

A REVIEW ON ENTREPRENEURSHIP EDUCATION, DIGITAL ECONOMY LITERACY, VUCA LITERACY, SOCIAL INNOVATION AND SOCIAL ENTREPRENEURSHIP

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INTRODUCTION

Research Background

Entrepreneurship is key to a country's economic growth because it contributes to an increase in GDP, stimulates investment, and creates job opportunities. In addition, entrepreneurship leads to innovative development and promotes the improvement of socioeconomic status by providing economic opportunities to all levels of society, especially the marginalized and disadvantaged in the labour market. At the global level, governments in certain countries focus on developing entrepreneurial ecosystems to produce entrepreneurs with high potential. Efforts to raise entrepreneurs with relevant skills are intensified through the introduction of national entrepreneurship policies to familiarize them with the ever-changing business landscape and disruptive emerging technologies.

However, the biggest challenge facing governments around the world is the transition from the "traditional" economy to the "new" economy. Entrepreneurs must be equipped with 21st century skills, digitization of business operations, and collaborate with other entrepreneurs to thrive in this dynamic environment. Malaysia has implemented various development programs that include funding, research & development (R&D), training and capacity building, infrastructure, technology transfer, market access, social entrepreneurs and internationalization. DEB 2030 will strengthen and enhance existing initiatives and programs to reduce entrepreneurial activities in Malaysia.

In the first quarter of 2019, Malaysia's economy recorded a GDP of RM341.7 billion, up 4.5% from the previous quarter. Five sectors contributed to this total: services, manufacturing, agriculture, construction and mining and quarrying. Economic activity in Malaysia is generated by SMEs, hawkers, cooperatives, franchise chains, start-ups, social enterprises and online businesses. According to the National Economic Census (2016), there are 920,624 new business entities registered in Malaysia, of which 907,065 (98.5%) are SMEs. Of these, 693,670 (76.5%) are micro enterprises, 192,783 (21.2%) small enterprises and 20,612 (2.3%) medium enterprises.

The digital economy is expected to continue to grow rapidly in line with the growth of Malaysian enterprises. In 2016, the digital economy sector contributed 18.2% (RM224 billion) to Malaysia's GDP and it is projected to grow to 20% in 2020 (DOSM, World Bank). One of the main components of the digital economy is e-commerce, where growth is projected to reach a value of RM110 billion in 2020. The impact of entrepreneurial activities in Malaysia can be measured in various aspects. First, it strengthens the Malaysian economy. In 2017, SMEs recorded a higher GDP growth of 7.2% compared to 5.2% in the previous year, which surpassed

the overall GDP growth of 5.9%. This has increased the contribution of SMEs to the overall GDP from 32.2% in 2010 to 37.1% in 2017. Malaysian enterprises have also contributed RM167.4 billion to the export value in 2017 (17.3% of the total export value). The majority of this export value comes from three main sectors: services (50.4%), manufacturing (47.2%) and agriculture (2.4%).

Second, entrepreneurial activities in Malaysia empower the socio-economic status of various levels of society including women, youth and the underprivileged. From the point of view of women's economic empowerment, 364,052 women entrepreneurs have benefited from various entrepreneurial initiatives and support such as financial assistance, training and business infrastructure throughout 2017. These initiatives and support are important in helping 186,930 women-owned enterprises that make up 20.7% of the total number of enterprises in Malaysia. Malaysian enterprises have also generated approximately 9.9 million job opportunities so far, which covers 66% of the total job opportunities in Malaysia. However, most of the job opportunities offered by entrepreneurial activities in Malaysia are unskilled and highly dependent on foreign labour. About 16% of the total number of workers in Malaysia is foreign workers who are mostly involved in the agriculture, plantation and construction sectors (Labor Force Survey, 2016).

Based on global analysis, countries such as the United States, the United Kingdom, Canada, Germany, Singapore, Thailand, Vietnam and Indonesia have introduced entrepreneurship policies that focus on entrepreneurs and Small & Medium Enterprises (SMEs), with an emphasis on mainstreaming the entrepreneurship agenda. Some countries have also included the entrepreneurship agenda in their policies including macro policies, such as short-term development plans, industrial policies and innovation policies.

These policies and plans generally outline the basic barriers in entrepreneurship, with the aim of providing equal opportunities to all segments of society, to engage in entrepreneurship. Developed countries such as Canada, have included their entrepreneurship policies in their innovation action plans and industrial strategies to promote an innovative ecosystem conducive to supporting the development of their entrepreneurs. ASEAN countries such as Vietnam and Indonesia specifically put an entrepreneurship component in their national short-term development plans making it holistic and inclusive.

Realizing the importance of entrepreneurship to individuals and society as well as its contribution to the country, the government has emphasized entrepreneurship starting with the New Economic Policy (1971-1990), the National Development Policy (1990-2000), and the National Vision Policy. (2001-2010) and the New Economic Model (2011-2020). Entrepreneurship is also an important element in 40 policies/master plans/action plans/national programs by various ministries and agencies. Various implementing agencies have also carried out entrepreneurship development activities. Of course, this activity shows the government's commitment to the sector and its players. In fact, entrepreneurship development programs and initiatives carried out in Malaysia are inclusive and involve the entire value chain. According to the SME Integrated Action Plan Report (SMEIPA) 2019, RM13.7 billion was spent by various ministries and agencies to run 153 entrepreneurship development programs, benefiting 637,808 participants.

However, entrepreneurship and the business world today face various challenges to survive and produce better performance. The new world that is VUCA is one of the terms that is

increasingly synonymous with the business industry. The VUCA world forces the need for organizations to innovate radically, and radical innovation must be supported by entrepreneurial education and a high entrepreneurial orientation. VUCA is not one word but consists of four different concepts. Volatility is frequent and unpredictable large-scale change, Uncertainty is associated with the inability to predict the future with certainty and uncertain outcomes, Complexity is to describe a complex network of interconnected parts and various forms, ambiguity (Ambiguity) is doubt in cause and effect where there is no precedent on which to base predictions (Cousins 2018, de Basah, 2019).

In order to face the VUCA world, entrepreneurs need to have knowledge and be oriented to produce innovation. Innovation is defined as involving the acquisition of new knowledge and the development of new products for new customers or emerging markets (Sheng & Chien 2016). Another meaningful definition for this research is by (Norman & Verganti, 2014) which explains that innovation is a change of frame that is doing what we have not done before. (Lv et al., 2018) stated the high risk and uncertainty associated with innovation by stating that the innovative capability that supports sustainable innovation is the capacity to handle risk and uncertainty to prevent survive and recover from disruptions. Risk and uncertainty are greater for innovation. Therefore, in explaining innovation, there are internal dynamics such as risk and uncertainty associated with the nature of innovation (Lv et al., 2018).

Then the VUCA phenomenon full of complexity and uncertainty is the thing that stifles innovation externally and further complicates the existence of business entities. Therefore, innovation is an undeniable element of its importance and in the current business environment that is not normal and innovation is facing its biggest challenge, not only from the point of view of businesses trying to survive but more deeply that of human survival. On the other hand, innovation in the current VUCA environment can be seen as having the best opportunity to change our society by creating evolutionary innovations, unique innovations, game-changing innovations or advanced technologies to meet the needs of consumers and customers (Lv et al., 2018).

Problem Statement

Chairman Zhang of Haier company stated that when the world changes, we have to accept the changes or we will be wiped out by the changing world (Frynas, 2018). (Uhl-Bien & (Arena, 2018) explained the strong statement made by John Chambers, the Executive Chairman of Cisco in March 2016 that is as a leader, if you don't make changes, if you don't create conditions and try to change the organizational structure for the better and if you don't care speed of innovation change, then organizations will be affected and it will have a severe impact where the majority of companies will not exist or function in a meaningful way 10 to 15 years from now. This statement is confirmed by the fact that large companies, small and medium enterprises, non-profits, public and private entities are faced with a continuous cycle of radical innovation, diverse innovation, sophisticated technology to survive in the VUCA environment of the 21st century by maintaining a competitive edge. Entities and businesses operating in a VUCA environment need to address global and national challenges such as climate change, technological expansion, supply chain disruption, political realignment, trade transformation, terrorism and pandemics. Most of these entities cannot cope with the VUCA environment, so

they fail, do not remain competitive, or go bankrupt. Research shows 61% of leaders see themselves as leading "in a revolution" or rapid and sudden change (Bywater 2017, Bywater & Lewis, 2019, Bywater 2019). This leads to a specific dilemma that organizations face in a VUCA world.

The exact problem is that recent research revealed that only 18% of leaders are competent in leading in a VUCA world (Rimita et al. 2020). The sudden emergence of the COVID-19 virus at the global level has brought the challenge of preparedness of leaders forward. The history of this challenge has been expressed in the article (Carvan, 2015) shows that a survey showed that only 32% of 800 corporate respondents in a study indicated that they had either "correct" leadership or the capacity to develop "correct leaders" at various levels in the organization. Furthermore, the results of (Carvan's survey, 2015) not only show the need to prepare entrepreneurially oriented leaders to lead in the VUCA world but the observation is made that the entrepreneurial education and life experience of senior leaders of organizations is not sufficient to prepare them to lead in the 21st century. VUCA world.

Historical data shown from (Carvan, 2015) & (Rimita et al., 2020) shows a downward shift from 32% to a low of 18% within five (5) years in terms of leader preparation to lead in a VUCA environment. These statistics have been covered with the onset of the Coronavirus pandemic. Only less than 13% of businesses were fully prepared for business continuity once the COVID-19 virus infiltrated the world (Shalal, 2020). Businesses around the world have been plunged into unprecedented chaos. Many do not have any contingency plans to manage this kind of crisis. However, it should be noted that some organizations have contingency plans for crises in the VUCA world and have taken full advantage of the opportunities presented during the outbreak.

Many organizations depend on innovation for success in the 21st century; this observation has been proven through the current pandemic situation. (Robbins & O'Gorman, 2015) observed that the technology and pharmaceutical industries focus on innovation more than other sectors because the success of the industry is highly dependent on innovation. Dependence has been supported and strengthened with the onset of the COVID-19 pandemic. Organizations are now faced with the choice of rapid transformation from the perspective of radical innovation or permanent extinction. This research aims to help organizations adapt quickly in the face of a world full of uncertainty and ambiguity and the best way is to use strategic management competencies to maintain or generate new innovations in the current VUCA environment and move into the next century.

Research Objective

- To evaluate the relationship between entrepreneurship education and social entrepreneurship intention.
- To evaluate the relationship between digital economic literacy and social innovation intention
- To evaluate the relationship between entrepreneurship education and VUCA literacy
- To evaluate the relationship between digital economy literacy and VUCA literacy
- To evaluate the relationship between VUCA literacy and social entrepreneurship intention
- To evaluate the relationship between VUCA literacy and social innovation intention
- To evaluate the mediating effect of VUCA literacy in the relationship between entrepreneurship education and social entrepreneurship intention.
- To evaluate the mediating effect of VUCA literacy in the relationship between digital economic literacy and social innovation intention

Importance of the Study

This study is important to carry out because it can help entrepreneurs to be aware of the importance and existence of the VUCA world. Entrepreneurs' awareness of the speed of change in the world today will make entrepreneurs more resourceful and ready with more innovative ideas to meet the needs of the current market. Awareness of the existence of the VUCA world will also encourage more creative thinking in making changes to society in general. Innovations that are socially compatible will make human life easier which is getting more complex day by day. The results of the study will also provide options or options to entrepreneurs in the development of their business strategy. A structured strategy needs to be built to deal with things that are unstable, unexpected and beyond the control of the entrepreneur. This strategic thinking can be formed through entrepreneurial orientation.

The results of this study also contribute to educational policy designers to pay attention to the entrepreneurship education curriculum where the construction of the existing curriculum structure should meet current needs. This matter needs to be taken seriously so that the graduates produced can balance and face the VUCA world which is closely related and affects the economic, social, educational, financial and other sectors. The world of VUCA involves all sectors but what differentiates it is the difference in the impact and the way VUCA affects the sector. In addition, this study also provides information to the community that jobs can be created through business. Innovation is the way to business because the creation of something more recent and effective can generate income when marketed to customers if the product meets market demand.

LITERATURE REVIEW

Studies show that the impact of entrepreneurship education on behaviour and attitudes is often influenced by indirect learning that comes from the family context, personal experience or social teaching (Bae et al., 2014; Bloemen-Bekx et al., 2019; Some (Entrialgo & Iglesias, 2016; Levie & Hart, 2011; Mari et al., 2016). Another influence is gender or university environment (Shirokova et al., 2016). Intentions in social entrepreneurship can be different institutions and backgrounds, so educators can promote entrepreneurship according to the level of knowledge and support their entrepreneurial skills and attitudes (Salamzadeh et al., 2013; Urban and Kujinga, 2017). Several studies have also described the effects of personality characteristics, role models and specific support on social entrepreneur intentions (Tran & Von Korflesch, 2016; Younis et al., 2020). Others include emotional intelligence, gender and individual culture (Elliott, 2019; Pines et al., 2012; Tiwari et al., 2020) on social innovation.

Social entrepreneurship can refer to companies that generate economic value, but the main purpose is social (Austin et al., 2006, (Martinez-Rivera & Rodriguez-Diaz, 2013, Sassmannshausen & Volkmann, 2013). Some authors call hybrid companies because they integrate the financial orientation of traditional companies with charitable or philanthropic purposes that generate social value (Alegre et al., 2017, Battilana & Lee, 2014). Social entrepreneurship is characterized by the implementation of socially innovative ventures (Bacq & Janssen, 2011), starting with the emergence of Ashoka, which has served as a platform for the support and scaling of social entrepreneurial ventures. Social innovation involves solving social problems collectively (Pol & Ville 2009, Young, 2006), creating social practices that lead to

social change (Cajaiba-Santana, 2014). Therefore, their main objective is to satisfy social needs through new solutions, changing the structure of social relations through the empowerment of diverse social actors, especially groups that are traditionally excluded (Portales, 2019). In discussing social practices, innovation should not be confused with technological development (Domanski et al., 2020).

The profile of social entrepreneurs is traditionally established as individuals who are concerned with meeting the needs of vulnerable communities, they are usually represented as proactive, resilient and maintain a perspective of distance from power (Vizcaino et al., 2020; Weerawardena & Sullivan Mort, 2006). Social entrepreneurs have the ability and confidence to turn ideas into action, so emotional intelligence is one of the elements that contribute to their success (Winarno et al., 2019; Zhou & Bojica, 2017). They combine social justice and sustainability convictions with achieving financial goals (Wry & York, 2017). (Zahra et al., 2009) describe three characteristics of social entrepreneurs: (1) social bricoleur (Hayek), (2) social constructionist (Kurzner) and (3) social engineer (Schumpeter). On the other hand, (Abebe et al., 2020) defined four archetypes of social entrepreneurs based on their life experiences and the scope of their social involvement: (1) seasoned champions, (2) local pragmatists, (3) social activists and (4) corporate veterans.

Then the VUCA phenomenon that is full of complexity and uncertainty is what stifles innovation externally and further complicates the existence of business entities. Therefore, innovation is an undeniable element of its importance and in the current business environment that is not normal and innovation is facing its biggest challenge, not only from the point of view of businesses trying to survive but more deeply that of human survival. On the other hand, innovation in the current VUCA environment can be seen as having the best opportunity to change our society by creating evolutionary innovations, unique innovations, game-changing innovations or advanced technologies to meet the needs and customers (Lv et al., 2018).

Digital technology usage by individuals, businesses and government significantly increases the capacity of a nation to benefit from ICT's social, economic, and environmental innovations (Vrontis et al., 2021). This ecosystem is typically designed to provide members of a community with the means of action, and means of motivation in order to help them achieve their own social objectives and to support social enterprises (Chi et al., 2020). Digitalisation and social entrepreneurship are contributing to the nation's stability (Torres-Augusto, 2020). Society positively affected by digitalisations by making the citizens to be easier to access public services and thus increases employment and economic growth (Galindo-Martín et al. 2019). However, this positive impact only can be seen if there are a good educational system, a swift financial system and a prosper governance. Digitalization has a positive impact with social innovations in Japan in which the diffusion Internet of Thing (IoT) helps daily needs of society.

Theoretical Framework

Design Thinking Theory

The theory of design thinking was chosen based on the findings from (Bolman & Deal, 2015) that contemporary leaders need a mental model that is versatile and refined enough to understand the modern institutional world of VUCA (volatile, uncertain, complex and

ambiguous). Design thinking theory addresses each of the key concepts of VUCA through strategic management efficiency and radical innovation. This theory includes several other theories and is therefore presented as a 21st century theory. It is important to understand this theoretical framework as well as to answer the following questions: How does design thinking theory support the constructs of VUCA and innovation?

The main characteristics of design thinking theory are as follows:

- Human-centered approach related to innovation.
- Solving problems correctly.
- Making decisions as a core element.
- Problem solving is connected to an open mind that moves to the process of reframing and solving complex problems at individual and organizational levels.
- Integrate customer and technology needs while supporting business success.
- Collaborative, curious, and creative elements.
- An empathetic way to understand the market environment and advance strategic management.
- h) Supports complexity.
- User-centered problem solving and relies on customer behavior used during the innovation development phase.
- j) Support strategy development and implementation.
- k) Ecosystem thinking uses inputs, outputs, and feedback loops to make decisions.
- l) Using absorptive capacity in managing new knowledge in a rapidly changing environment.

The deep connection of problem solving with design thinking makes the use of design thinking theory to support this research. Design thinking theory is closely related to strategic management and related leaders and decision makers. The importance of decision-making is explained by (Gershman, 2019) who states that uncertainty lies at the heart of decision-making in the real world or the VUCA world. The importance of decision making and innovation in a VUCA context will be explored more fully in this research through the lens of design thinking theory. Some features of design thinking theory are well suited to innovation and decision making such as user-centered problem solving, addressing customer needs and linking them with VUCA (Brown 2008, Brown 2009, Cousins 2018b, Connell 2013. Knight et al., 2020, Mahmoud-Jouini et al., 2019, Mugadza & Marcus 2019).

Adaptive Capacity Theory

VUCA makes existing theories inadequate to deal with the catastrophes in the 21st century business environment created by unknown factors. Therefore, to support the capacity of how to lead and respond to VUCA conditions, it imposes a new theory such as Adaptive Capacity Theory which refers to conditions that allow individuals to anticipate and respond to change, and recover from it and minimize the consequences of change (Adger & Vincent, 2005). Adaptive capacity theory was first introduced in the early 21st century and has been widely used in research over the past three to six years.

The main characteristics of Adaptive Capacity theory are as follows:

- Agility, the ability to move quickly.
- Ability to turn and change course quickly.
- Resilience, the ability to withstand difficult conditions
- Ask the right questions.
- Making decisions with limited knowledge does not wait to receive all the data.
- Adaptable, adjusting positions to overcome issues.
- Facing constant change.
- Ecosystem way of thinking in managing the flow of information and making decisions.
- Improve knowledge skills.

Adaptability is the ability to adapt quickly and intelligently to constant change. In a VUCA environment, speed is of the essence, decisions must be made quickly even before data can be collected. Adaptive capacity is a form of creativity that includes the ability to identify and seize opportunities (Mugadza & Marcus 2019). Adaptability allows entrepreneurs to respond quickly and intelligently to constant change by asking the right questions. It allows entrepreneurs to act with limited knowledge and then evaluate the results instead of trying to collect and analyze all the data before acting. The concept of VUCA uncertainty is highlighted in the definition of (Mugadza & Marcus, 2019), the aspect of making decisions quickly with limited data is a key element in this theory. Understanding the ecosystem's capacity to adapt and cope (adaptive capacity) with change is important for entrepreneurs to be able to create products that innovate and keep pace with changing times.

Dynamic Capability Theory

Dynamic capability theory is the oldest theory discussed for use in this research. However, it is a theory that was developed more fully in the early 21st century. The extant literature on dynamic capability theory has grown significantly over the past 10 years. Dynamic capabilities have many characteristics that can link them to innovation in a VUCA world. Dynamic capability theory is closely related to competitive advantage. The main characteristics of dynamic capability theory are as follows:

- Sensing changes or threats or opportunities in the business environment or other environments through adaptation.
- Seizing the right opportunity through integration.
- Changing or reorganizing the organization based on rapid changes in the environment.
- Manage all aspects of knowledge.
- Support competitive advantage.
- Renewing efficiency.
- Manage intangible and tangible assets.

The theory of dynamic capabilities assumes that market conditions will influence the process to achieve competitive advantage while acknowledging that we live in an innovation-based industry alongside more demanding customers and assuming that firms need to continue to update their resources and develop capabilities to maintain ownership of limited resources (Reis et al., 2020). (Alford & Duan, 2018) stated that there is a relationship between dynamic capabilities and innovation in the VUCA world. (Jurksiene & Pundziene, 2016) explained that

the antecedents to determine competitive change in an uncertain environment are through dynamic capabilities. Some other researchers have made observations with the theoretical relationship of dynamic capabilities to achieve sustainable competitive advantage, the exploitation of new ideas and the ability to reconfigure in response to environmental changes such as in studies by (Arranz et al., 2020), (Gruchmann, 2019), (Kapoor & Aggarwal, 2020), (Ledesma-Chaves, 2020) & Shastitko & Golovanova, 2016).

Furthermore, dynamic capability theory is closely related to knowledge management, radical innovation and open innovation. Previous research explains and investigates the close relationship with knowledge management (Basnayaka & Jayakody 2018, Tseng & Pei-Shan 2014, Yu et al., 2013) radical innovation and open innovation (Ardito et al., 2018, Bianchi et al. 2016, Cheng et al., 2016, Ferry 2011, Kang & Hwang 2019, Peris-Ortiz et al., 2018, Shi & Zhang, 2018). (Raman & Bharadwaj., 2017) established that by adopting dynamic capabilities, firms are able to generate, scan, adopt and use existing and new knowledge that can produce effective and innovative outputs. In addition, (Kodama., 2019) observes that idea generation or knowledge creation depends on the context especially in complex environments. This explains the appropriate conditions for applying dynamic capability theory in the context of VUCA-related studies.

Conceptual Framework

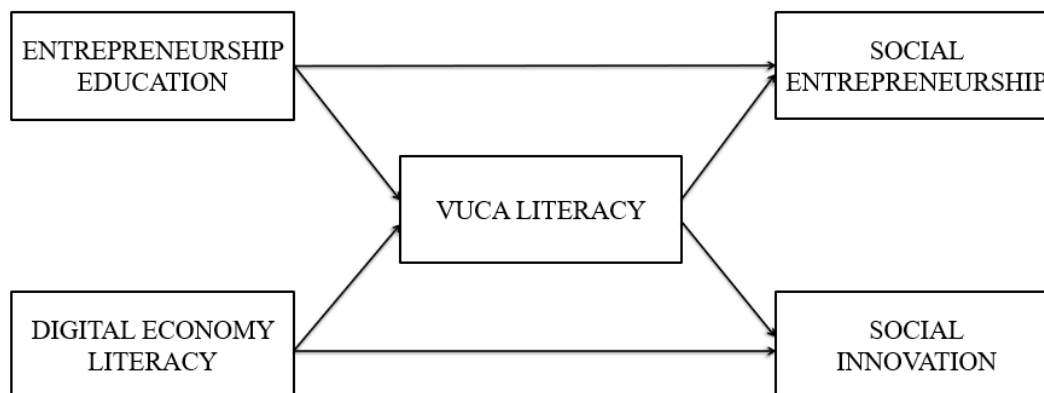


Figure 1
CONCEPTUAL FRAMEWORK

Figure 1 is the conceptual framework for this study. Entrepreneurship education has an impact on the social entrepreneurship. Digital economic literacy has an impact on social innovation. VUCA is a mediator in the relationship between entrepreneurship education and social entrepreneurship and the relationship between digital economic literacy and social innovation.

METHODOLOGY

Research Design

Research design is a plan that is compiled to help the researcher conduct the research. According to (Syed Arbi., 2002), the research design has two purposes. First, help the researcher determine the appropriate method that can be used to conduct the study. Second, choosing to use the interview procedure to answer the research questions. In addition, the research design shows the entire research through the determination of the type and pattern of research used, the sources and methods used to obtain information and the collection of information (Mohd Majid, 1994).

According to (Creswell, 2012), the appropriate method used to study the relationship between variables in a study is a quantitative method because through this method the researcher can see how a variable can affect other variables. Therefore, this study is a quantitative form of research where survey methods through questionnaires are conducted to examine the relationship between the study variables. The survey method is used to obtain data from the population through data sampling (Babbie, 1999). Questionnaires were distributed by the researcher during the survey because according to (Bailey, 1984), data collection involves a certain period of time with the determination of the number of questions and answers that must be systematically categorized to make quantitative comparisons.

Population and Study Sample

Population is defined by (Creswell, 2012) as a group of individuals that have similar characteristics. The population must be identified because it is important in determining the branch of the problem that should be studied (Creswell, 2012). Sample selection is done after the target group is identified. According to (Creswell, 2012), the subset of the target population being studied is a study sample that was chosen to generalize the study population. Systematic random sampling was used in this study to obtain the study sample. The purpose of this method is to ensure equal opportunities are given to respondents in the study population to be selected as study respondents. The sample size is determined through the (Krejcie & Morgan, 1970) table which sets the number of samples based on the target amount. The sample for this study is undergraduate students from Public University in Malaysia.

Methods of Analysis

This study uses the IBM Statistical Package for Social Science version 20 software (IBM SPSS) to analyze the data descriptively to assess the standard deviation, mean and frequency of the respondents' profiles while AMOS is used to make a Structural Equation Modeling (SEM) analysis. The data is analysed first to check compliance with the following assumptions:

- The full information maximum likelihood (FIML) method is carried out to overcome missing data.
- External elements or outliers are checked using the univariate z-score method -4 to +4 & and multivariate Mahalanobis test method D2)
- Multicollinearity

- Normality (Skewness & Kurtosis)
- Linearity (Scatterplot)
- Homoscedasticity

Once the assumption review has been completed, the study continues with a stepwise Structural Equation Modelling (SEM) analysis. The first stage of SEM, carried out to test the SEM model and factor validation analysis (CFA) where the following values are taken into account such as factor loading > 0.5 and Goodness-of Fit Indices with RMSEA < 0.08 , GFI > 0.90 , CFI > 0.90 , Chi square/ df < 5.0 and AVE > 0.50 . Next, level two SEM which is to test the structural model (structural model). Confirmation of the mediating effect is made where if the significant value between the variables does not change with the presence of the mediating variable, then the mediating effect is absent, if the significant value decreases then there is a partial mediating effect and if the value becomes insignificant then there is a full mediating effect.

REFERENCES

- Alegre, I., Kislenco, S. and Berbegal-Mirabent, J. (2017), "Organized chaos: mapping the definitions of social entrepreneurship", *Journal of Social Entrepreneurship*, Vol. 8 No. 2, pp. 248-264.
- Austin, J., Stevenson, H. and Wei-Skillern, J. (2006), "Social and commercial entrepreneurship: same, different, or both?", *Entrepreneurship: Theory and Practice*, Vol. 30 No. 1, pp. 1-22.
- Bacq, S. and Janssen, F. (2011), "The multiple faces of social entrepreneurship: a review of definitional issues based on geographical and thematic criteria", *Entrepreneurship and Regional Development*, Vol. 23 Nos 5-6, pp. 373-403.
- Bae, T.J., Qian, S., Miao, C. and Fiet, J.O. (2014), "The relationship between entrepreneurship education and entrepreneurial intentions: a meta-analytic review", *Entrepreneurship: Theory and Practice*, Vol. 38 No. 2, pp. 217-254.
- Cabrera-Santacana, O., Alegre-Beneria, R.-M., Alaiz-Chueca, E., Sanchez-Valverde-Visus, C. and Montane Lopez, A. (2014), "Social entrepreneur student profile in social education, pedagogy and social work degrees at university of Barcelona", *Revista d'Innovacio i Recerca En Educacio*, Edicions de la Universitat de Barcelona, Vol. 1 No. 7, pp. 11-29.
- Creswell, J.W. 2012. *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research*. Paul A. Smith, C. Robb, M. Buchholtz & K. Mason (Pnyt.) hlm. FOURTH EDI. Pearson Education.
- Du, J., & Chen, Z. (2018). Applying organizational ambidexterity in strategic management under a "VUCA" environment: Evidence from high tech companies in China. *International Journal of Innovation Studies*, 2(1), 42–52.
- Elkington, R. (2018). Leadership decision-making leveraging big data in VUCA contexts. *Journal of Leadership Studies*, 12(3), 66–70.
- Elkington, R., van der Steege, M., Glick-Smith, J., & Breen, J. M. (2017). *Visionary leadership in a turbulent world: Thriving in the new VUCA context*. (Vol. First edition). Bingley, UK: Emerald Publishing Limited.
- Federal Ministry for Economic Affairs and Energy Federal Ministry for Economic Affairs and Energy. 2016. "Future of the German Mittelstand" Action Plan. Berlin: Federal Ministry for Economic Affairs and Energy (BMWi).
- Federal Ministry for Economic Affairs and Energy. 2015. *The German Mittlestand: Facts and figures about German SMEs*. Berlin:
- Federal Ministry for Economic Affairs and Energy. 2017. *Start-ups and Entrepreneurial Spirit in Germany*. Berlin: *Federal Ministry for Economic Affairs and Energy (BMWi)*.
- Hung, K., Peng, Chiang, Y., & Hwa. 2010. Open innovation proclivity, entrepreneurial orientation, and perceived firm performance. *International Journal of Technology Management*, 52(3-1): 257-274.

- Lumpkin, G. T., & Dess, G. G. 1996. Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1): 135-172.
- Millar, C. C. J. M., Groth, O., & Mahon, J. F. (2018). Management innovation in a VUCA world: Challenges and recommendations. *California Management Review*, 61(1), 5–14.
- Moore, D. L. (2014). The experience of strategic thinking in a volatile, uncertain, complex, and ambiguous (VUCA) environment. (Order No. 3633614)
- Murthy, V., & Murthy, A. (2014). Adaptive leadership responses: Introduction to an emerging classification of zeitgeist enactments, practices and virtues for a VUCA world. *World Journal of Entrepreneurship, Management and Sustainable Development*, 10(3)
- Pérez-Luño, A., Wiklund, J., & Cabrera, R. V. 2011. The dual nature of innovative activity: How entrepreneurial orientation influences innovation generation and adoption. *Journal of Business Venturing*, 26(5): 555-571.
- Popova, N., Shynkarenko, V., Kryvoruchko, O., & Zéman, Z. (2018). Enterprise management in VUCA conditions. *Economic Annals-XXI*, 170(3/4), 27
- Putrajaya: Kementerian Pembangunan Usahawan (Kertas No 6.) SME Hub. 2019. Here's Why SME Matters in Malaysia. Dilayari pada 23 Mei 2019 di laman smeinfo.com.my/profile-of-smes
- Salavou, H., & Lioukas, S. 2003. Radical Product Innovations in SMEs: The Dominance of Entrepreneurial Orientation. *Creativity and Innovation Management*, 12(2): 94-108.
- Shi, X., & Zhang, Q. (2018). Inbound open innovation and radical innovation capability: The moderating role of organizational inertia. *Journal of Organizational Change Management*, 31 (3), 581–597
- Smart, D. T., & Conant, J. S. 1994. Entrepreneurial orientation, distinctive marketing competencies and organizational performance. *Journal of Applied Business Research*, 10: 28-38
- SME Corp Malaysia. 2018. SME Corp Malaysia Annual Report 2017. Kuala Lumpur: SME Corp SME Corporation. 2018.
- SME Integrated Plan of Action (SMEIPA). Putrajaya: Kementerian Pembangunan Usahawan
- U.S. Army Heritage and Education Center. (2018). Who first originated the term VUCA (volatility, uncertainty, complexity and ambiguity) USAHEC Ask Us a Question. The United States Army War College.
- Ungureanu, P., Bertolotti, F., & Macri, D. (2018). Brokers or platforms? A longitudinal study of how hybrid interorganizational partnerships for regional innovation deal with VUCA environments. *European Journal of Innovation Management*, 21(4), 636–671.
- Vaseashta, A. (2014). Advanced sciences convergence based methods for surveillance of emerging trends in science, technology, and intelligence. *Foresight: The Journal of Futures Studies, Strategic Thinking and Policy*.
- Vecchiato, R. (2015). Strategic planning and organizational flexibility in turbulent environments. *Foresight*, 17(3), 257–273.
- Volini, E., Schwartz, J., Denny, B., Maoon, D., Van Durme, Y., Hauptman, M., Yen, R., Poynton, S. (2020). The social enterprise at work: Paradox as a path forward.
- Wang, G., Li, L., & Ma, G. (2019). Entrepreneurial business tie and product innovation: A moderated mediation model. *Sustainability* 11(23), 6628;
- Wiklund, J., & Shepherd, D. 2003. Knowledge-based resources, entrepreneurial orientation, and the performance of small and medium-sized businesses. *Strategic Management Journal*, 24(13): 1307-1314.
- World Bank. 2019. Doing Business 2019. Washington: World Bank Group Yoon. J. 2018. South Korean Startup Ecosystem. Searched on 23 May 2019 at startupradar.asia/south-korean-startup-ecosystem
- Zhou, K. Z., Yim, C. K., & Tse, D. K. 2005. The Effects of Strategic Orientations on Technology- and Market-Based Breakthrough Innovations. *Journal of Marketing*, 69(2): 42-60.

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