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DRIVERS OF NEW VENTURE DIGITALIZATION AMONG MALAYSIAN SMES: A CONCEPTUAL MODEL

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ABSTRACT

This study is an extension of previous studies focusing on new venture digitalization. It examines the influence of the drivers of new venture digitalization on small and medium enterprises (SMEs). Using a systematic literature review, the study developed a conceptual model to examine the drivers of new venture digitalization among Malaysian SMEs. The findings reveal the extent to which organizational factors such as size, ownership and international experience of firms can influence Malaysian SMEs' new venture digitalization. It also indicates that individual and environment factors such as age, gender, and education; government intervention, competitors and customers pressure, Covid-19 health crisis, blockchain technology and fast broadband access have the potential to drive Malaysian SMEs' new venture digitalization. The study contributes to models on new venture digitalization and provides a better understanding of general and country specific factors that drives the utilization of digitalization in new ventures.

Keywords: *New Venture digitalization, organisational factors, environmental factors, individual factors, Malaysian SMEs.*

1. INTRODUCTION

New ventures benefit the countries because new ventures are the significant source of economic improvement, providing job opportunities and enhancing innovation [1]. Besides, new ventures are crucial to the society because it reduces the social problems including crime rate, income inequalities and poverty [2]. On the similar line, various studies [3, 4]. have explored the consequences of new ventures on economic, society, ground-breaking innovations, and wealth creation. Thus, the ministry recognised the demand to grow start-ups and assure their victory because they contribute in the internal economy development plan. It can be seen in Malaysian government offers various grants (e.g., PERMAI special prihatin grant, electricity bill support, wage subsidy programme) to help the new ventures to survive [5]. Another example is the Malaysian government gives loan which characterized as affordable and lower rates to the new ventures for funding their business initiatives [6]. Despite the Malaysian government effort, new ventures encounter obstacles and hassle in surviving as the new ventures have 90% failure rate [7] i.e., the phenomena of new organizations terminate the operation activities, organization structure falls to piece and coming to end [8]. Based on Mclntyre [9], in the first five years, around 50% of new ventures fail and less than 50% can survive more than five years. It has been proven that the first five years is the unsafe phase for the new ventures.

The main challenges faced by these new ventures in the first five years is incompetence in adopting digitalization i.e., merging various technologies such as big data, cloud computing, 3D printing generates previously unimagined possibilities and create brand new products and services [10]. Malaysian firms are lagging behind the worldwide average when it comes to digital adoption [11]. There are fewer Malaysian new ventures who have websites and

participate in electronic commerce [11]. Without digitalization, new ventures may not have corporate collaboration or changes in consumer and employee interactions. New ventures are also lagging behind in resource utilization, decreased staff productivity and work efficiency, lower consumer loyalty and satisfaction due to the absence of digital technologies. All these informs the importance of new venture digitalization, which needs to be examined. The paper purpose is to review prior literature to suggest the drivers (organizational, individual and environment) that may improve new venture digitalization in Malaysian SMEs.

This paper makes the following contributions. From theoretical viewpoint, it offers theoretical conceptualization on how the drivers (organizational, individual and environment) can severely impact Malaysian SMEs new venture digitalization effectively and satisfactorily. Besides, this paper highlights major gaps as well as potentially beneficial expansions of existing areas of research particularly to comprehend the past and future of new venture digitalization in Malaysian SMEs. Viewing from practical standpoint, this paper enhances SME entrepreneurs' thorough digitalization understanding and knowledge, helping entrepreneurs to analyze data on domestic and international markets, sell goods or services, or establish relationships with prospective customers, suppliers, or key stakeholders. This paper also allows the Malaysian governments concentrating on developing strategies for the national economic expansion once they understand the ecosystem of Malaysian SMEs' new venture digitalization. The examination of ecosystem of Malaysian SMEs' new venture digitalization involves a thorough investigation of all the drivers that affect how well Malaysian SMEs can be established and run new venture. The following is the paper's design: literature related to the drivers of new venture digitalization in Malaysian SMEs in section 2, proposed methodology in section 3. Finally, conclusion is in the last component.

Literature Review

Organizational context

Firm size

The size of a company appears to have an impact on its ability to survive for the new venture digitalization [12]. Theoretically, this conclusion reflects the fact that not only younger but also smaller businesses confront significant hurdles while attempting to grasp the issues of organisational development [13]. Firstly, small businesses frequently have little financial and tangible resources, making them unsafe to business cycle [14]. Although small businesses are able to obtain funds through regular market transaction, they will likely to cover greater rates of interest and will be subjected to more requests for replacement that would jeopardize the founders' vision for the company [15]. Secondly, small businesses not only lack of financial and tangible resources, but also managerial expertise that larger businesses do, as they are less likely to attract qualified employees [16]. Consequently, small businesses tend to rely on outside help more than larger businesses when it comes to securing financial resources, other tangible resources, and necessary skills and guidance [16]. Furthermore, small businesses are most likely struggle to persuade potential network partners to collaborate [13]. There are two reasons for this: First, small businesses have little market penetration, organizational prestige, small businesses' first pool of possible partners is limited [12]. Second, small businesses are impotent to actively respond within a network-based interchange due to limited resources [17]. As a result, when potential network partners are well informed of a new endeavor, they usually doubtful to invest in an exchange relationship [17]. Based on these discussions, this study expects firm size has relationship with new venture digitalization.

Firm ownership

A firm's ownership structure may exert influence on new venture digitalization [18, 19]. Barbera and Moores [20] have identified two types of firm ownership namely 1) non-family, 2) family. Prior studies [21, 22] have supported that non-family ownership is related to new venture digitalization. The rationale is that firms' managing directors have autonomy in impacting firms' decision-making, thereby reinforcing and tracking activities (e.g., new venture digitalization) which are advantageous for long lasting expansion [22]. The managing directors' decisions are convinced by economic actions which expect managing directors to assess the selection of new venture digitalization based on the return rate, market risk, connected opportunities and consumer needs [23]. Garcia-Sanchez et al. [24] has proven non-family ownership significantly related to innovation activities (e.g., new venture digitalization). According to Garcia-Sanchez et al. [24] managing directors influence eco-innovation (e.g., new venture digitalization) adoption via their active participation, involving themselves in decision making process regarding new investments in digitalization projects, implementing various activities to pressure subordinates to digitalize. In the similar vein, family ownership, referring to firms are owned, controlled, and managed by the family units [20]. The family units are allowed to utilize strategic control over the firms' resources, processes, and future directions [20]. Various studies [25, 26, 27] have claimed that family ownership has insignificant impact on new venture digitalization. Family firms are unenthusiastic to support insecure activities (e.g., new venture digitalization) and preparing to give up economic considerations to protect family prosperity. Additionally, family particular agency cost influences investment on new venture digitalization because family unit members resist the investment activities to maintain the businesses' cash flow. Block et al. [28] found that family firms reduce the investment intensity. In line with the arguments, this study expects firm ownership has relationship with new venture digitalization.

Firm's international experience

Firm's international experience is defined as the degree to which a venture's executive team is exposed to knowledge of other cultures through past encounters or network connections [29]. The connection between firm's international experience and new venture digitalization has a strong foundation. For examples, academic research has actually shown that firms use their international experience to spot prospective global business prospects and recognise new opportunities in the international marketplace more effectively and realistically [30, 31, 32]. Besides, Chen et al. [33] have discovered the firms will learn from past experience which domestic resources is most likely to be effective in subsequent tries, understand the possible requirements of the international market and thus raise the likelihood of successful outcomes. Chen et al. [33] highlight to handle the complexities, the firms with international experience might increase their knowledge and learning experience with the procedures for digital technologies. Additionally, encouraging comments from successful actions in the past might boost the firms' self-assurance and motivate them to repeat same actions in the future [34]. Based on the arguments, this study expects firm's international experience has relationship with new venture digitalization. The levels of formalization and centralization of the organisation were used to assess a company's management style.

Individual context

Age

Although the usage of information technology is increasing rapidly in our daily lives, age groups such as the older adults are still found to be utilizing digital technology at a lesser percentage relative to the younger generation [35]. A recent report from the Pew Research center [36] also revealed that 95% of the adults less than 65 years old in the United States use the Internet frequently, compared to adults who are 65 years old and above, which is only 73%. Besides, age has a positive and significant relationship with entrepreneurial activities. Several studies [37, 38, 39] have also shown that the young generation has significant differences in entrepreneurial behaviors compared to mature or older generations. For instance, older executives tend to prefer the status quo because they are less able to understand new information and causing the firm to be underperforming compared to the younger executives. Such findings were also in line with Gielnik et al. [40] who found that senior entrepreneurs have less concern on upcoming possibilities compared to the young entrepreneurs which resulted in lower venture growth. Although, studies (e.g., Tubadji et al. [41] have shown that when it comes to fear of failure, younger and older generations are similar in many ways. Yet, older generations are overall more careful and cautious than young generations [42]. According to Becker [43], older generations tend to prefer more on instant payoffs over slow down and unknown profits from new business. Hence, they are supposed to be less interest to spend their time and capital in a new business as relative to the younger generation [44]. As a result, age groups tend to influence the adoption of new venture digitalization as new ventures digitalization seems to be riskier and uncertain.

Gender

Another factor that can influence the adoption of new venture digitalization is male or female. Many societies expected males to be more assertive and dominant while females to be more communal, cooperative, and nurturing [45]. Early studies have found that gender differences do influence the new venture digitalization. For instance, previous studies [46] have reported that females are less likely to internationalize new ventures compared to males. Furthermore, males are often found to be more familiar with digital technology compared to females. Hunsaker and Hargittai [47] also revealed that the usage of technology widely differs between gender. Similarly, Ihle et al. [48] claimed significant variation between male and female on internet use. Bediou et al.'s [49] meta-analysis found that males tend to show cognitively demanding action video games while females tend to get attracted by social simulation and puzzle video games. This indicates that males and females have significant differences in use of the internet. Moreover, several studies [50, 51, 52, 53] have analysed the function of gender discovered that older men use the Internet more frequently than older women. However, other studies [54] found that there are no significant differences in younger and matured individuals on digital technology utilization. On the other hand, gender is often found widely differing in risk perception and risk-taking behaviors. Males tend to be more risk tolerant while females are more risk averse. Hence, when it comes to risky decision making, differences were frequently found between gender [55, 56, 57]. Therefore, we believe that new ventures digitalization tends to have higher risk and require higher investment compared to traditional methods, and hence, gender somehow still contribute in the new venture digitalization.

Education

Aside from age and gender, education level was also found to be one of the significant factors that influence the adoption of new venture digitalization. Early studies [58, 59, 60] have consistently shown that education significantly contributes to new venture formation and success. For instance, McMullan and Gillin [61] examined the graduates from the Swinburne Graduate School of Entrepreneurship and revealed that 87% of those graduates started independent or corporate ventures. Such findings were also in line with Cooper, Gimeno-Gascon and Woo [62] who found education to have positive significant relationship with continuance in self-employment. Moreover, education is one of the representatives for the knowledge, expertise and competence that entrepreneurs contribute to the business [63]. Bandura [64] stated that education is able to help in increasing self-efficacy of the potential entrepreneurs through knowledge transfer and skills development. Several studies [65, 66] have also found that education significantly contributes to survival and growth of a business. Chandler and Jansen [67] highlighted that business education tends to be related to profitability. Similarly, Honig [68] also found that education was positively related to performance especially in large organizations while negatively related in small organizations. Besides, previous studies have also found that countries with better education access tend to have higher use of technology and internet, where education is essential for technological innovation and economic growth. Hence, in order to be successful and survive in a business, adopting new venture digitalization could be one of the opportunities. However, entrepreneurs are first required to have digital efficacy before undertaking new ventures digitalization. Therefore, we believe that education level could potentially influence new venture digitalization.

Environmental context

Government intervention

The modern and contemporary technological era requires a digital tweak to drive small and medium (SME) organisations forward. One of the influencing factors is that of government intervention in promoting digital mode of payment, offer digital training and build digital partnership ecosystem [46]. Therefore, digital technologies should often be at the fore front of the SME digital transformation which fundamentally encumbrance digital capabilities, digital strategies and talent development [69]. Other previous research findings also have found several external attributes, namely digital shift in the industry, behavioural aspect and expectation of customers as well as changes in the competitive arena [70], and changes in legislations [71] could contribute to the adoption of digitalization for SME.

Competitors and customers' pressure

The drive to digitalize new business can also be due to rivals, and customers demand [72] although some researches have examined business environment in its entirety. Changing of customer demand and behaviour = customer requirements=customer pressure. Other prior studies [73] of big data analytics also revealed the association between environment and technology with SMES performance. The findings unfolded organization technological elements are the contributing factors to big data analytics in the context of SMEs establishment and its performance. Additionally, the outcome generated of this study also confirmed that the application and usage of big data analytics could enhance support in a broader domain in respect of SMEs market performance. Digital technologies do facilitate the direct interaction

and accelerate integration in supply chains [74], at the same time, the governmental policies also encourage a diffusion of Industry 4.0 with that of the industrial transformation [75].

In Khin and Kee's [76] study, the authors investigated several possible factors influenced adoption of I4.0. Stentoft et al. [77] have in their research found that the drivers of technological and digital application have received less attention. The authors suggested that companies might have to concentrate more on the pushing factors rather than hindrance to improve the execution of Industry 4.0 because there are more opportunities compared to blockages and limitations. The authors indeed had identified some market factors such as rivals and customer expectations and requirements as well as benefits (e.g speed to market entry and reduction in expenses) of I4.0 implementation. These findings are consistent with that of the outcomes exhibited in research found in Horvath and Szavo [78]. In contrast, M€uller et al. [79] revealed that environmental, social, strategic and operational elements are components for strategic plan revolution that constituted factors of I4.0 implementation by manufacturing firms in other country such as Germany. Many research produced variegated outcomes of factors of Industry 4.0 version which indeed not comprehensive enough and hence further warrant further research into the adoption of I4.0.

COVID-19 health crisis

The recent health crisis such as COVID-19 tends to be an accelerator in the rapid change of the global trend, in particular, the eagerness to embrace modern technologies in changing human lifestyle and work-related activities. Inevitably, the COVID-19 had emerged the primary driver for the adoption of digitalisation in organisations [80]. The research findings also suggested that digital payments should be a critical digital transformation priority for SMEs.

Blockchain technology

It was worth noting that the findings revealed by Upadhyay et al.'s [81] relating to blockchain technology indicated clearly it can help reducing cost of transactions, further ensure citizenship rights inclusive of wellness program of patient and ecosystem. Other study also evaluated the challenges to blockchain implementation which delves deeper into the concept of trust, scamming activities, possibility of hacking and the needs for suitable policies and governmental legislations to curb such illegal acts by irresponsible cyber predators. On the other hands, Bollweg et al.'s [82] results indicate high uncertainty among SME retailers concerning the path towards usage of technological aids and devices.

Fast broadband access

Lee et al. [83] contended that the recent studies gradually inclined towards digitalisation with a specific focus on digital technology, especially in the area of broadband Internet [84], social media [85], digital marketing [86], Internet of things [87], e-commerce [88, 89], Internet banking [90] or others. It has been an acceptable trend that firm's digitalisation initiated by most of the SME's senior officials, however, the issue of what are these should remain a conundrum which clearly had affected their decision to go-ahead with digitalisation. Jones et al. [91] mention three inner drivers (e.g. ICT knowledge, resource availability and business model fit) and three outer drivers (e.g. advice and support, customer relationships and the available of broadband speed and accessibility) that affect the digitalisation of SMEs in the western part of the world. Whilst, Lee et al.'s [83] findings suggest that digital adoption among SMEs generated out of the four primary drivers such as marketing, process and product

development and improvement. Increasingly, other authors such as Rahab and Hartono [92] and Ramayah et al. [93] investigated a framework consists of leadership, organisational and environmental determinants in relation to the IT usage. According to the authors, environment determinants are not the contributing factors to SMEs digitalisation. Conversely, both Taiminen and Karjaluoto [86] posit that environmental factors, firm contexture features and agency factor are possible drivers of firm digitalisation.

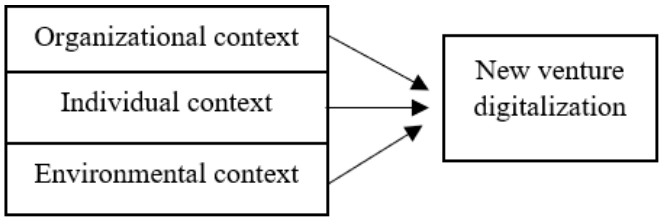

Figure 1. Conceptual Model

2. RESEARCH METHOD

The underpinning base for a positivist study is that of a structured review of prior studies which is a successful approach that provides a replicable, unambiguous and footsteps of the reviewers' recommendations, processes, and interpretations [94, 95]. It was well noted that a comprehensive and structured review should form a strong groundwork for knowledge building and improvement to create a new model. It assists evolution of numerous theories to be examined and also decided areas where future research is required and gaps acknowledged where there is already a lot of research. According to Tranfield et al. [95] and Petersen et al. [96], the data extraction must contain the subsequent details such as article title, author, nation, and year of publication. The authors have done a thorough explore for secondary data, utilizing a number of library databases such as publications by Scopus, Web of Science, ProQuest, Elsevier and Springer related articles in general. Other external explore includes but not limiting to Google Scholar, Research Gates etc. These databases were chosen for the review to guarantee that they would include the majority of the pertinent journal articles.

The systematic review approach can explore the literature in fields that aim to clarify interference with particular interest such as origin and consequence analysis [95, 97]. The mentioned method empowers systematic analyses and combine of suitable studies by precisely describing each article into subject, years, authors, and their discoveries [98]. After that, the authors enable to create a theoretical framework and evaluate of the study objects [95]. To extensively plan our document review and proposed framework, we utilized a systematic approach developed by Tranfield et al. [95]; Denyer and Tranfield [99] and Rousseau et al. [100]. To warrant the thoroughness of our review, we cut out news story and theoretical based published work or books.

3. CONCLUSIONS AND RECOMMENDATIONS

As a conclusion, new ventures digitalization benefits the countries by economic improvement, providing job opportunities and enhancing innovation. However, many challenges have been faced by the organizations in new venture digitalization as many were found to be not ready for digitalization. Therefore, this study attempts to understand the drivers of the new venture digitalizational and propose a conceptual framework for future study. Our reviews revealed

that organizational context, individual context, and environmental context are the three main drivers in influencing the new venture digitalization. For instance, for organizational context, we found that firm size, firm ownership, and firm international experiences are drivers that can influence the new venture digitalization. On the other hand, for individual context, we found that age, gender, and education whereas for environmental context, we found government intervention, competitors and customers pressure, Covid-19 health crisis, blockchain technology and fast broadband access have the possibility to influence the new venture digitalization. Therefore, we hope such findings could help future researchers to investigate the drivers empirically and importantly improve the utilization of digitalization in new ventures.

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