

Ambidexterity and Leadership Agility in Micro, Small and Medium Enterprises (MSME)'s Performance: An Empirical Study in Indonesia

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Abstract

Ambidexterity and leadership agility have become the most researched topics to analyze their application in companies, especially in this dynamic era. Several researchers have analyzed it in large companies. However, only a few have discussed the two topics simultaneously and at the MSME level. This study aims to analyze the relationship between ambidexterity and leadership agility and innovation capability and performance at MSMEs in Yogyakarta and East Java, Indonesia. This study is analyzed by using quantitative methods with SEM (Structural Equation Model) methods. The data in this study is primary data that is obtained through distributing 230 questionnaires to MSME managers in Yogyakarta and East Java, Indonesia. From 230 questionnaires distributed, 200 questionnaires are returned and completed, so the response rate in this study is 86%. The results in this study indicate that ambidexterity and leadership agility have a significant effect on innovation capability and MSME performance. This study also proved that innovation capability has a significant effect on MSME performance. Therefore, it is recommended for MSME managers to develop ambidexterity and leadership agility so they can create innovation and good performance. In the end, this study has provided findings related to the combination of ambidexterity and leadership agility variables.

Keywords: Ambidexterity, Leadership Agility, Innovation Capability, Performance, MSME

JEL Classification Code: O15, O20, O36, L25

1. Introduction

Economic conditions in the last two years have deteriorated due to the COVID-19 pandemic all over the world. One of the economic sectors that have been affected by the declining of economic performance and changes in people's lifestyle is MSMEs (Micro, Small and Medium Enterprises). MSMEs are a business sector that has a very broad market share, especially among middle to lower-level consumers. On the other hand, MSMEs have intense

competition because MSMEs have a low barrier entry-level (Ahmadi et al., 2020; Qamruzzaman & Jianguo, 2019). There is a variety of literature that discusses the performance of MSMEs but only a few analyzes strategic factors in MSMEs, especially in relation to strategic variables which is commonly used by large companies such as ambidexterity (Duodu & Rowlinson, 2020; Bustinza et al., 2020) and leadership agility (Gerlach et al., 2020; Muafi & Uyun, 2019; Fitaloka et al., 2020).

The discussion related to ambidexterity and leadership agility is still dominated by large companies and only a few have analyzed their application in MSMEs. MSMEs are deemed not to have the competence and resource to implement strategic planning and actions that are usually conducted by large companies (Qamruzzaman & Jianguo, 2019). However, if we look further, planning and strategic steps are needed by MSMEs to increase competitiveness, maintain company sustainability and make innovations (Ahmadi et al., 2020; Muafi & Uyun, 2019).

Planning and strategic actions such as ambidexterity and agility are not impossible for MSMEs even with limited resources (Muafi & Uyun, 2019). Ahmadi et al. (2020) analyzed the ambidexterity of manufacturing MSMEs in Iran

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and found that its application is able to improve the MSME's performance. They also found that the agility application, especially related to leadership, is able to improve the MSME's performance. These findings prove that MSMEs need to develop ambidexterity and leadership agility and optimize them to improve good performance in a sustainable manner.

Ambidexterity is the company's ability to conduct exploration and exploitation simultaneously. Some literature reveals the role of ambidexterity, one of which is the existence of ambidexterity, so a company is able to increase its innovation capabilities (Duodu & Rowlinson, 2020; Bustinza et al., 2020). In addition to increasing innovation capabilities, ambidexterity is also empirically proven by previous studies which find that it improves company performance (Dranev et al., 2020; Bustinza et al., 2020; Severgnini, 2018).

Leadership agility is the ability of a leader to place and control an organization or company in dynamic conditions with the right strategy and steps. Several previous researchers find that companies that have agile leadership will be able to form and develop innovation capabilities quickly (Gerlach et al., 2020; Fitaloka et al., 2020). These very favorable conditions can improve company performance (Nold & Michel, 2016; Gerald et al., 2020).

The discussion regarding the two important and strategic variables is still being analyzed separately by previous researchers. Few literature studies combine ambidexterity and leadership agility, especially in the MSME context. Therefore, this study explores the relationship between ambidexterity, leadership agility, and innovation capability on the MSME's performance.

2. Literature Review

2.1. Ambidexterity and Innovation Capability

Ambidexterity is the company's ability to conduct exploration and exploitation simultaneously (Ahmadi et al., 2020). Exploitation focuses on what the firm already has and knows. It is associated with concepts such as efficiency, repeatability, stability, reliability, low uncertainty levels. High success rates exploration focuses on what has to be discovered and it is associated with low efficiency, experimentation, flexibility, tolerance for errors, high uncertainty, and low success rates (Duodu & Rowlinson, 2020).

An ambidextrous organizational culture can be an important factor for a company's innovation capabilities (Bustinza et al., 2020; Wu et al., 2020; Benitez et al., 2018; Wang & Wang, 2021). Ahmadi et al. (2020) found that ambidexterity is able to have a positive impact on innovation and strategic flexibility in MSMEs. There has been much literature discussing ambidexterity in large companies. So it is interesting if an analysis of the ambidexterity application is conducted in MSMEs.

Duodu and Rowlinson, (2020) stated that social capital is the driving force for the formation of ambidexterity in innovating two forms, namely exploratory innovation and exploitative innovation. Wang and Wang (2021) analyzed the application of ambidexterity in cases of corporate parenting. The ambidexterity conducted by the parent company will have an effect on increasing innovation in the subsidiary company. So it can be concluded that efforts to increase ambidexterity in companies as well as MSMEs which include two activities (exploration and exploitation simultaneously) will have a significant impact on increasing the company's innovation ability. So that the hypothesis is formulated as follows:

H1: Ambidexterity has a significant effect on innovation capability.

2.2. Leadership Agility and Innovation Capability

Leadership agility is the ability to lead organizational change, build teams, and navigate challenging business conversations effectively (Gerlach et al., 2020). In response to the rapidly changing environment, organizations are increasingly using agile project management methods to develop innovation (Cleveland & Cleveland, 2020). Agility is one of the cornerstones of today's uncertain environment to ensure continuous innovation and long-term competitive performance. At the same time, there is a need to adapt traditional innovation management models to circumstances change (Cooper & Sommer, 2016).

Several previous studies have shown companies that have leadership agility will be able to increase innovation (Fitaloka et al., 2020; Ahmadi et al., 2020). Companies with leadership agility will be able to increase organizational innovation so that the resulting products or services become more unique, creative, and innovative, which in turn reduce the imitation orientation of the owners/managers of MSMEs (Muafi & Uyun, 2019).

The leaders in this modern and interconnected world must have agility in their competencies. Leaders are required to respond to unpredictable circumstances, whether they are flexible, able to adapt to unique situations, and will contribute to their effectiveness as leaders (Cleveland & Cleveland, 2020). A common trait of leaders is their ability to inspire and stimulate others to achieve worthy goals. Leadership can be defined as the trust and support among people to achieve organizational goals. Leaders must be able to change activities that provide motivation and inspiration for workers (Fitaloka et al., 2020). Therefore, the following hypothesis is formulated as follows:

H2: Leadership agility has a significant effect on innovation capability.

2.3. Ambidexterity and MSME Performance

Ambidexterity has various roles in the company, besides increasing innovation capabilities, ambidexterity can improve company performance (Khan et al., 2020). The ambidexterity framework considers the exploitation and exploration activities of companies and competition with other companies. Exploitation activities improve technology oriented towards efficiency and risk reduction gradually, and at a faster rate. Exploration also refers to new opportunities in the distant future, increasing uncertainty, and space for managerial flexibility (Dranev et al., 2020).

Companies seek to find a balance between exploring new ideas and exploiting existing competencies to satisfy existing customers while aiming to be future-oriented and seeing potential changes in their customer base, or emerging markets. This balancing process is referred to as organizational ambidexterity and consists of simultaneously conducting exploration and exploitative activities (Severgnini, 2018).

Ambidexterity is related to a company's strategic ability to achieve two different goals at the same time, namely exploitation and exploration (Khan et al., 2020). While exploitation enables companies to maximize the efficiency of day-to-day business operations and keep their organizations in tune with changing environments, exploration allows companies to explore innovative ideas and adapt to the demands of new environments. Some authors argue that companies must balance these two goals and be able to move from exploration to exploitation or vice versa (Bustinza et al., 2020). Thus, the following hypothesis is formulated as follows:

H3: Ambidexterity has a significant effect on MSME Performance.

2.4. Leadership Agility and MSME Performance

The success of the company is very dependent on leadership. Reliable leadership in the company will be able to improve its performance (Nold & Michel, 2016; Gerald et al., 2020). The business environment is associated with enormous change. What is relevant today is almost dead and obsolete later on. The business environment is unstable, uncertain, complex, and ambiguous. Therefore, a reliable leader is needed to bring the organization to survive in all conditions (Gerald et al., 2020).

All leaders apply some reflective action to their work. However, to become truly proficient and truly develop their agility, leaders need to adopt reflective actions and implement them so that they become agile leaders (Joiner, 2019). Therefore, in this dynamic era, a company or organization needs a leader who is ready to face changes that are fast and unexpected. It is called an agile leader.

Leadership agility includes several aspects, namely self-leadership agility, context-setting agility, stakeholder agility, and creative agility (Joiner, 2008). Gerald et al. (2020) stated that agility is not only a necessity for large companies but also for MSMEs it is proven that agility can improve MSME's performance. Therefore, the following hypothesis is formulated as follows:

H4: Leadership agility has a significant effect on MSME performance.

2.5. Innovation Capability and MSME Performance

Innovation capability refers to the disclosure of new ideas, products, and services that are implemented systematically to get new results. Organizations need to increase flexibility, responsiveness, and efficiency, as well as innovation to respond to challenges faced in local and global competition. This is due to the rapidly increasing need for innovative product and service capabilities as well as the internal processes and behavior of all members of the organization. To overcome this problem, previous studies have emerged which explore the shift from efficiency to innovation point of view. The need for knowledge about how individuals can be coordinated is aimed to increase innovation and performance at the organizational level.

Organizations are increasingly looking for new ways to improve their market position and as a result, they develop the ability to continuously innovate. Innovation has emerged as the main source for securing a competitive advantage in the market. Innovation enables companies to develop and implement processes and strategies that are more efficient and effective, resulting in innovative products (Vu, 2020). Therefore, several previous researchers find that innovation ability has a significant effect on company performance (Acosta-Prado et al., 2020; Bustinza et al., 2019; Ebrahimi & Mirbargkar, 2017; Qamruzzaman & Jianguo, 2019).

Qamruzzaman and Jianguo (2019) analyzed the innovation role in MSMEs and found that with good innovation capabilities, the performance of MSMEs would increase. Likewise, Ebrahimi and Mirbargkar (2017) proved that innovation has an important role for the company because innovation makes the company able to sell products that are in demand by the market and will have a positive impact on company performance. Therefore, the following hypothesis is formulated as follows:

H5: Innovation capability has a significant effect on MSME performance.

3. Methodology

This study is a quantitative study with a population of MSMEs in Yogyakarta and East Java, Indonesia. The data in this study is primary data obtained through distributing 230 questionnaires to MSME managers in Yogyakarta and East Java, Indonesia. From the 230 questionnaires distributed, 200 questionnaires are returned complete and valid then it is analyzed using AMOS 24. Hence, the response rate in this study was 86% and the sample in this study is 200 MSME managers in Yogyakarta and East Java who are engaged in the production of pottery and handicrafts.

This study analyzes 4 variables, such as ambiance with 2 dimensions (exploration and exploitation), leadership agility, innovation capability, and performance. The measurement of variables in this study refers to several previous studies that are modified by the researcher according to the conditions of the research subject.

For the ambidexterity variable, the measurements used in this study are adapted from Severgnini (2018) with two dimensions, namely exploration with 4 measurement items and exploitation with 4 measurement items. Leadership agility is measured by an indicator adapted from Joiner (2008, 2019) which includes 5 measurement items. The innovation capability measurement uses 5 measurement items adapted from Acosta-Prado (2020) and the measurement of performance variables uses 6 measurement items adapted from Severgnini (2018).

4. Results

Respondents in this study are 200 MSME managers in Yogyakarta and East Java. The characteristics of the respondents in this study are described in several criteria, namely gender, age, education, and income. The respondents in this study are mostly male, aged between 31–40 years old, and have the last education of bachelor.

4.1. Normality Test

The normality test is used to determine whether the data is normally distributed or not. Normality testing is conducted by observing the Critical Ratio (CR) value of the data used. If the CR value of the multivariate data is between ± 2.58 , then the data is normal. The results of the data normality test in this study can be seen in Table 1.

Table 1 shows that the multivariate CR value is 0.272 which means it is between $+2.58$ and -2.58 . So that the data in this study is normally distributed.

4.2. Outliers Test

The outlier test is an observation or data that has unique characteristics that look different from other observations and appear in the form of extreme values, either for a variable

or for combined variables. The outliers can be evaluated using an analysis of the multivariate outliers seen from the Mahalanobis Distance value.

Mahalanobis Distance test is calculated using the χ^2 value on the degree of freedom of 24 indicators at the level of $p < 0.001$ using the formula $X^2(24; 0.001) = 51.17$. The results of the outliers analysis have the highest Mahalanobis d Square value which is 45.945, so it does not exceed the c-square value of 51.17. From these results, it can be concluded that the data has no outliers.

4.3. Confirmatory Analysis

4.3.1. Validity and Reliability Test

The confirmatory analysis is used to test a concept that is built using several measurable indicators. In confirmatory analysis, the first thing to look at is validity and reliability. The validity can be seen through the loading factor value of each indicator. The minimum number of factor loading is ≥ 0.5 or ideally ≥ 0.7 . As for the reliability test, the reliability of the construct is good if the CR (construct reliability) value is > 0.7 and the VE (variance extracted) value is > 0.5 . The results of the validity and reliability tests are shown in Table 2.

Table 2 shows that all indicators have a loading factor value > 0.5 so that all indicators are valid. Likewise, the CR value of each variable is > 0.7 and the VE value is > 0.5 so that all variables are reliable.

4.3.2. Goodness of Fit

Furthermore, the confirmatory model suitability test is tested using the Goodness of Fit Index. In this study, several criteria are taken from each type of GOFI, namely χ^2 , probability, RMSEA, and GFI representing absolute fit indices, CFI, and TLI representing incremental fit indices, then PGFI and PNFI representing parsimony fit indices.

To increase the GOF value, it is necessary to modify the model referring to the modification index table by providing a covariance relationship or removing indicators that have a high MI (Modification Index) value. In the process of modifying the model, there is an indicator that must be removed because it has a high MI (Modification Index) value, namely LA4. The results of the confirmatory analysis can be seen in Table 3.

Table 3 shows that the Goodness of Fit value has met all the criteria so that the model in this study can be said to be Fit.

4.3.3. Hypothesis Testing

The next analysis is a full model Structural Equation Model (SEM) analysis to test the hypotheses developed in

Table 1: Data Normality Test Results

	Minimum	Maximum	Skew	c.r.	Kurtosis	c.r.
P6	2.000	5.000	-0.789	-4.554	0.042	0.121
IC5	2.000	5.000	-0.737	-4.257	0.508	1.467
P5	2.000	5.000	-0.681	-3.930	-0.118	-0.340
LA5	2.000	5.000	-0.695	-4.014	-0.047	-0.136
P4	2.000	5.000	-0.728	-4.203	0.132	0.382
P3	2.000	5.000	-0.710	-4.100	0.087	0.251
P2	2.000	5.000	-0.945	-5.459	0.425	1.226
P1	2.000	5.000	-0.710	-4.097	-0.104	-0.301
IC1	2.000	5.000	-0.734	-4.239	0.174	0.502
IC2	2.000	5.000	-0.879	-5.075	0.232	0.669
IC3	2.000	5.000	-0.969	-5.593	0.363	1.049
IC4	2.000	5.000	-0.947	-5.466	0.309	0.891
LA1	2.000	5.000	-0.783	-4.518	0.126	0.365
LA2	2.000	5.000	-0.791	-4.567	0.236	0.681
LA3	2.000	5.000	-0.576	-3.323	-0.457	-1.319
LA4	2.000	5.000	-0.728	-4.206	-0.202	-0.583
A5	2.000	5.000	-0.785	-4.533	0.092	0.265
A6	2.000	5.000	-0.646	-3.729	0.329	0.950
A7	2.000	5.000	-0.997	-5.758	0.274	0.791
A8	2.000	5.000	-0.775	-4.472	0.121	0.349
A1	2.000	5.000	-0.675	-3.900	0.248	0.717
A2	2.000	5.000	-0.706	-4.077	0.262	0.757
A3	2.000	5.000	-0.610	-3.521	0.169	0.489
A4	2.000	5.000	-0.713	-4.116	0.030	0.086
Multivariate					1.357	0.272

this study. The results of the regression weight test in this study are as shown in Figure 1 and Table 4.

The results of hypothesis testing can be seen by looking at the Critical Ratio (CR) value and the probability (*P*) value of the data processing results. The direction of the relationship between variables can be seen from the estimated value. If the estimated value is positive, then the relationship between the variables is positive, whereas the estimated value is negative then the relationship is negative. Furthermore, if the test results show a CR value above 1.96 and a probability value (*P*) below 0.05/5%, the relationship

between exogenous and endogenous variables is significant. More details on the results of hypothesis testing are shown in Table 4.

5. Discussion

This study analyzes the effect of ambidexterity and leadership agility in increasing the innovation ability and performance of pottery and handicraft MSMEs in Yogyakarta and East Java. The results of the analysis in this study indicate that of the five proposed hypotheses, all hypotheses

Table 2: Validity and Reliability Test

Variable	Indicator	Loading Factor	CR	VE
Ambidexterity (Exploration)	A4	0.816	0.9	0.6
	A3	0.769		
	A2	0.757		
	A1	0.729		
Ambidexterity (Exploitation)	A8	0.841	0.9	0.6
	A7	0.648		
	A6	0.787		
	A5	0.808		
Leadership Agility	LA5	0.886	0.9	0.6
	LA4	0.745		
	LA3	0.697		
	LA2	0.697		
	LA1	0.684		
Innovation Capability	IC5	0.756	0.8	0.5
	IC4	0.502		
	IC3	0.762		
	IC2	0.707		
	IC1	0.861		
Performance	P1	0.731	0.9	0.5
	P2	0.629		
	P3	0.678		
	P4	0.753		
	P5	0.741		
	P6	0.752		

Table 3: The Goodness of Fit Test Results

Fit Index	Goodness of Fit	Criteria	Cut-off Value	Description
Absolute Fit	χ^2	Small	239.831	Fit
	Probability	≥ 0.05	0.077	Fit
	RMSEA	≤ 0.08	0.027	Fit
	GFI	≥ 0.90	0.915	Fit
Incremental Fit	CFI	≥ 0.90	0.989	Fit
	TLI	≥ 0.90	0.987	Fit
Parsimony Fit	PGFI	≥ 0.60	0.696	Fit
	PNFI	≥ 0.60	0.763	Fit

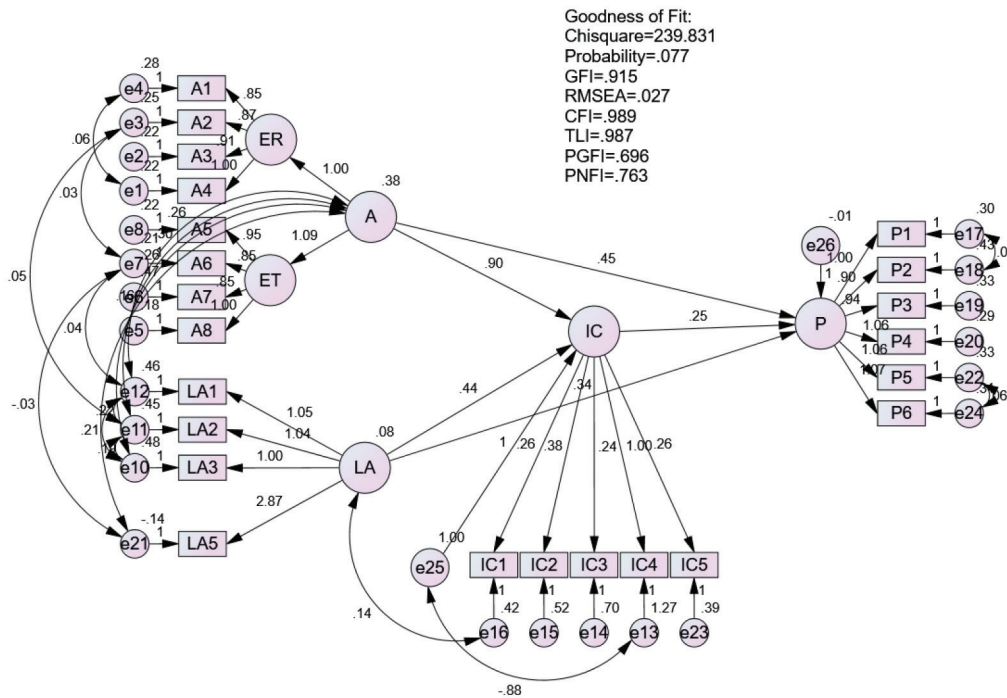


Figure 1: Path Diagram

Table 4: Regression Weight Test Result

		Estimate	S.E.	C.R.	P	Description
H1	A–IC	0.896	0.097	9.279	0.000	H1 Supported
H2	LA–IC	0.443	0.148	2.997	0.003	H2 Supported
H3	A–P	0.453	0.063	7.213	0.000	H3 Supported
H4	LA–P	0.341	0.082	4.183	0.000	H4 Supported
H5	IC–P	0.249	0.036	6.965	0.000	H5 Supported

are supported which prove that ambidexterity and leadership agility have a significant effect on the innovation capability and performance of MSMEs.

The analysis results of the first hypothesis show that the hypothesis is supported so that it is proven ambidexterity is able to have a positive and significant effect on innovation capability. These results are supported by several previous studies (Ahmadi et al., 2020; Duodu & Rowlinson, 2020; Bustinza et al., 2020; Wu et al., 2020). From these results, MSME managers should develop better the application of ambidexterity. Increased ambidexterity will encourage companies to create innovations. The application of ambidexterity includes two things that companies must be able to do simultaneously, namely exploration and exploitation.

Exploration, which means developing and increasing the company’s assets, resources, and competitiveness, must be conducted in conjunction with the company’s efforts to reap profits or exploitation. The condition of the company where the exploration and exploitation are conducted simultaneously will be able to encourage the company to continuously innovate.

The analysis results of the second hypothesis indicate that the second hypothesis is supported so that it is proven that leadership agility can also have a significant effect on innovation capability. These results are in line and supported by several previous studies (Muafi & Uyun, 2019; Fitaloka et al., 2020; Ahmadi et al., 2020). From these results, MSME managers must also develop leadership agility to develop better innovation capabilities. Leadership agility includes

several aspects, namely self-leadership agility, context-setting agility, stakeholder agility, and creative agility (Joiner, 2008, 2019). Gerald et al. (2020) stated that agility is not only a necessity for large companies but also for MSMEs it is proven that agility can improve the performance of MSMEs. In this dynamic era, change is a necessity in the business world. Therefore, leadership agility is no longer a complement, but a necessity for companies, including MSMEs.

The third hypothesis is also supported by the analysis results of this study, so it is proven that ambidexterity is able to have a positive and significant effect on the performance of MSMEs. These results are supported by several previous researchers (Dranev et al., 2020; Bustinza et al., 2020; Severgnini, 2018). The results of the third hypothesis analysis show that the better application of ambidexterity, the better the performance of MSMEs. Therefore, MSME managers are expected to be able to develop ambidexterity as much as possible. The development of ambidexterity includes two aspects, namely exploration and exploitation simultaneously. This capability must be familiarized with employees so that the company is able to create sustainable positive growth.

The results of the analysis in this study also support the fourth hypothesis. It is proved that leadership agility can have a positive and significant effect on the MSMEs performance. These results are supported by several previous studies including (Nold & Michel, 2016; Gerald et al., 2020; Joiner, 2019). The results of the fourth hypothesis test show that the better the leadership agility that is applied in the management of MSMEs, the better performance results. This study proves that leadership agility is not only an important aspect for large companies but also a very important aspect for MSMEs. Hence, leaders must be resilient and reliable in facing changing conditions to be able to lead the company to sustainable growth.

Furthermore, the analysis results of the fifth hypothesis show that the fifth hypothesis is supported so that it is proven that innovation capability is able to have a significant effect on the performance of MSMEs. These results are supported by previous research (Acosta-Prado et al., 2020; Bustinza et al., 2019; Ebrahimi & Mirbargkar, 2017; Qamruzzaman & Jianguo, 2019). These results indicate that the better the innovation ability of a company, the better its performance.

The most important thing for MSMEs is to create sustainable growth. Growth is characterized by continuous good performance. Therefore, MSMEs need to focus manage to improve several important aspects that affect performance. These important aspects include ambidexterity, leadership agility, and innovation capability.

6. Conclusion and Implications

This study analyzes four variables, namely ambidexterity, leadership agility, innovation capability, and MSME

performance. From these four variables, 5 hypotheses are formulated based on previous theory and literature review. The results of hypothesis testing in this study indicate that:

1. Ambidexterity has a significant effect on innovation capability.
2. Leadership agility has a significant effect on innovation capability.
3. Ambidexterity has a significant effect on MSME performance.
4. Leadership agility has a significant effect on MSME performance.
5. Innovation capability has a significant effect on MSME performance.

The results of this study have a managerial implication that in developing innovation capabilities in MSMEs, especially MSMEs engaged in pottery and handicrafts, two important variables are needed, namely ambidexterity and leadership agility. Likewise, there is an effort to improve the MSMEs performance, namely, managers need to pay attention to the application of ambidexterity, leadership agility, and innovation capability.

The theoretical implication of this study provides findings related to the combination of ambidexterity and leadership agility variables which are proven to have a significant effect on innovation capability and MSME performance. Future study is expected to be able to export more deeply and broadly related to these two strategic variables from the point of view of different research subjects and the measurement of different variables.

References

- Acosta-Prado, J. C., Severiche, A. K. R., & Tafur-Mendoza, A. A. (2020). Conditions of knowledge management, innovation capability, and firm performance in Colombian NTBFs. *VINE Journal of Information and Knowledge Management Systems*, 51(2), 218–235. <https://doi.org/10.1108/VJKMS-09-2019-0142>
- Ahmadi, M., Osman, M. H. M., & Aghdam, M. M. (2020). Integrated exploratory factor analysis and data envelopment analysis to evaluate balanced ambidexterity fostering innovation in manufacturing SMEs. *Asia Pacific Management Review*, 25(3), 142–155. <https://doi.org/10.1016/j.apmr.2020.06.003>
- Benitez, J., Castillo, A., Llorens, J., & Braojos, J. (2018). IT-enabled knowledge ambidexterity and innovation performance in small US firms: The moderator role of social media capability. *Information & Management*, 55(1), 131–143. <https://doi.org/10.1016/j.im.2017.09.004>
- Bustinza, O. F., Gomes, E., Vendrell-Herrero, F., & Baines, T. (2019). Product–service innovation and performance: The role of collaborative partnerships and R&D intensity. *R&D Management*, 49(1), 33–45. <https://doi.org/10.1111/radm.12269>

- Bustinza, O. F., Vendrell-Herrero, F., & Gomes, E. (2020). Unpacking the effect of strategic ambidexterity on performance: A cross-country comparison of MMNEs developing product-service innovation. *International Business Review*, 29(6), 1–12. <https://doi.org/10.1016/j.ibusrev.2019.01.004>
- Cleveland, M., & Cleveland, S. (2020). Culturally agile leadership: A relational leadership development approach. *International Journal of Public and Private Perspectives on Healthcare, Culture, and the Environment (IJPPHCE)*, 4(1), 1–9. <https://doi.org/10.4018/IJPPHCE.2020010101>
- Cooper, R. G., & Sommer, A. F. (2018). Agile-stage-gate for manufacturers: Changing the way new products are developed integrating agile project management methods into a stage-gate system offers both opportunities and challenges. *Research-Technology Management*, 61(2), 17–26. <https://doi.org/10.1080/08956308.2018.1421380>
- Dranev, Y., Izosimova, A., & Meissner, D. (2020). Organizational ambidexterity and performance: assessment approaches and empirical evidence. *Journal of the Knowledge Economy*, 11(2), 676–691. <https://doi.org/10.1007/s13132-018-0560-y>
- Duodu, B., & Rowlinson, S. (2020). The effect of social capital on exploratory and exploitative innovation. *European Journal of Innovation Management*, 23(4), 649–674. <https://doi.org/10.1108/EJIM-08-2018-0178>
- Ebrahimi, P., & Mirbargkar, S. M. (2017). Green entrepreneurship and green innovation for SME development in market turbulence. *Eurasian Business Review*, 7(2), 203–228. <https://doi.org/10.1007%2Fs40821-017-0073-9>
- Fitaloka, R., Sugarai, B., Perkasa, A. R. A., & Saputra, N. (2020). Leadership agility and digital quotient influence on employee engagement: A case of PT X and Pinrumah.com. *The Winners*, 21(2), 113–117. <https://doi.org/10.21512/tw.v2i1i2.6768>
- Gerald, E., Obianuju, A., & Chukwunonso, N. (2020). Strategic agility and performance of small and medium enterprises in the phase of the COVID-19 pandemic. *International Journal of Financial, Accounting, and Management*, 2(1), 41–50. <https://doi.org/10.35912/ijfam.v2i1.163>
- Gerlach, F., Hundeling, M., & Rosing, K. (2020). Ambidextrous leadership and innovation performance: a longitudinal study. *Leadership & Organization Development Journal*, 41(3), 383–398. <https://doi.org/10.1108/LODJ-07-2019-0321>
- Joiner, B. (2019). Leadership agility for organizational agility. *Journal of Creating Value*, 5(2), 139–149. <https://doi.org/10.1177/2394964319868321>
- Joiner, B. (2008). Leadership agility: Five levels of mastery. *Strategic Direction*, 24(10), 31–40. <https://www.leadershipnow.com/leadershop/0787979139.html>
- Khan, H., Freeman, S., & Lee, R. (2020). New product performance implications of ambidexterity in strategic marketing foci: A case of emerging market firms. *Journal of Business & Industrial Marketing*, 36(3), 390–399. <https://doi.org/10.1108/JBIM-01-2020-0003>
- Muafi., & Uyun, Q. (2019). Leadership agility, the influence on organizational learning and organizational innovation, and how to reduce imitation orientation. *International Journal for Quality Research*, 13(2), 467–484. <http://oaji.net/articles/2019/452-1559581310.pdf>
- Nold, H., & Michel, L. (2016). The performance triangle: A model for corporate agility. *Leadership & Organization Development Journal*, 37(3), 341–356. <https://doi.org/10.1108/LODJ-07-2014-012>
- Qamruzzaman, M., & Jianguo, W. (2019). SME financing innovation and SME development in Bangladesh: An application of ARDL. *Journal of Small Business & Entrepreneurship*, 31(6), 521–545. <https://doi.org/10.1080/08276331.2018.1468975>
- Severgnini, E., Vieira, V. A., & Galdamez, E. V. C. (2018). The indirect effects of the performance measurement system and organizational ambidexterity on performance. *Business Process Management Journal*, 24(5), 1176–1199. <https://doi.org/10.1108/BPMJ-06-2017-0159>
- Vu, H. M. (2020). A review of dynamic capabilities, innovation capabilities, entrepreneurial capabilities, and their consequences. *The Journal of Asian Finance, Economics, and Business*, 7(8), 485–494. <https://doi.org/10.13106/jafeb.2020.vol7.no8.485>
- Wang, N., & Wang, Y. (2021). Does parenting matter in subsidiary innovation in emerging economies? Exploring the role of parent superior competitiveness in affecting subsidiary contextual ambidexterity. *International Business Review*, 30(1), 1–13. <https://doi.org/10.1016/j.ibusrev.2020.101673>
- Wu, J., Wood, G., Chen, X., Meyer, M., & Liu, Z. (2020). Strategic ambidexterity and innovation in Chinese multinational vs. indigenous firms: The role of managerial capability. *International Business Review*, 29(6), 1–8. <https://doi.org/10.1016/j.ibusrev.2019.101652>