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MODEL OF THE ANTECEDENT AND CONSEQUENCES OF DIGITAL INCLUSION: A STUDY AMONG ENTREPRENUERSHIP

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Abstract

The study aims to develop a model of digital inclusion among entrepreneurs (SMEs) in Malaysia. The existing digital gap instrument is geared towards access, skills and motivational aspects of using ICT and looking at the issue of usage gaps, whereas digital inclusion is about how users benefit from the use of ICT as well as prevent the occurrence of digital imperfections. Digital inclusion is a holistic approach that a) measures the impact of ICT on economic and social (new skills), b) an environment that can help the economic and society capabilities benefit from ICT (innovation and entrepreneurship), c) Clear policy and identify opportunities for public-private collaboration (robust legislation and law). Hence, the formation of antecedent and digital inclusion model is a new lead in measuring individual and community development. The objective of the study is to determine the re-concept of digital inclusion and to test the identified digital domain domains such as communication networks, entertainment, and search for business information, e-commerce, creating business sites, advertising and product marketing. Subsequently, the expected outcome of the study is to introduce a new digital inclusiveness instrument among entrepreneurs (SMEs) in Malaysia based on a number of domains that have been tested and identified.

Keynote: Model, antecedent, digital inclusion, implications

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INTRODUCTION

Digital inclusion is critical issues related to inequality for those who are unable to access technology, the weak and marginalized groups in society that excluded the digital world (Seale 2009). In addition, digital inclusion is closely related to concepts such as access, use, power and engagement. Increasing Internet users basically impact the diversity of content on the Internet. Ultimately the user himself has the option of selecting the type of content and information it desires. In the meantime, Internet content is not only related to science, health, education, and politics but also brings a wealth of information about entrepreneurship (Tan et al., 2008; Wanyoike et al., 2012 & Prodnik, 2014). Generally, studies on the gaps found in Internet use are no longer the main thing but most studies are now beginning to look at the purpose of individual engagement in the Internet and its benefits (Hazura et al., 2012). Digital inclusion indicators such as access, skill, and motivation are related to content engagement and in turn lead to tangible outcomes. Tangible outcomes can further be related to economic, social, cultural, and personal fields.

LITERATURE REVIEW

ICT Usage

ICT usage can be identified as one user or an individual utilized the use of technology in order to complete their task or either getting things to be done with the help from computer networks or computer program which either software or hardware program also fully utilizing social media as tools for communications and getting information's. According to Kisanga and Ireson (2014) ICT has becomes immensely important globally and enlighten the mind of people, develop critical thinking, accept new ideas and show creativity. Other than that, ICT usage can be described as use of technological devices that allow data and information to be edited, produced, stored, exchange and transmitted between different information systems that have common protocols (Ortega, 2014; Sileny Estella et al., 2018). It is supported by Teo and Beng Lee (2010) where according to them, ICT usage can be referred to the utilization of the internet along with computer networks, World Wide Web, email and search engines used in the production and sharing of information (Umar Musa et al., 2018). It also can be define as the utilization of a diverse set of technological tools and resources that can be used to communicate, and to create, disseminate, store and manage information (Saraf et al., 2016; Umar Musa et al., 2018). In the early stages development of technology, society do understand that technological development has facilitated progressive human civilization, improved the environment of living and increased towards the human welfare (Anderson & Dexter 2005).

ICT also can be understood as information communication that progress with the assists of technology to ensure communication and information delivery will be done easily. As for entrepreneurs, their ICT usage will be focused on their business daily process and doing the marketing for their business by using social media as part of tools in marketing. Alderete (2012) stated that the concept of connectivity carry by ICT which has go beyond infrastructure and

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hardware, including software and skills incorporated in people, governments and entrepreneurs, who end giving values to these tools, through the way they contribute to productivity. The relationship between ICT usage and small medium entrepreneurship has accelerated research concern in entrepreneurship development and in particular, the concept of use ICT in business has attracted a huge research interest in the field over a decade (Amue Gonewa, 2014).

Utilizing the internet access as part of the business process in ICT usages can be found in the activity frequently done by entrepreneurs. According to Amue Gonewa (2014) the internet is another way of ICT tools can be utilized, internet access or services provided for people and public with a minimal cost surely can be considered to be use by the entrepreneurs. Even in Malaysia, currently the new government also enforcing the internet services provider to give high speed of access in the internet with a minimal charges. As mention by the Communications and Multimedia Minister Gobind Sing Deo in June 2018, where he state that broadband users in Malaysia should expect charges for service to fall by at least 25% by the end of the year 2018 (The Edge Financial Daily, June 21st 2018). Thus, it allows the ICT usage among the public to be increase and simultaneously the use of ICT in entrepreneurship. This can be seen as one way to encourage more people to start their business with a small investment of money in terms of technology application.

Malaysia has been recognized as a country that supports the rigid of integrating ICT usage into development of the nation (Samsudin et al., 2011; Faradillah Iqmar et al., 2018). Increasing numbers of entrepreneurs involved in small medium entrepreneurship (SMEs) has become the signal for the high internet demand and ICT usage in Malaysia every year. Hence, it triggered the government to be more productive in development of infrastructure to support the small industry. The provision of infrastructure in the field of technology is one of the government seven initiatives to ensure Malaysian are able to compete with other country in the small medium entrepreneurship industry. The ICT usage has been highlighted as the most significant idea to be acknowledge as among of the initiatives by the government to create Egovernment and business processes involving ICT as a medium of communication (Faradillah Iqmar et al., 2018).

Furthermore, ICT usage in small medium entrepreneurship can be seen as one of the benefits entrepreneurs would have in their business. As the adoption of ICT usages offers many benefits across a range of intra- and inter-firm business processes and transactions (Apulu & Latham, 2009; Ademola Afolayan et al., 2015). They expected that ICT will provide entrepreneurs with competitive advantage along with improved integration among supply chain trading partners (Bhagwat & Sharma, 2007; Ademola Afolayan et al., 2015). The use of ICT in business have been widely explored in the several past research which some of the researcher has been looking at information technology usage in small medium entrepreneurship in some developing nation in the south East Asian countries. They have seen that role of SMEs in developing countries as an important one, contributing to the economic growth and thereby creating job opportunity and poverty alleviation (Adekunle & Tella. 2008; Paul et al., 2008; Jones et al., 2014; Ademola Afolayan, 2015).

Moreover, the factors eventually effected the ICT usage among SMEs is the fact that SMEs is a highly heterogeneous collection of enterprises and vary substantially by size, sector, structure and location. Where these characteristics can directly influence the business environment or the organizations use of ICT as whole new way of getting task and works to be

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efficiently completed (Apulu et al., 2011; Ademola Afolayan, 2015). It is because that SMEs contrary with larger organizations that usually in possession of high technology, bigger human resources and maximum financial resources which can be used to aid and enhanced the use of high technology of ICT compared to SMEs. It is often to be seen that SMEs, particularly facing challenges with limited financial and human resources (Ashrafi & Murtaza, 2008; Jones et al., 2011, Mpofu & Watkins Mathys, 2011; Ajayi & Olayungbo, 2014; Ademola Afolayan, 2015). Hence, this factual knowledge of SMEs lacking in financial and human resources has become one of the catalyst of the importance of ICT usage among entrepreneurs that own their small medium businesses. They have to take advantages of ICT as by fully utilizing the ICT and able to know it could actually assists them and make their daily activities more efficient.

However, despite of utilizing the technology provided to them. There are still barrier among the SMEs in fully utilization and adoption of ICT which can be look from the internal and external barriers. The first barrier that can be identify is from the internal where there are those exists in certain organizational culture which the entrepreneurs who own the business have attitude toward ICT where they cannot seem to be comprehend the importance of ICT usage in their business. They are not interested with the development of technology and they do not feel the necessity of having technology as part of their business activities. The other barrier would be the external where those barriers that lie outside of the immediate control of the organization that include lack of infrastructural facilities, limited financial resources and other governmental rules and regulations. As mentioned by Kapurubandara et al. (2006) and Ademola Afolayan et al. (2015) the internal barriers include owners/manager characteristics, firm characteristics, cost and return in investment and external barriers include infrastructure, social, cultural, political, legal and regulatory.

Despite of internal and external barriers that cause the delayed of ICT usage among SMEs, the rapid rate of adoption ICT can be seen when an organization or entrepreneurs acknowledge that an innovation or new technology is meeting the needs of the customer in the contemporary years (Alam et al., 2007). Hence, the support from the management should be essential for the successful of ICT usage and encouraging the fully utilizing of technology for sake of their business. Entrepreneurs should realize the importance of technology and use of ICT in their business so that it would not be part of the limitations that slowing down their business to be develop. Entrepreneur should also not be reluctant to take risks to try out new technology and more willing to learn by accepting the advancement of technology. SMEs particularly should able to know that the development of technology is not going to stop at any time but rather it keep on changing and advancing to the new high technology in the coming years. As for the external barriers, which mention earlier that government providing poor infrastructure can also be part of the problem that ICT usage not being fully utilized by the SMEs. Thus, it is required by the government to be aware on the development of infrastructure to help the SMEs to be more competitive with other industry both domestically and globally.

Entrepreneurs in small medium industry have to realize that information and communication technology or better known as ICT is one of the main forces that driving the present day business environment. ICT has been dramatically informing business practices as well as the outcome of business engagements (Kuyore ‘Shade et al., 2013). ICT usage is promising the entrepreneurs to be able accessing data easily also processing and dissemination of large data volumes and eventually support the SMEs to have the opportunity to enter global

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market and remain competitive despite of challenges in globalization, liberalization, scientific and technical progress (Ongori, 2010; Kuyore 'Shade et al., 2013). Hence, ICT and the current technology is really need to be considered highly use by the SMEs particularly the owners and managers that own the business. There is nothing wrong to be part of the new urban society that have large reliance towards the use of ICT in their daily life. It even becomes one of the significant way of living in the current years and more to come. ICT usage must be implemented in every process of business, so that entrepreneurs can be part of the competitive industry.

Domain of Digital Inclusion

From the literature review conducted, the domains of digital inclusion for the entrepreneurs can be categorized as such. These are business domains that capitalized on digital technologies found mainly in the Internet and the Internet of Things (IoTs). On the other hand, digital inclusion can be comprehend as the ability of individuals and groups to access and use information and communication technologies as part of their daily life. As mentioned by Saeed Farooq et al. (2015), digital inclusion is one ability to use ICT which includes access to the internet, using suitable hardware and software and training for the digital literacy skills (Perlgut, 2011). Having better access and wide range of using technologies results in a wider choice and empowerment, with better integration in society. Lacking of access to or not having knowledge of how to use ICT results in one to be part of digital exclusion which is considered as an important indicator of economic inequity (Norris, 2001; Saeed Farooq et al., 2015). The ICT usage among SMEs has been identify as part of digital inclusion that could explain the practicality of technology applied in business activity taken by entrepreneurs. However, there are certain significant domains of digital inclusion for the entrepreneurs that can be classified into. According to Sheikh M. Hizam et al. (2018) business domain capitalized on digital inclusion found mainly in the Internet and the Internet of Things (IoTs). That can be separate into several techniques used such as for social networking, entertainment, business information search, E-commerce, business websites, advertising and E-marketing. Social media can be seen as the online application program, platform or mass media tools that facilitates interaction, collaboration, or content sharing among users' also connecting people through the medium (Kim & Ko, 2012; Bilgin, 2018).

As for entrepreneurs, social media has become the tools for marketing to be essentially used as part of digital inclusion so that they can promoted their products to the consumers in a much broader way and supplied to larger markets. Hence, this lead to businesses to be more interactive in marketing communication and able to find innovative applications to make products to be send out to markets affordable which is through online marketing activities (Sheikh M. H. et al., 2018; Bilgin, 2018). Business using social media as part of marketing tools is because of the growth number among users in the networks which in April 2009, Facebook has reach up to 200 million user and until November 2010, it had reached more than 547 million users. Thus, it become eligible to see how social media become significant domain of digital inclusion for entrepreneurs as the application of these networking sites in business can be grouped into 6 different categories such as advertising and marketing, social capital, knowledge management, relationship management, economic model and e-commerce
(Hanafizadeh, et al., 2012; Sheikh M. H. et al., 2018).

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Development of technology in the recent years also become one of the main catalyst for digital inclusion to be part of the business nature. Faradillah Iqmar et al. (2018) stated that the latest technology has made it become undeniably towards the involvement of internet in entrepreneurship where it require SMEs entrepreneurs to survive the current challenging environment from running it traditionally to digital – based entrepreneurship. As compared to the traditional way of doing business, e – commerce is said to be able penetrate a broader future market and literally increase the numbers of sale for their products (Ahmad Mohd Rafi, 2017; Faradillah Iqmar et al., 2018). Apart from having large market that can be explore, according to Goh Say Leng et al. (2011) doing business through online become the main choice of entrepreneurs because they can spent less money on advertising which the cost is very low compared to other commercial or advertising sites that could cost entrepreneurs more than ten thousand ringgit. Using straightforward information and message in advertising, particularly in online media can easily reach to large amount of audience. It also can be one of the effective way to cut down the cost and saving money for the SMEs entrepreneurs.

Apart from that, the rise of technology also become the roots for the Internet to be one of the significant player for society in delivering and sharing information through the online medium. As for the entrepreneurs, according to Mohd Hafizie and Norshuhada (2013) the internet plays an important role in conveying the information about a product or service offered by the entrepreneurs. This is mainly because of the efficient method of information content management in every company's website are constantly updated with latest information. Every feedback or testimonial given by the customers towards certain product or services offered to them can be send easily through social media or websites that provide customer with the link for giving feedback. Even there are certain company or business that are requesting their customer to give feedback through online application. Hence, those application of internet, social media networks and online websites own by entrepreneurs' shows how actually the area of digital inclusion were include as part of the business nature among SMEs. It is essentially to make sure that ICT usage should be consider to be implemented in the field of entrepreneurship as it would eventually bring more advantages toward entrepreneurs (Faradillah Iqmar et al., 2018). It is supported by Suriatie and Nor Aishah (2017) which they mention the use of emarketing medium has grown and become more important, especially in industries involving trade, business, investment, banking and so forth.

Implications of Digital Inclusion

Due to the rapid growth of ICT, now, digital divide has evolved to digital inclusion (Saha, 2014). Therefore, there is a need to measure the implication of digital inclusion so as to determine what digital inclusion could bring to the society and the entrepreneurs in particular. Innovation in entrepreneurship occurs when business develops new products and services to cater for the needs and wants of the customers. ICT has been found to improve efficiency of the business however, market-oriented applications such as website design is able to create competitive advantage through product innovation (Higon, 2011). Innovation also tends to improve productivity of the company (Díaz-chao, 2016). Entrepreneurs had been using ICT sophistication for business innovation (Todhunter & Abello, 2011). For example, e-commerce tools had been used by entrepreneurs to innovate their businesses. The more the ICT is used,

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the more likely innovations occur. Therefore, entrepreneurs take advantage of the latest technological trends such as the Internet of Things (IoTs) for business opportunity.

FRAMEWORK

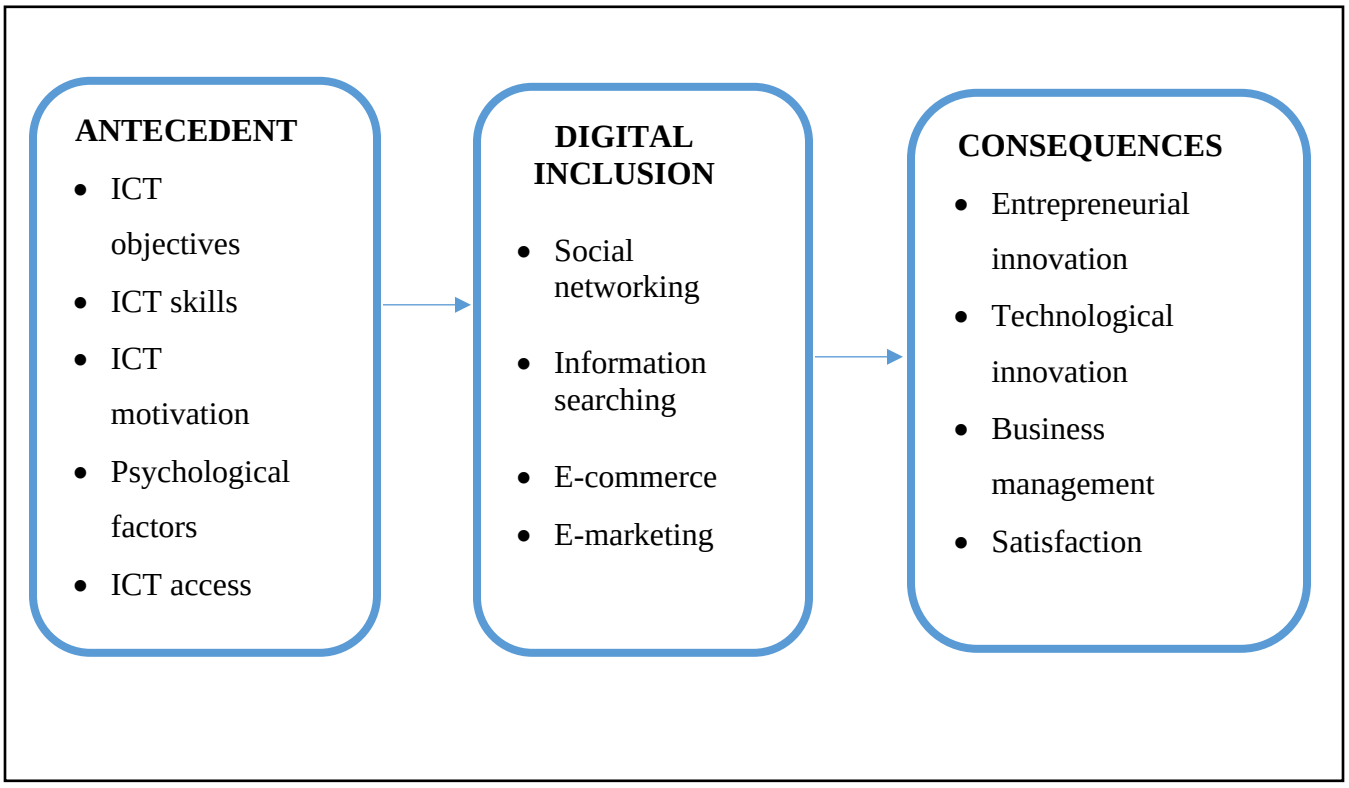

Figure 1. A model of the antecedent and consequences of digital inclusion (ACDI)

The framework explains a model of the antecedent and consequences of digital inclusion (ACDI). This study has conducted a survey of past studies by identifying several variables. Among them, goals, skills and motivation of ICT usage. In addition, psychological factors, ICT access and ICT requirements are also identified in explaining the antecedent to digital inclusion. Meanwhile, four dimensions are identified for measuring digital inclusion; social networking, information retrieval, e-commerce and e-marketing. To measure digital inclusion consequences, as many as four dimensions are identified namely entrepreneurship innovation, technological innovation, business management and satisfaction. All items have been developed and tested in reliability.

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CONCLUSION

In sum, this study clearly shows that ICT usage is an enabler for the digital inclusion. By having skills, motivation and good access towards ICT, entrepreneurs then will engaged with the system of digital inclusion. In fact, they will be benefited from using ICT in managing their business, especially in addressing the modernization of the global and digital economy.
Additionally, the model also explained the consequences of digital inclusion in which the entrepreneurs will be more innovative in terms of entrepreneurial tasks, technological aspects, business management and their satisfaction as a whole.

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