Model Analysis of Strengthening the Success and Sustainability of MSMEs in Pematang Siantar

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Abstract: In building business, it is hoped that it will last for the long term. This is also what is expected in establishing an MSME, hoping for progress, obtaining superior performance, and being able to compete. Therefore, as an MSME actor, you must be able to know the many factors that can affect MSME performance. The main objective of this study was to determine the factors that influence the performance of SMEs in the food sector in Pematang Siantar City. This study uses a causal technique, sometimes known as causal research. MSMEs in Pematang Siantar City make up the entire population of this research. Furthermore, the population and sample are MSME actors in the food sector in Pematang Siantar City. The sampling technique is accidental sampling, where the sample includes 250 MSMEs spread across Pematang Siantar. The results showed that four factors influenced a MSME’s performance: perceived competitive value, perceived customer benefits, product innovation, and digital marketing, which were included in factor 1. Factor 2 includes financial literacy and business network, and factor 3 covers owner’s perception.

Keywords: perceived competitive value, perceived customer benefit, product innovation, financial literacy, business network, owner’s perception, digital marketing.
1. Introduction

It is widely known that developing Micro, Small and Medium Enterprises substantially contributes to a country’s economic development [1]. It is known that the result of MSMEs will be able to overcome the problem of poverty and crime rates [2]. Undoubtedly, this can be done because the existence of MSMEs will create many new jobs that can absorb the labor force, thereby reducing the current unemployment rate [3]. Based on data from the Indonesian Ministry of Cooperatives and Small and Medium Enterprises (UKM), the contribution of the MSME sector to employment in the 2018-2019 period experienced a significant increase, namely around 109,842,384 people or 89.04% [4]. This indicates that the more developed MSMEs in a country will be able to absorb the number of existing workers to overcome the unemployment problem.

Based on data from the Ministry of Cooperatives and Small and Medium Enterprises throughout 2022, it is known that the growth of MSMEs in Indonesia experienced significant growth, reaching 8.71 million units ([4]. This certainly has a positive impact on the country’s economic development. The growth of MSMEs that occurred nationally differed from that of MSMEs in the City of Pematang Siantar, North Sumatra. Based on data from the Central Statistics Agency of North Sumatra, the number of MSMEs in Pematang Siantar City for all business sectors in 2020 has decreased [5]. Figure 1 shows data on the number of MSMEs in Pematang Siantar City from (2018-2020).

From these data, in 2020, there was a decrease in the number of MSMEs in Pematang Siantar City. This decline indicates that not all MSMEs have good performance; therefore, it impacts the sustainability of these MSMEs. Many factors can affect the performance of SMEs. Several factors can affect the performance of MSMEs, namely, owner perception, business network, perceived competitive value, perceived customer benefits, financial literacy, product innovation, and digital marketing.

As stated in [6], the owner’s perception significantly affects the performance of SMEs. According to [2], the business network has a significant effect on the performance of SMEs. Furthermore, [7] states that perceived customer benefits support SMEs’ success. A research result of [8] indicates that financial literacy significantly influences the performance of SMEs. According to [9], product innovation had a significant effect on the performance of SMEs. Finally, digital marketing has a significant effect on the performance of SMEs [10].

2. Literature Review and Hypothesis

2.1. MSME Performance

The ability to survive competitors and continue to increase sales is the hope of every MSME actor [11]. There must be precise instruments on how MSMEs can be declared healthy and thriving [12]. Four indicators can be used to assess the performance of MSMEs, namely sales growth, capital growth, workforce growth, and profit growth [13]. Furthermore, the excellent performance of MSMEs must have six criteria: increasing sales, increasing profits, increasing business capital, increasing the number of customers, achieving the goals and targets of MSMEs, and the ability to profit and meet needs [14]. Finally, the performance of MSMEs can be measured by five indicators: sales growth, capital growth, workforce growth, market growth, and profit growth [15]. Previous research studies assessed that in measuring the performance of MSMEs, there are at least nine criteria, namely increasing sales transactions, increasing sales volume, increasing customer engagement, increasing the number of customers,
increasing customer satisfaction, improving service quality, increasing brand awareness, improving the business image, and increasing profit growth [2], [16]-[17].

2.2. Perceived Competitive Value

The fundamental building block for producing business income and profits is competitive value. Identifying and applying a firm’s competitive value assets is the result of inputs from stakeholders, individuals, and company management [18]. A corporation has a competitive edge when it can perform action or possess an asset that its rivals desire. According to the theory of competitive advantage, a company must have specific strategies and pay attention to its performance in order for it to become better every day, every month, and every year; if this is achieved, the company has an advantage over other companies. Competitive. Every business that competes in an industrial setting wants to outperform its rivals [19]. Increasing business transactions, providing distinctive high-quality items, offering competitive prices, and expanding markets are ways to gage the perceived worth of an advantage [20]. Product distinctiveness, competitive pricing, and difficulty of imitation are all signs of perceived superiority value [21].

2.3. Perceived Customer Benefits

Customer value is an emotional connection between consumers and businesses that manifests as financial, practical, and psychological gains resulting from consumers using their goods and services to fulfill particular requirements [22]. Offer that is thought to give the most value will win customers. The consumer may perceive preferential treatment, extra care or personal recognition, and exclusive services not offered to other customers as benefits of customization [23]. The advantages of MSME goods or services are considered by consumers when making purchases [24]. One of the critical components for consumers to profit from a product is the speed of time, perceived benefits, and relatively low expenses [25]. Rational consumer behavior aims to maximize benefits and minimize expenses to get the most out of the exchange process [26]. Therefore, in this case, if the costs exceed the benefits, the customer will leave the deal; conversely, if the benefits exceed the costs, rational customers are expected to remain [24]. In essence, the current demand for MSME products is that MSME actors must be able to maximize their products to provide perceived customer benefits to their consumers [25]-[26].

2.4. Product Innovation

The continuous innovation is a crucial prerequisite for a business to have a competitive advantage [27]. Innovation is typically considered a breakthrough involving new goods [28]. The significance of innovation in entrepreneurship or business can be observed in the search for new, more efficient ways to generate goods, services or solutions [29]. Producers in the product sector can create new items from scratch or refine existing products to increase their value [29]-[30]. Regardless of the type of business, whether in the creative sector, industry, fashion, natural resources, etc, innovation is crucial for business resilience [31]-[33].

2.5. Financial Literacy

Financial literacy is comprehending, evaluating, and managing money to make wise financial decisions and prevent financial issues [34]. Financial literacy is the ability and confidence to manage one’s finances by making wise decisions in the short and long term while keeping track of changing economic conditions and life events. It measures one’s understanding of fundamental financial concepts [35]. Financial literacy is the capacity to manage one’s finances and to comprehend the financial implications of investments, insurance, and savings [36]. Financial expertise focusing on prosperity is called financial literacy [37]. According to earlier research findings, SMEs’ performance is significantly impacted by their financial literacy [38]-[40].

2.6. Business Network

In small and micro firms, the strength of this network is equally crucial [41]. When business players form cooperative relationships with third parties to advance the business being conducted, this closeness of the network is evident [42]. A network is a collection of social structures comprised of nodes, some connected via links, also referred to as edges or ties [43]. Market administrators, suppliers and MSME actors are at the center of the network, and they are crucial in facilitating the transfer of knowledge and resources that will enable both parties to succeed [44]. The research findings of [45]-[47] claim that the business network significantly impacts the performance of SMEs.

2.7. Owner’s Perception

The MSME owners view accounting as a tool to help with decision-making and as a source of accounting-related information relevant to business activities [48]. MSME owners’ perceptions of accounting may influence the usage of accounting information [49]. If MSME owners positively perceive accounting, they will perceive the need for accounting information as being more critical in future business development. On the other hand, if they have a negative perception of accounting, they may see less value in using accounting information [50]. MSME owners will track their financial transactions using an accounting information system. The better the owner can use SAK-UMKM for their financial reporting, the
longer MSMEs have been created [51]. Additionally, creditors and investors consider the length of a company’s existence when assessing it, as the longer a company has been operating, the more benefits it can accrue, and the more effectively it can conduct its business operations [52].

2.8. Digital Marketing

Innovation in entrepreneurship or business is most evident when new, better or more efficient ways are found to produce goods, services or solutions [53]. Producers in the product sector can create brand-new products from scratch or modify existing products to create something more valuable [54]. Regardless of the type of business, whether in the creative sector, industry, fashion, natural resources, etc, innovation is crucial for business resilience [55]. Digital marketing is a marketing activity that reaches target consumers using existing online platforms. Additionally, digital marketing is described as advertising goods or services online, often known as e-commerce, e-marketing, web marketing, or online marketing [56]. Research results [57]-[59] claim that the performance of SMEs is significantly impacted by digital marketing.

2.9. Conceptual Framework

A literature review generates a direction or research flow and hypotheses. Additionally, this flow serves as the foundation for the conceptual framework description provided by researchers. An illustration of this study’s conceptual framework is provided in Figure 2:

![Conceptual framework](image)

Fig. 2 Conceptual framework

3. Methodology

This study uses a causal technique, sometimes known as causal research. MSMEs in Pematang Siantar City make up the entire population of this study. Additionally, the sampling method uses random sampling, with 250 MSMEs in the food industry distributed throughout Pematang Siantar as the sample in 2023. The food sector in this study is chosen because the food sector in MSMEs in Indonesia is the most important and will remain a basic need even though the economic crisis hits. Most previous studies have researched the clothing industry, plantations, and developed countries.

The data collection method uses a questionnaire with a Likert scale measurement scale. The Likert Scale assessment methodology uses factor analysis to analyze data and has the following response options: (1 - strongly disagree, 2 - disagree, 3 - doubtful, 4 - agree, and 5 - strongly agree).

4. Results and Discussion

4.1. Stage 1

The main component technique is employed in this study for factor analysis. The Kaiser Mayer Olkin (KMO) value found from the data processing results in Table 1 is 0.789. This score suggests that factor analysis can be used to analyze the data further. The factor model employed is excellent as evidenced by the Bartlett test result of 667.867 and a significance value of 0.000, much lower than 5%. As a result, the correlation matrix created is an identity matrix.

| Kaiser-Meyer-Olkin measure of sampling adequacy | 0.789 |
| Barlett’s test of sphericity Approx. Chi-square | 667.867 |
| Df | 23 |
| Sig. | 0.000 |

4.2. Stage 2

The seven variables in the study model will be tested in the next test phase. The results of the stage 2 test in this study are as follows:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Nilai measures of sampling adequacy (MSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P Competitive Value (X1)</td>
<td>0.875</td>
</tr>
<tr>
<td>P Customer Benefit (X2)</td>
<td>0.756</td>
</tr>
<tr>
<td>Product Innovation (X3)</td>
<td>0.862</td>
</tr>
<tr>
<td>Financial Literacy (X4)</td>
<td>0.729</td>
</tr>
<tr>
<td>Business Network (X5)</td>
<td>0.667</td>
</tr>
<tr>
<td>Owner’s Perception (X6)</td>
<td>0.575</td>
</tr>
<tr>
<td>Digital Marketing (X7)</td>
<td>0.764</td>
</tr>
</tbody>
</table>

The table above shows that the MSA value is > 0.05 for the seven variables. This demonstrates that the second prerequisite of factor analysis has been satisfied. Additionally, the data extraction is used to analyze research data, as shown in Table 3.
Table 3 Communalities

<table>
<thead>
<tr>
<th>Variable</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>1.000</td>
<td>0.667</td>
</tr>
<tr>
<td>X2</td>
<td>1.000</td>
<td>0.962</td>
</tr>
<tr>
<td>X3</td>
<td>1.000</td>
<td>0.768</td>
</tr>
<tr>
<td>X4</td>
<td>1.000</td>
<td>0.674</td>
</tr>
<tr>
<td>X5</td>
<td>1.000</td>
<td>0.705</td>
</tr>
<tr>
<td>X6</td>
<td>1.000</td>
<td>0.811</td>
</tr>
<tr>
<td>X7</td>
<td>1.000</td>
<td>0.772</td>
</tr>
</tbody>
</table>

Note: Extraction method: principal component analysis

The extraction value for the seven variables was > 0.05, as shown in the table above. This demonstrates how any variable can be used to account for a factor.

4.3. Stage 3

Based on the study test results, Table 4 shows the results based on the total variance explained value. In Pematang Siantar City, the performance of MSMEs is known to be influenced by only three different variables. The variance of the seven variables under analysis was calculated using eigenvalues, demonstrating relative importance of each factor. There are just three factors that are formed as can be seen in the table above. Three factors were used to meet this condition.

Table 4 Total variance explained

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial eigenvalues</th>
<th>Extraction sums of squared loadings</th>
<th>Rotation sums of squared loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total % of variance</td>
<td>Cumulative %</td>
<td>Total % of variance</td>
</tr>
<tr>
<td>1</td>
<td>3.076</td>
<td>43.942</td>
<td>44.122</td>
</tr>
<tr>
<td>2</td>
<td>1.325</td>
<td>18.921</td>
<td>1.249</td>
</tr>
<tr>
<td>3</td>
<td>1.052</td>
<td>15.023</td>
<td>1.042</td>
</tr>
<tr>
<td>4</td>
<td>0.820</td>
<td>11.710</td>
<td>1.024</td>
</tr>
<tr>
<td>5</td>
<td>0.511</td>
<td>7.300</td>
<td>0.686</td>
</tr>
<tr>
<td>6</td>
<td>0.165</td>
<td>2.360</td>
<td>0.666</td>
</tr>
<tr>
<td>7</td>
<td>0.125</td>
<td>1.785</td>
<td>0.359</td>
</tr>
</tbody>
</table>

Note: Extraction method: principal component analysis

The decision also depends on the percentage of the total variance that can be accounted for by the number of components that need to be formed. The table above can be interpreted as the total cumulative variance of the sample. The total amount of variance that may be described if the variables are condensed into many components is as follows. If each of the seven variables is treated as a single factor, the total variation that can be stated is 3.076 x 7 = 100% or 43.94%.

1. If each of the seven variables acts as a separate factor, the total variation that can be stated is 1.325 x 7 = 100% or 18.92%.
2. If each of the seven variables in the dataset is broken down into three factors, the total variation that can be stated is 1.052 x 100% or 15.02%.
3. Accordingly, the overall cumulative yield for the three factors is 43.94% + 18.92% + 15.02% or 77.88%.
4. By rearranging the variables one by one into three factors, it was possible to obtain a 77.88%-large total cumulative variance. This means that the three bent factors might now be used to reorganize the seven UMKM variables in Kota Pematang Siantar. With this example, the three factors mentioned earlier may be identified and have already satisfied the second criterion.

4.4. Stage 4

Once it is established that three factors are the ideal number, the distribution of the seven variables among the three factors can be observed in the component matrix table. Factor loadings represented by the numbers in the table, display the correlations between a variable and factors 1, 2, and 3. Analyzing the correlation magnitudes in each row makes it possible to determine which variable will be included in which component.

Table 5 Component matrix

<table>
<thead>
<tr>
<th>Variable</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.767</td>
</tr>
<tr>
<td>X2</td>
<td>0.956</td>
</tr>
<tr>
<td>X3</td>
<td>0.934</td>
</tr>
<tr>
<td>X4</td>
<td>-0.064</td>
</tr>
<tr>
<td>X5</td>
<td>-0.015</td>
</tr>
<tr>
<td>X6</td>
<td>-0.043</td>
</tr>
<tr>
<td>X7</td>
<td>0.932</td>
</tr>
</tbody>
</table>

Notes: Extraction method: principal component analysis; Three components extracted
The determination using the scree plot is the subsequent test. A scree plot is a graph of the eigenvalues of extracted elements. The exact location where Scree first appears reveals some essential details. At this point the screen begins to appear flat. The scree plot begins to flatten in the figure below as the initial variables are extracted into three factors (Figure 3).

Figure 3 illustrates the findings of testing the research data and demonstrates how the Scree Plot illustrates how Total Variance provides the rationale for the number of elements that can be calculated using numbers. The graph direction reduces very dramatically from one to two elements (the line from the Component Number = 1 to 2 axis), as seen in the picture. The line then continues to decline from number 2 to number 3. This demonstrates that for summarizing the seven variables, three components work best.

In the findings of this study, the rotation procedure was used to create factors with factor loading that were understandable. A correlation matrix that displays a more precise and accurate distribution of variables than the component matrix is the rotation matrix component (rotated component matrix). The table below contains more information:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Component 1</th>
<th>Component 2</th>
<th>Component 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1</td>
<td>0.657</td>
<td>0.098</td>
<td>-0.425</td>
</tr>
<tr>
<td>X2</td>
<td>0.951</td>
<td>-0.039</td>
<td>0.126</td>
</tr>
<tr>
<td>X3</td>
<td>0.942</td>
<td>-0.006</td>
<td>-0.005</td>
</tr>
<tr>
<td>X4</td>
<td>-0.056</td>
<td>-0.764</td>
<td>-0.108</td>
</tr>
<tr>
<td>X5</td>
<td>-0.043</td>
<td>0.776</td>
<td>-0.038</td>
</tr>
<tr>
<td>X6</td>
<td>0.025</td>
<td>0.090</td>
<td>0.953</td>
</tr>
<tr>
<td>X7</td>
<td>0.944</td>
<td>0.022</td>
<td>-0.007</td>
</tr>
</tbody>
</table>

Table 6 provides the following information:
1. The perceived competitive value (X1), where factor 1 is 0.657, has the highest loading factor. This indicates that factor one is perceived competitive value.
2. Regarding perceived customer benefit (X2), factor 1 loading factor of 0.951 is the largest. This indicates that factor 1 is perceived customer advantage.
3. The product innovation (X3) has a loading factor of 0.942 as its most significant component. Therefore, factor 1 for product innovation has been reached.
4. Financial literacy (X4) has a factor 2 loading factor of 0.764 as its most significant value. This indicates that component two represents financial literacy.
5. Business network (X5) has a factor 2 loading factor of 0.776 as its highest value. This indicates that factor 2 is reached via the business network.
6. The owner’s perspective (X6) has a loading factor 3 of 0.953, the largest. This indicates that factor 3 is the owner’s perception.
7. Digital marketing (X7), where factor 1 is 0.944, has the highest loading factor. Social media is now at factor 1, which means.

The seven variables in this study were reduced to three factors based on the data test findings, which are as follows:
1. Factor 1: Product innovation, perceived consumer benefits, perceived competitive value, and digital marketing;
2. Factor 2: Business network and financial literacy;

5. Conclusion
The findings of this study led to the formation of three factors, the first of which was factor 1 – a combination of perceived competitive value, perceived customer benefit, product innovation, and digital marketing – that affected the performance of MSMEs in Pematang Siantar City. Factors 2 and 3 include the owner’s perception and business network. Specific recommendations may be made, particularly for Pematang Siantar City officials to be more involved and active in offering various training to MSME actors.

This training is beneficial in enhancing MSME actors’ understanding of the significance of paying attention to certain variables for the sustainability of MSMEs, including perceived competitive value, perceived customer advantages, product innovation, digital marketing, financial literacy, business network, and owner’s perception. Equipping MSME owners with various training can provide opportunities for increasing MSMEs in the city to reduce unemployment. Further research can be conducted in different cities by adding other research variables.
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