THE HOLISTIC APPROACH OF DIGITAL ECONOMY IN MALAYSIA

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ABSTRACT

Asian Development Bank (ADB) highlights that Asia's digital transformation is creating a massive impact to the region's economies. This development is brought about by numerous advancements in technological innovation. Digitization and digitalization were the product of all these developments. The regional economy benefited from digitization and digitalization in multiple facets particularly through improved efficiencies. The disruption of technology innovation has led to more job offering as well as employment reduction. The progress and level of digital economy in Asia countries are therefore asymmetrical and not uniform. Before Asia countries could reap the full benefit of digital economy, an-in-depth understanding of digital transformation based on a holistic approach is required, particularly in Malaysia. Digital economy in Malaysia is not merely the embrace of internet, cloud computing, big data, financial technology, and other new digital technologies, there are micro and macro levels required to purvey a holistic approach to achieve a complete spectrum of digital economy. This paper aims to exploit the Technology – Organization - Environment Model to understand the digital economy landscape in Malaysia.

Keywords: 1) Digital Economy 2) Digitization 3) Digitalization 4) Technology-Organization- Environment Model 5) Malaysia

1. Introduction

The impact of digitalization on the global economy has been significant but uneven, both within and across economies. The implications are vastly affecting economic development, simultaneous job creation as well as job destruction, and income and social inequality. The digital technology has begun in 20 centuries and their maximum capacities are being acknowledged in the business world. Digital revolution is driving up for new market opportunities and providing the competitive advantages for the enterprise. In view of the up changes worldwide, it certainly has created the Mathew effect on every single nation globally. This Mathew effect manifests from the micro level to the macro level of the economy. Hence, this paper aims to understand the influence from the micro level through Technology, Organization and Environment (TOE) on Malaysia Digital Economy in businesses. This paper is organized into four main sections. Brief description explaining the difference between digitization and digitalization along with an overview of the rise of digital economy is followed after this introduction section. The second section provides a snapshot of Malaysia current Digital Economy status and the third section examines Technology-Organization-Environment framework (TOE) of businesses by

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linking it to Malaysia environment. The fourth section suggests an empirical approach in using TOE framework to assess the digitalization level of Malaysia digital economy before ending with a conclusion.

2. Digitization, Digitalization and the Rise of Digital Economy

Schumpeter (1911) once argued that economic growth is the product of innovations in many forms. Among others are new combinations of products, processes, markets, sources of supply, and organizations. This shows that the number of potential technological innovations such as the opportunity set, or state space is virtually limitless. The economy ecosystem can be seen as a structure comprise of elements and connections. Improved connectivity among agents, actors and ideas would create more possible combinations through identification of current opportunities as well as new discoveries. By relating to the technological change and globalization based on the greater connectivity, it has driven the economy to the next level with the label of digital economy. Digital economy is therefore referring to a network of economic activities that involves commercial transactions and professional interaction based on digital computing technologies, the internet and the World Wide Web.

Before further understanding the evolution of digital economy, two most commonly terms used and yet being confused are *digitization* and *digitalization*. These two terms are distinguishable from each other based on their detail and analytical value. According to Klötzer and Pflaum (2017), digitalization is defined as the digitization process which involves encoding data or information into digital form. They further explained that digitalization emphasized on the utilization of information, communication and technology (ICT) by organization, company or society. Meanwhile, *digitization* is defined as the process of changing data into a digital form that can be easily read and processed by a computer. In other words, it involves the material process of converting analogue streams of information into digital bits. Digitalization is interpreted as higher level as compared to digitization as it claims to enhance the competitiveness of an organization through increased flexibility, wider market reach, transformed the processes and product in a more efficient and effective way with lower operating cost (Aboelmaged, 2014;Reinhard, Jesper, and Stefan, 2016). This will certainly be a great benefactor to businesses. In short, digital economy involves more of digitalization which is an advanced stage of digitization.

Based on this understanding, it is widely accepted that the growth of the digital economy has widespread impact on the whole economy. The new economy ecosystem comprises of digital networking and communication infrastructures. This development provides a global platform over people and organizations devise strategies, interact, communicate, collaborate and search for information and the trends are moving toward market liberalization and trade barriers being reduced. Report from "Understanding the Digital" (2018) pointed out that Asia's e-commerce transactions account for 25% of the business to consumer (B2C) market in the world, led by the People's Republic of China (PRC), where companies like Alibaba and Tencent have grown tremendously. The transaction volume of the PRC's retail e-commerce market has increased substantially from CNY1.32 trillion in 2013 to CNY5.33 trillion in 2016 and estimated CNY7.57 trillion in 2017. Further, Xinhua Headlines (2018) reported that China's digital economy totaled 26 trillion yuan in 2017 accounting for 32 percent of national GDP and accounting for more than 40 percent of the value of worldwide e- commerce transactions. These significant figures startled Asia economy. In addition, "What is digital?" (2018) stressed that the backbone of the digital economy is the hyper-connectivity of people, organizations,

and machines that resulting from internet, mobile technology and the internet of things (IoT) to collect, store, analyses, and share information digitally and transform social interactions. To gain the competitive advantage, firm needs to re-think the value proposition in their industry by personalized the customer experiences directly, applied omni- channel and; across space and time zone to response to each individual need. Well known computer scientist cum Professor, Prof. Walter Brenner stated that the aggressive use of data in digital economy will transform business models, facilitate new products and services, create new processes, generate greater utility, by ushering in a new culture of management where talents are expected to work at flextime and at remote location.

The key success that lead the full spectrum of digital economy stems from complete adaptation of digitization and digitalization through digital technology innovation in transforming businesses (Sharma, 2016).

3. Current Updates of Digital Economy in Malaysia

In Malaysia, the government is spearheading the growth of digital economy through Malaysia Digital Economy Corporation (MDEC) . Their goal is centered on building awareness on digital economy, creating talents for the industry, and encouraging digital technology adoption among the people and businesses. In addition, they aim to nurture the growth of the technology industry in Malaysia including the Small and Medium Enterprises (SMEs) (MDEC, 2018). According to MDEC, the digital economy contribution in 2016 was RM201. 6 billion at constant prices and RM223. 8 billion at current prices It is expected to achieve a target of 20% to Gross Domestic Product (GDP) by 2020 as compared to 18.2% in 2016 (The Sun, 2018). MDEC CEO Datuk Yasmin Mahmood added that the forecasted the digital transformation impact on Malaysia economy is expected to significantly increase by 2025 to RM400 billion. In fact, World Bank Digital Adoption Index (2016) is benchmarking Malaysia with other countries through the status of digital service. World Bank Digital Adoption Index uses digital services embraced by business, government and consumer to benchmark among the countries. Figure 1 illustrates the technological trends driving digital economy among the frontrunner countries such as USA, Germany and PRC. The current digital trends are big data analytics, internet of thing, cloud computing and artificial intelligence. Unfortunately, the result showed that Malaysia currently is the 'adopter' country. (World Bank 2016). As compare to the 'frontrunner' such as United States, Japan, Singapore, South Korea, and Estonia, the economic are still fall behind them. Among others, the key challenge in digital readiness of Malaysian main industries are the lack of structured approach, unavailable or no prioritized budget, lack of digitally skilled workforce, and a perception that digital transformation is too fast paced and complex. Besides the challenges ahead, Bank Negara report revealed that Malaysia's competitive positioning in the global economy is comparable with some advanced economies and Malaysia must become a frontrunner to unlock the economic benefits (Kylasapathy, 2018). In addition to MDEC' s various initiatives and programs to attract global and local tech start- ups, the Digital Free Trade Zone (DFTZ) was launched in 2017 under the National eCommerce Strategic Roadmap to boost SME export contribution to USD38 billion and create 60,000 jobs by 2025. (Kylasapathy, 2018). However, alongside these benefits, lessons drawn from other frontrunner country points out that there are risks that have to be considered especially cybersecurity threats. New opportunities have emerged, and Malaysia must further enhance their competitiveness to thrive in this new digital frontier for its success implementation.

According to World Bank (2018) report, the digital economy in Malaysia is expected to grow rapidly. This is supported with the statistics that Malaysia digital economy grew by 9 percent per year in value-added terms, faster than overall GDP from 2010 to 2016. World Bank is optimistic about the future of digital economy in Malaysia and expecting an increase approaching to 20 percent of the economy by 2020. Adding on, E-commerce is growing swiftly, and is projected to exceed RM 110 billion by 2020, when it will comprise nearly 40 percent of the digital economy. Although World Bank indicates positive growth, especially for e-commerce, these headline figures overstate the current size of the digital economy relative to most high-income countries because of Malaysia' s very broad definition of the digital economy. Hence, it requires a micro perspective of analyzing Malaysia' s digital economy. The following section explains digitalization adoption by theorizing TOE framework in Malaysia business organizations perspectives.

Technological Trends Driving the Digital Economy

	Definition	Examples of Applications	Frontrunners
Big Data Analytics	Real time analysis using high volume of data	• Transaction analysis for targeted advertising • Traffic management	• IBM (USA) • Oracle (USA) • SAP (USA)
Internet of Things	Sensor-enabled objects connected via Internet	• Remote monitoring • Wearables and autonomous cars	• Google (USA) • Samsung (Korea) • Intel (USA) • Siemens (Germany)
Cloud Computing	Large data pool stored on the web instead of hardware	• Alternative for acquiring and managing IT infrastructure • Web-based applications	• Microsoft (USA) • Amazon (USA) • Alibaba (PR China)
Artificial Intelligence	Software that learns and adapts	• Image recognition for early risk detection and treatment in medicine • Develop and execute investment strategies	• NVIDIA (USA) • Google (USA) • Baidu (PR China) • IBM (USA)

Figure 1: Technological Trends Driving Digital Economy

4. Theorizing Digital Economy through Technology-Organization-Environment (TOE) framework

There are many theories that were developed in the past in understanding technology usage and technology adoption. Among these theories, it is being further categorized as individual level and organizational level. Theories that are commonly use to understand the individual level technology adoption are Theory of Reasoned Action (TRA) (Fishbein and Ajzen,1975) , Technology Acceptance Model (TAM) (Davis 1989) , Theory of Planned Behavior (TPB) (Ajzen, 1991), Innovation Diffusion Theory (IDT) (Roger,1962) and the Unified Theory of Acceptance and Use of Technology(UTAUT) (Venkatesh, Morris, Davis, and Davis, 2003). Diffusion of Innovation (Rogers, 2003) is among the widely applied theory in organizational level to understand how technological innovations are adopted and diffused. Eze, Awa, Okoye, Emecheta, and Anazodo (2013) added that although some of these models/ theories either at the individual or organizational level evolve from TRA, their principal constructs are overlapping with each other that contributes to the reinforcement adoption theory. This supplements the argument that there is absence of clear and distinct enquiries to expand from the utilitarian, attitudinal, techno-economic, and deterministic contexts of TAM, TRA, and TPB in determining adoption behavior. For instance, TAM focuses extensively on technology aspect and neglects the social and psychological elements. Thus, TAM offers inadequate explanation

and prediction to the phenomena of interest (Venkatesh and Bala, 2008). Even though IDT by Rogers (2003) and TPB by Ajzen (1991) have incorporates the social and psychological aspects but these frameworks do not capture much studies in the contemporary Information System (IS) domain as compared to TAM. In this vein, IDT framework was being criticized for using indicators within the constructs of organization and technology to explain adoption behavior without explaining the environmental context. Awa and Ojiabo (2016) added that TRA, TPB, and IDT together with other grounded adoption theories are too general for technology adoption. The shortcoming of these existing models lead to the development of T-O-E (Technology-Organization-Environment) framework. TOE framework is one of the few adoption frameworks that attempt to incorporate the socio-economic features yet recognizing the interaction between technology development and organization's conditions relating to the necessary business and organizational reconfiguration shaped by agile industry environment. Ramdani, Lorenzo and Kawalek (2009) confirmed TOE framework in predicting the potential adoption of enterprise systems among SMEs in England. Meanwhile Ghobakhloo, Arias- Aranda, and Benitez-Amado (2011) revealed that perceived relative advantage, perceived compatibility, CEO's innovativeness, information intensity, buyer/ supplier pressure, support from technology vendors, and competition have significant impact on adopting EC applications among industrial SMEs.

TOE framework was proven to be holistic and sufficiently capture multiple technological adoption. TOE is claimed as a valid, robust and most dominant framework in studying organizational level on technology adoption (Gangwar, Date and Raoot, 2014). TOE has gained substantial theoretical and empirical support from many studies such as Iacovou, Benbasat and Dexter (1995); Kuan and Chau (2001); Zhu, Kraemer, and Xu (2003); Thong, (1999), Eze et al. (2013); Yoon and George (2013); Zheng, Yen, and Tarn (2011); Henriksen (2006); Ramdani and Kawalek (2008). According to Baker (2011), the well accepted TOE framework is due to its' inclusion of a multi-perspective organization-level innovation process that illustrate how the technological, organizational and environmental contexts. These three contexts interplay to influence the adoption and implementation of innovations. Based on the aforementioned reasons, current conceptual paper uses TOE framework as a theoretical basis to understand Malaysia Digital Economy which is formed by many business organizations.

Rocco DePietro, Edith Wiarda and Mitchell Fleischer (DePietro et al., 1990) were the pioneers that developed TOE framework stems from an organization-level theory. Baker (2011) clarified that TOE signifies one segment of the innovation process, as how the firm context influences the adoption and implementation of innovations. This framework pointed out three aspects of an enterprise that influence the technology innovation adoption process. These three aspects are Technological, Organizational and Environmental. Technological context represents the internal and external technologies related to the organization; both technologies that are already implement at the firm, as well as those that are available in the marketplace but has yet to be adopted (Baker, 2011). These technologies may include either equipment or practice. Organizational context is related to the resources and the characteristics of the firm, such as size and managerial structure. Lastly, environmental context refers to the arena in which a firm conducts its business. Environmental context can be related to surrounding elements such as competitors, industry and the presence of technology service providers. These three contexts present both opportunities and threats for technological innovation (Tornatzky and Fleischer, 1990). These three elements interplay forces influence the firm's level of technological innovation and in this situation, it is the digitalization context that referred.

The technology environment purveys the characteristics of an innovation, i. e. , digitalization that plays a critical role for its adoption. These characteristics represent both the internal and the external benefits of the technology innovation to the firm, that possibly lead to improved internal processes and productivity (Gu, Cao and Duan, 2012). The adoption decisions of most organizations are mainly motivated by the perceived benefits reaped technological innovation (Gu, et al. , 2012; Teo, Lin and Lai, 2009; Rogers, 2003) . The relative advantage of digitalization adoption can be anticipated as benefits to organizations derive from digitizing and digitalizing processes and structures within the organization. Gbobakhloo, Arias-Aranda and Benitez-Amando (2011) added that organizations are highly likely to digitalize if they perceive that its benefits outweigh the costs and risks of its adoption. Researchers (e.g., Gamal Aboelmaged, 2010; Li, Trout, Brandybarry and Wang, 2011; Ramayah, Ling, Taghizadeh, and Rahman, 2016) who have examined the relationship between relative advantages and intention to use technologies innovations propose that relative advantage is positively influencing behavioral intention to use a technology innovation. Adding on, the adoption of technology also lies on the ease of use as in the complexity level of operating the system (Alshamaila, Papagiannidis, and Li, 2013). Assuming that much effort is needed to learn the new adoption, higher chance that the adoption would not be materialized. Hence, potential adopters' perception on the extent of ease to use of an innovation will influence their behavioral intention towards its use. The linkage between complexity and behavioral intention to use an innovation has been widely established in the literature on individual-level innovation adoption (Agudo- Peregrina, Hernández-García and Pascual-Miguel, 2014; Visinescu, Sidorova, Jones, and Prybutok, 2015; Gao, Waechter and Bai, 2015; Ramirez-Correa, Rondan-Cataluna, ˜ and Arenas- Gaitán, 2015) . Maduku, Mpinganjira, and Duh (2016) the linkages between complexity and behavioral intention does not only applicable to the individual level but also in the organizational level. This finding supports the importance to understand technology context from the point of adopters as in the organization level. Additionally, cost of adoption in technological innovations is another important technological factor that influences digitalization. Cost factor and the subsequent adoption of technological innovations through digitalization, particularly important within the SME sector (Tan, Chong, Lin, and Eze, 2009; Ramayah, et al., 2016) with 99% of Malaysia economy is backboned by SMEs. These aforesaid show that there are more aspects to be looked into in the context of technological in terms of digitalization adoption. In order for Malaysia to embrace Digital Economy, all forms of business organizations are needed to comprehend their technological context in its' relative advantages, level of complexity and cost. Business organizations should clearly recognize the benefit of relative advantage received from digitalization adoption. In term of complexity, organizations are suggested to implement a gradual and progressive approach to minimize the learning curve of the adopters. As all business organizations with ultimate objective of increasing profitability and minimizing cost, the cost incurred for digitalization adoption should be viewed as a long term investment for future competitiveness and sustainability.

Organization context is another crucial element in the adaptations of digitalization. Organizational context covers the characteristics of the firm such as firm's size, decision making arrangement according to degree of centralization, degree of formalization, and managerial structure, as well as availability of resources (Tornatzky and Fleisher, 1990). In this paper, the organizational context represents various organizational conditions encompassing support from top management, sufficient financial resources, and employees' capability. Innovation adoption particularly for digitalization adoption in any organization require well- structured planning and strategic leadership. It should also be

clearly communicated within the organization at all levels of the role of digitalization by emphasizing the significance of creativity and innovation by employees, and rewarding innovative initiatives. The support of top management is needed to build a supportive environment and for providing adequate resources to assist digitalization adoption (Low, Chen, and Wu, 2011). Past studies (e.g., Ramayah et al., 2016; Wang and Lai, 2014; Tsai, Lai, and Hsu, 2013) reinforced that top management support is a key driver influencing firms' behavioral intention to use an innovation. Recent research by Maduku, Mpinganjira, and Duh (2016) further approved that the positive relationship between top management support and behavioral intention to adopt innovations among enterprises in Malaysia. In term of the financial resources, there were some mixed results surfaced. Maduku, Mpinganjira, and Duh (2016)'s research observed that financial resources had no significant effect on intention to adopt mobile marketing among the SMEs while Sila (2013); and Kim and Garrison (2010) found adequate financial resource as a key driver of technology adoption. Maduku, Mpinganjira, and Duh (2016) explained the mix findings that the surveyed SMEs do not fully appreciate the value that technology innovation holds for their enterprises, and instead perceive the innovation as another financial burden without corresponding benefits for their business operations. As such, the availability of financial resources may be an important element but not the key motivator for digitalization adoption. Besides, employees being the internal stakeholder of any organization have a crucial role in digitalization adoption too. In the organizational context, it is evidenced from employee capability. Well-qualified work force to manage the technological innovation is equally important. Numerous Information Technology (IT) literature pointed out that most businesses, exclusively the SMEs, often suffer from a lack of internal Information System (IS) experts, and face the severe challenge of having to hire external IS consultants at excessive cost. These literatures informed the serious repercussions when there is a lack of suitably qualified internal IT innovation experts (Caldeira and Ward, 2003; Fisher and Howell, 2004; Ghobakhloo et al., 2012; Thong, 2003). Hence, employee capability in term of technological knowledge is important and beneficial in digitalization adoption. This is understood as competent employees save the organization cost of having to hire external IT expert and ensuring the smooth operation of digitalization processes. It is reasonable to assume that higher levels of confidence among employees about their ability to cope with technology innovation would be allied to a higher likelihood of SMEs' intention to digitalize. This is consistent with past studies emphasized that organizations with lower levels of employees' capability for technology innovation appear as an impediment to enterprises' behavioral intention to use technology innovation (Ghobakhloo et al., 2012). With the knowledge of the benefits and use of technology innovation, employees are urge their decision-makers into developing a positive intention towards digitalization adoption. To foster Digital Economy in Malaysia, business organizations should have a promising organizational context through supportive management, adequate resource and capable employees.

The environmental context of TOE reflects the organization surrounded by multiple stakeholders such as competitors, suppliers, customers, the government, the community, etc. These group of stakeholder could determine the need for technology innovation, ability to acquire resources for adopting technology innovation, and capability for actually deploying it (Tornatzky and Fleischer, 1990). TOE framework considers the adoption process within organizations is effectively established through the right match between organization's environment from the internal and external factors (Arpaci, Yardimci, Ozkan, and Turetken, 2012). The environmental context is the climate in which the organization conducts its operations. Factors in this environment include the setup of the industry, the availability or non-availability of technology service providers,

and the organization's regulatory environment (Tornatzky and Fleischer, 1990). Alshamaila et al. (2013) informed that the suppliers' marketing activities significantly impact innovation technology adoption decisions. This is evidenced through the technical support provision. For instance, a client's organization can develop technology innovation-related capabilities through the training provided by its supplier. This initiative helps to mitigate the perceived risk related to the technology adoption, thereby influencing the potential adopter's decision to adopt the technology innovation (Weigelt and Sarkar, 2009). On the other hand, if organizations have a negative perception of technology vendors and are unhappy with their services, this would act as a barrier to their adoption decisions (Al-Qirim, 2007). Thong (1999) added that the availability of vendor support as a key determinant of new technology innovation. Competitive pressure is construed as the external environment that pressure the organization to establish its' competitive advantage (Wang and Cheung, 2004). Competitive pressure may coerce firms into adopting technology for not losing its' competitive advantage, even when they do not see the benefit in adopting (Lin, 2014). In Chwelos, Benbasat, and Dexter (2001)'s research, external pressure, i.e., competitive pressure is a significant antecedent of the intention to adopt technology innovation. Apart from the competitive pressure arise from the industry rival, customer is the central of any business organizations. Building a strong relationship and gaining continuous trust from customers are among the several characteristics of inter-organizational relationships. The commitment, encouragement and coercion arising from customers becomes the push factor for digitalization adoption (Rui, 2007). Satisfying the diverse needs and expectations of customers through the technology innovation facilitate improved interactive communication with customers. It is the major driver of new technology innovation adoption in many businesses. Organizations are forced to adopt and embrace digitalization because they believe that their customers are expecting them follow the path of technology advancement. According to Maduku, Mpinganjira, and Duh (2016), this perceived customer pressure was found to impact positively on SMEs' intention to adopt technology innovation. Customer pressure is thus another imperative driver of intention to digitalize. Past studies by Gareeb and Naicker, (2015) also concluded that customer pressure is among the reasons for SMEs embrace technology innovation. Businesses often wish to delight their customers by maintaining long relationship through multiple efforts. Henceforth, offering a platform that keeping track the technology advancement to the customers appears to be a novel way to maintain their relationship. The intention of providing greater customer services to their clients through technology innovation can be used a motivation to induce greater willingness to digitize among business. In sum, vendor support, competitive pressure and customer pressure compels businesses to develop a positive acceptance of behavioral intention towards digitalization. All these forces form the pull and push strategy for business to digitalize for the ultimate contribution of Digital Economy.

Drawing from the aforesaid discussion, the TOE framework is illustrated in the following Figure 2.

Figure 2: Theorizing Digital Economy through Technology-Organization-Environment (TOE) framework

5. Proposal for Future Research

Drawing from the TOE framework illustrated in Figure 2, the path to full spectrum of Digital Economy can be studied through the testable propositions of linking technological, organizational and environmental context to digital adoption among business organization in Malaysia. These propositions set forth in this research could offer an opportunity for further investigation into the relationship between the technological, organizational, and environmental factors and digitalization adoption through quantitative research design. Questionnaire survey technique and analytical protocols such as structural equation modelling (SEM) can be used to collect data from business organizations. A typical SEM analysis for the propositions might be employed independent analyses for each classification of relationships (technological, organizational and environmental) and an aggregated SEM analysis to investigate all the relationships simultaneously to the digitalization adoption. The fundamental basis for structural equation modelling is the ability to simultaneously examine multiple regression

statements. Applied research settings within various organizations should be used to validate this model and permit the identification of alterative intervening or moderating variables on the relationship between these variables and digitalization adoption. Once organizational adoption among businesses has occurred, the investigation can progress to macro level using models and theories to ground that research. It is anticipated that the three aspects of TOE framework would interplay a crucial relationship for digitalization adoption among businesses in Malaysia particularly SMEs. The consequence of widely adaptation of digitalization will lead to the full scale of Malaysia Digital Economy.

6. Conclusions

This paper provides a structured guide on understanding Malaysia businesses' paving to Digital Economy. A robust framework is proposed to examine Malaysia businesses landscape from technological, organizational, and environmental determinants. Drawing from this conceptual discussion and theory development effort, several propositions are emerged. Firstly, the technological context is examined through relative advantage, complexity and cost. Secondly, top management support, financial resource and employee's capability are the important indicators to understand the organizational context. The environment context consists of vendor support, competitor pressure and customer pressure. These three contextual elements will determine the digitalization adoption among businesses, in which contribute to success or failure of Malaysia digital economy. In addition, the potential findings will provide insights of the strength of these determinants and able to help to strategize for further recommendations of implementation. In a nutshell, the linkage between these technological, organizational, and environmental determinants and digitalization adoption for the fast economy is worthy of exploration.

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