## FINANCIAL LITERACY MODERATE THE EFFECT OF FINTECH ON THE FINANCIAL PERFORMANCE OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs)

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**ABSTRACT**
The purpose of this study was to determine the effect of fintech on the financial performance of Micro, Small and Medium Enterprises (MSMEs) with financial literacy as a moderating variable. The population in this study were all MSMEs in the traditional Balinese culinary sub-sector in the Sarbagita area. The sampling technique used in this study is non-probability sampling where the data used is in the form of primary data obtained from the results of questionnaires distributed to MSMEs in the Sarbagita area. The data analysis method used is the Structural Equation Model (SEM) based on Partial Least Square (PLS). The results in this study are Financial technology (Fintech) has a positive effect on financial performance and financial literacy strengthens the positive influence of financial technology (Fintech) on financial performance. Fintech as a form of innovation in the financial sector has proven to be able to improve the financial performance of traditional culinary SMEs in the "Sarbagita" area.

**Keyword:** Fintech, Financial Performance, Msmes, Financial Literacy.

## 1. INTRODUCTION
Digital acceleration is in line with the benefits offered by one of the digital platforms, namely fintech. Fintech (financial technology) is the latest trend in the financial sector. Fintech is a broad term that describes innovations in the financial sector which are generally related to the internet, technology, mobile and cloud computing (Unsal and Rayfield, 2019). Fintech uses innovative technology to provide financial services and products with the convenience and ease of managing finances from producers to consumers when compared to traditional methods (Anshari et al., 2019). The innovations owned by fintech are in line with the theory of financial innovation which states that innovation can increase the competitive advantage of a business in order to maximize its income. Innovations in the financial sector can be a new resolution or simply become a development component that can later increase company liquidity. Based on this theory, financial innovation is a critical motivation that encourages the creation of a financial system with better competence and economic benefits through new, sustainable changes (Opiyo et al., 2019).
The fintech industry is able to easily overcome the challenges and problems experienced by MSMEs. Fintech is able to target all types of MSME businesses and reach even remote business locations. Fintech is able to become a catalyst for the growth of MSMEs in Indonesia through P2P lending, equity crowdfunding, e-wallet and personal finance features. The role of fintech can be seen from its effectiveness as a source of MSME funding, ease of transaction processing, broad market access and helping accelerate the process of preparing MSME financial reports (Suryanto, et al., 2020).

The presence of fintech also affects the development of MSMEs in Indonesia. Fintech is expected to help MSMEs face their business problems. Limited access to capital is a classic problem faced by Indonesian MSMEs. MSMEs have various business ideas to develop their business, but they have to stop because there is no additional capital (Ariani and Utomo, 2017). MSME actors have difficulty obtaining loans from banks because they are unable to meet the requirements. This is in line with a survey conducted by PricewaterhouseCoopers in 2019 which stated that 74% of Indonesian MSMEs do not have access to finance (Annur, 2019). MSMEs also face problems in the field of marketing. Although promotion can be done online through social media Facebook, Google or Instagram, MSMEs are still having difficulty exploring creativity and collecting advertising budgets. The preparation of MSME financial reports is also still problematic due to the merging of personal funds and business funds in the same account. This affects the financial performance of MSMEs due to the absence of information related to profit or loss as well as cash flow conditions whether surplus or deficit (Suryant, et al., 2020). Another problem is the inefficiency of cash transactions and payments through conventional banks which are still run by MSMEs. Sutarmin and Susanto (2017) state that the level of use of non-cash transactions in Indonesia, which is 0.6%, is relatively low compared to Thailand at 2.8%, Malaysia at 7.7% and Singapore at 44.5%.

Previous research conducted by Abbasi, et al. (2020) confirms that fintech has a positive effect on the efficiency of MSMEs. Fintech, which plays a major role in the development of the industrial revolution 4.0, is expected to have a broad impact on the operational activities of MSMEs (Chang, et al., 2020; Lu, 2018; Rosavina, et al., 2019). Darma, et al., 2020 stated that there is a positive integration of fintech for MSME capital lending activities. Fintech provides various financial solutions, especially for the MSME scale that wants to grow. While a different opinion was stated by Sudaryanti et al., 2018, namely the use of fintech has a negative effect on ROA which is one of the ratios for measuring financial performance. Almulla and Ajughaiman (2021) also state that fintech services have a negative and insignificant effect on financial performance.

The inconsistency of research results related to the influence of fintech on financial performance indicates the possibility of other variables that can strengthen the relationship between the two. The convenience offered by fintech in order to improve financial performance needs to be supported by the ability and knowledge of the owner or human resources (HR) in it, especially related to finance. This knowledge is then referred to as financial literacy. Financial literacy is the ability to facilitate small businesses to develop and increase their profitability, productivity and competitive advantage (Sanistasya et al., 2019). Financial literacy consists of financial knowledge, financial behavior and financial attitudes that have a positive effect on the financial performance of MSMEs (Mukarromah, et al., 2020). These three components are explained in more depth in planned behavior theory. This theoretical model explains that a person's intentions towards certain behaviors are influenced by three variables, namely attitudes, subjective norms and behavioral control (Ajzen, 1985). If there is a positive attitude, support from people around and a perception of ease because there are no barriers to behavior, then a person's intention to behave will be higher (Ajzen, 2005). This positive intention is then needed so that MSME actors are willing to improve their financial literacy.

The level of financial literacy of MSMEs in Indonesia according to the National Survey of Indonesian Financial Literacy (SNLKI) per 2019 is 38.03%. Meanwhile, the level of financial literacy, especially in Bali Province, is 38.06% with a financial inclusion rate of 76.19%. The data

has a gap between the level of financial literacy and the level of inclusion which reflects the low level of public understanding regarding finance (OJK.go.id). Entrepreneurs must have an understanding of financial literacy (Hamidah, et al., 2020). Financial literacy will increase understanding related to management practices and minimize losses in order to increase the sustainability of MSMEs (Ye and Kulathunga, 2019). Financial literacy will also improve MSME management's ability to make decisions including financial plans, cash flow management and reliable financial reports. Financial literacy is crucial in the formation of financial decisions (personal and business) by MSME owners (Sabana, 2014).

Research conducted by Hamida, et al. (2020) states that increasing financial literacy will improve the financial performance of MSMEs. Goswami, et al. (2017) also stated that the better the vocational education and training of MSME actors, the better the performance of MSMEs themselves. Financial literacy has a positive effect on the financial performance of MSMEs (Wahyono and Hutahayan, 2021). Hamidah, et al. (2020) also states that financial literacy has a positive and significant effect on the financial performance of MSMEs. Lema et al. (2020) states that financial literacy has a direct or indirect effect on MSMEs by reducing financial barriers in developing technological innovations. Susan (2020) states that financial literacy has a positive effect on financial access and the growth of MSMEs which will have an impact on improving financial performance. The higher the level of financial literacy of MSME entrepreneurs, the higher the gross profit ratio obtained by MSMEs (Anshika, 2021).

The positive influence of the financial literacy variable on financial performance is expected to moderate the direct influence of the fintech variable on the financial performance of MSMEs. Financial literacy was chosen as the moderating variable because a high level of financial literacy can be used as a basic need so that everyone can avoid financial problems. Financial difficulties are not only caused by low income, but can also arise if there is an error in financial management (Akmal and Saputra, 2016). The application of financial literacy will assist business people in identifying and responding to changes in the economy and business climate. Business people will also be able to make decisions and create innovative solutions in order to improve financial performance and business sustainability of MSMEs (Aribawa, 2016). A good understanding of financial literacy will help MSME actors to improve their business performance management and train skills in making financial decisions (Rahayu, 2017). A good level of financial literacy can provide knowledge, confidence and understanding to MSME actors in utilizing fintech to make business decisions (Anisah and Crisnata, 2021). Octavina and Rita (2021) state that financial literacy is able to moderate (strengthen) the influence of fintech on the financial performance of MSMEs. When the use of financial literacy is good, this will have an impact on the performance of fintech in improving the financial performance of MSMEs.

The research period used is during the Covid-19 pandemic since the presidential decree stipulates the status of a pandemic in Indonesia until December 2021. This period was chosen because restrictions on community activities as an effort to deal with the COVID-19 pandemic have caused significant economic losses nationally (Hadiwardoyo, 2000) . A survey by BI (Bank Indonesia) as of March 2021 showed that 87.5% of MSMEs were affected by the COVID-19 pandemic and 93.2% of them were negatively affected in terms of sales. The survey also states that the pandemic is putting pressure on MSME revenues, profits and cash flows. However, the survey results also showed 12.5% of respondents were not affected by the economic impact of the Covid-19 pandemic and even 27.6% of them showed an increase in sales. A total of 2,970 MSMEs were used as survey

respondents by BI and 307 MSMEs were declared not affected by the pandemic because they had implemented digitalization (bi.go.id).

MSMEs studied in this study are MSMEs in the culinary sector, especially traditional culinary delights in the Sarbagita area. MSMEs in the culinary sector were chosen because the number of culinary sub-sectors nationally occupies the highest position, namely 41.47% compared to the fashion sector at 17.68% and handicrafts at 14.99% (baliprov.go.id). The role of fintech is also predominantly in the food and beverage accommodation sector (Pranata, 2019). Traditional culinary is chosen because it has uniqueness, originality, authenticity, and diversity. The originality of traditional food is reflected in the authenticity of the ingredients while maintaining the original local raw materials. The food processing process describes its authenticity and diversity leads to variations in forms and names (Harsana et al., 2018). The Sarbagita area which stands for Denpasar, Badung, Gianyar and Tabanan was chosen as the research location because it is the main route of tourism in Bali. Therefore, the application of fintech supported by good financial literacy is expected to improve the performance of MSMEs in the region while increasing the development of the tourism industry in Bali (Saragih et al., 2015; Hasan et al., 2021).

## 2.LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

The use of fintech in developed countries is normal and can reflect the maturity of business people (Effah, 2016). The fintech platform encourages the growth of MSMEs through various benefits and facilities provided. MSMEs have become easier to develop thanks to the support of fintech (Suryanto et al., 2020). Research conducted by Milian et al. (2019) and Rizvi et al. (2018) states that fintech promises better flexibility, security, efficiency and opportunities than traditional financial services. Research conducted by Suryanto et al. (2020) states that fintech can accelerate the growth of MSMEs in Indonesia. Fintech can increase access to finance, open up opportunities for new types of projects and attract new categories of investors (Bollaert et al., 2021). The existence of fintech can improve the financial performance of MSMEs (Abrahao et al., 2016; Luckandi, 2018). Hamidah et al. (2020) also states that fintech has a positive influence on the financial performance of MSMEs.

H1: Financial technology (Fintech) has a positive effect on financial performance.

A good understanding of financial literacy will help MSME actors to improve the management of their business performance and train skills in making financial decisions. Rahayu, (2017). Bonita et al. (2018) states that financial literacy is needed to improve MSME business performance. Hamidah et al. (2020) states that financial literacy has a positive and significant effect on the financial performance of MSMEs. Satiti (2020) states that financial literacy plays an important role in improving MSME business performance. Wahyono and Hutahayan (2021) also stated that financial literacy has a positive effect on the financial performance of MSMEs. The application of financial literacy will assist business people in identifying and responding to changes in the economy and business climate. Business people will also be able to make decisions and create innovative solutions in order to improve financial performance and business sustainability of MSMEs (Aribawa, 2016). A good level of financial literacy can provide knowledge, confidence and understanding to MSME actors in utilizing fintech to make business decisions (Anisah and Crisnata, 2021). When the use of financial literacy is good, this will have an impact on the performance of fintech in improving the financial performance of MSMEs. Financial literacy is able to moderate (strengthen) the influence of fintech on the financial performance of MSMEs

(Octavina and Rita, 2021).
H2: Financial literacy strengthens the positive influence of financial technology (fintech) on financial performance.

## 3.METHODS

The research was conducted on traditional culinary SMEs in Bali, especially the Sarbagita area which consists of the Denpasar, Badung, Gianyar and Tabanan areas. The time for distributing research questionnaires starts from March to April 2022. The variables used in this study are financial technology (fintech) as the independent variable, financial literacy as the moderating variable and financial performance as the dependent variable. The population in this study were all SMEs in the traditional Balinese culinary sub-sector in the Sarbagita area. The sampling technique used in this study is non-probability sampling where the data used is in the form of primary data obtained from the results of questionnaires distributed to MSMEs in the Sarbagita area. The data analysis method used is the Structural Equation Model (SEM) based on Partial Least Square (PLS).

## 4.RESULTS AND DISCUSSION

*Convergent Validity*

**Table 1. Convergent Validity Test Results**

| Variable | Indicator | Loading Factor |
|---|---|---|
| Fintech (X) | X1 | 0,672 |
| | X2 | 0,793 |
| | X3 | 0,832 |
| | X4 | 0,640 |
| | X5 | 0,788 |
| | X6 | 0,774 |
| | X7 | 0,859 |
| | X8 | 0,806 |
| | X9 | 0,761 |
| | X10 | 0,712 |
| | X11 | 0,771 |
| | X12 | 0,770 |
| | X13 | 0,658 |
| | X14 | 0,644 |
| | X15 | 0,706 |
| Financial Performance (Y) | Y1 | 0,943 |
| | Y2 | 0,936 |
| | Y3 | 0,898 |
| Financial Literacy (M) | M1 | 0,862 |
| | M2 | 0,776 |
| | M3 | 0,881 |
| | M4 | 0,814 |
| | M5 | 0,826 |
| | M6 | 0,856 |

| Variable | Indicator | Loading Factor |
|---|---|---|
| | M7 | 0,830 |
| | M8 | 0,869 |
| | M9 | 0,880 |

Primary Data, 2022

Based on Table 1, the results of the validity test show that all indicators in the study have met the requirements of convergent validity or are said to be valid. The indicator can be said to be valid because it has a loading factor value greater than 0.50. This shows that all indicators are able to represent latent variables.

*Average Variance Extracted (*AVE)

**Table 2. Average Variance Extracted (AVE)**

| Variable | AVE |
|---|---|
| **Fintech (X)** | 0,650 |
| **Financial Performance (Y)** | 0,858 |
| **Financial Literacy (M)** | 0,716 |

Primary Data, 2022

The test results in Table 2 show the AVE value for each variable is greater than 0.5. This means that the model used in this study is declared valid.

*Discriminant Validity*

**Table 3. Discriminant Validity Test Results**

| | Fintech | Financial Performance | Financial Literacy |
|---|---|---|---|
| X1 | **0,672** | 0,509 | 0,514 |
| X2 | **0,793** | 0,621 | 0,547 |
| X3 | **0,832** | 0,696 | 0,407 |
| X4 | **0,640** | 0,660 | 0,169 |
| X5 | **0,788** | 0,745 | 0,295 |
| X6 | **0,774** | 0,630 | 0,233 |
| X7 | **0,859** | 0,727 | 0,388 |
| X8 | **0,806** | 0,607 | 0,505 |
| X9 | **0,761** | 0,585 | 0,487 |
| X10 | **0,712** | 0,610 | 0,533 |
| X11 | **0,771** | 0,580 | 0,561 |
| X12 | **0,770** | 0,721 | 0,438 |
| X13 | **0,658** | 0,583 | 0,268 |
| X14 | **0,644** | 0,501 | 0,176 |
| X15 | **0,706** | 0,537 | 0,216 |
| Y1 | 0,811 | **0,943** | 0,535 |
| Y2 | 0,788 | **0,936** | 0,509 |
| Y3 | 0,714 | **0,898** | 0,474 |
| M1 | 0,474 | 0,505 | **0,862** |
| M2 | 0,295 | 0,366 | **0,776** |
| M3 | 0,519 | 0,560 | **0,881** |

|      | Fintech | Financial Performance | Financial Literacy |
|------|---------|----------------------|--------------------|
| M4   | 0,530   | 0,432                | **0,814**          |
| M5   | 0,462   | 0,443                | **0,826**          |
| M6   | 0,431   | 0,419                | **0,856**          |
| M7   | 0,363   | 0,412                | **0,830**          |
| M8   | 0,411   | 0,443                | **0,869**          |
| M9   | 0,463   | 0,488                | **0,880**          |
| M10  | 0,447   | 0,512                | **0,863**          |

Primary Data, 2022

Based on Table 3, the results of the discriminant validity test using cross-loading show that the cross-loading value of each indicator has a value greater than 0.50. The value of each indicator on the variable has a value greater than the other variables. The correlation of the fintech variable (X) with its indicators is higher than the financial performance indicator (Y) and financial literacy indicator (M). The correlation of the financial performance variable (Y) with the indicator is higher than the correlation with the fintech indicator (X) and financial literacy (M). The correlation between indicators of financial literacy variables (M) and their indicators is higher than the correlation between fintech indicators (X) and financial performance (Y). This shows that all indicators on each variable are valid.

*Root of AVE*

**Table 4. Root of AVE**

|     | Fintech   | Financial Performance | Financial Literacy |
|-----|-----------|----------------------|--------------------|
| **X** | **0,749** |                      |                    |
| **Y** | 0,834     | **0,926**            |                    |
| **M** | 0,527     | 0,547                | **0,846**          |

Primary Data, 2022

Variables that have discriminant validity can also be seen from the AVE root value that must be greater than 0.5 and the correlation between constructs. Based on table 9, the correlation of the fintech variable (X) with its own variable is higher than the financial performance variable (Y) and financial literacy (M) which is 0.749. The correlation of the financial performance variable (Y) is higher with the variable itself than the fintech variable (X) and financial literacy (M) which is 0.926. The correlation between the financial literacy variable (M) and the variable itself is also higher, namely 0.846 compared to the fintech variable (X) and financial performance (Y). These three values have met the requirements of greater than 0.5.

*Composite Reliability*

**Table 5. Composite Reliability**

| Variable                    | Composite Reliability | Cronbach's Alpha |
|-----------------------------|----------------------|------------------|
| Fintech (X)                 | 0,950                | 0,943            |
| Financial Performance (Y)   | 0,948                | 0,917            |
| Financial Literacy (M)      | 0,962                | 0,856            |

Based on the results of the reliability test in Table 5, the value of composite reliability and Cronbach's alpha for each variable is greater than 0.5. The fintech variable has a composite

reliability value of 0.950 and Cronbach's alpha of 0.943. The financial performance variable has a composite reliability value of 0.948 and Cronbach's alpha of 0.917. The financial literacy variable has a composite reliability value of 0.962 and Cronbach's alpha value of 0.856. These results indicate that all variables in this study are declared reliable.

**Table 6. R-Square**

| Variable | R-square |
|---|---|
| Financial Performance (Y) | 0,711 |
| Financial Literacy (M) | 0,278 |

Primary Data, 2022

The test results in Table 6 show that the R-square value or the coefficient of determination of the financial performance construct belongs to the high category, which is 0.711. This means that 71.1 percent of the financial performance constructs can be explained by the fintech variable, while the remaining 28.9 percent is explained by other constructs outside the model. The R-square value of the financial literacy construct is included in the low category, which is 0.278. This means that only 27.8 percent of financial literacy constructs can be explained by fintech variables and financial performance, while the remaining 72.2 percent are explained by constructs outside the model.

Predictive Relevance or Q-square ($Q^2$) aims to measure how well the observed values produced by a structural model are. The value of $Q^2$ has a range of $0 < Q^2 < 1$. The closer the $Q^2$ value is to 1, the better the model is stated.

$$Q^2 = 1 - (1 - R^2_1)(1 - R^2_2)$$
$$= 1 - (1 - 0,711)(1 - 0,278)$$
$$= 1 - (0,289)(0,722)$$
$$= 1 - 0,209$$
$$= 0,791$$

The results of the $Q^2$ calculation show that $Q^2$ is away from the zero value and is approaching the value 1. These results indicate that the model is declared to have good predictive relevance or the model is stated to be strong and feasible in predicting the endogenous variables. As much as 79.1 percent of the financial performance variables in Traditional Culinary MSMEs in the *Sarbagita* area are influenced by fintech and financial literacy, while the remaining 20.9 percent are influenced by other factors outside the research model.

**Table 7. Path Coefficients Test Results**

| Direct Effect | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T-statistics (|O/STDEV|) | P Values |
|---|---|---|---|---|---|
| Fintech -> Financial Performance | 0,794 | 0,796 | 0,077 | 10,362 | 0,000 |
| Fintech*Financial Literacy -> Financial Performance | 0,127 | 0,107 | 0,061 | 2,083 | 0,038 |

Primary Data, 2022

The fintech variable on financial performance has a positive correlation coefficient of 0.794 with

a t-statistic value of 10.362 and a p-value of 0.000. These results indicate that there is a positive effect of fintech on financial performance and is significant because it has fulfilled the significant requirements, namely t-statistics > 1.96 and p-values < 0.05. The first hypothesis is that fintech has a positive and significant effect on financial performance and is acceptable.

The results of the analysis for the moderating relationship show that the t-statistic value is > 1.96, which is 2.083 and the p-value is 0.038. These results indicate that the financial literacy variable is able to significantly moderate the influence of fintech on financial performance. The second hypothesis, namely that financial literacy moderates the positive influence of fintech on financial performance is acceptable.

## 5. CONCLUSION

Fintech as a form of innovation in the financial sector has proven to be able to improve the financial performance of traditional culinary SMEs in the *"Sarbagita"* area. This is in line with the theory of financial innovation which states that the technological solutions offered by fintech are able to increase the competitive advantage of a business. The results of the study also support the planned behavior theory. The theoretical components, namely positive attitudes, subjective norms in the form of environmental support, and behavioral control from MSME actors can encourage the creation of intentions to improve financial literacy. The results of this study are expected to be an empirical reference regarding the role of fintech in improving the financial performance of MSMEs with financial literacy as a moderating variable. The results showed that there was a significant relationship between these variables.

Traditional culinary SMEs in the *"Sarbagita"* area which was sampled in this study benefited positively from the existence of fintech to facilitate their business activities. The types of fintech used are mostly in the form of payment and financing applications. MSMEs that utilize more than one type of fintech on average experience an increase in sales results every month. This is because the more fintech applications provided by MSMEs, the more fintech users or in this case consumers who can be reached become MSME customers.

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