

# Elissa Dwi Lestari

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*Women-owned small businesses are crucial to the Indonesian economy. Despite this contribution, women entrepreneurs face many challenges when building their businesses, especially getting business loans. Women entrepreneurs adopt less technology and have less financial expertise than men. This study aims to determine financial literacy factors affecting women SMEs' business success and the extent of financial technology (FinTech) use as an alternative funding source to formal financial institutions. The study examines FinTech adoption using the Unified Theory of Acceptance and Use of Technology (UTAUT Theory). This study also examines how FinTech adoption mediates the indirect effect of financial literacy on SME business performance. The study uses a quantitative research approach using a judgmental sample of 270 women entrepreneurs who have previously used FinTech. The data is analyzed with SEM-PLS. According to the study, effort expectancy, performance expectancy, and social influence all have a beneficial impact on FinTech adoption among women-owned small businesses. The survey found that FinTech adoption was a key factor influencing women SMEs' business performance. The findings also indicate that financial literacy has a beneficial effect on business success. The study reveals FinTech adoption as a mediating factor in the association between financial literacy and SMEs business success. As a result, our findings contribute to a better understanding of how digital technology adoption affects SMEs' performance and long-term sustainability. The findings offer insights for entrepreneurs, policymakers, and company owners looking to enhance the survival rate of SMEs by improving operations and harnessing digital technology to promote capital accessibility, FinTech adoption, and financial literacy*

*Keywords: UTAUT Theory, financial literacy, FinTech adoption, business performance*

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# DEVELOPMENT OF FINANCIAL LITERACY AND FINTECH ADOPTION ON WOMEN SMEs BUSINESS PERFORMANCE IN INDONESIA

Florentina Kurniasari

Corresponding author

Doctor of Economics, Associate Professor  
Department of Technology Management\*

E-mail: florentina@umn.ac.id

Elissa Dwi Lestari

Master in Science Management, Senior  
Entrepreneurship Lecturer  
Department of Management\*\*Universitas Multimedia Nusantara  
Scientia Boulevard str., Tangerang,  
Banten, Indonesia, 15111

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## 1. Introduction

Small and medium-sized enterprises (SMEs) become the country's economic backbone and offer additional income for millions of housewives in Indonesia. Over 37 million SMEs in Indonesia (57 %) are managed by women and contribute more than 29.1 % of the country's GDP. Women entrepreneurs play an essential multiple role as housewives in the family and manage a household business to support the family's economic welfare [1]. Despite having a major contribution to the economy, in fact, women in Indonesia face barriers, including the socio-cultural environment, to undertaking business activities [2]. This leads to business instability and greater failure rates. More than 30 % of women SMEs fail in the two years of operation and more than 50 % experience failure in the first year of their establishments. In the context of women SMEs, failures were mostly caused by obstacles such as poor business performance, limited access to capital [1], insufficient financial knowledge [3], unprofessional management system and incapable ICT usage [4].

From the business performance side, previous research has shown that most women have higher vulnerability and failure rates than men [2] due to the length of the business as well as the average size of a smaller business than men [5]. Moreover, funding became one of the obstacles faced by women SMEs in achieving the greatest business performance [6]. Funding is

needed to broaden the market, maintain business operations, create innovative products and fulfill customer needs and wants [7]. The lack of funds and insufficient financial literacy hinder the progress of female entrepreneurs. This is a challenge for them to fully engage in the contemporary economy as they lack the means to get the necessary financial services, especially from banking institutions. Female entrepreneurs face significant challenges in obtaining financing due to lower levels of education and less collateral security, which puts them at a disadvantage compared to their male counterparts. A survey conducted by the Financial Services Authority showed that the women's financial inclusion index was 83.88 % lower than the men's 86.28 % [8]. The Indonesian Financial Literacy and Inclusion Index National Survey in 2022 also showed that the financial literacy index of SMEs is still 45.93 %, which is lower than the financial inclusion index, reaching 85.10 % [8]. In other words, the level of financial literacy of women in Indonesia is still low compared to men, whereas financial literacy [9], being one of the knowledge that should be possessed by women, will open up the opportunity to establish good relations with financial institutions to gain access to financial facilities, including funding, payments and other means.

The research [3] showed that one of the strategies for developing women's entrepreneurship is through increased knowledge of skills (technical know-how) as well as technological skills [4] in running a business. Technology advance-

ment, which is shown in the number of smartphone users in Indonesia, has grown up tremendously. The country's smartphone penetration rate reached 61.8 % of the total population. As one of the largest mobile markets in Asia, the current number of smartphone users is 187.6 million people, and this will lead to more than 270 million people having Internet access in 2028 [8]. Success in running this business through maximizing smartphone usage will motivate women to grow their business and expand to the wider market.

The research [5] found that the sustainability of women SMEs is related to the ability to respond to any technological advancement that changes the financial business model [7]. The growth of FinTech assists SMEs in managing their business efficiently since the new platform offers various financial services, including payment, sales and lending services.

Another study proposed the urgent need to increase the capacity of women SMEs in adopting the new technology [10]. Adopting technology allows SMEs to build their competencies in making decisions to increase their business performance. Even though the digitalization of financial services in Indonesia blossomed reaching US\$20.7 billion in 2021, only 26 % of SMEs joined in the financial ecosystem.

Performance expectancy is a technological aspect that affects digital adoption. The study [11] concluded that application adoption is positively impacted by performance expectancy. The positive effect of performance expectancy on digital adoption is contributed by additional research [10]. Performance expectation occurs when a user prioritizes ease of use while choosing which technology or tool to utilize. Users will undoubtedly select technology or applications that make their life easier, according to usage patterns [4].

Aside from the benefits and easiness to use of the new platform, social influence also plays an important role in financial technology (FinTech) adoption. Research carried out by [12] showed that social networking of the closest people, both family and friends, friends and social environment, promotes women's economic empowerment. Women entrepreneurs are charged with conducting their business professionally while not abandoning their domestic responsibilities as housewives in the family. Therefore, marital status, age, number of dependents and education will affect the success of the SMEs business carried out by women [1].

Financial literacy is essential for SMEs to perform better, as many studies have shown [13]. However, a deeper theoretical understanding of this link is required. The subsequent use of financial technology (FinTech) mediates the relationship between financial literacy and the success of SMEs business in Indonesia. Relatively few studies have been conducted on the business performance of SMEs, their use of contemporary digital technologies and their financial literacy, particularly with reference to women SMEs business in Indonesia.

The uniqueness of this study is the focus on women SMEs involved in traditional retail business in Indonesia. The traditional retail business contributes more than 75 % of total retail sales in Indonesia with the estimated average revenue reaching US\$71.64 billion per year in 2021 [8].

Therefore, studies on business performance in the retail industry are of scientific relevance to women SMEs sustainability.

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## 2. Literature review and problem statement

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The paper [11] presents the results of the concept of the Unified Theory of Acceptance and Use of Technolo-

gy (UTAUT Theory) in measuring the adoption of new technology. The study described that the level of adoption was determined by three main factors, namely: effort expectancy, performance expectancy and social influence.

The willingness of SMEs to adopt a new FinTech platform is related to the level of effort in using the new technology. Effort expectancy is usually related with the individual's belief that adopting a new FinTech platform will require less effort due to easy and understandable usage [11]. The research [14] mentioned that if the FinTech provider gives easier-to-use features, it will more attract potential women traders to adopt the product [1]. Unlike conventional banks, FinTech usually offers simple procedures in registering a new account or proposing a loan [15]. All documentation and screening process is conducted digitally without the need to go to the bank [6]. The simplicity of FinTech platforms has proven more appealing to many SMEs actors in Indonesia [8]. The previous study [4] found a relationship between the adaptation of a new FinTech platform and the concept of effort expectancy. [14] mentioned that effort expectancy significantly influences FinTech adoption, meaning that less effort will bring more FinTech adoption. Although; many FinTech platforms offer simpler features, women entrepreneurs in Indonesia still have difficulties and reluctance in adopting the new technology. All this suggests that it is advisable to conduct a study on determining the effort expectancy factor that will increase the adoption level of FinTech technology by women entrepreneurs.

Another factor of UTAUT Theory influencing the adoption of new technology is the ability to offer better performance, which is well-known as performance expectancy [11]. Performance expectancy was often explained by the capability of the new system in settling tasks in a speedier time to enlarge the business scale [14]. Performance expectancy is proven in increasing business efficiency and to the extent to which employing technology is thought to improve performance [16]. In the context of FinTech adoption, this relates to how graduates perceive the benefits of digital payment in enhancing their financial transaction convenience [17]. The positive influence of performance expectancy in e-crowdfunding platforms to access financial resources is found in [7]. Although the adoption rates of FinTech technologies are significantly influenced by a strong belief that these technologies will improve financial and business performance [1], many women SMEs in Indonesia are not aware of these substantial benefits [8]. Therefore, a study on increasing the willingness of women entrepreneurs in adopting technology is needed ensuring the excellent performance expectancy and benefits of the new technology.

The vital factor of UTAUT Theory affecting the adoption of FinTech in Indonesia is social influence, which refers to the women traders' perception of others' opinions before acting in a specific way [12]. It also relates to the extent to which people think they should utilize a specific technology because friends, families and social networks think so [1]. The research [2] found that social influence can have a large impact on a person's decision to employ FinTech solutions in the context of adoption. Positive recommendations can encourage women SMEs to adopt FinTech services. Seeing relatives and closest friends using FinTech platforms can create a sense of social proof and reduce barriers to adoption [1]. In addition, endorsement from popular influencers can also impact FinTech adoption. In conclusion, social influence shapes views through recommendations, social proof, in-



fluencer endorsements, and established social norms have a substantial impact on FinTech adoption [4]. Although encouragement from positive social influence can lead people to utilize FinTech platforms that they might not have otherwise thought about, there is still a need for further analysis in the context of women SMEs in Indonesia. The previous study [18] mentioned that financial behavior is highly influenced by the opinions of trusted persons, including family and friends. Even though the rise of the Internet made financial information widely available through social media, most women traders still rely on the recommendations of their surroundings before using FinTech services, especially if it is related to their businesses [7]. Analyzing the role of social networking is needed as the focus of this study in measuring the level of ICT adoption in women SMEs.

A determinant factor in FinTech adoption is the women traders' skills, abilities and financial knowledge, which are necessary for financial decision-making [18]. Financial literacy relates to individual competencies in understanding financial information and data [9]. Financial literacy is needed in managing business performance by creating a financial strategy to increase sales and reduce costs [5]. The term of financial literacy describes individual knowledge of complex financial concepts [14]. The study [18] mentioned that higher financial literacy supports FinTech adoption by providing people with the knowledge needed to understand, evaluate, and effectively use FinTech tools. Financial literacy reduces the perceived complexity of these new technologies and enhances people's confidence in implementing them into their daily financial practices [17]. According to [8], the financial literacy index in Indonesia is still low compared with other emerging countries. For women business SMEs, acquiring financial literacy is a must since it will assist them in managing daily business transactions, controlling production costs, and preparing business plans to attract business investors [18]. This study is expected to resolve the urgent problems for women SMEs in acquiring financial literacy since it will bring more confidence in using FinTech more skillfully and improve understanding of the benefits of FinTech solutions [4].

For SMEs, FinTech adoption assists them in proposed financing and having loans from financial technology providers. They just need to download and fill the application online [4]. FinTech adoption increases the efficiency of business processes, reduces unnecessary costs and strengthens business performance [18]. Various studies found that the rise of FinTech in many countries brings many advantages for its accessibility [4]. According to [10], FinTech platforms become famous among users for their efficiency and lower cost. Registering a FinTech platform is easy and only requires simple administrative documentation [14]. The paper [3] presents that FinTech platforms provide various services suitable for various industries, including payment, insurance, banking, lending and wealth management system [5]. Many scholars believe that the rise of FinTech is also due to the higher penetration level of Internet users [4]. However, there are unresolved issues related to the low level of digital adoption in SMEs. Therefore, there is an urgency to increase SMEs' trust in using the technology to expand their businesses.

SMEs business performance is measured by financial and non-financial performance. SMEs business performance will show sustainability and growth prospects in the future [17].

Strong business performance is indicated by effective cash flow management and debt repayment capabilities [6]. This business performance is reflected in financial reports in specific financial ratios, such as profitability, solvency, liquidity and valuation [13]. These financial ratios and their analysis will be reflected in good corporate governance in business operations [13]. Several studies found a significant relationship between SMEs' capabilities in adopting the new digital technology platform and their business performance [17].

Even though FinTech adoption is proven to increase business performance in various large-scale industries, research in the context of SMEs is limited. This study offers a strategic approach to analyzing the SMEs business performance, especially in the context of women entrepreneurs in Indonesia by focusing more on digitalization. Many studies have explored some constructs in analyzing the SMEs business performance [5]. But research on analyzing the mediation of FinTech adoption in the relationship between UTAUT Theory and financial literacy is limited. In addition, there is a lack of research analyzing these relationships in the context of women entrepreneurs in the traditional market. So, this study considers some dimensions, such as effort expectancy, performance expectancy and social influence recommended by [11], as the factors of UTAUT theory that affect FinTech adoption. The financial literacy dimension is added with the consideration that women traders are less educated in their role as housewives in the family. Taking advantage of digitalization in FinTech is expected to help women entrepreneurs increase their SMEs business performance. To enhance women SMEs business performance, researchers recommend the mediation model of FinTech adoption in the relationship between women's financial literacy and their business performance. There are unresolved issues related to implementing the UTAUT theory in the context of financial technology (FinTech) industries. The reasons for this are that the financial industry is heavily related to trust and security issues. All this suggests that it is expedient to conduct a study on the financial behavior of women entrepreneurs in SMEs business in Indonesia.

### 3. The aim and objectives of the study

The aim of the study is to unlock FinTech adoption in women business SMEs using the UTAUT theory and financial literacy to improve business performance.

To achieve this aim, the following objectives are accomplished:

- to study the effect of Effort Expectancy, Performance Expectancy and Social Influence on FinTech adoption in women business SMEs;
- to study the effect of Financial Literacy on FinTech adoption in women business SMEs;
- to study the effect of FinTech adoption and Financial Literacy on women SMEs business performance;
- to study the effect of Financial Literacy on women SMEs business performance with FinTech adoption as a mediating variable.

### 4. Materials and methods

The object of the study is women SMEs trading their products in the traditional market. There are 270 respon-

dents who answered the distributed questionnaires. The conclusive research design was chosen to test designated hypotheses in order to understand how financial literacy and FinTech adoption affected the SMEs strong business performance. The hypotheses were formulated to analyze the impact of effort and performance expectancy, social influence, financial literacy on FinTech adoption and business performance in the context of women SMEs in Tangerang region, Indonesia. FinTech adoption is considered to become a mediating variable in the relationship between financial literacy and SMEs business performance.

As a descriptive research, the study tried to analyze the relationship between exogenous and endogenous variables. Data collection through the survey method was conducted by distributing questionnaires directly to women traders in the traditional market.

Effort expectancy (EE) can be measured by three indicators, including: easiness to understand; simplicity and benefits to support the SMEs business [13]. Performance expectancy (PE) also had three indicators [13] related to the ability to finish the task quickly; help expand the business and avoid mistakes in using the digital platform. There are three indicators to measure social influence (SI), namely: having social media; asking closest friends or families before making financial decisions and making intensive communication with them about specific financial issues [13]. The financial literacy (FL) variable is indicated by the following six indicators [9]: the capabilities of women entrepreneurs in managing sales revenue; making appropriate financial decisions; using their financial knowledge to survive in a difficult business situation; increase business performance; expand the business and willing to spend money attending financial workshops. Moreover, the Financial technology adoption (FTA) variable is also measured with three indicators, as discussed in [3], and manifested in the readiness to download a FinTech platform and use the platform to propose the loan and get financing. Finally, the SMEs business performance (BF) is further explained by eight indicators [17], including: reduced operational costs; increased profit, market share, sales, return on investment (ROI) and customer satisfaction as well as the ability to respond promptly to customer orders by reducing the cycle time in delivery services.

This research is part of women's financial behavior toward new technology adoption considering the growing FinTech, especially the lending platform. The rise of digital technology allows women entrepreneurs to increase their financial knowledge and access diverse financial services available in the digital platform.

The study used the t-statistic and beta ( $\beta$ ) values in the path coefficient model to test the hypotheses. Beta coefficients explained the magnitude of the influence of each endogenous construct in the PLS structural model [19], showing that the higher the  $\beta$ -value, the greater the effect of endogenous latent construction variables. Meanwhile, the t-statistic test is implemented to confirm the variable's significance level [20]. The hypothesis is accepted if

the t-statistic value is more than 1.96 and the p-value is less than 0.05.

The study measured the effect size ( $f^2$ ) to understand the substantive significance of the relationship among variables [19] since the p-value can only indicate the existence of the effect but is not able to evaluate the significance of the effect. This study implemented both the p-value and  $f^2$  value for more detailed data and analysis [20]. The standard effect size  $f^2$  is 0.02, 0.15, and 0.35, indicating minor, medium, and substantial effects [19].

The study conducted a mediation analysis to evaluate the significance of the indirect effect [20]. The indirect significance value with a t-value > 1.96 and a p-value of 0.01 means the presence of a mediation relationship. In addition, if the 95 % Bootstrap Confidence Interval (CI) indirect effects did not encompass 0 within the range, this demonstrates the existence of a mediation relationship [19].

The study measured the consistency of internal reliability, discriminant validity, convergent validity of each indicator using the PLS model approach for all constructs [19]. The measurement of outer loadings and average variance extracted (AVE) is chosen to assess the relationship between the variables and their convergence [20]. The study also used Cronbach's alpha and composite reliability (CR) to measure each indicator's reliability. Furthermore, the study conducted the Heterotrait Monotrait testing (HTMT) to measure the validity between two constructs with the standard requirement < 0.90 [20].

## 5. Results of research on key determinant factors of business performance

### 5.1. Determinant factors of financial technology adoption on small medium enterprises

Research objective 1 aims to study the effect of Effort Expectancy, Performance Expectancy and Social Influence on FinTech adoption in women business SMEs, and the hypothesis result is described in Table 1.

Table 1

Hypothesis result for Research Objective 1

| RO No. | Research Objective   | Hypothesis  | Beta ( $\beta$ ) | T-Statistic | P-value | $f^2$ | Findings |
|--------|--|---|------------------|-------------|---------|-------|----------|
| RO 1   | To study the effect of Effort Expectancy, Performance Expectancy and Social Influence on FinTech adoption in women business SMEs | H1: Effort Expectancy significantly influences FinTech adoption in women business SMEs      | 0.251            | 4.104       | 0.000   | 0.250 | Accepted |
|        |  | H2: Performance Expectancy significantly influences FinTech adoption in women business SMEs | 0.188            | 2.906       | 0.001   | 0.188 | Accepted |
|        |  | H3: Social Influence significantly influences FinTech adoption in women business SMEs       | 0.263            | 4.137       | 0.000   | 0.266 | Accepted |

Table 1 found the significant and positive influence of effort expectancy, performance expectancy and social influence on FinTech adoption. Effort expectancy has a significant association with FinTech adoption ( $\beta$ -value=0.251, T-value=4.104. and p-value=0.000). Perfor-

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mance expectancy also has a significant relationship with FinTech adoption ( $\beta$ -value=0.188,  $t$ -value=2.906, and  $p$ -value=0.000). Social influence has a significant relationship with FinTech adoption as well with  $\beta$ -value=0.263,  $t$ -value=4.137, and  $p$ -value=0.000. It can be concluded that H1, H2, and H3 are accepted. The findings showed that all the variables of UTAUT theory had a medium effect on FinTech adoption with the  $f^2$  value of effort expectancy=0.250; the  $f^2$  value of performance expectancy=0.188 and the  $f^2$  value of social influence=0.266.

Table 1 shows that the three components of UTAUT (effort expectancy, performance expectancy and social influence) have a positive impact on FinTech adoption. Where effort expectancy has a positive influence on FinTech adoption (beta value=0.251), performance expectancy has a positive influence on FinTech adoption (beta value=0.188), and social influence has a positive effect on FinTech adoption in women-owned businesses (beta value=0.263). Therefore, the willingness of women entrepreneurs to adopt a new FinTech platform is highly determined by the factors of effort and performance expectancy as well as the influence of their social networking.

**5.2. Effect of financial literacy on financial technology adoption**

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Research Objective 2 is to study the effect of financial literacy on FinTech adoption among women business SMEs in Indonesia, and the hypothesis result is described in Table 2.

Hypothesis Result for Research Objective 2

| RO No. | Research Objective   | Hypothesis   | Beta ( $\beta$ ) | T-Statistic | P-value | $f^2$ | Findings |
|--------|--|--|------------------|-------------|---------|-------|----------|
| RO 2   | To study the effect of Financial Literacy on FinTech adoption in women business SMEs | H4: Financial Literacy positively influences FinTech adoption in women business SMEs | 0.199            | 3.126       | 0.001   | 0.200 | Accepted |

11

Table 2 found the significant effect of financial literacy on FinTech adoption in the context of women business SMEs. Financial literacy had a medium effect on FinTech adoption with the  $f^2$  value=0.200. The effect is also explained by the results of  $\beta$ -value=0.199,  $t$ -value=3.126, and  $p$ -value=0.001. Thus, it supported H4. Table 2 shows that the level of financial literacy has a positive influence on FinTech adoption ( $\beta$ -value=0.199). The adoption of new FinTech among women entrepreneurs is highly influenced by their financial literacy

and knowledge, which will lead to conformity in using the new technology.

**5.3. Effect of financial technology adoption and literacy on business performance**

The hypotheses testing result to answer Research Objective 3 is further explained in Table 3.

Table 3

Hypothesis Result for Research Objective 3

| RO No. | Research Objective  | Hypothesis  | Beta ( $\beta$ ) | T-Statistic | P-value | $f^2$ | Findings |
|--------|---|---|------------------|-------------|---------|-------|----------|
| RO 3   | To study the effect of FinTech adoption and Financial Literacy on women SMEs business performance | H5: FinTech adoption significantly influences the SMEs business performance   | 0.494            | 8.263       | 0.000   | 0.494 | Accepted |
|        |   | H6: Financial Literacy significantly influences the SMEs business performance | 0.238            | 3.727       | 0.000   | 0.240 | Accepted |

Based on Table 3, the hypotheses testing revealed that both FinTech Adoption and Financial Literacy had a significant effect on women SMEs business performance. FinTech adoption had a strong and substantial effect on SMEs business performance with the  $f^2$  value=0.494. The finding supported H5 since the effect of FinTech adoption on business performance had  $\beta$ -value=0.494,  $t$ -value=8.263 and  $p$ -value=0.000. In addition, women traders' financial literacy also had a positive effect on their business performance with  $\beta$ -value=0.238,  $t$ -value=3.727 and  $p$ -value=0.000 even though the effect is medium ( $f^2$  value=0.240). Finally, Table 3 shows that FinTech adoption (beta value=0.494) and financial literacy (beta value=0.238) have a positive influence on the business performance of women-owned SMEs. Table 3 also proved that SMEs business performance is influenced both by the success of women's FinTech adoption level as well as their financial literacy. Financial literacy helps women entrepreneurs use FinTech and believe that new technology will improve their business performance.

Table 2

**5.4. Technology adoption as a mediating variable of financial literacy and business performance**

Table 4 below describes the role of FinTech adoption as a mediating variable to correlate financial literacy and SMEs business performance. If the indirect relationship is significant, it means that there is a mediation effect among the variables.

Table 4

Hypothesis Result for Research Objective 4

| RO No. | Research Objective   | Hypothesis   | Beta ( $\beta$ ) | T-statistic | P-value | LL 95 % CI | UL 95 % CI | Findings |
|--------|--|--|------------------|-------------|---------|------------|------------|----------|
| RO 4   | To study the effect of Financial Literacy on women SMEs business performance with FinTech adoption as a mediating variable | H7: Financial Literacy significantly influences the SMEs business performance through FinTech Adoption | 0.099            | 2.957       | 0.002   | 0.047      | 0.155      | Accepted |

The research findings showed that the H7 hypothesis had significant indirect effects with the t-statistic value of 2.957 and significance p-value of 0.002. The mediation relationship is also shown by the 95 % Bootstrap Confidence Interval (CI) indirect effects value of 0.947 lower interval (LI) and 0.155 upper interval (UL). All direct and indirect relationships among financial literacy, FinTech adoption and SME business performance are positive and significant. Thus, it can be concluded that H7 is supported and there is a serial mediation relationship in this study.

Table 3 generalizes the role of FinTech adoption in mediating the relationship between women entrepreneurs' financial literacy and their business performance. The statistical value shows that with FinTech adoption as a mediating variable, the correlation between financial literacy and business performance is higher. This means the important role of FinTech adoption, especially as a response to technological advancement to increase the SMEs business performance. Financial literacy helps women entrepreneurs in choosing the right FinTech platform, which is more beneficial to improve their financial performance.

## 6. Discussion of the results of the study on the determinant factors of business performance

The study's findings in demographic profiling show that 87.4 % of the respondents are at a mature age with the range of 26–45 years, well-educated by graduating from at least High School (81.11 %) with daily sales of five hundred rupiahs to two million rupiahs (80 %). The majority of the respondents are familiar with the FinTech platform with 39.63 % using the platform daily and 54.81 % several times a week. The respondents are likely to use the platform due to its simplicity and convenience.

The study demonstrates the convergent validity of all UTAUT Theory constructs, with all AVE values > 0.50 [20]. The AVE value of each indicator is as follows: effort expectancy = 0.740; performance expectancy = 0.667; social influence = 0.660; FinTech adoption = 0.616; financial literacy = 0.676 and SMEs business performance = 0.564. During the test, all the indicators met the minimum requirements since the value of composite reliability and Cronbach's alpha > 0.70 [19]. The composite reliability value of each indicator shows that effort expectancy = 0.650; performance expectancy = 0.750; social influence = 0.743; FinTech adoption = 0.888; financial literacy = 0.862 and SMEs business performance = 0.900. Meanwhile, the HTMT value of each construct is < 0.90, with effort expectancy = 0.851; performance expectancy = 0.857; social influence = 0.854; FinTech adoption = 0.842; financial literacy = 0.760 and SMEs business performance = 0.871. This means all constructs are valid and have solid discriminant validity based on the HTMT ratio [20].

The study found the regression model, which supports the multicollinearity since VIF scores for each construct meet the minimum standard of less than 5.000 [20]. The correlation value of each construct with FinTech adoption is as follows: effort expectancy is 1.732; performance expectancy is 2.217; social influence is 2.146 and financial literacy is 1.799. Meanwhile, the correlation of FinTech adoption and Financial Literacy with Business Performance shows the same value of 1.553.

According to [20], the PLS-SEM method is based on  $R^2$  to test the model fitness. The Adjusted R-Square value for FinTech Adoption is 0.558, meaning that the three variables of UTAUT Theory (Effort Expectancy, Performance Expectancy and Social Influence) as well as Financial Literacy explain 55.8 % of the variations in FinTech adoption among women traders, indicating a strong relationship. Meanwhile, 43.7 % women SMEs Business Performance can be explained by women's FinTech adoption and Financial Literacy and Computer Self-Efficacy with 56.3 % explained by other variables not included in this study.

Furthermore, the relationship between the latent variables in this study was analyzed using the original sample value or Beta. In the PLS-SEM analysis, the original sample value is used as the regression coefficient value to complete the regression equation [19]. The original sample shows the direction of the relationship between variables in the entire research sample.

In understanding the impact factors of UTAUT theory towards FinTech adoption, this study found that effort expectancy, performance expectancy and social influence have a positive effect on the adoption of financial technology platform, as shown in the t-statistic and p-value of each hypothesis testing in Table 1.

This study explained that effort expectancy had a positive effect on FinTech adoption. This supports the previous research [4]. In financial services, trust plays an important role in the adoption of new technology [14]. Women traders, whose business is relatively small, realized that they have limited funds. They are also afraid of losing their money using untrusted FinTech. They are reluctant in adopting the new platform as they are not familiar with it and need more effort in understanding the system. As most women traders are also housewives who are busy taking care of their families, they do not have enough time to learn the new platform. Therefore, FinTech platforms should make the system friendlier by providing more handbooks, guidance and information from various sources, including sales agents. Providing workshops and trainings will assist them in using the system.

The study also revealed that performance expectancy had a positive influence on FinTech adoption and supported the previous research [4], as shown in Table 1. The willingness to use the system will arise if women traders believe that using the system will bring them many benefits. All the benefits should be presented in the platform. SMEs have to acquire digital competencies to adopt FinTech advancement, which is beneficial for their business ensuring data accuracy in keeping daily sales [5].

The findings align with the previous study [12], stating that social influence has a substantial effect on FinTech adoption in some developing countries such as Indonesia and Malaysia. The study found that social influence has the greatest impact on FinTech adoption among the other two UTAUT factors, as also shown in Table 1. The more positive recommendations from close relatives and friends an individual receives, the higher the level of FinTech adoption. Indonesia is famous for closely extended families in which family circles, friends and community become the most trusted people in decision-making. Bonding social groups share their memorable experiences of using the FinTech platform. Positive vibes will attract new women traders to try FinTech and use the platform.



Transfer of technologies: industry, energy, nanotechnology

30 As described in Table 2, the study showed that financial literacy had a positive influence on FinTech adoption. Thus, this finding supports the study [9], stating that women traders should have adequate financial literacy to avoid mistakes in business management. Having financial literacy allows them to maintain relationships with FinTech providers to get access to loans [18]. Adequate financial knowledge assists them in preparing financial budgets and reports, which is useful for credit approval [18].

Another finding in this study, as shown in Table 3, is that FinTech adoption is proven to affect SMEs business performance and supported the previous research [7]. Most respondents agreed that their reason for using the FinTech system is simplicity and low transaction costs. Using the FinTech system allows them to access financial services anytime in more convenient ways. They do not need to go to the bank to conduct financial transactions, which will make them leave and stop selling in the market. This means that they will not lose their potential sales and revenues. Since the main form of FinTech provider is the lending system, women traders can take advantage of using lending services, including a loan. They can propose the loan in simpler administrative documents and shorten approval time. The loan can be used to buy raw materials, especially having more orders during peak times. More revenue generated means stronger business performance [16].

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The study also revealed the important effect of financial literacy on business performance, which is aligned with the research [17] and proven in Table 3. Literate women traders mean they have adequate financial knowledge before making any financial decisions to improve their business performance [13, 17]. Women traders who acquire better financial knowledge will be more confident in managing their business [2]. Having high financial literacy would help traditional market traders build relationships with financial institutions to get more access to business financing.

The latest finding of this study, given in Table 4, showed the existence of a mediation effect of FinTech adoption in the relationship of financial literacy and business performance. Financial literacy will help choose the appropriate FinTech platform that gives more benefits and meets business needs. The study [1, 2] found that the willingness to use the new technology will further depend on how much women traders feel and experience the benefits of the new technology platform. Adequate financial knowledge will also help them in calculating the cost of the loan, which will affect their profit. Profit is an indicator of successful business performance since it can be used to expand the market, offer new various products and develop competitive marketing strategies. Thus, higher profit means greater business performance.

Overall, this study confirms the findings of earlier studies demonstrating the beneficial impact of FinTech adoption on the performance of small and medium-sized enterprises (SMEs). Additionally, the study highlights that the level of financial literacy plays a crucial role in enhancing the relationship between FinTech adoption and SMEs business performance [7]. However, unlike previous research that focused on the influence of FinTech adoption on MSME business performance in general, this research is different because it considers SMEs owned by women. The research findings show that the level of financial literacy affects the decision to adopt FinTech,

and business performance in women-owned SMEs shows the role of FinTech as an alternative funding for businesses. One of the biggest problems experienced by women-owned businesses is access to funding from formal financial institutions [7, 13, 17, 18]. Using FinTech as an alternative to funding helps women-owned businesses get funding that can be used to grow their businesses.

Overall, this study offers some insights both to the development of FinTech ecosystems and women SMEs in Indonesia. All stakeholders, including FinTech providers, banks and other financial institutions, as well as the Indonesia government, have to collaborate in formulating policies that benefit women SMEs by giving more financial knowledge as well as creating a more digitalized entrepreneurial ecosystem. It was also anticipated that this study would assist the country's vision to achieve the goal of having stronger and more sustainable women SMEs that contribute to the country's economic growth.

The study has some limitations. For instance, the number of respondents is limited, and they were only taken from women traders selling their products in the traditional market in the area of Tangerang. Hence, data processing was extremely challenging, as the current population results may be varied if taken from other regions with their own characteristics. The current study is conducted solely within the quantitative research approach. The projected results may alter whether the study uses mixed-mode or qualitative research methods.

In order to get more accurate results for future research, it is advised to use the most recent population data and statistics on the number of women SMEs across Indonesia. It is recommended that government policy and the role of financial intermediaries become variables to consider in future studies. Future studies are advised to use mixed-method or qualitative approaches to gather more useful insights. Applying qualitative or mixed-method research methods may shed new light on issues and provide updated perspectives.

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## 7. Conclusions

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1. Effort expectancy, performance expectancy and social influence had a significant impact on FinTech adoption since all the variables have a t-statistic value greater than 1.96 and a p-value lower than 0.05. The t-statistic value of effort expectancy, performance expectancy and social influence is 4.104; 2.906 and 4.137, respectively. Meanwhile, the p-value of these variables is 0.000, 0.001 and 0.000. This means that the women traders' willingness to adopt the FinTech platform is highly dependent on the familiarity, the attractive and more friendly front-end features available in that platform. In the context of Indonesia with strong bonding cultures, the recommendations of relatives and friends will further influence the decision to adopt financial technology platforms.

2. Financial literacy positively influences women's FinTech adoption with t-statistic value=3.126 and p-value=0.001. Literate women traders have an understanding of FinTech platform benefits, which will lead to the adoption and use of the platform.

3. Women traders' FinTech adoption strongly influences their business performance with a t-statistic value=8.263 and p-value=0.000. Using FinTech platforms is

1 proven to increase business performance in terms of higher sales, revenues and capital to expand the new market. The level of financial literacy has a positive effect on the SMEs business performance with a t-statistic value of 3.727 and p-value=0.000. This means that a higher level of financial literacy will encourage women traders to actively seek information to increase their business performance.

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4. FinTech adoption mediates the positive relationship between financial literacy and SMEs business performance with the t-statistic value=2.957 and p-value=0.000 with the confidence interval from 0.047 to 0.155. Strong financial literacy of women traders will help them easily understand the services offered by FinTech platforms and lead them to adopt and use FinTech. Using the FinTech platform allows them to manage business operations effectively and gain greater business performance.

#### Conflict of interest

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The authors declare that they have no conflict of interest in relation to this research, whether financial, personal, authorship or otherwise, that could affect the research and its results presented in this paper.

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#### Data availability

Data will be made available on reasonable request.

#### Use of artificial intelligence

The authors confirm that they did not use artificial intelligence technologies when creating the current work.

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