Entrepreneurial Orientation and Digital Technology Capabilities in Small and Medium-sized Enterprises (SMEs) in Indonesia

Anton Wardaya, Sasmoko, Idris Gautama So, Agustinus Bandur

Abstract: A Small and Medium sized enterprises (SMEs) has an important role in Indonesia economic. It contributes to 99.9% of national economic, 60.34% to Indonesia GDP and absorb 97% of employee. Moreover, Indonesia is known to be one of the most internet users. However, currently, there is lack of studies to understand the role of digital technology and entrepreneur orientation on influencing the performance of SME's in Indonesia. This study aims to give empirical evidence the hypotesis linking entrepreneurial orientation (EO), digital technology capability (DT) and SME performance (SP).

Index Terms: Entrepreneurial Orientation, Digital Technology, SME's Performance.

I. INTRODUCTION

Indonesia is one of the countries with the largest number of internet users in the world. Based on a survey conducted by APJII (2017), the penetration of internet users was 143.26 million or 54.68% of the total population of Indonesia. When compared to internet users in Indonesia in 2014 amounting to 110.2 million users, there was an increase in internet users by 33.06 million within 2 years (2015-2017). Based on a survey conducted by APJII (2017), it was noted that there were 371.4 million registered mobile users; 132.7 million internet users. Based on a survey conducted by We are Social (2019), the average netizen spends time using the internet is 8 hours 36 minutes / day. This indicates that using the internet has become a habit in Indonesia.

SMEs contribute 99.9% in the Indonesia's economy (Tambunan, 2007) and absorb employee reaches 97%. Beside that, SMEs contribute to GDP up to 60.34% (Hani, Rachmania, Setyaningsih, & Putri, 2012). Based on The Ministry of Cooperatives and SMEs (2017), the productivity per business unit does increase according to the type of business. Big business productivity is 38 times that of medium-sized businesses, 543 times small businesses and 11760 times micro-businesses. Moreover, the productivity of micro-enterprises is still far lower than that of small and medium enterprises which are more easily fragile or unstable and easily crushed due to intense competitive pressures.

Micro-businesses need to open themselves to rapidly developing technological developments, for example in utilizing digital technology that can reach large markets and cut the operational costs. According to the Annual Report of European SMEs (2016/2017), it was seen that the number of MSMEs in developed countries was also assessed by MSMEs, amounting to 99.8% while micro businesses were only 93%. While the structure of MSMEs in Indonesia is very important by micro-enterprises, which is 98.7% and unchanged in one decade. This shows that micro-businesses in Indonesia never scaling up to small or medium-sized businesses.

II. LITERATURE REVIEW

The concept of entrepreneurial orientation is central to the entrepreneurial domain (Green & Slevin, 2006). Entrepreneurial orientation is defined as a method and how to make decisions that are used to act as entrepreneurs and is a type of strategic orientation of a company that wants to get competitive advantage (Lumpkin & Dess, 1996). The other researchers, Bouncken, Plu, Pesch, & Kraus, (2014), argue that entrepreneurial orientation is defined as the company's competence to identify and utilize opportunities with the aim of creating value. Based on Anderson, Kreiser, & Donald (2014), entrepreneurial orientation is the company's strategy towards entrepreneurship. According to Dehghan (2015), entrepreneurial orientation is seeing opportunities to create value and improve company performance through innovation. Entrepreneurship orientation can be interpreted as a mindset, behavior and decision-making process that supports the company's strategy in practice, competition and management (Hughes et al., 2015).

SME performance can be measured by financial and non-financial performance. Financial performance consists of financial efficiency such as investment, profits from sales and net profit margins (Y. Li, Huang, & Tsai, 2009). While non-financial performance includes customer satisfaction, market growth and customers. The performance evaluation of SMEs is simpler than the assessment of the performance of large companies. Measurement of a company's performance can be seen from value-based assessments. The good performance of SMEs results in the growth of their business getting better and bigger.

According to Teece et all. (1997), rapid technological change requires high dynamic capabilities. The development

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of this technology helps companies to be able to take advantage and market opportunities that require an understanding of the needs that consumers want now, when they need it and at what price is in accordance with the ability of consumers. Capability of digital technology is the ability to access all information with the help of technology (Azubuike, 2013).

In the 4.0 industrial revolution, technology has a very important role. Economic actors must be technologically literate so that they can get the highest benefit by using these tools namely technology (Martín-Rojas, García-Morales, & Bolívar-Ramos, 2013). The rapid development of information technology has changed the way of thinking and behaving in society. Digital technology transforms the economic order from classical economics into a digital economy. Information technology encourages a country's economic growth which can be seen from national income (GDP). Information technology also succeeded in creating many new jobs.

The performance of SMEs is influenced by the knowledge and attitudes of business owners / managers about information technology (Quinton, Canhoto, Molinillo, Pera, & Budhathoki, 2018). Changes in the market due to the presence of digital technology require SMEs to improve their capabilities. SMEs are transformed into businesses that used to be conventionally turned into technology-based businesses. Businesses that do not follow technological developments will be eroded by the era. SMEs must be aware of reading business opportunities that are faster and able to optimize the opportunities provided in this digital age. Besides listening to responses that come from consumers and competitors and responding to customer needs that are constantly changing (Yoon & George, 2013). Technology makes people quick to innovate so that it can be a mediation between entrepreneurial orientation and company performance (Shan, Song, & Ju, 2015). SMEs can determine the best strategy in facing market competition with digital technology so that their performance becomes better and directed.

All organizations that use digital technology for internal operations, business processes and managing strategies, can transition into larger scale organizations (Tumbas, Be rente and Vom Brocke, 2018). With the help of technology, organizations can change direction faster (Woodard, Ramasubbu, Tschang, & Sambamurthy, 2012) reach larger markets even to international markets (J Chantanaphant, Nabi, & Dornberger, 2015), connect with global supply chains, track cost effective customers and improve internal operations (Mazzarol, 2015), products and services throughout the industry are becoming faster, opportunities for entrepreneurship are even greater (Nambisan, 2017), increasing processes and production is greater and increasing competitiveness (Hamdani & Wirawan, 2012; Lahovnik & Breznik, 2014). With the help of digital technology, entrepreneurs with limited resources can make their business succeed. (L. Li, Su, Zhang, & Mao, 2017). Adoption of technology is one of the SME strategies because it can increase SME productivity, minimize operational costs, increase the effectiveness of SMEs, reduce environmental impacts and energy costs (Arifin, 2015).

A. Hypothesis

In general, SMEs use financial performance indicators, because SMEs lack the human resources needed to measure their performance (Heilbrunn, 2014). SMEs measure their growth with turnover growth and employment growth (Güldenberg, 2014). The SME performance appraisal is best viewed from a financial perspective. In this case, the financial assessment used is increasing sales and increasing profits (Sidik, 2012). The success of an SME is largely determined by the participation of the people in it (Sinisammal, Belt, & Harkonen, 2012). First hypoteshis is:

H1: Entrepreneurial Orientation has a positive direct influence on firm performance

According to other researchers, Pranita (2018), the capability of digital technology is one of the functional capabilities in the process, practice and connection with customers through digital media. There are four dimensions of digital technology capabilities, namely the ability to provide information, the ability to share information, context awareness capabilities and tagging capabilities. Besides that digital technology is able to innovate to create new products and new values (Chen, Tang, Jin, Xie, & Li, 2014). The second hypothesis is:

H2: Entrepreneurial Orientation will positively influence digital technology capabilities

Mastery of the latest technology for SMEs in developing countries is needed so that they can compete in the international market (Lahovnik & Breznik, 2014). The latest technology includes internet technology. The capability of internet technology is very important in helping SMEs to reach new markets even at the international level (Bianchi, 2017). Capability to technology at any level has a significant influence on the performance of SMEs (Jirayuth Chantanaphant, Nabi, & Dornberger, 2013). Even Lahovnik and Breznik, (2014); Bianchi, 2017 emphasizes the dominant source of competitiveness superiority to the performance of a company is the capability of technological innovation. Companies can have the ability to provide access to a wider range of markets. Companies can find out the needs and values perceived by their customers. So technological capabilities are needed to support company performance. The last hypothesis is:

H3: Digital technology capabilities will positively influence firm performance**.**

III. METHODS

Operational Definition of the Constructs and Their Measurement

Table 1 contains the operationalization of the constructs that have been used in this paper as well as their corresponding indicators and their measurements.

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Sample and Data

SMEs in the Jakarta, Bogor, Depok, Tangerang, Bekasi (Indonesia) regions engaged in the culinary sector were involved as respondents in this study. From 100 questionnaires distributed online, finally 90 valid questionnaires were collected while 10 questionnaires were invalid. The sample consisted of 22 culinary businesses in South Jakarta, 15 in West Jakarta, 14 in Central Jakarta, 14 in North Jakarta, 12 in East Jakarta, 1 in Bogor, 1 in Depok, 9 in Tangerang and 2 in Bekasi. The average number of workers in SMEs is 15 people and the maximum number of workers is 90 people. The average age of the establishment of SMEs is 5 years, while the maximum age is 10 years. The respondent is the owner or the manager / supervisor of business.

Table 1: Operationalization Of The Constructs

Constructs	Operational Definition	Components	Number of Indicators*
Entrepreneurial Orientation (EO)	The view of business people to identify and utilize opportunities with the aim of creating value and improving the performance of the company through innovation and ready to bear all the risks that exist from the business they run. (Lumpkin, 2005; Le Roux & Bengesi, 2014; Zhang, 2014, Lechner & Gudmundsson, 2014; Fadda, 2018)	Risk Taking (RT) Proactiveness (PR) Inovativeness (IN) Autonomy (AU)	9
Digital Technology Capabilities (DCT)	The ability of businesses to access all information with the help of technology to take advantage and market opportunities that demand the needs of consumers today (Westerman et al, 2014)	Customer Experience Operational Process Business Models	8
SME's Performance (SP)	The results achieved in an SME in order to achieve goals accompanied by effort and process. (Sidik, 2012)	Sales Growth Profit Growth	6

*All indicators were measured with a 1-7 point Likert scale. 1=totally disagree. 2=disagree. 3=partially disagree. 4=partially agree. 5=agree. 6=totally agree

IV. RESULTS

The model was tested with Smart PLS. Table 2 shows the quality criteria of the model. The constructs are superior to the criteria of 0.85 in the composite realibility. The R Square (R^2) for the relationship between the constructs EO and DT is 0.303, this shows that EO can explain the strengthening of DT; the R^2 between DT and SP is 0.111. These two relationships are statistically significant. Also the results of the AVE and the composite reliability of the constructs are substantially higher. The mediator model and its statistic results are shown in the Figure 1.

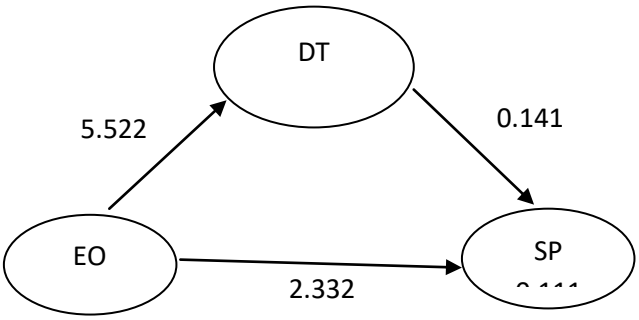

Fig. 1: Mediator Model Results

Table 2: Quality Criteria Of The Model

	R2	AVE	Composite Reliability	Cronbach's Alpha
EO	0	0.688	0.892	0.862
DT	0.303	0.626	0.928	0.91
SP	0.111	0.724	0.938	0.918

Table 3: Path Coefficients

Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (IO/STDEV)	P VALUES

EO → DT	0.529	0.542	0.096	5.522	0
DT → SP	0.617	0.708	0.017	7.841	0
EO → SP	0.29	0.301	0.124	2.332	0.02

V. DISCUSSION

The hypothesis that this paper tested was a mediator model itself. The model states that the mediator role played by DT on the relationship between EO and SP. Based on the statistical result, this hypothesis is proven, DT mediates the relationship between EO and SP.

VI. CONCLUSION

This paper has showed that DT acts as a mediator on the relationship between EO and SP. In the context of emerging countries, this research has presented the Indonesia case in which due to the lack of effective support for SMEs.

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