Technology exploration of micro, small, and medium enterprises in Kuningan Regency, Indonesia

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ABSTRACT

The purpose of this research is to explore technology use in micro, small, and medium enterprises in Kuningan Regency, Indonesia. The data analysis method used in this study is Structural Equation Modeling (SEM) with programming tools that support primary data analysis in the form of Lisrel 8.8 with the population being UMKM actors totaling 791 people and the sample used was 222 MSMEs offender with random sampling technique. The structural model analysis between the technology learning orientation and the MSMEs performance shows that the estimation coefficient is positive and high at 2.94 with a t-value of 0.77, which means it is significant (the number is greater than 1.96). The results of the structural analysis between Competitive Advantage and MSMEs Performance show a coefficient value of 4.72 and a total value of 0.80. The research is expected to give more insight into the use of technology for MSMEs, especially in Indonesia, and become a reference for future research discussing about similar issues.

INTRODUCTION

Post-Covid 19 Pandemic, the rapid information technology development affects all life aspects significantly and determines global economic development. Many business activities are automated using technology. This phenomenon greatly affects Micro, Small, and Medium Enterprises (MSMEs) in Indonesia, which have relied more on traditional business activities and prefer to interact directly, which then distracts the performance.

Arbawa & Wardoyo (2018) states that MSME performance is the result of work achieved and completed by an individual within the company in a certain period and will be linked to the company’s value or standard. So, performance is the result obtained by a person or company for a specific purpose. According to Arbawa & Wardoyo (2018), performance is the success of an organization in realizing strategic and predetermined goals with the behavior expected by an organization. The excellent performance of MSMEs will strengthen them so they can compete and have an essential role in the national economy. One factor that can improve MSMEs' performance is their ability to compete.

Marketing performance is a measure of achievement that comes from the comprehensive marketing activities of the business owner (Hajar & Sukaatmadja, 2016). Marketing performance is the relationship between marketing activities and company performance. Growth in sales and market share is also significant for the long-term sustainability of the company (Astuti, 2016). Marketing performance, according to Manambing et al. (2018), is the extent to which the company's achievements in the products and as a benchmark in measuring the achievements or actions of the marketing process. Customer growth is related to marketing performance, i.e., the increase in customers repurchasing the products.

According to Moehlerino (2012), performance is a description of achievement in implementing an activity program or policy to realize the organization's goals, objectives, vision, and mission as outlined through strategic planning. According to Raphi (2015), the indicators of MSME performance are sales growth, customer growth, and profit growth.

According to research conducted by Susana & Andarwati (2021), competitive advantage significantly affects business performance. Business performance can improve if SMEs have advantages in product

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uniqueness, product quality, and competitive prices (Susana & Andarwati, 2021). Dalimuhte (2017) states that competitive advantage is the business’s ability to create an advantage to compete with competitors.

According to Hajar & Sukaatmadja (2016), there are five indicators; they are: 1) Competitive prices: retail selling prices that are lower compared to the average retail selling prices of the competitors; 2) Opportunity exploration, i.e., identifying opportunities in new ways to develop existing resources. 3) Competitive threat defense: the company’s ability to survive against competing threats for the survival and growth of the company. 4) Flexibility is the concept of quickly responding to environmental changes. 5) Customer relationship is a relationship to know customer needs better than competitors with the hope of loyal customers.

Based on Damayanti et al. (2022), the results show that competitive advantage has a positive and significant effect on the marketing performance of MSMEs of local food in Ternate. Research conducted by Nila et al. (2021) shows that competitive advantage affects the performance of SMEs.

Information Technology refers to all forms of technology used to create, store, modify and use information in all its forms (Lestari et al., 2020). According to Masrukhin & Waridin (2004), a business that wants to sustain itself and remains leading the market needs to target market opportunities more carefully, create a more favorable, conducive, passionate, and constantly innovative working atmosphere. A learning organization is committed to improving its performance by finding new things and ways to do these things. Masrukhin & Waridin (2004) explain that there are five disciplines in learning organizations, including mental models, system thinking, shared vision, personal mastery, and system thinking.

Technology learning orientation is a company’s ability to use technological developments to increase innovation and facilitate marketing access. The indicators used in measuring the technology orientation construct refer to (Abulrub et al., 2012; Lestari et al., 2020; Mansur et al., 2019), with indicators that include the use of the latest technology, speeding up service to customers, and ease of transaction process. According to Reswanda (2011), learning orientation positively affects marketing performance through competitive advantage.

Digital marketing is a form of promotion and market search process facilitated by online digital media utilizing various digitalization tools, such as social media. Social media is now not only able to connect people with devices but also connect people with other people all over the world. Digital marketing, which consists of interactive and integrated marketing, can facilitate interaction between producers/suppliers, market intermediaries, and consumers. Digital marketing makes it easier for business people to research markets and provide various consumer needs and wants. It also eases the consumers in finding the right product and its information. Consumers can now make the necessary decisions independently based on search results. Digital marketing can reach all levels of society wherever and whenever they want. Effective digital marketing needs a strategy. Digital marketing is technology usage in assisting marketing activities to increase customer knowledge according to their needs (Chaffey & Chadwick, 2016). Sawicki (2016) defines digital marketing as the exploitation of digital technology to create a channel to reach potential consumers and achieve company goals through more effective fulfillment of consumer needs. According to Kim & Kim (2004), the indicators used are Interactive, Incentive Program, and Site Design.

According to Hudha et al. (2022), digital marketing affects competitive advantage, digital marketing has an effect on marketing performance, competitive advantage has no effect on marketing performance, and digital marketing does not mediate the impact of marketing performance on competitive advantage.

Based on data recorded at the Ministry of Cooperatives and SMEs, Kuningan Regency has around 791 MSMEs out of 1,063,305 MSMEs in West Java. The MSMEs in Kuningan get special attention from the Cooperatives and SMEs Office because they suffer revenue decrease post-covid-19 since only a few utilize the technology in marketing and others stick to traditional marketing without utilizing its technology. Based on an initial survey conducted on 52 MSMEs, only seven business units have used technology for competitive advantage. In contrast, others are just willing to learn, and some have yet to use the technology because they already have enough customers. Some MSMEs said that without using technology, their businesses continued to run well and did not experience significant problems, except in mid-2019 when their income decreased because of the Covid-19 pandemic and the implementation of PSBB (Pembatasan Sosial Berskala Besar, Government’s policy to limit people’s activity). They rely more on offline selling and marketing by word-of-mouth from their loyal customers.

However, the current technological development changes consumers’ shopping behavior. The demands and desires of consumers are different; they feel more comfortable and facilitated when they can access all their needs from home or various places without having to go out looking for something they want by relying solely on the gadget they have. Indeed consumers are kings, which is a challenge for MSMEs, so what must be done to compete is to meet consumer demands/needs. Technological exploration is the right effort at this time. Exploration is carried out by utilizing technology through a technology learning orientation and utilizing technology as a means of conducting digital marketing. If they have utilized digital technology through e-
commerce in their business activities, they are expected to have a competitive advantage, which will automatically improve the performance of the MSMEs.

The purpose of the research is to explore technology use in micro, small, and medium enterprises in Kuningan Regency, Indonesia. The research is expected to give more insight into the use of technology for MSMEs, especially in Indonesia, and become a reference for future research discussing about similar issues.

METHOD

The data analysis method used in this research is Structural Equation Modeling (SEM) with programming tools that support primary data analysis in the form of Lisrel 8.8 with the population being UMKM actors in Kuningan Regency totaling 791 people and the sample used was 222 MSMEs offender with random sampling technique.

RESULTS AND DISCUSSION

Structural Model Analysis

The structural model analysis relates to the evaluation of the coefficients or parameters that present a causal relationship or the influence of one latent variable on another latent variable. In this section, the analysis of the structural model includes the t-value of the coefficient or parameter, the value of the coefficient or parameter, and the coefficient of Determination ($R^2$), the results of the structural model analysis are the interpretation of the complete structural model presented in the figure below:

![Complete Structural Model](image)

The T-value of the coefficient or parameter

1) Technology Learning Orientation $\rightarrow$ Competitive Advantage = 5.42: This value indicates that the impact of Technology Learning Orientation on the Competitive advantage is significant because the t-value is $> 1.96$

2) Digital Marketing $\rightarrow$ Competitive Advantage = 3.94: This value shows that the impact of digital marketing on the competitive advantage is significant because its t-value is $> 1.96$

3) Technology Learning Orientation $\rightarrow$ MSME Performance = 2.49: This value indicates that the impact of Technology Learning Orientation on MSME performance is significant because the t-value is $> 1.96$

4) Digital Marketing $\rightarrow$ MSME Performance = 4.11: This value indicates that Digital Marketing significantly affects MSME Performance because the t-value is $> 1.96$

5) Competitive Advantage $\rightarrow$ MSME Performance = 4.72: This value indicates that the impact of Competitive Advantage on MSME Performance is significant because the t-value is $> 1.96$

The tables should be numbered according to the order in which they are presented (e.g. Table 1. etc.). The source of the table is written below the table, while the number and title of the table are written above the table. The table number is written in Book Antiqua font, 9-pt size, with bold type, while the table name is written in Book Antiqua font, 9-pt size, with regular type, and centered. Each figure and table must be correctly referenced in the text by including the figure/table number. After the sub-heading and before the figure or table should be given an introduction.

<table>
<thead>
<tr>
<th>Table 1. Model Match Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model Overall Match Test (Goodness of Fit)</strong></td>
</tr>
<tr>
<td>Chi-Square</td>
</tr>
</tbody>
</table>

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Assessing the model’s fitness is done by analyzing the chi-square test, RMSEA, CFI, and RMR values. Therefore, the fit test shows that the model is fit, so it can be concluded that the model used in this study can be used as the basis for the research problem analysis.

Hypothesis Test Results

Based on the model test, the hypothesis proposed in this study is proven. Based on the results of the hypothesis testing seen in the path diagram of the Structural Model T-Value, the conclusions from the results of the hypothesis testing can be seen in Table 2 as follows:

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path</th>
<th>t-value</th>
<th>Estimation</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>OP → KB</td>
<td>5.42</td>
<td>0.92</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>DM → KB</td>
<td>3.94</td>
<td>0.86</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>OP → KU</td>
<td>2.94</td>
<td>0.77</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>DM → KU</td>
<td>4.11</td>
<td>0.85</td>
<td>Accepted</td>
</tr>
<tr>
<td>H5</td>
<td>KB → KU</td>
<td>4.72</td>
<td>0.80</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Source: Lisrel Output, 2022

Hypothesis Analysis

After the goodness of fit criteria has been met for the estimated structural model and the evaluation of the structural model relationships has been done, the next step is hypotheses analysis. The description regarding each hypothesis in this study is guided by the table above, which is a detailed result of the relationship test on the structural model that explains the relationship between latent variables in this study.

Hypothesis 1: Technology Learning Orientation (OP) positively influences Competitive Advantage (KB)

In the structural model analysis between learning orientation and competitive advantage, hypothesis 1 is accepted because the t-value is 5.42 and the estimated coefficient is 0.99. This value is significant because the t-value is > 1.96. The estimated value meets the requirements and is relatively high, indicating a positive relationship between the technology learning orientation and competitive advantage. A positive coefficient value proves that the technology learning orientation might encourage the competitive advantage of MSMEs and has a strong significant relationship between the two latent variables. This shows that the technology learning orientation has a high value which indicates that it gives high value to MSMEs in order to be able to compete.

The Effect of Technology Learning Orientation on Competitive Advantage

The Effect of Technology Learning Orientation on MSMEs in Kuningan Regency positively affects Competitive Advantage. This research is in line with Reswanda (2011), which states that learning orientation positively affects marketing performance through competitive advantage. Unlike the research conducted by Arbawa & Wardoyo (2018), learning orientation does not affect competitive advantage. Thus companies that compete in business need to conduct technology learning in order to gain a competitive advantage.
**H2: Digital Marketing (DM) positively affects Competitive Advantage (KB)**

In the structural model analysis test between digital marketing and competitive advantage, it is known that hypothesis 2 is accepted because the results of the estimated coefficient and t-value are significant. This result is significant because the t-value is 3.94, greater than 0.86, and the estimated coefficient is 0.42, which is relatively high. Thus, these results indicate a positive relationship between digital marketing and competitive advantage. Therefore it is concluded that hypothesis 2 is accepted. Accepting this hypothesis 2 means a higher value of digital marketing for MSMEs means a higher competitive advantage. This also means that if MSMEs fully transform digital marketing, it will increase their competitive advantage.

**Digital Marketing Impacts Competitive Advantage**

In this study, Digital Marketing has a positive and significant effect on the competitive advantage of MSMEs in Kuningan Regency. In the questionnaire, MSMEs stated that by using digital marketing, 73% of businesses are affected because of increased sales, more accessible customer service, and faster financial transactions. In line with research conducted by Obeidat et al. (2021), e-marketing affects competitive advantage. In contrast, Lee & Falahat (2019) stated that digital marketing does not affect competitive advantage.

**H3: Technology Learning Orientation (OP) positively affects MSMEs' Performance (KU)**

The results of the structural model analysis between the technology learning orientation and the MSME performance show that the estimation coefficient is positive and high at 2.94 with a t-value of 0.77, which means it is significant (the number is greater than 1.96). These significant results prove a positive relationship between technology learning orientation and MSME performance. The higher the value of technology learning orientation, the better the MSME performance. So, hypothesis 3 is accepted.

The results show that the technology learning orientation has a positive and significant effect on the MSMEs performance. Based on the questionnaire, MSMEs hoped that this would increase their business activities. In fact, after learning about technology, 67% felt that there are many things they can do with technology and business performance becomes more accessible and organized. This research is in line with Sari & Thamrin (2022), which state that learning orientation positively affects performance.

**H4: Digital Marketing (DM) positively affects MSME Performance (KU)**

The results of the structural model analysis between Digital Marketing and MSME Performance show a high coefficient value (4.11) and t-value of 0.85. These findings indicate a very strong relationship between digital marketing and MSME performance. High digital marketing transformation will improve the MSMEs performance. So, hypothesis 4 is accepted.

**Digital Marketing Affects the MSMEs' Performance**

The data analysis shows that digital marketing has a positive and significant effect on the MSMEs performance. According to the interview, the MSMEs' performance is improving by utilizing digital marketing and making all business activities more manageable. This research is in line with Mechman, Ali, et al., who stated that digital marketing affects the MSMEs performance. In contrast to research conducted by Chakravarthy et al. (2022), digital marketing does not directly impact company performance.

**H5: Competitive Advantage (KB) positively affects MSME Performance (KU)**

The results of the structural model analysis between Competitive Advantage and MSMEs Performance show a coefficient value of 4.72 and a t-value of 0.80. These findings indicate a very strong relationship between competitive advantage and MSME performance. The higher the competitive advantage value, the higher the MSMEs' performance. In addition, these results indicate a significant relationship between competitive advantage and MSME performance. So, hypothesis 5 is accepted.

**Competitive advantage affects MSME performance**

Competitive advantage has a positive and significant effect on MSME performance. The questionnaire also proves that some MSMEs are superior to other MSMEs. This research is in line with Arbawa & Wardoyo (2018), which stated that competitive advantage Influences MSMEs Performance. However, this is different from the research conducted by Nilasari et al. (2021) stated that competitive advantage does not affect the performance of the plantation industry.

**CONCLUSION**

Technology learning orientation positively impacts competitive advantage for MSMEs. Continuous learning of technology makes business activities more manageable, increasing performance. Digital marketing expands the market, increasing sales levels. Continuous innovation is crucial for MSMEs to maintain a
competitive advantage. Therefore, it is recommended that MSMEs continuously learn and innovate to improve their performance and stay ahead of competitors.

REFERENCES


