The Influence of the Ability to Use Information Technology and Capital Access on the Competitiveness of SMEs in Pekanbaru City

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Abstract. The business world, especially MSMEs, makes a big contribution to the Indonesian economy, but unfortunately their competitiveness is still low. Of course, many factors influence it, including technology and capital. This research aims to prove whether the ability to use information technology and access to capital influence the competitiveness of SMEs. The methodology in this research uses a quantitative approach, the population is SME business managers in Pekanbaru City with a sample of 75 business managers, taken using simple random sampling. Data was collected using a questionnaire and analyzed using multiple linear regression analysis tools. The research results prove that both partially and simultaneously the variables of ability to use information technology and access to capital have a significant effect on the competitiveness of SMEs in the city of Pekanbaru.

Keywords: SME Competitiveness, Ability to Use Information Technology, Access to Capital

1 Introduction

Business contribution in Indonesia has a structure of 99.99% MSMEs, which means that 0.01% are large businesses (source: kemenkopukm.go.id), this shows that the MSME sector plays a very large role in supporting the nation's economy. However, MSMEs have relatively low competitiveness, this is shown by the fluctuations in the development of MSMEs in Indonesia. The importance of the competitiveness of MSMEs, especially in the SME sector, is an important part of demonstrating the economic strength of a country [1]. Apart from that, SMEs that have high competitiveness will be able to push economic conditions in a better direction [2].

In order to increase the competitiveness of SMEs, the Indonesian government also provides empowerment efforts that encourage the financial institution sector to provide access to capital to the business world, as well as establishing strategic partnerships for SMEs to develop their products and marketing. This differentiation is a form of government contribution and support to SMEs [3].

Pekanbaru is one of the cities in Riau Province that continues to develop and develop, and its SME sector continues to receive attention from the government and also from the business actors themselves. This relatively rapid development shows that there is ongoing economic development in this area. Apart from that, with the development of the business world, there is
also the development of information technology, which through the use of the internet, the business world has to adapt. Currently, almost all residents of the city of Pekanbaru have good internet access and the marketing of SME products is also inseparable from the role of internet technology as a form of information technology by providing easy access to information and also services to customers that are fast, cheap and of higher quality. Also, access to capital provided by the government to SMEs also shows an improving trend.

The following is data on the development of the business world, especially SMEs and also internet users as well as access to capital for the business world in the city of Pekanbaru, as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>SMEs (Unit)</th>
<th>Internet (%)</th>
<th>Banking Credit (Million Rupiah)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>2,191</td>
<td>70.51</td>
<td>45,874,729</td>
</tr>
<tr>
<td>2020</td>
<td>2,271 (3.52%)</td>
<td>69.53 (-1.41%)</td>
<td>47,245,318 (2.90%)</td>
</tr>
<tr>
<td>2021</td>
<td>2,574 (11.77%)</td>
<td>74.41 (6.56%)</td>
<td>48,324,018 (2.23%)</td>
</tr>
</tbody>
</table>


The data in table 1 shows that developing SMEs tend to experience fluctuations, in line with the growth of internet users which reached 74.41% and access to capital in the business world tends to decrease in 2021 compared to 2020.

The rapid development of SMEs is still not accompanied by competitiveness in business, where this can be seen from the ability of SMEs to defend themselves from the competition they face, apart from that, the rise of product competition both from within and from outside means that the ability to defend themselves against SME products is still relatively low. Of course, many factors influence the competitiveness of SMEs, including the relatively difficult access to capital for SMEs. [6]; then the factor of utilization of financial information [7]; ability to bookkeeping business finances [8]; business capital factor [9]; technological sophistication factor [10]; personal character factors, business capital and also sophistication in technology [10]; and because of knowledge factors and product standardization [11].

Based on several opinions of these experts and looking at the phenomenon of access to capital and developments in the use of technology, this research aims to prove whether the ability to use sophisticated technology, especially information technology, coupled with the factor of access to capital from banking is a factor that influences the competitiveness of SMEs in the city of Pekanbaru.

According to Eliasson [12] states that competitiveness is the ability of a nation to improve itself. The competitiveness of this business, especially in the era of IT-based technology, by utilizing Android as an information base by providing access anywhere and everywhere has become a basic human need. So business actors really need the ability to access this technology [8].

The concept of competitiveness is explained by Imawan [13] that there is a concept of comparative advantage, where there needs to be supporting elements in a production process that enable investment to exploit it. Then also explained by Joni [13] that this is equated with investment, it is possible for investors to reap large profits, in other words competitiveness will be formed based on capital and the role of technology.

Furthermore Aaker [14] explained that the competitiveness of SMEs will be built if quality and standards can be provided in producing a product. This will have an impact on the sales volume of the products produced. According to Li [15] Competitiveness indicators include: 1)
Management competency; 2) Organizing competency; 3) Technology; 4) Finance; 5) Market; 6) Social responsibility; and 7) regional advantages.

Then explained according to World Economic Forum [12] competitiveness is also influenced by information and communication technology factors; technology transfer; innovation; business environment; and public institutions. Other than that Pitoyo [11] explained that the low competitiveness of SME products is a result of being unable to compete, including due to low product standardization; Information technology is still little implemented. Then obey Nurbayani [16], that the low level of support from various parties, including the government and the banking world, for SMEs causes their competitiveness to be low.

This was further explained by several researchers regarding the role of ability in using information technology in order to increase competitiveness [17]; then the research results Pitoyo [11]; [18]; [10]; ability to use online bookkeeping applications [8]. Then the researchers also examined the influence of access to capital and use of capital in increasing the competitiveness of SMEs, as stated by, among others Mukoffi [10]; also delivered Duwur [9]; access to financing [7]; and accessibility of capital financing [6].

Indicators of ability to use information technology according to Djatikusumo [19] including: 1) the ability to collect new customers; 2) communicate actively; 3) increase output; 4) work productivity. Apart from that, the variable indicator for access to capital is according to Rahmawati [20] including: 1) ease of obtaining capital from banks; 2) there is a government recommendation; 3) guarantee of obtaining a loan; 4) low interest.

Based on the descriptions of expert opinions, a framework for this research was also prepared which can be seen in Figure 1 below:

![Figure 1. Research Framework](image)

The hypotheses set out in this research include:

H1 : The ability to use information technology has a significant effect on the competitiveness of SMEs

H2 : Access to capital has a significant effect on the competitiveness of SMEs

H3 : The ability to use information technology and access to capital simultaneously have a significant effect on the competitiveness of SMEs

2 Method

Quantitative type is used in this research, access to primary data from research respondents specified in this research. Quantitative research carries out measurements by proving hypotheses
determined using statistical formulas. This type of data comes from samples and also from related agencies. Primary data comes from research samples that provide answers to questionnaire descriptions regarding competitiveness variables, ability variables to use information technology and responses to access to capital in running their business. Meanwhile, secondary data was obtained directly from agencies in this research such as BPS Pekanbaru city and BPS Indonesian telecommunication and Pekanbaru city government.

The observed variable is the SME business managers in Pekanbaru City, a population whose information is relatively difficult to obtain, so the researcher used a sampling model by multiplying the number of indicators by the number 5 according to opinion. Ferdinand [21] as a guideline, namely the number of indicators Y=7; X1=4; X2=4, namely 15 indicators times 5, so the number of samples taken was 75 SME managers. Sampling was carried out simply randomly.

The research was conducted in Pekanbaru City by examining existing SMEs business managers. The questionnaire was used as a tool in collecting data developed from each research indicator as follows: Competitiveness indicators include: 1) Management competency; 2) Organizing competency; 3) Technology; 4) Finance; 5) Market; 6) Social responsibility; and 7) regional advantages. Then indicators of the ability to use information technology include: 1) ability to collect new customers; 2) communicate actively; 3) increase output; 4) work productivity. Variable indicators of access to capital include: 1) ease of obtaining capital from banks; 2) there is a government recommendation; 3) guarantee of obtaining a loan; 4) low interest.

Quantitative methods are applied, namely by using ordinal data types. This research also uses linear regression tools. Previous research data was tested for the validity and reliability of the data and also looked at the normality of the data. The t test and F test were used in hypothesis testing. The data analysis application used SPSS version 21.

3 Result
3.1 Description of Research Variables

Based on a survey conducted with 75 SME managers regarding the competitiveness variable, which is explained conceptually, competitiveness refers to the ability of a small business to compete in a competitive market. Small businesses often face challenges in competing with large companies, but they have their own advantages that they can take advantage of. From the results of the research carried out, it is known as in the following table:

<table>
<thead>
<tr>
<th>No</th>
<th>SME Competitiveness</th>
<th>SA</th>
<th>A</th>
<th>E</th>
<th>DA</th>
<th>SD</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When managing a business, always start with a plan, then implement it according to the plan and evaluate it</td>
<td>35</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>4.5</td>
</tr>
<tr>
<td>2</td>
<td>Have employees and are given tasks according to their abilities and work areas required in the business</td>
<td>20</td>
<td>42</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>3.9</td>
</tr>
<tr>
<td>3</td>
<td>The business applies the latest technology in producing products</td>
<td>20</td>
<td>38</td>
<td>14</td>
<td>2</td>
<td>1</td>
<td>4.0</td>
</tr>
<tr>
<td>4</td>
<td>Have a reliable financial control system</td>
<td>14</td>
<td>50</td>
<td>11</td>
<td>0</td>
<td>0</td>
<td>4.0</td>
</tr>
</tbody>
</table>
Always able to supply market needs which are the main customers

The business always provides donations for social activities in its local area

The resulting product is unique compared to competitors' products

From the data above, it can be seen that the competitiveness of SMEs with a score of 4.0 is in the category of having good competitiveness. This is based on the competitiveness measurement scale. From the seven questions related to competitiveness, it can be seen that the highest item is in managing a business, always starting with a plan, then implementing it according to plan and evaluating the results of the plan at 4.5, which is in the very competitive category. Meanwhile, the lowest item is for businesses that always provide donations for social activities in their domicile environment, namely 3.8, which is in the quite competitive category. This shows that the competitiveness of SMEs is good.

In the variable ability to use information technology, what is meant is the ability to use information technology (IT) in business which is very important in the modern business environment. Information technology enables small and medium industries (SMEs) to increase operational efficiency, reach wider markets, and compete with other companies, with measurements of four items which from business managers' responses can be seen in the following table:

<table>
<thead>
<tr>
<th>No</th>
<th>Ability to use information technology</th>
<th>SA</th>
<th>A</th>
<th>E</th>
<th>DA</th>
<th>SD</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When selling products using online media, you enter the customer group</td>
<td>19</td>
<td>40</td>
<td>9</td>
<td>5</td>
<td>2</td>
<td>3.9</td>
</tr>
<tr>
<td>2</td>
<td>Always offer continuous/updated product promotions in marketing products to customers on social media</td>
<td>18</td>
<td>45</td>
<td>8</td>
<td>4</td>
<td>0</td>
<td>4.0</td>
</tr>
<tr>
<td>3</td>
<td>Always provide answers to customer comments about the products we offer</td>
<td>19</td>
<td>50</td>
<td>3</td>
<td>3</td>
<td>0</td>
<td>4.1</td>
</tr>
<tr>
<td>4</td>
<td>Always try to expand market share by following and adding to online marketing networks all the time</td>
<td>19</td>
<td>42</td>
<td>10</td>
<td>4</td>
<td>0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

From the table on the ability to use information technology in business, it can be seen that the average score of respondents' answers is 4.0, which is included in the good category, indicating that the ability of business managers to use information technology is good. Of the four items that are measured, it can be seen that the highest item is always providing answers to customer comments about the products we offer with a score of 4.1. Meanwhile, the lowest item, namely selling products using online media, is included in the customer group with a score
of 3.9. This shows that the ability to use information technology in business is good, especially in terms of responding to customers.

Lastly, the variable access to capital means that access to capital refers to the ability of an entity, such as a business or individual, to obtain the funds or financial resources needed to finance certain projects, operations or activities. Capital is essential in a variety of contexts, including business, project development, education, and investment, with measurements of four items from the responses of business managers which can be seen in the following table:

<table>
<thead>
<tr>
<th>No</th>
<th>Capital Access</th>
<th>SA</th>
<th>A</th>
<th>E</th>
<th>DA</th>
<th>SD</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Get capital support from banks, especially government banks</td>
<td>6</td>
<td>23</td>
<td>15</td>
<td>13</td>
<td>18</td>
<td>2.8</td>
</tr>
<tr>
<td>2</td>
<td>Get marketing support from the government to introduce products to the market, for example by being involved in events organized by the government</td>
<td>5</td>
<td>30</td>
<td>21</td>
<td>10</td>
<td>9</td>
<td>3.2</td>
</tr>
<tr>
<td>3</td>
<td>Obtain a guarantee from the government in obtaining a capital loan</td>
<td>6</td>
<td>20</td>
<td>19</td>
<td>17</td>
<td>13</td>
<td>2.9</td>
</tr>
<tr>
<td>4</td>
<td>Get low loan interest</td>
<td>7</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>20</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>Average</td>
<td>7</td>
<td>20</td>
<td>16</td>
<td>12</td>
<td>20</td>
<td>2.9</td>
</tr>
</tbody>
</table>

Source: Processed data, 2023

From the table on access to capital in business, it can be seen that the average score of respondents' answers is 2.9, which is in the poor category, indicating that the access to capital obtained by entrepreneurs in strengthening their respective business capital is not good. Of the four items that are measured, it can be seen that the highest item is getting marketing support from the government to introduce products to the market, for example by being involved in events organized by the government with a score of 3.2. Meanwhile, the lowest item is getting capital support from banks, especially government banks, with a score of 2.8. This shows that access to capital obtained by SME business managers is still low.

3.2 Statistic Analysis

Statistical analysis was carried out using multiple linear regression equations. This is used to prove whether the variable ability to use information technology and the variable access to capital influence the competitiveness of SMEs in doing business. However, previously a validity test, reliability test and normality test were carried out. For more details, see the following description.

3.2.1 Validity Test

The validity test is used to ensure that item by item is suitable for use in collecting research data. The test is carried out by comparing the r calculation results using the SPSS program compared to the r table from the existing r table determination. If r count is greater than r table, then it is certain that the item is valid, and vice versa.
The following is an explanation of the validity test for each research variable which can be described as for the SME Competitiveness variable (Y) with item Y.1=0.571; Y.2=0.667; Y.3=0.640; Y.4=0.675; Y.5=0.753; Y.6=0.678; and Y.7=0.571. Then for the variable Ability to Use Information Technology (X1), namely X1.1=0.852; X1.2=0.857; X1.3=0.850; and X1.4=0.828; and the Capital Access variable (X2) with X2.1=0.938; X2.2=0.829; X2.3=0.941; and X2.4=0.914. From the results of the calculations carried out, each item in each variable has a calculation number exceeding 0.300 (r table), this means that all items are declared valid and suitable for use as research instruments.

3.2.2 Reliability Test

Reliability testing is used to ensure that all items in each research variable are consistent in their use. The measurement is carried out by comparing the results of the Cronbach alpha value with 0.600, if the Cronbach alpha value is greater then it is reliable and vice versa. Following are the calculation results. From the calculation results for the SME competitiveness variable with a value of 0.772; the variable ability to use information technology is 0.861 and the variable access to capital is 0.927. This means that all variables are greater than 0.600 which means reliable.

3.3.3 Normality Test

The normality test is used to ensure that all items fall into the normal category. The application of the Kolmogorov Smirnov test is that if the significance is below 0.05, it means that the data to be tested has a significant difference from standard normal data, meaning the data is not normal. From the data in the table above, it can be seen that the values are above 0.05, namely X1=0.063 and X2=0.237, so the data distribution is declared to meet the assumption of normality.

3.3.4 Hypothesis Testing

The results of calculations using the multiple linear regression equation produce values which can be described in the following table.

<table>
<thead>
<tr>
<th>Table 5. Coefficient regression and t Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>1  (Constant)</td>
</tr>
<tr>
<td>Ability to Use Information Technology</td>
</tr>
<tr>
<td>Access to Capital</td>
</tr>
</tbody>
</table>

a. Dependent Variable: SME Competitiveness
Source: Processed data, 2023
From the results of measurements carried out in the field related to the research variables, the regression coefficient value for the ability to use information technology variable was 0.780 (t calculated 6.567) and the capital access variable 0.143 (t calculated 2.067) and a constant value of 14.012 so that research findings can be made using the formula as follows:

\[ Y = 14.012 + 0.780X_1 + 0.143X_2 \]

This equation means that the ability to use information technology for business managers has a positive and significant influence on the competitiveness of SMEs. This also applies to the variable access to capital obtained by business managers, which has a positive and significant influence on the competitiveness of SMEs.

Next, simultaneously test the hypothesis using the F test, which can be seen from the following table:

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>413.297</td>
<td>2</td>
<td>206.648</td>
<td>31.304</td>
<td>.000*</td>
</tr>
<tr>
<td>Residual</td>
<td>475.290</td>
<td>72</td>
<td>6.601</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>888.587</td>
<td>74</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Access to Capital, Ability to Use Information Technology
b. Dependent Variable: SME Competitiveness
Source: Processed data, 2023

Based on table 6, it can be seen from the calculated F value that it is 31.304. Meanwhile, the resulting significance value is 0.000, which is smaller than 0.05. This means that simultaneously the variables of ability to use information technology and access to capital have a significant effect on the competitiveness of SMEs in the city of Pekanbaru.

4 Discussion

Small business competitiveness is the ability of a small business to compete in a competitive market. This competitiveness depends on various factors and strategies implemented by small businesses. It has been proven by SME managers in the city of Pekanbaru that their competitiveness is influenced by their ability to use information technology, this technology is used to promote the products they produce. With information technology, products produced by SMEs are increasingly known to customers. This is in line with the results of research conducted by Meng [22] who said small businesses in Bangladesh through the adoption of technology can increase the sustainability of their businesses. Bogh also said that the use of artificial intelligence and the internet helps increase the competitiveness of small businesses [23].

Apart from that, the variable access to capital also has a positive and significant influence on the competitiveness of SMEs in Pekanbaru City, although in practice support for access to capital is still low. This is in line with what was said Marija [24]; Giunti [25]; dan Hors [26] who said the role of capital provided by banks and the government contributed to increasing the competitiveness of small businesses.
Practically, with the existence of government policy regarding access to capital that has been provided so far in Indonesia, it is still felt by IKM managers that it still does not have an impact on their businesses. This access provided is burdened by the existence of various requirements that must be met by business managers and this is burdensome for entrepreneurs to get it. Also, sometimes with the dynamics of very fast technological developments, small business managers have to actively follow technological developments and this is what sometimes becomes an obstacle to increasing the competitiveness of SMEs.

5 Conclusion

It can be concluded that it is proven that the ability to use information technology for small business managers has a significant effect on their competitiveness in facing intense competition. Also, access to capital has a significant and positive effect. Likewise, simultaneously the influence of these two variables is significant even though the variable ability to adapt to information technology has a greater influence when compared with access to capital.

References


