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RIDING THE DIGITAL WAVES: READINESS OF SMALL ENTREPRENEURS IN ADOPTING DIGITAL TECHNOLOGIES

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ABSTRACT

Malaysia business environment was predominantly made up of small and medium enterprises (SMEs), which indicates a total of 1,151,339 SMEs that represent 97.2 percent of total business establishments. The SMEs created employment accounted for 7.25 million workforces, which indicates 48 percent of total employment in the year 2020. The unexpected outbreak of the COVID-19 pandemic has presented a notable challenge for numerous SMEs, particularly in developing nations that have been slower in implementing digitalization strategies. Without exception, SMEs in Malaysia are currently facing ongoing challenges in their efforts to undertake digital transformation. Despite the considerable advantages derived from the digitised economy, small and financially constrained SMEs continued to lag due to internal resource and information deficiencies, skills gaps, and challenges related to securing financing. Hence, this study aims to investigate

the digital transformation phenomenon and the challenges faced by SMEs following the COVID-19 pandemic so that the government can provide the necessary support for SMEs' digital transformation.

Keywords: Digitalization strategies, transformation, digital economy, small and medium enterprises, digital age.

INTRODUCTION

It is impossible to ignore the contribution that small enterprises make to the continued growth of the economy. It would appear to be the central pillar upon which the expansion and development of the national economy is built in most countries around the globe. According to the OECD (2021), the contribution of small firms to the economy accounts for approximately 90 percent of businesses, 60% to 70 percent of employment, and 50 percent of GDP worldwide. This including in Malaysia business environment, which is predominantly made up of micro, small and medium enterprises (MSMEs) at about 1,226,494 MSMEs that represent 97.4 percent of total business establishments (Department of Statistics Malaysia-DOSM, 2021). SMEs created employment accounted for 7.25 million workforces, which indicates 48 percent of total employment in the year 2020. Besides, MSMEs contribute 37.4 percent to GDP in 2021, with a value added of RM518.1 billion. Consequently, this demonstrates the vital role of MSMEs to Malaysia's economic growth and development.

The only way for the global economy to get back on its feet in a strong and stable way is for these small businesses to be able to change to how customers act now that COVID-19 is over. This is where technology can help people get things done faster and is being used to its fullest in many parts of everyday situations. (Yong & Liew, 2022). Currently, after three years of the MCO declaration, MSMEs in Malaysia still struggling with challenges in digitalisation transformation. Despite the significant benefits gained through digitalised economy, the small and unaffordable MSMEs are still left behind due to lack of internal resources and information's, skills gaps, or financing issues. Whereby these gaps will lead to inequalities among people, places and, of course, MSME firms. In accordance with this perspective, it is imperative that government intervention or policy measures be implemented in order to ensure the long-term viability of MSMEs

and enhance their capacity to thrive and achieve business success by embracing digitalization and adopting technology strategies. Thus, the aim of this study is to ascertain the level of preparedness for implementing digital technology and the challenges encountered by SMEs.

WHY TRANSFORMATION TO DIGITALISATION IN NEEDED?

According to Chen et al. (2016), the more the ability of small businesses to use digital technology, the greater their chances of long-term competitiveness and growth. This prompted many MSMEs to incorporate more technology in order to adapt to the global changes in post-COVID-19 customer norms. They have to adjust to the new business norms by incorporating more digital technologies in order to increase their business's efficiency, efficacy, and accessibility with society, customers, and suppliers as the circle of business chains. Past studies showed that the transformation to digitalization offers numerous benefits and opportunities for small entrepreneurs, including enhancement of efficiency and productivity, reach broader range of market segment, improve relationship with customers through better engagement with them, and more innovative and creative in business approach (Klein, & Todesco, 2021; Pfister & Lehmann, 2023; Purnamasari et al., 2020).

Movement Control Order (MCO) implemented in March 2020 was the first punch for SMEs, whereby most SMEs under non-essential sectors was forced to stop the operation during that time. The pandemic has push SMEs more actively engage in technology adoption to sustain their business operations. Malaysia government recognise the challenges of SMEs during pandemics and implemented a series of programmes to accelerate SMEs digitalisation transformation.

For large firms, the rationale behind digitalisation is clear, which is to improve efficiency, competitiveness and economies of scale. However, the case of digitalisation of SMEs is not clear due to the perceptions that digitalisation are costly and complex. Despite SMEs being the backbone of Malaysia's business environment, SMEs perform relatively poor in digitalisation due to the existence of a digital divide among SMEs in Malaysia. One of the reasons for this gap was caused by the weak governance of SMEs in digital transformation,

especially due to lack of appropriate structured digitalisation planning and transformation guidelines for SMEs. Government and policy interventions are vital to facilitate the process by developing a digital economy governance model to support SMEs digitalisation in the digital economy.

According to Pisu et al. (2021) as illustrated in Figure 1, in their analysis on the stock market performance during the shock to COVID-19 crisis in March 2020 to December 2020, showed an increase trend in stock market return for high digitalization SMEs as compared to those SMEs with low digitalization adoption. They added that these online platforms offer simple pathways to digitalisation for firms, while providing services (e.g. outsourcing of data storage, advanced low-cost logistics and payment services, tailored advertising, better communications between buyers and suppliers and dispute resolutions) that can be especially beneficial to micro enterprises and SMEs (OECD, 2021). Adding to this, OECD also believed business that invested in digital technologies will get long run benefits through better communications and interaction with the global markets. Figure1 shows that e-commerce as a percentage of retail sales continues to grow across region, which Southeast Asia (ASEAN) and Latin America, for example, is estimated to grow 17 percent and 20 percent, respectively, over the next five years and compound annually.

Figure 1

Stock Market Returns Surged for Firms with A Strong Digital Presence

Note: Stock Market Indices allocate each one of the 500 companies within OECD ADIMA to High or Low Digitalisation based on the cumulative Page Rank of the websites identified as belonging to the company within the ADIMA Digital Register whilst controlling for the Economic Sector determined by The Refinitiv Business Classification (TRBC). Allocations are chosen to ensure that the most digitalised 50% of Market Capitalisation is classified within the "High Digitalisation" Index.
Source: OECD calculations based on (OECD, 2020[52]).

The important of digitalization is believed to offer a range of opportunities for SMEs including improve performance, spur innovation, enhance productivity and compete, on a more even footing, with larger firms, reflecting: economies of scale; lower operation and transaction costs; reduced information asymmetries; greater capacity for product differentiation, business intelligence or automation; increased customer and market outreach; and network effects (OECD, 2021). Therefore, digitalization can play as a role to reduce gaps between SMEs and larger firms that advances in digitalization adoption. However, despite the significant benefits gained from digitalised economy, the small size and unaffordable SMEs still suffer in this digitalization technology since they lack internal resources and information's, skills gaps, or financing issues. Whereby these gaps will lead to inequalities among people, places and, of course, SME firms. Therefore, intervention through government or policy makers is really needed.

DIGITAL ECONOMY IN SMALL AND MEDIUM ENTERPRISES (SMEs)

The digital economy is known as the new economy that underpins productivity growth, development, and prosperity globally. In line with the industrial revolution 4.0 (IR4.0) that combines the assets of traditional and internet technologies, business-to-customer communication and interaction are now internet-based (Bencsik, 2020; Brettel et al., 2014). Global internet users have climbed to 5.18 billion at the first quarter of 2023, with internet penetration at 64.6 percent of the world's total population (Statistica, 2023). Of this total, 4.8 billion, or 59.9 percent of the world's population, were social media users.

The COVID-19 pandemic has accelerated the digitization of economies among societies. According to the International Institute for Sustainable Development (2019) and Devos et al. (2012), various countries have debated whether it is appropriate to negotiate binding rules governing digital economy in a regional and multilateral trade agreement. From regional to global digital economy governance there are system differences between countries in terms of systems of government, economies, approaches to data privacy, and ownership. With these differences of system among countries may put a barrier

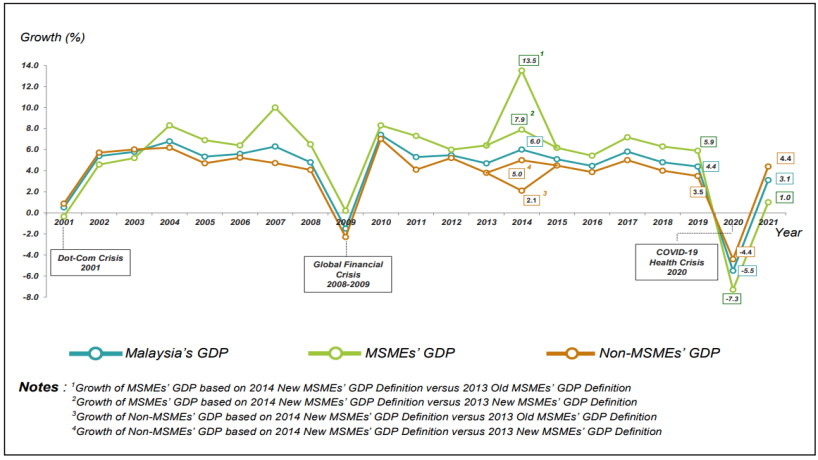
and limitation, especially among SMEs to participate in the global business through digital economy.

The digital economy requires distinguishing between information and example interpreting physical information such as cash flow, checks, invoices, bills, reports, face-to-face meetings, analogue telephone conversations or radio, television transmissions, etc (Clarke, 2001). In the digital economy, all information is digital, reduced to bits stored in computers and sent across networks at light speed. The use of digital tools by small firms can assist them in achieving cost-effective spending for basic ecosystem components such as marketing and customer engagement (Bencsik, 2020; Brettel et al., 2014). Online advertising, for example, can be less expensive and reach a broader range of customers globally.

Various sectors, such as government institutions, finance, entertainment, healthcare, education, and services, can derive advantages from the process of digitalisation and the utilisation of the internet. Despite the fact that MSMEs are expected to benefit from the spill over effects of the digitalization wave. In most economies, MSMEs are acknowledged as a contributor that helps provide jobs and encourages entrepreneurialism. In addition to this, MSMEs make a sizeable contribution to the GDP (refer Figure 2) of most countries in the region, including those in Asia (Mutula, 2009). According to Johannessen (2020), a large number of SMEs now sell their goods and services online. In line with this, because digital technology assists with the collection of information, the reduction of expenses, and the expansion of consumers, MSMEs may prosper in a digitalized environment (Borges et al., 2009; Harrigan et al., 2011). Despite this, certain MSMEs may be unable to adapt to digitalization due to a lack of marketing or technical experience as well as budgetary constraints (Nguyen et al., 2015).

Figure 2

GDP: Malaysia, MSMEs and Non-MSMEs for 2001-2021 at Constant Prices- Annual Percentage



Source: Department of Statistic Malaysia

SMES DIGITALISATION: MACRO PERSPECTIVES

SMEs are the growth engines in Southeast Asia economy because it comprises of 99 percent of business establishments, 90 percent of employment and almost 60 percent of gross domestic product (GDP) in ASEAN (Liew & Chuan, 2019). The emerge of digital economy reshaping business ecosystem, thus, pushing MSMEs to digitalisation transformation. Kergroach and Bianchini (2021) found that SMEs were severely affected by the COVID-19 pandemic. The suspension of businesses during a pandemic has resulted in substantial sales declines and diminished cash reserves. Therefore, digital transformation is the key for MSMEs to escape pandemic pitfalls by reducing transaction costs, expanding to larger markets, and exploring new operation methods for improved performance. In this regard, the enabling environment for SME digitalisations is essential for promoting SME technology adoption.

SMEs digital transformation requires policy support of a nation. National digitalisation strategies stipulate digital transformation. Government of Southeast Asian countries have actively involved

in digitalisation strategies for industries. For instances, Malaysia introduced MDEC 100 Go Digital, Singapore with SME Go Digital, Indonesia with Go Digital Vision 2020, Vietnam with National digital transformation programme, Philippines with Philippines e-commerce roadmap 2016-2020 roadmap and Thailand with Thailand 4.0 Model e-commerce development plan. Amongst the countries, SMEs digitalisations policy work together with e-government initiatives to shorten business process and create enabling environment for business. However, according to ISEAS Yusof Ishak Institute (2021), initiatives to foster local tech start-ups by Southeast Asia countries, except Singapore, were relatively low ranked globally.

SMES DIGITALISATION: MALAYSIA PERSPECTIVES

Aligned with the global trend of digitalization in the realms of business and economy, Malaysia has introduced its own digital economy initiative, referred to as MyDIGITAL. This initiative has been strategically developed to complement the national development policies of the Twelfth Malaysia Plan (RMK-12) and "*Wawasan Kemakmuran Bersama 2030* (WKB 2030)". MyDIGITAL has established the strategic trajectory for the digital economy and laid the groundwork to facilitate the process of digitalization on a national scale. The formulation of the Malaysia Digital Economy Blueprint serves as the strategic action plan to effectively achieve the aspirations of MyDIGITAL. This blueprint outlines the various efforts and initiatives that will be implemented until the year 2030. From a governance standpoint, MyDIGITAL demonstrates the government's commitment to effectively develop, execute, and oversee the performance of Malaysia's Digital Economy Blueprint, with a focus on accountability, efficiency, and effectiveness. An ecosystem that facilitates sustainable transformation will provide strategic direction and better policy decisions especially in governing the investment in infrastructure and facilitating skills. The data-driven and rakyat-centric approach will help in developing policies and regulatory frameworks especially to facilitate businesses and society to have equal access to the opportunities and socio-economic benefits of the digital revolution.

During the pandemic, the awareness among SMEs and consumers towards the digital economy has been increased. According to Kemp

(2022), Malaysia is the second-highest country after Thailand that contributing 66.6 percent of the internet user from 16 to 64 years old that make online purchases each week. In addition, daily time spent using the internet in Malaysia is more than 9 hours. Besides, statistic shows that Malaysia is the second-highest country in the world with 91.7 percent population being social media users with an average usage time of 3 hours per day. Total annual spending for good purchases via online USD8.17 billion in 2021 increase by 40 percent compared to 2020. There were 29.55 million internet users in Malaysia in January 2022 and the internet penetration rate stood at 89.6 percent of the total population. The data indicates that MSMEs possess significant potential for expanding their market share through the utilization of digital platforms. The Malaysian Communications and Multimedia Commission (MCMC) proposes that the government should enhance the existing supportive ecosystem to facilitate the digitalisation efforts of local MSMEs. The National 4IR Policy highlight the importance of reviewing the laws and regulations to improve provision for digital infrastructure by 2025.

According to the report titled "Malaysia's Digital Economy: A New Driver of Development" published by the World Bank Group in 2018, it was emphasized that Malaysia has achieved the distinction of being the first nation to establish a Digital Free Trade Zone. This initiative has created an advanced platform for MSMEs to effectively engage in electronic commerce and enhance their promotional activities. Aligned with the MyDIGITAL initiative, there are four primary objectives that must be attained. These include fostering a more vibrant digital ecosystem, ensuring widespread access to high-speed and affordable internet connectivity, enhancing human capital through enhanced educational curricula and lifelong learning opportunities, and safeguarding forthcoming digital tax revenues. The announcement made by Datuk Ismail Sabri, the former prime minister in 2022 pertains to the operational status of the Keluarga Malaysia Digital Economy Centres, which are being facilitated through the Entrepreneur Digitization Empowerment Programme (Pupuk). This program aims to facilitate the provision of communal internet access and the implementation of entrepreneurship initiatives within local communities. The transformation of Malaysia into a high-income nation and its emergence as a regional leader in the digital economy by 2030 can be achieved through the collective commitment of diverse agencies and society (Krishnan, 2022).

Malaysia's strategic objective of attaining regional leadership in the digital economy by 2030 is compared with the findings of the Digital Trade Restrictiveness Index (DTRI) (2020). The DTRI reveals that Malaysia ranks fifth in terms of establishment restrictions, eleventh in data restrictions, and tenth in trading restrictions. In contrast to the objectives of the government, the implementation of these restrictions will result in increased costs for both businesses and consumers. Digital protectionism, on the other hand, will slow down productivity in the digital economy. In line with government policy, element Fiscal Restrictions & Market Access in DTRI showed that Malaysia was ranked at number 50. This shows greater competition that can benefit consumers through lower prices and a greater variety of choices.

Open markets easy to access allow consumers to buy the product with higher quality and equipped with better technologies. For businesses, open digital markets enhance productivity and increased digital competition that will lead to generating greater value. Besides, an open and competitive market will lead to ensure that the benefits will be passed on to consumers and create higher incomes. Various opportunity highlighted in My Digital Blueprint shows that Malaysia has great potential in the digital economy. Some of the policies especially related to digital restrictiveness need to strengthen and revised in order to have better opportunities in the digital economy.

The study by Cisco (2020) indicated the four stages of digital maturity, namely Digital Indifferent, Digital Observer, Digital Challenger and Digital Native. The study found that, in overall, Malaysia from Digital Indifferent (year 2019) have moved up to Digital Observer stage whereby 53 percent of local SMEs were Digital Indifferent, 46 percent were Digital Observers and 3 percent considered as Digital Challengers. Although Malaysia has improved in the ranking, but, out of 14 countries, Malaysia was ranked at number 11 out of 14 markets in Asia Pacific. Malaysia lagged Thailand, India, and Singapore. The main reasons for Malaysia low ranked among Asia Pacific are because of (i) Digital skill shortages and access to talent (21%), (ii) lack of commitment or budget from management (16%), and (iii) lack of a proper digital transformation road map (12%). Adding to this notion, by Cisco Study (2020), it was discovered that 64 percent of SMEs in Malaysia are actively seeking to undergo digital transformation in order to introduce new products and services to the market. Additionally, 59 percent of these SMEs acknowledge the changing

landscape of competition and the need to keep up with it, while 43 percent stated that the driving force behind their transformation efforts is the demand from their customers.

Implicitly, the report reveals the facts that Malaysia government need to be scaling up SMEs internal capacity, leverage SMEs with resources such as talent, technology, and shared data, providing financial assistance for SMEs, and design a proper digital transformation road map to guide SMEs' digital transformation pathway. According to OECD (2021), government play important roles to foster SMEs' digital transformation through provide a digital transformation road map start from creating right environment for SMEs transformation, provide a whole of government approach, easing SMEs access to strategic resources and help to ratchet up SMEs internal capacity. Hence, the governance framework for SMEs digital transformation in Malaysia is needed to be realized through the development of conducive and integrated elements of governance structure to guide a proper SMEs digital transformation road map for better sustainability of SMEs digital economy eco-system.

DIGITAL TRANSFORMATION HURDLES FOR SMES IN THE DIGITAL AGE

However, the digital economy's growth is not without challenges. Despite the advantages, SMEs in developing nations have been slower to adopt digital business than their counterparts in developed countries (Fan, 2016; Shemi & Procter, 2018). Many variables bring the limitation to the MSMEs to grab the benefits from the digital economy, such as lack of digital strategy to convert their business, lack of understanding of the advantages to their organization, firm size, infrastructure inadequacy, non-transparency in government assistance programs, information confidentiality, credit financing, legal and regulatory framework, lack of expert skills, management excitement, security, and privacy concerns (Fan, 2016; Rahmana & Senusia, 2019; Savrul et al., 2014; Shemi & Procter, 2018).

Due to the limited budget and lack of network specialists, SMEs are exposed to technological crimes such as hackers (Fitriasari, 2020). SMEs generally operate within more limited financial resources in comparison to larger corporations. The process of allocating financial

resources for digital transformation can present significant challenges, as it typically entails considerable expenditures on hardware, software licenses, cybersecurity measures, and the continuous expenses associated with maintenance. The SMEs may encounter significant financial barriers, particularly when they must allocate resources to other critical areas of their operations, such as inventory management, employee compensation, or marketing efforts (Yousaf et al., 2021). The implementation of digital solutions frequently necessitates SMEs to allocate resources towards the acquisition of novel technology and hardware (Eller et al., 2020). Potential strategies for enhancing the digital infrastructure may encompass various measures such as computer upgrades, investment in mobile devices, or procurement of specialized equipment. The initial expenses associated with these acquisitions can impose financial burdens on SMEs, particularly if they had previously operated with minimal technological demands (Zimmermann, 2016).

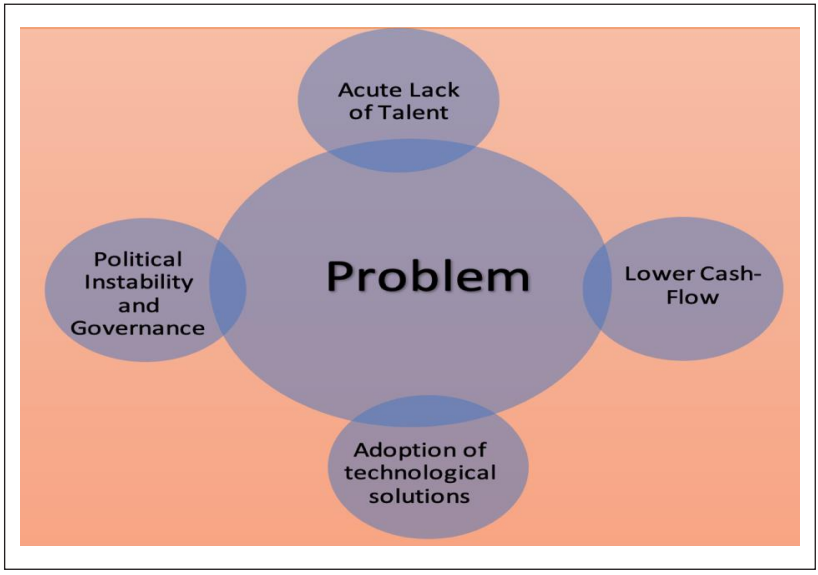
SMEs were the most susceptible since they lack resources to survive during COVID-19 Pandemic (Albulescu, 2020; Rathore & Khanna, 2020). The most severe supply and demand issues are passenger transport, tourism, and services (Levashenko & Koval, 2020). However, existing SMEs are viewed as vital for economic growth and represent the natural signal of social entrepreneurship that major operators must release (Grondys et al., 2021). Moreover, the extremely changing economic environment increases the uncertainty and unpredictability of economic occurrences, hence the risk of doing business (Haviernikova et al., 2016). Bigger companies incur less risk due to their size but SMEs are three times more in danger than big enterprises (Gengatharan et al., 2020). SMEs may be unprepared to deal with the COVID-19 pandemic's economic effects.

For the SMEs to take the digitalisation road, lack of access to talents will directly impede innovation and digital adoption. According to research conducted by SME Corp Malaysia and Huawei (2018), smaller firms will have to invest to upskill and reskill their employees, but they were lacking the funding and resources needed. The second problem is low cash flow due to a decrease in sales and poor market access and higher operating costs. As of January 2021, 45 percent of SMEs have cash reserves of less than 2 months and 20 percent of the SMEs look optimistic to have cash reserves lasting 4-5 months. The third problem is the low level of adoption of technological solutions

by SMEs. The digital gap has caused business owners to struggle with customers engagements and consumer patterns, and thus making it difficult for SMEs to stay relevant in the virtual marketplace. Lastly, political uncertainty influenced investors' confidence in the governance of SMEs digitalisation, and as a result delayed foreign investment inflows into Malaysia. The following figure illustrates the challenges of SMEs digitalisation.

Figure 3

Problem Faced by SMEs towards Digitalisation



Source: Adapted from Penang Institute, 16 February 2021

The primary challenges pertaining to the digitalisation of MSMEs in Southeast Asian predominantly revolve around infrastructure limitations and a lack of digital literacy. A study from ISEAS Yusof Ishak Institute (2021) revealed those Southeast Asian countries - Thailand, Vietnam, Indonesia, Malaysia, and Singapore have overarching model which emphasis digitalisation strategies for the nation. According to the report, less developed countries such as Indonesia and Philippines are more focused on establish infrastructure for internet coverage, whereas developed countries such as Singapore strives to improve digital inclusive for all population (largely involve elderly population). Infrastructure is the pre-requirement for digital

economy, and digital literacy is the second important element to ensure digital transformation of a nation. Based on the report, only Singapore and Thailand government worked on foster digital literacy amongst elderly population and the other countries such as Malaysia, Indonesia, Philippines, Vietnam government focuses on young and working population with neglected the elderly population.

Understanding changing consumption patterns, supply-demand connections, knowledge extraction techniques, digital technology products, and services. In this way, knowledge management studies may aid SMEs. A worldwide view of SMEs' aims and concerns might help them develop a pandemic strategy (Ravindran & Boh, 2020). It may also help to understand new customer behaviour during and after the COVID-19 pandemic. Using digital technology to reimagine operations and business models may help SMEs respond to shifting societal expectations (Mahraz et al., 2019) and be better prepared for eventual new crises (Klein & Todesco, 2021; Ravindran & Boh, 2020). The capacity to develop partnerships to grow firms in a global market order is critical to the success of SMEs. The digital economy may provide a competitive edge to most SMEs (Purnamasari et al., 2020). Ahead of the COVID-19, SMEs may use cutting-edge technology to digitize company processes and conduct virtual operations, enhancing competitiveness, productivity, and business performance, and ensuring business survival (Papadopoulos et al., 2020; Ting et al., 2020).

From a governance perspective, to ensure the seriousness of government a governance structure has been established to drive effective formulation, implementation, to ensure accountability, efficiency, and effectiveness in monitoring Malaysia's Digital Economy Blueprint. An ecosystem that facilitates sustainable transformation will provide strategic direction and better policy decisions especially in governing the investment in infrastructure and facilitating skills. The data-driven and rakyat-centric approach will help in developing policies and regulatory frameworks especially to facilitate businesses and society to have equal access to the opportunities and socio-economic benefits of the digital revolution.

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Malaysia's Digital Economy: A New Driver of Development report (World Bank Group, 2018) highlighted that Malaysia is the first country in the world to establish a Digital Free Trade Zone providing a state-of-the-art platform for SMEs to promote e-commerce. In line with My Digital, four main goals need to be achieved more dynamic digital ecosystem, achieving universal, fast, and inexpensive internet connectivity; improving human capital through better curricula and life-long learning opportunities, and safeguarding future digital tax revenues.

CONCLUSION

In conclusion, the majority of governments try to provide infrastructure to support the digital transformation. Even though there are still obstacles to providing the community with complete internet coverage, this initiative is effective in Southeast Asian nations. Therefore, many nations have a long way to go to improve their digital economies, particularly to support the development of SMEs. SMEs must be able to adapt to new ways of conducting business, including but not limited to business strategies, processes, and behaviour, especially after the outbreak of COVID-19 and the emergence of the "new norm" and mode of interaction within business chains. To overcome SMEs' particular obstacles, they must identify and seek chances to reinvent

themselves and establish new business strategies (Syed, 2019). The shift in customer purchasing behaviour under the lockdown and mobility restrictions is now an important trend for SMEs globally. As with every technological revolution, there will be winners and losers in emerging markets and developing economies (EMDEs) and developed nations (Akpan et al., 2020; Cowling et al., 2020; Javaid et al., 2020).

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