

Targeted Support Needed to Keep Penang's SMEs Afloat

Penang Institute*

EXECUTIVE SUMMARY

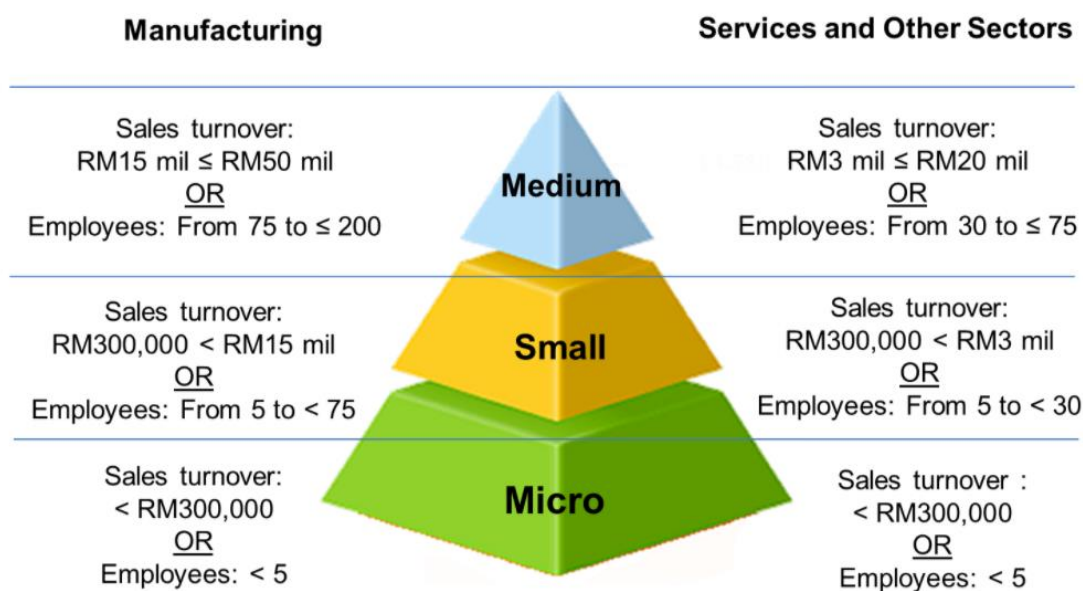
1. The Covid-19 pandemic brought about the necessary enforcement of a Movement Control Order (MCO) which shuts down the operations of non-essential businesses and services for its duration. Penang's economy and SMEs have subsequently been facing significant challenges with loss of revenue and the rise of unemployment on the horizon.
2. All businesses are expected to be hit negatively, with some subsectors expected to fare much worse than others. The key subsectors and industries identified as needing urgent intervention are as follows, in order of priority:
 - a. Tourism industry;
 - b. Wholesale and retail trade;
 - c. Repair of motor vehicles and motorcycles (MSIC: G) and other service activities (MSIC: S);
 - d. Real estate activities (MSIC: L);
 - e. Construction sector (MSIC: F) and;
 - f. Agriculture sector (MSIC: A).
3. Intervention measures should be considered from the perspective of:
 - a. Reducing credit risks;
 - b. Reducing high fixed costs, and;
 - c. Income replacement.
4. As for workers, measures need to be taken to support continuous employment, including salary compensation. Migrant workers make up a significant proportion of SME employees. Therefore, they need to be included in all forms of worker interventions.

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1.0 INTRODUCTION

The implementation of the Movement Control Order (MCO) has forced many businesses to halt their operations. Small-medium enterprises (SMEs) (Figure 1.1) whose businesses are involved in the non-essential services and sectors, as well as businesses producing and trading in non-essential goods, are expecting to see zero cash inflow for the next three months.¹ The loan relief measures offered by the Prihatin Rakyat Economic Stimulus Package are not sufficient for a huge proportion of SMEs; and in fact, many do not qualify for it for various reasons.² Many workers are temporarily suspended, some without pay while many others contend with the threat of unemployment.

Figure 1.1: Definition and categorisation of SMEs



Source: SME Corp, Malaysia.

This report is intended to be an exhaustive handy guide for policy makers to quickly identify businesses that are most negatively affected by the MCO and Covid-19; thus making it possible for the government to target and prioritize businesses that urgently need attention and intervention. We systematically examine all the subsectors in Penang's economy to consider the effects of the MCO, in a bid to frame categorisations that are nuanced enough to be accurate and exhaustive, and at the same time, general enough to be practical and useful.

¹ Shanker, A.C. (30th March, 2020). Covid-19: Malaysia SMEs see zero cash inflow for at least three months due to MCO, retrieved from <https://www.theedgemarkets.com/article/covid19-malaysia-smes-see-zero-cash-inflow-least-three-months-due-mco>

² ibid.

SMEs are integral drivers of Penang's economy, making up a staggering 99.0% of all business establishments.³ SMEs are therefore almost analogous to Penang's economy as a whole, in terms of number of establishments and employment. Any policy or commentary on SMEs that is not analysed at a smaller denominator will result in targeting errors.

SMEs in Penang collectively account for 99% (66,895) of all establishments, 47.8% of value added (RM30 billion), 62.9% (403,299) of persons engaged and 48.6% (RM9 billion) of salaries and wages paid.⁴ SMEs in the Services sector are the largest contributor to Penang's economy, followed by those in *Manufacturing, Construction* and *Agriculture* (Table 1.1).

Table 1.1: Percentage contribution of all sectors and SMEs in each corresponding sector to Penang's total economy, 2015.

SECTOR	Number of establishments		Value added		Number of persons engaged		Salaries and wages paid	
	Sector	SME	Sector	SME	Sector	SME	Sector	SME
Agriculture	0.7%	0.7%	1.7%	0.6%	0.8%	0.6%	0.5%	0.4%
Construction	4.3%	4.1%	5.5%	2.9%	11.1%	6.8%	10.2%	5.5%
Manufacturing	6.2%	5.9%	54.3%	13.0%	42.4%	16.0%	54.7%	14.6%
Services	88.8%	88.2%	38.1%	31.3%	45.4%	39.5%	34.4%	28.1%
TOTAL CONTRIBUTION TO PENANG	100.0%	98.9%	100.0%	47.8%	100.0%	62.9%	100.0%	48.6%

Source: Authors' calculations, *Economic Census, MyState Statistics, Penang, 2016 & Economic Census, Profile of Small and Medium Enterprises, 2016, Department of Statistics, Malaysia*

Using Sector as the unit of comparison, SMEs in the services sector have the highest percentage of contribution across all four parameters. The data shows that, by percentages, in terms of number of establishments, SMEs in the construction sector are the second largest contributor while by number of persons engaged, the agriculture sector is the second largest contributor (Table 1.2).

In consideration of total value added (by percentage), SMEs in the manufacturing sector play the smallest role.

³ Department of Statistics Malaysia. (2016). *Economic Census, Penang*. Figures referring to SME establishments in this report are based on the latest available data, which would be year 2015, unless otherwise stated.

⁴ Absolute figures in brackets excludes the mining sector which has a much smaller presence in comparison to the other sectors (29 establishments with a workforce of 1,550 persons), and therefore not be considered in detail for this report.

Table 1.2 Principal statistics of SME by sector, Penang, 2015

SECTOR	Number of establishments		Value added		Number of persons engaged		Salaries and wages paid	
	Total	%	Total (RM million)	%	Total	%	Total (RM million)	%
Agriculture								
Total	486	100.0%	1,064	100.0%	4,998	100.0%	92	100.0%
Proportion of SMEs	470	96.7%	349	32.8%	4,021	80.5%	71	77.2%
Construction								
Total	2,888	100.0%	3,474	100.0%	71,403	100.0%	1,943	100.0%
Proportion of SMEs	2,804	97.0%	1,823	52.5%	43,464	60.9%	1,046	53.8
Manufacturing								
Total	4,191	100.0	34,294	100.0%	272,241	100.0%	10,431	100.0%
Proportion of SMEs	4,021	95.9%	8,223	24.0%	102,507	37.7%	2,791	26.8%
Services								
Total	59,997	100.0	24,061	100.0%	291,279	100.0%	6,553	100.0%
Proportion of SMEs	59,600	99.3%	19,743	82.1%	253,307	87.0%	5,350	81.6%

Source: Authors' calculations, Economic Census, MyState Statistics, Penang, 2016 & Economic Census, Profile of Small and Medium Enterprises, 2016, Department of Statistics, Malaysia

Using composition of SMEs as the unit of comparison, we estimate that the Services sector has the highest composition of micro-SMEs at 80.2% (47,799 establishments)⁵. This is notable because micro-SMEs are more at risk of bankruptcy, given their reliance on monthly revenues to stay in operation.

In the circumstances and restrictions brought on by the Covid-19 pandemic, it is vital that the sustenance of SMEs be ensured; the collapse of these firms will be detrimental to Penang's economy in both the short and long run.

⁵ This estimation and the estimations in Table 1.3 are calculated based on the national aggregation of SMEs in all sectors.

Table 1.3 Estimated composition of SMEs by sector, Penang, 2015

Sector	Micro		Small		Medium		Total
	National %	Number	National %	Number	National %	Number	Number
Agriculture	47.6%	224	40.5%	190	11.9%	56	470
Manufacturing	46.3%	1,862	48.4%	1,946	5.3%	213	4,021
Construction	44.3%	1,242	43.4%	1,217	12.3%	345	2,804
Services	80.2%	47,799	18.3%	10,907	1.5%	894	59,600
Total number	51,127		14,260		1,508		66,895

Source: Authors' calculations,⁶ Economic Census, MyState Statistics, Penang, 2016 & Economic Census, Profile of Small and Medium Enterprises, 2016, Department of Statistics, Malaysia

⁶ The number of SMEs in Penang's services sector according to size is estimated based on the national percentage of all SMEs in the services sector for 2015.

2.0 METHODOLOGY

In order to achieve an assessment that is credibly exhaustive of every economic sector in the economy, this brief uses the Malaysian Standard Industrial Classification 2008 (MSIC 2008) Code System that is adopted by the Department of Statistics Malaysia. Where relevant to Penang's economic activities, assessments are done up to the *Item* level (5-digit code). This is necessary since the exemptions allowed during the MCO are commonly decided at the *Item* level.

Table 2.1: Example of MSIC classification structure and total number of items at each level.

Level	Title and Description	Codes	TOTAL
Section	Agriculture, Forestry and Fishing	A	21
Division	Crop and animal production, hunting and related service activities	01	88
Group	Growing of non-perennial crops	011	238
Class	Growing of cereals (except paddy), leguminous crops and oil seeds	0111	423
Item	Growing of cereals (except paddy), leguminous crops and oil seeds	01111	1174
	Growing of maize	01112	
	Growing of leguminous crops	01113	
	Growing of oil seeds	01119	
	Growing of other cereals n.e.c.		

Source: *Department of Statistics, Malaysia.*

At each level of classification, this brief uses an assessment framework to evaluate the three core pillars of businesses:

- (1) Input** – Availability of inputs to continue operations during the MCO;
- (2) Operation** – Ability to continue operations during the MCO; and
- (3) Sales** – Ability of business to close sale and deliver product/service to customer.

In each pillar, an assessment is made against various sources of available data/information (eg: official government announcements, industry inputs, reference from other studies) to determine the extent of business interruption due to the MCO. The assessment criteria in the framework are adapted accordingly to take into account industry specific nuances (Table 2.2).

In reporting, this brief takes the approach of *the exception rather than the rule*, i.e. analysis of sectors is done to highlight industry specific nuances that will be collectively useful as inputs for policy intervention. This approach rightly accommodates resource constraints and the critical need to prioritise intervention, especially given the economy-wide impact of the MCO and the Covid-19 pandemic in general.

Table 2.2: Assessment framework and example of criteria

PILLAR	INPUT (Availability of inputs to continue operations during MCO)	OPERATION (Ability to continue operations during MCO)	SALES (Ability of business to reach customers and vice versa)
CRITERIA	<p>Does the business require inputs that are classified as non-essential products/services?</p> <p>Why is the business unable to receive inputs during MCO?</p> <p>Will the business have sufficient stock to operate without receiving additional inputs during MCO?</p>	<p>Is the business classified as an essential product/service during MCO?</p> <p>Is the business able to operate remotely?</p>	<p>Does the business have an online platform?</p> <p>Is the business able to deliver service/product remotely?</p> <p>What is the frequency of delivery cycle?</p>

3.0 SECTOR ANALYSIS

3.1 Agriculture (MSIC: A)

The agriculture sector has been allowed to operate under essential services during the MCO. Interruptions, however, are expected due to the reliance of this sector on warehousing and logistics services. Demand is expected to fall significantly in the absence of large-scale consumers (eg: hotels, event caterers, restaurants). Supply chain disruptions have also led to the dumping of foods such vegetables and fish.⁷

3.1.1 Crops and livestock (MSIC: 01)

Many SMEs in this sub-sector are expected to incur a disproportionately huge cost burden during the MCO, which would subsequently lead to losses in revenue despite being able to operate. SMEs in this sector own the characteristics of long yield cycles (time it takes for production) and perishable outputs. This leaves a small margin for cost management in responding to a drastic drop in demand, especially from large-scale consumers (eg: hotels, events caterers, restaurants) since variable cost is sticky (not quickly adjustable). Therefore, SMEs bear a disproportionately high cost burden due to the MCO.

3.2 Manufacturing (MSIC: C)

3.2.1 Non-essential manufacturing subsectors

The following sub-sectors are classified as non-essential manufacturing⁸: Manufacture of tobacco products (MSIC: 12); Manufacture of textiles (MSIC: 13); Manufacture of wearing apparel (MSIC: 14); Manufacture of leather and related products (MSIC: 15); Manufacture of wood and products of wood and cork except furniture; Manufacture of articles of straw and plaiting materials (MSIC: 16); Printing and reproduction of recorded media (MSIC: 18)⁹; Manufacture of other non-metallic mineral products (MSIC: 23); Manufacture of basic metals (MSIC: 24); Manufacture of motor vehicles, trailers and semi-trailers (MSIC: 29); Manufacture of other transport equipment (MSIC: 30); Manufacture of furniture (MSIC: 31); Other manufacturing (MSIC: 32).¹⁰

SMEs in these sub-sectors are likely to report zero revenue during the MCO. As they are ordered to cease their operations for the duration, SMEs are unable to fulfil orders and will also lose a month's worth of production. This is expected to affect an estimated 1,222

⁷ Ng, X.Y. & Wahid, R. (25th March, 2020). Cameron Highlands farmers dump hundreds of tonnes of vegetables, retrieved from <https://www.malaysiakini.com/news/516704>; Wahid, R. & Ng, X.Y. (26th Marchm 2020). Fishermen are dumping their catch as well, retrieved from <https://www.malaysiakini.com/news/516942>

⁸ Sub-sectors are inferred from Appendix B, Table B.1 by authors.

⁹ In this manufacturing sub-sector, only *Printing* (MSIC: 18110) is allowed to operate to support essential *communication and broadcasting* services.

¹⁰ In this manufacturing sub-sector, only *Manufacture of medical and dental instrument and supplies* (MSIC: 32500) is allowed to operate under essential manufacturing.

establishments and 48,545 workers, and may lead to an average loss of up to RM311.9 million in value added.¹¹

Additionally, most of the manufacturers obtain their inputs based on credit. In the current climate, cash will be preferred by suppliers. Therefore, manufacturers with insufficient cashflow and/or bad credit ratings may face problems procuring inputs upon resumption of operations.

At least one of the following is expected: massive unemployment, forced unpaid leave and/or pay cuts. This is due to the structure of workers in the *manufacturing* sector, where in the year 2017, 62.5% are *plant and machine operators and assemblers*. This group is most likely to be highly affected by the closures since they are unable to work remotely (Table 3.2.1.1).

Table 3.2.1.1 Persons engaged by category of workers in the manufacturing sector, Malaysia, 2017

Category of workers	Persons Engaged	
	Total	Share (%)
Managers, professionals and researches	206,347	9.6%
Technician and associate professionals	192,439	8.9%
Clerical and related occupations	255,099	11.8%
Plant and machine operators and assemblers	1,349,869	62.5%
Elementary occupations	154,365	7.15%
TOTAL	2,158,119	100.0

Source: Department of Statistics, Malaysia

3.2.2 Essential manufacturing¹²

SMEs categorised as essential manufacturing are allowed to operate under stringent conditions,¹³ thus greatly reducing output; possibly by 50%. Limitations on operations include limiting the number of workers to a minimum or at least 50% of the current or registered amount.¹⁴

The following sub-sectors are categorised as essential manufacturing: Manufacture of food products (MSIC: 10); Manufacture of beverages (MSIC: 11); Manufacture of paper and paper products (MSIC: 17); Manufacture of coke and refined petroleum products (MSIC: 19);

¹¹ This is a rough approximation based on 2015 data, by averaging the total of each variable for these subsectors over a period of 12 months.

¹² Sub-sectors are inferred from Appendix B, Table B.2 by authors.

¹³ Prime Minister's Office. (18th March, 2020) Press release, retrieved from <https://www.mkn.gov.my/web/wp-content/uploads/sites/3/2020/03/2.-KENYATAAN-MEDIA-MKN-PERGERAKAN-KAWALAN-COVID19-MITIfinal.pdf>

¹⁴ Zainul, E. (18th March, 2020). NSC: Manufacturers to continue operating, subject to conditions, retrieved from <https://www.theedgemarkets.com/article/nsc-manufacturers-continue-operating-subject-conditions>

Manufacture of chemicals and chemical products (MSIC: 20); Manufacture of basic pharmaceutical products and pharmaceutical preparations (MSIC: 21); Manufacture of rubber and plastic products (MSIC: 22); Manufacture of computer, electronic and optical products (MSIC: 26); Manufacture of fabricated metal products, except machinery and equipment (MSIC: 25); Manufacture of electrical equipment (MSIC: 27); Manufacture of machinery and equipment (MSIC: 28); Repair and installation of machinery and equipment (MSIC: 33).

3.3 Construction

All on-site activities in this sector are not allowed during the MCO. Some administrative job functions may still be ongoing, with the possibility of working remotely.

3.3.1 SMEs with credit risk

The following sub-sectors are exposed to high credit risk: Construction (MSIC: 41); Civil engineering (MSIC: 42); Demolition and site preparations (MSIC: 431).

SMEs are adversely affected, particularly from high exposure to credit risk and therefore the viability of SMEs to remain in operation post-MCO will be compromised. The construction sector is uniquely characterised by projects being funded on credit, which in turn is highly correlated to the duration of projects. The effect of delays on credit is two-fold: the foregone return of credit and the compounded interest incurred by project delays. By being on credit, SMEs are consequently in a position of limited cash flow, which is brought to bear by the sudden imposition of the MCO and the extension thereafter.

This subsector poses significant risk to migrant workers – categorised as a vulnerable group – which may, in turn, lead to other issues of social distress. Penang reported 5,660 registered migrant builders in the year 2018¹⁵ – an underestimation of actual numbers, given the prevalence of undocumented migrant workers in this sector. Migrant workers typically rely on daily wages for basic consumption, often with no recourse. This may lead to other issues of social unrest common to vulnerable groups, such as deteriorating health conditions, crime, and communal violence.

3.3.2 SMEs in Specialised Construction Activities (MSIC: 43)

The following classes of activities are included: Electrical, plumbing and other construction installation activities (MSIC: 432); Building completion and furnishing (MSIC: 433); Other specialized construction activities (MSIC: 439).

SMEs are likely to lose a month's worth of revenue due to the MCO, exposing employees to the risk of unemployment, forced unpaid leave and/or pay cuts.

¹⁵ Ministry of Works, Malaysia. (2018). Number of registered builders by status and state, retrieved from http://www.data.gov.my/data/ms_MY/dataset/statistik-personel-binaan-berdaftar-mengikut-negeri-dan-status-pada-tahun-2016-hingga-2018

3.4 Services¹⁶

3.4.1 Wholesale and retail trade, repair of motor vehicles and motorcycles (MSIC: G)

SMEs in this sector are especially affected by the MCO, since an estimated 81.1% of SMEs are micro-SMEs.¹⁷ Any negative effects on revenue and cost are therefore amplified since micro-SMEs have a smaller margin of cash flow, and are more heavily reliant on monthly revenue to maintain operations.

Most SMEs in subsector of *Wholesale trade, except of motor vehicles and motorcycles* (MSIC: 46) and the subsector of *Retail trade, except of motor vehicles and motorcycles* (MSIC: 47) are non-operational due to the MCO and are expected to report zero revenue whilst bearing high overhead costs. In addition, workers are at risk of unemployment.¹⁸

Examples of such SMEs include retail of clothes, footwear, mobile phones, musical instruments, jewellery, books, etc. Retail SMEs that have high rental cost (eg: mall retailers, especially those dealing in luxury brands and non-perishable goods, can expect to see roughly an 85% drop in sales value¹⁹) will be more susceptible to the issues mentioned above. This subsector is also characteristic in its engagement of part-time workers, who will likely be the first to lose their employment in any cost-cutting measures by SMEs.

Retail SMEs that are able to reach customers via online platforms will fare slightly better. However, it is estimated that only 37.9% of SMEs maintain an online presence.²⁰

Some SMEs will be able to continue operations, namely SMEs in *Wholesale of agricultural raw materials and live animals* (MSIC: 462), *Wholesale of food, beverages and tobacco* (MSIC: 463) and *Other specialised wholesale* (MSIC: 466).

3.4.2 Transportation and storage (MSIC: H)

SMEs in this sub-sector are deemed as providers of essential services. The Ministry of Transport has assured the public that measures will be put in place to ensure that the transportation of essential goods are allowed during the MCO.²¹

Transportation related to tourism activities and human transportation are negatively affected, posing risks of unemployment, forced unpaid leave and pay cut to workers. These include *Other land transport* (MSIC: 492) – examples include school bus services, express

¹⁶ Sub-sectors are inferred from Appendix C, Table C.

¹⁷ Appendix A, Table A.2.

¹⁸ This excludes some in *Retail in non-specialised stores* (MSIC: 471) – e.g.: convenience stores, supermarket and mini markets – and *Retail sale of food, beverages and tobacco in specialised stores* (MSIC: 472) and some. These SMEs are allowed to operate during MCO.

¹⁹ Based on retail sector data from China and Europe in February and March 2020. Financial Times. (29th March, 2020). Coronavirus, US jobs figures, China PMIs, retrieved from <https://www.ft.com/content/ce0822bc-e1c5-47f2-bd58-495531c3cd52>

²⁰ SME Malaysia Annual Report 2018/19, retrieved from http://www.smecorp.gov.my/images/SMEAR/SMEAR2018_2019/final/english/SME%20AR%20-%20English%20-%20Chapter%202.pdf

²¹ Press release from the Ministry of Transport, 26th March 2020, retrieved from <https://www.fmm.org.my/upload/Media%20statement%20of%20YBM%2026-3-2020.pdf>

bus services, car rentals and taxi operations²² – and *Operation of excursion, cruise or sightseeing boats* (MSIC: 50111).

3.4.3 SMEs related to the tourism industry

Subsectors that are closely linked to the tourism industry that are non-operational due to the MCO include the following: *Accommodation service* (MSIC: 55) and *Arts, entertainment and recreation* (MSIC: R).

SMEs in Accommodation service (MSIC: 55) are expected to report zero revenue, incur high overhead costs and workers at risk of unemployment. A recent survey conducted by Penang Institute showed that room bookings plummeted to zero in March. This subsector is also characteristic of high fixed costs like rental from property assets, made worse by the equal absence of other business lines (e.g.: many accommodations also operate F&B outlets and act as event caterers and planners). Part-time employment is common in this subsector, while full time employees are usually low-skilled, thus easily replaceable.

SMEs are at high risk of bankruptcy not merely due to the MCO, but also to the Covid-19 pandemic at large. Penang's tourism industry relies heavily on foreign tourists; hence the industry is likely to see historically low figures since most countries are behind Malaysia in imposing some level of lockdown – an intervention understood to be crucial in early control of the Covid-19 outbreak – and cases are seen to be increasing exponentially in some countries. Worse, SMEs in this industry had already seen plummeting revenues even before the MCO had begun.

The tourism industry is at risk of an economic crisis, affecting upwards of 35,741 establishments, RM9 billion in value added, and 156,516 employees.²³ 74.9% of SMEs in the *Arts, entertainment and recreation* (MSIC: R) subsector are micro-enterprises – the category of SMEs most at risk of bankruptcy.

3.4.4 Essential services

Subsectors that are deemed as essential services, and are expected to continue operations include: *Electricity, gas, steam and air conditioning supply* (MSIC: D), *Water supply, sewerage, waste management and remediation activities* (MSIC: E), *Information and communication* (MSIC: J), *Financial and insurance/takaful activities* (MSIC: K), and *Human health and social work activities* (MSIC: Q).

SMEs in Professional, scientific and technical activities (MSIC: M) are expected to continue operations with minimal disruptions despite not being classified as essential services. The nature of SMEs in this subsector enable workers to remotely and digitally, thus almost analogous to being as operational as those in essential services. Additionally, this subsector is characterised by longer delivery cycles (e.g.: architectural services, fashion designing) and is therefore less likely to lose significant revenue during the MCO.

²² E-hailing services are exempted from this category, identified rather as self-employed.

²³ Economic Census 2016, Tourism Statistics. Department of Statistics, Malaysia. Values are from year 2015, pp. 72.

3.4.5 Food and beverage service activities

SMEs involved in food and drink hawking, coffee shops and restaurants are expected to continue operations with lowered revenue. Those who make use of existing online platforms will fare better, having the benefit of being supported by a digital ecosystem that enables customer interaction and fulfilment, up to delivery. The online delivery food platform established by the City Council of Penang provides some relief.²⁴

SMEs in operations, however, face the latent need to lay off workers, or request workers to take forced unpaid leave or pay cuts. Despite being able to operate, a huge drop in revenue, combined with high fixed costs (rental) leave SMEs with little choice but to adjust employee composition. The most at risk being part-time employees; a mainstay in this subsector.

SMEs in other types of food and beverage activities (eg: event caterers, cocktail lounges, cafeterias, restaurants who choose not to operate) are expected to see zero revenue, and unemployment. Despite being deemed as essential services, these types currently face very low demand for their services.

Case study of a restaurant owner of a small restaurant chain located in shopping malls:

The owner of this Food and Beverage (F&B) business has 3 outlets. The owner employs 30 people (10 at each outlet), mostly food preparers and servers, who earn around RM3,000 per month including allowances and overtime. This works out to an overhead of approximately RM 100,000 per month including EPF and SOCSO payments. The owner chooses not to have delivery services because she does not want her staff to travel to work and risk getting infected. She still has to pay a monthly rental of RM5,000 per outlet since the rental is not waived by shopping malls which she operates at. She will not likely be able to take advantage of the RM 600 a month subsidy from the government because she has to conserve cash flow and close one outlet and retrench 10 staff. She has to incur overhead costs of at least RM100,000 during the Movement Control Order (MCO) without any revenue.

Source: Media Statement by Dr. Ong Kian Ming, Member of Parliament for Bangi (6 April, 2020)

3.4.6 Real estate activities (MSIC: L)

This subsector will likely report zero revenue due to non-operation during the MCO. As the SMEs are dependent on face-to-face interactions for sale, rental and lease transactions, remote operations will only include finalising financing details on existing agreements.

85.3% (1,215 establishments) of SMEs in this subsector are estimated to be micro-SMEs, at risk of bankruptcy. The real estate industry had been sluggish since the start of the year and is expected to further deteriorate post-MCO owing to the global economic recession and limited flow of capital, with the worst hit being micro-SMEs.²⁵

²⁴ Dermawan, A. (7th April, 2020). MBPP introduces online food delivery platform, 'Jom Beli Online', retrieved from <https://www.nst.com.my/news/nation/2020/04/582118/mbpp-introduces-online-food-delivery-platform-jom-beli-online-nsttv>

²⁵ News Straits Times. (20th March, 2020). Effects of COVID-19 on local property market, retrieved from <https://www.nst.com.my/property/2020/03/576591/effects-covid-19-local-property-market>

3.4.7 Administrative and support service activities

This subsector will likely report zero revenue due to non-operation during MCO. Example of activities affected include event managing, cleaning activities, vehicle rental and renting of machinery.

Travel agency, tour operator, reservation service and related activities (MSIC: 79) will be similarly affected, as analysed in 3.4.3.

3.4.8 Education (MSIC: P)

Education services are non-essential services. However, most operations are expected to continue via digital channels. The education subsector is well poised to fully utilise digital channels for teaching. This, however, may affect those whose subjects are more practical in nature (eg: vocational courses, driving schools and dance classes).

3.4.9 Other service activities (MSIC: S)

This subsector will likely report zero revenue due to non-operation during the MCO. Examples of SMEs in this sub-sector include laundering services (MSIC: 96011), hairdressing (MSIC: 96020), repair of bicycles (MSIC: 95291) and repair of mobile phones (MSIC: 95122).

94.1% (5,056 establishments) of SMEs in this sub-sector is estimated to be micro-SMEs with risk of bankruptcy. Many in this sector are petty traders and rely heavily on monthly revenues to continue operations.

4.0 DISCUSSION

4.1 Intervention targeting

More so than ever, budget constraints are most salient. The negative effects of the Covid-19 pandemic is economy-wide. While some are better positioned to adapt, the emerging truth is that everyone will be negatively affected. The only difference is the degree to which its effects are felt. In this sense, interventions – especially financial ones – need to be targeted and purposeful; there is a necessity for interventions to reach its intended user where the need is most felt, and be used for its intended purpose.

In order to better achieve this, three factors are considered:

4.1.2 Business or Worker

The stimulus packages that have been announced so far can be separated into two categories:

(1) those that target businesses, and (2) those that target workers. The former primarily aims to enable the business to weather through the MCO, while the latter primarily aims to prevent unemployment²⁶; or rather, to keep workers employed. In the same way, we use these two categories to identify entry points for intervention.

The decision between *business* or *worker* is inferred from the analysis, taking into consideration industry-specific nuances both at the state level and at the firm level. This way, the severity and urgency due to the MCO between one or the other becomes more pronounced. To some extent, interventions that are targeted at workers will indirectly also assist the business entity. The difference merely lies in that the intervention for workers is expected to go directly to the worker without much interference by employers.

4.1.3 Prioritising economic activities

The effects of the MCO – and the Covid-19 pandemic in general – are not evenly distributed. Effects at the firm level when aggregated at the sectorial level may lead to significantly different results. This, in turn, is largely dependent on the make-up and composition of the economic sector.

We note that SMEs in the *services* sector contribute the largest portion with regards to number of establishments (88.2%), value added (31.3%), persons engaged (39.5%) and salaries and wages paid (28.1%). This highlights the significance of the *services* sector to Penang's economy (Table 1.1).

The negative effects of the MCO to the *services* sector in comparison to other sectors will therefore be more significantly amplified throughout Penang's SME economy as a whole. We also note that the representation of micro-SMEs is largest in the *services* sector (80.2%), imposing further risk to the sector since micro-SMEs are more at risk of bankruptcy from a forced closure during the MCO.

²⁶ The stimulus package for workers also includes cash handouts for immediate relief.

Furthermore, the contribution of SMEs in both the *agriculture* and *construction* sector is more pronounced than in the *manufacturing* sector (Table 1.2). The implication of this is that the risk posed by SMEs to the sector is greater. The collapse of SMEs in the *agriculture* and *construction* sector will therefore be likely to significantly and negatively affect the sector as a whole. In comparison, the risk in the *manufacturing* sector is more readily borne by large companies, many of which are multinational companies that are better able to weather the MCO.

4.1.4 State Government vis-à-vis Federal Government

Since the MCO began, the Federal Government has already launched two economic stimulus packages. A commonality in them is that they are blanketed across industries. This is understandable because firm-specific nuances are necessarily lost at every level of aggregation. Moreover, the federal government is also equipped with the necessary fiscal space to take this approach of intervention.

This approach by the Federal Government happily allows the State Government's own approaches to be more targeted, by intervening at lower levels of aggregation, i.e., by industry and/or economy activity. The State Government is well positioned to complement assistance in this regard. Given its proximity to firms, it is able to receive more accurate signaling of context and needs.

4.2 Intervention schedule

The analysis in Section 3 and the discussion in Section 4.1 are consolidated to form an Intervention Schedule that will serve as a quick guide for the Penang State Government to identify which activities to prioritise, and to which entity interventions should be designed for.

4.2.1 Status of business during MCO

We identify businesses by their status during the MCO:

<p><i>Status Quo (SQ)</i></p> <p><u>Definition:</u> Business is operational but expected to report drastic fall in profits during MCO</p>	<p><i>Zero Revenue (0-Rev)</i></p> <p><u>Definition:</u> Business faces high possibility of reporting RM0 revenue during MCO</p>
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4.2.2 Target entity for intervention

We then identify the target entity that interventions should be prioritised and designed for:

- a) *Business*; and/or
- b) *Worker*.

In each corresponding cell, data is reported where available or credible estimations²⁷ can be made. Annotations are also included to highlight crucial nuance where necessary.

4.2.3 Demarcating risk of bankruptcy

Cells in red are used to demarcate businesses that need to be prioritised in intervention due to their being critically at risk of bankruptcy and/or posing significant risk to the broader economy.

Table 4.1: Status of business and necessity of intervention by sector and subsector

Activity	SQ	0-REV	Business (number of establishments)	Worker (number of persons engaged)
Agriculture				
1. Crops			486	
2. Livestock				
3. Fisheries				
Manufacturing				
1. Manufacture of food products				
2. Manufacture of beverages				
3. Manufacture of tobacco products				112
4. Manufacture of textiles				2,879
5. Manufacture of wearing apparel				11,528
6. Manufacture of leather and related products				996
7. Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials				2,483
8. Manufacture of paper and paper products				
9. Printing and reproduction of recorded media				4,440
10. Manufacture of coke and refined petroleum products				
11. Manufacture of chemicals and chemical products				
12. Manufacture of basic pharmaceutical products and pharmaceutical preparations				
13. Manufacture of rubber and plastics products				
14. Manufacture of other non-metallic mineral products				2,879
15. Manufacture of basic metals				11,104
16. Manufacture of fabricated metal products, except machinery and equipment				

²⁷ Data and data estimations used are taken from Economic Census, MyState Statistics, Penang, 2016 and Economic Census, Profile of Small and Medium Enterprises, 2016, Department of Statistics, Malaysia

17. Manufacture of computer, electronic and optical products				
18. Manufacture of electrical equipment				
19. Manufacture of machinery and equipment n.e.c.				
20. Manufacture of motor vehicles, trailers and semi-trailers				4,540
21. Manufacture of other transport equipment				3,337
22. Manufacture of furniture				4,157
23. Other manufacturing				10,597
24. Repair and installation of machinery and equipment				
Construction				
1. Residential buildings			2,888; Credit risk	71,403 persons engaged; Migrant workers as vulnerable group.
2. Non-residential buildings				
3. Civil engineering				
4. Specialized construction activities				
Services				
1. Electricity, gas, steam and air conditioning supply				
2. Water supply; sewerage, waste management and remediation activities				
3. Wholesale and retail trade, repair of motor vehicles and motorcycles			29,701; (81% micro-SME)	108,178
Wholesale of agricultural raw materials and live animals; Wholesale of food and beverages; Wholesale of pharmaceutical and medical goods; Wholesale of soap and toiletries				
Retail sale in non-specialised store; Retail sale of food, beverages and tobacco in specialised stores; Retail sale of automotive fuel in specialised stores				
4. Transportation and storage				
Tourism related transportation (bus services, taxi/limousine, rental of car with drivers, cruise & sightseeing boats)				
5. Accommodation service activities			262	9,641
6. Food and beverage service activities				55,714
7. Information and communication				
8. Financial and insurance/takaful activities				
9. Real estate activities			1,434 (85.3% micro-SME)	

10. Professional, scientific and technical activities				
11. Administrative and support service activities				
Travel agency, tour operator, reservation service and related activities				
12. Education				
13. Human health and social work activities				
14. Arts, entertainment and recreation			512	3,590
15. Other service activities			5,411 (94,1% micro-SME)	

4.3 Limitations of the study

4.3.1 Data limitation

The only credible and comprehensive source for data on SMEs is the *Profile of small and medium enterprises*, published by the Department of Statistics, Malaysia, where the most recent publication is from 2016, whose reporting year is 2015. Data used in this report is therefore a considerable underestimation, given economic growth in the past 5 years.

Data limitation is further amplified by the lack of granularity at state level. For example, profile of SMEs by size (micro, small, medium) is not available at state level. The same is observed for profile of SMEs (number of establishment etc.) at state level. While estimations can be made, every assumption made in correspondence to the estimation increases the variance of error. The variance of error also increases with granularity.

4.3.2 Discrepancy and ambiguity in the MCO list

The analysis in Section 3 is heavily subjected to inferences made by the authors as to which subsectors are included in the MCO list. This is due to the ambiguity from official lists and the frequency with which the list is altered²⁸.

4.4 A discussion on digitisation

4.4.1 Use of digital platforms

The Covid-19 pandemic has brought to bear the importance of digitisation by businesses. We note throughout this analysis that subsectors that are minimally affected by the MCO are those who are able to perform all three business pillars (input, operation and sales) via digital channels to varying degrees. The biggest paradigm shift brought by digitisation is the emancipation of the business entity from geographic constraints. Adapted correctly, this very paradigm enables businesses to reach global markets.

²⁸ The Star. (7th April, 2020). MCO: Govt makes U-turn, revokes permits for Heineken and Carlsberg, retrieved from <https://www.thestar.com.my/news/nation/2020/04/06/mco-govt-makes-u-turn-revokes-permit-for-heineken-and-carlsberg>. For example, Heineken and Carlsberg were initially allowed to operate during the MCO after obtaining approval to do so with a limited workforce. As of the 6th of April 2020, the government has revoked this decision due to criticisms from political and religious groups.

In this, however, SMEs in Penang have a significantly long journey to take. It is estimated that only 37.9% of SMEs maintain an online presence. They are also likely to experience friction in switching completely to online sales, as these were seen as unessential to their core business.

The MCO has also acted as a credible trial on the ability of digital technologies to enable significant productivity gains. There is growing recognition by businesses that many work functions can be completed remotely, and their corresponding considerations on how human resource can be better optimised to complement digital automation. On the other hand, employees realise productivity gains by not needing to commute to work and reap other benefits accrued from being able to work from home.

4.4.2 Digitisation of government services

The MCO has also shone light on the importance of government services being made available digitally. More than just allowing remote access to citizens, digitisation has also proven itself to be a critical channel for governments to communicate with citizens, and more importantly, combat the spread of fake news.

The Covid-19 pandemic has also brought to prominence the lack of structured and comprehensive data in the public sector. More so than ever, intervention targeting is critically necessary, and with it, the need for granular data. While these data are currently available, they are disparate in their structure and isolated in their ownership.

4.5 Post-MCO recovery

4.5.1 Tourism industry

The tourism industry is one of the greatest drivers of economic growth for Penang. The industry will remain in a downturn for an extended period of time after the MCO is lifted, due to virus fears, travel bans, and a lower propensity to spend as a result of the global recession.

The most urgent task at hand is to prevent a sectoral collapse during the height of the pandemic. Without intervention, the pandemic will effectively cripple the tourism industry swiftly, destroying businesses, and creating mass unemployment (given how labour-intensive the industry is) in the short term. More critically, there will be severe consequences for Penang's long-term growth trajectory. Furthermore, rebuilding a destroyed industry will be far costlier than reviving one that is doing poorly but still intact at its core.

Not only will the state need to temporarily prop up the industry until the worst is over, massive efforts in promoting Penang's tourism, and in renewed strategizing on the future of the sector, will be required in the aftermath.

4.5.2 Firms reliant on international trade

The pandemic has created a global recession, possibly one that is worse than the financial crisis of 2007/8. Though the majority of Malaysia's top trade partners will still see positive

GDP growth, it will be severely muted compared to previous years.²⁹ Hong Kong and Thailand's economies, for example, will contract by 3.1% and 4.8% respectively.³⁰

Trade will massively slow down due to the crunch in demand and heightened uncertainty, and export-reliant SMEs in Penang will bear the brunt of this downturn. Large SMEs (who export as much as 70% of their production³¹) in particular will be disproportionately affected.

Aside from the direct impact of shrunken global demand, firms will need to grapple with other indirect factors. Falling oil prices and possible credit downgrades will depreciate the ringgit, making it costlier to import raw materials, and hence, making those who import to export less competitive. Also, there is the issue of decreased productivity due to the impact on population health. Fortunately, this is less of a risk because Penang has succeeded in containing the virus spread thus far, and public health has not been compromised.

4.5.3 The aftereffects of fiscal and monetary measures

The impact of the government's stimulus packages in the medium to long term is very broad, but we will limit ourselves to a few pressing issues here.

In an uncertain environment, banks become more risk-averse, and become less willing to fund business ventures or other productive activities, worsening the downturn and making it harder for businesses to rebuild themselves after this. However, this is less of a risk since Bank Negara has made significant efforts to ensure that markets remain liquid, and continues to make itself the lender-of-last-resort.

As a result of large cash handouts and other fiscal measures, the federal government's borrowing is bound to increase. This may curtail the provision of public services funded by the federal government later on, and/or decrease the budget allocated to Penang on a whole, which would in turn affect how much the state can spend on development-related activities in the future. It is very important that the federal government does not become tempted to cut down on public health expenditure after the MCO. Future outbreaks after the MCO is lifted are possible, and Penang (like all states) continues to require public health funding to manage this risk.

²⁹ Malaysia's Trade Statistics, retrieved from <http://www.matrade.gov.my/en/malaysian-exporters/services-for-exporters/trade-market-information/trade-statistics>

³⁰ GDP Growth in Asia and the Pacific, Asian Development Outlook (ADO), retrieved from <https://data.adb.org/dataset/gdp-growth-asia-and-pacific-asian-development-outlook>

³¹ The Star. (30th September, 2019). Large SMEs to suffer the most, retrieved from <https://www.thestar.com.my/business/smebiz/2019/09/30/large-smes-to-suffer-the-most>

5.0 RECOMMENDATIONS AND CONCLUSION

In this report, we set out to determine which businesses are the most negatively affected by the MCO; in what way; and therefore, the entities which intervention should be targeted towards.

We present the following ranking of priority:

Table 5.1: Intervention needs for economic activity

RANK	ECONOMIC ACTIVITY	NOTES ³²
1.	Tourism Industry	<ul style="list-style-type: none"> 35,741 establishments; 156,516 persons engaged; RM9 billion in value added require industry-wide stimulus
2.	Wholesale and retail trade, repair of motor vehicles and motorcycles (MSIC: G)	<ul style="list-style-type: none"> 29,701 establishments – 81% of which are micro-SMEs; 108,178 persons engaged intervention should target business and workers
	Other service activities (MSIC: S) Eg: repair of bicycles, laundries, repair of mobile phones, hairdresser	<ul style="list-style-type: none"> 5,411 establishments – 94.1% of which are micro-SMEs; 3,590 persons engaged Intervention should target business entity and workers
3.	Real estate activities (MSIC: L)	<ul style="list-style-type: none"> 1,434 establishments – 85.3% of which are micro-SMEs Intervention should target business entity
	Construction Sector (MSIC: F)	<ul style="list-style-type: none"> 2,888 establishments – high exposure to credit risk Migrant workers as vulnerable group – official estimate at 5,660 persons Intervention should target business entity (credit) and migrant workers
4.	Agriculture (MSIC: A)	<ul style="list-style-type: none"> 486 establishments Intervention should target business entity

In our analysis, a few recurring intervention entry-points emerge. While on the entity level, we have identified *business* or *worker*, this can be further broken down to more accurately align intervention to where the needs are most felt.

³² See Appendix A, Table A.2

Table 5.2: Intervention entry points and corresponding target entity

Business	Worker
Credit 1. Reduce risk of default <u>Examples of intervention:</u> reprieves from loan repayment, and subsidies targeted at accrued interests. 2. Finance cost in absence of revenue <u>Examples of intervention:</u> interest-free loans and structured loan repayment schemes specifically designed for the Covid-19 context.	Worker retention 1. Support continuous employment <u>Examples of intervention:</u> exemptions of statutory employee contribution, wage subsidy ³³ and funding for upgrading skills.
Cost reduction 1. Reprieve from high fixed costs <u>Examples of intervention:</u> tax exemptions and subsidy pass-through ³⁴ by property owners	Salary compensation 1. Compensate foregone salary <u>Examples of intervention:</u> cash transfers, unemployment benefits and personal tax exemptions.
Income replacement 1. Stimulating consumption/industry <u>Examples of intervention:</u> dine-out campaigns post MCO, business transformation through technology and council parking waivers. 2. Income compensation <u>Example of intervention:</u> cash transfer	Migrant workers Migrants are identified as a vulnerable group during this Covid-19 pandemic. They rely on daily wages, and are often undocumented. In turn, SMEs rely on them heavily. Migrant workers should therefore also be specifically considered either in <i>worker retention</i> and/or <i>salary compensation</i> . <u>Examples of intervention:</u> alterations to foreign worker levy and stimulus pass-through by NGOs.

In conclusion, it is crucial that intervention measures are taken to ensure the sustainability of Penang's SMEs. Their survival is critical in the rebuilding of the state's economy in the months to come.

³³ The Straits Times. (6th April, 2020). All firms to get 75% wage subsidy for local employees and foreign worker levy waived for April, retrieved from <https://www.straitstimes.com/politics/employers-in-all-sectors-to-get-75-wage-subsidy-for-local-employees-in-april-dpm-heng>. Singapore has allocated a 75% wage subsidy to all firms where workers earn less than SGD\$4,600 for the month of April. Malaysia's current wage subsidy is between 15% to 30% for workers earning below RM4,000 (subjected to conditions) for three months.

³⁴ Channel News Asia. (2nd April, 2020). Government to introduce legislation to make landlords pass on property tax rebates to tenants 'in full', retrieved from <https://www.channelnewsasia.com/news/singapore/coronavirus-covid-19-introduce-law-property-tax-rebate-tenants-12601680> A subsidy pass-through is a subsidy given to a third party, which is then passed on to the intended beneficiary. An example of this is Singapore's property tax rebates to landlords which are meant to be passed on to tenants in full.

APPENDIX A

Table A.1: Principal statistics by sectors and subsectors, Penang, 2015

Sector	Number of establishments	%	Value added (RM million)	%	Number of persons engaged	%	Salaries and wages paid	%
Agriculture								
1. Crops	210	43.2%	90	8.5%	1,890	37.8%	31	33.7%
2. Livestock	144	29.6%	884	83.1%	2,133	42.7%	42	45.7%
3. Fisheries	132	27.2%	87	8.2%	975	19.5%	18	19.6%
Total	486	100.0%	1,064	100.0%	4,998	100.0%	92	100.0%
Proportion of SMES	470	96.7%	349	32.8%	4,021	80.5%	71	77.2%
Construction								
1. Residential buildings	687	23.8%	1,276	36.7%	24,854	34.8%	701	36.1%
2. Non-residential buildings	472	16.3%	869	25.0%	17,932	25.1%	507	26.1%
3. Civil engineering	340	11.8%	492	14.2%	9,830	13.8%	267	13.8%
4. Specialised construction activities	1,389	48.1%	837	24.1%	18,787	26.3%	468	24.1%
Total	2,888	100%	3,474	100.0%	71,403	100.0%	1,943	100.0%
Proportion of SMEs	2,804	97%	1,823	52.5%	43,464	60.9%	1,046	53.8%
Manufacturing								
1. Food products	571	13.6%	1,446	4.2%	14,624	5.4%	386	3.7%
2. Beverages	35	0.8%	66	0.2%	754	0.3%	19	0.2%
3. Tobacco products	3	0.1%	26	0.1%	112	0.0%	4	0.0%
4. Textiles	76	1.8%	233	0.7%	2,879	1.1%	85	0.8%
5. Wearing apparel	324	7.7%	440	1.3%	11,528	4.2%	266	2.6%
6. Leather and related products	19	0.5%	51	0.1%	996	0.4%	24	0.2%
7. Wood, products of wood and cork except furniture, articles of straw and plaiting materials	109	2.6%	117	0.3%	2,483	0.9%	62	0.6%
8. Paper and paper products	184	4.4%	966	2.8%	10,292	3.8%	291	2.8%
9. Printing and reproduction of recorded media	204	4.9%	241	0.7%	4,440	1.6%	117	1.1%
10. Chemicals and chemical products	138	3.3%	1,444	4.2%	7,354	2.7%	292	2.8%
11. Basic pharmaceutical products and pharmaceutical	36	0.9%	99	0.3%	1,369	0.5%	44	0.4%
12. Rubber and plastic products	316	7.5%	1,302	3.8%	19,480	7.2%	528	5.1%
13. Other non-metallic mineral products	86	2.1%	179	0.5%	2,878	1.1%	85	0.8%
14. Basic metals	171	4.1%	1,211	3.5%	11,104	4.1%	410	3.9%

Sector	Number of establishments	%	Value added (RM million)	%	Number of persons engaged	%	Salaries and wages paid	%
15. Fabricated metal products except machinery and equipment	553	13.2%	1,519	4.4%	15,161	5.6%	426	4.1%
16. Computer, electronic and optical products	217	5.2%	19,878	58.0%	118,465	43.5%	5,915	56.7%
17. Electrical equipment	136	3.2%	1,809	5.3%	11,677	4.3%	345	3.3%
18. Machinery and equipment n.e.c	359	8.6%	1,085	3.2%	11,554	4.2%	410	3.9%
19. Motor vehicles, trailers and semi-trailers	46	1.1%	530	1.5%	4,540	1.7%	163	1.6%
20. Other transport equipment	26	0.6%	547	1.6%	3,337	1.2%	117	1.1%
21. Furniture	158	3.8%	167	0.5%	4,157	1.5%	91	0.9%
22. Other manufacturing	183	4.4%	812	2.4%	10,597	3.9%	282	2.7%
23. Repair and installation of machinery and equipment	241	5.8%	124	0.4%	2,460	0.9%	69	0.7%
Total	4,191	100.0%	34,294	100.0%	272,241	100.0%	10,431	100.0%
Proportion of SMEs	4,021	95.9%	8,223	24.0%	102,507	37.7%	2,791	26.8%
Services								
1. Electricity, gas, steam and air conditioning supply	10	0.0%	137	0.6%	612	0.2%	19	0.3%
2. Water supply; sewerage, waste management and remediation activities	68	0.1%	400	1.7%	3,164	1.1%	104	1.6%
3. Wholesale and retail trade, repair of motor vehicles and motorcycles	29,701	49.5%	8,938	37.1%	108,178	37.1%	2,418	36.9%
4. Transportation and storage	2,663	4.4%	2,441	10.1%	20,758	7.1%	556	8.5%
5. Accommodation services activities	262	0.4%	641	2.7%	9,641	3.3%	258	3.9%
6. Food and beverage service activities	12,272	20.5%	2,376	9.9%	55,714	19.1%	532	8.1%
7. Information and communication	379	0.6%	1,665	6.9%	10,948	3.8%	320	4.9%
8. Financial and insurance/takaful activities	1,231	2.1%	3,069	12.8%	12,407	4.3%	712	10.9%
9. Real estate activities	1,434	2.4%	717	3.0%	5,376	1.8%	172	2.6%
10. Professional, scientific and technical activities	2,753	4.6%	1,287	5.3%	18,286	6.3%	470	7.2%

Sector	Number of establishments	%	Value added (RM million)	%	Number of persons engaged	%	Salaries and wages paid	%
11. Administrative and support service activities	1,318	2.2%	485	2.0%	10,226	3.5%	185	2.8%
12. Education	806	1.3%	375	1.6%	8,089	2.8%	201	3.1%
13. Human health and social work activities	1,177	2.0%	875	3.6%	12,462	4.3%	410	6.3%
14. Arts, entertainment and recreation	512	0.9%	151	0.6%	3,590	1.2%	58	0.9%
15. Other service activities	5,411	9.0%	504	2.1%	11,828	4.1%	137	2.1%
Total	59,997	100.0%	24,061	100.0%	291,279	100.0%	6,553	100.0%
Proportion of SMEs	59,600	99.3%	19,743	82.1%	253,307	87.0%	5,350	81.6%

Source: Authors' calculations, Economic Census, MyState Statistics, Penang, 2016 & Economic Census, Profile of Small and Medium Enterprises, 2016, Department of Statistics, Malaysia

Table A.2: Estimation of the number of SMEs in the services subsector by size

Services subsector	Micro		Small		Medium	
	National %	Number	National %	Number	National %	Number
1. Electricity, gas, steam and air conditioning 2. supply	16.1%	2	58.6%	6	25.3%	3
3. Water supply; sewerage, waste management and remediation activities	42.9%	29	45.0%	30	12.2%	8
4. Wholesale and retail trade, repair of motor vehicles and motorcycles	81.1%	23,919	17.7%	5,220	1.2%	354
5. Transportation and storage	94.5%	2,499	2.9%	77	2.6%	69
6. Accommodation services activities	46.1%	120	43.7%	114	10.2%	27
7. Food and beverage service activities	80.4%	9,798	19.0%	2,315	0.6%	73
8. Information and communication	48.9%	184	44.1%	166	7.0%	26
9. Financial and insurance/takaful activities	68.4%	836	22.4%	274	9.2%	112
10. Real estate activities	85.3%	1,215	13.8%	197	0.9%	13
11. Professional, scientific and technical activities	58.8%	1,607	39.0%	1,066	2.2%	60
12. Administrative and support service activities	62.8%	822	35.3%	462	1.9%	25
13. Education	75.4%	603	21.6%	173	3.0%	24
14. Human health and social work activities	73.3%	857	26.0%	304	0.7%	8
15. Arts, entertainment and recreation	74.9%	381	22.6%	115	2.5%	13
Other service activities	94.1%	5,056	5.7%	306	0.2%	11
Total	47,927		10,825		825	

Source: Authors' calculations,³⁵ Economic Census, MyState Statistics, Penang, 2016 & Economic Census, Profile of Small and Medium Enterprises, 2016, Department of Statistics, Malaysia

³⁵ The number of SMEs in Penang's services sector according to size is estimated based on the national percentage of all SMEs in the services sector for 2015.

APPENDIX B

List of critical manufacturing sectors that are allowed operations according to guidelines as decided by Ministry of International Trade and Industry

Table B.1: List of essential products recognised by the Ministry of Health

Products
1. Food and beverage items including imported items <ul style="list-style-type: none"> • Rice • Sugar • Vegetable and animal oils and fats • Flour and all grain mill products • Bread • Water • Dairy products – milk, infant formula • Condiments and spices • Dry food such as instant noodles etc • Coffee and tea • Canned food • Meat • Chicken • Animal feed • Processing of fruits and vegetables
2. Agriculture and fisheries including imports <ul style="list-style-type: none"> • Fish and seafood • Fruits • Vegetables
3. Household products <ul style="list-style-type: none"> • Detergents • Disinfectants • Sanitisers • Personal care items • Toilet paper and tissue paper
4. Personal Protective Equipment (PPE) including fire safety equipment and medical attire, including face masks, rubber gloves, etc.
5. Pharmaceuticals – all chemical and drugs production
6. Packaging materials and printing including ink
7. Medical and surgical devices
8. Parts for medical devices eg parts for ventilators

Source: Prime Minister's Office,³⁶ 2020

³⁶ Prime Minister's Office. (18th March, 2020) Press release, retrieved from <https://www.mkn.gov.my/web/wp-content/uploads/sites/3/2020/03/2.-KENYATAAN-MEDIA-MKN-PERGERAKAN-KAWALAN-COVID19-MITIfinal.pdf>

Table B.2: List of products that are part of the supply chain for essential goods for the exemption of restriction of movement

Products
1. Oil and Gas
2. Petrochemicals
<ul style="list-style-type: none"> • PTA and PET resins • Polyester fibres and filaments • Polypropylene and polyethylene • ABS and MABS resin • Maleic anhydride • PVC paste resin • Expanded EPE • Impact modifiers and processing aids • Styrene monomer • Styrene butadiene latex • Polystyrene
3. Chemicals and chemical products
4. Electrical and electronics (E&E) including semiconductors

Source: Prime Minister's Office,³⁷ 2020

³⁷ Prime Minister's Office. (18th March, 2020) Press release, retrieved from <https://www.mkn.gov.my/web/wp-content/uploads/sites/3/2020/03/2.-KENYATAAN-MEDIA-MKN-PERGERAKAN-KAWALAN-COVID19-MITIfinal.pdf>

APPENDIX C

Table C: List of essential services that are allowed to operate in the duration of the MCO

Phase 1 (19 th March, 2020 – 2 nd April, 2020) ³⁸	Phase 2 (2 nd April, 2020 – 14 th April, 2020) ³⁹
Services	
<ol style="list-style-type: none"> 1) Banking and finance 2) Customs 3) Defence and security 4) E-commerce 5) Electricity and energy 6) Fire 7) Food supply 8) Healthcare and medical 9) Hotels and accommodations 10) Immigration 11) Port, dock and airport services and undertakings, including stevedoring, lighterage, cargo handling, pilotage and storing or bulking of commodities 12) Postal 13) Prison 14) Production, refining, storage, supply and distribution of fuel and lubricants 15) Radio communication including broadcasting and television 16) Sewerage 17) Solid waste management and public cleansing 18) Telecommunication 19) Transport by land, water or air 20) Water 21) Wildlife 22) Any services or works determined by the Minister as essential or critical to public health or safety. 	<ol style="list-style-type: none"> 1) Banking and finance 2) Communications and internet 3) E-commerce 4) Energy 5) Food 6) Healthcare and medical including dietary supplement 7) Hotels and accommodations 8) Logistics confined to the provision of essential services 9) Port, dock, airport services and undertakings (including stevedoring, lighterage, cargo handling, pilotage and storing or bulking of commodities) 10) Production, refining, storage, supply & distribution of fuel and lubricants 11) Security and defence 12) Solid waste and public cleansing management and sewerage 13) Transportation by land, water or air 14) Water 15) Any services/works determined important or critical to public health or safety by the Minister

Source: Ministry of Human Resources and National Security Council, 2020

³⁸ Ministry of Human Resources. (19th March, 2020). Press release, retrieved from <https://www.mkn.gov.my/web/wp-content/uploads/sites/3/2020/03/FAQ-KSM-Edited-Version.pdf.pdf>

³⁹ National Security Council. (2nd April, 2020). Press release, retrieved from <https://www.mkn.gov.my/web/wp-content/uploads/sites/3/2020/04/FAQ-MKN-BIL.-2-PB-3-APRIL-2020.pdf>