Executive Summary

Recent economic developments and outlook

The global economy is riding on a rollercoaster year in 2020 as a result of the coronavirus disease 2019 (COVID-19) pandemic. As a state with a high reliance on external demand, Penang's economy will be affected by the health crisis; all economic activities are expected to experience a significant slowdown. Tourism-related services in particular have been severely affected, and the post-lockdown effect will likely be the longest among all of the economic activities. Retail businesses of non-essential goods and services for SMEs including micro-businesses are facing challenges in maintaining their operating costs. The global manufacturing supply chain has been disrupted. A U- or W-shaped recovery in the state's economy is being projected, with the latter being more critical if the state or country is to tackle a second wave of the pandemic.

Based on the latest GDP data, Penang's economy registered a slower growth rate in 2019, undermined by the challenging global trade environment. The state's GDP grew at 3.8% compared with 5.1% in 2018. Despite the fact that agriculture and construction experienced negative growth rates in 2018, all economic sectors turned out to record positive growth rates in 2019. The services sector remained as the main growth driver to Penang's economy, expanding moderately at 5.5%. This is supported by utility, transport, storage and information and communication growing at 6.9%, and wholesale and retail trade, and food and beverage and accommodation growing at 6.4%. Growth in the manufacturing sector has moderated to 2.7%, with petroleum, chemical, rubber, and plastics products having the largest growth rate, while electrical and electronics (E&E), and optical products are responsible for the largest share of Penang's manufacturing industry. The agriculture sector, on the other hand, rebounded to 4.9%, surpassing the national growth rate of 2% because of improved weather conditions. As Malaysia's largest GDP per capita state (excluding federal territories), Penang's manufacturing sector remained the second-largest contributor to the national GDP after Selangor, underpinned by continued and robust capital investments.

As Malaysia's major export-oriented manufacturing hub, Penang's trade surplus continued to expand along with improved global export demand amid the US-China trade war. This is because Penang has a strong manufacturing ecosystem, which enables the state to weather global uncertainties. Machinery and transport equipment and miscellaneous manufactured articles remained the core exported products connecting to the global value chain, largely from the E&E and medical devices industries. Bayan Lepas airport continued to handle the largest export value in Malaysia. With the implementation of the Movement Control Order (MCO) as a result of the COVID-19 pandemic, the exports handled at Bayan Lepas airport was the least impacted compared with goods handled through sea and land transports in the first five months of 2020. Trade surplus is expected to persist in 2020, albeit at a lower value, and imports rising as a result of the subdued global demand.

Based on the recently released 2019 Household Income and Expenditure Survey, Penang's median monthly household income continued to expand at a faster pace than its annual median household expenditure during 2016–19. Households in Seberang Perai Selatan recorded the largest income growth at 5.8%, coinciding with the new development at Batu Kawan. Households in Seberang Perai Selatan are also saving more owing to their low household consumption expenditure, and registered the largest net income across five districts in Penang. Moving forward, households in Seberang Perai Selatan will continue to benefit from the continued development in industrial park, commercial, and education services provided in Batu Kawan. During the global pandemic, household income may see a slower growth with the rise in unemployment, and households will be more cautious in spending on non-essential and durable items compared with essential and non-durable items.

As the ninth-most-populated state in Malaysia, Penang gained the fourth-largest share of T20 households, trailing Selangor, Kuala Lumpur, and Johor. The state has a relatively lower share of B40 households in the country. Penang made up 5.8% of Malaysia's household share for the T20 group; 7.2% for the M40 group; and 5.3% for the B40 group in

2019. In tandem with population distribution, Timur Laut had the highest share of the state's income. In 2019, the district saw a drop in income share of 4.2% compared with 42.3% in 2016 owing to the decrease in the percentage share of households, while all other districts registered a surge in income share. Among the three income groups, Seberang Perai Selatan recorded an increase of 3.1% in T20 households, while the T20 group in Timur Laut declined by 5.9%.

The state's income gap has relatively widened, with the Gini coefficient soaring from 0.356 in 2016 to 0.359 in 2019. This increase was attributed to the increase in the income gap in Barat Daya, Seberang Perai Utara, and Seberang Perai Tengah. With the latest recalibration of Malaysia's poverty line income, Penang's absolute poverty rate shrank by a marginal 0.3% from 2.2% in 2016 to 1.9% in 2019, strengthened by the level of the median household income for all districts except Barat Daya and Seberang Perai Utara. Incidence of relative poverty, on the other hand, increased across all districts except Seberang Perai Selatan. Penang's incidence of relative poverty rose from 11.3% in 2016 to 13.2% in 2019.

Penang's labour market remains cautiously optimistic amid global uncertainties brought about by the global pandemic in 2020. The unemployment rate will be high as a result of weak demand for products, causing a hike in retrenchment activities in the form of voluntary separation schemes (VSS), layoffs, and pay cuts—affecting the services sector in particular. Despite the surge in unemployment, Penang's economy is projected to still have full employment status, with its unemployment rate hovering below a 4% trajectory, similar to the 1998 Asian financial crisis and 2009 global recession. According to historical trends, workforce with secondary education will continue to register a higher unemployment rate compared with other educational levels, ceteris paribus. However, during the COVID-19 crisis, youth and graduate unemployment are expected to increase owing to the freeze in labour recruitment.

Labour demand remains weak. Job hiring has slowed down as employers become cautious about their business prospects, and some employers have downsized their organisations in response to the pandemic. Despite a subdued hiring market, digital-related positions will continue to experience exponential growth as a result of movement restrictions. On the national front, JobStreet Malaysia saw a spike in job searches related to information technology roles, particularly during the MCO. Network engineers, IT project managers, and helpdesk analysts were among the roles employers have been looking to fill. However, according to JobsMalaysia, Penang had 21,172 job vacancies posted by private sector as of 17 July 2020, with the majority of them being low-skill employment.

Manufacturing sector

Penang's manufacturing activities continued to be responsible for over 40% of its total GDP—the highest share in comparison with other manufacturing-leading states like Selangor, Johor, and Sarawak. With a subdued growth of 2.7% in 2019, the sector is estimated to remain cautiously optimistic in 2020 owing to the global supply-chain disruptions brought about by the pandemic, along with the implementation of planned investments.

Penang's approved investment projects have surged significantly, recording the highest-ever capital investment in 2019. As the national's largest share of foreign capital investment, the state seeks to create about 18,000 employments from both domestic and foreign investment projects, centering on E&E, scientific and measuring equipment, and machinery and equipment industries. This is a potential impact of the US-China trade tension, where US offshore plants are being set up outside China. The United States remained as the top investor in Penang (57.7%), followed by Singapore (12.3%) and the United Kingdom (10.1%).

In terms of value creation, Penang ranked second in total value created by the manufacturing industries. Although Penang has a smaller value created compared with Selangor, Penang recorded the highest value created per employee across the high-tech-manufacturing-leading states (such as Selangor, Johor, and Kedah) in Malaysia. This reflects Penang's linkages in relatively high-value-added operations. The state also led in average value created per firm, suggesting that Penang's manufacturing industries are considered high value, are more capital- and knowledge-intensive, and feature less low-skilled labour comparatively.

The manufacturing sector was heavily impacted

by the implementation of the MCO. Global supply chain disruptions led to significant delays in order deliveries, resulting in Penang-based manufacturing firms (including foreign firms) sourcing raw materials from local suppliers. With a quick reopening of business operations, Penang's manufacturing firms will experience a gradual recovery in the semiconductor, precision machining, measuring and test, and medical devices industries. In contrast, textile and garment manufacturers will take longer to recover owing to poor retail performance. The approved investment for the first quarter of 2020 shows that Penang still led in attracting foreign investment, and ranked second in total investments after Sabah. The manufacturing sector is projected to grow moderately in 2020.

Services sector

Business services, tourism, and logistics activities are the main growth drivers for Penang's services sector and account for 39% of the state's GDP in 2019. Utility, transport, and storage, and information and communication—proxies for the logistics sub-sector—grew at the fastest rate (6.9%) over the previous year, followed by wholesale and retail trade, food and beverage, and accommodation—which are closely related to tourism industry—at 6.4%. Finance and insurance, real estate, and business services grew at 5.4%. The share of wholesale and retail trade, food and beverage, and accommodation has consistently contributed the highest share in the services sector at 16.8%.

Responsible for 12.4% of the state's GDP, the logistics sub-sector benefits from the close proximity of the industrial parks to Penang's seaport and airport. As previously mentioned, Penang International Airport is responsible for the largest trade value in the country, accounting for approximately one-fifth of the total trade value and two-thirds of the trade value through air channels in Malaysia. While total trade volume handled through air cargo decreased by 7.8% in the first four months of 2020, the total trade value handled at airport increased by 4.3%. This indicates that a higher value of products is being shipped through the airport. This trend is projected to continue in spite of the challenging global macroeconomic environment along with the state's development focus on high-tech and high-value-added industries. Though the Penang seaport

is a feeder port providing ancillary cruise services, the port handles bulk cargo from Southern Thailand—primarily rubber and rubber products.

Priority projects under the Penang Transport Master Plan (PTMP) are expected to ease traffic bottlenecks and improve accessibility. The Light Rail Transit (LRT) is designed to cover a distance of 29.5km, connecting the north of Penang Island to the Penang South Reclamation Smart City, along with monorail services to be developed in smaller areas. The George Town-Butterworth LRT and Penang Third Link are also set to increase connectivity between Butterworth and Penang Island. In a state with more cars than inhabitants, PTMP projects play an important role in increasing traffic efficiency, which will benefit the local population, business community, and tourists.

The digital revolution has advanced business services by leveraging modern technologies into their operations. Artificial intelligence (AI), robotic process automation (RPA), cloud storage, big data, and block chain are seamlessly turning business operation models into a connected ecosystem for maximum value across the value chain. Coupled with tax incentives for new Global Business Services (GBS) companies in Malaysia, conditions for Multimedia Super Corridor (MSC) status have been revised to incentivise new GBS companies that have adopted modern digital technology to establish a presence in Malaysia. In Penang, high demand for talent equipped with high proficiency in the latest software still persists. Foreign knowledge workers play an important role in knowledge transfers. The state imported 1,725 foreign workers in 2019, an increase of 16.9% from 1,476 persons recorded in 2018. Of this, about 89% worked in GBS. According to InvestPenang, Penang ranked second after Kuala Lumpur for its GBS investment hub creating approximately 12,000 high-value jobs. ICT and software development, and creative multimedia are two other advanced services that recently gained international investment traction in Penang.

The tourism sector was impacted the hardest by the COVID-19 pandemic. The first quarter of 2020 saw a significant decrease in domestic and international travellers. Passengers carried through airplanes dropped drastically during the MCO period, with international arrivals decreasing by 38.8%. In April,

there were only 35 international departures and zero arrivals due to the border closure. Travellers are expected to return in phases, but this is dependent on the global containment situation. Passenger volumes will remain weak in the short term compared with pre-COVID-19 levels. Hotel businesses have been severely impacted, resulting in the temporary and permanent closures of some hotels. Although domestic tourism is heavily promoted in the state, a relatively higher occupancy rate has only been observed during weekends. This rebound is a far cry from the pre-MCO period.

According to Penang Tourist Survey (2018), experiencing local food continued to be the top reason for international and domestic tourists to visit Penang. For international visitors, sightseeing in the city, visiting historical sites, and visiting national parks/hiking/trekking were their favourite activities in contrast with domestic tourists. Both international and domestic tourists spent the most on food and beverage, followed by accommodation and shopping and entertainment.

As the main driver for the tourism sector, Penang has gained a significant multiplier effect from medical tourism. With its fully equipped hospital facilities in the private sector, Penang is the most popular destination for medical tourists in the country, accounting for over half of Malaysia's total medical tourists, along with the highest revenue collected (followed by Kuala Lumpur). Indonesians accounted for more than 95% of Penang's medical tourists. Foreign tourists visited Penang's hospitals largely for medical treatments in the areas of oncology, orthopaedics, and paediatrics. Aesthetic procedures are also becoming increasingly popular. With the lockdown and the growing number of COVID-19 cases in Indonesia, Penang's private hospitals will experience a significant negative impact on their business revenue, and the path to recovery will be slow.

Penang's health services created the highest growth in gross output annually, superseding the annual growth rate recorded in Selangor, Johor, and Kuala Lumpur—the most developed states in Malaysia. Being one of the smallest states in Malaysia, Penang remained as the third-largest value-added state in the country. As the largest public hospital, Penang General Hospital collected the highest amount of revenue, followed by Seberang Jaya Hospital and Bukit Mertajam Hospital. Interestingly, Penang's private hospitals have a higher rate of admissions compared with public hospitals, reflecting the significant contribution of international medical tourists. In public hospitals, general medicine and obstetrics and gynecology (O&G) are the most popular departments with the highest number of admissions (28,752 in 2018). However, the paediatrics department saw the biggest increase in admissions in 2018 (22%). Dengue fever remained the most prevalent communicable disease in Penang, while cases of hand, foot, and mouth disease saw an increase of more than threefold in 2018. Meanwhile, the biggest cause of death in Penang were diseases related to respiratory system (e.g. acute pneumonia and asthma) followed by circulatory system (e.g. hypertension, heart failure, and stroke).

Private and public hospitals are working closely to detect COVID-19 cases. In Penang, testing is made available in selected private hospitals and public hospitals and clinics. However, all patients with positive COVID-19 must be referred to Penang General Hospital for treatment. While the number of COVID-19 cases are still on the rise globally, the situation in Penang is still under control, with the lowest prevalence rate in the country. (As of 13 September, Penang has the lowest prevalence rate at 7.8 confirmed cases per 10,000 population.) Seberang Perai Tengah recorded the highest number of COVID-19 cases, followed by Timur Laut.

Construction sector

Accounting for 2.8% of the state's GDP, growth in the construction sector improved to a positive rate of 0.7% in 2019, but the sector will contract in 2020 owing to weak demand for houses and slow business developments brought about by the COVID-19 pandemic. With the implementation of the MCO, the value generated from construction activities has been significantly affected, with new properties launches postponed. In near to medium term, consumers are likely to defer buying new properties, and more overhang units are expected. For existing properties, the rental market is projected to be sluggish, particularly in retail businesses. Poor demand for houses resulting from the pandemic will put further downward pressure on house prices.

In the first half of 2019, new completions of residential stock were largely concentrated in Seberang Perai Selatan and Seberang Perai Tengah. Terraced houses, semi-detached, and condominiums and apartments contributed the most to development in Seberang Perai Selatan. While landed properties have always been popular in mainland Penang, high-rise development projects are on the rise, outpacing the construction of landed properties. Demand for houses remains low. Overhang residential units continue to center on higher-price properties. More than two-thirds of these were condominiums and apartments, with a majority located in Timur Laut and Barat Daya.

Agriculture sector

In 2019, Penang's agriculture sector rebounded to 4.9% while contributing the same share as in the previous year (2.2%). The total crop land use shrank by an average of 2.1% per year during 2014–18. As a staple food for the country, rice production experienced stable growth, featuring the highest rice yield in the country. Penang also recorded a high self-sufficiency level (SSL) for rice, fulfilling over 70% of domestic demand. However, challenges persist. Land conversion will be a threat to the rice industry and food security; farmers need to adopt modern farming technologies to sustain rice production. Additionally, an overdependence on a single source of water can be a risk to Penang, either for consumption or agricultural use. While durians and pineapples are Penang's main fruit production, the planted area has also decreased sharply in recent years. In the vegetable industry, the planted area increased by 6.1% annually on average from 2009 to 2018.

In the livestock industry, while the size of farmers declined by about 10% annually from 2015 to 2018, the livestock population increased marginally at 0.6%, fuelled by the increase in sheep and pig populations. Chicken farming remained the largest livestock production in Penang, followed by pork and duck. Chicken meat and pork had a higher SSL compared with the production of eggs, fresh milk, and cow meat. Due to the increased price of chicken feed, the production of eggs has been on a decline, leading to a decrease in the SSL for eggs in domestic consumption. In contrast, the production of beef rose sharply from 2015 to 2019 owing to a significant increase in the cow population. Shortage of land and labour, high feed costs, and the lack of private investments continue to be challenges in the face of rising demand for livestock products.

Penang's fisheries industry remains competitive. Production of the food fish sub-sector (i.e., marine capture fisheries, aquaculture fisheries, and inland fisheries) has moderated in the past five years. As the main source of income for coastal villages, marine-capture fisheries are responsible for nearly two-thirds of total fish landing in Penang, while aquaculture fisheries make up about one-third of total production. Trawl nets and drift/gill nets were the main fishing methods used by Penang's fishermen in 2018. While Penang produced the fourth-largest aquaculture fisheries in Malaysia, its wholesale value was the second-highest in the country after Perak, with shrimp farm registering the highest value nationwide. This indicates that the state has generally produced high-value aquaculture fishes compared with other states.

As a result of the MCO, Penang's agriculture sector will continue to post lacklustre growth in 2020. The state's vegetables and fruits production plunged at 3% and 1.3% per day, respectively, during the first phase of the MCO. Poor market access and food supply-chain disruptions were the difficulties experienced by farmers and distributors, leading to a high level of food wastage.