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*Market Recovery or Uncertainty?
Theories and Methodologies Across Disciplines*

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Factors Influencing Micro, Small and Medium Enterprises (MSMEs) Competitive Advantage

Lina Anatan*

*Faculty of Business, Maranatha Christian University, Bandung, Indonesia
Email address: lina.anatan@eco.maranatha.edu*

Wilson Bangun

*Faculty of Business, Maranatha Christian University, Bandung, Indonesia
Email address: wilson.bangun@eco.maranatha.edu*

Fransiscus Marcel

*Faculty of Business, Maranatha Christian University, Bandung, Indonesia
Email address: fransiscusmarcel@ymail.com*

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ABSTRACT

As a pillar of Indonesian economy, Micro, Small and Medium Enterprises (MSMEs) have important role with a level of contribution to the national GDP reaching more than 50%. As a pillar of the national economy, MSMEs are required to have competitive advantage so that they are able to survive and win competition in increasingly business competition and unpredictable changes. To increase competitive advantage, knowledge and innovation are the two determining factors that are absolutely owned by MSMEs. Knowledge is the main source for companies in developing core competencies, improving performance, creating value and organizational competitive advantage. The ability of companies to innovate is greatly influenced by the ability of organizations to utilize their knowledge and intellectual assets. In addition managerial skills are also a determining factor in improving organizational performance and competitive advantage. This research was conducted to examine the role of mastery of knowledge, innovation, managerial skills in influencing the competitive advantage of MSMEs in Indonesia. By involving 43 MSME actors, it was found that knowledge had a significant effect on the competitive advantage of MSMEs, while innovation and managerial skills had no significant effect. This study is expected to contribute both to academics and practitioners in implementing knowledge and innovation so as to increase organizational competitive advantage.

Keywords: SMEs Competitiveness, knowledge, innovation

1. INTRODUCTION

MSMEs have important role as pillars of the Indonesian economy. The study results conducted by Ashariyadi (2016) show that Indonesian MSMEs have contributed 99.98% of business units in Indonesia. The level of contribution of MSMEs to national GDP in that year reached 57% with the absorption rate of domestic workers reaching more than 97%. The amount of assets owned and turnover generated are used to classify of types of MSMEs in Indonesia and its regulated in Law no 20/2008 in Chapter I article 1 as shown in Table 1.

Table 1. SME Classifications Based on Law no. 20/2008

Size	Asset	Turnover
Micro	Min 50 Juta	Max 300 million
Small	>50 – 500 million	Max 3 billion
Medium	>500 million – 10 billion	>2,5 – 50 billion

Source: Law no 20/ 2008 cited from Widjaja et al. (2018)

Based on Law No. 20/2008, microbusiness is defined as businesses that owned by individuals and/or business entities. Small business is defined as productive business that stands alone (not subsidiaries and not branches) and operated by individuals or business entities who owned, controlled, directly or indirectly become a part either of medium or large businesses. A medium-sized business is defined as business that is independent, operated by individuals or business entities that are not subsidiaries or branches of a company that is owned, controlled, or become part, either directly or indirectly with a small business or large business with a net worth or annual sales results. Widjaja et al. (2018) concludes MSMEs as business operated by individuals individual or entities that meet the criterias of micro, small and medium business.

As a pillar of the Indonesian economy, MSMEs are demanded to have high competitiveness, especially in this competitive environment where trade liberalization and the 4.0 Industrial Revolution have been imposed. The entry into force of the ASEAN Economic Community (AEC) since January 1, 2016 and the launch of the Industrial Revolution 4.0 (4IR) on October 10, 2016 at the World Economic Forum Annual Meeting provides challenges and opportunities for Indonesian MSMEs to compete in the international arena. To be able to win the competition, Indonesian MSMEs must have high competitiveness, be able to overcome challenges and respond to existing opportunities.

One source of competitive advantage to increase MSME competitiveness is knowledge (Drucker, 1995; Mahr et al., 2014). Knowledge is in the minds of suppliers, workers, and consumers who are resources that can guarantee a stable and far more important growth of the company than traditional factors of production such as land and capital (Grossman, 2006 cited in Lee at al., 2016). Grant (1996) cited in Anatan (2015) suggested that knowledge is a major organizational resource and is needed in the production process. Chong et al. (2015) argued that knowledge is not only important for the production process, but also for organizational outcomes, including the development of competency-based human resources, financial performance, and innovation capabilities possessed by the organization.

Innovation especially in terms of information and communication technology (ICT) also important in creating the competitiveness of MSMEs. In addition, ICT innovation also important in facilitating interorganizational knowledge transfer activities that occur within organizations. Knowledge transfer activities between organizations and ICT innovation become an absolute

requirement for SMEs to create competitiveness so that they can actively participate in responding to economic liberalization and 4IR. Acting Deputy for Human Resources Development at Kemenkop and UKM, Rulli Nuryanto, said that businesses must be able to take advantage of the development of ICT to spur productivity and improve business efficiency. This was conveyed in a national seminar themed We Are Ready to Change: Entrepreneurial Readiness in the Disruptive Era and the Industrial Revolution 4.0 at Hall C BSI Convention Center (BCC) in Bekasi. According to him, the company's success is not determined by the size or size of the company, but the agility of the company in dealing with changes through achieving competitive advantage.

Managerial skills are also a determining factor in increasing the competitive advantage of MSMEs. Previous studies provide empirical evidence that managerial experience, education, knowledge are important in ensuring the success of MSMEs, and the lack of management skills is the main reason for the failure of MSMEs (Martin & Staines, 2008; Alattar et al., 2009). Abdel et al. (2010) suggested that the most basic understanding that managers must master is an understanding of financial problems, accounting information, and business planning.

This research objectives are to examine the role of knowledge and innovation in creating and improving the competitive advantage of MSMEs in Indonesia. The research model adopted from the research of Lee et al. (2016) which examines the relationship of knowledge management practices, technological innovation and competitive advantage in manufacturing SMEs in Malaysia. The results of the study showed that knowledge significantly effects technological innovation and competitive advantage, while technological innovation is significantly effect competitive advantage. Testing the role of technological innovation mediation in mediating the relationship between knowledge management practices and competitive advantage proved to be significantly positive.

This study is a descriptive study that modifies research conducted by Lee et al. (2016) and Sitharam and Houque (2016) by adding managerial skills variables affect the competitive advantage of MSMEs. This study examines the level of knowledge, innovation, and managerial skills in might influence the competitive advantage of MSMEs in Indonesia. Based on the background of the study described before, this research was conducted to find the answer of answer the following research questions:

1. Does knowledge affect MSMEs competitive advantage?
2. Does innovation affect MSMEs competitive advantage?
3. Do managerial skills affect MSMEs competitive advantage?

2. LITERATURE REVIEW

2.1. A Brief Overview of MSMEs in Indonesia

Quoted from financialera.co.id data on December 28, 2018, MSMEs contribute 61.41 percent to Indonesian's GDP (Gross Domestic Product). This shows the significant role of MSMEs as a pillar of the national economy. The data was obtained based on data released by the Central Statistics Agency (BPS). Meanwhile, according to IFC (International Finance Corporation), the financing gap for the small and medium business sector is 166 billion US dollars or around 19 percent of gross domestic income (GDP) in 2017. It cannot be denied, the role of Indonesia's MSMEs is very strategic, especially in the ability innovation and management in Indonesia's industrialization process from Pelita I to the present. Industrialization has an impact on structural transformation in Indonesia, especially in the economic sector which is characterized by several facts which include:

1. A decrease in the contribution of the agricultural sector (primary sector), and an increase in the contribution of the secondary and tertiary sectors.
2. The surge in purchasing power parity as a result of changes in the economic structure that follows an increase in income has resulted in a tendency to shift the structure from agrarian-based to industrial-based in Indonesia.

MSMEs are expected to have three important roles in reforming the structure of MSME development, namely as a driving force for the growth of the business world through its productivity; as a towing carriage for small businesses to develop and advance to middle-class businesses; and as a vehicle for technology and business knowledge transfer for small businesses in free competition. In the process of industrialization, the role of medium-sized businesses is needed, both to accelerate the process of industrialization and increase economic productivity.

2.2. Knowledge Management Practices

Previous studies have shown that achieving competitive advantage requires proper implementation of knowledge management (Matusik & Hill, 1998; Chuang, 2004; Nag & Gioia, 2012). Matusik and Hill (1998) suggested that the mastery of knowledge in organizations enables individuals to implement technology in the production process so that work efficiency and productivity can be increased and the savings in production costs can be increased. Efficiency that has an impact on saving production costs can be used as one source of organizational competitive advantage. The study conducted by Chuang (2004) proves that knowledge management and competitive advantage have significant positive relationship. Studies conducted by Nag and Gioia (2012) confirm that when knowledge is applied correctly in an organization, competitive advantage in the form of competitive knowledge, special knowledge that is difficult for competitors to imitate will be created by the organization. Based on these empirical studies results, the following hypothesis is formulated in this study:

H1. Knowledge influences the competitive advantage of MSMEs

2.3. Technological Innovation

Lee et al., 2016 stated that technological innovation will encourage the creation of competitive advantage. These technological innovations can be in the form of new or improved processes that have an impact on saving production costs so that cost leadership can be achieved as source of organizational competitive advantage. The study conducted by Reed et al. (2012) proves that an organization's competitive advantage can be achieved as improvements in organizational innovation are achieved through organizational openness to new ideas from outside the organization and openness in adopting the development of existing information and communication technology, so that in this study the hypothesis is formulated as follows:

H2. Technological innovation affects the competitive advantage of MSMEs

2.4. Managerial Skill

Previous studies have shown that managerial experience, education, knowledge play an important role in ensuring organizational success (Martin & Staines, 2008). Conversely, low management skills are a major factor causing failures in organizational management (Alattar et al., 2009). In managing organizations, an understanding of financial issues, accounting information, and business planning is the most basic understanding that managers must master (Abdel et al.,

2010). Study conducted by Alattar et al. (2009) proves that managers who have a minimum understanding of financial problems, do not have expertise in financial planning, and do not even understand the information generated from financial statements will result in organizational failure. Based on the results of these studies, the following hypothesis is formulated in this study:

H3. Managerial skills affect the competitive advantage of MSMEs

3. RESEARCH METHODS

3.1. Sample of the Study and Data Collection

Convenience sampling method is used in this study. Research respondents are business actors who are included in the criteria of micro and small business units according to the criteria stated in Law no. 20/2008. In this study, primary data collection uses survey methods. Primary data collected is cross section data, i.e. the study was conducted at a certain time using many respondents.

3.2. Variables and Measurements

Variables in this study include knowledge management practices, technological innovation, managerial skills, and MSMEs competitive advantage. Knowledge management practices include knowledge acquisition, knowledge distribution, and application of knowledge (Lopez et al., 2006; Martinez-Costa & Jimenez-Jimenez, 2009). Knowledge management practices consists of 12 item question measured by 5 Likert Scale. Technological innovation refers to novelty in products and processes and is defined as the adoption of ideas, behaviors, systems, policies, programs, equipment, processes, products, or services in an organization (Schweitzer et al., 2015; Prajogo & Sohal, 2003). Technological innovation consists of 6 item question measured by 5 Likert Scale. Managerial skills relate to managerial experience, education, knowledge, experience of start-up management, which indicates managerial competence (Hisrich & Drnovsek, 2002). Managerial skills consist of 6 item question measured by 5 Likert Scale. Competitive advantages include improving efficiency, improving quality, improving productivity, and cost savings (Rao & Holt, 2005). Competitive advantages consist of 4 item question measured by 5 Likert Scale.

3.3. Technique of Data Analysis

This study uses descriptive statistics and multiple regression analysis as technique analysis used to analyze research data. Description or depiction of a set of data visually can be done through description in written or text form that consists of important parts that describe the overall contents of the data such as the mean (average data), standard deviations (how the data varies by group), data variance and so on. The other technique is description in the form of pictures or graphics. Graphs of data are usually presented to complete text descriptions so that the data looks more impressive and communicative with its users. In SPSS, descriptive statistical methods can be done with the Descriptive Statistics menu consisting of: frequencies, descriptive, explore, and crosstab. In this study, the descriptive statistical method is performed using one of the Descriptive Statistics menus, Descriptive. This menu does not display the frequency tabulation, but instead displays the statistical amount to be described in a variable., multiple regression analysis was used. Multiple regression analysis is used to test the hypotheses which is performed to predict the effect of several independent variables (X) on the dependent variable (Y).

4. RESULTS

4.1. Respondent Profile

The data collection stages in this study were carried out in the period June-September 2020. Data collected through online survey method by using Google Form which was sent either via email or WhatsApp to 80 potential target respondents. In this study it is assumed that there is no difference between the respondents who answered before and after the deadline for returning the questionnaire set by the researcher. The survey results obtained 43 respondents who filled out the questionnaire completely with a rate of return of 53.75% as summarized in Table 2.

Table 2. Sample and Rate of Return

Total questionnaires sent	80
Total questionnaires returned and can be processed	43
The rate of return is based on a processed questionnaire	$43/80 \times 100\% = 53,75\%$

Source: Processed Data

The characteristics of micro, small and medium enterprises (MSMEs) that participated in this study were seen in terms of age, type of business, number of permanent workers, assets owned, and general performance achieved during the last three years. Based on a total of 43 actors who participated in this study, the majority of MSME players have been in business for more than 30 years (44.2%). In terms of types of business, the majority of MSMEs participating in this study operate in food and beverages industry (34,88%). Based on the number of workers, the majority of MSME actors in this study had a workforce of more than 30 and less than 300 people, namely 58.14%. The majority of MSMEs answered that performance in the last three years increased by less than 15%, namely a number of eleven respondents or 25.6%. Based on assets owned, most respondents have total assets of less than US \$ 15 million. Data regarding the characteristics of respondents in this study are presented in Table 3.

Table 3. Respondent Characteristics

Dimension	Categories	Number of respondent	Percentage
Company age	5-10 years	1	2,3
	10-20 years	9	20,9
	20-30 years	11	25,6
	More than 30 years	10	44,2
	Not answer	3	7,0
Type of business (Producing and or marketing)	Textiles, clothing, leather.	11	25,58
	Wood, bamboo, rattan, handicrafts, furniture.	13	30,23
	Food and beverages	15	34,88
	Chemical, oil, coal, rubber and plastics industries.	4	9,30
Number of workers	< 10 workers	9	20,93
	< 30 workers	9	20,93
	>30 -300 workers	25	58,14

	Not answer	-	-
Performance by general during three years past end	Increase > 15%	7	163
	Increase <15 %	11	25,6
	No changes	9	20,9
	Decrease < 15%	8	18,6
	Decrease > 15%	8	18,6
Asset	Less than US \$ 100	9	20,9
	Less than US \$ 3 juta	10	23,3
	Less than US \$ 15 juta	15	34,9
	Not answer	9	20,9

Source: Processed Data

4.3. Validity and Reliability Testing

Validity testing in this study uses factor analysis. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (Kaiser's MSA) is used to measure the level of association between variables and the feasibility of factor analysis. The KMO value varies from 0 to 1. The desired value must be > 0.50 for the factor analysis to be carried out. Validity testing uses factor analysis with varimax rotation, each construct is said to be valid and acceptable if the loadings factor value is 0.5 (Mac Lean & Gray, 1998). Based on the test results with factor analysis, there are three invalid question items, namely two items measuring managerial skills variables (MS 4 and MS 7) and one item of technological innovation (TI 7) since it has a loadings factor value <0.5. Table 4 shows the results of validity testing for each variable in this study.

Cronbach's Alpha is used in this study to perform reliability testing with the criteria that the instrument was considered to have high reliability if the Chronbach's Alpha value was higher than 0.6 (Nunnaly, 1978). Table 5 summarizes the results of the reliability testing of the instruments used in the study. Based on the results of the validity test, it shows that all measurement items are valid. The results of reliability testing showed that Cronbach's Alpha value ranged from 0.683-0.846. Thus it can be concluded that the question items in this study are reliable.

Tabel 4. Validity Testing

Variable	Component	Loading Factors
Knowledge	KM 1	.892
	KM 2	.838
	KM 3	.600
Technological Innovation	TI 1	.651
	TI 2	.761
	TI 3	.689
	TI 4	.566
	TI 5	.690
	TI 6	.561
	TI 7	.463
	TI 8	.530
	TI 9	.542
Managerial Skill	MS 1	.855
	MS 2	.757
	MS 3	.846
	MS 4	.461

	MS 5	.788
	MS 6	.678
	MS 7	.404
Competitive Advantage	CA 1	.785
	CA 2	.705
	CA 3	.796
	CA 4	.745

Source: Processed Data

Table 5. Chronbach's Alpha

Variable	Cronbach's Alpha
Knowledge (KM)	0.683
Technological Innovation (TI)	0.846
Managerial Skill (MS)	0.778
Competitive Advantage (CA)	0.748

Source: Processed Data

4.4. Descriptive Statistic

Table 6 summarizes the average respondents' answers to each question item in the research variables which include knowledge management variables, technological innovation, managerial skills, and competitive advantage.

Table 6. Descriptive Statistic

Variable	Mean	Std. Deviation
Knowledge (KM)	1.42 - 4.09	.698 - .925
Technological Innovation (TI)	3.65 - 4.35	.627 - .926
Managerial Skill (MS)	4.12 - 4.49	.583 - .854
Competitive Advantage (CA)	3.98 - 4.26	.535 - .785

Source: Processed Data

4.5. Hypothesis Testing

To test hypothesis 1 (knowledge affects the competitive advantage of MSMEs), hypothesis 2 (technological innovation affects the competitive advantage of MSMEs), and hypothesis 3 (managerial skills affects the competitive advantage of MSMEs), this study uses multiple regression models. By testing the multiple linear regression model, the estimated parameter with the value of t and the coefficient of determination (R²) will be obtained. The regression coefficient is significant at $p < 0.05$, it can be concluded that the independent variable has a significant effect on the dependent variable, and the greater the R², the better the model in explaining the variation in the dependent variable.

Table 7 summarizes the results of the hypothesis testing, all deviations from classical assumptions such as normality, homoscedasticity and non-multicollinearity have been tested. The

results of partial model testing show that only the first hypothesis is supported, while the second and third hypotheses are not supported. This means that the knowledge variable has a significant influence on the competitive advantage of MSMEs, with a significance value of .000, while the variables of innovation and managerial ability do not affect the competitive advantage of MSMEs. Simultaneously it can be concluded that knowledge, technological innovation, and managerial abilities affect the competitive advantage of MSMEs. The results of the adjusted R2 test in this research model are .552, this means that 55.2% of the competitive advantage of MSMEs can be explained by the variables of knowledge, technological innovation, and managerial abilities, while 44.8% is explained by variables. others outside this research model.

Tabel 7. Hypothesis Testing

Model	Stand. β	Stand. Error	t	Sig	F	Sig	Adj R ²
Constant	.927	.517	1.792		18.271	.000	.552
KM	.420	.533	4.071	.000			
TI	.223	.203	1.574	.124			
MS	.144	.154	1.207	1.207			

Source: Processed Data

In this study, two open questions were asked, namely: 1) what obstacles were faced by MSMEs in increasing the competitiveness of MSMEs, 2) what strategies could be done to increase the competitiveness of MSMEs. Of the 43 respondents who participated in this study, only 9 respondents answered these two questions. The main obstacles faced by MSMEs in increasing competitiveness are limited business capital, lack of technological mastery capability, which in turn has an impact on the limited use of existing technology. In connection with the second question about what strategies can be done to increase competitiveness are increasing the skills and knowledge of the workforce through training programs, increasing product promotion so that it is better known in a wider market share.

These obstacles can be used as reasonable arguments to explain why the second and third hypotheses in this study are not supported. In other words, neither technological innovation nor managerial ability will affect the competitive advantage of MSMEs. Based on literature studies related to empirical research on the competitiveness of Indonesian MSMEs, it can be concluded that Indonesian MSMEs still have relatively low competitiveness compared to MSMEs from other countries even among ASEAN countries. Apart from limited capital, low mastery of technology, MSMEs in Indonesia are also faced with other problems such as limited labor skills so that low productivity, from controlling the quality of products produced from the production aspect are also still low.

5. CONCLUSION AND SUGGESTION

The results of the research model testing show that only one hypothesis is accepted, while the other two hypotheses are rejected. The hypothesis supported in this study is that knowledge affects the competitive advantage of MSMEs. Meanwhile, technological innovation and managerial abilities are not supported in this study. This can be explained by the lack of mastery of technology and knowledge and skills possessed by MSMEs.

Researchers admit that there are still several limitations in this study which result in the results obtained are not optimal. First, the low number of respondents involved in this study resulted in the sample being deemed unable to represent the characteristics of the MSME population in Indonesia so that the results of the study could not be generalized. Second, data collection is carried out only by relying on online surveys due to the difficulty of direct data collection, on the other hand, not a few MSMEs refuse to fill out online surveys on the grounds that they do not have certain email accounts or have limited ability to utilize existing technology, resulting in inadequate data collection processes and results. .

Future research is expected to reach a wider range of MSMEs and include several other variables that may affect the competitive advantage or competitiveness of MSMEs such as product advantages, marketing, collaboration, the role of government and other factors such as competitors, geographic location and time of delivery are reviewed. from an operational aspect.

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