

Exploring Success Factors of Business Performance for Malaysian SME Manufacturing Companies During Covid-19 Pandemic

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Abstract

The main purpose of this paper is to identify the success factors of business performance for Malaysian SME manufacturing businesses during the COVID-19 pandemic. The study employs quantitative research techniques through self-administered questionnaire for data collection. The questionnaires distributed to 756 Malaysian manufacturing SMEs to gain a feedback of business performance during Covid-19 pandemic and identify the success factors from the perspective of Senior Managers. The number of SMEs response from the self-administered questionnaire was 243 businesses which contributed 32% of response rate. The data was statistically analyzed to identified success factors that have a significant relationship with performance of Malaysian SME manufacturing businesses during the COVID-19 pandemic. This study identified the success factors of business performance with consists of digital technology, innovation and government support. The factors have a significant relationship with the performance Malaysian manufacturing SMEs during the COVID-19 pandemic. The study outcomes might assist of Malaysian government agencies related to SMEs development, policymakers as well as institutions of higher learning in formulation of policies and strategies concerning the future of small businesses. This could help SMEs manufacturing businesses propelling their performance after COVID-19 pandemic. This paper is an empirical study focusing on the relationship between success factors of business performance for Malaysian SME manufacturing businesses impacted during COVID-19 pandemic.

Keywords: SMEs, Company Performance, Manufacturing, Success Factors, COVID-19

Introduction

Coronavirus disease (COVID-19) outbreak in March 2020 has been significantly infected not only millions of people but also huge number of businesses all over the world. The COVID-19 disease was initially detected in Wuhan, China in December 2019, however, it turned into a

global pandemic in March 2020. At the preliminary stage, the outbreak was limited to China and Europe, but it was spread worldwide with more than 6.5 million confirmed cases and almost 200,000 deaths (World Health Organization, 2020). This unforeseen global phenomenon has significantly affected global economy and lead to a business chaotic especially small and medium enterprises (SMEs) (Hasanat et. al., 2020). They are facing with various difficulties and challenges of running the business during COVID-19 pandemic. Most SME businesses was badly affected due to closure and movement prevention policies adopted by government during the pandemic.

In the case of Malaysia, like other countries in the world, SME businesses is a backbone of nation economy. They make up to 99% of the 920,624 business establishments in Malaysia (SME Corp, 2021). In 2021, SMEs employed 7.32 million workers or 47.8% share to Malaysia employment and contributing RM518.1 billion or 37.4% to the Malaysian GDP (DOSM, 2022). The transformation and sustaining of the competitiveness of the service and manufacturing sector were among the major factors in determining the pace of economic activity for Malaysia. Services and manufacturing sectors contributed 39.8% and 34.2% of Malaysia GDP respectively in 2021 (DOSM, 2022). Therefore, among the strategies of the Twelfth Malaysia Plan (2021-2025) was designed is to help the development of SME businesses and to be more competitive in the market.

COVID-19 has enforced digital technology across industries to provide opportunity for companies to change their normal practices and align strategic vision and mission based on long-term planning and value creation for all stakeholders. Many obstacles of the digital technology adoption have been removed along the way to allows employees to work from home remotely. Most of the previous studies indicates that digital technology helps large companies to survive during the pandemic of COVID-19 (Ramona et. al., 2020; Gerald et. al., 2020). According to The Organisation for Economic Co-operation and Development OECD (2021) large companies are at a better positioned to take advantage of digital technologies and turn them into smart and sustainable companies. Guo et. al (2020) argued that the use of digital technology helps SMEs to survive and cope with the consequences of the pandemic. Hence, this finding considers as a wake-up call to the importance of digital technology in helping SMEs facing the challenges created by the COVID-19 crisis. Digital technology is critical for modern economy improving profitability at the long run (Priyono et. al., 2020; Matt et. al., 2020; Kin and Ho, 2019). However, fewer studies were conducted on the usage of digital technology among SME businesses especially during COVID-19 pandemic (Kindermann et. al. 2020; Saputra et. al., 2022).

Similarly, innovation practices among SME businesses were less emphasised (Omar et. al., 2020). They are normally left behind as compare to larger organizations in term of producing new product, method or processes. They are busy producing existing product to supply for larger organizations. Lesser time has been allocated for innovation activities. Furthermore, SMEs had lack of equipment for research and development due to higher investment requirement. However, during the COVID-19 outbreak they have to embark into innovation practices to ensure business survival (Adam and Alarifi, 2021). Previous literatures indicates that innovation practices have a positive relationship with business performance (Zhang et. al., 2018; Oura et. al., 2016).

In term of government support, SMEs really looking forward for business survival especially during COVID-19 pandemic. Incentives provided by government to SMEs help to reduce the challenges facing by them. Past studies also addressing the impact of government support received by SMEs since the COVID-19 pandemic (Ahmad et al., 2020; Albonico et al., 2020; Altman et. al., 2020).

This study therefore is vital and significant to explore the success factors influence performance of SMEs manufacturing businesses during COVID -19 pandemic. What are the best practices adopted by business owners in facing the challenges. The finding of this study is beneficial to SMEs manufacturing operators, policy makers as well as government agencies to have a better understanding of what should be done if similar crisis happened again in the future.

Following an extensive literature review, this paper crafted three objectives of the study to close the gap in knowledge and to identify the success factors of business performance during the COVID-19 pandemic and how the models engaged by Malaysian manufacturing SME businesses. The objectives of the study are to identify the success factors of business performance during COVID-19 pandemic in SME manufacturing businesses located in Malaysia; to determine the most contributing factor to performance of the companies and to establish a model of SME business performance during COVID-19 pandemic.

To achieve these objectives, the study therefore, employed quantitative approach through self-administered questionnaires for data collection. The questionnaires distributed to Malaysian manufacturing SMEs to gain a general understanding of business performance and to identify the success factors from the perspective of Senior Managers.

Literature Review

Definition of Success Factors

Success factors are common term used and define in the literatures or dictionary. According to Collins Dictionary success factor are related to personal characteristic such as knowledge, skill, trait, motive, attitude or value to perform the job. However, the definition is different when associated with companies or organizations. For instance, success factors of companies or organizations refer to internal and external elements influencing a future performance (Moktadir et. al., 2022; Zaman and Kusi-Sarpong, 2024; Vogelsang et.al., 2018). This element consists of customers, suppliers, location, digital technology, innovation and government support. This articles therefore will focus on digital technology, innovation and government support because those elements have been focussed and associated with company performance in the literatures.

Digital Technology and SME Performance

Digital technology plays a unique role in entrepreneurial firms Goerzig and Bauernhansl (2018); Proksch et al (2021) especially with regard to reshaping and transforming the entrepreneurial process (Elia, Margherita, and Passiante, 2020). The adoption of digital technology in SME businesses is still new and challenging (Guo et. al., 2020; Gerald et. al., 2020). Most of the companies are at the early stage of implementation (Coreynen et. al., 2017; Ritter and Pedersen, 2020). Previous literatures indicates that the efforts of SMEs in building dynamic capabilities utilizing digital technologies during COVID-19 pandemic has not

been studied (Carcary et al., 2016; Matarazzo et al., 2021). Digital technology offers both new opportunities and challenges for the firm especially SME businesses. Furthermore, it's leading to a new venture creation process (Berger et. al., 2021), allow greater customer value through firm resource optimizations (Graham et. al., 2023; Papadopoulos et al., 2020), enhancing traditional manufacturing practices (Anwaredin and Gereziher, 2020) and strengthening product and process innovation (Bresciani et al., 2021). Digital technology is challenging to adopt due to SMEs capability and limited resources (Ritter and Pedersen, 2020). However, if SMEs able to face challenges and overcome the obstacles, their performance will be improved in the future endeavor (Jagdeep, S. and Harwinder, S. 2018; Melo and Machardo, 2021). When SMEs facing abruptly change due to the emergence of digital technology, they are able to manage this change process through the dynamic capabilities that are available to them (Ellström et al., 2022; Warner and Wäger, 2019). A survey conducted by the Data Catalyst Institute (2020) toward 2,000 United States SME owners revealed that most of SMEs business owners and senior decision makers learned the use of digital tools to increase their agility, resiliency, and ability to adapt to challenges during COVID-19 pandemic. This will lead to the opportunity of expanding their business operations and enhance business performance during the crisis.

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Innovation Practices and SME Performance

Innovation has become an important agenda for all companies that want to survive in a competitive world nowadays. It became a catalyst of all successful economies, globally. Innovation considered a vital source of economic growth and contributing to the development of Gross Domestic Product (GDP) of both developed and developing countries. The concept of innovation refers to the use of new technology, processes or method for improvement in organisation (Tornatzky et al., 1990). According to Godin (2015) innovation seen as an outcome of a process, rest on two defining characteristics, a degree of newness of a change and a degree of usefulness or success in application of something new. The concept of 'new' could mean new to world, new to a nation, new to industry or new to the firm.

Most of the previous empirical findings shows significant relationship between innovation and the achievement of firm performance. The recent studies conducted in manufacturing sectors indicates that there is a high correlation between innovation and firm performance (Rosenbusch et.al., 2011; Yildiz et. al., 2014). The important elements that enable companies to be competitiveness in both the domestic and international markets is their capability to innovate (O'Cass and Sok, 2014; Qura et. al., 2016). Therefore, organizations that invest in innovation activities have a potential to be success in the future. In the case of SMEs, majority of empirical investigations found a correlation between innovation and business performance (Saunila and Ukko, 2014). According to Agyapong et al (2017) there is a significant relationship between innovative and SMEs' performance. However, Zhang et. al (2018) contends that SMEs with innovation capabilities able to outperform their competitors. Bigliardi's (2013) on the other hand, concluded that innovation potential lead to improve the operational efficiency and financial position of SMEs. Similarly, the finding from United Arab Emirates Al-Ansari et al (2013) and Spain Exposito and Sanchis-Llopis (2018) portrays a positive

relationship between innovation and firm success. As such, this study investigates the effectiveness of SMEs' innovation practices in response to the challenges posed by the COVID-19 pandemic.

Government Support and SME Performance

The of roles government in supporting SME businesses especially during the COVID-19 pandemic is undeniable. Although a new policy was introduced during the outbreak such as imposing full-scale or partial lock down and restricting intra border movement, however, the government already have a plan in place on how to help people and businesses after the crisis. Some countries such as Japan, Korea and United Kingdom, the government had a number of initiatives which incurred huge amount of money to help SMEs for sustaining and survival of their business (Mavrodieva et. al., 2019; Ropaccini et. al., 2020). Malaysian government also had taken similar action to help people and businesses during the hard time.

Government support normally comes either in financial or non-financial terms. Financial support includes grants, subsidies, tax incentives, special scheme for credits or loans. On the other hand, non-financial support includes, but not restricted to, technical capability, capacity building, access to technology and access to information (Eggers, 2020; Doh and Kim, 2014). A number of previous studies shows the impact of government roles of supporting SMEs since COVID-19 outbreak (Hussain et. al., 2022; Songling et. al., 2018). Malaysia Government in the presentation of budget 2023 recently had allocated RM 1.1 billion for the development of SME businesses (Malaysia Ministry of Finance, 2023). This indicates the seriousness of government in helping SMEs for their survival and competitiveness.

Definitions of Malaysian SMES

Every country normally has their unique definition toward SMEs. For instance, United Kingdom Government defines SMEs as any organization that has fewer than 250 employees and turnover of less than €50 million or balance sheet total less than €43 million. Australia Government defines SMEs as those with an annual turnover of \$10 million or less. Meanwhile, Thailand Government indicates SMEs company with employees of up to 50 or with assets of up to 50 million baht. Singapore Government on the other hand, identify SMEs as enterprises that have an annual turnover of less than \$100 million and employs less than 200 workers. Similarly, Malaysia Government define SMEs based on sales turnover and number of full-time employees according to the sectors. For manufacturing, SMEs are defined as firms with sales turnover not exceeding RM50 million or number of full-time employees not exceeding 200 persons. Services and other sectors are defined as firms with sales turnover not exceeding RM20 million or number of full-time employees not exceeding 75 persons (SME Corp, 2021). The details definition of each category is displayed in Table 1.

Table 1

Definition of Malaysian SMEs (SME Corp, 2021)

Manufacturing	Category	Services and Other Sectors
Sales turnover: RM15 mil ≤ RM50 OR Employees: From 75 to ≤ 200	Medium	Sales turnover: RM3 mil ≤ RM20 mil OR Employees: From 30 to ≤ 75
Sales turnover: RM300,000 < RM15 mil OR Employees: From 5 to < 75	Small	Sales turnover: RM300,000 < RM3 mil OR Employees: From 5 to < 30
Sales turnover: < RM300,000 OR Employees: < 5	Micro	Sales turnover: < RM300,000 OR Employees: < 5

Small and medium enterprises (SMEs) play a significant role in contributing to the Malaysian economy especially services and manufacturing sectors. SMEs also have built up linkages and networking with large corporations as well as multinational companies (MNCs) (SME Corp, 2021).

Small And Medium Enterprises Characteristics

Small and medium enterprises (SMEs) have their own characteristics that are different from those of large organisations (Juergensen et.al., 2021). The most typical factor that distinguishes SMEs from larger organisations is the organisational environment operating system in which they operate (Lila Rao-Graham et. al., 2023). The operating system includes flat structures, with few management layers, flexible and adaptable processes that meet changing market needs, high potential for innovation, informal dynamic strategies and a fire-fighting mentality (Eggers, 2020; Kottika et. al., 2020) SMEs tend to be more dynamic than do larger businesses.

SMEs are dynamic but lack the formalisation/resources and role definitions associated with performance. Based on an extensive review of the literature, Lila Rao-Graham et.al. (2023) classify SMEs as having critical internal and external dimensions to the business that impact upon performance. Internal features include management, decision- making and planning processes and the acquisition of resources and external features related to the market and the environment (risk taking and uncertainty).

SME businesses therefore face many constraints that affected the performance but they also have organisational features, which accelerate the implementation to such systems when compared with larger businesses. Addressing the constraints that affect small businesses, it can be seen that small businesses do not have easy access to production technology, customers can become concerned when they are dependent upon a small business and the

lack of available free management resources means that few managers have time to do anything other than help the day-to-day process of order fulfilment rather than business development. The lack of resources has a fundamental impact upon business performance for instance busy managers do not have time to attend lectures, business systems are less formalised, computerization is lower and the impact of the customer (in demanding certain practices be introduced is much higher). These issues do have a bearing on business performance uptake and call for much greater management involvement and sacrifice so that the systems can be designed and embedded by managers who themselves do not have much free time. These constraints were considered to benefit this study because the pivotal role of management as system designers implies those managers that took the time to design effective systems would outperform other businesses.

Research Objectives

The following research objectives were established to capture the essence and focus the subsequent direction of the study:

- a) To identify the success factors of business performance during COVID-19 pandemic in SME manufacturing businesses located in Malaysia.
- b) To determine the most contributing factor to performance of the companies.
- c) To establish a model of SME business performance during COVID-19 pandemic.

Research Questions

To examine the business performance, the following three critical research questions were crafted

- a) What are the success factors of business performance for SME businesses during COVID-19 pandemic as perceived by Senior Managers?
- b) What is the most contributing factor for business performance among success factors identified?
- c) What is the suitable model of business performance for SME businesses during COVID-19 pandemic?

The research question was crafted because most previous studies had not examined success factors of SMEs business performance during COVID-19 outbreak. As such, the second question was used to focus on the main factor contributing to business performance. Further, the question highlights the need to develop a general model as a guideline to SMEs for business survival during pandemic.

Research Methodology

This research employed quantitative approach to explore success factors of business performance among SMEs during COVID-19 pandemic. The methodology was deemed necessary to achieve the objectives of the study and to answer the research questions. Self-administered questionnaires permitted the identification of important and emerging issues that required further explanation by those who were directly involved in managing SME businesses.

Self-Administered Questionnaire

According to Adam and Lawrence (2018), the used of self-administered questionnaire is an effective tool for obtaining opinions, attitudes and descriptions as well as for identifying cause and effect relationships. The method also was considered a useful way of collecting data in a short time period whilst allowing respondents the ability to give their answers. Alternative methods including group interviews or semi structured questionnaire with open-ended response boxes could have been engaged at this stage. Following a deep methodological review these latter methods were considered inappropriate because there was inconsistency and commonality between the questions posed and the theoretical underpinning of this study. Furthermore, it was difficult to the researcher to travel from one place to another for data collection due to movement control order enforcement by government. As such a very open-ended questionnaire is less likely to truly identify the presence of success factors than a questionnaire, which addresses the key areas.

Sampling Technique

Since this research involved a self-administered questionnaire, the researcher employed probability-sampling technique which allowed the researcher to draw valid inferences regarding the population (Ratten, 2023; Bell et. al., 2022). For the questionnaire, the list of potential respondents was obtained from SME development agencies in Malaysia. The respondents for this research were selected from the list provided which focusing on manufacturing base companies only. This was due to the significant contribution of the manufacturing sector to both GDP and employment (SME Corporation, 2022). The total number of SMEs obtained was 756 Malaysian manufacturing companies.

Pilot Testing and Sample Selection

Pilot testing was conducted to ensure that any discrepancies in the questionnaire during the design were rectified and corrected before the actual questionnaire deliver to respondents. According to Aityan (2021), the minimum number for pilot testing is 10. Therefore, in this research, a total of 30 questionnaires were sent out to the Managing Directors of Malaysian manufacturing SMEs. From the 30 questionnaires, only 12 companies responded which given response rate of 40%. The issues identified focussed on the length of the questionnaire, sentences being too wordy, ambiguity, and double-barrelled questions. All the comments were analysed and used as a tool for improving the final questionnaire.

The questionnaires then distributed to all companies in the list provided through email and postage. This method was very challenging because the researcher has to make a frequent follow-up through a phone call and texting a message to ensure they completed and submitted the questionnaire. It took almost 6 months from the date of distribution for completion. Results from the survey indicates that 243 companies were responded which contributing 32% of response rate.

Reliability and Validity of Data

The results of reliability test of questionnaire tabulated in Table 2. The Cronbach's alpha value ranged from 0.8476 to 0.9643 and therefore, it was within the acceptable level and the questionnaire were considered reliable. On the other hand, the results in Table 3 indicates the results of validity test (criterion) for the questionnaire used in this research.

Table 2

Internal consistency analysis (Cronbach's alpha)

Sections	Factors	No. of items	Alpha value	Items deleted	Alpha after deleted	value items
A	Business Performance	25	0.8132	6 items	0.8546	
B	Digital Technology	28	0.8476	None	0.8476	
C	Innovation	23	0.9317	None	0.9317	
D	Government Support	30	0.8312	5 items	0.8516	

Table 3

Pearson correlation between constructs (Criterion validity)

Elements	Business Performance	Digital Technology	Innovation	Government Support
Business Performance	1.00			
Digital Technology	0.299***	1.00		
Innovation	0.270*	0.473**	1.00	
Government Support	0.347**	0.256*	0.125	1.00

Findings and Discussion

Analysis was carried out using the Pearson correlation to examine the relationship between business performance and success factors that have been identified in the literatures. The correlation analysis was the most appropriate means of analysis for this research due to the number of samples involved (Pallant, 2018).

General Descriptive Statistics of Respondents

Background of respondents

The total response rate was 32% (243 companies out of 756 questionnaires distributed) as indicates in Table 4. Majority of the respondents (87.2%) were the management of the responses companies which consists of Managing Directors, Senior Managers and Managers (Table 5). The results portray that information was gathered from persons who had authority for decision making in the company.

Table 4

Useable Response Rate

Total questionnaires issued	Total usable responses	Total usable response rate
Frequency	Frequency	Percentage
756	243	32%

Table 5

Number of Respondents Based on Position

Position	No of Responses	Percentage
Managing Director	58	23.8%
Senior Manager	69	28.4%
Manager	85	35.0%
Supervisor	31	12.8%
Total Number of Respondents	243	100%

In the case of data distributions, most of the respondents (39.1%) were from Klang Valley (Centre of the Country), followed by Southern and Northern region with responses of 24.3% and 21.4% respectively (Table 6). This was due to the fact that most of SMEs manufacturing businesses located in the middle part of Malaysia. East Coast however, contributed only 15.2% of the responses. Therefore, it is recognised that the sample taken was considered representative of the general population of SMEs in the Malaysian economy.

Table 6

Distributions of Responses SMEs Manufacturing Businesses

Region	No of Responses	Percentage
Northern	52	21.4%
Southern	59	24.3%
Klang Valley	95	39.1%
East Coast	37	15.2%
Total Number of Responses	243	100%

Success Factors of Business Performance

In this research, success factors contribution toward business performance was identified through the analysis using standardized multiple regressions as summarized in Table 7. Success factors of the business performance further were performed to address the research questions of determining the significant impact toward business performance as well as highlight the most influencing factor. R square value is 0.569 which means that the success factors explain 56.9 percent of the variance in business performance. The statistic tests, therefore provide good support of this study.

Table 7

Coefficient correlations

Model	Unstandardized Coefficient		Standardized Coefficient	t	Sig.	Collinearity Diagnostic	
	B	Standard Error	Beta			Tolerance	VIF
Business Performance	0.674	0.145	0.025	13.45	0.121	0.503	1.857
Digital Technology	0.751	0.130	0.451	-5.32	0.000*	0.426	2.156
Innovation	0.323	0.019	0.231	8.13	0.000*	0.412	2.234
Government Support	0.861	0.118	0.152	- 2.11	0.004*	0.448	2.018

Note: *p<0.005

Table 7 presented the result of coefficient correlations for the constructs of this research. The result indicates that all of success factors significantly contribute to business performance (digital technology $\beta = 0.451$, $p < 0.005$; innovation $\beta = 0.231$, $p < 0.005$ and government support $\beta = 0.152$, $p < 0.005$). Further analysis indicates that the most contributing factor to business performance is digital technology ($\beta = 0.451$, $p < 0.05$), followed by innovation ($\beta = 0.231$, $p < 0.05$) and government support ($\beta = 0.152$, $p < 0.05$).

The Model of Business Performance for SMEs

Results obtained from the analysis lead to draw together the common features and model was duly crafted by the researcher and this is presented in Figure 1. The model shows there are three success factors significantly contributed to business performance during COVID-19 pandemic. This includes digital technology, innovation and government support.

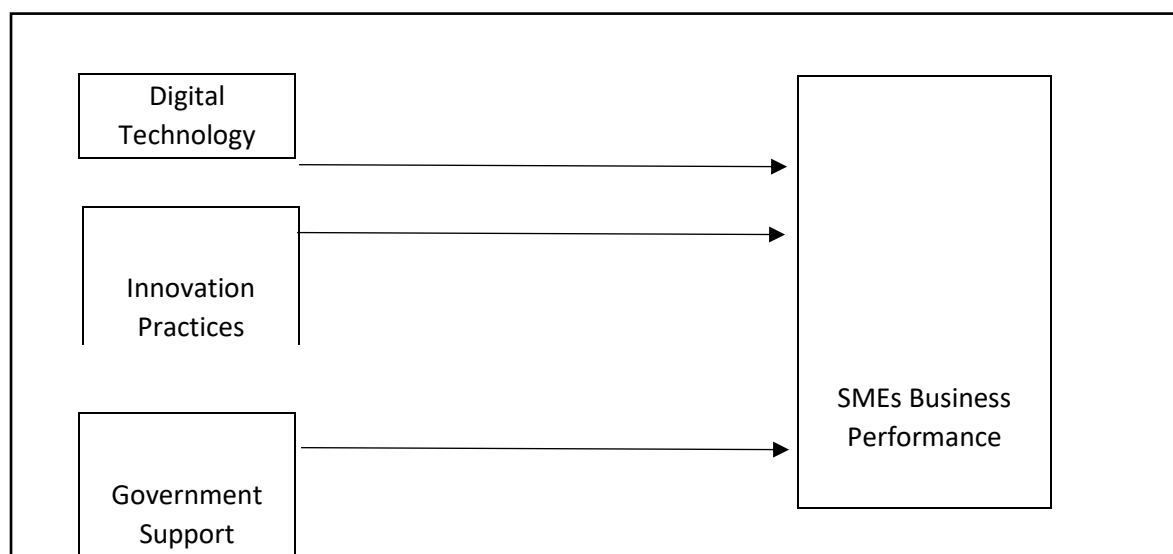


Figure 1: Model of Business Performance for SME Businesses

Conclusions and Recommendations

The objectives of the study were to identify the success factors of business performance during COVID 19 pandemic at Malaysia SME businesses and investigates the most contributing factor toward business performance of responded companies. The research employed quantitative sampling technique through self-administered questionnaire with a response rate more than 30% (243 respondents). The results portray that success factors influencing business performance during COVID-19 pandemic are digital technology, innovation practices and government support. Further analysis shows the most influencing factor for business performance of SMEs is digital technology. Then followed by innovation and government support. The finding is in parallel with previous studies by other researchers (Rao and Verma, 2022; Soong et. al., 2019; Adam and Alarifi, 2021).

From the results, the researcher would like to suggest that Malaysia government should encourage and support SME businesses of using digital technology in the organization for daily operations. Although higher investment incurred at the initial stage, however it is worth for future development and sustainability. This can be achieved through the implementation of government special scheme such as grant or venture capital for SME businesses. On the other hand, the SMEs owner or key personnel of the organization need to be proactive by equipped themselves to the digital world through training and participating in any related programs organised by public or private sectors. This will lead to the enhancement of their knowledge, skills and experiences.

Innovation practices also should be enforced to the staff to ensure they have a capability in producing innovative product or processes for sustainability of the organizations. Incentives in term of monetary or non-monetary reward should be provided to the staffs whom are active in innovation activities. These incentives consider as a catalyst to increase motivation and encouragement for them to actively participate in innovation activities.

Similarly, institutions of higher learning (IHL) must play their roles by focussing more on digital technology-based program. The educators who teach digital technology related subjects should enhance themselves with skills and knowledge of those subjects. The IHL also should embedded digital technology modules into other subjects (non-digital technology) to ensure all students expose themselves with the knowledge during their study.

In the case of future research, it is suggested that the study employed qualitative research approach through semi structured interview by focussing other industries such as service or construction. This methodology able to gain in-depth information or issues of SMEs businesses and their performance during COVID-19 pandemic.

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