Influence Financial Technology, Financial Literacy, and Intellectual capital on financial inclusion in Micro, Small and Medium Enterprises (MSMEs)

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ABSTRACT: Micro, Small and Medium Enterprises (MSMEs) grow and compete in a constantly changing business environment such as the current digital era, this change makes Micro, Small and Medium Enterprises (MSMEs) need follow-up for more advanced business development. Many found that Micro, Small and Medium Enterprises (MSMEs) that have been established have finally had to stop operating due to improper management. Of course, this is a joint concern considering that Micro, Small and Medium Enterprises (MSMEs) are the heart of economic development. Micro, Small and Medium Enterprises (MSMEs) are businesses with high GDP contributors and also new job seekers. The study was conducted by conducting preliminary observations by looking at the data on the number of Micro, Small and Medium Enterprises (MSMEs) in Lubuklinggau City totaling 5,303 registered in Lubuklinggau City. with data analysis technique use linear regression . As a result, there are significant influence between the variable. Keywords: Intellectual Capital; Financial Literacy; Financial Inclusion; MSME.

INTRODUCTION

Micro, Small and Medium Enterprises (MSMEs) are the drivers of the country's socio-economic development as productive businesses that are just developing and the forerunners of future large businesses owned by individuals and business entities (Anjaningrum, 2020; Chatterjee et al., 2022; Haron et al., 2013; Putra, 2018). The economic crisis of the 1990s showed that Micro, Small and Medium Enterprises (MSMEs) continued to grow and became supporters in increasing Gross Domestic Product (GDP) and employment. The development of Micro, Small and Medium Enterprises (MSMEs) is consistently a top priority for the government because it is considered capable of providing benefits to the welfare of the community (Anas et al., 2017; Shafi et al., 2020; Srijani, 2020; Trinh et al., 2020).

The advantage of Micro, Small and Medium Enterprises (MSMEs) in Indonesia is that they provide a large contribution to GDP for the country and can absorb labor (Janita & Chong, 2013; Kumala & Junaidi, 2020; Rahayu & Day, 2015; Sisilia et al., 2015). However, the fact is that...
Micro, Small and Medium Enterprises (MSMEs) in Indonesia are still lacking in building financial stability such as access to capital, competent Human Resources (HR) to use advanced technology, and not many have evaluated management performance in facing challenges (Muhammad et al., 2009).

The growth of Micro, Small and Medium Enterprises (MSMEs) can be measured from a qualitative perspective through the company’s subjective attributes such as increasing the quality of output and depicting a positive product image. Quantitative perspective is also considered in measurable indicators such as increase in number of employees, sales revenue and profitability (Nkwabi & Mboya, 2019).

Qualitative and quantitative perspectives on Micro, Small and Medium Enterprises (MSMEs) can be optimized so that the business runs smoothly and maintains sustainability. Micro, Small and Medium Enterprises (MSMEs) are optimistic about their growing business, thus achieving competitive advantage. This achievement cannot be directly achieved without actors who have an understanding of financial literacy and utilize technology along with the times and utilize intellectual capital (Leitner, 2011).

The 2019 National Financial Literacy and Inclusion Survey (SNLIK) showed a financial literacy index of 38.03% and a financial inclusion index of 76.19%. This shows that the Indonesian people in general do not understand well the characteristics of various financial products and services offered by formal financial services institutions, even though financial literacy is an important skill in the context of community empowerment, individual welfare, consumer protection, and increasing financial inclusion (Otoritas Jasa Keuangan, 2020).

Minimal financial literacy has resulted in low financial inclusion and vice versa (Martini et al., 2021). The need for a good understanding of literacy certainly reduces the risk of using fintech and increases public financial inclusion (Sulistiyarini, 2012). Financial technology and financial inclusion are external factors in viewing the understanding of financial literacy. Understanding of Financial Technology on financial literacy and financial inclusion has a positive effect as evidenced by financial technology-based financial services that are needed by the public to broaden their horizons regarding financial literacy and financial inclusion (Mulasawi & Julialevi, 2020). This research has been carried out previously which states a significant positive relationship between these variables (Martini et al., 2021); (Marginingsih, 2021); (Marini et al., 2020); (Dewi, 2020); (Sulistiyarini, 2012).

There are other factors that are thought to have an effect on intellectual capital in Micro, Small and Medium Enterprises (MSMEs), namely financial inclusion. Intellectual capital is a company resource that is categorized as intangible assets that can be developed from human resources (Leitner, 2011). Intellectual capital is one of the main sources of financial inclusion in Islamic banking in Pakistan (Nawaz, 2017). Previous research related to Intellectual capital in relation to financial inclusion in Micro, Small and Medium Enterprises (MSMEs) has not been carried out. The research focuses only on the financial performance of each Micro, Small and Medium Enterprises (MSMEs), has not discussed further about intellectual capital on financial inclusion. This study analyzes the influence of intellectual capital, financial technology and financial literacy on financial inclusion in Micro, Small and Medium Enterprises (UMKM) Lubuklinggau City.
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Financial Inclusion
Inclusion is providing financial services such as savings, credit, insurance, and payments at prices that all economic actors can afford, especially low-income economic actors (Anwar et al., 2017). Financial inclusion is the proportion of individuals and companies that use financial products and services (Pulungan & Ndruru, 2019).
Financial inclusion is the process of promoting affordable, timely and adequate access to a wide range of regulated financial products and services and expanding their use by all segments of society through the adoption of existing and innovative tailored approaches including financial awareness and education with a view to promoting financial well-being and inclusion. Economic and social (Holle, 2019).
Financial inclusion is a banking instrument that plays an important role in the stability of financial services and access to finance (Rusdiunasari, 2018). The following indicators for financial inclusion are:
1. Availability/access
2. Use
3. Quality
4. Well-being

Financial Technology
Financial Technology is an innovation that provides convenience and comfort for the public in the financial sector, because people can make transactions only with smartphones and the internet (Ansori, 2019). Financial Technology is an innovation in financial services by utilizing the development of information technology (BFI Finance, 2022). Financial Technology (Fintech) is a 'revolution' of combining financial services with information technology that has improved the quality of financial services, and created financial stability (International Trade Administration, 2016).
Financial Technology refers to the use of technology to provide financial solutions (Arner et al., 2015). Specifically, Financial Technology defined as the application of digital technology to financial intermediation problems (Aaron et al., 2017). Financial Technology is the use of financial system technology that produces new products, services, technology, and/or business models and can have an impact on monetary stability, financial system stability, efficiency, fluency, security, and reliability of the payment system (Bank Indonesia, 2017).
Financial technology is divided into several indicators based on their use (Martini et al., 2021), namely:
1. Perception of ease of use of financial technology
2. Effective use of financial technology
3. Risk of using financial technology
4. Interest in using financial technology

Financial literacy
Financial literacy is the level of knowledge, skills, beliefs that influence attitudes and behavior to improve the quality of decision making and financial management in order to achieve prosperity (OJK, 2013).
In addition, financial financial literacy is knowledge to manage finances (financial literacy is money management knowledge), indicators in financial literacy are (Ulfatun et al., 2016):
1. Basic Knowledge of Financial Management. This basic knowledge is usually related to making decisions in investing or financing that can affect a person's behavior in managing the money they have.
2. Credit Management. is a facility to borrow money and repay it within a certain period of time with interest.
3. Savings Management. is the amount of money saved for future needs.
4. Investment Management. is a form of investment activity of funds or assets with the aim of obtaining profits in the future.

**Intellectual Capital**

Intellectual Capital refers to knowledge resources that can provide a competitive advantage for companies (Stewart & Ruckdeschel, 1998). Intellectual Capital is defined as a new, intangible source of wealth; as information, knowledge that is applied to work to create value (Nawaz, 2017). Intellectual Capital refers to the possession of knowledge and experience, professional knowledge and skills, good relations, and technological capacity, which when applied will provide a competitive advantage for the organization (Starovic & Marr, 2005). Intellectual capital is divided into human intellectual capital and structural, where the former refers to human intellectual capital, which generates new ideas. Second, structural refers to supporting mechanisms, which help human capital to turn these ideas into real products.

Previous research has shown that intellectual capital is the main driver of value creation in the banking industry (Nawaz, 2017). Indicators in intellectual capital are measured by developing the competence of Micro, Small and Medium Enterprises (MSMEs) in honing competent employees, innovating, and maintaining good relations which will result in a successful business in the future and sustainability and can excel in business competition between entrepreneurs in similar fields (Absah et al., 2018).

**Framework of thinking**

![Thinking frame diagram]

**Hypothesis**

Based on the framework of thinking, the following hypotheses can be presented:

H1 : Financial Technology effect on financial inclusion in Micro, Small and Medium Enterprises (MSMEs)

H2 : Financial literacy a effect financial inclusion in Micro, Small and Medium Enterprises (MSMEs)
H3: Intellectual capital affects financial inclusion in Micro, Small and Medium Enterprises (MSMEs)

METHOD

This study uses a population of all Micro, Small and Medium Enterprises (MSMEs) in Lubuklinggau City as many as 5,303 businesses registered with the Office of Cooperatives and Small and Medium Enterprises (UMKM) Lubuklinggau City. This population cannot be used as a sample because only 2,150 Micro, Small and Medium Enterprises (MSMEs) in Lubuklinggau City have business permits. The sample of this study was 337 Micro, Small and Medium Enterprises (MSMEs) which were determined by the slovin formula. The slovin formula is used to reduce the number of populations that are too large but still represent the total population of 100% (Sujarweni, 2015). The following slovin formula is used with an error rate of 5%. The data collection technique used was the distribution of questionnaires to the people of Lubuklinggau City as many as 337 Micro, Small and Medium Enterprises (MSMEs) in Lubuklinggau City. Collecting data by distributing online questionnaires with smartphones for 3 months. In addition, other methods are also carried out by visiting the owner directly to be invited to actively participate in providing information related to the problem under study.

Table 1. Definition of Operational Variables

<table>
<thead>
<tr>
<th>No</th>
<th>Variabel</th>
<th>Sub Variabel</th>
<th>Variabel</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Financial technology</td>
<td>1. Persepsi kemudahan financial technology</td>
<td>Independen / Bebas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Efektivitas penggunaan financial technology</td>
<td></td>
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<td></td>
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<td>3. Risiko penggunaan financial technology</td>
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<td></td>
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<td>4. Minat penggunaan financial technology</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Literasi keuangan</td>
<td>1. Pengetahuan Dasar Pengelolaan Keuangan</td>
<td>Independen / Bebas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Pengelolaan Kredit</td>
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<tr>
<td></td>
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<td>3. Pengelolaan Tabungan</td>
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<td></td>
<td></td>
<td>4. Pengelolaan Investasi</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Intellectual capital</td>
<td>1. Kompetensi inovasi</td>
<td>Independen / Bebas</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. sustainability</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. keunggulan kompetitif</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Inklusi keuangan</td>
<td>1. Ketersediaan/akses</td>
<td>Dependen / Terikat</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Penggunaan</td>
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<tr>
<td></td>
<td></td>
<td>3. Kualitas</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Kesejahteraan</td>
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</tbody>
</table>

Source: Primary Data Processed (2020)

The analysis technique uses quantitative analysis. The quantitative analysis technique uses a Likert scale with 4 scales to measure each element of the indicator. Data analysis using IBM SPSS 25 includes descriptive statistics, multiple regression analysis and hypothesis testing (Ghozali, 2016).
RESULT AND DISCUSSION

Data Distribution

The research data was taken from MSMEs registered in Lubuklinggau City, as many as 5,303 MSMEs registered at the Cooperatives and Micro, Small and Medium Enterprises Office where the MSMEs are spread across eight sub-districts, as shown in the following table:

![Chart showing Jumlah UMKM (UNIT) for different sub-districts.]

Source: Primary Data Processing, 2022

Figure 2. Research Population

Table 2. MSME Research Samples in Lubuklinggau City

<table>
<thead>
<tr>
<th>Complete with business license</th>
<th>2,150</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Sample (Slovin Formula)</td>
<td>337</td>
</tr>
</tbody>
</table>

Source: Sujarweni, 2015

The sample of this study was 337 Micro, Small and Medium Enterprises (MSMEs) which were determined by the slovin formula. The slovin formula is used to reduce the number of populations that are too large but still represent the total population of 100% (Sujarweni, 2015).

![Chart showing Gender distribution.]

Source: Primary Data Processing, 2022
Respondents consisted of 175 women and 162 men, with an average age of 20 to 59 years.

**Figure 3 . Respondent's Gender**

There are 298 respondents in SMA and equivalent education, 38 respondents for Bachelors and 1 respondent for Masters.

**Figure 4 . Respondent's Education Level**

The results of X2 Financial Literacy Data Analysis on Financial Inclusion Y for simple linear regression shows the regression equation, namely $Y = 28.095 + 0.263 X2$. Then, the table of results of data analysis of Financial Literacy on Financial Inclusion for the t-test of the Financial Literacy variable (X2) on Financial Inclusion (Y) obtained the value of tcount = 7,123 greater than the value of ttable (337-1=336) = 1,652 with a significant value of 0.000 < 0.05. This means that the Financial Literacy variable (X2) has a partially significant effect on Financial Inclusion (Y).

The results of X3 Intellectual Capital Data Analysis on Financial Inclusion Y for simple linear regression shows the regression equation, namely $Y = 25.399 + 0.332 X3$. Then, the table of results of data analysis of Intellectual Capital on Financial Inclusion for the t-test of the Intellectual Capital variable (X3) on Financial Inclusion (Y) obtained the value of tcount = 9.487 which is greater than the value of ttable (337-1=336) = 1.652 with a significant value of 0.000 < 0.05.
That is, the variable *Intellectual Capital* (X3) has a partially significant effect on Financial Inclusion (Y). Results of Data Analysis of *Intellectual Capital* X3 on Financial Inclusion Y in for simple linear regression shows the regression equation, namely $Y = 25.399 + 0.332 X3$. Then, the table of results of data analysis of Intellectual Capital on Financial Inclusion for the t-test of the Intellectual Capital (X3) variable on Financial Inclusion (Y) obtained the value of $t_{count} = 9.487$ which is greater than the value of $t_{table} (337-1=336) = 1.652$ with a significant value of $0.000 < 0.05$. That is, the variable Intellectual Capital (X3) has a partially significant effect on Financial Inclusion (Y).

**Effect of Financial Technology (X1) on Financial Inclusion (Y)**

Based on the results of the regression test, it is known that the Financial Technology (X1) variable has a coefficient value of $0.347$, a positive coefficient value indicates that the higher the Financial Technology, the higher the level of financial inclusion. The significance value for the financial technology variable is $0.00$ less than $0.05$, while the $t$-count value is positive at $9.670$.

Based on the results of the regression test, it shows that H0 is rejected and H1 is accepted, which means that the Financial Technology variable has an effect on the financial inclusion variable. So it can be concluded that Financial Technology has a positive and significant effect on financial inclusion.

The results of this study are supported by previous research, namely "The Role of Fintech on Financial Inclusion in South Tangerang MSMEs". The results of the analysis show that the t count of the fintech variable is $6.925 > t_{table}$ with a value of $1.965$, then $H_{a1}$ is accepted. Thus, fintech has a significant and positive control effect on the financial inclusion variable.

This research describes that if there are more MSME actors who use technology-based financial assistance, this will further encourage the achievement of the implementation of financial inclusion that is echoed by the government and the increase in the financial inclusion index will also increase with the growing use of fintech assistance. Support for financial technology companies should also be increased. The use of technology-based financial services is expected to provide support for increasing levels of financial inclusion. The precise way and ease of access in the use of aid and financial products can ease the efforts of MSME actors in obtaining capital and managing their business finances.

**The Effect of Financial Literacy (X2) on Financial Inclusion (Y)**

Based on the results of the regression test in this study, it is known that the financial literacy variable (X2) has a coefficient value of $0.263$, a positive coefficient value means that the higher the level of financial literacy, the higher the level of financial inclusion. The significance value for the financial literacy variable is $0.00$, smaller than $0.05$, while the t-count value is positive at $7.123$.

The results of the regression test indicate that H0 is rejected and H2 is accepted, which means that there is an effect of the financial literacy variable on the financial inclusion variable. So it can be concluded that financial literacy has a positive and significant effect on financial inclusion.
This research is supported by a previous study entitled 'The effect of financial literacy on financial inclusion through Financial technology on MSMEs in Bandar Lampung, the result of which is that Financial Literacy has a significant effect on financial inclusion. This shows that the higher the financial knowledge, the better the financial behavior and financial attitude of a person will increase the use, utilization and understanding of financial products and services. This is reinforced by the answers of respondents who have the highest scores related to financial literacy where MSMEs in Bandar Lampung City already believe and also understand about investment in the form of returns and investment risks, so that MSME business actors by investing as early as possible are expected to provide benefits. for them in the future (Kusuma, 2020).

The Influence of Intellectual Capital (X3) on Financial Inclusion (Y)

Based on the results of the regression test in this study, it is known that the Intellectual Capital (X3) variable has a coefficient value of 0.332, a positive coefficient value means that the higher the level of Intellectual Capital, the higher the level of financial inclusion. The significance value for the financial literacy variable is 0.00 less than 0.05, while the t-count value is positive at 9.487.

The results of the regression test indicate that H0 is rejected and H3 is accepted, which means that the Intellectual capital variable has an effect on the financial inclusion variable. So it can be concluded that Intellectual capital has a positive and significant effect on financial inclusion. This research is supported by a previous study entitled 'The Impact of Intellectual Capital and Public Financial Services Education on Financial Inclusion Succession in Indonesia with the test results showing that the intellectual capital variable has a T-Value value of 2.21 or > 0.196.

These results indicate that the intellectual capital variable has a significant positive impact on the succession of financial inclusion in Indonesia. This conclusion means that H1 is accepted. This proves that intellectual capital can help for the succession of financial inclusion, so that the development of the concept of intellectual capital is not always only to detect the financial performance of a company, however, we are oriented more broadly that intellectual capital also supports the economy, one of which is the succession of financial inclusion.

Based on the results of the coefficient of determination test also found that the magnitude of the influence of the variable intellectual capital on the succession of financial inclusion is 0.299 or 29.9%. These results prove that the role of intellectual capital towards the succession of financial inclusion in Indonesia is quite large. These results should be able to provide advice to the government and policy makers (regulators) to start intensifying cooperation with any educational institution to help provide good and correct knowledge (finance) to the unbanked community so that they immediately have access to financial institutions and independently manage their finances.

CONCLUSION

1. Based on the results of the regression test, it shows that H0 is rejected and H1 is accepted, which means that the Financial Technology variable has an effect on the financial inclusion variable. So it can be concluded that Financial Technology has a positive and significant effect on financial inclusion.
2. Based on the results of the regression test in this study, it is known that the financial literacy variable (X2) has a coefficient value of 0.263, a positive coefficient value means that the higher the level of financial literacy, the higher the level of financial inclusion. The significance value for the financial literacy variable is 0.00, smaller than 0.05, while the t-count value is positive at 7.123.

3. The results of the regression test indicate that H0 is rejected and H3 is accepted, which means that the Intellectual capital variable has an effect on the financial inclusion variable. So it can be concluded that Intellectual capital has a positive and significant effect on financial inclusion. This research is supported by a previous study entitled The Impact of Intellectual Capital and Public Financial Services Education on Financial Inclusion Succession in Indonesia with the test results showing that the intellectual capital variable has a T-Value value of 2.21 or > 0.196.

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