INCOME
AT CURRENT PRICE**RM1,415.7** BILLION

CURRENT ACCOUNT BALANCE OF BOP

RM48.5 BILLION
(3.4% OF GNI)

CONSUMER PRICE INDEX

-1.0%

UNEMPLOYMENT RATE

4.2%

Supply (% p.a.)



SERVICES

-3.7%
2019: 6.1%

MANUFACTURING

-3.0%
3.8%

CONSTRUCTION

-18.7%
0.1%

MINING

-7.8%
-2.0%

AGRICULTURE

-1.2%
2.0%

Demand (% p.a.)

PRIVATE
CONSUMPTION**-0.7%**
2019: 7.6%GROSS FIXED
CAPITAL
FORMATION**-11.1%**
-2.1%PUBLIC
CONSUMPTION**1.6%**
2.0%

EXPORTS

-13.4%
-1.3%

IMPORTS

-11.9%
-2.5%

MALAYSIA'S ECONOMIC OUTLOOK

Economy is
Expected to
Rebound

6.5%–7.5%

2020:-4.5%

2021



GDP AT CONSTANT 2015 PRICES

RM1,450.8 BILLION



GDP AT CURRENT PRICE

RM1,568.1 BILLION



GROSS NATIONAL INCOME
AT CURRENT PRICE

RM1,526.5 BILLION



CURRENT ACCOUNT BALANCE OF BOP

RM20.3 BILLION
(1.3% OF GNI)



CONSUMER PRICE INDEX

2.5%



UNEMPLOYMENT RATE

3.5%

Supply (% p.a.)



SERVICES

7.0%
2020: -3.7%



MANUFACTURING

7.0%
-3.0%



CONSTRUCTION

13.9%
-18.7%



MINING

4.1%
-7.8%



AGRICULTURE

4.7%
-1.2%

Demand (% p.a.)



PRIVATE
CONSUMPTION

7.1%
2020: -0.7%



GROSS FIXED
CAPITAL
FORMATION

9.5%
-11.1%



PUBLIC
CONSUMPTION

2.0%
1.6%



EXPORTS

8.7%
-13.4%



IMPORTS

9.2%
-11.9%

CHAPTER 3

Macroeconomic Outlook

Overview

Gradual economic recovery in the second half of 2020 before normalising in 2021

The Malaysian economy experienced the full impact of the COVID-19 pandemic in the second quarter of 2020, with the real gross domestic product (GDP) contracting by 17.1%. The contraction was mainly attributed to the imposition of the Movement Control Order (MCO) to contain the outbreak. Though affecting all sectors in the economy, the move was necessary to flatten the COVID-19 curve and save lives. Hence, the Government has announced several stimulus packages totalling RM305 billion to support both households and businesses. Reinforced by the reopening of the economy in phases, growth is expected to improve gradually during the second half of the year, cushioning the significant contraction in the first half. Thus, Malaysia's GDP is expected to contract by 4.5% in 2020, before rebounding between 6.5% – 7.5% in 2021. With the bold and swift measures undertaken, Malaysia has been recognised as one of the most successful countries in managing the socio-economic impact of the pandemic.

Although domestic demand is expected to remain soft throughout 2020, there are signs of recovery in the second half of the year, particularly in private consumption. On the external front, the collapse in global demand and world trade led to a decline in exports during the year. However, current account of the balance of payments is expected to remain in surplus. On the supply side, all sectors are expected to contract, affected by the unprecedented crisis. Nevertheless, the pace of improvement gathered momentum in the third quarter, especially in the services and manufacturing sectors, with the resumption of economic activities.

Sectoral

Services Sector

New norms accelerate the growth of the digital economy

The **services** sector contracted by 6.7% in the first half of 2020 largely due to worldwide travel bans, domestic movement restrictions and quarantines, which severely affected the tourism-related subsectors and airlines. Among the subsectors that have been severely affected include wholesale and retail trade, food & beverages and accommodation, transportation and storage as well as real estate and business services. Nevertheless, the information and communication subsector expanded as online transactions increased significantly during the MCO. The services sector is expected to record a smaller decline of 1% in the second half of the year, reflecting the gradual resumption of economic activities. Overall, the sector is projected to contract by 3.7% in 2020 before rebounding by 7% in 2021. With the normalisation of economic activities in 2021, all subsectors are projected to record positive growth.

TABLE 3.1. GDP by Sector, 2019 – 2021
(at constant 2015 prices)

	SHARE (%)	CHANGE (%)		
	2020 ¹	2019	2020 ¹	2021 ²
Services	58.1	6.1	-3.7	7.0
Manufacturing	22.6	3.8	-3.0	7.0
Agriculture	7.4	2.0	-1.2	4.7
Mining	6.9	-2.0	-7.8	4.1
Construction	4.0	0.1	-18.7	13.9
GDP	100.0	4.3	-4.5	6.5 – 7.5

¹ Estimate

² Forecast

Note: Total may not add up due to rounding and exclusion of import duties component

Source: Department of Statistics and Ministry of Finance, Malaysia

The **wholesale and retail trade** subsector contracted by 10.8% in the first half of 2020 due to disruptions in the global and domestic supply chains. The subsector is expected to record a smaller decline by 1.9% in the second half of the year with the gradual resumption of business operations, online platforms, cash assistance, sales campaigns and sales tax exemption for the purchase of new cars. For the year, the subsector is projected to contract by 6.1%. The subsector is anticipated to rebound by 8.5% in 2021, supported by all segments. The wholesale segment is expected to be backed by food-related industries. At the same time, the expansion in e-commerce activities will support the retail segment. The growth of the motor vehicles segment will be underpinned by the introduction of new models and higher household disposable income.

The **information and communication** subsector expanded by 5.8% in the first half of 2020, primarily supported by higher usage of internet, particularly online transactions, entertainments, educational and work from home (WFH) activities. The subsector is projected to expand further by 7.1% in the second half of the year buoyed by various Government initiatives. The initiatives include a tax exemption of up to RM5,000 for information, communication and technology (ICT) equipment to support WFH activities and individual income tax relief of up to RM2,500 on the purchase of digital devices. For the year, the subsector is anticipated to accelerate by 6.4% as WFH activities, virtual communication and online businesses become the new normal. In 2021, the subsector is projected to expand by 7.9%, with the fifth-generation cellular network (5G) spectrum facilitating e-commerce and e-learning activities. The roll-out of the National Fourth Industrial Revolution (4IR) Policy and Digital Economy Blueprint in the fourth quarter of 2020 is expected to enhance the productivity and competitiveness of the subsector. The formation of the Malaysian Digital Economy Task Force, which focusses on digital technology, cybersecurity, trade and digital content is expected to support the acceleration of the subsector.

The **finance and insurance** subsector in the first half of 2020 contracted marginally by 0.2%, mainly due to the six-month wide-scale

TABLE 3.2. *Services Sector Performance, 2019 – 2021*
(at constant 2015 prices)

	SHARE (%)	CHANGE (%)		
	2020 ¹	2019	2020 ¹	2021 ²
Wholesale and retail trade	28.8	6.7	-6.1	8.5
Finance and insurance	11.8	4.6	-0.1	5.5
Information and communication	11.4	6.6	6.4	7.9
Real estate and business services	7.7	7.8	-11.6	7.6
Transportation and storage	6.0	6.8	-11.9	7.5
Food & beverages and accommodation	5.5	9.6	-13.3	10.7
Utilities	4.9	6.0	1.7	5.7
Other services	8.2	5.5	-8.1	6.2
Government services	15.7	3.7	4.0	3.7
Services	100.0	6.1	-3.7	7.0

¹ Estimate

² Forecast

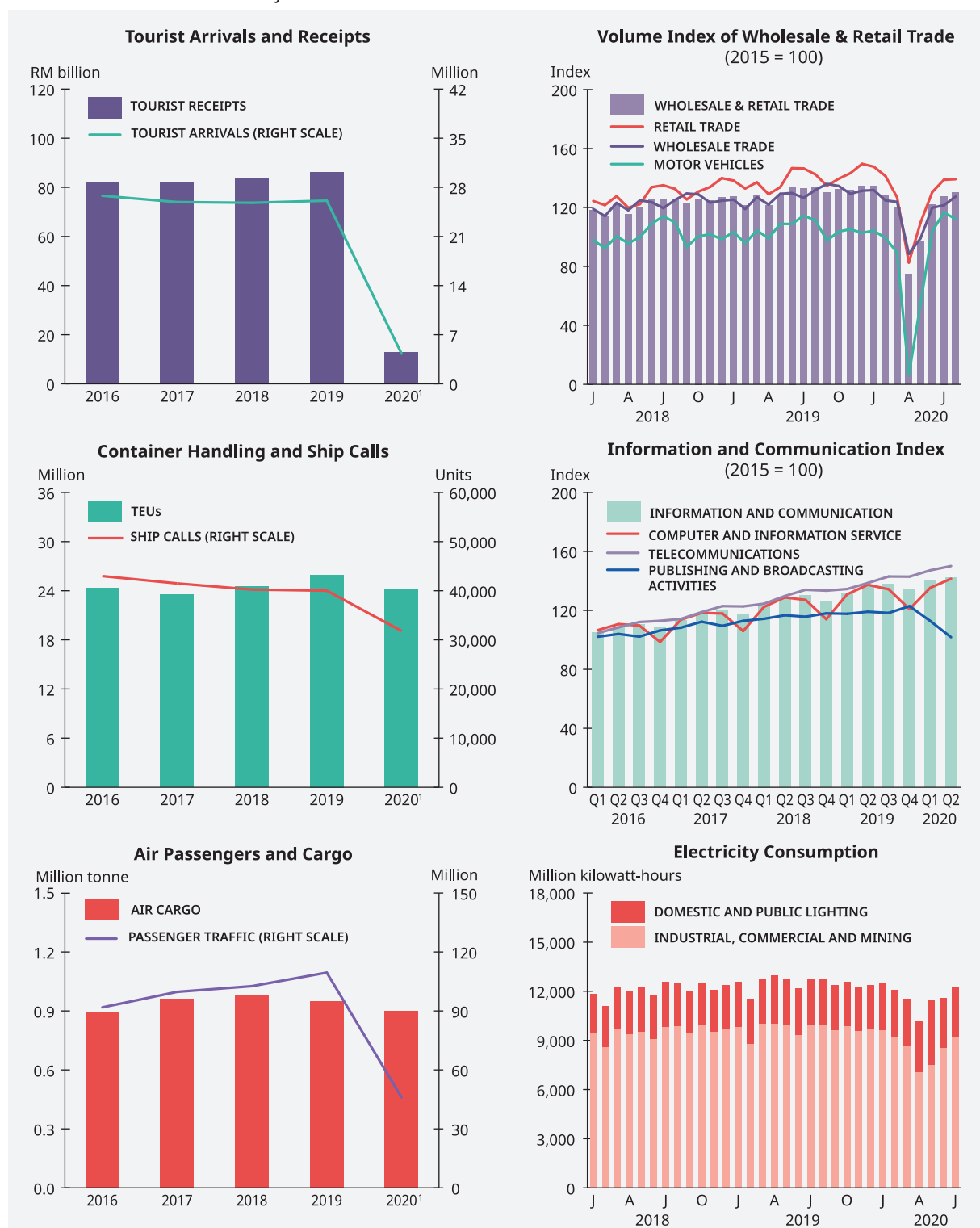
Note: Total may not add up due to rounding

Source: Department of Statistics and Ministry of Finance, Malaysia

moratorium and slower lending activities. Nonetheless, the better performance of the insurance segment reflects the increase in life insurance subscriptions, which partly cushioned the overall decline of the subsector. The trend is expected to continue in the second half following the extension of moratorium to targeted borrowers. Overall for the year, the subsector is expected to contract marginally by 0.1% with the expansion in the insurance segment, reflecting the net impact of higher premiums amid lower claims.

The subsector is projected to rebound by 5.5% in 2021, driven mainly by the finance segment, benefitting from the normalisation of loan repayments and continuation of bank lending amid stronger domestic economic activities. The insurance segment is also expected to grow steadily with the promotion of innovative and risk-based pricing in motor and fire insurance. In addition, the launching of the Financial Sector Blueprint 2021 – 2025 in the first quarter of 2021 is expected to further boost the growth of the subsector.

FIGURE 3.1. Selected Indicators for the Services Sector

¹ Estimate

Source: Department of Statistics, Malaysia; Malaysia Airports Holdings Berhad; Malaysia Tourism Promotion Board; Senai International Airport; and seven major ports (Bintulu, Johor, Klang, Kuantan, Kuching, Pulau Pinang and Tanjung Pelepas)

FEATURE ARTICLE 3.1

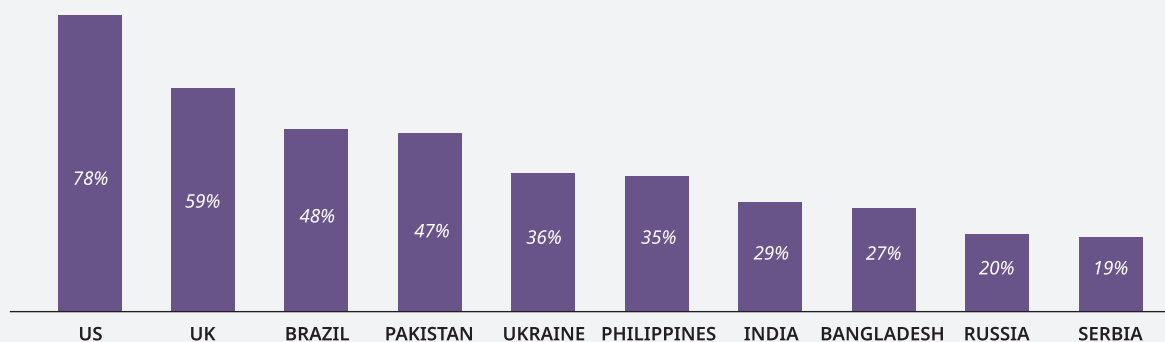
Gig Economy

Introduction

The gig economy is a free market system, characterised by temporary job positions where corporations tend to engage independent workers for short-term durations. Unlike the traditional economy, the gig economy is characterised by flexible, temporary, or freelance jobs with irregular income and working hours. The primary distinction between the gig economy and traditional working arrangements is the digital element (Burtch et al., 2016). According to Khazanah Research Institute (2019), the benefits of being a freelancer or gigs include having an additional income, more flexible working schedules, more accessibility to the market via the internet and lower cost of doing business.

In 2019, the Global Gig-Economy Index revealed that freelancers in the US had the most significant revenue growth at 78%, followed by the UK (59%) and Brazil (48%). Digital service intermediary platform providers in the US, such as Uber, Airbnb and Lyft, are the cornerstone of the gig economy. Furthermore, according to a survey by MBO Partners (2017), nearly 60% of the workforce in the US would be independent professionals and companies will spend up to USD6 billion on improving the rights of gig workers by 2027.

FIGURE 3.1.1. Top 10 Countries with the Fastest Growing Earnings for Freelancers, 2019



Source: Global Gig-Economy Index, 2019

TABLE 3.1.1. Comparison between Gig and Traditional Economies

CHARACTERISTIC	GIG ECONOMY	TRADITIONAL ECONOMY
Definition	An economy characterised by flexible and temporary jobs. Hence companies tend to hire freelancers and independent contractors as opposed to full-time employees	An economy in which companies tend to employ workers on a full-time basis
Type of Jobs	Offers temporal jobs such as contracts or short-term gigs	Offers long-term and permanent jobs

CHARACTERISTIC	GIG ECONOMY	TRADITIONAL ECONOMY
Flexibility	Has a high level of work flexibility	Does not offer work flexibility with rigid or set hours
Employee Benefits	Employees do not enjoy additional benefits	Employees enjoy additional benefits, such as health insurance and leave days
Cost to Employers	Employers eliminate unnecessary overhead costs, such as additional benefits, office space and employee training	Employers incur overhead costs including the payment of additional benefits, office space and employee training
Work Monotony	Breaks routine work, hence promoting enthusiasm creativity and innovation	Tend to be monotonous, thus could be demotivating, discouraging creativity and innovation

Source: DifferenceBetween.net, 2020

Gig Economy in Malaysia

A study by the Zurich-University of Oxford (2018) found that 38% of the respondents in Malaysia, who were in full-time employment, would be looking to enter the gig economy in the following 12 months. According to Employees Provident Fund (2019) nearly 40% of the workforce would be gig workers in the next five years, significantly higher than the global average of 20%. The rise of millennials¹ and digital technology are the main factors contributing to this surge.

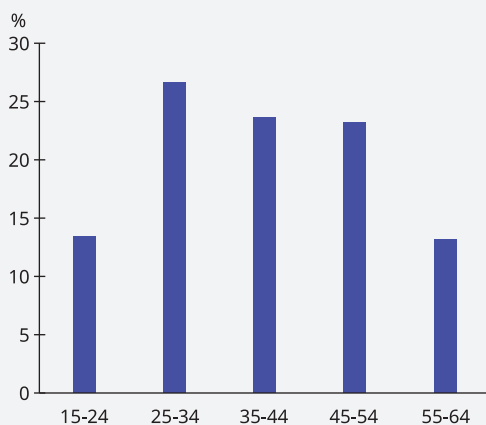
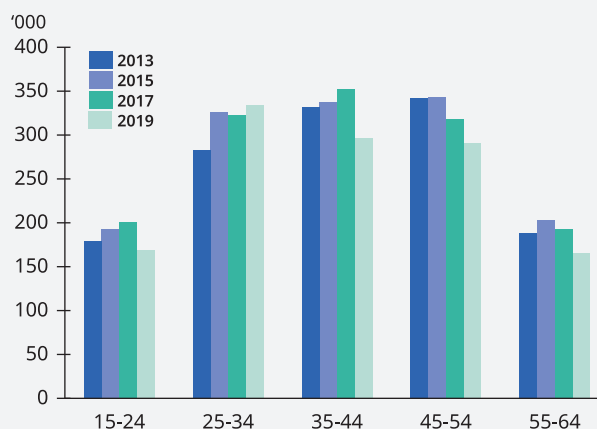
Rise of Millennials

Most millennials are no longer interested in the concept of secure and permanent employment. Millennials grew up in the technological era, and so they are more immersed digitally. This means gig economy often occurs due to its online platform element, which provides the facility for millennials to use their talents and abilities (Hershatte & Epstein, 2010). Hence, they account for the major share of employment in the gig economy as it offers greater flexibility. In Malaysia, there are about 15.6 million people in the labour force, and 1.3 million are in the informal sector, with 50.2% in the 25 to 44 age group (2013: 46.5%) (Figure 3.1.2.). This reflects that many millennials are opting out of the traditional workforce as the gig economy offers higher independence and flexibility in line with their aspirations.

Rise of Digital Technology

The digital economy in Malaysia grew by 18.5% between 2015 and 2019 per annum. In 2020, Malaysia remains ranked 26th out of 63 countries in the IMD World Digital Competitiveness Ranking 2020. With the Government investing heavily on digital technologies, Malaysians are among the most digitally connected in the world and produce some of Southeast Asia's most recognisable digital start-ups (World Bank, 2018). As digitalisation is the main enabler for the gig economy, the upsurge in digital platforms encourages more millennials to become gig workers and freelancers. As of August 2020, there were around 140 platforms providing gig and freelance opportunities with an estimated 540,000 gig and active freelance workers in Malaysia. Firms, such as Grab and Foodpanda, continue to record an increasing number of gig workers. Furthermore, there were about 190,000 gig workers providing services as riders and drivers on various logistic and delivery platforms in the country.

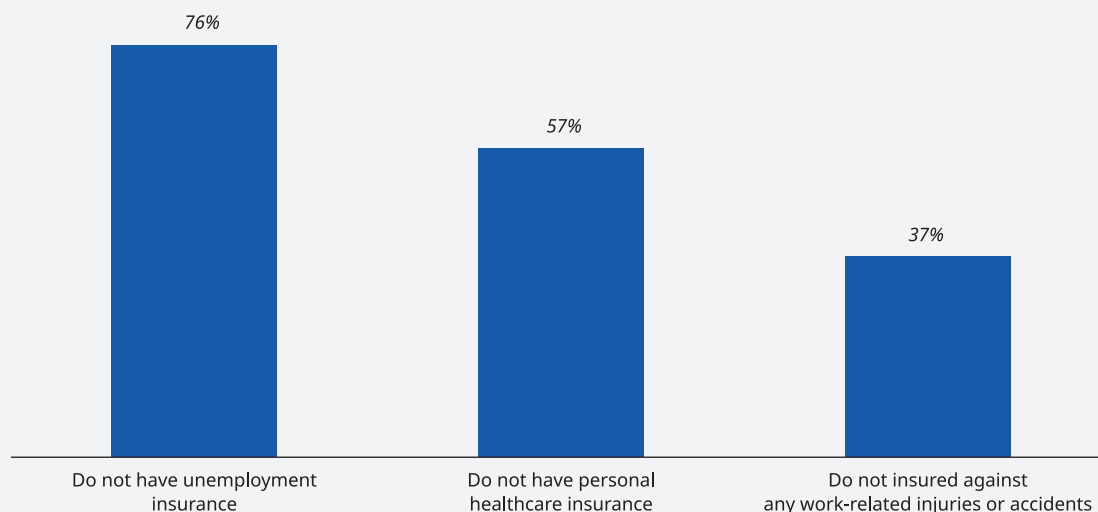
¹ Refers to anyone born between 1981 and 1996 (Pew Research Centre, 2019).

FIGURE 3.1.2. *Employment in the Informal Sector by Age Group, 2019*
(% share)**FIGURE 3.1.3.** *Employment in the Informal Sector by Age Group, 2013 – 2019*

Source: Informal Sector Workforce Survey Report, Department of Statistics, Malaysia, 2019

Issues and Challenges Facing Gig Workers

Despite offering greater work flexibility, gig workers do not have the advantage of a steady job with regular pay and benefits. In addition, there is still no specific regulation, law or guideline to protect the welfare of the gig workers except for provisions under the Self-Employment Social Security Act 2017 [Act 789] which require self-employed to register and contribute under this scheme. As they are not formally recognised as employees, they are not legally covered under specific labour provisions, such as the minimum wage, working hours limitation, paid annual and sick leave as well as unfair dismissal. In addition, unlike traditional employees, gig workers do not have financial safety nets, such as pension and savings in the EPF. A survey by The Centre (2019) indicates that nearly 60% from more than 400 of e-hailing and delivery drivers did not have savings for emergencies, and 59% did not have retirement or old age savings.

FIGURE 3.1.4. *Financial Security among E-hailing and Delivery Drivers, 2019*

Notes: Figure may not add up to 100% due to multiple choices by the respondents
Source: The Centre, 2019

Way Forward

Preparing the Workforce

The workforce needs to be equipped with the required skills to support the gig economy as one of the new sources of growth in the country. This includes more training in software development and technology, creative and multimedia work, data entry and analyses as well as writing and translation (Human Resources Development Fund, 2019). Towards this end, Malaysia Digital Economy Corporation (MDEC) has embarked on the Global Online Workforce (GLOW) training programme, with an allocation of RM25 million, to enable Malaysians to earn higher income digitally. The Government also has launched the myGIG Programme on 23 June 2020 to support youths to participate in the gig economy by providing appropriate training and supporting equipment.

With the increasing number of graduates joining the gig economy, Institutions of Higher Learning (IHLs) should move away from educating and preparing students for full-time employment. This traditional method does a disservice to graduates who will be ill-equipped and unprepared to succeed as independent workers in the gig economy. To better prepare students as gigs, IHLs should embark on teaching the basic skills to work independently, expanding career services to offer gigs and promoting online courses. Reframing business school syllabus, such as learning how to be self-employed and running a business, will prepare students to work independently. In addition, the use of technology needs to be further accelerated to teach crucial skills, such as self-directed learning, effective communication, critical thinking, problem-solving, collaboration and project management.

Providing career services by developing apps and websites will also help students to find short-term projects and assignments. For example, in the US, The DePaul School of Music uses an app called The Gig Connection to help students find a freelance job throughout Chicago. Boston University has developed a Quick Job board, which offers short-term opportunities for students to assist in medical research studies. In addition, IHLs also need to emphasise online courses and programmes that provide options to students to learn at their own pace and location. These approaches will enable IHLs to better prepare students to join the gig economy.

Regulating the Gig Economy

The Government is considering new laws to regulate the gig economy and to protect the welfare of the gig workers. A committee comprising representatives from three ministries² has been set up to formulate long-term solutions to resolve various issues on the gig economy in the country. The committee will also be looking for ways to create a win-win situation for workers and employers.

Conclusion

The emergence of digital platforms connecting freelancers with businesses and the rise of millennials have all played a contributing role to the surge in the gig economy. It offers benefits, particularly in the form of job flexibility for workers. Nonetheless, there are numerous issues and challenges, including the status and welfare of the gig workers, that need to be addressed before the gig economy becomes a source of sustainable growth. Given its importance, the Government has implemented several initiatives to ensure its development. Moving forward, revamping of the syllabus, incorporating project-based learning and upskilling are needed to better prepare graduates for the gig economy.

² Ministry of Human Resource, Ministry of Youth and Sports, and Ministry of Domestic Trade and Consumer Affairs.

The **real estate and business services** subsector declined by 11.3% in the first half of 2020, attributed to temporarily suspension of construction activities during the MCO. The subsector is expected to continue to decline by 11.9% in the second half and 11.6% for the whole year. This is mainly due to deferred construction projects and subdued business activities. However, with projected economic recovery and the roll-out of delayed infrastructure projects, the subsector is expected to rebound by 7.6% in 2021. The exemption of Real Property Gains Tax (RPGT), launching of the National Affordable Housing Policy and Rent-to-Own (RTO) scheme, extension of Youth Housing Scheme (YHS) and Home Ownership Campaign (HOC) are expected to support the subsector. In addition, higher demand for construction-related services is expected to drive the business services segment.

The **transportation and storage** subsector contracted significantly by 24% in the first half of 2020 with all segments severely affected by the border closure and lower trade activities. However, the subsector is anticipated to decline marginally by 0.5% in the second half following the lifting of interstate travel bans, increasing domestic travellers, improving trade activities and loosening of port restrictions. With prolonged border closure for tourism-related activities and the extension of Recovery Movement Control Order (RMCO) until year-end, the subsector is forecast to record a decline of 11.9% in 2020.

The subsector is projected to rebound by 7.5% in 2021, driven by the land transport segment, following operations of new highways, including the Setiawangsa – Pantai Expressway (SPE), Damansara – Shah Alam Elevated Expressway (DASH) and partial alignment of Pan Borneo Highway. In addition, the launching of seven sets of four-car trains for KL Monorail is expected to increase the daily ridership. Likewise, the air transport segment is anticipated to recover moderately, due to the increase in domestic passenger traffic and cargo movement. The water transport segment is forecast to improve gradually, as world maritime trade recovers.

The **food & beverages and accommodation** subsector declined by 19.9% in the first half of 2020 due to stringent travel restrictions on movement and business operations. With a continuous drop in international tourist arrivals, the subsector is projected to contract by 7.3% in the second half of 2020. For the whole year, the subsector is anticipated to decline by 13.3%, mainly due to the sluggish performance of the accommodation segment following the significant drop in tourist arrivals. Nevertheless, an increase in demand for online food delivery and domestic tourism activities are expected to cushion the subsector.

The subsector is expected to expand markedly by 10.7% in 2021, mainly backed by domestic tourism-related activities with support from several initiatives. These initiatives include tax exemptions on tourism and accommodation services as well as an extension of income tax relief of up to RM1,000 on domestic travel services. In addition, attractive packages coupled with promotions, marketing and campaigns via digital platforms to restore public confidence is expected to revitalise the domestic tourism industry. The implementation of the Reciprocal Green Lane and Periodic Commuting Arrangement between Malaysia and Singapore for official cross-border travel for businesses and work purposes will also help to spur the subsector. The Government's effort to promote travel bubbles with more destinations is anticipated to further support the subsector.

The **utilities** subsector declined by 2% in the first half of 2020 following lower usage by the industrial segment. Nevertheless, the subsector is estimated to rebound in the second half of the year by 5.3% attributed to the resumption of industrial activities. Overall, the subsector is expected to expand by 1.7% in 2020, supported by higher demand from both residential and industrial segments. In 2021, the subsector is projected to further grow by 5.7%, primarily supported by higher usage by the industrial segment in line with expansion in economic activities as well as the implementation of renewable energy projects and Rural Electricity Supply Programme.

The **other services** subsector contracted by 9.6% in the first half of 2020 due to lower medical travellers and decline in enrolments in private colleges and universities. The contraction is expected to narrow to 6.6% in the second half of the year following the arrival of registered foreign students and critically ill patients, except those from high-risk countries with more than 150,000

COVID-19 cases. Thus in 2020, the subsector is expected to decline by 8.1%. The subsector is projected to expand by 6.2% in 2021, following aggressive branding and digital marketing for health tourism in targeted countries, such as Cambodia, China, Indonesia and Myanmar. The **Government services** subsector is projected to maintain its expansion by 4% in 2020 and 3.7% in 2021.

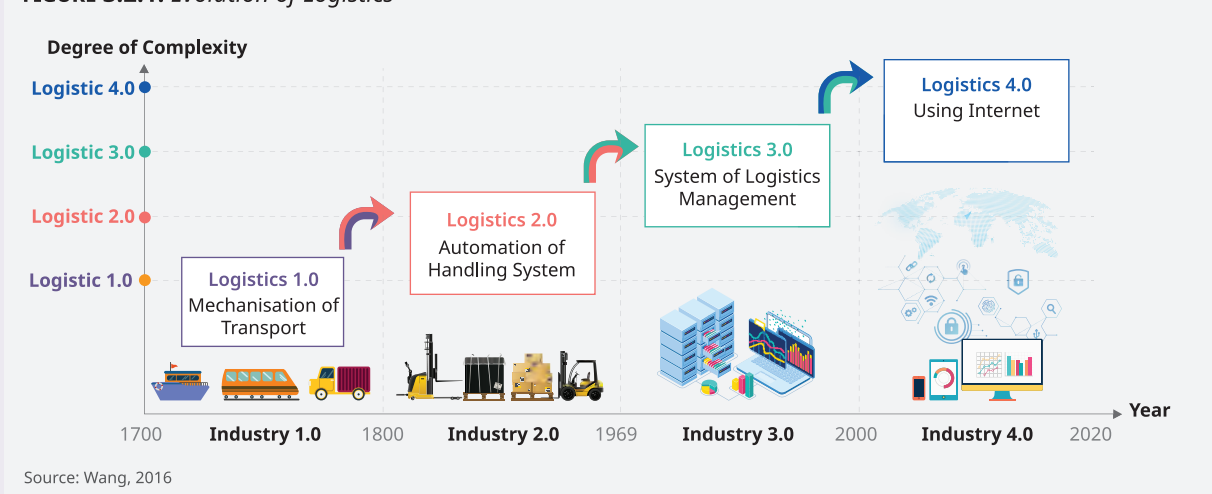
FEATURE ARTICLE 3.2

Digitalisation in the Logistics Industry

Introduction

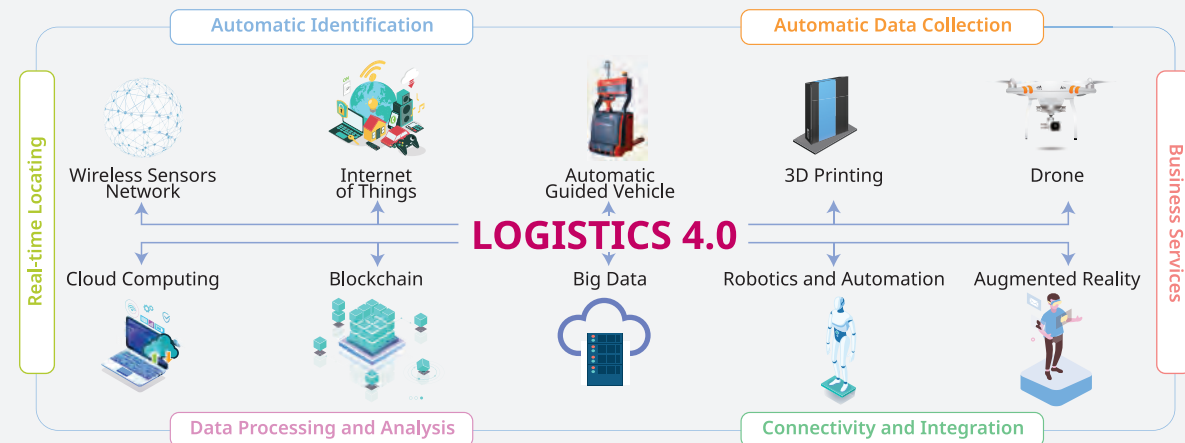
Logistics refer to the process of managing and controlling the flows of goods, energy, information and other resources such as facilities, services and people. It involves the integration of information, transportation, inventory, warehousing, material handling and packaging (Gen et al., 2008). In general, this industry has undergone three phases and is now entering the fourth stage which represents the integration of internet with production processes in line with the emergence of Industrial Revolution 4.0 (IR4.0) (Figure 3.2.1.). This enables the communication between machines and humans in real-time and the use of what is known as “smart products and smart services” as well as the advanced digitalisation within factories (Lasi et al., 2014).

FIGURE 3.2.1. Evolution of Logistics



In Malaysia, the industry is highly integrated across various sectors. It has been a key enabler for the advancement of industrialisation, international trade and competitiveness. The logistics industry has contributed immensely in the production and distribution processes as well as facilitating trade activities. In 2019, the logistics industry¹ expanded by 6.8% contributing RM53.7 billion to the country's GDP (Department of Statistics Malaysia, 2020). Nevertheless, the industry faces various challenges inhibiting it from reaching its full potential and efficiency. Accordingly, it is imperative to transform the industry with the applications of IR4.0 to improve efficiency and productivity as well as to remain competitive.

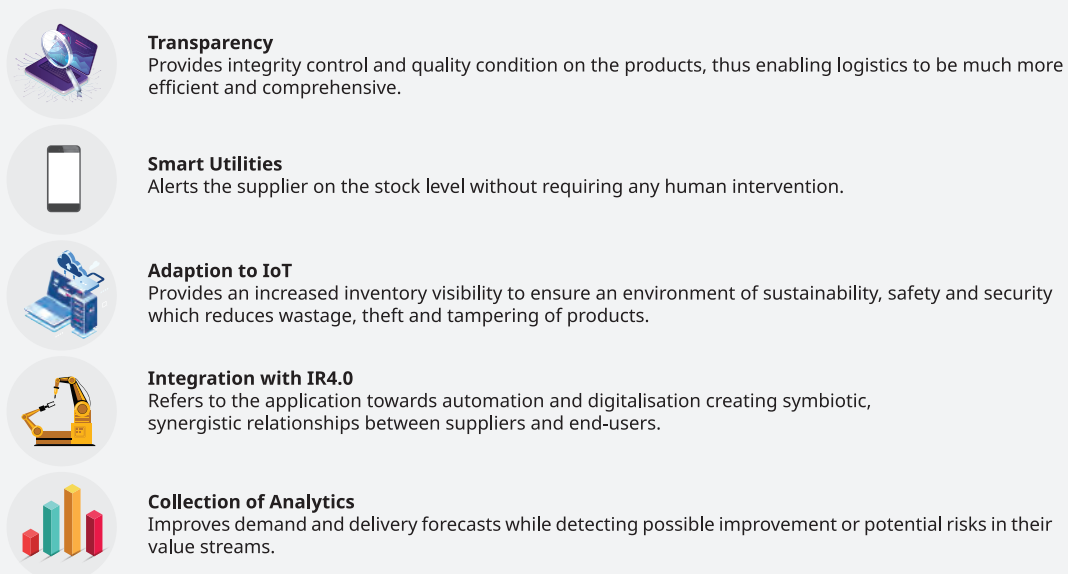
¹ Proxied by the transportation and storage subsector.

FIGURE 3.2.2. Application of Industrial Revolution 4.0 Technologies in Logistics 4.0

Source: Radivojevic & Milosavljevic, 2019

Logistics 4.0

Logistics 4.0 is defined as the specific application of connecting machines, products, systems and people that can share information and manage themselves (Bamberger et al., 2017). It uses technologies such as Internet of Things (IoT), wireless sensor network, cloud computing, blockchain, big data as well as robotics and automation. These technologies enable real-time information flows, monitoring of market demand, personalisation of products and autonomous management of global supply chains. Matyushenko et al. (2019) indicate that there are five elements of Logistics 4.0, namely, transparency, smart utilities, adaption to IoT, integration with IR4.0 and collection of analytics.

FIGURE 3.2.3. Five Main Elements of Logistics 4.0

Source: Matyushenko et al., 2019

Digital transformation will benefit industries through lower cost and additional revenues. Cost is expected to be reduced by 34.2% while increasing revenue by 33.6% in the logistics services industry through this transformation (Lehmacher et al., 2017). According to the World Economic Forum (2016), digitalisation in the logistics industry could unlock USD1.5 trillion of value for logistics players and a further USD2.4 trillion worth of societal benefits over the next decade. A study across EU countries indicate that a 10-percentage point rise in the share of firms using high-speed broadband internet at the industry level results in an increase in multi-factor productivity of 1.4% after one year and 3.9% after three years (Organisation for Economic Co-operation and Development, 2019).

Challenges Facing the Logistics Industry in Malaysia

The logistics industry in Malaysia is still facing various challenges, such as inadequate infrastructure and limited internet connectivity, low adoption of digitalisation, burdensome regulations, lack of skilled workers, and external factors such as the COVID-19 pandemic. Furthermore, Malaysia's information communication and technology (ICT) infrastructure lag behind global standards, especially in rural areas (Ismail & Masud, 2020). At the same time, high cost, unstable internet connectivity and low digitalisation hamper efficiencies and competitiveness of Malaysian logistics firms. In addition, the industry lacks expertise and skilled workers, especially in the design of the supply chain network, integrated warehouse management and information technology application.

Given the immense variety of economic goods and the different modes of transportation, there are various regulations concerning the governance of the logistics industry, which slows down the adoption of digitalisation and innovation. External shocks, such as the COVID-19 pandemic, have also disrupted the industry. The ensuing lockdown has restricted export-import activities globally which severely affected the logistics industry in the country.

Way Forward

The Logistics and Trade Facilitation Masterplan (2015 – 2020) aims to provide the strategic framework and roadmap to strengthen Malaysia's position as the preferred logistics gateway in Asia (Ministry of Transportation, 2017). The masterplan outlines that by leveraging the potential of e-commerce and adopting digitalisation, competitiveness and efficiency in the logistics industry will improve. This will pave the way for new, advanced and automated logistics services. The core aspects of digital infrastructure, such as ICT networks, data infrastructure, digital platforms and devices must be reliable and compatible for logistics firms to invest in digitalisation. For instance, the broader roll-out of the fifth-generation cellular network (5G) internet would provide a convenient way to send and track packages, schedule deliveries and get real-time updates anytime and anywhere. Furthermore, the efficiency of the first and last mile aspects, including keeping the customers informed throughout is vital in ensuring customer delivery experience is achieved efficiently and effectively.

With the COVID-19 disrupting the logistics supply chain network, the industry needs to adopt a new business model by accelerating digital transformation. Post COVID-19, consumers have adjusted their behaviours and preferences to use logistics services that provide last-mile deliveries of various sizes of appliances and commercial goods. As a result, many logistics firms are shifting from business-to-business (B2B) to business-to-consumer (B2C) models which increases the demand for couriers and online delivery services platforms. Government's intervention by providing institutional support and initiatives will ease the adoption of digitalisation in the logistics industry. This includes developing skills and technology, reducing unnecessary regulatory burden and ensuring data protection and security.

Conclusion

The adoption of digitalisation enables the logistics players to manage their operations efficiently and provide seamless logistics services to their clients worldwide. This will allow businesses to run with greater resilience and flexibility to remain competitive. The COVID-19 pandemic has precipitated the digital transformation of firms, including those in the logistics sector, which can no longer do business conventionally. With the rise of e-commerce activities, logistics players need to ramp up their performance while adjusting to strict guidelines to keep in pace with the new norms. Therefore, Logistics 4.0 can enhance operational efficiency by reducing time and cost for goods to reach consumers and subsequently increases the competitive advantage of domestic firms. It also accelerates convergence with global supply chains and helps key export industries connect with international markets.

Manufacturing Sector

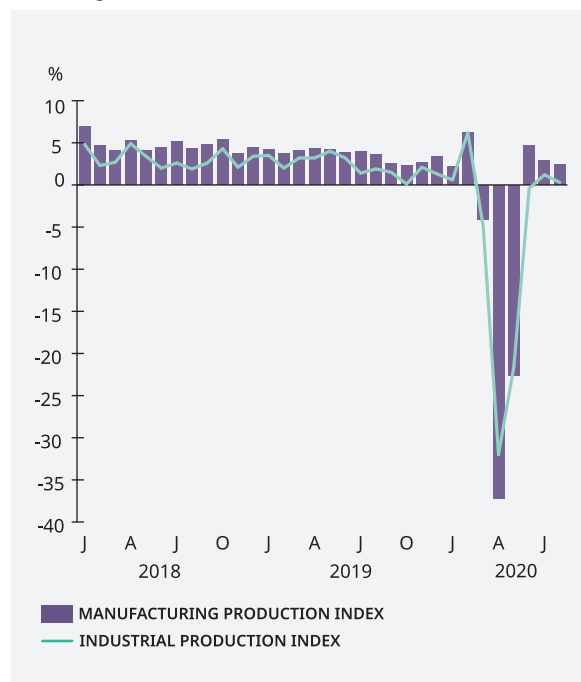
Essential segments cushion overall decline

The **manufacturing** sector contracted by 8.7% during the first half of 2020, as almost all industry operations were temporarily halted, following supply chain disruptions amid the MCO. Within the export-oriented industries, the E&E cluster was severely affected as global demand decelerated sharply. Domestic-oriented industries also recorded sluggish growth, with transport equipment; and non-metallic mineral products, basic metal and fabricated metal products segments registering a double-digit contraction.

Nonetheless, the manufacturing sector is expected to improve by 2.4% in the second half of 2020, as industrial activities resume operations in line with the gradual lifting of the MCO. Within the export-oriented industries, the E&E segment is projected to improve following rising demand for computer and electronic products. Chemical and rubber products are anticipated to continue to record high growth, benefitting from higher demand for rubber gloves and pharmaceutical products. Within the domestic-oriented industries, the food products and transport equipment segments are expected to rebound, supported by higher demand. Overall, for the year, the manufacturing sector is expected to decline by 3%.

The manufacturing sector is forecast to rebound by 7% in 2021, driven by steady improvement in both the export- and domestic-oriented industries. The E&E segment is projected to accelerate in line with the

FIGURE 3.2. Output of Manufacturing Sector (% change)



Source: Department of Statistics, Malaysia

digital transformation as WFH and virtual communication become part of new business practices. Higher demand for integrated circuits, memory and microchips within the global semiconductor market will further support the segment. The production of chemical and rubber products is expected to expand rapidly in tandem with the increase in demand for disinfectants, sanitisers and rubber gloves. With the economic recovery, consumer-related products will benefit from higher household disposable income, while construction-related products will be supported by major infrastructure and affordable housing projects.

Table 3.3. Manufacturing Production Index,
January – August 2019 and 2020
(2015 = 100)

	INDEX		CHANGE (%)		SHARE (%)	
	2019	2020	2019	2020	2019	2020
Export-oriented industries	118.6	114.5	3.6	-3.5	69.2	70.8
Electronics and electrical product cluster	124.4	122.4	4.0	-1.6	27.2	28.3
Electronics	129.0	128.7	3.7	-0.2	15.1	16.0
Electrical products	119.1	115.1	4.4	-3.4	12.1	12.3
Primary-related cluster	115.1	109.8	3.4	-4.7	42.0	42.5
Chemical and chemical products	115.9	109.3	2.3	-5.7	12.8	12.8
Petroleum products	112.2	99.3	3.0	-11.5	12.9	12.1
Textiles, wearing apparel, leather products and footwear	123.8	101.0	5.3	-18.4	2.0	1.7
Wood and wood products	119.9	100.7	4.8	-16.0	3.2	2.8
Rubber products	122.2	175.6	8.0	43.8	3.0	4.7
Off-estate processing	109.3	110.5	2.2	1.1	5.1	5.5
Paper and paper products	118.0	108.6	4.6	-8.0	3.0	2.9
Domestic-oriented industries	119.5	106.9	4.8	-10.5	30.8	29.2
Construction-related cluster	119.2	98.6	4.3	-17.3	13.7	12.0
Non-metallic mineral products	118.8	94.7	4.7	-20.3	4.4	3.7
Basic metals	116.4	105.9	3.8	-9.0	3.4	3.3
Fabricated metal products	121.1	97.2	4.3	-19.7	5.9	5.0
Consumer-related cluster	119.7	113.5	5.2	-5.2	17.1	17.2
Food products	125.9	132.0	5.0	4.8	6.1	6.7
Transport equipment	115.9	105.1	7.2	-9.3	6.6	6.3
Beverages	125.5	102.5	3.4	-18.3	1.0	0.9
Tobacco products	116.3	85.9	6.2	-26.1	0.7	0.6
Others	115.4	107.5	1.6	-6.8	2.7	2.7
Manufacturing Production Index	118.9	112.2	4.0	-5.6	100.0	100.0

Note: Total may not add up due to rounding

Source: Department of Statistics and Ministry of Finance, Malaysia

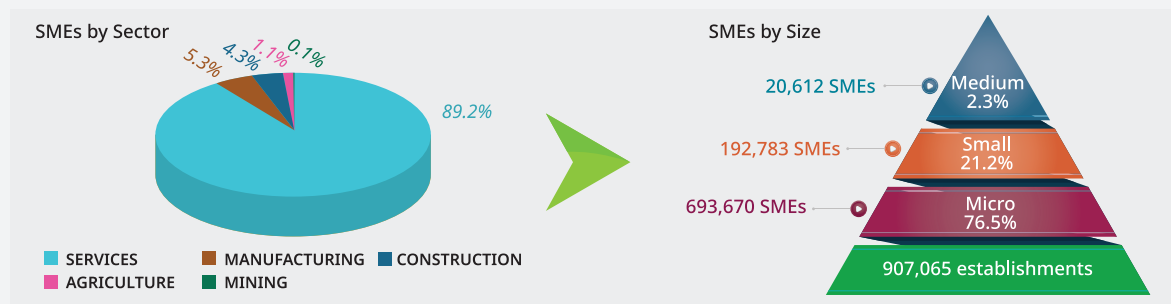
FEATURE ARTICLE 3.3

Small and Medium Enterprises: Building Resilience to Weather Crises

Introduction

Small and medium enterprises (SMEs) form a vital component of the Malaysian economy, contributing more than a third of total gross domestic product (GDP). It also provides jobs to more than seven million workers (Department of Statistics Malaysia, 2019). Furthermore, SMEs account for 98.5% of total establishments, mainly in the services sector. In Malaysia, an establishment is classified as an SME based on annual sales turnover or the number of employees,¹ subject to further conditions stipulated under the guideline of SME definition established by SME Corporation Malaysia (SME Corp. Malaysia) as the secretariat of the National Entrepreneur and SME Development Council (Figure 3.3.1.).

¹ Endorsed at the 14th National SME Development Council Meeting (now known as the National Entrepreneur and SME Development Council) in July 2013.

FIGURE 3.3.1. Profile of Malaysian SMEs**Malaysian SME Definition**

Manufacturing		Services and Other Sectors
Sales turnover: RM15 million ≤ RM50 million <u>OR</u> Employees: From 75 to ≤ 200	MEDIUM	Sales turnover: RM3 million ≤ RM20 million <u>OR</u> Employees: From 30 to ≤ 75
Sales turnover: RM300,000 < RM15 million <u>OR</u> Employees: From 5 to < 75	SMALL	Sales turnover: RM300,000 < RM3 million <u>OR</u> Employees: From 5 to < 30
Sales turnover: < RM300,000 <u>OR</u> Employees: < 5	MICRO	Sales turnover: < RM300,000 <u>OR</u> Employees: < 5

Source: Department of Statistics Malaysia, 2016 and SME Corporation Malaysia, 2020

Impact of COVID-19 Pandemic on Malaysian SMEs

The severity of the impact of COVID-19 on the global economy is unprecedented. The International Monetary Fund (IMF) projects that global growth in 2020 would experience the worst recession since the Great Depression in the 1930s and far worse than the 2009 Global Financial Crisis. The crisis is mainly caused by the movement control, lockdowns and physical distancing measures implemented globally to contain the spread of the virus. The cumulative loss to global GDP arising from the pandemic crisis for 2020 – 2021 is estimated to be around USD9 trillion (International Monetary Fund, 2020). In Malaysia, the impact of demand cut-backs and supply chain disruptions on cash flow, employment and sustainability are the main challenges for most businesses, in particular the SMEs. As the backbone of the country's economy, the Government has introduced various initiatives to support SMEs during the crisis, including soft loans, grants, wage subsidy, tax exemptions and moratorium.

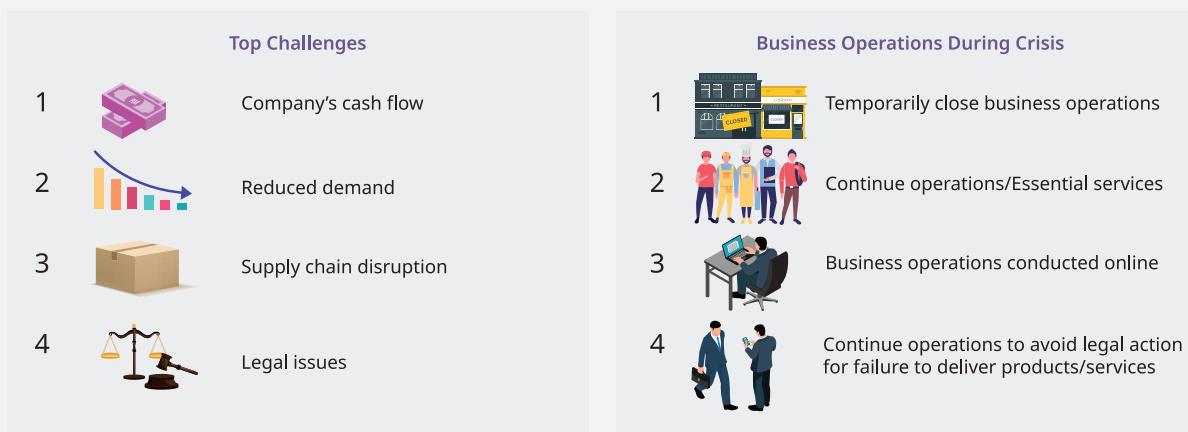
Findings by Omar et al. (2020) highlights the impact of the Movement Control Order (MCO) on SMEs. The effect is characterised as operational problems, such as operation and supply chain disruptions, difficulties in the fore-sighting of future business direction as well as financial-related issues. This is in line with a quick survey by Marketing Insight (2020) on the impact of MCO in Kuala Lumpur and Pulau Pinang, businesses were switching their business conduct into online transactions in line with the changes in consumers' purchasing behaviour. An online survey by the Department of Statistics, Malaysia (2020), indicates that 68% of establishments had no source of income during the initial MCO period and 12.3% earned revenue through online sales or services.

To assess the impact of the MCO on SMEs, the SME Corp. Malaysia undertook a series of internal surveys between March and May 2020.² These surveys aimed to understand the challenges faced by SMEs and to assess the effectiveness of Government assistance. More than 1,900 SMEs in various sectors throughout the nation participated in the surveys.

Main Findings of SME Corp. Malaysia Surveys

The SME Corp. Malaysia's surveys indicate that cash flow disruptions were the main challenge to SMEs during the COVID-19 crisis, followed by lower demand, supply chain disruption and legal issues (Figure 3.3.2.). These challenges caused SMEs to halt their business operations temporarily with the possibility of huge losses. This is in line with the findings of Bourletidis and Triantafyllopoulos (2014) that SMEs in a period of prolonged economic crises may suffer disproportionately from economic downturns because of limited financial resources.

FIGURE 3.3.2. *SMEs Top Challenges and State of Business Operations During the Crisis by Ranking*



Source: SME Corporation Malaysia, 2020

Cash flow issues arise mainly due to the drop-in sales, insufficient cash-in-hand as well as high overhead costs. The surveys revealed that nearly 60% of SMEs reported not having any sales during the MCO period, while 39% experienced lower sales. SMEs also claimed to have cashflow problems in paying employees' salaries and benefits, business loan repayments, rental and utility payments as well as for the purchase of raw materials and packaging. Consequently, more than 90% of SMEs were expected to survive only up to five months with existing cash-in-hand.

The global economic fallout from COVID-19 has been devastating, with many losing jobs and business, and unable to pay their commitments (Hakovirta & Denuwara, 2020). SME Corp. Malaysia surveys reveal that only 34% of the SMEs were able to continue operations as essential services providers. Majority of SMEs had to undertake various alternative actions, including negotiating with employees on salary and benefits cut (37%), retrenching employees (34%), limiting business trips (33%) and working from home (33%).³

The surveys also indicate that for SMEs to regain their pre-crisis growth momentum, assistance other than commercial loans are necessary. This include, soft loans, deduction on corporate and business tax as well as a dedicated government agency as SMEs focal point. In addition, advice on

² The surveys cover the period between the MCO and the reopening of the economy (excluding the initiatives under Pelan Jana Semula Ekonomi (PENJANA) which was announced in June 2020).

³ Figure may not add up to 100% due to multiple choices by the respondents.

restructuring and remodelling of businesses, identifying new business areas and access to online platforms are among assistance needed by SMEs. Hence, of all the initiatives under the stimulus packages, the wage subsidy programme, six-month automatic moratorium on loans, free internet services and special relief facility initiatives were the most impactful measures. Other beneficial programmes include discounts on electricity bills and micro-credit schemes.

With the support and assistance, a total of 72% of SMEs are anticipated to rebound within a year. However, the rest would require more than a year to stabilise their businesses. Nonetheless, most SMEs faced challenges to restart their businesses due to lesser demand, insufficient capital, supply chain issues and difficulties in complying with the standard operating procedures (SOPs).

Way Forward

With the significant presences of SMEs in the economy, any crisis will inevitably affect various sectors and overall economic growth. Therefore, it is vital to ensure the sustainability and resilience of SMEs at all times. Moving forward, among the initiatives that will enable SMEs to endure any crisis are accelerating digitalisation, adopting strategic financial planning and enhancing branding capabilities.

Accelerating Digitalisation

The adoption of digitalisation is necessary to transform SMEs to be more competitive and resilient. Nonetheless, businesses in Malaysia have adopted digital technologies less readily than the Government and the population in general. Only 62% of companies are connected to the internet, 46% have fixed broadband and 18% have a web presence of some kind (World Bank, 2018). A study by Association of Small & Medium Enterprises, Singapore (2018) found that SMEs which have embraced digitalisation saw revenue growth of 26% on average. The digitalisation helps businesses better understand their customers, gauge the effectiveness of marketing campaigns, increase the efficiency of their business operations, transform products and empower employees.

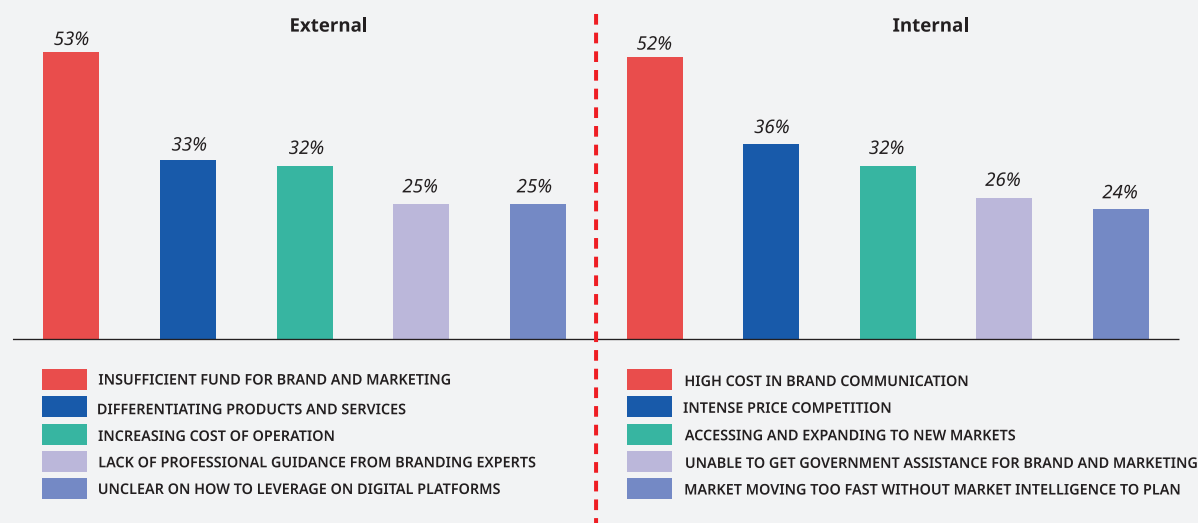
Adopting Strategic Financial Planning

According to a survey conducted by Bank Negara Malaysia (2018), more than 70% of SMEs' financing needs are sourced internally or from personal savings and the rest obtained from banks as well as development financial and microcredit institutions. It is also found that many SMEs lack awareness and the know-how to conduct effective and efficient budgeting, including alternate financing. Strategic financial planning involves a process by which firms derive a strategy to enable them to anticipate and respond to the dynamic business environment (Kee Luen et al., 2013). Such efforts inevitably improve the competitiveness of business firms and eventually their performances. Thus, the study confirmed that adopting strategic financial planning would improve the business performance and success rate of SMEs.

Enhancing Branding Capability

Currently, local SMEs contribute only 18% of total exports due to lack of knowledge on market access and readiness in exporting. Insufficient funds for brand and marketing is the top internal challenge for SMEs. In contrast, the high cost in brand communication was the main external challenge (Bizsphere Online Reviews, 2017) (Figure 3.3.3.). The commercialisation process is claimed to be more difficult for SMEs since they lack the presence and resources necessary for broad reach on the marketplace (Walsh et al., 2017). Thus, there is a need for SMEs to adopt cost-effective methods through technology-oriented approaches to commercialise their products.

FIGURE 3.3.3. Top Five Challenges to Bring Brand to the Next Level



Notes: Figure may not add up to 100% due to multiple choices by the respondents
Source: Bizsphere Online Review, 2017

Conclusion

The COVID-19 pandemic has exposed underlying problems in the way SMEs conduct businesses. The timely intervention by the Government through PRIHATIN dan PRIHATIN SME+ is expected to sustain SMEs to survive in a challenging business environment. The pandemic has also created a new normal in business practices, which includes adopting digital business models, re-orientation in supply chains and embrace the shift in consumer behaviours. Thus, SMEs need to improve their capability and capacity to be more resilient, agile and flexible to face uncertainties.

Agriculture Sector

Oil palm subsector poised for recovery

The **agriculture** sector contracted by 3.9% in the first half of 2020 due to lower growth of oil palm and rubber subsectors following supply disruptions. The oil palm subsector was affected even before the pandemic, attributed to dry weather and cutbacks in fertilisers by smallholders in 2019. The rubber subsector also declined due to unfavourable weather and low rubber prices. The agriculture sector was further affected by the MCO, which led to lower production across most of the subsectors. The sector is anticipated to rebound by 1.4% in the second half of the year driven by the recovery in the oil palm subsector. The output of livestock and other

TABLE 3.4. Value-added in the Agriculture Sector, 2019 – 2021
(at constant 2015 prices)

	SHARE (%)	CHANGE (%)		
	2020 ²	2019	2020 ²	2021 ³
Oil palm	37.6	1.5	-1.3	5.9
Rubber	2.4	6.1	-18.9	6.0
Livestock	16.1	6.3	4.0	5.7
Other agriculture ¹	27.4	3.9	4.9	4.6
Fishing	11.5	-0.7	-5.2	2.9
Forestry and logging	5.0	-8.6	-21.8	-3.0
Agriculture	100.0	2.0	-1.2	4.7

¹ Including paddy, fruits, vegetables, coconut, tobacco, tea, flowers, pepper, cocoa and pineapple

² Estimate

³ Forecast

Note: Total may not add up due to rounding

Source: Department of Statistics and Ministry of Finance, Malaysia

agriculture subsectors are also expected to expand, supported by stable demand for food items, primarily during festivities. Hence, the agriculture sector is projected to decline by 1.2% in 2020.

The agriculture sector is expected to turnaround by 4.7% in 2021, supported mainly by higher production of palm oil and rubber. The oil palm subsector is anticipated to rebound following improvements in global demand, particularly from China and India. The crude palm oil (CPO) price is projected to remain stable with higher demand following recovery in the hotel, restaurant and catering operations as well as

higher biodiesel mandate in Indonesia and Malaysia. The rubber subsector is expected to surge as global demand for natural rubber increases in line with the expansion of the automotive industry. The production of livestock and other agriculture and fishing is also expected to improve in line with various Government's initiatives in modernising the agro-food subsector. This include integration of agriculture technologies, such as agro-robotic, sensor, precision farming, drones, agriculture data development and Internet of Things (IoT) applications. In addition, the Government's efforts to increase domestic food production in ensuring food security are expected to continue to sustain the growth of the subsector.

INFORMATION BOX 3.1

The Importance of Commodity Sector to the Malaysian Economy

Introduction

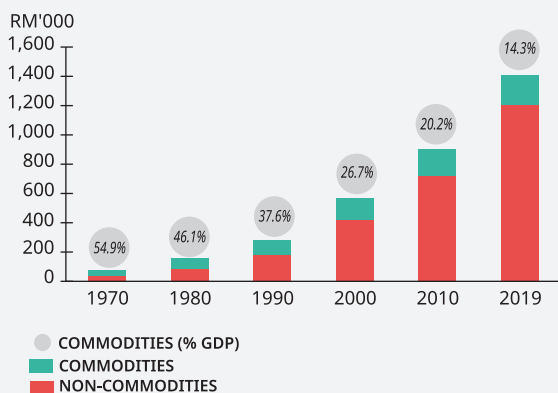
The commodity sector¹ continues to play an important role in the Malaysian economy. However, with the focus shifting from purely upstream to various downstream activities, the contribution of the commodity sector has declined. Furthermore, the sector is vulnerable, mainly due to the volatility in global demand and supply. Using an input-output methodology and a Dynamic Computable General Equilibrium (CGE) model, this article assesses the contribution of the commodity sector to economic growth.

Contribution of the Commodity Sector

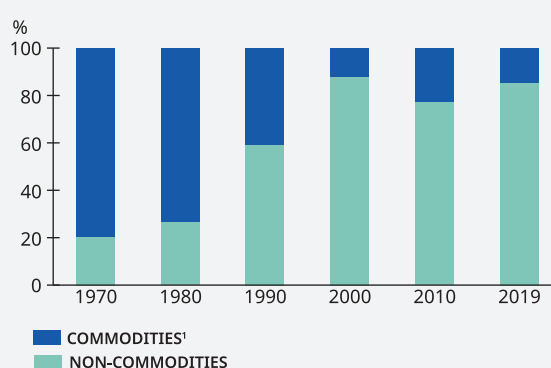
In 1970, the commodity sector accounted for 54.9%² of gross domestic product (GDP) or RM43.2 billion (in 2015 prices) (Figure 3.1.1.). The commodity sector constituted about 80% of total exports, comprising mainly of rubber and tin (Figure 3.1.2.). However, during the subsequent decades, oil and gas (O&G) and oil palm replaced rubber and tin as the major commodities. In 2019, despite an increase in value to RM203 billion, the share of the commodity sector to GDP had reduced to 14.3%. This was due to the rapid growth of the manufacturing sector during the industrialisation phase of the mid-1980s. The sector's share further declined during the 1990s following the transformation into a services-driven economy. Despite accounting for a smaller percentage of GDP, the sector has cushioned the economy from external shocks, especially during the crises of 1998, 2009 and the recent COVID-19 pandemic.

¹ Includes oil palm, rubber as well as oil and gas.

² Backcasting data from Economic Planning Unit, Prime Minister's Department.

FIGURE 3.1.1. Value and Contribution of Commodity and Non-Commodity Sectors

Source: Economic Planning Unit, Prime Minister's Department

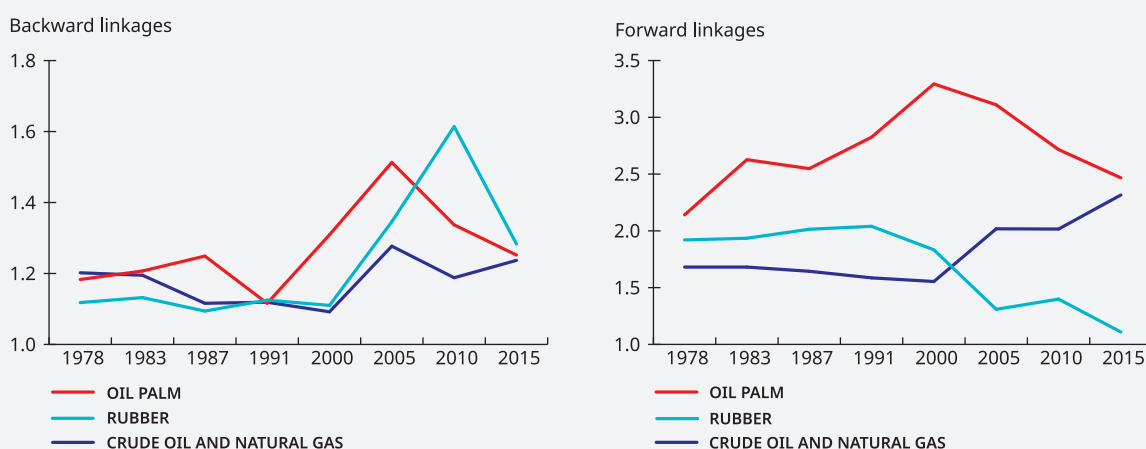
FIGURE 3.1.2. Contribution of Commodity and Non-Commodity Sectors to Total Exports

¹ Excluding commodity-related downstream activities

Source: Department of Statistics, Malaysia and Malaysia External Trade Development Corporation

Assessing the Contribution of the Commodity Sector

Based on the input-output analysis, there are three notable trends observed in the forward and backward linkages³ for the commodity sector. Firstly, there was a gradual increase in the forward linkages for oil palm and O&G since 2000. This reflects the compositional shift in both commodities as they moved to higher value-added downstream activities in the resource-based industry, which constituted 44.3% of the manufacturing sector. The output of crude palm oil was mainly used by oils and fats as well as manufacturing of animal feeds industries. The output of O&G was consumed by the petroleum refinery, basic chemicals, wholesale and retail trade as well as motor vehicle industries. The evolution of downstream activities was in line with Industrial Master Plans (IMPs), which aimed at ensuring the manufacturing sector, including the resource-based industry, remains an essential source of growth. On the contrary, the forward linkage for rubber industry remained low following increasing usage of synthetic rubber for the production of gloves.

FIGURE 3.1.3. Linkages and Multiplier Impacts of Commodity Industries

Source: Ministry of Finance, Malaysia (estimates)

³ Backward linkage is the interconnection with the industry of upstream industries for inputs. Forward linkage is the interconnection of the industry to downstream industries as markets for its output (Miller & Blair, 2009).

Secondly, all the three commodities have higher backward linkages for the period of 2000 – 2015 as compared to 1978 – 1991. This reflects that industries consumed more input as they expanded to meet demand from more diversified downstream industries (Figure 3.1.3.). Thirdly, the commodity sector has more extensive forward linkages as compared to backward linkages as they supply natural raw materials to the economy. This is in line with the study by Valdés and Foster (2010), which revealed that agricultural commodities have higher forward linkages rather than backward linkages.

Subsequently, the CGE model was applied to assess the contribution of the commodity sector to the economy. The analysis shows that with a 10% increase in productivity of O&G, oil palm and rubber industries, real GDP will increase by 1.5, 0.5 and 0.03 percentage points, respectively (Figure 3.1.4., 3.1.5. and 3.1.6.). In addition, other industries that are associated with the commodity sector, such as civil engineering, oils and fats as well as rubber processing, are also expected to benefit. The CGE results indicate that industries that sell the most to households are expected to gain from higher household disposable income. In comparison to the commodity industry, a 10% increase in productivity of electronics and basic chemicals will increase real GDP by 0.3 and 0.12 percentage points, respectively. The lower contribution to GDP is attributed to the high dependency of these industries on imports of intermediate inputs.

FIGURE 3.1.4. Crude Oil and Natural Gas

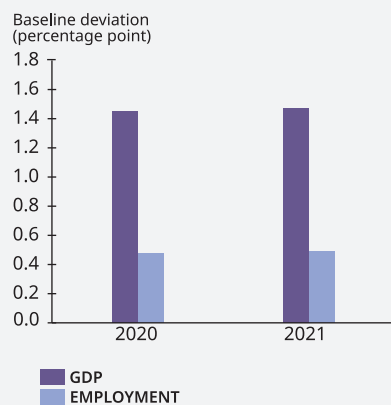


FIGURE 3.1.5. Oil Palm

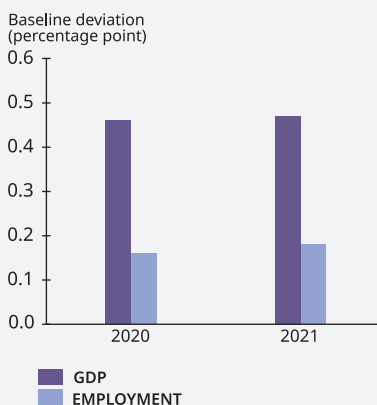
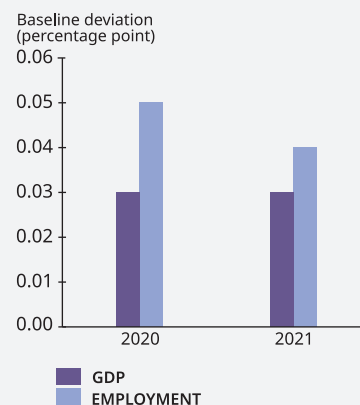


FIGURE 3.1.6. Rubber



Source: Ministry of Finance, Malaysia (estimates)

Conclusion

The Malaysian economy has experienced a relatively rapid growth during the last four decades and has also undergone a structural transformation. From an agriculture-based economy, diversification has proceeded to the extent that services and manufacturing have become the engine of growth. Nevertheless, the commodity sector continues to play an essential role in the economy through the inter-sectoral linkages, particularly in terms of forward linkages. This is mainly attributed to the emphasis on enhancing resource-based downstream activities. The oil palm and O&G industries also contribute higher to the GDP as compared with electronics and basic chemicals industries which have high import content. Therefore, research and development (R&D) collaborations between the industry and research institutes need to be enhanced to produce more high value-added products. In line with the Industrial Revolution 4.0 (IR4.0), adoption of technology such as usage of robotics, sensors and the Internet of Things (IoT) will increase productivity and ensure the sustainability of the sector.

Mining Sector

Higher demand to drive growth in 2021

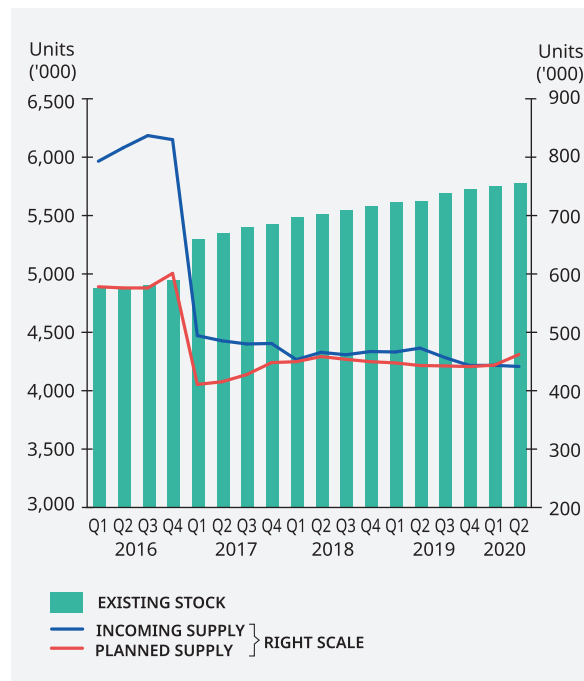
The **mining** sector recorded a double-digit contraction of 11% in the first half of 2020, affected by the slump in global demand due to business closures as well as the reduction in travel and transport activities. The sector was further weighed down by the temporary shutdowns of several oil and gas (O&G) facilities for maintenance purposes. With the COVID-19 pandemic crushing demand, storage facilities filled rapidly, and Brent crude oil price fell to its lowest level at USD17.32 per barrel (pb) on 21 April 2020 before stabilising at about USD40 pb. The sector is expected to continue to decline in the second half of the year due to on-going maintenance works and bearish outlook, following economic and geopolitical uncertainties as well as trade tensions. Against this backdrop, the mining sector is anticipated to contract by 7.8% in 2020. Nonetheless, the sector is expected to rebound by 4.1% in 2021, supported by the recovery in global demand for crude oil and condensate as well as liquified natural gas (LNG). Brent crude oil price is expected to improve in 2021 to an average of USD42 pb and recover to pre-pandemic level in the medium-term.

Construction Sector

Civil engineering segment to spur recovery

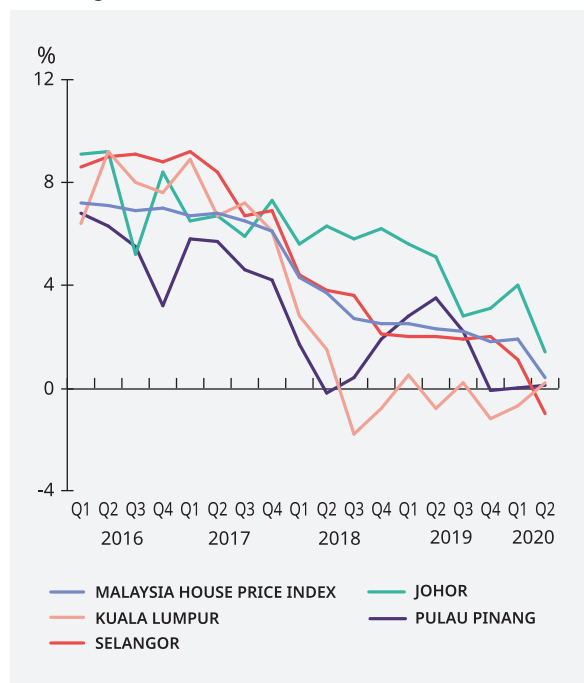
The **construction** sector contracted by 25.9% in the first half of 2020 and is expected to shrink by 11.8% in the second half with all segments declining significantly. At the same time, prolonged property overhangs continue to weigh down the performance of the sector. However, civil engineering and specialised construction activities subsectors are expected to improve gradually, cushioned by various measures under the economic stimulus packages. Overall, for the year, the sector is projected to contract by 18.7%.

FIGURE 3.3. Supply Indicators of Residential Property

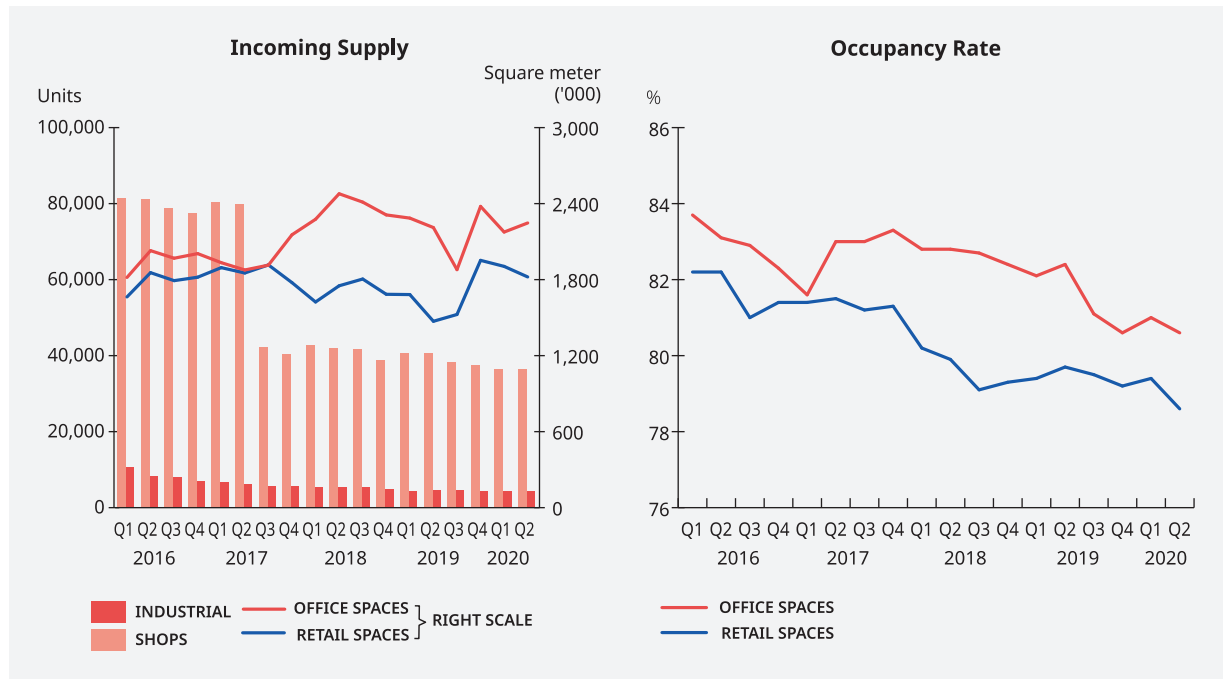


Source: National Property Information Centre

FIGURE 3.4. Malaysia House Price Index (% change)



Source: National Property Information Centre

FIGURE 3.5. Supply Indicators of Non-Residential Property

Source: National Property Information Centre

The construction sector is expected to rebound by 13.9% in 2021 on account of the acceleration and revival of major infrastructure projects, coupled with affordable housing projects. The civil engineering subsector will continue to be the main driver of the construction sector. Among the major infrastructure projects include Mass Rapid Transit 2 (MRT2), Light Rail Transit 3 (LRT3), West Coast Expressway (WCE) and Bayan Lepas Light Rail Transit (LRT) as well as Pan Borneo and Coastal Highways in Sarawak. Utility projects include the Langat 2 Water Treatment Plant, Baleh Hydroelectric Dam and Sarawak Water Supply Grid Programme (Phase 1).

The residential subsector is anticipated to improve, supported by various measures taken by the Government to address the property overhang situation. Among the measures include the extension of HOC, exemption of RPGT, the introduction of RTO scheme as well as reduction of foreign ownership threshold. The performance of the non-residential subsector is expected to recover marginally, supported by on-going commercial projects, including Bukit Bintang City Centre, Cyberjaya City Centre, Forest City and Malaysia Vision Valley 2.0.

Domestic Demand

Domestic demand spearheads the recovery

Domestic demand is expected to contract by 3% in 2020, with private and public sectors' spending declining by 3.2% and 2.1%, respectively. In the first half of 2020, domestic demand declined significantly by 7.7%, amid restricted movements to contain the COVID-19 pandemic. Nevertheless, the announcement of various stimulus packages and the gradual resumption of economic activities are expected to restore business and consumer confidence in the second half of the year. Hence, domestic demand is anticipated to turnaround to 1.5% during the period and expand further by 6.9% in 2021.

Private consumption declined by 6% during the first half of 2020, affected by the implementation of the MCO. However, household spending is anticipated to pick up during the second half of the year, on the back of various stimulus packages aimed at providing support to households and businesses. The measures include a moratorium on loan repayments, temporary

optional reduction in employees' contributions to the Employees Provident Fund (EPF) and discounts on electricity bill as well as low interest rates. As a result, private consumption is projected to rebound by 4.2% in the second half, cushioning overall consumption activities, which is expected to record a marginal decrease of 0.7% in 2020.

TABLE 3.5. *GDP by Aggregate Demand, 2019 – 2021*
(at constant 2015 prices)

	SHARE (%)	CHANGE (%)		
	2020 ²	2019	2020 ²	2021 ³
Domestic demand	95.5	4.3	-3.0	6.9
Private expenditure	76.6	6.2	-3.2	7.0
Consumption	61.1	7.6	-0.7	7.1
Investment	15.5	1.6	-11.7	6.7
Public expenditure	18.9	-2.8	-2.1	6.7
Consumption	13.0	2.0	1.6	2.0
Investment	6.0	-10.8	-9.3	16.9
External sector¹	5.5	9.7	-24.9	4.1
Exports	57.8	-1.3	-13.4	8.7
Imports	52.3	-2.5	-11.9	9.2
GDP	100.0	4.3	-4.5	6.5 – 7.5

¹ Goods and non-factor services

² Estimate

³ Forecast

Note: Total may not add up due to rounding and excluding change in stocks component

Source: Department of Statistics and Ministry of Finance, Malaysia

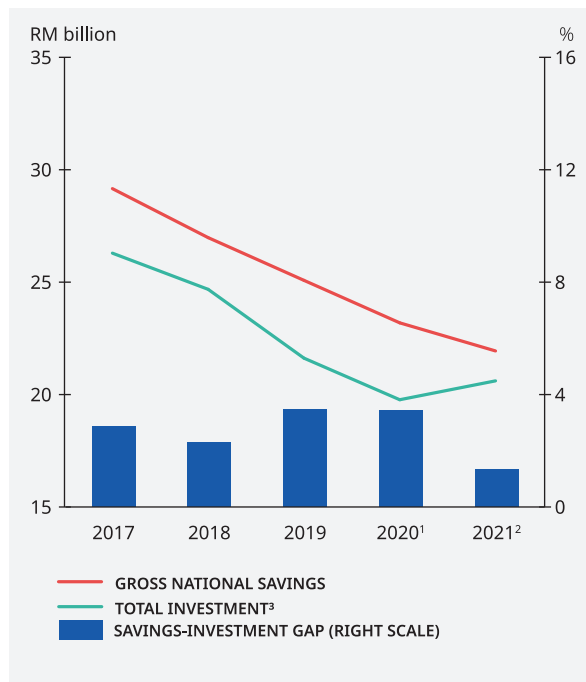
Private consumption is anticipated to increase by 7.1% in 2021, mainly supported by higher disposable income arising from buoyant domestic economic activities, stronger export earnings, accommodative financial stance, extension of tax relief on childcare and favourable stock market conditions. Better job prospects, following broader improvement in the economy and measures addressing employability, are also expected to contribute to household spending. Furthermore, the expected recovery in the tourism-related industries following tax incentives on domestic tourism expenses for households will also provide additional impetus to private sector spending. As the nation rapidly shifts towards adopting digitalisation, the broader availability of various e-commerce platforms and roll-out of 5G technology will facilitate economic activities.

Private investment is expected to contract by 11.7% in 2020, after declining significantly by 15.2% in the first half of the year. The significant decline was due to weak demand and tight liquidity as businesses were closed down for weeks following the MCO and uncertainties in the financial markets. Nonetheless, with various measures taken to revitalise and accelerate businesses, private investment is expected to record a smaller decrease of 7.8% in the second half of the year. Among the measures include the establishment of funds to support digitalisation, especially for SMEs, as well as tax incentives to attract foreign direct investment (FDI) and assistance to sustain businesses. In addition, the MalaysiaMudah (#MyMudah) initiative and the establishment of the Project Acceleration and Coordination Unit (PACU) will reduce bureaucracy to facilitate business operations and boost private investment activities. With these policies in place and coupled with spill-over effects from the fiscal injection, private investment is expected to rebound by 6.7% in 2021.

Public investment is projected to decline by 9.3% in 2020 on account of lower capital outlays, especially in the first half of the year. Public investment expenditure, which shrunk by 24.2% during the period, is expected to gradually improve in the second half of 2020. This follows the implementation and acceleration of investment in infrastructure, such as small-scale projects under the economic stimulus packages and the National Fiberisation and Connectivity Plan (NFCP). The Federal Government's development expenditure (DE) continues to prioritise investment with high multiplier impact and value for money. The DE, averaging about RM59 billion between 2020 – 2021, is mostly targeted at promoting sustainable development and bridging urban-rural infrastructure gap as well as enhancing the living standards of the people. Among major projects, include expansion of several airports as well as construction of hospitals and Klang Valley Double Track Phase 1 (KVDT 1). The continuation of large-scale transport-related projects, such as MRT2, LRT3, Rapid

Transit System (RTS) and Pan Borneo Highway, will also provide impetus to public investment. Public corporations are expected to continue investing in new and on-going projects, among others, development of O&G-related projects, upgrading of digitalisation-related activities and construction of energy plants. All

FIGURE 3.6. *Savings-Investment Gap (% of GNI)*



these initiatives are expected to support public investment to expand by 16.9% in 2021.

Public consumption is anticipated to increase by 1.6% in 2020, with higher expenditure on emoluments mainly to meet the staff requirements in critical sectors. The 3.6% increase in public consumption in the first half of 2020 is mostly attributed to the implementation of stimulus packages. Public consumption is expected to expand by 2% in 2021 with the Government continuing to further improve public services delivery and optimising spending.

Gross national income (GNI) in current prices is anticipated to decline by 3.7% in 2020, following slower economic activities. Gross national savings (GNS) is also expected to fall by 11% to RM328.3 billion, with the bulk of savings contributed by the private sector. With total investment declining at a slower rate than savings, the savings-investment gap is forecast to record a surplus of RM48.5 billion.

In 2021, GNI is projected to rebound by 7.8% to RM1.53 trillion, while GNS by 2% to RM335 billion. During the year, the savings-investment gap is anticipated to record a lower surplus of RM20.3 billion. However, the surplus will continue to provide ample liquidity to finance domestic economic activities and be mobilised for long-term productive investment.

FEATURE ARTICLE 3.4

Shadow Economy in Malaysia

Introduction

Shadow economy (SE) exists around the world. However, there is no standard definition and methodology to account for its activities in the official national gross domestic product (GDP), given its hidden nature. Apart from SE, there are many terms used, such as underground economy, non-observed economy, hidden economy and informal economy (Organisation for Economic Co-operation and Development, 2017). The SE includes all market-based legal production of goods and services that are deliberately concealed from public authorities to avoid payment of taxes and social security contributions as well as to avoid complying with labour market standards and administrative obligations (Schneider, 2011).

The incentive to be in SE is driven by the higher cost in the hiring of workers, which includes tax burden and social contributions as well as regulations to control economic activities (Schneider, 2011). An increase in the rate of self-employment as a percentage of the labour force also

contributes to the size of SE (Dell'Anno, 2004). Although self-employment is high in many countries, they may not enjoy the benefits of formal contracts (Organisation for Economic Co-operation and Development, 2009). Thus, the information on the size of SE is crucial for the government in making policy decisions to reduce tax evasion (Medina & Schneider, 2018). The estimation on SE would also provide insights for governments to enhance social security protection among low-income households and unemployed persons.

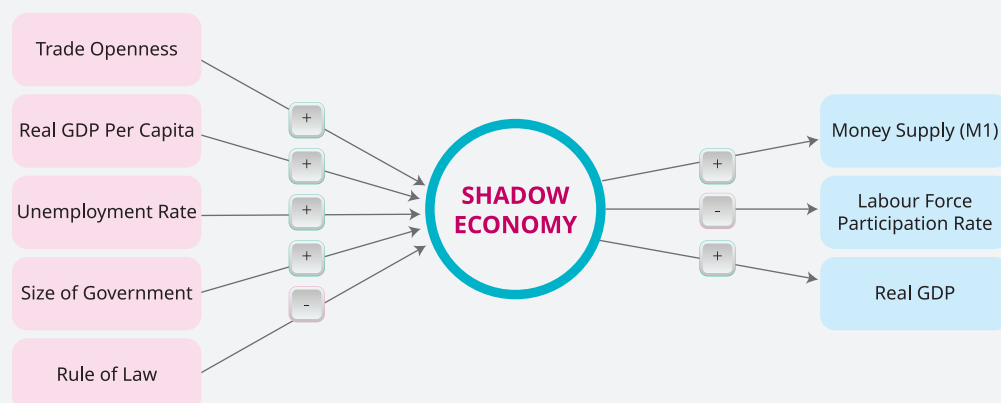
Many studies have estimated the size of the SE in Malaysia using various methodologies. Using the Multiple Indicators Multiple Causes (MIMIC) model and Currency Demand Approach (CDA), Medina and Schneider (2019) estimated the average size of SE in Malaysia at 31% of GDP between 1991 – 2017. This article estimates the size of the Malaysian SE between 1990 – 2019 using a similar method. It also provides some insights on the main causes and best practices in other countries to minimise shadow economic activities. In this context, SE is defined as legal productive economic activities that remain unreported from the official authority to avoid government regulations, tax obligations and social security contributions¹.

Estimating the Shadow Economy

There are two steps in the estimation of SE. Firstly, the MIMIC model is applied to estimate the relative size of the SE. The model is derived from structural equation modelling (SEM) to confirm the influence of causal variables as well as the effect of SE on macroeconomic indicators. Secondly, the CDA is applied to calibrate the relative estimates into the absolute size of SE in Malaysia for the period between 1990 – 2019. The size of SE depends on various variables. The MIMIC estimation uses causal variables of SE, which include trade openness, real GDP per capita, unemployment rate, size of government and the rule of law. The effect of SE on macroeconomic indicators are reflected in money supply (M1), labour force participation rate and real GDP.

The model shows that trade openness, real GDP per capita and size of government are contributors to the larger size of SE. Many research indicate that real GDP per capita and trade openness have an inverse relationship with the size of SE. However, for Malaysia, both variables have a positive relationship with the size of SE, suggesting that an increase in real GDP per capita or trade openness will lead to a larger size of the SE. These relationships are also observed in advanced countries. A positive relationship with real GDP per capita occurs when an economy has reached a certain threshold of real GDP per capita or when an economy is more developed (Wu & Schneider, 2019). In addition, high trade openness indicates minimal trade barriers. As such, businesses or individuals may involve in illegal trading without difficulty (International Chamber of Commerce, 2017).

FIGURE 3.4.1. Causal and Macroeconomic Indicators of Shadow Economy in Malaysia



Source: Ministry of Finance, Malaysia (estimates)

¹ Any undeclared, under-reporting and suppression of income in Malaysia are regarded as tax evasion (Malaysian Income Tax Act, 1967 and Service Tax Act, 1975).

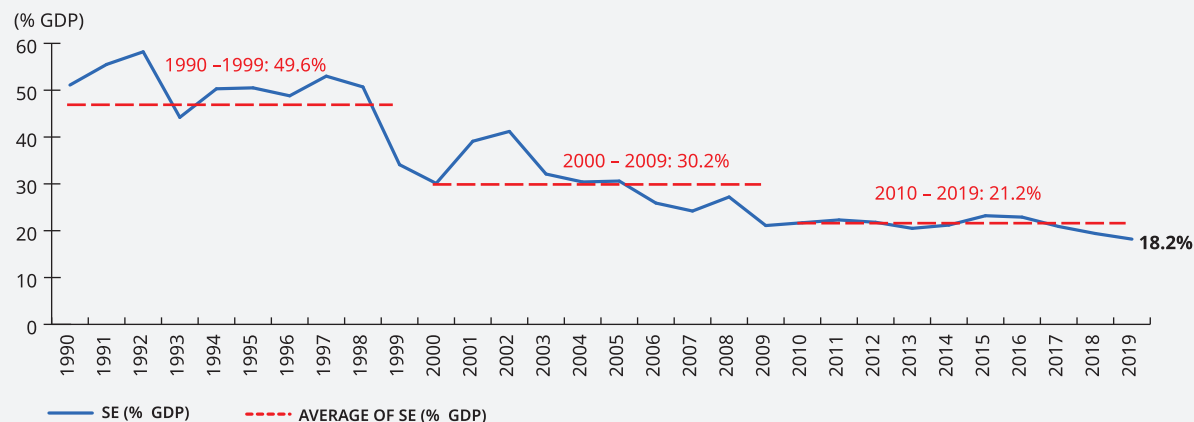
In the labour market, tight regulations have a significant effect on employers' costs and workers' incentives. In many Organisation for Economic Co-operation and Development (OECD) countries, high labour costs are the leading reason for the rising unemployment rate, and thus, for the expansion in the SE, which employs many unemployed people. As growing numbers of people work in the hidden sector, participation rates in the official economy may fall (Schneider & Enste, 2000). Nevertheless, better job prospects in the labour market are expected to reduce the size of SE.

A positive relationship exists between SE and the size of government, which is the proxy for the burden of indirect taxation (Schneider et al., 2010). A bigger government is associated with greater red tape, which induces some firms to operate underground (Goel et al., 2017). On the contrary, the size of SE declines as the overall institutional quality and the rule of law improves. Businesses also have an incentive to go underground, not to avoid high taxes but rather to reduce the burden of the regulation (Friedman et al., 2000).

Heightened activities in SE is likely to push up the demand for the currency. This is because SE transactions tend to be in cash or cryptocurrencies, which is difficult to be detected. Hidden transactions are assumed to be carried out in cash to avoid leaving a paper trail for authorities (Tanzi, 2002). Thus, higher M1 reflects the increase in the size of SE.

This article estimates the average size of Malaysian SE at 33.7% of GDP from 1990 – 2019. Figure 3.4.2. indicates that the size of SE has declined over the years fluctuating around 50% of GDP between 1990 – 1999. The size of SE continued to fall to about 30% between 2000 – 2009 before averaging about 21% between 2010 – 2019. In 2019, the size of SE stood at 18.2%.

FIGURE 3.4.2. *Size of Shadow Economy in Malaysia, 1990 – 2019*



Source: Ministry of Finance, Malaysia (estimates)

Best Practices to Curb the Shadow Economy

Tax administrators globally have strengthened their efforts to identify and reduce the size of SE. Data sharing among agencies are crucial in detecting SE. For instance, New Zealand provides a tax number to every new-born child upon registration of birth. The Australian Taxation Office allows taxpayers to pre-fill their income tax returns with information, such as salary, interest and health insurance, with data sourced directly from employers, banks and insurers. In Singapore, the inland revenue agency sourced information from vehicle records and the Central Provident Fund Board to help determine whether a company is active or dormant (Organisation for Economic Co-operation and Development, 2017).

In Nigeria, electronic payments and cashless transactions have been implemented to limit undeclared economic activities by gradually reducing and eliminating unrecorded cash payments (Yusuf & Agbi, 2018). Liberalising the labour market is also among measures implemented to minimise SE. Denmark, for example, has a renowned “flexicurity” model, where businesses are given the “flexibility” in hiring and firing workers. At the same time, the model has increased the “security” for people who have lost their jobs by providing unemployment benefits, retraining and job search assistance (Packard et al., 2012).

Way Forward

Advanced technology can help reduce the size of SE and the incidence of tax evasion. The emergence of the sharing economy and gig economy allows the migration from cash to digital transactions and creates digital footprints. Data sharing among government agencies, for example, registration of properties and vehicles as well as the introduction of tax identification number, will provide information on the expenditure patterns of individual and businesses. Thus, the government could analyse the collected data effectively and enable the identification of fraudulent tax activities. The government’s welfare distribution platforms could also be utilised to register business entities in the informal sector.

The government will enhance efforts to make working in the formal sector more beneficial, for example, by improving efficiency in the labour market and simplifying tax compliance procedures with greater adoption of technology. Efforts will be continued to enhance and emphasise the rule of law and enforcement rather than increasing the number of regulations.

Conclusion

As SE under-values the actual size of the economy, this article applies the MIMIC model and CDA approach to estimate the size of SE in Malaysia between 1990 – 2019. The results indicate that although the size of SE is on a declining trend, its presence is still significant and deters the development of an inclusive economy. It deprives potential high tax revenue collection to finance development projects, such as healthcare, education and public transportation. Measures to reduce the size of SE include adopting advanced technologies, higher data sharing among government agencies, emphasis on the rule of law and stringent enforcement.

External Sector

Green shoots emerging

Exports

In 2020, **gross exports** are projected to decline by 5.2% weighed down by global supply disruptions as a result of the unprecedented crisis. Consequently, exports of manufactured goods are estimated to contract by 3.8% following lower demand for E&E and non-E&E products which are expected to fall by 3.8% and 3.7% respectively. Nonetheless, exports of agriculture goods are anticipated to rise by 0.7%, buoyed by palm oil and palm oil-based

agriculture products. Exports of palm oil are projected to increase by 5.6% with higher demand, particularly from China, India and the Netherlands. The exemption of export duties on CPO, crude palm kernel oil as well as refined, bleached and deodorised (RBD) palm kernel oil is also expected to support the exports of palm oil. In contrast, receipts from natural rubber are anticipated to drop by 20.1% in 2020. Exports of mining goods are projected to decrease further by 21.8%, dragged down by exports of crude petroleum and LNG by 27.6% and 15.7%, respectively. The slowdown in demand from global industrial, travel and transportation activities as well as price slump are the main reasons for the downtrend in exports of mining goods.

TABLE 3.6. *External Trade, 2019 – 2021*

	RM MILLION			CHANGE (%)		
	2019	2020 ¹	2021 ²	2019	2020 ¹	2021 ²
Total trade	1,844,483	1,738,477	1,805,749	-2.1	-5.7	3.9
Gross exports	995,072	943,761	968,793	-0.8	-5.2	2.7
<i>of which:</i>						
Manufactured	840,586	808,851	828,862	0.4	-3.8	2.5
Agriculture	65,958	66,441	69,381	-1.6	0.7	4.4
Mining	81,520	63,771	65,118	-9.3	-21.8	2.1
Gross imports	849,411	794,716	836,956	-3.5	-6.4	5.3
<i>of which:</i>						
Capital goods	100,179	87,642	100,219	-10.9	-12.5	14.3
Intermediate goods	467,211	437,406	460,280	1.1	-6.4	5.2
Consumption goods	74,155	74,718	76,967	1.5	0.8	3.0
Trade balance	145,661	149,045	131,838	17.7	2.3	-11.5

¹ Estimate

² Forecast

Note: Total may not add up due to rounding

Source: Department of Statistics, Malaysia External Trade Development Corporation and Ministry of Finance, Malaysia

TABLE 3.7. *Gross Exports, January – August 2019 and 2020*

	RM MILLION		CHANGE (%)		SHARE (%)	
	2019	2020	2019	2020	2019	2020
Manufactured	553,834	533,378	1.7	-3.7	84.1	85.9
Agriculture	44,212	43,960	-1.6	-0.6	6.7	7.1
Mining	55,591	40,463	-1.9	-27.2	8.4	6.5
Others ¹	4,940	2,841	-31.9	-42.5	0.8	0.5
Gross exports	658,576	620,642	0.8	-5.8	100.0	100.0

¹ Including gold scrap and waste; worn clothing; and special transaction not classified

Note: Total may not add up due to rounding

Source: Department of Statistics, Malaysia and Malaysia External Trade Development Corporation

Gross exports are expected to rebound by 2.7% in 2021, benefiting from the recovery in global trade and supply chains. Exports of manufactured goods are anticipated to turnaround by 2.5%, supported by improved demand for E&E and non-E&E products. Higher demand for semiconductor, telecommunication equipment parts as well as automatic data processing equipment in line with the global digital transformation and 5G roll-out is expected to expand the exports of E&E by 3%. Similarly, exports of the non-E&E are expected to improve by 2.1%, contributed by higher

demand for chemicals and chemical products, rubber products and manufactures of metal.

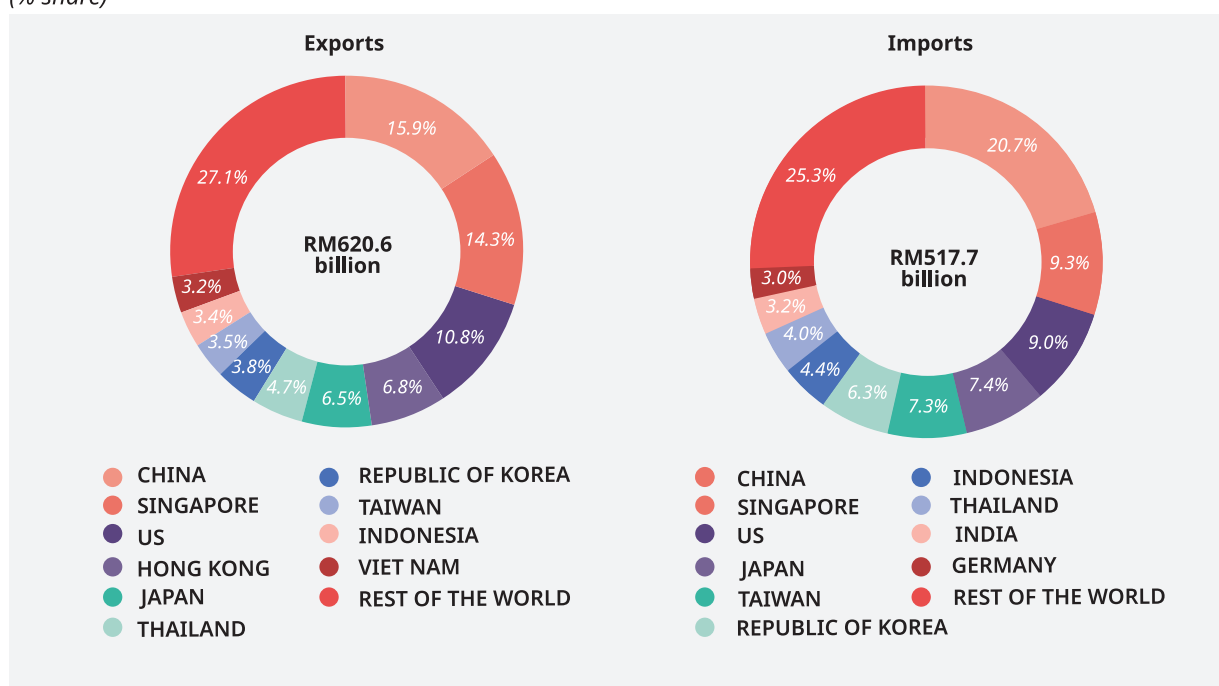
Exports of agriculture goods are projected to expand by 4.4% in 2021, led by an increase in demand for palm oil and palm oil-based agriculture products as well as natural rubber. In line with the recovery in world economic activities and improvement in crude oil prices, export earnings from mining goods are projected to recover by 2.1%, contributed by higher demand from major markets for crude petroleum (2%) and LNG (2.2%).

TABLE 3.8. *Exports of Manufactured Goods, January – August 2019 and 2020*

	RM MILLION		CHANGE (%)		SHARE (%)	
	2019	2020	2019	2020	2019	2020
E&E	247,757	237,847	0.8	-4.0	44.7	44.6
Non-E&E	306,077	295,531	2.4	-3.4	55.3	55.4
Petroleum products	47,072	43,774	-4.4	-7.0	8.5	8.2
Chemicals and chemical products	38,458	32,712	4.6	-14.9	6.9	6.1
Optical and scientific equipment	24,592	25,914	4.5	5.4	4.4	4.9
Machinery, equipment and parts	27,723	25,310	0.6	-8.7	5.0	4.7
Rubber products	16,779	23,351	-3.8	39.2	3.0	4.4
Manufactures of metal	28,034	22,978	-7.6	-18.0	5.1	4.3
Iron and steel products	14,472	15,706	48.0	8.5	2.6	2.9
Palm oil-based manufactured products	16,020	13,769	5.1	-14.1	2.9	2.6
Processed food	14,024	13,719	11.8	-2.2	2.5	2.6
Transport equipment	11,733	13,064	-4.2	11.3	2.1	2.4
Wood products	10,101	9,836	-2.5	-2.6	1.8	1.8
Textiles, apparels and footwear	10,406	8,721	5.0	-16.2	1.9	1.6
Manufactures of plastics	9,905	8,554	3.9	-13.6	1.8	1.6
Non-metallic mineral products	5,633	5,081	19.5	-9.8	1.0	1.0
Paper and pulp products	4,071	4,195	29.2	3.0	0.7	0.8
Jewellery	4,712	2,286	9.0	-51.5	0.9	0.4
Beverages and tobacco	2,274	1,629	5.5	-28.4	0.4	0.3
Other manufactures	20,067	24,933	0.4	24.2	3.6	4.7
Exports of manufactured goods	553,834	533,378	1.7	-3.7	100.0	100.0

Note: Total may not add up due to rounding

Source: Department of Statistics, Malaysia and Malaysia External Trade Development Corporation

FIGURE 3.7. *Top 10 Trading Partners, January – August 2020*
(% share)

Note: Total may not add up due to rounding

Source: Department of Statistics, Malaysia and Malaysia External Trade Development Corporation

Imports

Gross imports are projected to contract by 6.4% in 2020 due to lower imports of intermediate and capital goods as a result of slower economic and investment activities. Gross imports are expected to turnaround by 5.3% in 2021, supported by an increase in all types of imports. Imports of intermediate goods are projected to rise by 5.2%,

mainly attributed to expansion in the manufacturing and construction sectors. Similarly, imports of capital goods are projected to expand by 14.3%, following improvement in investment activities and the continuation of strategic projects. Imports of consumption goods are expected to increase by 3%, led by higher demand from households as consumers' confidence improves and income increases.

TABLE 3.9. *Gross Imports by End Use, January – August 2019 and 2020*

	RM MILLION		CHANGE (%)		SHARE (%)	
	2019	2020	2019	2020	2019	2020
Capital goods	65,521	59,930	-13.4	-8.5	11.7	11.6
Capital goods (except transport equipment)	59,712	62,221	-5.3	4.2	10.7	12.0
Transport equipment (industrial)	5,809	-2,291	-53.9	-139.4	1.0	-0.4
Intermediate goods	306,810	278,266	-0.1	-9.3	54.9	53.8
Food and beverages, primary and processed, mainly for industry	12,173	13,182	3.5	8.3	2.2	2.5
Fuel and lubricants, primary, processed and others	39,293	32,403	7.0	-17.5	7.0	6.3
Industrial supplies, primary, processed and n.e.s. ¹	143,404	125,442	1.2	-12.5	25.7	24.2
Parts and accessories of capital and transport equipment	111,940	107,239	-4.2	-4.2	20.0	20.7
Consumption goods	48,486	47,638	0.6	-1.7	8.7	9.2
Food and beverages, primary and processed, mainly for household	20,071	21,464	5.2	6.9	3.6	4.1
Transport equipment (non-industrial)	689	562	32.1	-18.4	0.1	0.1
Other consumer goods	27,725	25,611	-3.0	-7.6	5.0	4.9
Durables	6,359	5,800	-6.7	-8.8	1.1	1.1
Semi-durables	8,881	7,980	-12.6	-10.1	1.6	1.5
Non-durables	12,486	11,832	7.5	-5.2	2.2	2.3
Others	24,766	12,871	32.0	-48.0	4.4	2.5
Re-exports	112,961	118,960	-14.4	5.3	20.2	23.0
Gross imports	558,543	517,665	-4.0	-7.3	100.0	100.0

¹ Not elsewhere stated

Note: Total may not add up due to rounding

Source: Department of Statistics, Malaysia

Balance of Payments

The current account surplus of the **balance of payments** narrowed to RM17.1 billion or 2.6% of GNI in the first half of 2020. This is due to a smaller surplus in the goods account and a lower deficit in the income account. In the second half of the year, the current account surplus is projected to widen to RM31.4 billion or 4.1% of GNI following a wider surplus in the goods account and a lower deficit in the income account. Overall in 2020, the current account surplus is expected to narrow to RM48.5 billion or 3.4% of GNI. This is primarily due to the widening deficit in the services account despite a higher surplus in the goods account and a lower deficit in income account.

The goods account is anticipated to record a higher surplus of RM130.9 billion as exports are projected to outpace imports. The services account is expected to post a wider deficit of RM50.3 billion, mainly due to the decline in receipts in the travel and transport accounts. The travel account is anticipated to record a deficit of RM10.9 billion for the first time since

1989, on account of a significant decline in tourist arrivals as international borders are closed to contain the COVID-19 pandemic. The deficit in the transport account is projected to reach RM26.8 billion due to lower earnings from freight charges, airline passenger fares, airport and port charges, such as aircraft landing and parking, ship docking and cargo handling provided by domestic companies. The other services account is expected to record a lower deficit due to declining outflow of payments for construction, financial as well as maintenance and repair services.

The primary income account is projected to register a lower deficit of RM23.7 billion in 2020, mainly with lower payments accruing to foreign direct investors in Malaysia due to sluggish performance of construction and manufacturing sectors. The investment income payments are expected to record a decline of RM65.6 billion. Compensation of employees is expected to record a smaller deficit following a larger decline in payments, reflecting slower domestic economic activities.

TABLE 3.10. *Current Account of the Balance of Payments, 2019 – 2021 (RM million)*

	2019			2020 ¹			2021 ²		
	RECEIPTS	PAYMENTS	NET	RECEIPTS	PAYMENTS	NET	RECEIPTS	PAYMENTS	NET
Balance on goods and services	985,283	872,871	112,412	842,053	761,454	80,599	916,286	833,823	82,463
Goods	815,470	692,136	123,334	750,424	619,538	130,886	778,135	664,804	113,311
Services	169,814	180,735	-10,922	91,629	141,916	-50,287	138,151	169,019	-30,868
Transport	21,669	47,572	-25,903	14,962	41,805	-26,843	20,333	52,509	-32,176
Travel	82,114	51,296	30,818	12,414	23,283	-10,868	53,468	35,495	17,973
Other services	66,030	81,868	-15,837	64,252	76,829	-12,576	64,350	81,015	-16,665
Primary income	64,851	105,118	-40,267	56,516	80,202	-23,686	62,804	104,362	-41,558
Compensation of employees	6,784	15,906	-9,122	6,308	14,565	-8,257	6,809	15,351	-8,542
Investment income	58,067	89,212	-31,145	50,208	65,637	-15,429	55,995	89,011	-33,016
Secondary income	16,897	38,191	-21,294	26,118	34,575	-8,458	17,522	38,150	-20,628
Balance on current account	1,067,031	1,016,181	50,850	924,686	876,231	48,455	996,612	976,335	20,277
% of GNI			3.5			3.4			1.3

¹ Estimate

² Forecast

Note: Total may not add up due to rounding

Source: Department of Statistics and Ministry of Finance, Malaysia

The outflows of secondary income account, which primarily consist of remittances, are expected to decline to RM34.6 billion as the income of foreign workers is affected during the MCO. At the same time, inflows of secondary income account are anticipated to increase to RM26.1 billion following a one-off receipt, contributing to a lower deficit of RM8.5 billion in secondary income account.

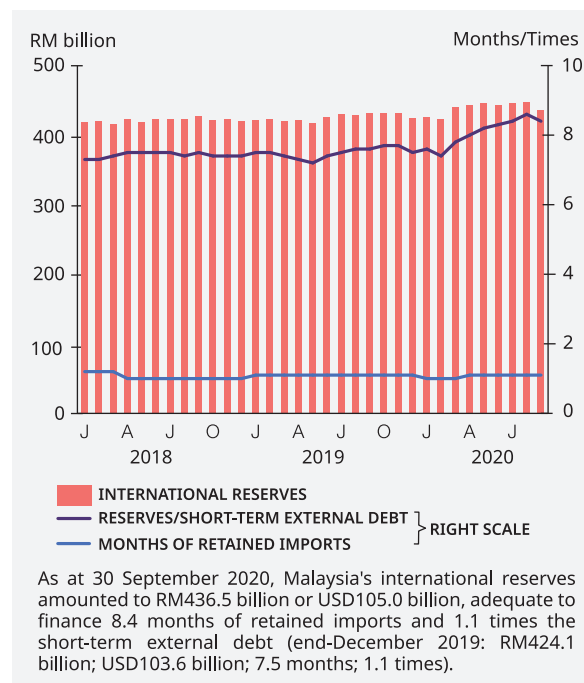
The financial account registered a net outflow of RM33.1 billion due to higher net outflows in portfolio investment amid lower net inflows in direct investment and financial derivatives accounts. Despite the pandemic, FDI registered a net inflow of RM8.6 billion during the first half of the year and channelled mainly to the manufacturing and mining sectors as well as financial and insurance/takaful segments. Direct investment abroad by Malaysian companies registered a lower net outflow of RM6.5 billion. The outflows were mainly channelled into the mining sector, followed by financial and insurance/takaful as well as information and communication segments.

The current account balance is expected to record a lower surplus in 2021 at RM20.3 billion or 1.3% of GNI, in line with the expansion in domestic industrial and investment activities. The surplus in the goods account is estimated to record RM113.3 billion, supported by a gradual recovery in global trade activities. The deficit in the services account is anticipated to narrow to RM30.9 billion amid surplus in the travel account. During the year, the travel account is expected to improve as tourism activities recover gradually. Receipts from travel account are projected to increase to RM53.5 billion driven by higher tourist arrivals and per capita spending, which more than offset residents' spending abroad for leisure, business and pilgrimage purposes.

Gross payments for transport services are expected to increase to RM52.5 billion, attributed to the continued reliance on foreign transport services amid the expansion in trade activities. Gross receipts are also anticipated to rise to RM20.3 billion, supported by improved earnings from air travel as well as cargo handling and shipping services provided by domestic companies. A wider deficit is expected in the other services account in line with higher payments attributed to expansion in the manufacturing and construction sectors.

The primary income account is anticipated to record a larger deficit of RM41.6 billion, following improvements in investment activities. This is in line with higher repatriation of profits and dividends by foreign investors and net outflows of compensation for foreign professionals. Net outflows in the secondary income account are projected to widen to RM20.6 billion as remittances by foreign workers will more than offset inflows, following the anticipated recovery in domestic economic activities.

FIGURE 3.8. *International Reserves*



Source: Bank Negara Malaysia

Prices

Inflationary pressure remains benign

The **Consumer Price Index (CPI)** shrank by 1% during the first eight months of 2020, and the trend is expected to continue for the rest of the year. The contraction was due to lower pump prices on account of weaker global crude oil prices as well as the discount given on electricity bills as part of the stimulus measures. However, the core index increased by 1.2%, indicating sustained domestic demand along with the gradual resumption of economic activities. In 2021, inflation is expected to normalise at 2.5% in line with better economic prospects and higher crude oil prices.

TABLE 3.11. *Consumer Price Index, January – August 2019 and 2020 (2010 = 100)*

	WEIGHT ¹	CHANGE (%)		CONTRIBUTION TO CPI GROWTH (PERCENTAGE POINTS)	
		2019	2020	2019	2020
CPI	100.0	0.5	-1.0	0.50	-1.00
Food and non-alcoholic beverages	29.5	1.6	1.2	0.51	0.39
Alcoholic beverages and tobacco	2.4	1.6	0.2	0.05	0.01
Clothing and footwear	3.2	-2.4	-1.0	-0.06	-0.02
Housing, water, electricity, gas and other fuels	23.8	1.9	-1.0	0.44	-0.24
Furnishings, household equipment and routine household maintenance	4.1	1.3	0.3	0.05	0.01
Health	1.9	0.3	1.2	0.01	0.02
Transport	14.6	-3.6	-10.0	-0.51	-1.37
Communication	4.8	0.0	1.6	0.00	0.06
Recreation services and culture	4.8	0.6	0.7	0.03	0.03
Education	1.3	1.3	1.2	0.02	0.02
Restaurants and hotels	2.9	1.2	0.7	0.04	0.02
Miscellaneous goods and services	6.7	-0.6	2.7	-0.04	0.17

¹ Based on Household Expenditure Survey 2016
 Note: Total may not add up due to rounding
 Source: Department of Statistics, Malaysia

TABLE 3.12. *Producer Price Index, January – August 2019 and 2020 (2010 = 100)*

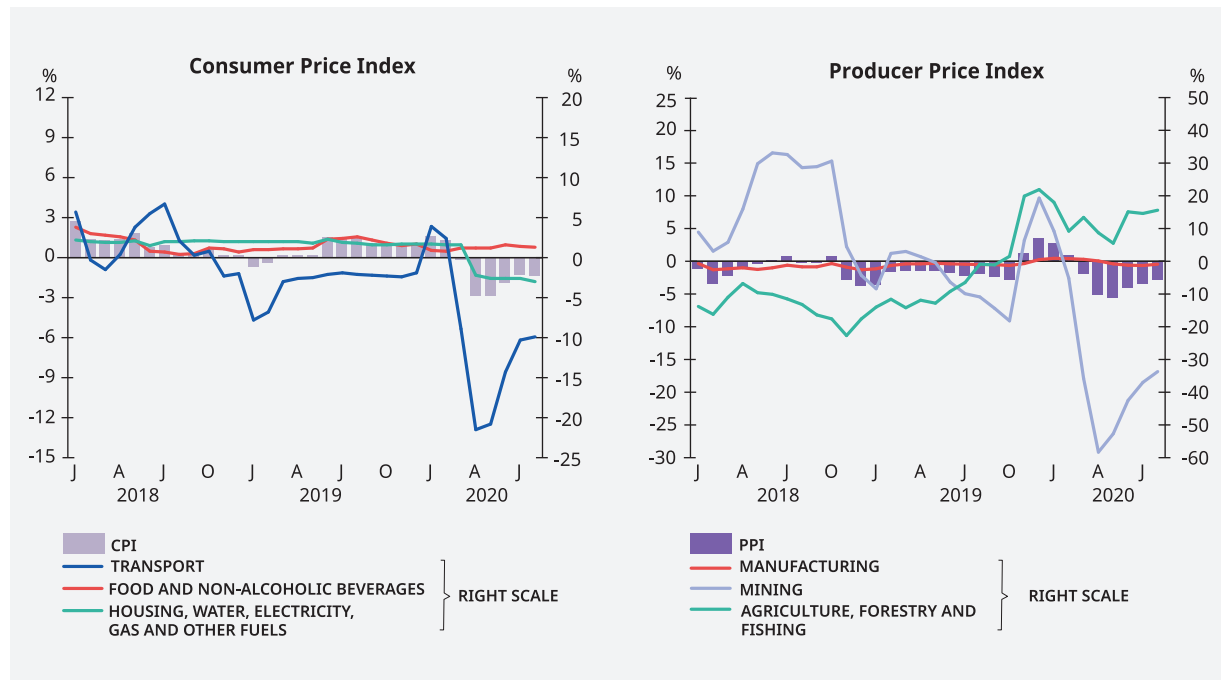
	WEIGHT ¹	CHANGE (%)		CONTRIBUTION TO PPI GROWTH (PERCENTAGE POINTS)	
		2019	2020	2019	2020
PPI	100.000	-2.0	-2.4	-1.96	-2.39
Agriculture, forestry and fishing	6.730	-10.3	12.5	-0.66	0.74
Mining	7.927	-3.8	-32.7	-0.30	-2.50
Manufacturing	81.571	-1.1	-0.2	-0.92	-0.16
Electricity and gas supply	3.442	1.6	-0.2	0.06	-0.01
Water supply	0.330	-2.1	-0.6	-0.01	0.00
PPI by stage of processing	100.000	-2.0	-2.4	-1.96	-2.39
Crude materials for further processing	16.410	-5.7	-12.4	-0.97	-2.04
Intermediate materials, supplies and components	56.119	-1.6	-0.3	-0.89	-0.16
Finished goods	27.471	0.2	0.3	0.05	0.08

¹ Based on Economic Census 2016
 Note: Total may not add up due to rounding
 Source: Department of Statistics, Malaysia

The **Producer Price Index (PPI)** by local production declined by 2.4% during the first eight months of 2020 and is expected to remain stable due to low input costs. This is attributed to weaker global commodity prices, particularly that of crude oil and natural gas. The PPI by sector was weighed down, particularly by a significant contraction

in the mining sector (-32.7%) followed by a contraction in other sectors, namely water supply (-0.6%), manufacturing (-0.2%) and electricity and gas supply (-0.2%). In contrast, the index for agriculture, forestry and fishing sector rose by 12.5%. The PPI is expected to improve in 2021 following the projected recovery of the domestic and global economy.

FIGURE 3.9. CPI and PPI Trends (% change)



Source: Department of Statistics, Malaysia

FEATURE ARTICLE 3.5

Dynamic Relationship between Consumer and Producer Price Indices

Introduction

The Consumer Price Index (CPI) measures the percentage change in the cost of purchasing a constant “basket”¹ of goods and services which represents the average pattern of purchases by a particular population during a specified period. Changes in the costs of items in the basket are therefore due only to “pure” price movements, not associated with changes in the quantity and quality of the set of consumer goods and services in the basket. On the other hand, the Producer Price Index (PPI) for local production is an output-based index, which measures the change in the price of commodities sold to the domestic market valued at the ex-factory price. The PPI for local production measures the average change in the prices charged by producers of goods of an industry in a reference month compared with the base period. Thus, it is an important macroeconomic indicator used for monitoring the price movements of local outputs and is often viewed as a leading indicator of CPI (Department of Statistics Malaysia, 2020).

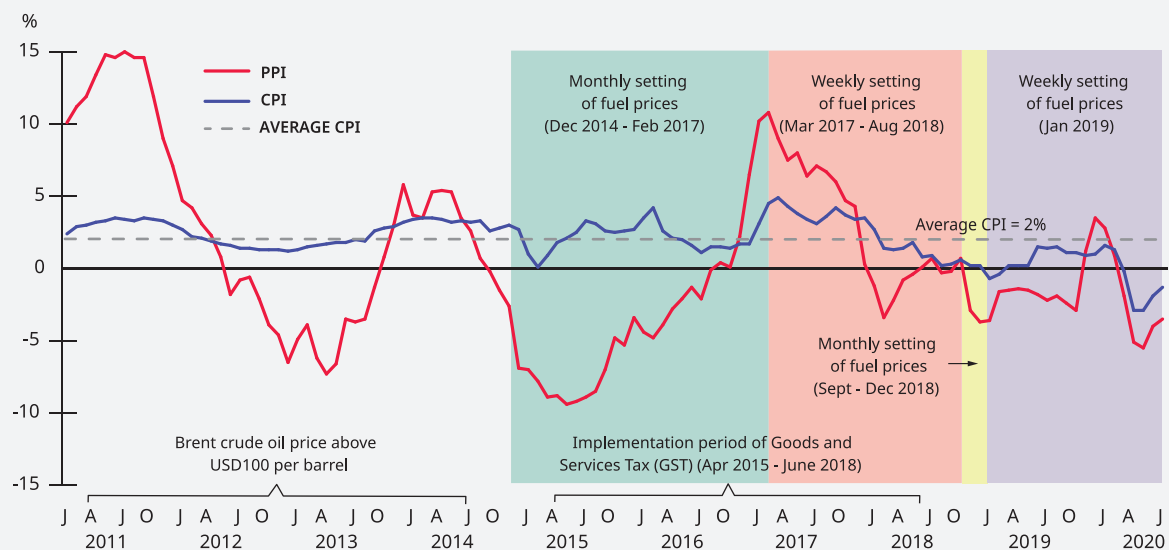
¹ The “basket” is of an unchanging or equivalent quantity and quality of goods and services, consisting of items for which there are continually measurable market prices over time.

According to Clark (1995), PPI can be transmitted to CPI via the pass-through effect. Meanwhile, research on the developing economies (Sidaoui et al., 2010) and advanced economies (Woo et al., 2018) revealed that there is a long-run relationship between CPI and PPI, which helps to forecast inflation. This article analyses the relationship for the period from January 2011 to July 2020², which provides an insight on inflation expectation for better management of the macroeconomic policy.

CPI measures the price changes in a fixed basket of goods and services and used as a proxy for inflation. In Malaysia, the CPI basket consists of 12 main groups of 552 items with fixed weights. Food and non-alcoholic beverages (29.5%), housing, water, electricity, gas and other fuels (23.8%), as well as transport groups (14.6%) form the largest weightage at 67.9% within the basket. In comparison, the PPI is measured by stages of processing and by five sectors. By stages of processing, the PPI is skewed towards intermediate materials, supplies and components, which account for 56.1% of the total weightage, while by sector, manufacturing (81.6%) and mining (7.9%) formed the largest weightage at 89.5%.

The CPI trend remained relatively stable and exhibited a smaller variation than PPI from January 2011 to July 2020 period (Figure 3.5.1.). In contrast, the PPI recorded two distinct trends during the same period. From January 2011 until January 2017, the PPI had a wider variation before stabilising and converging with the CPI after the weekly setting of fuel prices.

FIGURE 3.5.1. *The Trend of CPI and PPI over 10-Year Period*



Source: Department of Statistics and Ministry of Finance, Malaysia

By and large, the inflation rate has remained low and stable. The CPI hovered around 2% on average, while the PPI at 0.6% during the analysis period. However, there were periods of high inflation rate. The highest rate recorded for CPI was 4.9% in March 2017 following the shift from a monthly to a weekly setting of fuel prices. CPI recorded its largest decline in April and May 2020 at -2.9%, attributed to the weaker private consumption during the second quarter of 2020

² Base year index set at 2010 = 100.

following the implementation of the Movement Control Order to stem the transmission of COVID-19 pandemic. Meanwhile, the PPI recorded its maximum rate increase of 15% in July 2011, which coincided with the surge in global crude oil prices averaging USD116.46 per barrel. In May 2015, the PPI reached the deepest trough at a rate of -9.4% following the slump in global crude oil prices to an average of USD64.56 per barrel.

Methodology

The relationship between the CPI and PPI in the period under review was examined using the Threshold Vector Error Correction Model (TVECM) with Momentum Threshold Autoregressive (MTAR) adjustment (Enders & Granger, 1998; Woo et al., 2018). Both CPI and PPI variables were transformed into natural logarithms. Within the relevant time series, the MTAR cointegration model was deployed, followed by the TVECM to measure the asymmetric adjustments to equilibrium.

Findings

The analysis indicates the existence of a bidirectional relationship between the CPI and PPI. Thus, price changes can be transmitted from producers to consumers and vice versa. Therefore, different approaches are needed to address inflation, depending on the sources of price variation. Other than that, the downward reversion of CPI to its long-run equilibrium will take approximately 9.1 months compared to PPI at approximately 15.5 months. This implies that more efforts are needed to soften the impact on PPI as it takes a longer time for the PPI to return to its long-run equilibrium.

TABLE 3.5.1. *Estimation of TVECM with MTAR Adjustment*

	CHANGE OF CPI (Δ CPI)	CHANGE OF PPI (Δ PPI)
Speed of adjustment	CPI adjust downward to reach equilibrium in approximately 9.1 months .	PPI adjust downward to reach equilibrium in approximately 15.5 months .
	CPI adjust upward to reach equilibrium in approximately 11.6 months .	PPI adjust upward to reach equilibrium in approximately 6.2 months .

Source: Ministry of Finance, Malaysia (estimates)

Recommendations

Based on the findings, the lengthy downward adjustment of PPI is a primary concern in Malaysia. Therefore, effort should be focused on addressing this issue which in turn will contribute to a lower cost of doing business and reduce the pass-through effect. Lowering barriers to entry for new firms, especially small and medium enterprises, will increase the total number of domestic producers while ensuring a highly competitive market environment. It is also imperative to strengthen market competition and enhance domestic production capacity to increase aggregate supply (Benkovskis, 2017). In addition, the existing rules and regulations could be strengthened and strictly enforced. This is to prevent anti-competitive practices and ensure the prices of essential goods remain reasonable for consumers.

Conclusion

The analysis has established bidirectional properties between the CPI and PPI during the period under review. It also indicates that the time taken for prices to adjust to long-run equilibrium varies between both price indices, implying there are imperfections in the market. Thus, there is a need for a more effective supply management policy to contain the transfer of impact between the two indices. At the same time, cost-push factors in PPI should be identified to weaken the pass-through effects from producers to consumers.

Labour Market

Labour market showing signs of recovery

The **labour market** deteriorated in the first half of the year as economic activities were severely disrupted by COVID-19 pandemic. Although employment was still recording a positive performance with 71,300 new jobs generated, the increase was marginal at 0.5%, which is lower than the growth of the labour force of 1.5%. During the period, the services sector was the largest source of employment, accounting for 63.3% of total employment, followed by manufacturing (16.8%) and agriculture (11%) sectors. The labour force participation rate remained encouraging at 68.4%. However, the closure of business operations and cost-cutting measures undertaken by firms due to the MCO have weakened aggregate demand. As a result, lesser employment opportunities were created as compared with the pre-COVID-19 period. This has caused a spike of 30% in unemployed persons, which led the unemployment rate to soar to 4.3% or 670,200 persons.

TABLE 3.13. *Labour Market Indicators*

	('000)			CHANGE (%)		
	H1 ¹	2020 ²	2021 ³	H1 ¹	2020 ²	2021 ³
Labour force	15,691.3	15,737.4	15,910.5	1.5	1.0	1.1
Employment	15,021.1	15,084.0	15,347.9	0.5	0.1	1.8
Unemployment	670.2	653.5	562.6	(4.3)	(4.2)	(3.5)

¹ January to June 2020

² Estimate

³ Forecast

Note: Figures in parentheses refer to unemployment rate

Source: Department of Statistics and Ministry of Finance, Malaysia

The negative impact of the pandemic was also reflected in other labour market indicators. Job vacancies declined significantly by 50.8% to 251,944. In comparison, the number of active job seekers rose by 16.9% to 277,840 persons, of which 2% were new registrants. Retrenchment also increased considerably by 76.2% to 36,196 persons, mainly in the manufacturing and tourism-related industries amid the closing down of businesses, downsizing exercises and financial difficulties.

Nevertheless, the labour market condition is anticipated to progressively recover during the second half of the year. With the expectation of a more favourable economic outlook, the unemployment rate is expected to fall to overall 4.2% in 2020, with more job opportunities in the economy. Meanwhile, total employed persons are projected at 15.1 million in 2020 and further expand to 15.3 million in 2021, supported by stronger domestic demand amid the sharp recovery in economic growth. Of the 15.3 million employed persons, 9.7 million or 63.3% will be recruited in the services sector, 17.4% in the manufacturing and 10.2% in the agriculture sectors.

Labour productivity, as measured by value-added per worker, dropped sharply by 8.4% to RM84,138 in the first half of 2020, attributed to productivity contraction in all economic sectors, especially construction. Nonetheless, the decline in labour productivity is expected to moderate by 3.2% to reach RM90,900 for the whole year. This follows from the wide-range of skills enhancement programmes and initiatives to encourage technology adoption in industries under the economic stimulus

TABLE 3.14. *Employed Persons by Sector*

	('000)			SHARE (%)		
	H1 ²	2020 ³	2021 ⁴	H1 ²	2020 ³	2021 ⁴
Agriculture, forestry and fishing	1,655.9	1,644.3	1,565.5	11.0	10.9	10.2
Mining and quarrying	94.9	90.5	92.1	0.6	0.6	0.6
Manufacturing	2,529.4	2,564.2	2,670.5	16.8	17.0	17.4
Construction	1,227.2	1,236.9	1,304.6	8.2	8.2	8.5
Services	9,513.7	9,548.1	9,715.2	63.3	63.3	63.3
Total¹	15,021.1	15,084.0	15,347.9	100.0	100.0	100.0

¹ Total includes 'Activities of extraterritorial organisations and bodies'² January to June 2020³ Estimate⁴ Forecast

Note: Total may not add up due to rounding

Source: Department of Statistics and Ministry of Finance, Malaysia

packages. The productivity of the agriculture sector is projected to record an increase of 0.6%, with a decline in manufacturing (-1.4%) and services (-3.6%) sectors. In 2021, labour productivity is projected to rebound by 4.9% to reach RM95,400, supported by strong economic growth, particularly in services, manufacturing and construction sectors.

Foreign workers continued to represent a substantial part of the Malaysian labour market, thus, they were not spared from the effects of the COVID-19 pandemic. As at end-August 2020, registered low-skilled foreign workers fell to 1.7 million persons and is expected to remain at this level throughout the year, due to the temporary halt in new employment in most sectors. The foreign workers were mainly from Indonesia (34%), Bangladesh (28.3%) and Nepal (15.3%). The manufacturing sector employed the highest number of foreign workers with a share of 35.5%, followed by construction (21.3%) and services (15.2%) sectors. Nevertheless, the share of low-skilled foreign workers at 11.1% is still below the threshold of 15% to total employment.

Meanwhile, the number of **expatriates** fell by 17.9% to reach 100,373 persons. The majority of expatriates were from India (23.8%),

followed by China (18.9%) and the Philippines (7.4%). They were mainly employed in the services (50.5%), information technology (34.5%) and construction (5.9%) sectors. The Government will continue to undertake initiatives to reduce the dependency on migrant workers by ensuring the employment of migrant workers, particularly low-skilled foreign workers, is based on the actual needs of the economy. This will allow for more high-income job opportunities for the local workforce and the opportunity for industries to automate.

Conclusion

After a dismal economic performance in 2020 due to the COVID-19 pandemic, the Malaysian economy is expected to rebound firmly in 2021, in line with the expectation of a more synchronised global recovery. At the same time, domestic demand is projected to record a steady growth, supported by improvements in labour market conditions, low inflation and favourable financing conditions as well as the revival of major infrastructure projects. All sectors in the economy are expected to turnaround, with services and manufacturing sectors continuing to spearhead growth.

Nevertheless, downside risks to the growth outlook remain, arising from the resurgence of COVID-19 cases and the duration of containment measures domestically and globally. Geopolitical tensions, volatility in financial and commodity markets as well as prolonged trade and tech war may dampen the recovery pace. Against this background,

the Government will continue to promote resilient and sustainable economic growth, while safeguarding the welfare of the people. Efforts will be enhanced to accelerate the shift to digitalisation, skilled workforce, quality FDIs and strengthening environmental, social and governance principles to ensure sustainable and inclusive growth.

References

- Association of Small & Medium Enterprises, Singapore. (2018). *Singapore SMEs: Are You Ready for a Digital Future?* Retrieved from <https://news.microsoft.com/en-sg/2018/10/23/singapore-smes-who-embrace-digital-transformation-expect-to-see-average-revenue-gains-of-26-asme-microsoft-study/>
- Bamberger, V., Nansé, F., Schreiber, B., Zintel, M. (2017). *Logistics 4.0 - Facing Digitalization Driven Disruption*. Retrieved from http://www.adlittle.com/sites/default/files/prism/logistics_section.pdf 2019-02-25.
- Bank Negara Malaysia. (2020). *Monthly Statistical Bulletin*. Retrieved from <https://www.bnm.gov.my/>
- Bank Negara Malaysia. (2018). *Understanding Financing through the Lens of Small and Medium Enterprises*. Retrieved from https://www.bnm.gov.my/files/publication/fspd/en/2018/cp02_001_box.pdf
- Benkovski, K. (2017). *Higher Competition in the Domestic Market – A Way to Boost Aggregate Productivity*. Retrieved from <https://freepolicybriefs.org/2017/02/27/higher-competition-domestic-market-way-boost-aggregate-productivity/>
- Bizsphere. (2017). *World Trademark Review: Brand Investment is the Biggest Hurdle for Malaysia SMEs*. Retrieved from <http://bizsphere.com.my/smebrandsurvey2017-world-trademark-review/>
- Bourletidis, K., & Triantafyllopoulos, Y. (2014). SMEs Survival in Time of Crisis: Strategies, Tactics and Commercial Success Stories. *Procedia-Social and Behavioral Sciences*, 148, 639-644.
- Burtch, G., Carnahan, S., & Greenwood, B. N. (2016). Can You Gig It. *An Empirical Examination of the Gig-Economy and Entrepreneurial Activity*. SSRN, March 2016.
- Clark, T. E. (1995). *Do Producer Prices Lead Consumer Prices?* Economic Review, Federal Reserve Bank of Kansas City, 80(3), 25-39.
- Dell'Anno, R. (2004). *Estimating the Shadow Economy in Italy: A Structural Equation Approach*. (Economics Working Papers Number 2003-7), Department of Economics and Business Economics, Aarhus University.
- Department of Statistics Malaysia. (2020). *Consumer Price Index*, July 2020, Technical Notes, 97-100. Retrieved from <https://www.dosm.gov.my/>
- Department of Statistics Malaysia. (2020). *Monthly External Trade Statistics*. Retrieved from <https://www.dosm.gov.my/>
- Department of Statistics Malaysia. (2020). *National Account: Gross Domestic Product 2015-2019*. Retrieved from <https://dosm.gov.my>
- Department of Statistics Malaysia. (2020). *Producer Price Index*, July 2020, Technical Notes, 63-67. Retrieved from <https://www.dosm.gov.my/>
- Department of Statistics Malaysia. (2020). *Quarterly Balance of Payments*. Retrieved from <https://www.dosm.gov.my/>
- Department of Statistics Malaysia. (2020). *Report of Special Survey on Effects of COVID-19 on Companies and Business Firms (Round 1)*. Retrieved from https://www.dosm.gov.my/v1/uploads/files/covid-19/Report_of_Special_Survey_COVID-19_Company-Round-1.pdf

- Department of Statistics Malaysia. (2019). *Informal Sector Workforce Survey Report 2019*. Retrieved from <https://www.dosm.gov.my>
- Department of Statistics Malaysia. (2019). *Input-Output Tables, 2005, 2010 and 2015*. Retrieved from <https://www.dosm.gov.my>
- Department of Statistics Malaysia. (2019). *Small and Medium Enterprises 2019*. Retrieved from <https://newss.statistics.gov.my/newss-portalx/ep/epFreeDownloadContentSearch.seam?cid=22660>
- Department of Statistics Malaysia. (2016). *Economic Census 2016, Profile of Small and Medium Enterprises*. Retrieved from <https://newss.statistics.gov.my/newss-portalx/ep/epFreeDownloadContentSearch.seam?cid=23136>
- DifferenceBetween.net. (2020). *Difference Between Gig Economy and Traditional Economy*. Retrieved from <http://www.differencebetween.net/business/economics-business/difference-between-gig-economy-and-traditional-economy/>
- Economic Forum. (2016). *Digital Transformation of Industries: Logistics Industry, White Paper*. Retrieved from <http://reports.weforum.org/digital-transformation/wp-content/blogs.dir/94/mp/files/pages/files/dti-logistics-industry-white-paper.pdf>
- Employees Provident Fund. (2019). *The Gig Economy Is Real and Here to Stay*. Retrieved from <https://www.digitalnewsasia.com/digital-economy/gig-economy-real-and-here-stay>
- Enders, W., & Granger, C. W. J. (1998). Unit-Root Tests and Asymmetric Adjustment with an Example Using the Term Structure of Interest Rates. *Journal of Business & Economic Statistics*, 16(3), 304–311.
- Friedman, E., Johnson, S., Kaufmann, D., & Zoido-Lobaton, P. (2000). Dodging The Grabbing Hand: The Determinants of Unofficial Activity in 69 Countries. *Journal of Public Economics*, 76(3), 459-493.
- Gen, M., Cheng, R., & Lin, L. (2008). *Logistics Network Models: Network Models and Optimisation*. Springer, London, 135-229. Retrieved from <https://doi.org/10.1007/978-1-84800-181-7>.
- Global Gig Economy-Index. (2019). *The Global Gig-Economy Index*. Retrieved from <https://cdn.techjuice.pk/wp-content/uploads/2019/08/Index-freelance.pdf>
- Goel, R. K., Saunoris, J. W., & Schneider, F. (2017). *Drivers of the Underground Economy Around the Millennium: A Long Term Look for the United States*. (IZA Discussion Papers Number 10857). Boon, Germany, IZA Institute of Labor Economics.
- Hakovirta, M., & Denuwara, N. (2020). *How COVID-19 Redefines the Concept of Sustainability*. Retrieved from <https://www.mdpi.com/2071-1050/12/9/3727>
- Hershatter, A., & Epstein, M. (2010). Millennials and the World of Work: An Organisation and Management Perspective. *Journal of Business and Psychology*, 25(2), 211-223.
- Human Resources Development Fund. (2019). *HRDF Human Capital Report*, Issue: Jan 2019/2. Retrieved from https://www.hrdf.com.my/wp-content/uploads/2016/12/02.-issue_Jan02_2019-Human-Capital-Report-Gig-Economy-and-Training.pdf
- IMD World Competitiveness Center. (2020). *The IMD World Digital Competitiveness Ranking 2019*. Retrieved from <https://www.imd.org/wcc/world-competitiveness-center-rankings/world-digital-competitiveness-rankings-2020>

- Inland Revenue Board of Malaysia (IRB). (1975). *Service Tax Act*. Retrieved from <http://www.agc.gov.my>
- Inland Revenue Board of Malaysia (IRB). (1967). *Malaysian Income Tax Act*. Retrieved from <http://www.agc.gov.my>
- International Chamber of Commerce (ICC). (2017). *The Economic Impacts of Counterfeiting and Piracy*. Retrieved from https://www.inta.org/communications/documents/2017_frontier_report.pdf
- International Monetary Fund. (2020). *The Great Lockdown: Worst Economic Downturn Since the Great Depression*. Retrieved from <https://blogs.imf.org/2020/04/14/the-great-lockdown-worst-economic-downturn-since-the-great-depression/>
- Ismail, N. A., & Masud, M. M. (2020). *Prospects and Challenges in Improving E-Commerce Connectivity in Malaysia*. Economic Research Institute for ASEAN and East Asia, 78-98. Retrieved from <https://www.eria.org/uploads/media/E-commerce-Connectivity-in-ASEAN>
- Kee-Luen, W., Thiam-Yong, K., & Seng-Fook, O. (2013). *Strategic Planning and Business Performance: A Study of SMEs In Malaysia*. Proceedings of 3rd Asia-Pacific Business Research Conference, 25-26.
- Khazanah Research Institute. (2019). HRDF Human Capital Report, Issue: Jan 2019/2. Retrieved from https://www.hrdf.com.my/wp-content/uploads/2016/12/02.-issue_Jan02_2019-Human-Capital-Report-Gig-Economy-and-Training.pdf
- Lasi, H., Kemper, H.-G., Fettke, P., Feld, T., & Hoffmann, M. (2014). *Industry 4.0. Business & Information Systems Engineering*, 6(4), 239-242. Retrieved from <https://aisel.aisnet.org/bise/vol6/iss4/5>.
- Lehmacher, W., Betti, F., Beecher, P., Grotmeier, C., & Lorenzen, M. (2017). *Impact of the Fourth Industrial Revolution on Supply Chains*. World Economic Forum. Retrieved from <https://www.weforum.org/whitepapers/impact-of-the-fourthindustrial-revolution-on-supply-chains>
- Malaysia External Trade Development Corporation. (2020). *Monthly Malaysia External Trade Statistics*. Retrieved from <https://www.miti.gov.my/>
- Manufacturing and Automation*. (2016). Manchester, UK, 68-74. Retrieved from <https://doi.org/10.2991/iwama-16.2016.13>.
- Marketing Insight. (2020). *Sentiment Study on the Impact of COVID-19 MCO on Malaysians*. Retrieved from <https://marketingmagazine.com.my/sentiment-study-on-the-impact-of-covid-19-mco-on-malaysians/>
- Matyushenko, I., Berenda, S., Shtal, T. & Grigorova-Berenda. (2019). *Logistics and Transport in Industry 4.0: Perspective for Ukraine*. SHS Web of Conferences, 67. Retrieved from <https://doi.org/10.1051/shsconf/20196703008> NTI-UkrSURT 2019 3008
- MBO Partners. (2017). *Study: 60% of Workforce will be Independent by 2027*. Retrieved from <https://www.hrdive.com/news/study-60-of-workforce-will-be-independent-by-2027/505313/>
- Medina, L., & Schneider, F. (2019). *Shedding Light on the Shadow Economy: A Global Database and the Interaction with the Official One*. (CESifo Working Paper Number 7981). Retrieved from https://www.cesifo.org/DocDL/cesifo1_wp7981.pdf
- Medina, L., & Schneider, F. (2018). *Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?* Retrieved from <https://www.imf.org/~media/Files/Publications/WP/2018/wp1817.ashx>

- Miller, R. E., & Blair, P. D. (2009). *Input-output Analysis: Foundations and Extensions*. Cambridge University Press.
- Ministry of Finance. (2019). *Economic Outlook 2019: Determinants of Inflation in Malaysia*, 75-77.
- Ministry of Transport. (2017). *Logistics and Trade Facilitation Masterplan: Performance Report 2016*. Retrieved from <http://www.mot.gov.my>
- Omar, A. R. C., Ishak, S., & Jusoh, M. A. (2020). The Impact of Covid-19 Movement Control Order on SMEs' Businesses and Survival Strategies. *Geografia-Malaysian Journal of Society and Space*, 16(2).
- Organisation for Economic Co-operation and Development (2019). *Digitalisation and Productivity: In Search of The Holy Grail – Firm-Level Empirical Evidence from EU Countries*. OECD Economic Outlook, 2019(1). Retrieved from <https://doi.org/10.1787/b2e897b0-en>
- Organisation for Economic Co-operation and Development. (2017). *Shining Light on the Shadow Economy: Opportunities and Threats*. Retrieved from <http://www.oecd.org/tax/crime/shining-light-on-the-shadow-economy-opportunities-and-threats.pdf>
- Organisation for Economic Co-operation and Development. (2009). *Is Informal Normal? Towards More and Better Jobs in Developing Countries*. OECD Publishing and OECD Development Centre
- Packard, T.G., Koettl, J., & Montenegro, C. (2012). *In From the Shadow: Integrating Europe's Informal Labor*. The World Bank
- Pew Research Center. (2019). *Defining Generations: Where Millennials End and Generation Z Begins*. Retrieved from <https://www.pewresearch.org/fact-tank/2019/01/17/where-millennials-end-and-generation-z-begins/>
- Radivojevic, G., & Milosavljevic, L. (2017). *The Concept of Logistics 4.0: 4th Logistics International Conference*. Retrieved from <http://logic.sf.bg.ac.rs/wp-content/uploads/Papers/LOGIC2019/ID-32.pdf>
- Schneider, F., & Enste, D. H. (2000). Shadow Economies Around the World: Size, Causes and Consequences. International Monetary Fund.
- Schneider, F. (2011). The Shadow Economy Labour Force. *World Economics*, 12(4), 53 - 92.
- Schneider, F., Buehn, A., & Montenegro, C. (2010). *Shadow Economies All Over the World: New Estimates for 162 Countries from 1999 to 2007*. (The World Bank Policy Research Working Paper Series Number 5356). Retrieved from <http://documents1.worldbank.org/curated/en/311991468037132740/pdf/WPS5356.pdf>
- Sidaoui, J., Capistran, C., Chiquiar, D., & Ramos-Francia, M. (2010). *On the Predictive Content of the PPI on CPI inflation: The Case of Mexico*. Bank for International Settlements Papers, 249–257.
- SME Corporation Malaysia. (2020). *Malaysian SME Definition*. Retrieved from <https://www.smecorp.gov.my/index.php/en/policies/2020-02-11-08-01-24/sme-definition>
- SME Corporation Malaysia. (2020). *Survey on Access to COVID-19 Stimulus Incentives and Next Steps to Rebuild the Business of SMEs*.
- SME Corporation Malaysia. (2020). *Survey on Impact of COVID-19 on SMEs*.
- SME Corporation Malaysia. (2020). *Survey on SMEs Response towards the Restarting of the Economy*.
- Tanzi, V. (2002). The Shadow Economy, Its Causes and Its Consequences. *Edited Lecture. Brazilian Institute of Ethics*.

- The Centre. (2019). *Ensuring Social Protection Coverage for Malaysia's Gig Workers*. Retrieved from <https://www.centre.my/post/voluntary-versus-automatic-figuring-out-the-right-approach-on-social-protection-for-informal-workers>
- Valdes, A., & Foster, W. (2010). *Reflections on the Role of Agriculture in Pro-Poor Growth*. World Development, 38, 1362-74.
- Walsh, G. S., Przychodzen, J., & Przychodzen, W. (2017). Supporting the SME Commercialization Process: The Case of 3D Printing Platforms. *Small Enterprise Research*, 24(3), 257-273.
- Wang, K. (2016). *Logistics 4.0 Solution: New Challenges and Opportunities*. Proceedings of the Conference: 6th International Workshop of Advanced World. Retrieved from <https://doi.org/10.2991/iwama-16.2016.13>
- Woo, K. Y., Lee, S. K., & Ng, J. C. Y. (2018). An Investigation into the dynamic relationship between CPI and PPI: Evidence from the UK, France and Germany. *The Singapore Economic Review*, 1-19.
- World Bank. (2018). *Malaysia's Digital Economy: A New Driver of Development*. Retrieved from <https://www.worldbank.org/en/country/malaysia/publication/malaysias-digital-economy-a-new-driver-of-development>
- World Economic Forum. (2016). *Digital Transformation of Industries: Logistics Industry*, White Paper. Retrieved from <http://reports.weforum.org/digital-transformation/wp-content/blogs.dir/94/mp/files/pages/files/dti-logistics-industry-white-paper.pdf>
- Wu, D. F., & Schneider, M. F. (2019). *Nonlinearity between the Shadow Economy and Level of Development*. International Monetary Fund
- Yusuf, Ismaila & Agbi, Sam. (2018). *The Impact of Electronic Payments and Cash- Less Policy on the Shadow Economy in Nigeria*. *ICAN Journal of Accounting and Finance*, 7(1), 154 - 165.
- Zurich-University of Oxford. (2018). *Agile Workforce Study: Gig Economy Rises in Malaysia, Income Protection Lags*. Retrieved from <https://www.zurich.com.my/en/about-zurich/zurich-in-the-news/2020/2020-01-16>