Optimum: Jurnal Ekonomi dan Pembangunan
Vol. 15, No. 1, March 2025, pp. 57-68
DOI:10.12928/optimum.v15i1.11962
ISSN 2613-9464

Finance literacy, digital literacy and Micro, Small, Medium Enterprise (MSME) performance

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ARTICLE INFO

Received : 07-11-2024
Revised : 02-01-2025
Accepted : 13-01-2025
Published : 21-02-2025

Keywords
Financial literacy
Digital literacy
Women empowerment
MSMEs performance

ABSTRACT

The low level of female participation in the labor market affects the income gap between men and women. However, the informal sector tends to be of interest to women, especially in the Micro, Small, and Medium Enterprises sector (MSMEs). MSMEs have a very vital role in Indonesia's economic growth. However, the development of MSMEs for women entrepreneurs has obstacles such as low access to business capital and marketing of MSME products. This is influenced by the low level of financial literacy and digital literacy for women in the MSME sector. This paper aims to ascertain the relationship among financial literacy and the performance of women MSMEs specifically with the variable of digital literacy as a moderator. This paper uses primary data through the distribution of questionnaires to women entrepreneurs (MSMEs) in Sorong Regency. The data analysis technique uses Structural Equation Model (SEM) and Partial Least Square (PLS). The results show that financial literacy has positive and significantly affect MSME performance. While, digital literacy has a positive effect on MSMEs performance. In addition, digital literacy has a positive effect in moderating the relationship between financial literacy and MSMEs performance for female entrepreneurs. However, financial literacy is not significantly effect on the performance of MSMEs for women.

1. Introduction

Female labor force participation rate is lower compared than man (McKinsey Global Institute, 2019). It can be seen that male labor force participation rate is 1.5 times higher than female (BPS, 2019). The declining in female labor participation is influenced by marital status and having children. Married women have obligations to take care of the household such as cooking, cleaning, and taking care of children which is affected to they do not have time to work outside the home. However, they tend to choose jobs with flexible time to take care of the household and work (Cameron et al., 2019). The increasing of female labor force participation in the informal sector, especially in rural areas, is influenced by several factors such as age, marital status, education, region, and ethnicity (Yuniashri & Wahyudi, 2023). This is supported by BPS (2023) that women who is working in the informal sector are 42.45% higher than formal sector at 34.14%. Therefore, this leads that women prefer to work in the Micro, Small, and Medium Enterprises sector (MSMEs).

MSEMs plays a vital role into Indonesian economy. Its contribution towards GDP reaches 60.5% and MSEMs also have a role in absorbing 97% or around 116 million people of the total national workforce. However, the development of MSMEs faces obstacles, particularly in the form of capital or financing. According to the Indonesian Peer-to-Peer lending association (AFPI) in 2023, MSMEs that do not yet have access to financing from banks or non-bank financial institutions reached 46.6 million out of a total of 65 million MSMEs. There are some obstacles faced by MSMEs in obtaining

credit access including limited information of MSMEs's profile, failure to meet risk management requirements, inadequate financial record-keeping, and a lack of knowledge among MSMEs actors about alternative financing options (Fathurrahman & Fitri, 2024). Thus, it is important for MSMEs actors to have financial literacy skills in order to develop their business.

Financial Services Authority (OJK) states that women's financial literacy is lower than men's in 2019. However, it slightly higher percentage compared than men in 2024 (OJK, 2023). However, women's financial literacy needs to be improved in order to improve the performance of MSMEs (Sulistianingsih & Santi, 2023). This means that financial literacy not only covers aspects of knowledge but also the implementation of knowledge. Women with lower financial literacy tend to has experienced on the financial rejection when they apply for financing to develop their business (Al Faizah et al., 2022). This often encourages women to choose informal loans due to the difficulty of accessing loans from formal financial institutions such as bank (Kass-Hanna et al., 2022). This usually happens to poor people. Poor people does not have assets as collateral in financing. Morever, women tend to have lower assets than man. In fact, it drives women to borrow funds from loan sharks. On the other hand, digital financing has great potential to reach people who lack of access to banking sector especially in developing countries.

The percentage of poor people in Indonesia is 9.03%, where the poor are mostly found in rural areas at 11.79% compared to those in urban areas by 7.09%. This is also in line with the percentage of poor people in urban areas by 8.51% lower than rual areas by 27.78%. This shows that the poor are mostly found in rural areas. MSMEs are one way of empowerment in reducing poverty in Indonesia. Based on Ministry Cooperatives and Small and Medium Enterprises, it shows that there were 65 million MSME actors in 2019 and 64.5 percent of them are women in Indonesia. MSMEs led by women have an important role in creating jobs, encouraging women's participation in the economy, and driving increasingly inclusive gross domestic product (World Bank, 2018). In addition, women in MSME sector will also increases gender equality and helps improve family economy, which has an impact in inreasing family welfare, especially increasing the quality of human resources through improving education and helath for children (Ramdlaningrum et al., 2020). Thus, women in MSME needs to boost their business performance with innovation and use of technology in order to gain wider market access and impacted on increasing the income of MSME (Panjawa et al., 2022).

Financial literacy is needed to know and understand digital financial products and services along with their benefits and risks (Yang et al., 2023). The use of digital financial facilities makes it easier for MSMEs to access various sources of funds that can be used to develop their business (Frimpong et al., 2022). Good Management of MSMEs will produce wise decision-making regarding savings, investments, and loans (Biswas & Gupta, 2021). Therefore, financial literacy training programs are needed on various media such as radio and televisions, as well as training held by financial institutions to empower MSMEs in order to improve their business performance (Agyei, 2018). The increasing number of internet users encourages women to use internet. However, internet usage for women is still lower than men so it is necessary to encourage women to make more use of the internet. Digitalization has also driven an increase in female workforce participation in Indonesia (Davani & Sulistyaningrum, 2023). Even women who use the internet to work in the MSME sector are more in urban areas than in rural areas (Falentina et al., 2021).

Digital literacy is also something important to improve alongside the increase in the number of internet users. Digital literacy can boost increased employment and income performance (Kim & Jin, 2024). Therefore, it is necessary to optimize the use of business digitalization and social media in order to expand the market share and adapt to market changes quickly and effectively (Titin et al., 2024). Thus, it is important for female MSME to increase financial literacy and digital literacy in accessing digital financial services and expanding sales through digital marketing. Previous studies have found that financial literacy has an effect on the performance of MSMEs (Sulistianingsih & Santi, 2023; Yakob et al., 2021). Financial literacy can encourage the use of digital financial services including mobile payments, online borrowing and online financial products (Yang et al., 2023). In line with Frimpong et al (2022) shows that financial literacy skills can also encourage MSMEs to adopt digital financial systems, thereby increasing digital capabilities. Moreover, digital literacy, which is a person's ability to use digital systems, can trigger an increase in MSME performance through modern marketing (Suyanto et al., 2023).

Nevertheless, earlier studies has estimated that the performance of MSMEs can be influenced by good financial literacy skills. Financial literacy can affect the performance of MSMEs by adopting

digital financial services. On the other hand, earlier studies has also revealed that digital literacy skills can expand market share, thereby impacting the performance of MSMEs. However, research correlating the relationship between financial literacy and MSMEs performance using digital literacy as a moderating variable is still rare, especially in Indonesia. This study aims to analyze the influence of financial literacy on the performance of MSMEs using digital literacy as a moderating variable. The use of digital literacy as a moderating variable is expected to provide more precise policy recommendation in improving the performance of MSMEs, especially for female MSMEs actors.

2. Literature Review

There are demographic and socio-economic factors affect the increase in financial literacy (Dewi, 2022; Prakosa et al., 2024). Several previous studies have stated that wome's financial literacy is lower than men (Fonseca et al., 2010; Okamoto & Komamura, 2021). Women who have low financial literacy will affect family welfare. This is caused by women have a role in the household as financial managers so that women who do not have capacity to manage family finance will affect financial risks that will be faced by the household (Gunawan et al., 2021). In addition, financial literacy can affect women's performance, especially in the MSME sector. Tubastuvi & Purwidianti (2023) found that financial literacy is important in influencing MSME performance through financial inclusion. People who have good financial knowledge will easily to get access in financial services, thereby developing MSMEs performance. Moreover, Asandimitra et al (2024) found that it is important to improve MSME performance with financial literacy for female MSME thorugh openness, efficiency, accuracy, and responsibility in making decisions that lead to success in the market.

Financial literacy can affect financial attitudes, financial behavior, organizational capabilitues and MSME performance (Graña-Alvarez et al., 2024). Indeed, there is relationship between financial literacy and personal characteristics of MSME in order to making a decision. The level of financial literacy possessed by MSME players can influence financial decision related to managing financial resources, choosing the right investment vehicles, allocating funds appropriately, and being aware of growth funding options that can improve business performance (Agyei, 2018). This will be implemented in financial decisions regarding savings, investment and loans (Biswas & Gupta, 2021). In line with Yakob et al (2021) found that financial literacy can improve MSME performance through decision making, especially related to business finance. Moreover, MSMEs can benefit from accurate financial decision in a number of ways, such as lower administrative costs, cost-benefit analysis, employee turnover, profitable investment, and less internal conflict. This will encourage MSMEs to be able to increase sales and profits by improving MSME performance. Sanistasya et al (2019) found that financial literacy helps business owners with increased financial knowledge and skill which is very useful for them to make a business plans, evaluate financial plans, and make strategic investment decision so that it has an impact on increasing productivity, competitive advantage, business expansion, and profitability of MSMEs.

Li et al (2024) found that financial literacy can influence the relationship between digital transformation and improving MSME performance. MSME with high financial literacy are able to diversify assets based on risk management strategies and digital transformation provides flexibility for MSME to apply the right method in expanding market reach and increasing management efficiency which has an impact on improving MSME performance so that it can increase profitability. One way to improve financial literacy is using information technology (Rizkan et al., 2022). It is important to improve digital literacy on MSMEs performance particularly for women. Digital literacy is not only able to improve entrepreneurial behavior but also encourage the development of MSMEs (Sunuantari et al., 2021; Bai et al., 2023). Simplify that digital literacy is the capacity to properly access, comprehend, and use digital technology (Mishra et al., 2024). It is importance to conduct digital literacy training for MSME in order to encourage the transfer of knowledge through learning and skills development and foster self-confidence in the use of digital technology (Ollerenshaw et al., 2021). Unfortunately, the level of digital literacy of women is lower than men. It is contributes by several factors such as: low levels of education, lack of skills, lack of facilities, and the influence of patriarchal culture (Suwana & Lily, 2017). The impact of digital literacy in business performance is both positive and substantial. The performance capabilities of MSME actors must be enhanced by converting their commercial operations into digital enterprises. It can increase operational efficiency, expand market access, encourage innovation in goods and services, and enhance consumer communication. To thrive in the digital era, one must possess digital literacy (Novela et al., 2024).

In order to boost innovation in corporate process, from marketing to production, a digital system must be implemented. This will raise sales outcomes, which will ultimately boost MSMEs performance and revenue (Frimpong et al., 2022). In line with Ramanathan et al (2012) describes that adopting e-commerce has helped MSMEs to improve marketing better. However, the use of the digital system is greatly influenced by the digital literacy skills possessed by MSMEs . Moreover, the digital literacy skills possessed by MSME can be a driving force for digital transformation in the MSME (Zahoor et al., 2023). Those with high digital skills are able to create creative ideas and innovations thereby improving performance effectively and efficiently. Therefore, MSMEs need digital literacy in order to gain competitive advantage which in turn can improve MSME performance after adopting technology (Raharjo et al., 2024).

The low level of financial literacy and digital literacy for women not only hinder women's empowerment in the economic sector but also related to financial resilience. Digital and financial literacy are needed to dealing with unexpected circumstances and also encourage inclusiveness and financial resilience. Indeed, the relationship between financial literacy and digital literacy on financial practices were able to build financial resilience, such as risk management, borrowing, and savings. Moreover, women who participate in the MSME needs to balance digital financial literacy skills in order to understand and able to choose digital financial products that can improve business performance. This encourages MSMEs to have a good understanding of digital literacy to make it easier for them to carry out financial transactions and make it easier to get business capital (Ratnawati & Soelton, 2022). Nevertheless, financial literacy is important to adopting the financial digital product such as digital credit. Digital credit can help people in the low income country who have difficult access for funding to expand their business. One of the barriers to adopt financial digital product is the lack of product knowledge/awareness (Sarfo et al., 2023).

Thus, digital literacy plays a moderating role in the relationship between financial literacy and MSMEs performance. MSME players who have good digital literacy are able to utilize digital financial products such as savings, loan, non-cash transfers, etc. This has an impact on increasing the efficiency and effectiveness of MSME performace. However, the use of digital financial service cannot be done wisely without good financial literacy skills. In addition, digital literacy skills are not only used to access digital financial products but also to expand market share through modern marketing via online marketing. There are few previous studies that discuss the role of financial literacy and digital literacy on women's empowerment in MSME sector. In addition, there has been no previous research that uses digital literacy moderation that explains the influence of the relationship between financial literacy and the performance of female intrepreneurs. Thus, the novelty is empirical evidence from this study can contribute to business literacy and be used as a reference for utilizing digital literacy to improve the performace of MSMEs's female.

3. Method

The population in this study were female entrepreneurs in Sorong Regency, Southwest Papua. The sampling technique used a non-probability sampling method with a purposive sampling technique. Purposive sampling is a sampling technique based on certain criteria which is female in MSME sector, using social media for her business, and located in Sorong Regency. This population of female's MSMEs in Sorong Regency is unknown, thereby this research determine the sample size are 100 individuals based on Lemeshoow formula with 10% error sampling. This study collected data using a survey method in the form of a quesstionnaire that would be distributed to respondents directly. The questionnaire contains about understanding of financial literacy, digital literacy, and the performance of female entrepreneurs in the MSME sector. These questionnaire uses a likert scale within range 1 to 4.

This study attempts to estimate the relationship between exogeneous latent variables and endogeneous latent variables. The endogeneous latent variable is women MSMEs performance. To Assess the women MSMEs performance, the researcher referred to the validate measurement by Ramanathan et al (2012). There are indicators for measuring women MSMEs performance including sales growth, customer base, customer satisfaction, process enhancement, and competitive advantage. The exogenous latent variable is financial literacy which is measurement conducted by Chiam (2018). There are 3 indicators of financial literacy consist of financial knowledge, financial behavior, and financial attituted The moderating variable uses digital literacy with 2 indicator namely cellphone use and proficiency.

This study estimate with Structural-Equation Model and Partial Least Square (SEM-PLS). This study used the SmartPLS 4 as tool analysis. The research conduct by using SEM-PLS bacause its advantages of being able to combine two analysis techniques, namely multivariate factor analysis and multiple regression analysis. Moreover, it has ability to handle small sample sizes (Hair et al., 2017). The first step is testing outer model. the data is valid if the Average Variance Extracted (AVE) value more than 7 of outer loadings but the value is 0.5-0.7 is still acceptable especially in the early research stage whilst the data is reliable if the value of Cronbach alpha and composite reliability is 0.7 respectively but the value is 0.6 still acceptable. The next step is doing dicriminant validity based on Fornel-Larcker. After the outer model was tested, this research will conduct inner model analysisi by analysing R^2 determination and path coefficient. The degree to which the exogenous variables in the model can account for the endogeneous variable which is shown by R^2. The last step is to test whether these hypothesis based on the constructed model satisfies the requirements for testing the measurement model and structural model.

4. Results and Discussion

SEM-PLS analysis, validity and reliability testing is important in order to asess the quality of measurement instrument and model accuracy. The AVE values indicates convergent validity which referes to how well the indicators are measured theoritically under the same construct. The data is valid if the AVE value is greater than 0.7 but if the AVE is 0.5-0.7 still acceptable. Moreover, the AVE value does not have sufficient validity when the value is lower than 0.5, thereby it is consider to remove with low loading or merging constructs (Hair et al., 2017). The higher outer loading value leads to higher the AVE value. It shows that these indicators consistently measure the same construct.

Table 1. Outer Loading, Reliability, and Validity Constructs

Construct	Item	Loading	Cronbach's Alpha	Composite Reliability	AVE
Y1.1	Y1.1	0.690			
Y1.2	Y1.2	0.710			
Y1.3	Y1.3	0.739	0.695	0.812	0.520
Y1.4	Y1.4	0.703			
Y1.5	Y1.5	0.361			
X1.1	X1.1	0.443			
X1.2	X1.2	0.825	0.600	0.833	0.714
X1.3	X1.3	0.840			
Z1.1	Z1.1	0.925	0.803	0.863	0.761
Z1.2	Z1.2	0.817			

Source: data processed

The composite reliability (CR) is also used to measure the reliability of latent variable in SEM-PLS. CR is used to evaluate the reliablity of latent construct by calculating how indicator consistently measured the same concept. CR calculates internal consistency based on the weight or outer loading value of each construct indicator. If CR more than 0.7 then the reliability is sufficitent. However, the CR value between 0.6 and 0.7 are acceptable for early stage research development (Puspitowati & Royhard, 2024). Table 1 explains that AVE value is 0.520, financial literacy is 0.714, and digital literacy is 0.761. The Cronbach's Alpha is 0.695, financial literacy is 0.600, and digital literacy is 0.699. While the composite reliability of MSMEs performance is 0.812, financial literacy is 0.833 and digital literacy is 0.863. overall, the AVE value of these variables are more than 0.5 which refers to sufficient convergent validity. Cronbach's alpha value is more than 0.6 and it is still acceptable. Thus, the composite reliability value for all variables is more than 0.7 which proves that all variables have consistency.

In SEM-PLS, discriminant validity indicates how difference a contruct into other costruct in the model. In order each concept measures only a specific component of the phenomenin being studied, discriminant validity ensures that theoritically disticnt constructs do not overlap. In other words, a construct cannot be too similar to other constructs within the same model. the method for testing discriminant validity consists of 2, namely the Fornell-Larcker Criterion and the Heterotrait-Monotrait Ratio (HTMT). The square root of AVE of each construct must be higher than the correlation between the two by using Fornell-Larcker Criterion. The amount of item variance that can be explainned by the construct is indicated by AVE. Discriminant validity is acceptable when the square rrot of AVE

higher than its correlation with other construct which is indicate that the construct is different from the others (Frimpong et al., 2022).

Table 2. Fornell-Lacker Criterion

Variable	Firm Performance (Y)	Financial Literacy (X)	Digital Literacy (Z)
Dig_Lit (Z)	0.872		
Fin_Lit (X)	0.374	0.845	
Firm_Perf (Y)	0.567	0.370	0.721

Source: data processed

Table 2 shows that the square root of AVE is displayed on the diagonal and the correlation value between variables is displayed outside the diagonal. In the digital literacy, the AVE square root is 0.872, where this value is more correlated with financial literacy of 0.374 and MSME performance of 0.567. These results indicate that digital literacy has good discriminant validity because it is closer to its own indicator than other construct. Then the financial literacy variable has an AVE square root value of 0.845, which is greater than its correlation with digital literacy of 0.374 and MSE performance of 0.370. The results show that financial literacy variable has a good discriminant validity. Moreover, the MSMEperformance variable has a square root of 0.721, which is greater than its correlation with financial literacy of 370 and digital literacy of 0.567. the results show that MSME performance has good discriminant validity.

According to the Fornell-Larcker analysis, each variable satisfies the criterion for discriminant validity. This demonstrates that each construct in the model has a strong association with its own indicator than it does with other variables, allowing each construct to be viewed as a unique and independent entity. HTMT is a more sensitive method for evaluating discriminat validity. HTMT is calculated by comparing the average correlation between items on the same construct (monotrait) and items on distinct constructs (heterotraits). In general, HTMT score below 0.85 are regarded as meeting discriminant validity.

Table 3. Heterotrait-Monotrait Ratio (HTMT)

Variable	Firm Performance (Y)	Financial Literacy (X)	Digital Literacy (Z)
Dig_Lit (Z)			
Fin_Lit (X)	0.385		
Firm_Perf (Y)	0.531	0.394	

Source: data processed

Table 3 shows there is an HTMT value of 0.764 between MSME performance and digital literacy, 0.567 between MSME performance and financial literacy, and 0.555 between digital literacy and financial literacy. All of the construct pairs in this model have HTMT values below 0.85, which suggests that the three constructs have discriminant validity. The distinctive and distinct assessments of digital literacy, financial literacy and company performance all contribute to the measurement integrity of the model.

Table 4. Outer Variance Inflation Factors (VIF) Values

Variable	VIF
X1.2	1.224
X1.3	1.224
Y1.1	1.310
Y1.2	1.386
Y1.3	1.245
Y1.4	1.336
Z1.1	1.407
Z1.2	1.407

Source: data processed

VIF is used to find potential multicollinearity amongst indicators within a construct. High levels of multicollinearity shows the indicators are too similar leads to model stability. Evaluating multicollinearity among the variables are on the table above. A possible collinearity issue is indicated by tolerance value ≤ 20 and VIF value ≥ 5, respectively (Frimpong et al., 2022). When a VIF Value is greater than 3.3, it indicates pathological collinearity and suggests that a model moght be tainted by common method bias. Therefore, if all of the VIF produced by an extensive collinearity test are equal

to or less than 3.3., the model is free of both common method bias and vertical and lateral collinearity (Frimpong et al., 2022). Table 4 shows each construct do not exhibit excessive correlation as a result of these low values, suggesting that the measurements of each indicator within the construct are fairly independent of one another. The collinearity validity results show that this model does not have multicollinearity issues because the indicators do not overlap excessively. This suggests that developed SEM-PLS model is both structurally sound and stable.

Structural models with coefficients of determination (R^2) consist of 0.025, 0.500, and 0.750 are deemed weak, moderate, and significant respectively (Hair et al., 2017). Table 5 shows that the digital literacy variable has an R square 0.140, where the variance of digital literacy can be explained by the financial literacy variable. In other words, the model's capacity to explain variation in the digital literacy construct is relatively low. The model is stable but R square 0.132, which displays the value after being adjusted for sample size and number of predictors, indicates that the model is stable, albeit the difference is quite small. Within the R square of 0.350, the independent variables explain around 35% of the variation in firm performance. A good degree of predictability is indicated by model's ability to sufficientlt explain the variation in the firm performance construct. An adjusted R square of 0.338 indicates that the sample and number of predictors in the model have been taken into consideration. The model appears to be reasonably stable, though, as the adjustment is little. Even the r square is quite small but it is still acceptable when some or most of the explanatory variables statistically significant. However, if the r quare is low and the all of the explanatory variables insignificant so it would be rejected (Ozili, 2023).

Table 5. Result of R-Square

Variable	R-Square	Adjusted R-Square
Dig_Lit (Z)	0.140	0.132
Firm_Perf (Y)	0.350	0.338

Source: data processed

The path coefficient value is between -1 and + 1. If it is greater than zero, the effect is positive and if it is less than zero, the effect is negative. In conclusion, hypothesis testing indicates that the hypothesis will be accepted if the t-statistics value is greater than 1.96 and p-value is less than 0.05. the cutoff value for t-statistics is 1.96 and p-values are 0.05. Furthermore, if the p values are greater than 0.05 and the t-statistics value is less than 1.96 so the hypothesis will not be accepted (Puspitowati & Royhard, 2024). Table 6 shows the original sample value was 0.498, indicating that digital literacy has a quite strong positive impact on MSME performance. This clarifies how rising digital literacy might affect enhancing business effectiveness. It is supported by Novela et al (2024) that digital literacy positively affects the development of MSMEs through revenue growth, profitability, market share, and customer satisfaction. A very statistically significant influence is indicated by T statistic value greater than 1.97 and P value less than 0.001. To put in another way, the model claims that MSME performance can be impacted by digital literacy.

Table 6. Result of Path Regression

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics	P-Values
Dig_Lit (Z) à Firm_Perf (Y)	0.498	0.501	0.109	4.589	0.000
Fin_Lit (X) à Dig_Lit (Z)	0.374	0.382	0.132	2.835	0.002
Fin_Lit (X) à Firm_Perf (Y)	0.183	0.194	0.095	1.932	0.027

Source: data processed

Financial literacy initial sample value on digital literacy was 0.374. It shows that raising financial literacy can help raise digital literacy. A statistically significant link is indicated by T statistic value greater than 1.96 but P value of 0.002, which is less than 0.05. These findings clarify how digital literacy can be significantly impacted by financial literacy. The T statistic value is 1.93 indicating below the threshold 1.96, so it is not significant whilst P value is 0,027 which smaller than 0.05. It shows that financial literacy is not significantly affecting MSME performance. Table 7 shows financial literacy has a beneficial indirect impact on MSME performance. This can be proven by the

original sample value is 0.186. This demonstrate that raising financial literacy helps to improve financial performance through the mediation of digital literacy. A statistically significant effect is indicated by the T statistic value of 2.430, which is higher than 1.96 and P value of 0.008, which is lower than 0.10. As a result, digital literacy mediates the relationship between MSME performance and financual literacy. It is imply raising financial literacy may boost business performance, particularly when digital literacy rises as well.

Table 7. Result of Specific Indirect Effect

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T-Statistics	P-Values
Fin_Lit (X) à Dig_Lit (Z) à Firm_Perf (Y)	0.186	0.191	0.077	2.430	0.008

Source: data processed

Based on Path regression (Table 6) shows financial literacy has positive and significantly effect towards digital literacy by females' MSME. Those who have good financial literacy are able to understand the various financial products and services. With the rapid advancement of technology, all financial products and services are now offered digitally. It is in line with Sarfo et al (2023) that financial literacy can increase the awareness of financial digital product. Women who have lower financial literacy and limited access to formal credit so they prefer to get some funding from informal peer-to-peer landing institution. In contrast, women who have good financial literacy prefer to get some funding such as digital credit serviced by formal peer-to-peer landing institution. Moreover, financial technology (fintech) has encouraged individuals to use financial products and services easier and faster. Furthermore, the emergence of fintech has prompted females' MSME to enhance their digital literacy abilities in order to be able to implement digital transformation for the growth of their firms (Zahoor et al., 2023). It encourage some firms to implement non-cash payment in order to make it easier for customers to pay and also entrepreneurs to have automatic sales records from these non-cash payment.

Literacy digital has positive and significantly affecting MSMEs performance. it is in line with Novela et al (2024) that digital literacy has an positive and siginificantly effecting business performance. Digital literacy can influence entrepreneurs bahavior and it will encourage them to transform their business into digital (Bai et al., 2023). Thus, it needs for women to improve the digital literacy. The performance of women MSMEs may be impacted by the highly beneficial influence of digital literacy. This due to the fact that they can advertise their business using digital platforms like facebook, instagram, and whatsapp. It is supported by Frimpong et al (2022) and Ramanathan et al (2012) who highlighted the value of innovation by implementing digital technologies in the marketing and production procesess in order to get wider market share through the usage of information technology and internet. Moreover, digital literacy affecting entrepreneur bahavior. Additionally, the usage of financial technology in carrying our various MSME operations, particularly online, is more impacted by increasing levels of digital literacy, which might improve MSME performance.

Enhancing womens MSMEs performance requires financial literacy. Particularly when it comes to risk mitigation and financial management, financial literacy is regarded as crucial. Nevertheless, this study discovered that financial literacy doest not significantly affect MSMEs. These results are in contrast with Yakob et al (2021) and Sanistasya et al (2019) found that financial literacy had an influence on MSME performance. This consistent with Tubastuvi & Purwidianti (2023) discovered no relationship between financial literacy and MSME performance. These effects particularly in the district which is still have very little financial literacy. Information about financial services and goods is more widely dispersed in metropolitan regions compared to district. This is influenced by the lack of socialization related to the introduction of available financial products and services. Moreover, they only use financial digital for payment not manage business finance such as funding cash-transaction, payment, and others (Mangawing et al., 2023).

However, digital literacy is able to moderate the relationship between financial literacy and MSME performance positively and significantly. Financial literacy helps entrepreneurs to aware and understand the digital financial products. While digital literacy is also used to be able to use digital financial products. This demonstrates how financial literacy abilities can help women MSMEs gain access to digital financial products, such digital finance, which can boost productivity and enhance

MSME performance. Strong financial literacy abilities can also help women MSMEs manage risks by diversifying their firms assets and create strategic financial and marketing plans (Li et al., 2024).

5. Conclusion

The increasing number of women working in the informal sector compared to the formal sector, especially MSMEs, has encouraged women to be able to improve their financial literacy and digital literacy skills in increasing business growth, namely MSME performance. This refers to the low level of financial literacy and digital skills possessed by women. Financial literacy refers to financial knowledge, attitudes, and behavior whilst digital literacy refers to the ability to use technology in various activities. The results show that financial literacy can improve MSMEs' performance but it is not significant. This is influenced by the lack of ability of women MSMEs in making financial planning as a basis for seing the growth and development of a business. This can be overcome by increasing the ability to use technology through digital literacy. Digital literacy, which is a moderation of the relationship between financial literacy and MSMEs' performance, has positive and significant effect. In addition, financial literacy can improve digital literacy and also digital literacy has an effect on improving MSME performance. Increasing financial literacy raises awareness and encouragement for women MSMEs to be able to implement digital system in their business so that effective and efficient performance is realized in order to increase business profitability. In addition, the use of digital can have an impact on expanding market share which has an impact on increasing business activity.

However, the low level of financial literacy for women MSMEs is a challenge to overcome the obstacles that limit their ability to improve their financial literacy. The researcher suggests that there is a need for government support to improve financial literacy, especially for women MSMEs. The government and private sector, such as formal financial institutions, need to collaborate in the form of socialization related to digital financial products and assistance to women MSMEs in accessing digital financial products in order to increase the level of financial literacy and improve the business performance of women MSMEs. The limitation in this study is the low of influence of the moderating variable effecting financial literacy on the performance of women MSMEs. Further researchers are expected to explore other variables that can strengthen the relationship between financial literacy and women MSMEs performance. In addition, it is expected to explore additional exogeneous latent variables that can strengthen the performance of women MSMEs.

Acknowledgment

We are thankful to Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) already provide financing fo this research through Directorate of Research, Technology, and Community Service (DRTPM) Directorate General of Higher Education, Research, and Technology (Ditjen Diktiristek).

Declarations

Author contribution	:	All authors contributed equally to main contributor to this paper. All authors read and approved the final paper.
Funding statement	:	The authors disclosed received of the following financial support for the research by Decree 069/E5/PG.02.00/PLBATCH.2/2024.
Conflict of interest	:	The author declares no conflict of interest.
Additional information	:	No additional information is available for this paper.

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