Determinants of performance improvement of Micro, Small, and Medium Enterprises (MSME) in the border market of North Timor Central District – Timor Leste

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Abstract
This study examines the impact of financial literacy, technological innovation, government support, and subjective norms on the performance of Micro, Small, and Medium Enterprises (MSMEs) in the North Central Timor District (TTU)-Timor Leste Border Market. Furthermore, it seeks to identify appropriate strategies for enhancing MSME performance in this region. Both multiple linear regression analysis and descriptive analysis were employed as research methods. The study population included all MSMEs in the TTU District, totaling 693 entities. The researchers employed a purposive sampling technique based on the Slovin formula, selecting 80 respondents as research samples. The findings indicated that technological innovation, government support, and subjective norms significantly affect MSME performance in the TTU-Timor Leste Border Market. To improve the performance of MSMEs, various strategies can be implemented. These encompass the enhancement of financial literacy through training and mentoring programs, adopting e-commerce within the digital economy, and improving human resource quality and product standards. Other strategies include fostering partnerships among institutions, cultivating an investment-friendly bureaucracy, implementing product labeling, establishing legal business associations, and promoting motivation and self-confidence.

Keywords: Border markets, Financial literacy, Government support, MSME performance, Subjective norms, Technological innovation

JEL Classification: L25, M21, O32

INTRODUCTION
The role of the Micro, Small, and Medium Enterprises (MSMEs) sector in Indonesia is an important part of supporting the national economy. Historical reports show that when Indonesia went through a monetary and economic crisis in 1998, MSMEs were at the forefront of the country's economy. At that time, when most of the large capital-intensive companies operating in the import-export sector went bankrupt, the MSME sector was able to survive. It became the main pillar of the national economy. It also occurred in 2007-2008, when many countries experienced the global
financial crisis. Indonesia was no exception, as MSMEs became the economy's savior in absorbing the number of workers, reducing poverty, and maintaining community purchasing power. (Pratiwi, 2020).

Indonesia is the largest country in the ASEAN region, with a total number of SMEs of 65.46 million units. The quantity of MSME ownership is much higher than Thailand, which is in 2nd place with a total of 3.1 million, and Malaysia, which is only 1.2 million units. The high number of MSME owners has a multiplier effect on several macroeconomic variables, including being able to absorb 97 percent of the workforce, increase the contribution of the foreign trade sector by 14.4 percent towards total national exports, and contribute to the establishment of Gross Domestic Product (GDP) by 60.3 percent. However, if we investigate closely, the high ownership of MSMEs is not directly proportional to the performance of MSMEs in aggregate. For example, Myanmar, which only has 72,700 MSMEs, can contribute 69.3 percent of the Gross Domestic Product (GDP). Another indicator is Indonesia's export performance from the output of MSME products nationally, which was recorded at 14.4 percent, still lower in value than Singapore at 38.3 percent, Thailand at 28.7 percent, Myanmar at 23.7 percent, and Vietnam at 18.7 percent (Ahdiat, 2022).

The factual conditions described above showed that MSMEs in Indonesia, in their development, also encounter various obstacles, both internal and external. One of the causes is that most of the MSMEs fell when the world was faced with the Covid-19 virus. In medical science, Corona Virus Disease in 2019, also known as COVID-19, is a new disease caused by a virus from the coronavirus group, namely SARS-CoV-2. This contagious virus attacks humans’ lungs, so the patients experience fever, flu, dry cough, shortness of breath, and death (Amri, 2020).

The initial spread of this virus began in Wuhan, China, at the end of December 2019 and then spread massively and rapidly to all parts of the world, including Indonesia. Data released by the COVID-19 Response Acceleration Task Force (Indonesian: Gugus Tugas Percepatan Penanganan COVID-19) showed that starting from March 2, 2020, the first case entered Indonesia until December 2022. The number of people suffering from the disease continues to increase until recently at 6,715,586 people suffering from the disease with 160,524 deaths. It can be said that the death rate for Covid-19 sufferers (the case fertility rate) in Indonesia is 2.39 percent. It is quite a large number and has claimed many lives and national assets that must be protected. Even though the number of sufferers has not grown as quickly and massively as when this virus first entered Indonesia in 2020, the government continues to try to break the transmission chain. Several policy scenarios are taken by the government, including lockdown policies, Large-Scale Social Restrictions (PSPB), Work From Home (WFH), and socialization of the implementation of health protocols. Moreover, they also pursue vaccination targets for the community in stages, starting from the first vaccine to the third vaccine, as well as allocating a budget as a form of a social safety net (Rosita, 2020).

The various policies implemented so far suggest that the government has a strong commitment and attitude to control the spread of the coronavirus, even though other urgent matters must be sacrificed. Inevitably, this situation has resulted in a condition where the government faces a dilemma. On one side, we want to save the sufferers and victims who continue to fall, but at the same time, the national economy continues to decline, and many people have even lost their jobs due to layoffs from companies. The national data shows that when Indonesia coexisted with Covid 19, the national
economic situation experienced a severe shock. It was recorded that the value of economic growth, originally 5.02 percent in 2019, fell to 2.97 percent at the end of 2020. The decline in national economic growth was also caused by the decline in the performance of the MSME sector as the most dominant sector in absorbing labor and contributing to the composition of Indonesia's Gross Domestic Product (GDP). Research conducted by Faizi et al. (2022) revealed that based on data from the Ministry of Cooperatives and Small and Medium Enterprises, around 64,194,057 business units could absorb a total workforce of 116,978,631. This situation changed during the Covid-19 pandemic. 163,713 MSME business units were forced to go bankrupt due to the Covid-19 pandemic. It resulted in a significant increase in the unemployment rate. Among the 29 million total labor force, 7.07 percent are unemployed, equivalent to 9.77 million people who have lost their jobs (Rusman, 2021).

The uncertainty of the national economy due to the COVID-19 pandemic has also been felt directly by all aspects of society in East Nusa Tenggara (NTT) Province. The Central Bureau of Statistics of NTT Province (2021) noted that during the second quarter of 2020, economic performance experienced a significant slowdown and an economic contraction of 1.96 percent. The sluggish economic performance in NTT Province is inseparable from the contribution of the business sectors that construct the Gross Regional Domestic Product (GRDP), which also contracted. Out of the 17 (seventeen) types of business sectors, only the information and communication sector experienced positive growth (15.36%), financial services (12.32%), and the electricity and gas manufacturing sector (11.76%). Meanwhile, the types of business fields or primary sectors closely related to people's businesses and directly related to the activities of Micro, Small, and Medium Enterprises (MSMEs) experienced a deep contraction. These include the corporate services sector, which is contracted by (-3.5%), the accommodation and food supply sector (-42.36%), and the transportation sector (-23.22%).

On the other hand, leading sectors in NTT Province, such as the agriculture, livestock, fisheries, and forestry sectors, experienced stagnation, and their influence was quite significant in boosting the value of GRDP (Elim et al., 2021). The findings indicate that the decline in economic performance during the pandemic significantly affected the open unemployment rate. Initially recorded at 1.14% in August 2019, the rate rose to 4.28% by August 2020, representing an increase of 3.14% within a year. This escalation in the open unemployment rate corresponds to an additional 0.12 million unemployed individuals. (BPS, 2021a).

The NTT Provincial Government realizes that in the middle of the predicament experienced by all levels of society due to the Covid-19 pandemic, a series of cross-sector strategic policies are needed to support the real sector, including micro, small, and medium enterprises (MSMEs). The Office of Cooperatives, Labor, and Transmigration of NTT Province stated that as many as 4,157 MSMEs suffered losses and had lost 75 percent of their income during the Covid-19 pandemic. The MSME sector has received serious attention from the local government and the Central Bank (or Bank Indonesia) Representative Office in Kupang. It is because of the recognized contribution of MSMEs to the Gross Regional Domestic Product (GRDP) of NTT Province, which is 99 percent and absorbs a workforce of approximately 1.5 million people (Atmaja, 2020).
North Central Timor District (TTU) is one of the districts in the Province of NTT directly adjacent to the Democratic State of Timor Leste (RDTL). Geographically, those areas adjacent to neighboring countries certainly have promising economic potential for increasing people's welfare through trade activities. The cross-border trade route is one of the economic activities that contribute to the income of the community and the region. Community interest in border areas in carrying out investment and trading activities through the existence of Micro, Small, and Medium Enterprises (MSMEs) is classified as having a fairly good prospect. From 2016 to 2021, it was recorded that 2,222 small and medium business actors had business licenses and are still operating today (BPS, 2021).

As part of efforts to revive trading in the goods and services sector, the Regional Government has prepared trading facilities spread equally across 24 sub-districts for 32 public markets, both in the sub-district center and villages with a strategic position in bringing together consumers and producers. There are three public markets located in border areas. These three markets are Wini Market, located in North Insana Sub-district; Napan Market, in North Bikomi Sub-district; and Haumeni Ana Market, located in Bikomi Nilulat Sub-district. All three are directly adjacent to Ambeno Oecusse District, Timor Leste. The existence of these three border markets plays an important role as a mediator in responding to the needs of the community, not only for the people of TTU Regency who live in the three sub-districts but also for Timor Leste residents who still depend on various supplies of necessities from Indonesia (Oki & Babulu, 2021). Besides, the presence of the border market is not only an effort to fulfill the necessity of goods and services through trade transactions between the two parties but also an important moment as a "Gathering" event for relatives who were separated due to different political choices after the referendum of Timor Leste in 1999. This is mainly because, in one week, trading activities in the border market are only carried out on certain days. For example, the Wini border market in North Insana Sub-district operates on Mondays, the Haumeni Ana market in Bikomi Nilulat sub-district operates on Saturdays, and the Napan border market in North Bikomi sub-district operates on Fridays (Oki, 2021).

The high level of economic and trade activity in the border area that brings together the people of the two countries results in a relatively high flow of goods, services, and money. The prevailing currency in trade transactions is not only the Indonesian Rupiah (Rp) but also the United States Dollar (US$) which is the currency of Timor Leste. Unsurprisingly, people in the border areas, known as traditional communities with rural characteristics, also use the US currency. This condition has caused many groups classified as capital owners to assume the role of Money Changer agents (PVA) with speculative motives in seeking profits. It can be said that the benefits felt by the community of micro, small, and medium enterprises (MSMEs) in border areas are high business opportunities and employment as well as income in supporting family economic welfare.

This situation drastically changed when the Covid 19 pandemic entered NTT Province in March 2020. Several residents were exposed to the deadly virus, so the government was forced to issue a Large-Scale Social Restrictions (PSPB) policy aimed at limiting the space for movement and mobility of the population. All activities were stopped, and public members were prohibited from socializing and carrying out other activities. This unpopular policy had to be taken by the government to break the chain of the spread of the coronavirus so that it greatly impacted the regional economy. The
number of MSME actors in TTU Regency has stagnated, and not a few have gone bankrupt. Redjo et al. (2022) revealed that during the Covid-19 pandemic, the condition of MSMEs in North Central Timor Regency in general (90%) experienced a potential loss of income of 80% of sales turnover.

In general, the difficulty for MSMEs to develop is inseparable from conventional problems that have not been completely resolved. Some of the problems that are often encountered, such as limited access to financing, lack of understanding of financial literacy, low competitiveness, limited human resource capacity, difficulty accessing marketing, limited access to information technology, minimal local government support, low motivation, and various other important variables in determining the existence of success and business development (Rahayu, 2017).

Thus far, research on cross-border trade routes in the NKRI-Timor Leste Region by making MSME actors the main research object has never been conducted. The study by Oki & Burhanuddin (2020) is limited to explaining the effect of cross-border trade when viewed from social capital variables and institutional changes when mediated by accessibility variables. Furthermore, research by Patiung & Taus (2022) only looks at how cross-border trading activities affect the economic level of local communities. Moreover, Maia et al. (2020) research looks more at the political economy aspect by imposing cross-border restrictions for the community that it creates illegal trade routes and military domination in illegal levies.

There are several differences between the current study and previous studies. This research uses a more comprehensive analysis method to explore and find various problems in the development of the MSME sector in the border area of the Republic of Indonesia-Leste Timor. This is expected to provide a comprehensive picture to suggest inputs for local governments as public policymakers and to improve the performance of MSMEs. Local governments have an important role in which the role and function of this sector can provide a chain effect for employment, increase welfare, and regional economic growth.

METHODS

This research is experimental with a quantitative approach or inferential analysis to determine the partial and simultaneous effect of independent variables (Financial Literacy, Technological Innovation, Government Support, and Subjective Norms) on MSME Performance Variables as the dependent variable. Moreover, to explore further the quantitative findings, it is necessary to combine them with qualitative methods to look further at the various indicators that cause the presence or absence of the influence of each independent variable on the dependent variable. This is intended so that the researchers can provide appropriate policy recommendations following the real problems faced by the MSME community in border areas.

The research focused on MSME actors conducting business activities in the Indonesia-Timor Leste Border Market. The population in this study consisted of all MSME actors spread across three points in the border market area, namely Wini Market in North Insana Sub-District, Haumeni Ana Market in Bikomi Nila Sub-District, and Napan Market in North Bikomi Sub-District. The total population of the three markets is 693 MSME actors. The sampling technique used is Simple Random Sampling based on the Slovin formula so that 80 respondents are representatives of MSME actors from the three border markets and are the research sample. The criteria set in the sampling were MSME actors engaged in the creative industry trading business, having capital
ownership of around Rp. 50 million - Rp500 million, having a business license still active and consistent as an MSME actor in the Border Market for the last 10 years. The size of the population and sample can be seen in Table 1.

Table 1. Determination of the number of research samples

<table>
<thead>
<tr>
<th>No</th>
<th>Location</th>
<th>Population</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wini Border Market, North Insana District</td>
<td>342</td>
<td>34</td>
</tr>
<tr>
<td>2</td>
<td>Haumeni Ana Border Market, Bikomi Nilulat District</td>
<td>215</td>
<td>26</td>
</tr>
<tr>
<td>3</td>
<td>Napan Border Market, North Bikomi District</td>
<td>136</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>693</strong></td>
<td><strong>80</strong></td>
</tr>
</tbody>
</table>

Source: Department of Industry, Trade, and Cooperatives. TTU Regency year 2022.

The location of the Border Market, which is a place for MSME activities spread across three districts in the NKRI-Timor Leste border area. The population and research samples can be seen in the following map picture.

![Map of North Central Timor District and research locations](image)

Source: Results of map design with the ArcGIS Application in 2022

Figure 2. Map of North Central Timor District and research locations

This study consists of primary data and secondary data. Primary data is obtained directly from MSME actors who are respondents to this study, while secondary data is obtained from government agencies such as publication documents. These documents are closely related to research, such as data on the number of MSME actors obtained from the TTU Regency Industry, Trade, and Cooperative Office, and economic growth data for NTT Province and TTU Regency obtained from the NTT Provincial Statistics Agency.

This study's most important data collection instruments were questionnaires, interviews, documentation, and direct observation. Each indicator attached to the research variables (Financial Literacy, Information Technology, Government Support, Subjective Norms, and MSME Performance) was arranged in positive statements to make it easier for respondents to answer. Each indicator in the research variable is used as a statement item which is the result of theoretical studies or previous research and is relevant to research requirements. The alternative answers in the research questionnaire given to respondents have guided answers based on a level 4 Likert scale with the categories ‘strongly agree’, ‘agree’, ‘disagree’, and ‘strongly disagree’.

After all, the respondents had filled in the data, the next step was to collect
questionnaires and data tabulation. The purpose of the tabulation is as material for data analysis. The analytical tool used was descriptive statistical analysis to describe the characteristics of the respondents and the factual conditions in seeking in-depth information about the variables in this study. Meanwhile, inferential analysis was conducted using multiple linear regression analysis. This aimed to see the partial and simultaneous effects of financial literacy, information technology, government support, and subjective norms on MSME performance. The formulation of this multiple linear regression analysis used in this research was based on Krasniqi et al. (2020) and Pratama (2022).

\[ Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \varepsilon \]  

(1)

Where:

- \( Y \) = Performance of MSME Actors in the Border Market
- \( X_1 \) = Financial Literacy
- \( X_2 \) = Information Technology
- \( X_3 \) = Government Support
- \( X_4 \) = Subjective Norm

To fulfill statistical rules, the first step that needed to be done was to test the quality of data collection instruments in the form of the validity and reliability of the data. This was an absolute requirement so that the data analyzed produced accurate research outputs. Furthermore, classical assumption tests were carried out as normality, autocorrelation, multicollinearity, and heteroscedasticity tests.

RESULTS AND DISCUSSION

Characteristics of respondents

In this study, the respondents who became the research sample had different characteristics from one another in terms of gender, age, educational background, and length of business.

Table 2. Characteristics of respondents

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>27</td>
<td>33.75</td>
</tr>
<tr>
<td>Woman</td>
<td>53</td>
<td>66.25</td>
</tr>
<tr>
<td><strong>Respondent Age:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-35 Years</td>
<td>12</td>
<td>15.00</td>
</tr>
<tr>
<td>36-45 Years</td>
<td>45</td>
<td>56.25</td>
</tr>
<tr>
<td>&gt; 45 Years</td>
<td>23</td>
<td>28.75</td>
</tr>
<tr>
<td><strong>Level of education:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary School</td>
<td>33</td>
<td>41.25</td>
</tr>
<tr>
<td>Junior High School</td>
<td>26</td>
<td>32.50</td>
</tr>
<tr>
<td>Senior High School</td>
<td>14</td>
<td>17.50</td>
</tr>
<tr>
<td>Diploma</td>
<td>5</td>
<td>6.25</td>
</tr>
<tr>
<td>Bachelor</td>
<td>2</td>
<td>2.50</td>
</tr>
<tr>
<td><strong>Length of Business:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 Years</td>
<td>27</td>
<td>33.75</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>16</td>
<td>20.00</td>
</tr>
<tr>
<td>≥11 Years Old</td>
<td>37</td>
<td>46.25</td>
</tr>
</tbody>
</table>
Table 2 shows that MSME actors who carry out trading activities at the border market in TTU-Timor Leste Regency are dominated by women at 66.25 percent of 80 respondents. Furthermore, based on age level, those classified as productive young people aged 36-45 years with a percentage of 56.25 percent. Meanwhile, if seen from the background level of education, most of them only have elementary school education (SD), with a percentage of 41.25 percent. Then from the mapping of MSME actors based on the length of business, the average is dominated by those who have carried out trading business activities for more than 10 years, with a percentage of 46.25 percent.

**Data validity and reliability test**

This study uses primary data in which MSME actors in the border market are used as respondents in answering questions in a questionnaire based on a 4-scale Likert scale (strongly agree, agree, disagree, and strongly disagree) on each indicator attached to the research variables. Therefore, the results of the questionnaire must be subjected to instrument testing. Data collection instruments are tested by testing the validity and reliability of data as terms and conditions in multivariate statistical tests. The value used as a benchmark in seeing whether the data to be analyzed is valid or not is through the Pearson correlation test with the condition that the r-count > r-table value with a standard alpha coefficient of 0.05 Crombach Alpha > 0.60, as Sugiyono showed in Nalle & Afoan (2022).

**Table 3. Recapitulation of data validity and reliability test results**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
<th>R count</th>
<th>Rtable</th>
<th>Cronbach Alpha</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Literacy (X1)</td>
<td>X1.1</td>
<td>0.569</td>
<td>0.195</td>
<td>0.787</td>
<td>Valid and Reliable</td>
</tr>
<tr>
<td></td>
<td>X1.2</td>
<td>0.632</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X1.3</td>
<td>0.781</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X1.4</td>
<td>0.425</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>Technology Innovation (X2)</td>
<td>X2.1</td>
<td>0.630</td>
<td>0.195</td>
<td>0.732</td>
<td>Valid and Reliable</td>
</tr>
<tr>
<td></td>
<td>X2.2</td>
<td>0.438</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X2.3</td>
<td>0.503</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X2.4</td>
<td>0.526</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>Government Support (X3)</td>
<td>X3.1</td>
<td>0.559</td>
<td>0.195</td>
<td>0.715</td>
<td>Valid and Reliable</td>
</tr>
<tr>
<td></td>
<td>X3.2</td>
<td>0.660</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X3.3</td>
<td>0.356</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X3.4</td>
<td>0.459</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>Subjective Norms (X4)</td>
<td>X4.1</td>
<td>0.682</td>
<td>0.195</td>
<td>0.780</td>
<td>Valid and Reliable</td>
</tr>
<tr>
<td></td>
<td>X4.2</td>
<td>0.498</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X4.3</td>
<td>0.533</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>X4.4</td>
<td>0.635</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>MSME Performance (Y)</td>
<td>Y1</td>
<td>0.662</td>
<td>0.195</td>
<td>0.735</td>
<td>Valid and Reliable</td>
</tr>
<tr>
<td></td>
<td>Y2</td>
<td>0.600</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Y3</td>
<td>0.425</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Y4</td>
<td>0.556</td>
<td>0.195</td>
<td></td>
<td>Valid</td>
</tr>
</tbody>
</table>

Based on Table 2, it is explained that all indicators inherent in each construct variable have met the elements of validity and reliability. This condition makes it possible to proceed to the next stage of analysis.

**Classic assumption test**

In multiple linear regression analysis, it is necessary to test the classical assumptions so that the parameter values produced in the regression model are not biased and have a high degree of accuracy in estimating. Ghozali stated this in Nalle et
There are several classic assumption tests: Normality, Autocorrelation, Multicollinearity, and Heteroscedasticity.

**Table 4. Recapitulation of classical assumption test results**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Jargue-Bera test (P-value)</th>
<th>Prob. Chi-Square (2) (P-value)</th>
<th>Prob. Chi-Square (14) (P-value)</th>
<th>VIF value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residual</td>
<td>3.895002</td>
<td>0.0701</td>
<td>0.1832</td>
<td></td>
</tr>
<tr>
<td>Financial Literacy</td>
<td></td>
<td></td>
<td></td>
<td>3.851</td>
</tr>
<tr>
<td>Technology Innovation</td>
<td></td>
<td></td>
<td></td>
<td>4.976</td>
</tr>
<tr>
<td>Government Support</td>
<td></td>
<td></td>
<td></td>
<td>5.283</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td></td>
<td></td>
<td></td>
<td>5.295</td>
</tr>
</tbody>
</table>

Table 3 explains that all the elements in the classic assumption test have been fulfilled and are feasible to continue at the data analysis stage. In the data normality test, it has been shown that the data is normally distributed because the Jargue-Bera test value is greater than alpha (3.895002>0.05). Furthermore, to test the assumptions of autocorrelation and heteroscedasticity, it shows that the value Prob. The chi-Square produced is greater than the alpha (0.0701 and 0.1832>0.05). It means that there is no similarity of variance in all research variables. The multicollinearity test also shows that the VIF value produced is less than 10, meaning there is no perfect correlation between each independent variable in this study.

**Model estimation**

This analysis is intended to answer the research objectives, namely to determine the partial and simultaneous effect of the variables of financial literacy, technological innovation, government support, and subjective norms on the MSMEs’ performance in the Border Market of North Central Timor Regency. This variable was chosen based on the results of field observations and relevant tracking theories that reflect the actual conditions experienced by MSME actors in border markets. These actors have low levels of knowledge, expertise, and skills to run a business due to the limited availability of quality human resources. Furthermore, there are not a few who, even though they have lived in the modern era, are still "technology illiterate" in following technological developments, so they run conventional businesses without significant support from the government. This, sometimes, causes them to lose confidence in the continuity of their business. The results of the data analysis can be seen in Table 5.

**Table 5. Model estimation**

<table>
<thead>
<tr>
<th>Variables</th>
<th>coefficient</th>
<th>std. Error</th>
<th>t-Statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-1.285203</td>
<td>0.958476</td>
<td>-1.340882</td>
<td>0.1840</td>
</tr>
<tr>
<td>LIT_KEU</td>
<td>-0.019412</td>
<td>0.081599</td>
<td>-0.237901</td>
<td>0.8126</td>
</tr>
<tr>
<td>INOV_TEK</td>
<td>0.250428</td>
<td>0.086700</td>
<td>2.888453</td>
<td>0.0051</td>
</tr>
<tr>
<td>DUK_PEM</td>
<td>0.282313</td>
<td>0.105275</td>
<td>2.681686</td>
<td>0.0090</td>
</tr>
<tr>
<td>NORM_SUBJ</td>
<td>0.586869</td>
<td>0.068758</td>
<td>8.535307</td>
<td>0.0000</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.826053</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.816775</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F-statistics</td>
<td>89.04119</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob(F-statistic)</td>
<td>0.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The probability F-statistic is smaller than alpha 0.01. This value indicates that simultaneously, the independent variables in this study, which are financial literacy,
technological innovation, government support, and subjective norms, affect the dependent variable, namely the performance of MSMEs in the TTU-Timor Leste Boundary market.

The next value is the Adjusted R-squared, which is 0.816775. This indicates that the statistical model developed in this study can explain 81.67% of the variance in MSME performance in the Border Market of TTU-Timor Leste Regency, taking into account the variables of financial literacy, technological innovation, government support, and subjective norms. The remaining 18.33% is influenced by other variables not included in this study.

The financial literacy variable partially has an insignificant negative effect on MSME performance because the resulting regression coefficient value is -0.0194, and the probability value is greater than alpha (0.8126 >0.1). Financial literacy in research is defined as managing financial management appropriately to improve the business. The capabilities and expertise include access to financial institutions to support the business. It must be admitted that SMEs in border markets have an average level of education that is relatively low. This can be seen in the descriptive analysis in Table 2 before. The low level of education also affects the ability or expertise of MSME actors in managing their business finances. This condition creates opportunities for capital owners whose role is usury hunter moneylenders in offering loans with very easy conditions, namely simply having an Identity Card. Even with very high-interest rates, far from the loan interest charged by banking institutions, MSME actors still choose money lenders as a rational choice. Banks are often considered exclusive financial institutions, in which if someone wants to get banking services, they must be well-dressed, clean, and attractive with very formal procedural service standards. Moreover, one must also have a guarantee or collateral commensurate with the value of the loan and various other views. Due to this, there is a strong perception that banks are only accessible to the upper-middle class.

Apart from problems in obtaining access to financing from credible banking financial institutions, another problem that is part of the financial literacy variable here is skills in managing finances. Starting from basic personal finance management (basic personal finance), management of loans or credit, savings, and business development investments, as well as risk management in the face of threats of loss due to internal and external factors. MSMEs often have difficulties keeping financial records per applicable accounting standards. This condition makes it difficult for them to sort out sources of income from the profits of running a business and income from outside their business. The lack of institutional roles from the government, the banking sector, and non-governmental organizations.

This study presents findings that diverge from those reported by Aribawa (2016), Sabilla & Wijayaangka (2019), Septiani & Wuryani (2020), and Pusporini (2020), which demonstrate a positive and significant impact of financial literacy on the performance of MSME actors. Furthermore, research conducted by Nurlaela & Bahtiar (2022) elucidates that individuals with a strong grasp of financial literacy exhibit improved saving behaviors, allocating a portion of their income towards enhancing their future quality of life.

Furthermore, the technological innovation variable produces a regression coefficient value of 0.250428 with a probability value smaller than alpha (0.0051<0.05). This means that the technological innovation variable partially has a significant positive effect on the performance of MSMEs in the TTU Regency. If technological innovation is increased by 0.250428 percent, it will also increase MSME performance growth by
one percent. The technological innovation variable in this study is regarding the adaptability of MSME actors in the NKRI-Timor Leste border region in carrying out digital transformation in the form of implementing e-commerce to support their business activities. From the results of field observations and information retrieval, it is known that it is very rare for MSME actors in research locations to have implemented a form of economic digitization. Marketing methods for various MSME products still apply the old, conventional methods by bringing all the products they want to trade using their vehicles or public transportation to the border market where they trade. Marketing methods like this are certainly ineffective in increasing business scale, market segmentation, and income. Andini (2021) explained that applying technology with various digital innovations positively affected the growth of MSME performance amid increasingly competitive business competition. MSMEs must adapt to the environment and the increasingly dynamic development of modernization.

Furthermore, the regression coefficient value for the government support variable is 0.282313, with the resulting probability value smaller than alpha (0.0090 <0.05). This means that the performance of MSMEs will experience an increase in performance by 1 percent if the role of the government support variable is increased by 0.0090 percent while taking into account the ceteris paribus principle. These results emphasize that support from every level of government is needed to support the trade sector, especially for MSME actors and creative industries in border areas.

Considering that the role of MSMEs is very large for the economy of the Province of NTT in general, government support in the form of policy synergy and collaboration for every level of government, from the lowest to the highest, is urgently needed. The government can partner with various institutions, be it banking institutions, educational institutions, the private sector, or non-governmental organizations that favor the continuity of MSME businesses amid a pandemic that is still hitting. Hartanti (2021) revealed that during a pandemic, the role of the local government through various supports can be sorted using three approaches as the best alternative solution: empowering, enabling, and protecting. This approach is certainly for the benefit of the resilience of MSME players during a pandemic, both in the short, medium, and long term. Government support programs in the short term, for example, can be distributing social safety net assistance funds, facilitating the issuance of business licenses, mentoring, training, and empowerment. Meanwhile, medium-term and long-term programs can be in the form of implementing tax incentives, training to increase production skills or expertise, business labeling, implementing digital marketing with various institutional partners.

So far, what can be observed in TTU Regency, specifically at the border market, is that MSME actors have not received full attention from the government, despite this sector potentially contributing around 43 percent to the regional economy in terms of Gross Regional Domestic Product. Several critical aspects require serious attention from the government. These issues include the absence of social assistance programs targeting MSMEs directly impacted by Covid-19 and unimplemented tax incentives. Additionally, there are insufficient partnership models with modern market business actors to support the uptake of MSME products, along with the suboptimal role of universities in providing education, training, and assistance to improve the mindset and expertise of MSME actors in producing quality products. Apart from that, People's Business Credit from banking financial institutions is still exclusive, and the network of MSME ecosystems that became more Go-Digital has not been built yet.
Furthermore, there is also the lack of role of BUMDes as a village government institution that can take part in the marketing chain of MSME products, the lack of assistance of product labeling, and licensing and patenting of regional superior products. Some of the problems above are exacerbated by very worrying supporting facilities such as border markets that are not well organized, wifi networks that are difficult to obtain, and low telecommunication network capacity so that the synergy of cooperation between institutions is not maximized. The minimal role of BUMDes as a village government institution that can participate in the marketing chain for MSME products, the lack of assistance in product labeling, licensing, and the granting of patents for regional superior products. Some of the problems above are exacerbated by very worrying supporting facilities such as border markets that are not well organized, wifi networks that are difficult to obtain, and low telecommunication network capacity so that the synergy of cooperation between institutions is not maximized. The minimal role of BUMDes as a village government institution that can participate in the marketing chain for MSME products, the lack of assistance in product labeling, licensing, and the granting of patents for regional superior products. Some of the problems above are exacerbated by very worrying supporting facilities such as border markets that are not well organized, wifi networks that are difficult to obtain, and low telecommunication network capacity so that the synergy of cooperation between institutions is not maximized. The minimal role of BUMDes as a village government institution that can participate in the marketing chain for MSME products, the lack of assistance in product labeling, licensing, and the granting of patents for regional superior products. Some of the problems above are exacerbated by very worrying supporting facilities such as border markets that are not well organized, wifi networks that are difficult to obtain, and low telecommunication network capacity so that the synergy of cooperation between institutions is not maximized. The minimal role of BUMDes as a village government institution that can participate in the marketing chain for MSME products, the lack of assistance in product labeling, licensing, and the granting of patents for regional superior products. Some of the problems above are exacerbated by very worrying supporting facilities such as border markets that are not well organized, wifi networks that are difficult to obtain, and low telecommunication network capacity so that the synergy of cooperation between institutions is not maximized. The minimal role of BUMDes as a village government institution that can participate in the marketing chain for MSME products, the lack of assistance in product labeling, licensing, and the granting of patents for regional superior products. Some of the problems above are exacerbated by very worrying supporting facilities such as border markets that are not well organized, wifi networks that are difficult to obtain, and low telecommunication network capacity so that the synergy of cooperation between institutions is not maximized.

The results of the subsequent analysis of the subjective norm variable obtained a regression coefficient value of 0.586869 with a probability value smaller than alpha (0.000<0.05). These results explain that the subjective norm variable partially has a significant positive effect on MSMEs' performance in the TTU-Timore Leste Regency's Border Market. The number 0.586869 implies that every one percent increase in MSME performance will also increase the subjective norm variable by 0.586869 percent when other variables are held constant.

The definition of subjective norms in this study is about the perspectives of other people, both positive and negative, about what is believed and can influence a person's final decision (Shalwoharjimas, 2019). The growth and development of MSMEs' performance are strongly influenced by their accuracy in running the business, as well as by other people's opinions and the business environment in which they operate. In other words, the success or failure of a person's business is highly dependent on the input provided by other people. If people have a positive impression of MSME actors regarding education, motivation, and encouragement, it may also increase business progress. However, the opposite will happen if the perspective contains more negative things, pessimism, or criticism. This can have an unhealthy impact on the progress of the business. Therefore, SMEs need to be in an environment that can create a conducive business climate and healthy competition.

It must be admitted that the people in TTU Regency generally have very strong social capital culturally. Owned social capital is seen as a culture of mutual cooperation, togetherness, and even a sense of brotherhood that has been maintained to this day. A value is instilled in the Dawan people on the island of Timor with a philosophy of "Tabua Nekaf Mese Ansaof Mese", which means "Working Together with the Mind". This view has become a culture deeply rooted in everyday life and even a strong symbol of brotherhood. Ownership of this social capital should be the main pillar that can be used in the spirit of kinship, hand in hand with supporting all efforts carried out, even in fighting poverty on the island of Timor (Haukilo, 2021). Departing from the cultural
conditions of the defense community on Timor Island, as described above, it has indirectly influenced the mindset and attitude in making business decisions even in a difficult situation during the pandemic. Confidence, motivation, and encouragement from those closest to you are the biggest assets to grow and continue to develop. Fanani & Fitrayati, (2021) revealed that social capital positively and significantly affects the performance of food and beverage SMEs in Surabaya. Likewise, stated by Putro et al. (2022) stated that social capital owned by the community plays a very large role in supporting the performance of MSME artisans in Pulun village.

Discussion

Financial literacy, technological innovation, government support, and subjective norms significantly influence the performance of MSMEs in the Border Market of TTU-Timor Leste Regency, both individually and simultaneously. Therefore, in this sub-chapter, the discussion will be more directed at describing the determination of strategies that the TTU Regency Regional Government can carry out as a form of policy program implementation to support the growth of MSME performance in the Border market during the Covid-19 pandemic. Determining strategies to be carried out focuses more on the variables raised in this study.

The TTU district government must partner with credible Financial Institutions or several Cooperative Institutions. This partnership could eventually take the form of mentoring, training, and education so that MSME players understand financial management following applicable accounting requirements (Hossain, 2020). The People's Business Credit (KUR) assistance program, a banking institution program, is not exclusive but precisely targeted at small-scale MSME community groups. Additionally, the banking service model in channeling credit to revive the real sector must be more proactive in involving the community. KUR assistance funds distributed must be followed by an assistance and empowerment program for the beneficiary community so that both parties are not disadvantaged. Research conducted by Cahya et al. (2021) found that batik artisans in Yogyakarta do not always expect financial assistance from banks. Still, getting financial management training is far more important to avoid the risk of failure in running a business (Lusardi et al., 2017).

To improve the understanding of financial literacy, it is expected that local governments need to build partnerships with higher education institutions as institutions that produce quality and reliable human resource assets in border areas (Jati et al., 2021). The collaboration with universities is in the form of Tri Dharma in teaching/education to form a good mindset in the community. In the research aspect, it aims to explore and discover the phenomenon of development problems in various fields based on good theoretical and methodological approaches. This is conducted to provide input to local governments to carry out appropriate public policies to improve the performance of MSMEs and build quality regions. Likewise, in the service field, the role of higher education groups can provide various training and empowerment to improve the quality of financial management according to accounting principles. Mariati (2012) revealed that the role of higher education is very large in empowering entrepreneurship.

The pandemic that has hit this country for two years has caused economic activity to run stagnant. One might even say it is paralyzed. MSMEs cannot develop their businesses due to the Restricting Movement of Community Activities program. Having almost certainly passed the Covid-19 pandemic, the choice to carry out digital
transformation by implementing an E-Commerce system is important to continue to develop market share and business scale. But on the other hand, one of the biggest obstacles in the effort to implement economic digitalization in the TTU-Timor Leste Regency Border Area is the limited capacity of human resources to adapt to the information technology-based E-Commerce system. Supporting infrastructure in telecommunications technology networks is still far from feasible. However, this hope remains as long as all stakeholders in the border areas have the same determination and commitment to support regional development (Ainin et al., 2015).

Local governments must collaborate and partner with higher education institutions, Telkomsel or Indosat providers, and banking institutions. In terms of improving the quality of human resources, for long-term purposes, higher education institutions can play a role through vocational education that leads to the specification of expertise and skills in digital technology. The community is prepared through formal education to face the demands of an ever-more modern era. Meanwhile, for short-term purposes, MSMEs are trained in various marketing methods using the marketplace platform provided (Aryawati et al., 2022). Furthermore, with their authority, telecommunications companies can make border areas a priority area for expanding telecommunications networks to support various community economic activities. The border region represents Indonesia's face, so it is appropriate to get adequate infrastructure development support, including telecommunication access (Irdayanti, 2017; Camisón & Villar-López, 2014).

Recognizing the significant role and contribution of MSMEs in the regional economy, local governments must prioritize implementing several measures to enhance the resilience of MSMEs in border areas during the Covid-19 pandemic. Due to the complexity of the problems MSMEs face, several strategic steps can be taken. The researchers map out several policies important for the growth of MSME performance into short-term and long-term targets. This is necessary to more easily untangle the tangled knot of problems that have been faced by MSME actors in the TTU-Timor Leste border region and to provide appropriate policies for their development. First is the Short-Term Target. The things that the government needs to do are (i) Strengthen the social safety net through direct cash transfer programs and provide tax incentives. Besides, the government can expand access to capital from the government budget and with banking partners through concessional loans. (ii) Establishing MSMEs with legal entities; to enable MSMEs to grow and develop properly, these business actors need an organizational platform to implement strengthening institutional aspects (Shafi et al., 2020).

This association of MSME actors is united in an association whose role and function is to protect its members' businesses and, beyond that, build a larger marketing network. (iii) Establishing Partnership Patterns with BUMN, BUMD, and Private Parties. The government needs to form a cooperation network with all stakeholders to support the uptake of MSME products to create sustainability. For example, in large-scale government activities, the government can partner with MSME actors to use their products as well as promotional media for various parties. Besides, MSMEs are also connected to large entrepreneurs so that their products can enter modern markets with good product quality standards, proper labeling, and health requirements from The National Agency of Drug and Food Control (NA-DFC) inspection results. (iv) Strengthening Partners and Inter-Institutional Cooperation Networks. This is necessary so that each institution can strengthen the capacity and existence of MSMEs in border
areas according to their respective functions and roles. The government’s main programs are improving product quality, increasing marketing and legal protection access, and facilitating licensing and investment processes (Hartanti, 2021).

**Second.** the Long Term Program. Improving the quality of human resources must be the main agenda of the regional government of TTU Regency, considering the lack of quality human resources in border areas. Support for formal education institutions that lead to vocational education by providing a curriculum that adapts to the demands of the industrial revolution 4.0 is necessary. Therefore, several tactical and strategic steps need to be carried out, including (i) making a Road Map for developing MSMEs in border areas. Inviting various parties, from MSME actors, banking institutions, Corporate Social Responsibility (CSR) parties, community leaders, and academics, to develop MSME development concepts in the form of standard documents that can be used as a guide in efforts to improve MSME performance. This is necessary so that the running programs do not overlap. Also, there is coordination between institutions and a multi-level monitoring and evaluation process. (ii) Implementing the Economic Digitalization Program. SMEs can reach all potential markets through digital technology as a marketing medium. The relevant technical agencies, banking institutions, and academic groups must continuously conduct training, mentoring, and empowerment programs. The application of the Go-Digital economy must be the main agenda as a response to the challenges of the times (Fatimah & Azlina, 2021; Mahajan, 2018).

The success or failure of MSMEs in a business that is run is very dependent on the form of self-confidence they have. This comes from the perception of the people around us (Supriono, 2015). This trust can arise if every MSME actor has sufficient quality and capacity to manage their business. Therefore, self-maturity is the best fortress in filtering all incoming information to influence the business. All kinds of positive feedback are used as the best motivation and supplement in developing the business.

Meanwhile, if pessimistic remarks come, it is still accepted as a small obstacle or challenge that must be overcome. The biggest asset in running a business is courage. Dare to accept all the risks faced (Nur'arif, 2021).

Experience proves that many successful people have achieved great success due to mental ownership and strong courage in facing all the existing challenges. All MSME actors need to have this in the border area of TTU-Timor Leste Regency. Therefore, this becomes the responsibility of the relevant technical agencies, such as the Department of Industry, Trade, and Cooperatives (Deperindagkop). This is in addition to the main program of improving product quality and capacity. However, what should not be forgotten is the encouragement and motivation to foster high self-confidence in running a business (Samah, 2018).

**CONCLUSIONS AND RECOMMENDATIONS**

**Conclusions**

Based on the analysis and discussion, several key conclusions can be drawn: (i) The simultaneous testing reveals that financial literacy, technological innovation, government support, and subjective norms significantly influence MSME performance in the TTU-Timor Leste Border Market. (ii) Partially indicate that financial literacy has a partially negative and insignificant impact on MSME performance, while technological innovation, government support, and subjective norms significantly and
positively affect MSME performance in the TTU-Timor Leste Border Market. (iii) To enhance the growth and performance of MSMEs, strategic steps can be undertaken in various ways. This encompasses enhancing financial literacy through training and mentoring programs and bolstering access to technology by implementing a digital economic system. Additionally, it involves securing government support to improve human resource quality, fortify production quality, establish partnerships with various stakeholders, create investment-friendly bureaucratic services, implement product labeling, and form border area MSME group associations. These measures are essential for boosting motivation and confidence in conducting business.

The authors recognize the limitations of this research, as it does not include the perspectives of several relevant entities, such as regional head leadership elements, associated technical services, banking institutions, or Corporate Social Responsibility (CSR) leaders. More in-depth information regarding policies directly targeting MSMEs in the Border Market could have been obtained by involving these stakeholders. Consequently, this study can serve as a reference for other researchers to examine the extent to which local government policies develop the performance of MSMEs in the TTU Regency.

Recommendations

The researchers wish to elaborate on several crucial aspects to enhance the performance of MSMEs in the TTU-Timor Leste Border Market. These include: 1) To foster financial literacy among MSME stakeholders, the TTU Regency Government should establish partnership models with universities and banking groups. Synergy and coordination between institutions are vital, with MSME stakeholders being the target group for training, mentoring, and empowerment programs. 2) Implementing a digital economy is a rational choice to expand market share, business scale, and resilience of MSME stakeholders during the Covid-19 pandemic. 3) The TTU Regency Government can support the growth of MSME performance by developing a roadmap to achieve set short-term and long-term targets. Short-term targets can be attained by reinforcing the social safety net with various social assistance measures, tax incentives, and soft loans. Long-term targets include strengthening human resource quality and capacity, enhancing production quality, and implementing the digital economy through e-commerce systems. 4) As the pandemic continues, crucial roles are required from relevant technical offices, academic groups, CSR institutions, and banking institutions. In conducting their businesses, these organizations’ respective roles foster optimism and confidence for MSME stakeholders in the TTU-Timor Leste Border Market area.

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