

AN INNOVATION CAPABILITY MODEL TO INCREASE MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs) COMPETITIVENESS IN INDONESIA: A CONCEPTUAL MODEL

Roosdiana Noor Rochmah¹

¹ Faculty of Industrial Engineering, Telkom University, Bandung - INDONESIA

* Corresponding author e-mail: diananr@telkomuniversity.ac.id

Abstract

Globalization and the fourth Industrial Revolution have presented various opportunities but also disruption in the economy and social life. Although Indonesia's performance among ASEAN countries is very good, in 2019, Indonesia has experienced a decline in globally competitiveness. One of the low aspects is the innovation capability. As the main driver of the nation's economy, MSMEs must have the innovation capability to create innovation and make valuable contributions to the nation's competitiveness. It is very important to identify the factors that show the innovation capability. This paper present the key constructs of Innovation capability and the developed conceptual model which shows an innovation capability model through a conclusive research. The model identifies three key innovation capability constructs, namely knowledge & technology output, knowledge utilization for product innovation, and innovation fund generation and other important factors to explain the constructs. The first two constructs constitute the technical aspect and the third construct indicate the financial aspect of innovation capability.

Keywords: innovation capability, competitiveness, MSMEs, conceptual model

1. Introduction

Globalization and the fourth Industrial Revolution have presented various opportunities but also disruption in the economy and social life. Business competition forces business owners to have competitive advantages and strategies to maintain their business. Greater opportunities to attract consumers are owned by those who can deliver superior products through entrepreneurial orientation and innovation ability (Mohammad et al, 2019). At present, innovation is a major driver of long-term business success (Enzing et al., 2011), so it is a major challenge for all types of organizations (Andreeva and Kianto, 2011).

1.1 Global Competitiveness

Competition strategy is defined as all decisions and behaviors that provide competitive advantage through creating value and having basic capabilities for customers in certain markets (Porter, 2004). According to Porter, the company must determine its strategic position to maintain their presence in an intensive competition environment. The strategy a company must provide an opportunity to suggest values that are different from its competitors or present various benefits. The World Economic Forum (WEF) conducted survey data to measure global competitiveness, which was set out in the Global Competitiveness Index (GCI) Report. In the 2019 GCI report, Indonesia ranks 50th, down five places from last year. Among ASEAN countries, Indonesia ranks fourth after Singapore (1st), Malaysia (27th), and Thailand (40th). Indonesia's main strengths are its market size and macroeconomic stability. Apart from performance on other pillars, the quality of access remains relatively low. In the innovation ecosystem pillar, Indonesia gets the lowest score of all indicators for innovation capability and ranks 74th. On the other hand, Indonesia ranks 85th in the 2019 World Intellectual Property Organization (WIPO) on Global Innovation Index Report.

1.2 Creative Economy

Conceptual age is identical with creative economy era, whereas the core of economy is creative industry (Suhendra, 2017). The creative economy began to increase in Indonesia since 2017. The contribution of the creative economy to the Gross Domestic Product (GDP) has continued to increase in recent years. According to the Creative Economy Agency report, the GDP of the creative economy in 2018 will reach Rp. 1102 Trillion (Bekraf, 2019). Creative industries are part or subsystem of the creative economy. In general, the creative industries that have emerged in Indonesia are in the form of Micro, Small and Medium Enterprises (MSMEs), usually a form of business that is established independently by the owner. Recognizing the importance of MSMEs for economic growth and their ability to provide employment opportunities for the community, especially in rural areas (Abdullah & Mustapha, 2009; Ismail, 2013;

Mohamad, Rashed, & Rahman, 2008), many researchers have studied MSME factors to gain excellence competitiveness. Some researchers suggest that the main determinant of MSMEs to gain competitive advantage is the ability of MSMEs to develop unique products, and their flexibility in adopting new technologies (Williams & Hare, 2012). Saunila (2014) stated that MSMEs could get more benefits if they develop and explore an innovation orientation. Innovation is defined as a mental process that leads to the creation of new phenomena in the form of new material or new services or new techniques (Abou-Moghli, Abdallah, & Muala, 2012). Innovation has a strong positive impact on competitive advantage. Aziza & Samad (2016) said that innovation contributed 73.5% in competitive advantage.

1.3 Research Problem

Innovation has a strong positive impact on competitive advantage. It is very important to identify the factors that show the capability of innovation and then develop an innovation capability model to improve the competitiveness of MSMEs. That is the purpose of this research.

2. Literature review

2.1 Innovation Capability

The ability of innovation can be described as the ability to continuously change knowledge and ideas into new products, processes and systems for the benefit of the company and its stakeholders (Mohammad et al, 2019). Not only does it refer to the ability to be successful in managing new business flows, the ability of innovation is also related to the ability to synthesize the operating paradigm (Lawson and Samson, 2001). Romijn and Albaladejo (2002) refer to the ability of innovation as the skills and knowledge needed to effectively absorb, master and improve existing technologies to create new ones. Meanwhile, innovative capabilities are also described as the capacity to gain access to develop and implement innovative technologies for design and manufacturing (Xu, Lin, and Lin, 2008).

The 2019 World Intellectual Property Organization (WIPO) on Global Innovation Index divides the variables to measure innovation into two categories, namely the innovation input sub-index and the innovation output sub-index. Innovation input sub-index consists of 5 variables, namely institutions, human capital and research, infrastructure, market sophistication and business sophistication. While the innovation output sub-index consists of two variables, namely knowledge and technology outputs and creative outputs. Meanwhile Valaei et al (2017) describe innovation into four processes: exploitative learning, explorative learning, improvisational creativity, and compositional creativity.

Tesyafe and Kitaw (2018) mentioned in their journal that the variables forming the innovation capability are knowledge accumulation, knowledge application and innovation fund generation.

Table 1. Innovation Capability Constructs in Literature

No	Authors	Constructs addressed
1.	Azabadi et al. (2012)	Knowledge acquisition, knowledge creation, knowledge utilization
2.	Sobanke et al. (2013)	Internal factors (education, relevant prior experience, training efforts, use of ICT), external factors (technical/management/ financial support received) technological innovation
3.	Bo (2015)	Knowledge transfer, knowledge storage
4.	Cheng et al. (2016)	Knowledge acquisition, knowledge sharing
5.	Zou et al. (2016)	Establishing networking, external knowledge source, knowledge storage, absorptive capacity, technology innovation achievements
6.	Tesfaye et al (2018)	Knowledge accumulation, knowledge utilization, and innovation fund generation
7.	WEF on Global Competitiveness Index (2019)	Diversity and collaboration, Research and development, Commercialization
8.	WIPO on Global Innovation Index Report (2019)	Knowledge and technology outputs (Knowledge creation, knowledge impact, knowledge diffusion) and Creative outputs (Intangible assets, Creative goods and services, Online creativity)

2.2 MSMEs

The Indonesian Ministry of Cooperatives and SMEs reports that in terms of units, MSMEs have a share of around 99.99% (62.9 million units) of the total number of business operators in Indonesia (2017), while large businesses are only 0.01% or around 5400 units. Micro Business absorbs around 107.2 million workers (89.2%), Small Business 5.7 million (4.74%), and Medium Enterprises 3.73 million (3.11%); while Large Enterprises absorbed around 3.58 million people. This means that combined MSMEs absorb around 97% of the national workforce. SMEs are considered to be significantly important to contributors to economic development, particularly in regards to providing jobs and employment opportunities; and generating income for many households (Kongolo, 2010, Saerang et al, 2018). SMEs have a tendency to use entrepreneurship principles to focus on exploitation of opportunities and adopt innovative approaches to attract customers and increase profitability (Mohammad et al, 2019).

2.3 The existing innovation capability model's relevance to the MSMEs

Tesfaye et al (2018) using three key constructs such as knowledge accumulation, knowledge utilization, and innovation fund generation. The proposed conceptual model defines the whole process of Innovation capability.

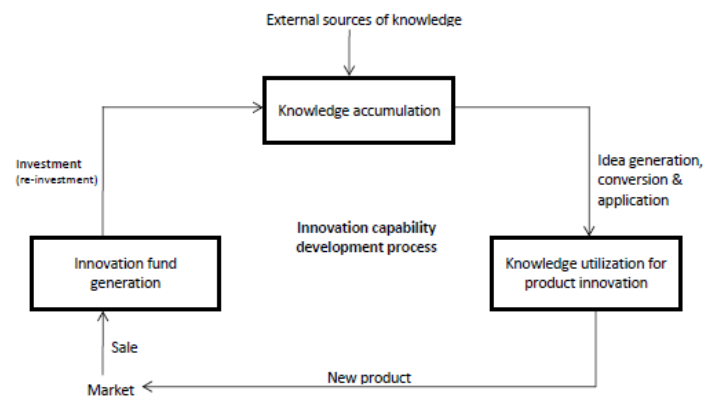


Fig. 1: Innovation Capability Model (Tesfaye, 2018)

The WEF on Global Competitiveness Index (2019) using three constructs which is diversity& collaboration, research&development and commercial.

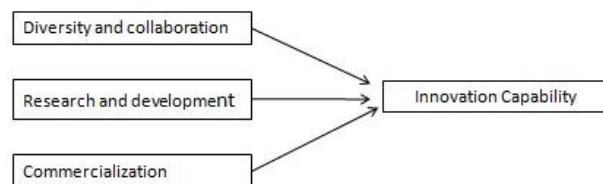


Fig. 2: Innovation Capability Mode (GCI, 2019)

The last conceptual model is from WIPO on Global Innovation Index Report (2019). The report using two construct which is knowledge & technology outputs and creative outputs. The variables for knowledge &technology outputs are Knowledge creation, knowledge impact, knowledge diffusion. The creative outputs variables are Intangible assets, creative goods and services, online creativity.

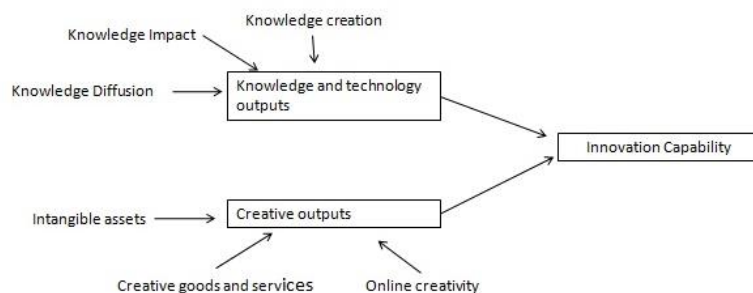


Fig. 3: Innovation Capability Mode (GII, 2019)

2.4 Gaps in the literature as advocacy of a new innovation model for MSMEs

Tesfaye et al (2018) noted that based on the literature review, either the most commonly used innovation measures or the innovation capability models are not sufficient to develop innovation capability for the innovation capability. This is because; innovation in the developing countries is challenged by barriers that are not found in the advanced economies (Cirera & Maloney, 2017). MSMEs in emerging markets may see MSMEs innovation as critical as they are dealing with unprecedented competition and abundant business opportunities. Therefore, it is imperative for SMEs including those from emerging market economies to benefit from innovation even if it is not an easy task (Games,2019). This research finds the gap of integrating the aspects of Innovation capability into the nature of MSMEs as a remarkable deficiency in the literature.

3. Methodology

This research is designed into two core parts using conclusive research type. The first part is to find the key constructs of Innovation capability. In the existing literature, these constructs are addressed in different contexts and aspects. The second part of the research is the developed conceptual model which shows an innovation capability model.

4. Result and Discussion

4.1 Building The innovation Capability Model for MSMEs

As modeled in figure 4, there's three main constructs identified: knowledge & technology output, knowledge utilization for product innovation and innovation fund generation. MSMEs use the accumulated knowledge&technology to generate and apply new ideas. The second construct is knowledge utilization for product innovation. Through a dynamic process of diversity&collaboration, research&development and commercialization the product, MSMEs will increase its competitiveness to compete globally. When the new products are commercialized successfully in the market, innovation can generate income for the MSMEs (innovation fund generation). According to this research, the first two constructs (knowledge & technology output, knowledge utilization for product innovation) constitute the technical aspect and the third construct (innovation fund generation) indicate the financial aspect of innovation capability.

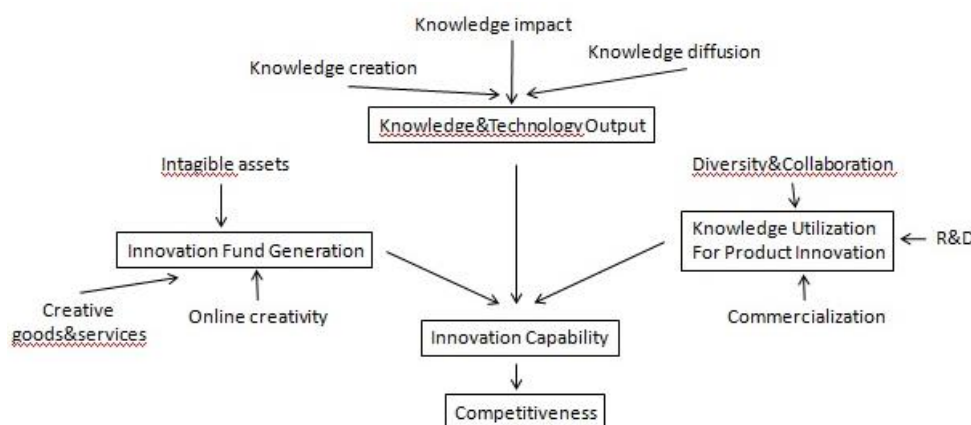


Fig. 4 : Proposed conceptual model for Innovation Capability in MSMEs in Indonesia

5. Conclusion

As the main driver of the nation's economy, MSMEs must have the capability of innovation to create innovation and make valuable contributions to the nation's competitiveness. Nevertheless, the lack of references to the innovation capability model makes MSMEs, especially in Indonesia, difficult to improve their performance, especially to compete internationally. The majority of literature discusses the technical aspects which are the initial phase of innovation. Research that discusses the technical and financial aspects is still rarely done.

To avoid this gap, this research develops a continuous and dynamic conceptual model of innovation capability. The model identifies three key innovation capability constructs, namely knowledge & technology output, knowledge utilization for product innovation, and innovation fund generation and other important factors to explain the constructs. The first two constructs constitute the technical aspect and the third construct indicate the financial aspect of innovation capability.

Technical aspects namely knowledge & technology output and knowledge utilization for product innovation require knowledge from external sources. The knowledge and information obtained from external sources has been analyzed, processed and interpreted to be transformed and utilized to generate innovations. On the other hand, MSMEs capability of generating financial returns from innovation will enhance their capability to re-invest in the MSME development and expansion.

Finally, the proposed conceptual model can place a great understanding of the key constructs and the nature of their relationships to enhance the MSMEs practices to develop their innovation capability.

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