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Penang Economic Outlook 2021: Uneven Growth Expected across Sectors

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Executive Summary

- A combined K- and W-shaped economic recovery is forecasted for Penang, with a bumpier normalisation to be experienced by tourism-related and retail industries until vaccines are fully rolled out locally and globally. The pace of economic normalisation may be slow, depending on two factors, namely the ability of the country to drastically reduce infection cases within the partial relaxation of MCO 2.0, and the effectiveness of the government in implementing its vaccination programme.

- Penang Institute's back-of-the-envelope calculation expects Penang's manufacturing sector to exhibit a cautiously optimistic outlook for 2021. Penang's industries showed resilience during the challenging year of 2020, amid unprecedented lockdowns and supply chain and logistical challenges.

- Indications that Penang's manufacturing sector will experience growth this year are driven by: (1) a positive global semiconductor and semiconductor-related outlook; (2) healthy growth for Malaysia's E&E exports and Penang's total exports; (3) manufacturer confidence staying stable; (4) the continuing inflow of investments amid the Covid-19 pandemic.

- The astronomical setbacks to the tourism industry and its subsectors in 2020 will carry forward to 2021. Industry experts have predicted that a minimum two-year period is needed for a complete recovery.

- The construction sector will experience lacklustre growth due to modest demand for houses and commercial properties. However, first-home buyers, newly married couples with solid financial backgrounds and T20 households are expected to purchase property (or properties) in order to take advantage of the plunge in house prices, the low lending rate, and the loosening of certain house-purchase policies. Those in the M40 and B40 groups are likely to postpone the purchase of durable goods and prioritise expenses on perishable goods instead.

- Penang's agriculture sector will continue to face uncertainties in 2021. Labour shortage and higher production costs are expected to adversely affect the total agricultural production and farmer incomes. Technological solutions coupled with innovative methods should help farmers, agribusinesses, and the retail food sector to minimise risks and uncertainties by improving productivity, reducing labour dependency, and linking farmers to buyers and logistics services.

Introduction

The Covid-19 pandemic took most economies in the world on a long roller-coaster ride in 2020. The world economy is estimated to have contracted by 3.5% that year, after being hit by waves of coronavirus (IMF, 2021). The recovery has been slow, challenging and uncertain. After various lockdown measures were implemented continually, giving mixed effects, new variants of the virus now pose further challenges to the global economy.

In 2021, the core challenge for Malaysia remains curbing the third wave of the pandemic while attaining economic growth. Restricting economic movement has exaggerated job and income losses and affected the livelihoods of many. Going forward, an efficient vaccination programme is expected to bring herd immunity within the population and stimulate economic growth.

Malaysia's Gross Domestic Product (GDP) had rebounded impressively in the third quarter of 2020 after the full lockdown from March 2020 had ended, and major economic activities restarted. The rollout of stimulus packages also had beneficial effects. But for the year as a whole, the national GDP registered a worse-than-expected contraction of 5.6% - the lowest contraction since the Asian Financial Crisis of 1998. However, uneven growth was observed across economic sectors. The manufacturing sector surged steeply in the last two quarters of 2020 (Q2 2020: -18.3%; Q3 2020: +3.3%; Q4 2020: +3.0%) while the agriculture sector edged only slightly at 0.7%. The contraction rates for construction, mining and quarrying, and the services sector moderated somewhat to 13.9%, 10.6% and 4.9% in the last quarter of 2020.

Penang's economy will continue to be uniquely driven by the manufacturing and services sectors (which include wholesale and retail trade, food and beverage and accommodation; and utility, transport & storage and information & communication).

Due to the unavailability of the latest subnational GDP figures at the point of writing, this paper uses sectoral performance-related information on quarterly and monthly bases as proxies for GDP in measuring the short-term movements of Penang's economy. It provides the outlook for Penang's economy for 2021 and reviews macroeconomic performance for 2020 across major sectors. The headwinds blowing against economic normalisation are also discussed.

Penang's macroeconomic performance

Penang's economy is projected to remain anemic in 2021 amid rising cases of Covid-19. Even as the vaccination programme is rolled out early in the year, growth will continue to be uneven across sectors. Industries that have seen a quick and full recovery include technology, logistics, medical devices related to infectious diseases prevention, and e-commerce. On the negative end, recovery in the sectors of travel and hospitality, food and beverage, and retail trade is expected to be difficult and protracted.

In short, a combined K- and W-shaped recovery is forecasted for Penang, with a bumpier normalisation to be experienced by tourism-related and retail industries until vaccines are fully distributed locally and globally. However, economic normalisation can be slowed, depending on the following two factors: the ability of the country to drastically reduce infection cases within the partial relaxation of MCO 2.0, and the effectiveness of the government's vaccination programme.

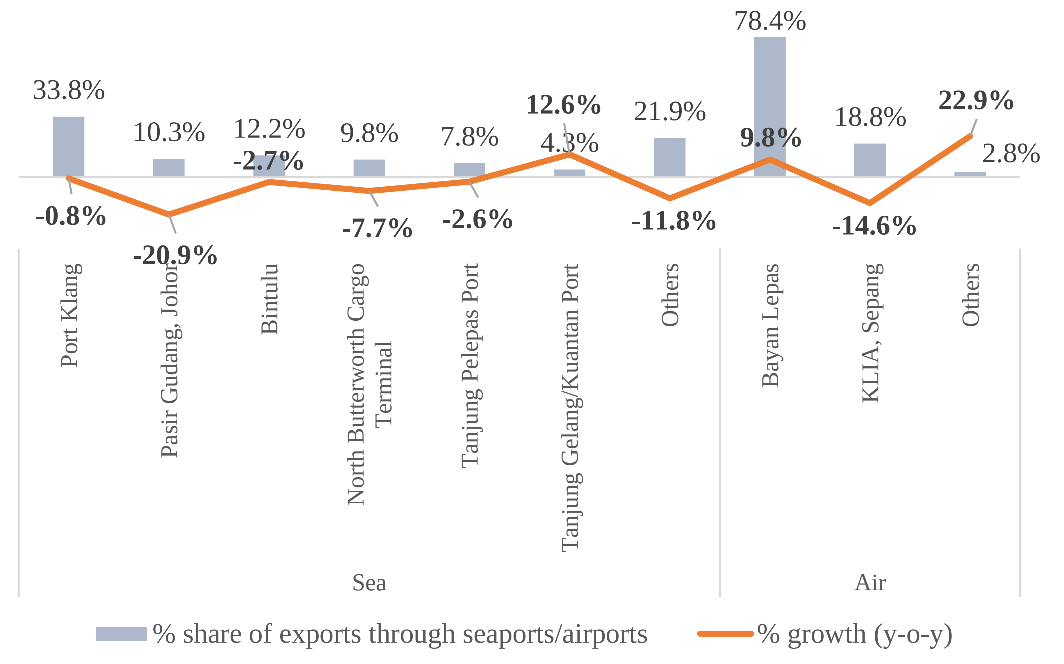
Cautiously optimistic with wider market access through RCEP

As an export-led growth state, Penang's trade activities will stay on a cautiously optimistic trajectory in 2021. Buoyed by optimism from Malaysia's involvement in the Regional Comprehensive Economic Partnership (RCEP), which was signed in November 2020, regional trade should remain robust and help boost Malaysia's and Penang's economy. Due to reduced market barriers, opportunities for local businesses will be elevated, and more investments are expected to flow into this region. However, as the country's technology hub, Penang and its industries will have a hard time maintaining competitive advantages over countries such as Indonesia and Vietnam if its technological competency and human capital are not properly capitalised upon.

However, there are encouraging signs for Penang. In 2020, while Malaysia's total trade shrank by 3.6%, Penang's total trade expanded by 7.2%. Trade surplus handled by Penang's exit and entry points increased by 3.2%, with exports and imports increasing by 6.5% and 8.4% year-on-year, respectively. This may be attributed to strong external demand for machinery and transport equipment, as reported in the national figures, and that cuts across medium and high-tech range industries, which are Penang's major strengths (such as electrical and electronics (E&E), medical devices and engineering support services).

The Bayan Lepas airport spearheaded this situation in handling 78.4% of export value across all Malaysian airports, and in fact, showing a growth rate of 9.8% in 2020. This growth rate is higher when compared to the decreased exports value handled by the North Butterworth Cargo Terminal (Figure 1). Trade activity rebounded strongly after a one-month dip in May last year, indicating strong external demand despite disruptions to the manufacturing supply chain brought on by the full lockdown in some parts of China.

Figure 1: Exports by seaport and airport in Malaysia, January-December 2020



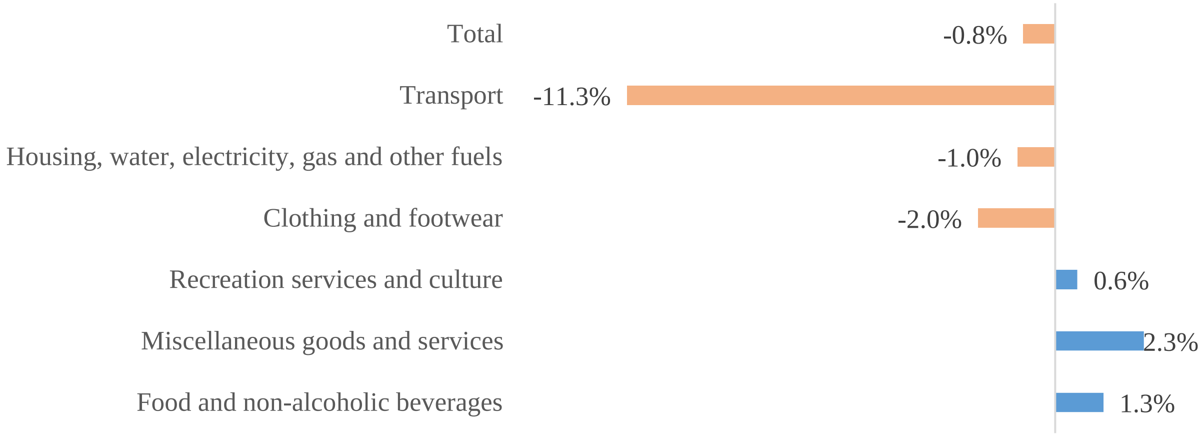
Source: Department of Statistics Malaysia.

Drop in consumer prices due to changes in spending pattern

Consumer spending has been greatly influenced by the pandemic. Households show more prudence in spending on essential and non-durable items such as food, electricity and internet than on non-essential and durable items such as recreation, clothing and footwear, and housing.

Penang's consumer prices were down by 0.8% in 2020, registering the country's third lowest rate of deflation, after Selangor and Kuala Lumpur. The consumer price index was undermined by the price drop in transport, housing and utilities (due to a discount provided by TNB), and clothing and footwear. As can be seen in Figure 2, prices in transport saw the largest drop – 11.3%. This was due to subdued demand for fuel caused by widespread work-from-home practices.

Figure 2: Changes of the consumer price index for major groups in Penang, 2019/2020



Source: Department of Statistics Malaysia.

Weak employment outlook especially for new graduates

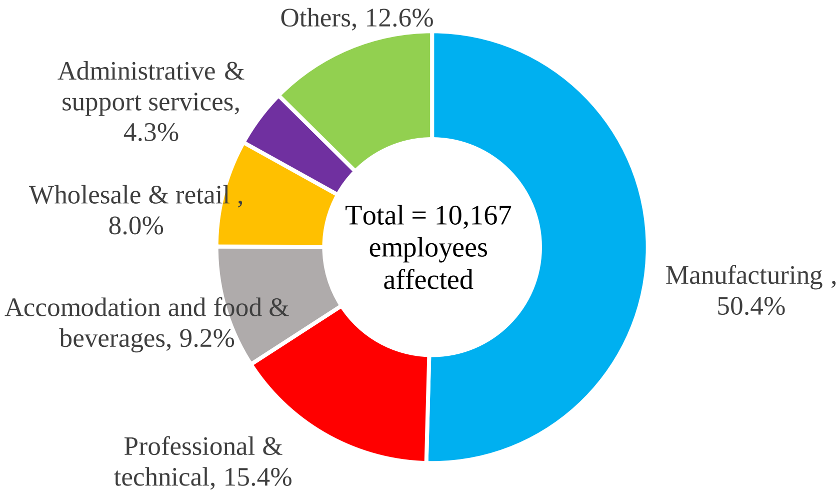
The labour market will continue to face challenges due to the reintroduction of MCO necessitated by the rise in coronavirus cases. The travel and hospitality sector is facing a more severe and adverse knockout than during the first MCO. For example, a Voluntary Separate Scheme (VSS) was carried out by two renowned Shangri-la hotels[1], while Hotel Equatorial, Penang's first hotel granted with the five-star status, announced its closure by end of March this year[2]. Manufacturing and construction operations, at the same time, may temporarily reduce employees to comply with federal anti-pandemic standard operation procedures (SOP). More employees are expected to be laid off in the retail industry, especially in the fashion and cosmetic sector.

In 2020, more than 10,000 workers lost their jobs in Penang, accounting for about 10% of Malaysia's total employment loss (SOCSO, 2020). Retrenchment activity was particularly active in June and July 2020 during the Conditional Movement Control Order (CMCO) and Recovery Movement Control Order (RMCO). The manufacturing industry registered highest employment loss, accounting for almost half of all cases since January 2020, followed by professional and technical (15.4%), and

[1] See Emmanuel (2021).
[2] See Channel News Asia (CNA, 2021).

accommodation and food and beverage (9.2%) (Figure 3). This respectively made up 1.7%, 7.1% and 1.2% of Penang's total employment.

Figure 3: Loss of employment, by major industries (1 January-4 December 2020)



Source: MYFutureJobs, Social Security Organisation (SOCSO) Malaysia.

Most importantly, high-skill occupations were responsible for 49.2% of Penang's total employment loss (Malaysia: 61%). These involved professionals, managers, and technicians & associate professionals. Another 28.2% of retrenchments were due to layoffs among plants & machine operators & assemblers (semi-skilled).

Even as a large number of high-skill workers are being retrenched, new vacancies have not been able to absorb the new supply of high-skill labour. Graduate employment remains challenging and will lead to further graduate skill mismatch and underemployment.[3] Furthermore, job placements in Penang are largely focused on low-salary jobs. As of December 2020, 57.7% of the state's total job placements involved salaries below RM1,000, and 33.5% landed between RM1,000 and RM1,499. Only 3.5% of the job placements offered salaries that were RM 3,000 and above.

Highlights in key economic sectors

Manufacturing: Cautiously optimistic outlook but headwinds still present

Back-of-the-envelope calculations done by Penang Institute expect Penang's manufacturing sector to present a cautiously optimistic outlook for 2021. As the country's second largest manufacturing state, Penang's manufacturing sector is expected to continue contributing significantly to the national manufacturing output. Penang's strategic focus in promoting industries such as electrical and electronics (E&E), machinery and equipment (M&E), medical devices, plastic and metal products manufacturing, and food manufacturing buoyed a significant level of resilience during the challenging

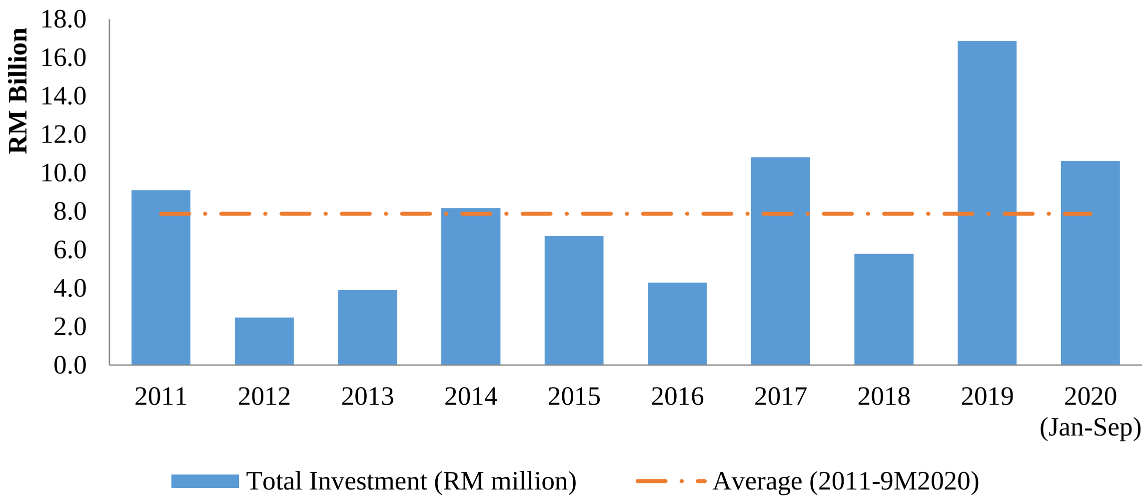
[3] The Ministry of Higher Education (MOHE) estimated Malaysia's graduate unemployment to be 25% in 2020, a jump up from 13.8% in 2019. About 75,000 of 300,000 fresh graduates are expected to be unemployed in 2020 (Musa, 2020). This is on top of graduates still unemployed in 2019, adding up to a whopping total of 116,161.

year of 2020. The downsides were manageable, amid unparalleled lockdown, supply chain and logistics challenges.

Some recent data indicate that Penang's manufacturing sector will experience growth this year. Firstly, the global semiconductor and semiconductor-related industries show positive outlooks. Global sales of semiconductor manufacturing equipment are projected to increase to USD71.9 billion this year, up from USD68.9 billion (expected) in 2020 (SEMI, 2020). Secondly, Malaysia's E&E exports and Penang's total exports exhibited healthy growth in 2020. In 2020, Malaysia's E&E exports rose 45.6% to reach RM386.1 billion. Exports from customs points in Penang recorded a 6.5% growth to reach RM310.1 billion, in the same period. Thirdly, manufacturer confidence is at a stable level, with Malaysia's IHS Markit manufacturing Purchasing Managers' Index (PMI) standing at a four-month high in December 2020[4].

Fourthly, Penang continues to receive investment inflows amid the global pandemic. Approved manufacturing investments for January-September 2020 was at RM10.6 billion, after record-high approved manufacturing investments of RM16.9 billion a year before (Figure 4). Several major investment projects are expected to begin operations this year, such as Micron and Lam Research. Notable re-investments in 2020 such as those by B.Braun and Keysight Technologies also show sustained confidence in the face of the pandemic. Recruitments for new positions have been taking place, and more employment opportunities are expected.

Figure 4: Penang's approved manufacturing investments, 2011-September 2020



Source: Malaysian Investment Development Authority (MIDA)

The manufacturing sector is expected to be catalysed by growth in sub-segments such as the semiconductor and semiconductor-related industries, wafer fabrication equipment and critical subsystems, 5G, automotive electronics and medical technology. Domestic investments are expected to rise as well, as more of the announced foreign direct investments (FDI) projects are realised[5]. Booked orders for E&E companies in Penang are reportedly robust and on an increasing trend.

[4] However, this was before the proclamation of the state of emergency and MCO2.0.

[5] JHM Consolidation and Greatech announced their additional investments as part of the companies' plans to expand capacities.

Announcements by the Penang State Government to develop 1,156-acre Batu Kawan Industrial Park 2 (BKIP2) as an extension of the existing Batu Kawan Industrial Park (BKIP), and the approval given by the Federal government to gazette a free commercial zone at North Butterworth Container Terminal (NBCT) also augur well for Penang's short- to medium-term industrial growth. For the first nine months of 2020, Batu Kawan Industrial Park (44%) was the state's largest investment location, followed by Bayan Lepas Free Industrial Zone Phase IV (19%).

Although the manufacturing sector is expected to register growth, an area of concern is the expected K-shaped economic normalisation, for different industries including the manufacturing sector. Industries such as E&E, M&E and some medical devices are experiencing encouraging growth (some have exceeded growth rates of pre-pandemic) while textiles and garments have experienced difficulties due to muted demand and the movement control measures. At least two major textile companies have announced the ceasing of operations in Penang in 2020. Reskilling of workers and job matching for affected workers are sorely needed in these affected industries.

Some risks to Penang's manufacturing sector are prominent. Firstly, increasing Covid-19 cases in the country and the high number of workplace-related clusters will mean a bumpy ride in terms of potential plant closure or suppliers' plant closure, causing disruptions to production and business operations. Secondly, global supply capacity limits in the short-run and the global container and logistics crunch[6] may hamper pandemic-driven and recovery-driven demand. Thirdly, with Malaysia being placed under a state of emergency until August 2021, businesses may take a wait-and-see approach. This could lead to delays in investments and expansion plans, and to the preparation of contingency plans for geographical diversification in production activities.

Tourism: The hardest hit industry

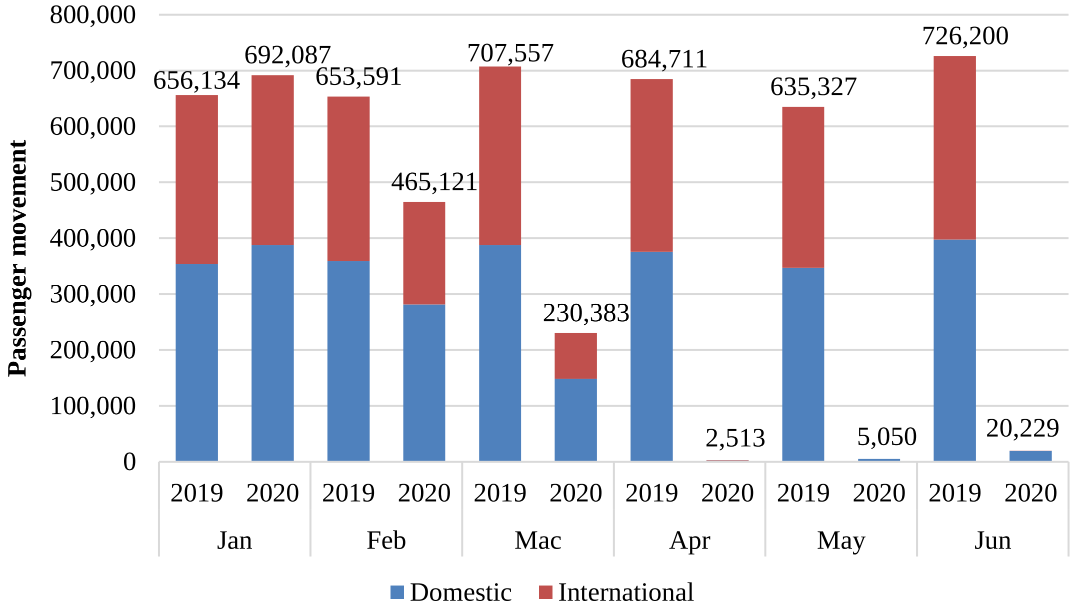
The tourism sector is a vital contributor to the state's GDP and its economic health. In 2020, the Covid-19 pandemic brought immense and unprecedented losses to the tourism industry. The closing of international borders all but obliterated international tourism, while the intermittent closure on domestic borders in recent months have also brought great disruptions to domestic leisure travel. At the time of writing, international borders remain sealed and interstate travel is prohibited.

In 2020, international tourist arrivals in Malaysia began to see significant drops from February when a 35.5% drop from the previous year was recorded. This was followed by a 71.3% drop in March.[7] From April onwards, international tourist arrivals decreased by more than 99.0%, and this held until September[8], remaining (prognostically) stagnant for the remainder of the year.

As Figure 5 shows, Penang International Airport (PIA) saw an increase in both international and domestic passenger movements for the month of January 2020, at 0.7% and 9.5% respectively, before dropping drastically in February, and decreasing further in the subsequent months. International passenger movement was almost non-existent for Q2 of 2020. Some domestic passenger movement took place in the same quarter but diminished by more than 95%.

[6] See Murray (2021).
[7] See Appendix, Figure 5.
[8] The sporadic numbers of international tourist arrivals from April to September 2020 were in one or more of the following categories: essential business travelers, foreign spouse arrivals, medical tourists (pertaining to special permission obtained from the Department of Immigration) and long-term pass holders.

Figure 5: Passenger movement at Penang International Airport, Jan-Jun, 2019-2020



Source: Malaysia Airports Holdings Berhad
Note: Passenger movement denotes both arrivals and departures.

The low numbers of international air passengers and tourists for Penang are unlikely to have changed for the last quarter of 2020, and is projected to remain unchanged in the first few months of 2021, until Malaysia fully reopens its international borders.

Conversely, domestic passenger movement in PIA projected some improvement in Q3 and Q4 of 2020, with RMCO allowing interstate travel, although fluctuations were expected with the intermittent closures of some state borders. Some regression is forecasted however, with the reinstatement of the MCO in January 2021.

Domestic tourism is a significant contributor to Penang's economy. In 2019, Penang received 3.9 million domestic tourists, a drop of 2.9% from the previous year, but saw a 10.1% growth in the total number of excursionists. The majority of Penang's domestic tourists hailed from Selangor (38.9%), and from neighbouring Perak (18.3%) and Kedah (17.1%).

Concurrently, for 2019, the state recorded a 7.4% growth in domestic tourist receipts, amounting to RM 6.7 billion in value. Shopping as well as food and beverage made up more than 50% of total receipts, standing at 43.9% and 11.9% respectively, with a corresponding growth rate of 9.1% and 8.1%.

Unfortunately, estimated growth for domestic tourists and revenue from that source will be negative in 2020.

The retail sector and the food and beverage industry, particularly hawkers, will see substantial losses in revenue. With the imminent availability of Covid-19 vaccines, domestic tourism is expected to see a more positive development in 2021, with recovery set to eventuate in line with different phases of the vaccination programme.

Domestic tourism has better prospects for recovery compared to international tourism; as mentioned, it already experienced periods of revival in 2020. However, recovery is still projected to be uneven due to changing federal guidelines when it comes to interstate travel.

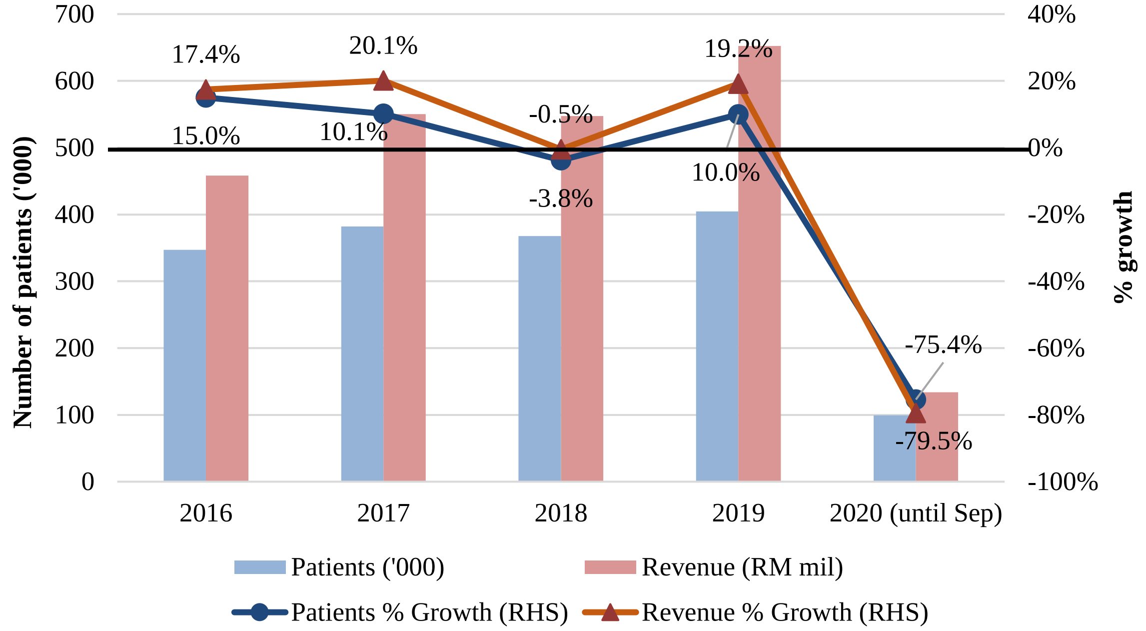
The pandemic has also caused great duress to the hotel industry. Hotels in Penang, which saw an average occupancy rate of approximately 57% during the last three quarters of 2019, saw drastic reductions for the same period the following year, with bookings being cancelled and unfulfilled. For the first half of 2020, the Malaysian Association of Hotels reported a national average occupancy rate of only 21.5% (Malaysian Association of Hotels, 2020).

The easing of restrictions and the promotion of domestic tourism during certain periods of the RMCO managed to improve hotel occupancy rates. For instance, Penang hotels saw weekend occupancy rates of as high as 70% to 80% for beach hotels, and 40% for city hotels in early July (Akmal, 2020); the first two weeks of December also saw high occupancy rates on weekends[9]. However, this slow progress was often interrupted by recurring cycles of state-border lockdowns, and in fact reversed when rising COVID-19 cases pushed another strict lockdown into place at the start of 2021.

The second MCO has rendered single-digit occupancy rates of between 2% to 4% for Penang hotels (Dermawan, 2020). Till date, nine major hotels in Penang have ceased operations, among them Holiday Inn Resort and Equatorial Hotel, two renowned hotels. With uncertainty persisting, the hotel industry's recovery will remain subdued for the first quarter of 2021.

Medical tourism is a key subsector in Penang's tourism sector, where it accounted for 56.8% of Malaysia's health tourists and 60.7% of total medical tourism revenue in 2018. Penang's closest competitor, Malacca, only accounted for 15% of total health tourists and 9.4% in overall revenue.

Figure 6: Number and annual growth of health tourists and revenue generated in Penang, 2016–September 2020



Source: Authors' own calculations, data from Penang Centre of Medical Tourism
Note: The above figures are only provided only by Loh Guan Lye, Pantai Hospital, Island Hospital, Mt Miriam, Adventist, Gleneagles, Bagan & KPJ Penang Specialist Hospital, and are therefore not a comprehensive representation of total patients and revenue for Penang's medical tourism. They nevertheless are able to provide an overall outlook.

[9] See Mok (2020).

In 2019, medical tourism in Penang enjoyed impressive growth rates of 10% for number of patients and 19.2% for revenue generated, after posting negative growth rates the previous year (Figure 6). Unfortunately, the state stopped receiving health tourists in mid-March of 2020, rendering significant losses for the subsector. Up until September 2020, medical tourism saw a 75.4% reduction in number of patients, and a 79.5% loss in revenue. As patients from Indonesia make up approximately 95% of Penang's health tourists, these negative growth rates are expected to have persisted or worsened for the rest of 2020, with Indonesia remaining on Malaysia's travel ban list.

The Malaysian Healthcare Travel Council (MHTC) has estimated the revenue for 2021 to be approximately 50% of 2019's revenue, with a 70% to 75% loss for 2020 (Batumalai, 2020). Looking at Figure 6, Penang is likely to travel along the same trajectory towards recovery. Again, this will very much depend on the reopening of international borders, and the restoring of confidence in Penang as a safe and trusted medical hub.

The astronomical challenges encountered by the tourism industry and its subsectors in 2020 will unfortunately carry forward to 2021, as the world continues to struggle with the pandemic. International travel, especially for leisure purposes, is expected to remain sporadic, as most border closures are still in place, and the risk of Covid-19 infections is remains high.

Subsequent rejuvenation of the tourism industry in the year ahead will depend on the successful management of Covid-19 cases and the effective rollout of the vaccination programme, both nationally and globally. Regardless, industry experts have predicted that a minimum two-year period is needed for a complete recovery.

Construction: Moderated buying underpinned by stimulus packages

The construction sector will experience lacklustre growth resulting from modest demand for houses and commercial properties. However, first-home buyers, newly married couples with solid financial backgrounds and T20 households are expected to purchase a property (or more) in order to take advantage of the plunge in house prices, the low lending rate and the loosening of certain house-purchase policies[10]. Others may wait for a further drop in house prices before acting. Buyers from M40 and B40 groups are likely to postpone the purchase of durable goods and prioritise expenses on perishable goods.

On the whole, Malaysian house prices have tumbled, with Penang and Selangor being most severely affected (Figure 7). Penang's house prices dropped by 1.3% in Q3 2020 (vs KL: -1.1% & Selangor: -1.5%), following stagnated demand in the first half of 2020. Both detached and semi-detached units had their prices elevated, while terraced residential units saw a slump in Q3 2020, and prices for condominium/apartment edged up slightly (Henry Butcher Malaysia, 2021). The number of residential units transacted fell by 16.7% for the first 9 months of 2020, largely due to the effect of the MCOs, with the total value of transactions declining drastically by 19% for the same period (NAPIC, 2020).

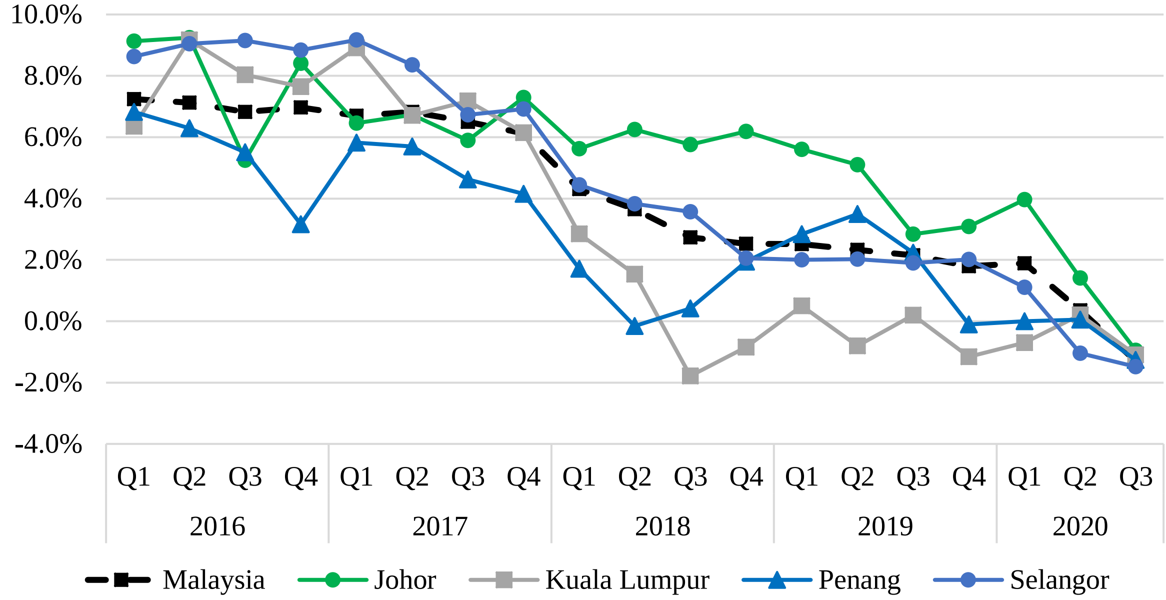
Property developers and agents have innovatively, during this time, used digital technology to transform the house buying experience. While the volume of transactions may have slowed, buyers did not reject the system of online house purchase from reputable and trustworthy developers (Henry Butcher Malaysia, 2021).

During this difficult time, overhang residential units have increased. A total of 3,816 units, worth RM2.86 billion were recorded in Q2 2020 – where 52% involved houses priced RM500,001 and above. The number of unsold units is more evident for condominium/apartment compared to landed house.

[10] These include Home Ownership Campaign (HOC), relaxation of lending criteria for third-home buyers, exemption of stamp duty and the Real Property Gains Tax (RPGT).

While the number of unsold landed houses dropped from 857 units in Q1 2020 to 746 units in Q3 2020, condominium/apartment unsold units increased to 2,968 in Q3 2020 from 2,180 in Q1 2020.

Figure 7: The quarter-on-quarter change in house price index for selected states in Malaysia



Source: Malaysian House Price Index, National Property Information Centre (NAPIC).

With the reinstatement of the MCO beginning 13 January 2021, the pace of recovery of the sector has been disrupted again. Ongoing projects are expected to be delayed while the launch of new projects are likely be postponed. For non-residential properties, the rental market will be significantly affected. More retail spaces at shopping complexes and commercial units will be left unoccupied following the rise in popularity of online shopping platforms. Business operators are expected to adjust and adapt to the changing purchasing options available online.

On the bright side, the demand for new commercial units by courier-related services is on the rise. This is to meet the escalating demand for e-commerce (Henry Butcher Malaysia, 2021). Likewise, the demand for logistics warehousing facilities is expected to expand in 2021 and beyond. On industrial land and properties, demand for these will persist in 2021, given the encouraging activities and outlook in the manufacturing sector. The residential units developed in Seberang Perai Selatan will benefit from the positive impact of continued investments into the Batu Kawan Industrial Park through job creation. The expansion of BKIP2 will certainly attract more home buyers to reside in this area[11].

Agriculture: MCO exaggerates demand for agricultural products

Despite the fact that the agriculture sector only contributes 2.2% to Penang's GDP, paddy and aquaculture fisheries are the two high-yield sectors in Penang. Based on the latest data, Penang has the highest rice yield in Malaysia. In 2019, its aquaculture sector recorded the third-highest production in the country after Sabah and Perak, and continues to rank second largest in total wholesale value. This simply means that Penang is producing higher-value aquaculture fisheries compared to other states in Malaysia.

[11] See Lee (2021).

In addition, Penang is self-sufficient in poultry meat (141%) and pork (265%)[12]. These two areas make up roughly 95% of the state's total meat production. The state also has great potential in fruit production, especially durian. Although the land used for fruit cultivation in Penang has not increased much, its productivity grew significantly during the last decade.

This growth in the agriculture sector is predicted to have flattened in 2020 owing to agricultural supply and demand disruptions under various stages of the MCOs. The lockdown to contain Covid-19 affected food security and food supply mainly through logistical challenges which slowed down agricultural services and prevented farmers, especially smallholders, from getting their products to market or from buying inputs. These led to increased post-harvest loss, wastage of perishables and loss of income.[13]

According to the Department of Agriculture (DOA) Penang, during the first MCO, vegetable and fruit production in Penang dropped at an average daily rate of 3% and 1.3% respectively, mainly due to limited availability of agricultural inputs and farm equipment.

Fishermen and culturists faced difficulties in selling their products. Market demand for fresh fish and aquatic products saw a sudden decline, coupled with limited sales operations due to the closure of seafood restaurants, and limited opening hours for morning and night food stalls and wet markets.

According to the Department of Veterinary Services (DVS) Penang, although the supply of livestock products was sufficiently good during the MCO 1.0, some small-scale farmers and distributors had difficulties selling their products because of the lack of market access and of logistical constraints. This, together with the rising prices of livestock feed, which increased the total production costs, resulted in a total loss of about RM261,991.52 per day.

Despite the disruptions and challenges mentioned above, the agriculture and food sector in Penang was able to keep the public supplied. It is however expected that Penang's agriculture sector will continue to face challenges in 2021. On the demand side, the demand of food will continue to increase, though slowly under the MCO. On the supply side, labour scarcity will be the main constraint for farmers, as many foreign workers have had to return to their home countries during the MCO. Malaysia's agriculture sector is heavily dependent on foreign workers, and the present labour shortage may reduce agricultural yield and income, especially in labour-intensive sub-sectors. The cost of production is bound to increase throughout in the region, and Malaysia being a net importer of agricultural inputs, a slightly rise in food prices may be expected in the country in the near future.

On the bright side, the pandemic opens up opportunities for agricultural reforms and for a transformation towards sustainable agriculture – through the adoption of new technologies and innovative agricultural methods and the growth of agri-food e-commerce. The future of agriculture is in technology and innovation. With the rapid population growth and with Penang's limited land size, smart farming has become crucial to the future of its agriculture sector. Although smart farming in Penang is still in an early development stage, technology adoption has shown great potential, especially in its two high-yield sectors – in aquaculture and in the rice industry. In addition, the strong E&E ecosystem in Penang provides good opportunities for attracting agrotech companies and enhancing agriculture in the state.

In line with Penang2030 (theme B and strategic initiative B2), modernising and diversifying sustainable agriculture are the main objectives where agro-food development in Penang is concerned. Among the main focal points of the state's agriculture sector are sustainable agriculture production, urban and community farming, high-tech food production, and food preservation and packaging technologies.

For Agriculture 4.0 to become a reality in Penang, the sector needs a dedicated joint effort by the public sector, industry actors and the farming community. Public institutions need to help farmers navigate

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[12] Department of Veterinary Services, Penang (2019)
[13] See Vaghefi (2020).

and invest in digital technologies, while digital industry players need to create a competitive and innovation-friendly landscape that allows equitable information flow and encourages fair competition. Farmers themselves must be prepared to adopt technologies and develop the required skills. It is essential that the required digital skills are developed and that a public openness is maintained about new digital opportunities and models.

Risk management for the new normal

1. **A rapid rollout of the vaccination programme is vital for economic recovery.**
   According to the World Bank Group's latest Malaysia Economic Monitor, Malaysia's economy will grow by 6.7% in 2021[14] following the contraction of 5.6% in 2020. This rate of recovery depends on success in containing the third wave of Covid-19 infections, and an effective rollout of the vaccination programme across the nation.

   While rapid rollout of the vaccination programme may be necessary, a set of SOPs especially for high-risk economic activities such as construction and the travel and hospitality sectors, is urgently needed, and should be prepared in advance. This being said, the risk of new variants of Covid-19 must be taken into account when constructing the SOPs.

2. **Covid-19 calls urgently for automation in agriculture and manufacturing activities.**
   Covid-19 has quickly changed the conditions for most forms of work. To reduce the foreign low-skilled workforce in the country, for example, it is imperative for agriculture and manufacturing operators to adopt automated technology. Since investments in automation can be extraordinarily high, policymakers should develop means to help upgrade the technical capacity among industry players.

   Be that as it may, the loss of low-skilled jobs is of greatest concern, at least in the short term. Policy makers need to draft automation plans for upgrading the low-skilled workforce, and to lead these into the agriculture and manufacturing sectors.

3. **Enhancing productivity and market access through broad digitalisation**
   The pandemic has dramatically changed the business and consumer landscapes. All types of businesses now need to digitalise, from real estate players to street food hawkers; from grocery shopping to wet marketing. With the promise of broader market access and low costs in starting up a business, doing business online can be possible for most entrepreneurs. Stiff competition is unavoidable (as consumers will have more options than ever to choose from), and the innovative services that can be provided by sellers and the information easily accessed by buyers remotely through online customer reviews will come to define consumerism in the near future.

4. **Innovative and sustainable strategies are vital to the tourism sector.**
   With tourism and public health sharing an intimate link, the integration of epidemiological indicators into the tourism industry will be vital to the latter's recovery. Safe easing of travel restrictions should reflect the implementation of evidence-based measures and policies, while new protocols centered on hygiene and safety should be established across the sector, with designated guidelines provided to tourism operators. Multiple-stakeholder partnerships and collaboration between public and private entities all along the tourism value chain is important in ensuring the success of recovery plans.

   Travel preferences are anticipated to change, as there will an expected shift from mass tourism to alternative or experiential tourism tied to Nature, to general wellbeing and to outdoor

[14] See World Bank (2020).

activities. With great likelihood, the practices of sustainable tourism will become the new pillars supporting global tourism.

5. **Political stability needed to stimulate economic recovery.**
   Due to Malaysia's political uncertainty, Credendo, a Belgium risk analysis company, downgraded the country's rating for short-term political risk from 1/7 to 2/7, and its commercial risk from A to B (Cecchi, 2021). Malaysia's economic recovery by most accounts will be impeded by reduced business confidence and by the state of federal emergency that is projected to end only on 1 August 2021.

   The ultimate objective of Malaysia's proclamation of a state of emergency was presumably to effectively tackle the third wave of the pandemic. Private hospitals have been encouraged to help reduce the burden on the public healthcare sector. However, widespread controversy has resulted over the real need for so radical a measure.

To sum up, countries with prolonged lockdowns in economy activity are expected to experience a longer recession. For Malaysia, the MCO, the state of emergency and the political instability will continue to hamper economic recovery. Broader fiscal and monetary measures, strategic re-investment reforms and elevated healthcare support systems are crucial if the losing of jobs and incomes for a majority of Malaysians is to be reversed.

Penang, a small trade-dependent economy, while easily affected by macroeconomic changes in the country and the world, has opportunities for building back better, when compared to most other places in the region.

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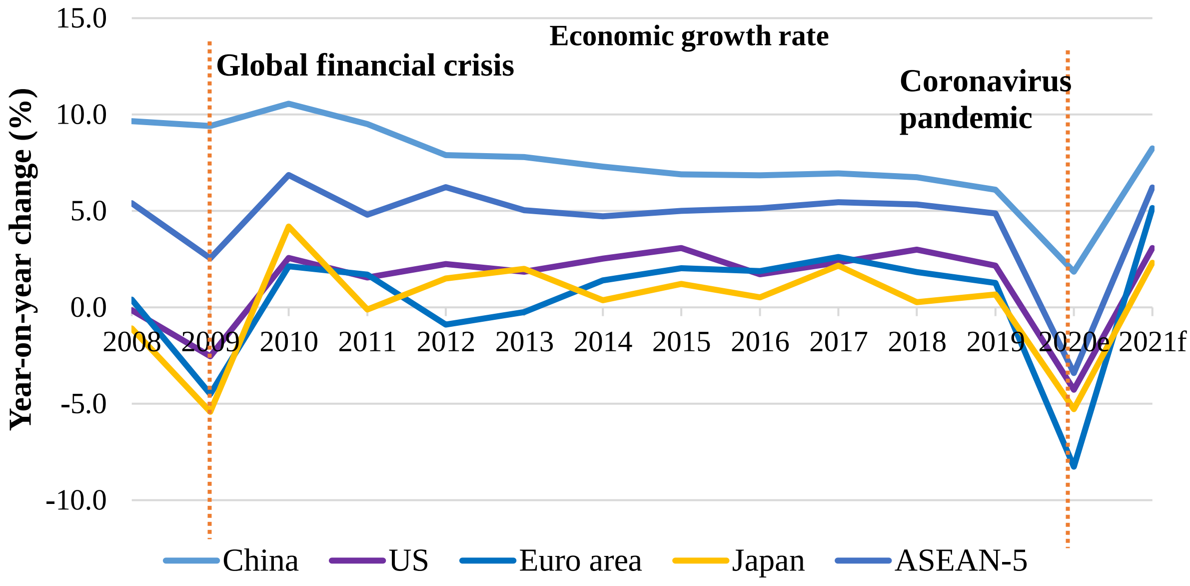
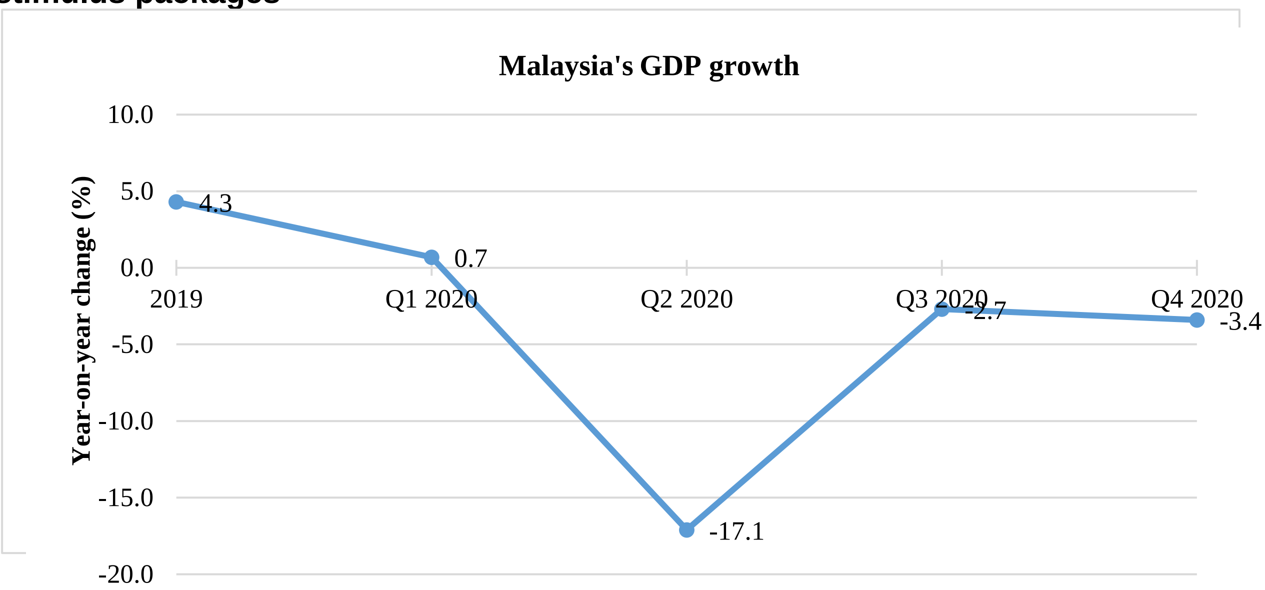
Appendices

Figure 1: Economic hit by the Covid-19 pandemic in major economies



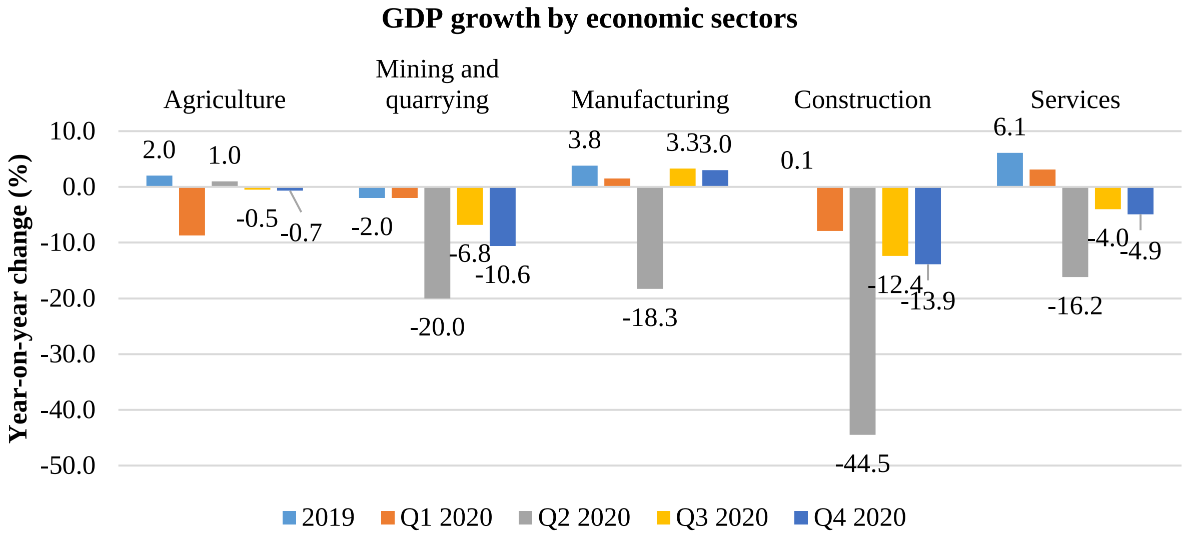
Source: International Monetary Fund (IMF), World Economic Outlook Database, October 2020.

Figure 2: Stable rebound due to the reopening of economic activities and stimulus packages



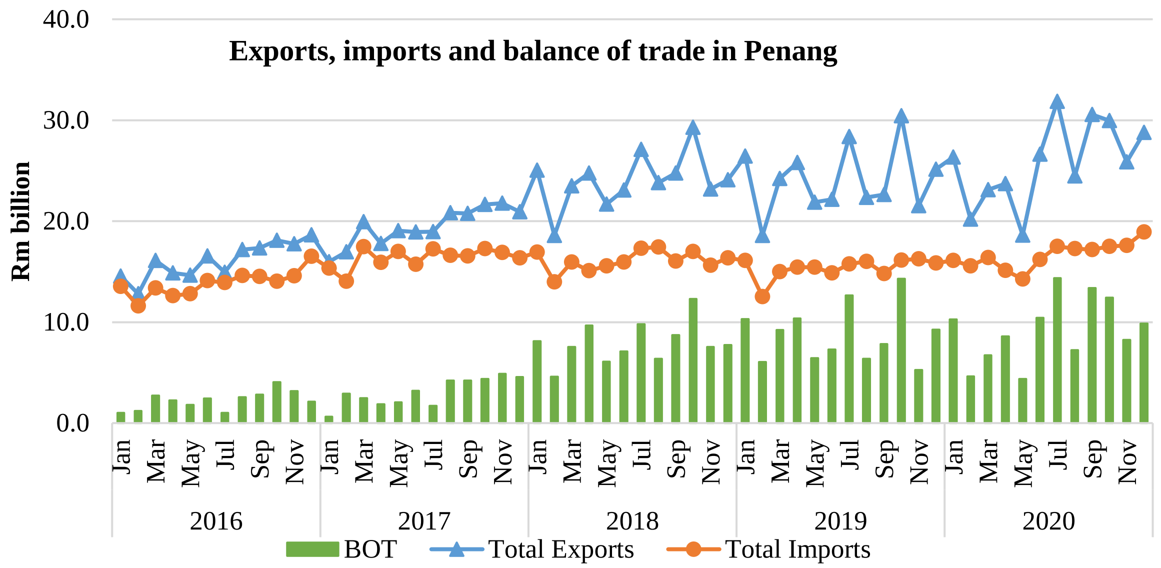
Source: Department of Statistics Malaysia.

Figure 3: across economic sectors in Malaysia



Source: Department of Statistics Malaysia.

Figure 4: Strong external demand despite the coronavirus outbreak



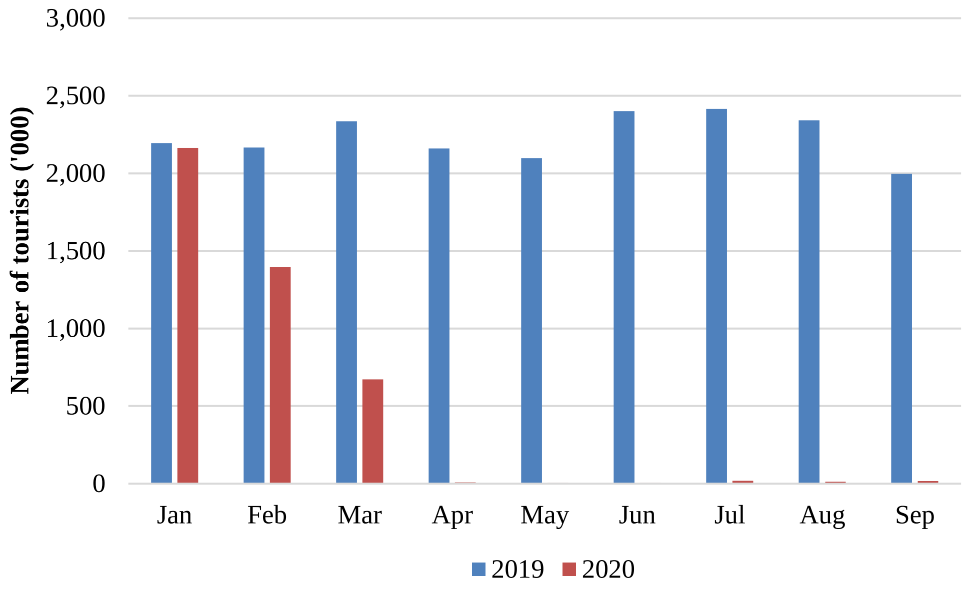
Source: Author's own calculation based on data published by Department of Statistics Malaysia.

Table 1: Employment loss by occupational group in Penang, as of 4 Dec 2020

Occupational Group	No. Employment Loss	% Share
Plants & Machine Operators & Assemblers	2,789	28.2%
Professionals	2,115	21.4%
Technicians & Associate Professionals	1,874	18.9%
Managers	882	8.9%
Clerical Support Workers	839	8.5%
Elementary Workers	581	5.9%
Services & Sales Workers	505	5.1%
Crafted & Related Trades Work	317	3.2%
Total	**9,902**	**100.0%**

Source: MYFutureJobs, Social Security Organisation (SOCSO) Malaysia.

Figure 5: Number of international tourist arrivals in Malaysia, Jan-Sep, 2019 - 2020



Source: Tourism Malaysia

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