

**INFLUENCE OF TALENT FARMING AND  
STRATEGIC AGILITY ON PERFORMANCE OF  
SMEs IN MANUFACTURING  
INDUSTRIES**

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**INFLUENCE OF TALENT FARMING AND  
STRATEGIC AGILITY ON PERFORMANCE OF  
SMEs IN MANUFACTURING INDUSTRIES**

by

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## LIST OF ABBREVIATIONS

AI	Artificial Intelligence
BNM	Bank Negara Malaysia
C&B	Compensation and Benefit
CAGR	Compounded Annual Growth Rate
CEO	Chief Executive Officer
CMB	Common Method Bias
CMCO	Conditional Movement Control Order
COVID-19	Coronavirus disease
DCT	Dynamic Capabilities Theory
DOSM	Department of Statistics, Malaysia
E&E	Electrical and Electronics
EMPRETEC	A United Nations programme established by the United Nations Conference on Trade and Development (UNCTAD)
EU	Europe
FDI	Foreign Direct Investments
FMM	Federation of Malaysian Manufacturers
GDP	Gross Domestic Product
HCM	Human Capital Management
HR	Human Resource
HRM	Human Resource Management
HTMT	Heterotrait-Monotrait
ICT	Information and Communication Technologies
IMF	International Monetary Fund
IR4.0	The Fourth Industrial Revolution
I-TOP	Innovation - Technologies-Organizational Capabilities-People
LLC	Large Local Company
M&E	Mechanical & Electrical
MATRADE	Malaysia External Trade Development Corporation
MCO	Movement Control Order
MIDA	Malaysian Investment Development Authority

MITI	Ministry of International Trade and Industry
MNC	Multinational Company
MPC	Malaysia Productivity Corporation
MSS	Mutual Separation Scheme
PKS	Perusahaan Kecil Sederhana
PSDC	Penang Skills Development Centre
R&D	Research and Development
RCEP	Regional Comprehensive Economic Partnership
RBV	Resource-Based Theory
RMCO	Recovery Movement Control Order
SEDCO	Perbadanan Pembangunan Ekonomi Sabah
SME	Small and Medium Enterprise
SME Corp	Small and Medium Enterprises Corporation Malaysia
TNC	Transnational Corporations
TQM	Total Quality Management
US	United State of America
VSS	Voluntary Separation Scheme

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**PENGARUH PENCAMBAHAN BAKAT DAN KETANGKASAN  
STRATEGIK TERHADAP PRESTASI PKS DALAM  
INDUSTRI PEMBUATAN**

**ABSTRAK**

Industri Perusahaan Kecil dan Sederhana (PKS) adalah tulang belakang dalam pembangunan industri dan memberi sumbangan yang sangat penting pada ekonomi Malaysia. Namun begitu, industri pembuatan PKS kurang berkeupayaan dalam menyesuaikan perubahan dan kurang bersedia dalam pencambahan bakat bagi mengurangkan risiko serta meningkatkan peluang dalam lanskap perniagaan yang dinamik masa ini. Oleh itu, kajian ini bertujuan memberikan bukti empirikal tentang hubungan antara pengaruh percambahan bakat dan ketangkasan strategik terhadap prestasi PKS dalam industri pembuatan di Malaysia. Dimensi yang dipertimbangkan dalam mengkaji percambahan bakat pada kajian ini ialah pemanfaatan bakat, pemerolehan bakat, pengekalan bakat dan penggantian bakat. Sejumlah 149 respon daripada soal-selidik yang telah dijalankan pada industri PKS di Malaysia telah di kaji dengan menggunakan perisian SPSS versi 24 (PLS-SEM) dan analisis IPMA. Penemuan pada kajian ini telah mendedahkan bahawa pengekalan bakat, penggantian bakat dan ketangkasan strategik mempunyai pengaruh langsung yang signifikan terhadap prestasi industri PKS, dan ketangkasan strategik juga mempunyai kesan pengantara ke atas perhubungan yang melibatkan pengekalan bakat dan penggantian bakat dengan prestasi industri PKS. Walau bagaimanapun, penemuan dalam analisis IPMA menunjukkan bahawa semua dimensi percambahan bakat adalah sama penting bagi menyokong peningkatan prestasi dalam industri PKS. Kajian ini turut

menyumbangkan panduan kepada industri PKS bagi membangunkan perniagaan yang mampan dan berdaya saing dengan mengguna pakai penjajaran ketangkasan strategik kepada bakat untuk meningkatkan ketangkasan mereka. Selain itu, penyelidikan ini juga menyumbang kepada ahli akademik dengan mengesahkan bahawa model Ketangkasan Strategik I-TOP yang menjadi asas bagi mengkaji faktor manusia terhadap konteks dimensi bakat bersama dengan ketangkasan strategik mempengaruhi prestasi industri PKS di Malaysia. Pembaharuan pada kajian ini adalah bagi membantu industri PKS dalam sektor perkilangan untuk lebih memahami pencambahan bakat dengan lebih baik dan pentingnya dalam mengekalkan strategi sendiri dan strategi modal insan. Analisis empirikal dan konsep rangka kerja ini turut memberi sumbangan penting kepada teori, pengamal dan polisi terhadap bakat ke arah ketangkasan strategik untuk menyokong prestasi dalam industri PKS. Sumbangan dan keterbatasan dalam penyelidikan ini akan dibincangkan dan cadangan untuk penyelidikan untuk masa depan juga turut dibentangkan.

**INFLUENCE OF TALENT FARMING AND STRATEGIC AGILITY ON  
PERFORMANCE OF SMES IN MANUFACTURING  
INDUSTRIES**

**ABSTRACT**

Manufacturing SMEs is the backbone of industrial development and an important contribution to the Malaysian economy. However, manufacturing SMEs lack of ability on adjusting to changes and preparation in talent readiness to mitigate the risk of capitalising on the opportunities in today's dynamic business landscape. Therefore, this study attempts to examine and provide empirical evidence on the relationship between the Talent and Strategic Agility influence on the performance of Malaysian manufacturing SMEs. The dimensions considered for Talent Farming in the study are talent harnessing, talent acquisition, talent retention and talent displacement. A total of 149 valid responses from a cross-sectional survey from Malaysian manufacturing SMEs were investigated using SPSS software version 24, Partial Least Squares-Structural Equation Modelling (PLS-SEM) and IPMA analysis. The findings reveal that talent retention, talent displacement and strategic agility have a significant direct influence on SMEs' performance while Strategic Agility has mediating effects on the relationship involving talent retention and talent displacement with SME's performance respectively. However, IPMA analysis finding highlight all talent farming dimensions are equally important to support building well-organized and robust SMEs' performance. This study contributes a guide to SMEs for developing a sustainable and competitive business by adopting a strategic agility alignment to talent to increase their agility. The research contributed

to academics by confirming that the underpinning I-TOP Strategic Agility model to examine the people factor in the context of talent dimensions together with Strategic Agility influence on the performance of Malaysian manufacturing SMEs. The novelty of this study is to assist SMEs in the manufacturing sector to understand better talent farming and its important approach in formulating effective self-reliance and self-sustain the human capital strategy. The empirical analysis and the conceptual framework make an important contribution to theoretical, practitioner and policy in the area of talent towards strategic agility to support manufacturing SMEs' performance. The contribution and limitations of the research are discussed, and recommendations for future research are also presented.

# CHAPTER 1

## INTRODUCTION

### 1.1 Chapter Introduction

This first chapter sets out an overview of the research study approach. In the first place, a brief overview of the background of the study to facilitate and identify the problem statement will be unfolded. Subsequently, it is followed by sections outlining the research objectives with corresponding research questions that are to be investigated. Thereafter, the significance of this research study will be briefly discussed, and a description of the key terms used in the thesis will be spelt out. Finally, the organization of thesis chapters will be discussed and it is brought to an end with a concluding summary.

### 1.2 Background of the Study

In today's era, economies and business dynamism landscape are unavoidable. Technology disruptions have become the main factor in the economy's dynamism, where organizations must respond and adapt quickly to sustain their businesses. In recent years, in addition to technological disruptions, the world landscape is also hit by recession due to the semiconductor shortage supply chain, trade wars, and other unprecedented events like the Covid-19 pandemic outbreak which has changed the business landscape. The landscape as we used to know, which is business strategies developed from forecast and prediction is gone with the wind. Today, the business is operating under a dynamic landscape that changes at an unpredictable pace that was never seen before in the digital age. Therefore, organizations are in dire need of better sensing agility, decision-making, and agility in executing the operation smoothly (Nafei, 2016).

SMEs are recognized as the backbone of sustainable economic development globally. Regardless of the size of the organization, all organizations including SMEs need critically to attain a level of readiness to compete. However, SMEs are facing three competitive challenges sustainability, global pressure and technology disruption (Leifels, 2020). Lack of strategic internal alignment to act quickly and in coordination with each other due to a lack of dynamic capabilities during the high degree of uncertainty (Uğurlu et al., 2018). In today's dynamic world, the organization must be persistently watchful of business landscape changes and align their business strategies dynamically. Even the current business champions can be knocked off their domination by a new market entrant or significant industry disruptors, for example, in the case of Apple and Microsoft. Despite arising new challenges, these companies are so agile in adjusting their market positioning by changing their strategies as and when the environment dictates. Unfortunately, not many companies have the capacity and bandwidth like these two giants to face the dynamism of business changes. Many organizations do not perform well due to a lack of ability in sensing, decision making, and executing the decision timely (Chan & Muthuveloo, 2018). According to Suryaningtyas et al. (2019), organizational performance is defined as the organizational ability to adapt by sensing, organizing, and executing ever-increasing changes due to sudden disturbances to survive and prosper. Strategic agility enables an organizational ability to efficiently regulate and also execute the right strategic direction at the right time to enhance overall organizational performance. The performance of an organization depends on its strategic agility aligning flexibility towards its stakeholders such as competitors, customers, suppliers, partners and government policies (Asheq & Hossain, 2019). Literature reviews on organizational performance have indicated that strategic agility

had significantly improved the competitive advantage and overall performance of any organization (Arokodare et al., 2019)

Also, in the current globalized economy, SMEs are encountering increasing complexity of the manufacturing process that changed the traditional organization management (Alderete, 2019). Even more challenging when the acceleration of the digital transformation has reached all areas of the SME sector. But the digitalization of SMEs is being hampered by a growing problem such as a lack of digital skills in the workforce. For successful technology adaptation in SME sectors, the availability of a technologically skilful workforce in the economy, and identifying the relevant technologies are vital for readiness for SMEs' success and performance (Obaji et al., 2019). Changes in the field of work in the IR 4.0 setting have further increased the gaps in skills mismatch and the absence of skilful workers was the biggest concern of the manufacturers (Kamaruzaman et al., 2019).

Disruption of talent management demands new design thinking, agile management, behavioural economics and analytics to augment their HR competencies. Organizations will be unable to reinvent their existing talent management practices in a sustainable way (Claus, 2019). Malaysian manufacturing SMEs possess limited skills and knowledge in manufacturing and strategy development (Mamun, 2019; Leifels, 2020). Digital acceleration compels an organization to revisit business operations via e-commerce and hybrid work from the home approach which led to harnessing internal employees to more digital incline competencies (Khai et al., 2020). Battling for better talent is worth it as organizations find it hard to bring and keep quality individuals, especially when the requirement for eminent talent is expanding (Aina & Atan, 2020). Most manufacturing SMEs' cash flow is bleeding due to a lack of reserves and are forced to look to displace some

talents that are not productive, redundant, unable to be reskilled or upskilled (López-Pérez et al., 2020; Aguinis & Tian, 2021).

According to Leifels (2020), even in developed countries like Germany, around 80% of SMEs have a great need for basic digital skills such as the ability to use standard software and digital devices. Just under one quarter (24%) of SMEs need advanced digital skills such as programming and statistical data analysis skills. One-third of SMEs cannot meet their digital skill requirements, as 34% of them experience a shortage of at least one digital skill. SMEs could acquire digital skills in three approaches: through recruitment, outsourcing and further training. The latter has proven to be the most common strategy of SMEs. However, smaller enterprises lack an HR development department which is seen as expensive (Mensah, 2011), or do not have a department to deal with digitalization or IR4.0 challenges to identifying training needs (Grencíková et al., 2020).

However, the current HR core functions of attracting, retaining and managing the employees effectively only will not be enough to sustain and grow the organization to move to the next level (Richman, 2015). In the dynamic world today, an organization is finally focusing on managing its talent for future needs (Bhambhani & Saniy, 2017). Disruption changes to the business landscape by Industry 4.0 revolution created extraordinary pressure on human resource management to relook into their talent management practices to ensure the survival and sustainability of the organization's performance.

The speed of transformation due to technology disruption created by IR4.0 exposed a significant competencies gap with current employees on future needs. A new evolving requirement for new roles demands new and more effective talent management practices to develop future skillsets. Nevertheless, SMEs continue



overlooking or taking things for granted in developing critical digital skillset under talent management for the digitalization business landscape (Whysall et al., 2019).

In current SMEs, talent management practices do not design processes automatically to address the talent competencies gaps in skillset, knowledge and abilities to execute their assigned roles. Although the intention of SME organizations to implement HR towards IR4.0 is the best optimum, cash sensitive SMEs HR departments still not investing enough to reinvent their existing talent management approach sustainably but rely heavily on hiring managers (Puhovichova & Jankelova, 2020). According to the study done by Mathew (2018), the major challenge for any organization to execute any digital strategies is due to the lack of digital skills. Today, more than ever, the organization tend to invest in reskilling and upskilling their existing talents toward digital competencies. The challenges brought by digitalization require the main stakeholder's real-time realization of the demand for digital competencies whether through internal skill-enhancing or talent acquisition to address business needs.

For successful implementation and creating a value proposition in the dynamic business landscape, a collaborative and integrated ecosystem is vital compared to working in silos for better effective information and knowledge sharing (Mathew, 2018). Therefore, for SMEs to prepare an adequate digital talent pool, new talent farming themes complementing traditional talent management practices beyond focusing only on internal existing resource development practices are needed. A new focus on “farm” new talent crops to address open talent war competition along with harnessing existing talent to the optimum potential and investing further strategically in talent acquisition (Cappelli & Keller, 2014). At the same time, low-performing employees or unable to harness further should be identified with transparency on the

separation process from the organization fairly. New talent farming elements by complementing talent management will be able to address the lack of skilful talents faced by manufacturing SMEs in Malaysia (Kamaruzaman et al., 2019). Their study illustrated that the workforce in manufacturing still lacks appropriate digital competencies, flexibility, and agility to face the challenges posed by the uncertain business landscape in Malaysian SMEs.

Until now, organizational performance is the most debated topic by researchers even though the concept is prevalent in academic literature. However, the definition of organizational performance is difficult because of its varied meaning. Most academic studies on organizational performance tend to approach different theoretical lenses. For example, the resource-based perspective like the Resource-Based Theory (RBV) (Wernerfelt, 1984; Barney, 1991) explains the competitive advantage of a firm capability by accessing correctly to the fullest potential of its resources to perform in a dynamic uncertain environment in the digital age. Dynamic Capability Theory (Teece, 2014) stresses the business's need to achieve business sustainability, addressed by the dynamic capability theory (Teece et al., 1997) and business processes in linking the firm to the external environment (Teece, 2014). Even though the concept of company performance gets a high level of attention, most scholars have yet to adequately deal with this situation of uncertainty satisfactorily. The outcome of organizational performance analysis influences actions taken by the organization to define its future direction. There is also a lack of operational definitions with no consensus among scholars, and the objectives of an organization are not precisely defined, which results in a large number of concepts employed to explain performance (Elena-Juliana & Maria, 2016). Organizational performance is the most sought variable in management study and management research. In today's

sensitivity to revealing business strategy on competitiveness, measuring organizational performance based on financial results as the only measurement for business performance is not comprehensive (Primadona & Emrizal, 2018). As a result of this, a considerable amount of literature has been published, a key focus being on the improvement in performance in dealing with an increasingly uncertain world economic environment (Radović-Marković et al., 2019; Tajpour et al., 2020).

Nevertheless, the result of SMEs' performance is the result of the actions taken by the organization to meet its future business needs. There is still a lack of clarity in measuring SMEs' performance contributions factors. During SME Policy Brief by KSI Strategic Institute for the Asia Pacific (2020) involving SMECorp CEO, the forum concluded most of the discussion on SMEs' challenges and issues highlighted more from larger SMEs' views and inputs during every business dialogue which is never a true representation of all SMEs population. As the business nature of the medium, small and micro SMEs tend to operate with different challenges and issues, making a general assumption might not be addressing the correct problem to resolve. Therefore, measurement items to measure the performance of SMEs may vary from business, industry and countries perspective. Using the same performance indicators for generalising will not represent the actual performance of the organizations. There is no strong disagreement with considering the financial report as the only measurement for business performance, non-financial performance measurements that improve business performance could be the best substitute.

Therefore, SMEs organization need to understand the influential critical factors like talent with the right digital skillsets and strategic agility that contribute towards organizational performance based on the right relevant practical measurement, especially on Malaysian manufacturing SMEs, which are the biggest

enablers for employment and also demand a high level of digitalization adoption. The contribution of studies on organizational performance can be capitalized as guidelines to enable organizations to focus to build the right talent competencies to be strategically agile to support digitalization deployments. As such, this paper is organized to focus on the concept of talent-related determinants alignment with strategic agility for the survival, sustainability, and successes of Malaysian SMEs manufacturing with underpinning theories related to the dynamism of the business landscape. It is envisaged that this paper would further enhance knowledge in this area. The study findings will guide the relevant stakeholders such as policymakers, business owners, and scholars on how to shape talents according to company-specific agility needs that are unable for the manufacturing organization of Malaysian SMEs to perform.

#### 1.2.1 Global SME scenarios

Small and Medium Enterprises (SMEs) play a significant role in GDP contributors to any country's economy. SMEs account for the majority of businesses establishment worldwide and are important contributors to job creation. They represent about 90% of businesses establishments and contribute more than 50% of employment worldwide. In emerging economies, SMEs contribute up to 40% of national income (GDP). According to the World Bank (2020), an estimated 600 million jobs will be needed by 2030 to absorb the growing global workforce. In emerging markets, 7 out of 10 jobs are generated by SMEs (World Bank, 2020). In many regions and cities, SMEs have been the main drivers of job creation, particularly since the crisis. In urban and rural areas, they often contribute to the identity and social cohesion of local communities. SMEs tend to be more labour intensive and at a macro

level, therefore, provide a substantial contribution to employment. SME development is always a high priority for many governments around the world. Thus, the study of SMEs becomes a widespread relevant subject study. From country to country, the definition of SMEs can be varied. Table 1.1 gives a general overview of different definitions used worldwide.

Table 1.1 SME definitions

	VARIOUS COUNTRIES					BRICS					
	EU	USA	Asia (Malaysia)	Egypt	Ghana	Brazil (industrial)	Brazil (commercial)	Russia	India	China	South Africa
Name	Small & Medium Ent.	Small & Medium Bus.	Small & Medium Ent.	Micro, Small & Medium Ent.	Micro, Small & Medium Ent.	Small & Medium Ent.	Small & Medium Enterprise	Small & Medium Ent.	Micro, Small & Medium Ent.	Small & Medium Ent.	Micro, Very Small, Small & Medium Ent.
Number of employees											
Micro	<10	-	<5	1 - 4	1 - 5	1 - 19	1 - 19	-	0	-	<5
Small	<50	<100	May-50	5 - 14	6 - 29	20 - 99	10 - 49	15 - 100	0	<300	20-49
Medium	<250	<500	51-150	15 - 49	30 - 39	100 - 499	50 - 99	101 - 259	0	300-2000	50-200
Annual Turnover											
Micro	<€2	0	RM250K	0	\$10K	0	0	-	<Rs50mil	-	<R200k
Small	<€10	0	RM250K- <RM10mil	0	\$100K	0	0	400mil RUB max	<Rs50-60m	<Y3m	R3mil- R32m
Medium	<€50	0	RM10mil- RM25mil	0	\$1mil	0	0	1bn RUB max	R260-99m	Y30- Y300m	R5m- R64m

Source: South African Institute of Public Accountants (SAIPA), information is drawn from NCR (2011:23), and South African National Small Business Amendment Act, 2003.

## 1.2.2 Overview of SMEs in Malaysia

In literature, SMEs definition has been differently defined by the countries and international organizations based on the number of annual turnovers, employees and concerning the characteristics specific to the sector, region, and the country. The majority of countries define limit SMEs as enterprises with employees ranging and annual revenue. The World Bank defines the SMEs and large firms using the employment size of the firm for classification as small, medium, and large. In Malaysia, SME has been defined by SME Corp. as reflected in Figure 1.1 below.

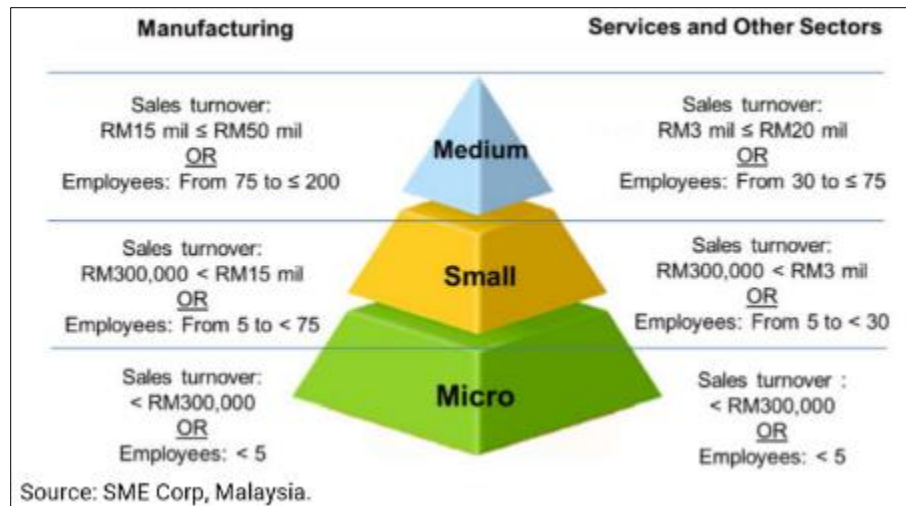


Figure 1.1 Definition and categorization of SMEs (SMECorp, 2016)

Like every country, SMEs are the major backbone of Malaysia's economy (Ibrahim et al., 2016). Aside from generating income and employment, SMEs equally have a crucial role in gender and youth empowerment, addressing urban and rural poor through entrepreneurship promotion. Therefore, member states depend significantly on SMEs for their economic growth and development (Singh & Hanafi, 2019).

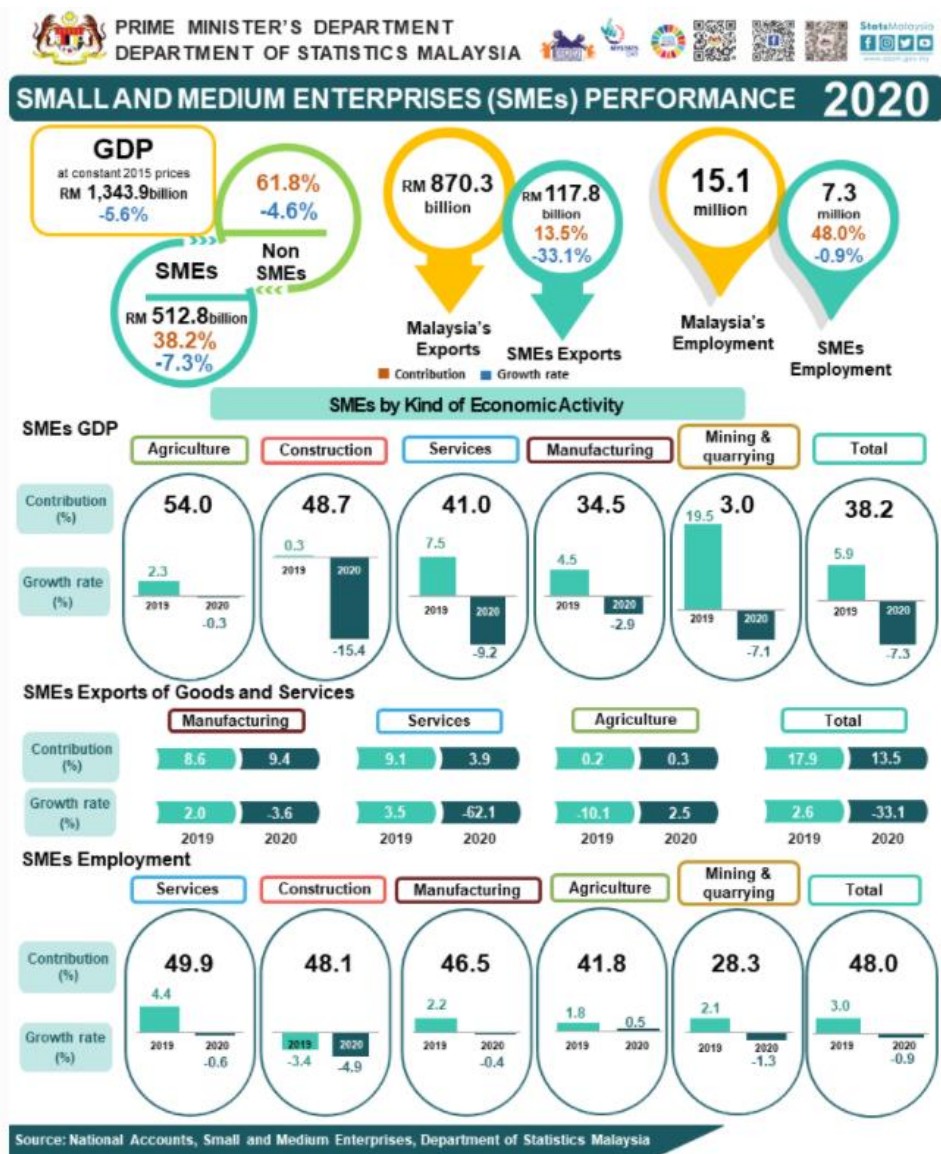
According to the data released by the Department of Statistics Malaysia (DOSM) on 29 July 2020, SME contribution to the overall GDP increased to 38.9% in 2019 compared to 38.3% recorded in 2018. The contribution of SMEs to the economy, namely to Gross Domestic Product (GDP), exports and employment expanded further in 2019 despite a challenging domestic and global environment. The contributions have reaffirmed the role of SMEs as a substantial backbone of the Malaysian economy, providing jobs and growth opportunities. In 2019, SMEs employed about 7.3 million people, denoting an increase of 3.0% from the previous year, thus contributing 48.4% to the country's employment (2018: 48.0%). SME employment generated by manufacturing

(16.3%) followed by agriculture (10.6%), construction (9.7%) and mining & quarrying (0.3%).

### 1.2.3 SME Performance in Malaysia

Small and medium enterprises (SMEs) in the manufacturing and services sectors play an important role in the economy and are acknowledged to be the backbone of economic development. Background studies from the previous section on SMEs performance show that small and medium enterprises (SMEs) are renowned as an engine of sustainable economic development in both the developed and developing world (Prasanna et al., 2019). SMEs are the main enablers to create job opportunities and improve the economy.

Based on the Department of Statistics Malaysia. Performance of Small and Medium Enterprises (SMEs) 2020 is shown in Figure 1.2, there is an increasing number of SMEs in Malaysia since 2015 to 1,151,339 SMEs in 2020. SMEs in Malaysia contributed 38.2 per cent of Gross Domestic Product (GDP) in 2020. Despite the tremendous growth in terms of the numbers and contributions of SMEs to the Malaysian economy, recent issues such as the health crisis caused by the COVID-19 pandemic in 2020 have impacted SMEs. More specifically, the performance of all sectors of the economy has declined with the implementation of the Movement Control Order (MCO) across the country, which includes numerous measures to combat the spread of COVID-19. Data from DOSM based on Gross Domestic Product (GDP) for 2020 illustrated that Malaysia's export is worth Rm 870.3b whereas, SMEs' export is around RM117.8b. SMEs' GDP declined to -7.3 per cent in 2020 as compared to 5.9 per cent in 2019.



Source: Department of Statistics Malaysia. Performance of Small and Medium Enterprises (SMEs) 2020; Department of Statistics Malaysia: Putrajaya, Wilayah Persekutuan Putrajaya, Malaysia, 2021.

Figure 1.2 Small Medium Enterprises (SMEs) Performance in Malaysia

In the context of economic activity change of SMEs' GDP by economic activity, it is shown that there is a steady decline from 2019 (17.9%) to 2020 (13.5%) in contributions while declining in growth rate from 2019 (2.6%) to 2020 (-33.1%). Although, the manufacturing SMEs sector recorded an increase from 2019 (8.6%) to 2020 (9.4%) in contributions but a decline in growth rate from 2019 (2.0%) to 2020 (-3.6%). However, service sectors show a decline from 2019 (9.1%) to 2020 (3.9%) in



contributions and a drastic decline in growth rate from 2019 (3.5%) to 2020 (-62.1%). The increase in manufacturing contributions could be explained by the below investment trend illustrated in Figure 1.3 which could be spillover effects on SMEs manufacturers contributions.

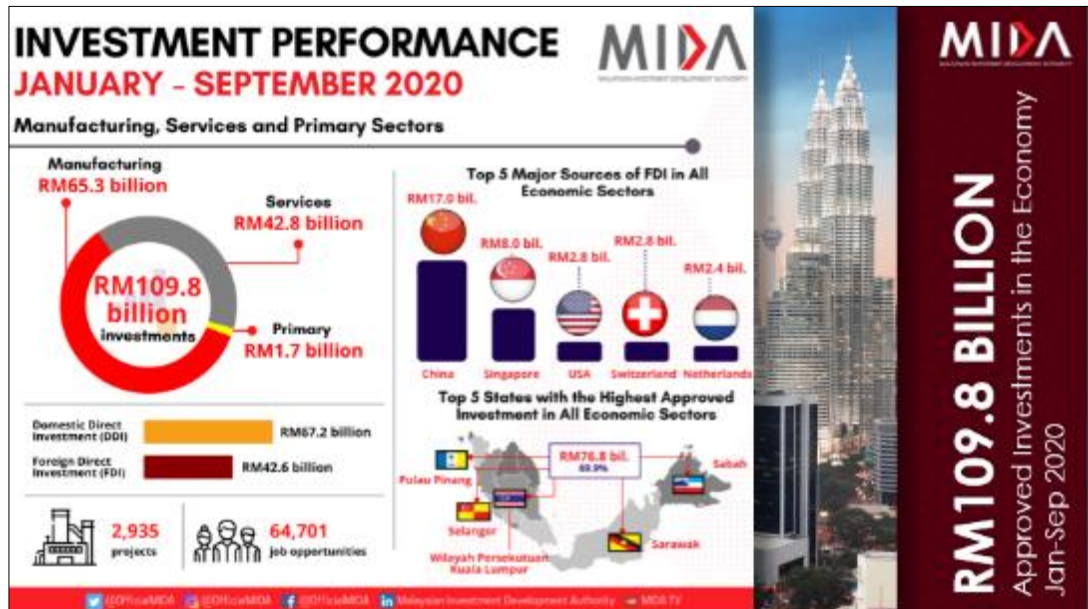


Figure 1.3 Investment Performance (January 2020 to September 2020)

As illustrated in Figure 1.3, Malaysia recorded a total of RM109.8 billion worth of investments in the manufacturing, services and primary sectors for the first nine months of 2020. The manufacturing sector attracted the largest portion of approved investments for this period, contributing more than half (59.5 per cent) or RM65.3 billion, followed by the services sector with investments of 39.0 per cent or RM42.8 billion, and the primary sector with approved investments of 1.5 per cent or RM1.7 billion. Department of Statistics Malaysia in 2017 indicated that there were close to 2,000 establishments involved in the manufacturing of electric and electronics (E&E) related products in Malaysia.

About 1,700 of these companies are SMEs. Since then, it has grown by leaps and bounds to become one of the major industries for the country as it contributes significantly to export earnings, foreign investments, and employment. In 2020, the economic activity in Malaysia contracted sharply in the first half of the year (-8.3%) as the measures introduced to contain the pandemic globally. It domestically resulted in a concurrent supply and demand shock to the economy, which directly and indirectly affected SMEs' performance in Malaysia. Figure 1.9 below, illustrate the milestones during the lockdown in Malaysia.

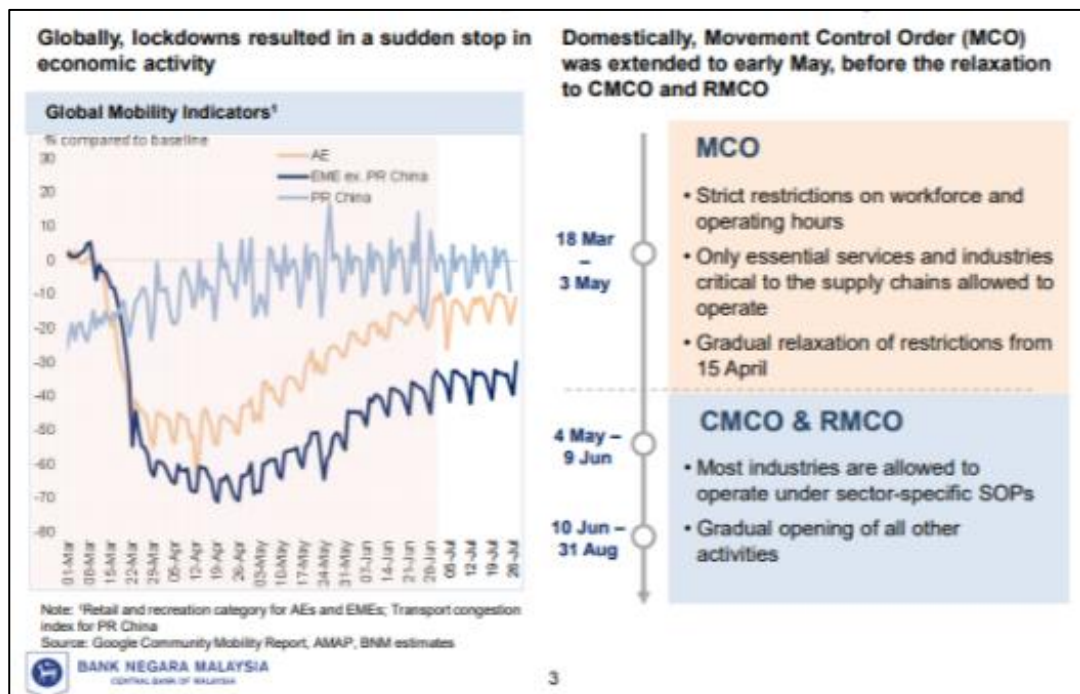


Figure 1.4 Lockdown imposed globally and domestically to combat COVID-19 resulted in a stop in economic activity (Bank Negara, 2020)

Weak growth was recorded across most economic sectors amid the imposition of the Movement Control Order (MCO), followed by the Conditional and Recovery MCO, during 2Q 2020. During the lockdown, weak external demand conditions and strict containment measures in 2Q 2020, forced the Malaysian economy to register Malaysia's first contraction (2Q 2020: -17.1%; 3Q 2009: -1.1%) since the Global Financial Crisis (Bank Negara, 2020) as shown in Figure 1.5.

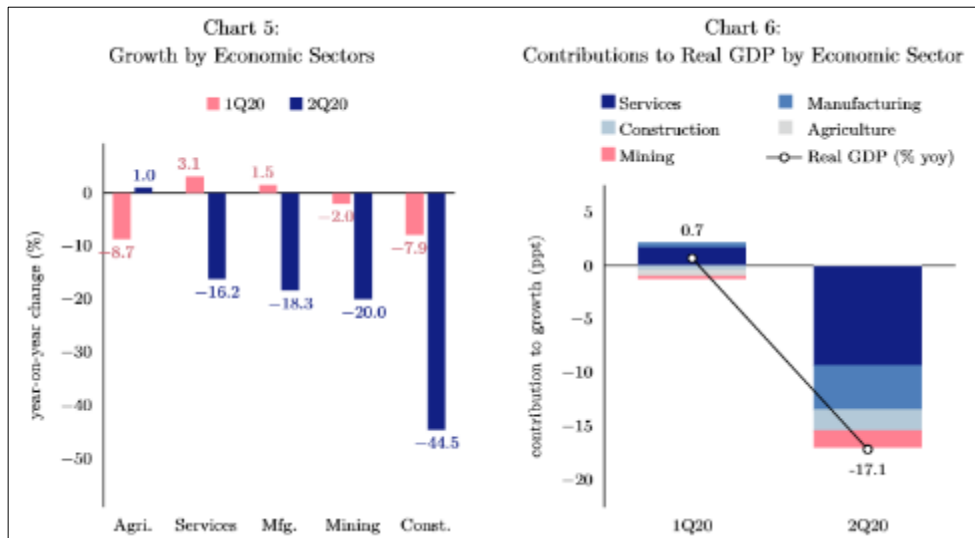


Figure 1.5 Weak growth across most economic sectors (Department of Statistic Malaysia)

The services sector contracted by 16.2% (1Q 2020: 3.1%). The services sector contracted by 16.2% (1Q 2020: 3.1%). The sector was affected by the implementation of a nationwide restrictive MCO, with only essential services such as food-related retail, utilities, banking, transportation as well as information and communication entities allowed to operate with very limited capacity. The subsequent transition to Conditional MCO (CMCO) in May and Recovery MCO (RMCO) in June 2020 provided some relief to businesses in the sector. The lockdown had substantially affected consumer spending and tourism activity, as shown by the significant decline in the wholesale and retail trade, as well as food and beverages and accommodation sub-sectors. Meanwhile, growth in the information and communication sub-sector was relatively sustained by the continued high demand for data communication services, especially during this period of remote working arrangements.

The manufacturing sector contracted by 18.3% (1Q 2020: 1.5%), due largely to the imposition of MCO restrictions as well as weak demand conditions. The extension of the MCO from the end-March throughout April 2020 curtailed

production activity across all industries. Essential sectors and those in the related supply-chain sectors operated at reduced capacity to ensure sufficient social distancing at workplaces. In contrast, non-essential sectors such as transport equipment and textile-related industries did not operate. Following the lifting of MCO restrictions in May 2020, manufacturing firms gradually restarted operations but did so while observing sector-specific health protocols amidst subdued demand conditions externally and domestically. The latter had particularly affected the performance of the primary-and consumer-related clusters.

Nevertheless, the impact of weak demand was partially offset by a backlog of orders which supported a faster production recovery, observed mainly in the electric and electronics (E&E) industry. The E&E industry was established in Malaysia in the 1970s. Furthermore, the E&E sector continues in an uptrend in manufacturing contributions more than the services sectors, which were impacted during the pandemic. According to Tengku Datuk Seri Zafrul Tengku Abdul Aziz, who is the Finance Minister, in 2020, growth in key manufacturing and export sectors like medical equipment and electrical and electronics (E&E) helped cushion the blow to the services sector, particularly with international borders still closed.

In terms of employment, SMEs contribute 7.8mil employment out of a total of 15.1 million Malaysian employments which is 48% of Malaysia's workforce. However, Malaysia's SMEs employment also declined to -0.9 per cent in 2020 as compared to 3.0 per cent in 2019. However, during the pandemic, Malaysia experienced labour market conditions illustrated in Figure 1.6 which shows the unemployment rate increased from 3.5% in Q1 to 5.1% in Q2, 2020 while new job

creation of 11 against every 100 job losses. New jobs could merely be due to the unique skillset needed after lockdown compares to unskilled jobs losses.

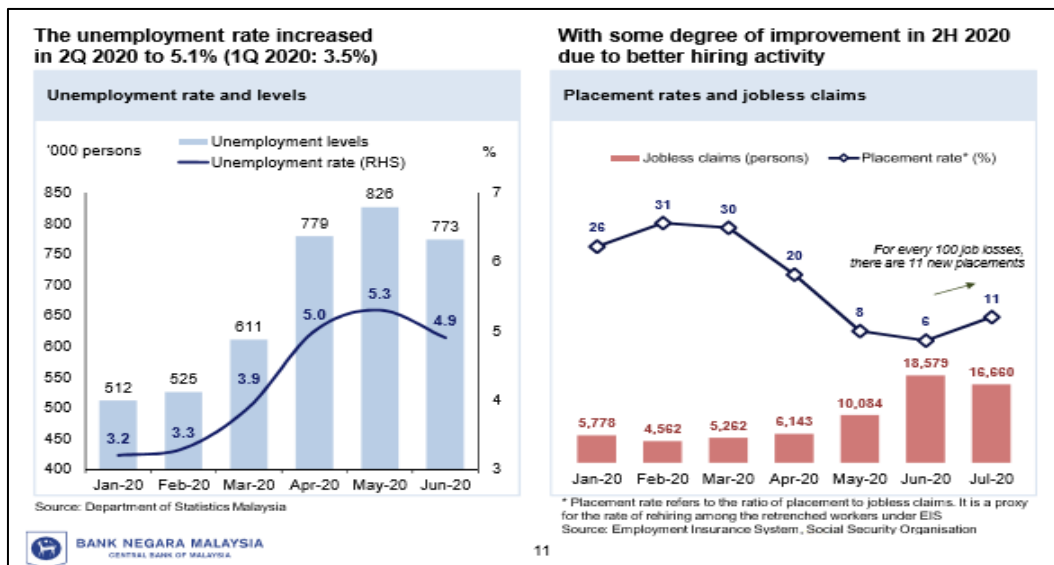


Figure 1.6 Labour market conditions to improve going forward, in line with the recovery in economic activity (Bank Negara, 2020)

However, the Malaysia Productivity Corporation (MPC) reported that the labour productivity for Malaysia’s M&E sector lags the “Best in Class” average by four times (see Figure 1.7).



Figure 1.7 Comparison of Labour Productivity between Malaysia and Selected Countries (Malaysia Productivity Corporation (MPC): Productivity Malaysia Way Up. (2017). Productivity Nexus-Machinery and Equipment

Besides, the labour productivity of SMEs is 1.4 times less than large companies (see Figure 1.8).

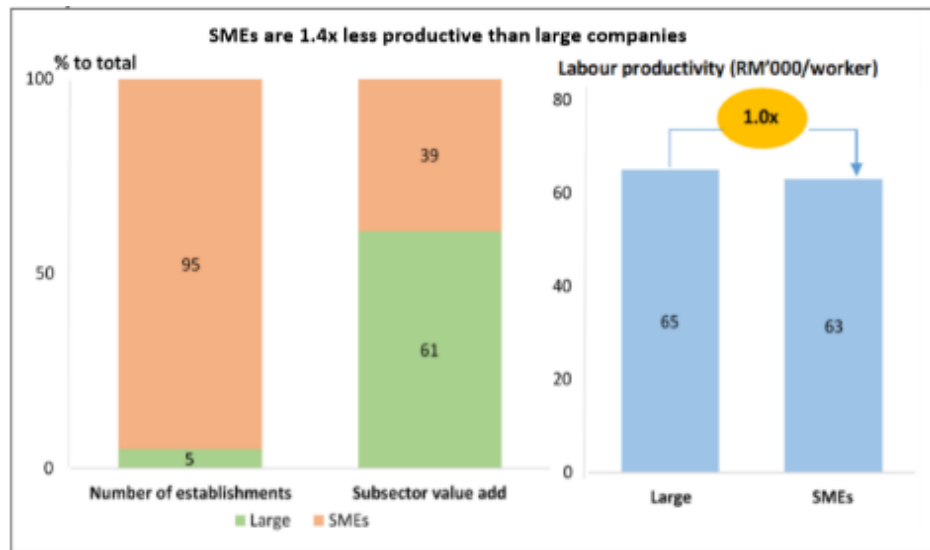


Figure 1.8 Comparison of Labour Productivity between SMEs and Large Companies in Malaysia (Malaysia Productivity Corporation (MPC): Productivity Malaysia Way Up. (2017). Productivity Nexus-Machinery and Equipment.

The above illustration demonstrated that SMEs still lacked the drive on deploying IR4.0 to improve efficiency and productivity despite all the policies in place and drive-by MITI.

In terms of overall SMEs performance as shown in Table 1.2, the overall services sector which used to exceed the manufacturing sector before the pandemic seems to decline whereas manufacturing seems to show more resilience even during the pandemic.

Table 1.2 Key SME Performance Summaries

INDICATORS	2019	DURING PANDEMIC	POST PANDEMIC
Overall GDP SME Contribution	56.7%	Δ 16.2% ↓	Δ Service ↓
• Services	22.4%	Δ 18.3% ↓	Δ Manf ↑
• Manufacturing			
Employment	3.2% ↑	Δ 3.5% (Q1, 2020) ↓ Δ 5.1% (Q2, 2020) ↓	Δ Service ↓ Δ Manf ↑
Productivity	2.7% ↓ (2.9% 2018)	Not available	Not available

Note: Δ Estimated delta equivalent of revenue

Despite Malaysian SME performance showing resilience, there is a contraction in the services sector while stable in the manufacturing sector. This impact, directly and indirectly, impacted the SME employment trend. However, the previous section demonstrated that post-pandemic seems to show that during the crisis, manufacturing contributions performance seem to more than the service sector. This demonstrated that the manufacturing sector helped cushion the blow to the services sector. As the importance of manufacturing to Malaysia as GDP and job creation, this study scope will be on SME manufacturing SMEs in Malaysia.

Manufacturing SMEs have significant influence over global development as the backbone of the economy for most countries in the world, even in Malaysia (Lee et al., 2017). Current statistics indicate that Malaysia's manufacturing sector is increasingly exceeding the growth compared to services dependency on FDI (DOSM 2020). It also highlighted that digitalization increased the SMEs' production productivity which is critical for organizational performance (Alderete, 2019). The Malaysia Productivity Corporation (MPC) reported that the labour productivity for Malaysia's M&E sector most of them SMEs inclined are still lagged against the "Best in Class" in the world at an average of four times. Additionally, the labour productivity of SMEs is 1.4 times less than large companies as they are less dependent on labour due to automation investment compared to SMEs. Traditional thinking on over-dependence on lower pay for foreign workers or expectation of material costs to reduce is not productive to compete in the digital business environment. However, automation efforts to enhance productivity, improve product quality and increase manufacturing process efficiency are hindered by costing, training and lack of flexibility from manufacturing SMEs stakeholders in Malaysia (Ismail et al., 2019).

#### 1.2.4 SME Challenges in Malaysia

A recent study in Malaysia showed SMEs' lack of business sustainability, acting proactively, and making a timely decision during a crisis (Kasim et al., 2020). The results found showed that SMEs lack readiness in sensing sustainable position, assessment of risk management and ability to decide the crisis. While another study was done by Yusoff et al. (2018) in Malaysia, where the study revealed that almost 50% of SMEs were unable to sustain their business after the first five years of the establishment while two-thirds failed within the first ten years of operation. The unpredictable global phenomenon has thrown the business into turbulence due to a lack of strategic agility to navigate through the crisis, especially the small-medium enterprises (SMEs) which are the backbone of Malaysia's business environment. SMEs have less survival rate due to a lack of ability on changing and aligning changes than large firms due to changes in customer behaviour towards e-commerce and digitalization expectations in manufacturing. Despite being the backbone, SMEs perform relatively poorly in digitalization in this digital age.

Smaller-scale SMEs and their lack of specialist staff for strategic or long-term planning, strategic or technological surveillance and innovation are hindered by a lack of financial resources and people (Arbussa et al., 2017). Malaysian SMEs' performance is still far from readiness to digitalization or automation to capitalize on the opportunities on their own due to lack of funding. SMEs see investing in digitalisation or automation as an expense rather than an investment (Sreenivasan et al., 2019). Due to SMEs' lack of agility, they are unable to respond to remote working or business via e-commerce during the lockdown, which led to many SMEs being unable to sustain their operations. Many led to the closure of businesses during and post-pandemic. Most SME organizations during crises demonstrated ad hoc resilience



in terms of cash flow and operational challenges. Most SMEs tend to lack strategic agility to sense, make decisions and execution to capitalize on the opportunities or mitigate the risk in the marketplace for SMEs in Malaysia (Munteanu et al., 2020).

The majority of SMEs' performance during Covid-19 seem to demonstrate a lack of strategic agility leading to operational problems such as operational disruption, supply chain disruption, fore sighting of the future business direction and financial problems such as cash flow imbalance, access to stimulus packages and risk of bankruptcy (Omar et al., 2020).

SMEs were caught in surprise on the readiness during and post-pandemic due to a lack of strategic agility. SMEs demonstrated a lack of resilience and agility to remain relevant to this adverse condition (Omar et al., 2020; Lim & Teoh, 2021). During pandemic Covid-19, there was an impact on vulnerable segments of the labour market disproportionately which resulted in a net employment change from 2019 to 2020 in non-standard employment such as own-account workers, unpaid family workers, and employers (Bank Negara, 2020).

A survey conducted by the Department of Statistics Malaysia in the period 10th April to 1st May 2020 (MCO Phase 2 to Phase 4) as illustrated in Figure 1.9, found that there were three main issues or challenges SMEs faced, which are namely salary payments, no customers and difficulty to do rental payments. It also found that 42.5% of SMEs companies or businesses firms require more than six months to recover. Other findings highlighted are 67.8% of SMEs claimed that there is no sales or revenues as a source of income while 68.9% of SMEs seem to use their savings as the main source to accommodate operating cost or working capital during MCO. The survey found that 53.4% of SMEs companies are only able to survive 1 to 2 months if the employees, whether full-time or part-time, take pay leave options. During this

period of MCO, 33.5% of SMEs choose to work from home, 19.0% reduced working hours, 16.5% went into unpaid leave and 3.8% of employees were terminated.

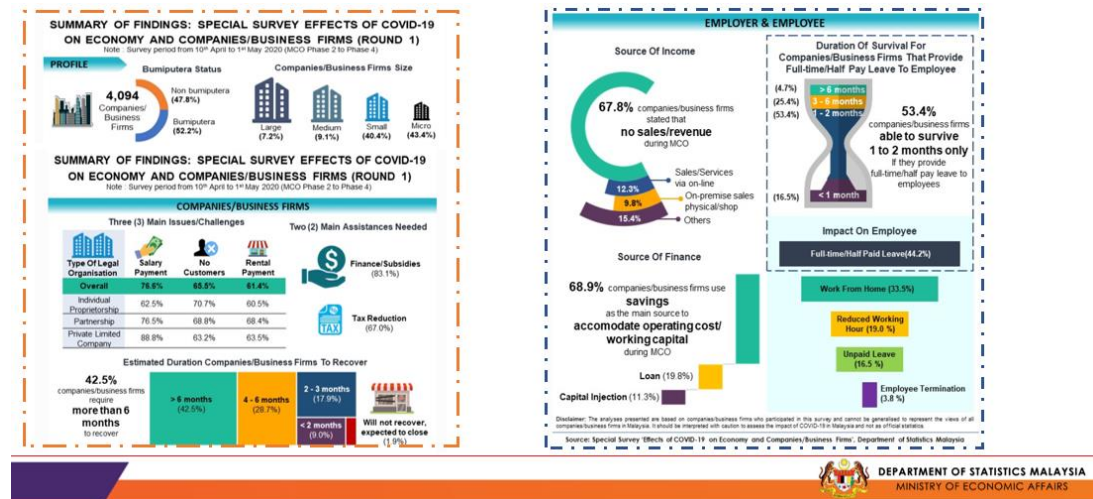


Figure 1.9 Survey Effects of Covid-19 on SMEs companies (Department of Statistic Malaysia)

According to a recent study by Omar, Ishak, & Jusoh, (2020), the major setbacks faced by SMEs in Malaysia during the pandemic are the future business direction. Only a few SMEs organization in Malaysia can demonstrate effective transformation to capitalize on opportunities in a dynamic uncertain business landscape due to their organization's agility to transform the existing business to future needs to sustain and create a unique competitive edge. However, most SMEs tend to continue with conventional business to sustain due to the lack of agility in decision making or shortage of the right competencies. Therefore, a new mindset in the context of strategic agility; sensing, decision and implementation to identify crisis and how to mitigate the risk and at the same time explore to tap new norm opportunities spillovers from post-pandemic which demand new alignments in dynamic capabilities within the organizations.

In a media sharing from Bank Negara (2020), it recommended how Malaysian SMEs should reboot to benefit from the rising demand for technology and health-related products as shown in the Figure below 1.10.

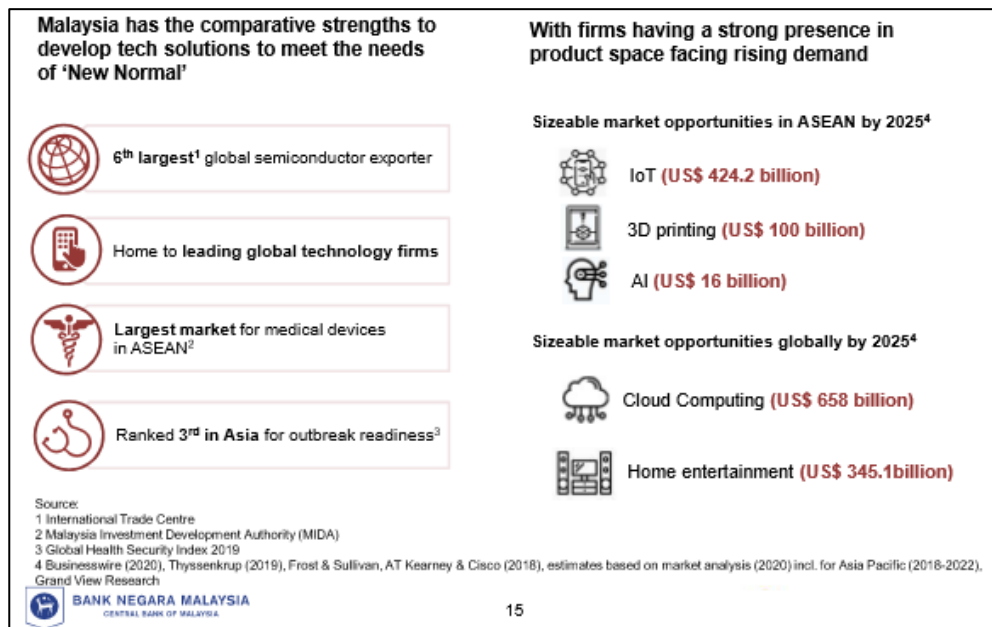


Figure 1.10 Malaysia’s pivotability will enable it to benefit from the rising demand for technology and healthcare products (Bank Negara, 2020)

In the recent Budget 2021, the Malaysian government enabled the economy by RM1billion special incentive package for investments in high value-added technology and knowledge-based industries; RM1billion fund provided by Bank Negara to support high-tech and innovative companies; the extension of the Green Technology Financing Scheme 3.0 with an RM2billion fund size; and multiple forms of tax breaks, rebates and tax cuts, including for commercialization of research and development (R&D) which is also extended to higher learning institutions. Additionally, medium to longer-term efforts in catalyzing the development of new areas of growth includes Penjana Kapital, which recently facilitated the commitment by eight international venture capital fund managers to invest, together with the government, up to RM1.57billion into Malaysian start-ups in the fields of smart

farming, big data, and artificial intelligence (AI), which are set to create 1,800 high-skilled jobs in the process.

According to the Federation of Malaysian Manufacturers (FMM), SMEs continue to find difficulty in identifying which technologies will best suit their business needs. Many SMEs are still in the exploratory stage of understanding the benefits of Industry 4.0 technologies and how to deploy these technologies that enhance further their organizational performance. The survey done by SMEs Corporation Malaysia in 3Q 2017, revealed that 63% of SMEs are still deficient in digital competencies to rollout Industry 4.0 technologies. This has been restressed again by the study done by McKinsey (2018) that 38% of the ecosystem in SMEs value chain is still sceptical on the importance of IR4.0 technologies benefits. The majority of SMEs still lack digital competencies to understand the ICT applications. But due to the rising cost of doing business, SMEs are forced to improve productivity by creating a skilled and diverse workforce to stay competitive.

SMEs began to recognize that automation can ensure maximum output by improving productivity, and reducing time wasted on repetitive and monotonous manual operations. SMEs are still lagging in digitalization adoption. Adoption of digitalization among smaller firms is lower due to challenges in undertaking investment on talent upskilling and organization agility to implement effectively to benefit fullest from the technology. SMEs tend to see digital deployment as an expenses rate investment. Due to that, SMEs tend to be less proactive in protecting their data which leads most of them to be unprepared to face cybersecurity threats. SMEs tend to fall into the risk of becoming a weak link in this digitalization ecosystem infrastructure systems. As SMEs lack focus on talent development investment or digital training, most probably there will be competencies gaps in managing the digital