



The Impact of Financial Literacy on Investment Decisions: The Moderating Role of Financial Technology

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Abstract

This study investigates the impact of financial literacy on investment decisions and explores the moderating role of financial technology (Fintech). Conducted among small and medium-sized enterprises (SMEs) in Bali Province, Indonesia, the research seeks to understand how financial literacy influences investment choices and how Fintech enhances this relationship. A quantitative approach was used, involving the distribution of questionnaires to 100 SME owners who received business legality through decentralization funds. The data, collected via primary sources and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) 4.0, included measures of financial literacy, investment decisions, and Fintech usage. The findings reveal that higher financial literacy positively impacts investment decisions, with SMEs demonstrating better investment management and decision-making capabilities. Additionally, Fintech was found to strengthen this relationship by providing real-time data and advanced analytical tools that enhance investment decisions for those with strong financial literacy. However, the benefits of Fintech were more significant for individuals with higher financial knowledge, indicating that technology alone cannot replace the need for financial education. This study underscores the importance of integrating financial literacy with technological tools to improve investment outcomes and suggests that future research should explore diverse geographic contexts and longitudinal studies to better understand the evolving dynamics between financial literacy, Fintech, and investment decisions.

Keywords: Financial Literacy, Investment Decisions, Financial Technology (Fintech), Small and Medium-sized Enterprises (SMEs)

1. Introduction

With the aid of financial analysis tools, a company's In this fast-growing era of digitalization, financial literacy has become one of the crucial elements when decisions about investments are concerned (Rorlen et al., 2020). Individuals have multiple investment avenues that exist in conventional markets or advanced financial schemes. Unfortunately, a multitude of them are restricted from making wise and profitable investment choices due to an inability to understand elementary financial concepts.

It is the state of being informed on ways to manage, control, and make decisions concerning personal finances, including saving, investment, and borrowing. Generally speaking, Indonesian financial literacy stays at relatively low levels. Based on the 2022 OJK survey, only about 49.68% of the population in Indonesia has adequate financial literacy (Shevany et al., 2022). This presents a very big challenge for increasing public participation in more complex financial activities, such as investments.

Among the new differentials that have arisen in recent years, Fintech has become an important constituent of daily life (Rizal Sukma Aliyudin, 2020). In addition to providing a number of conveniences pertaining to the access of investment information, Fintech offers online investment services and, above all, the ease of transaction (Purwanto et al., 2022). All this provides opportunities for those people who cannot have real access to traditional financial services to make investments.

On the other hand, although Fintech has widened access to financial services, it cannot ensure efficiency within every group of people (Bhattacharjee et al., 2024). In the case of individuals with low financial literacy, Fintech is simply a two-edged sword: the convenience caused by it can lead to poor investment choices (Sihombing, 2021). One thus needs to consider how the interaction of financial literacy and use of Fintech technology influences the investment choices of individuals.

The association between financial literacy and investment decisions is an area which has been well researched. A person with high financial literacy makes wise decisions about investment, keeping in mind the two important aspects: risk and potential return (Lubis et al., 2023). Nonetheless, there is a lack of research so far that might investigate the moderating influence of Fintech use in this relationship, particularly in Indonesia, where the financial technology industry is growing fantastically.

The present study analyzes how financial literacy influences the decision to invest or not to invest and how it can be moderated by the use of Fintech. This research will add to the views on the importance of financial literacy in taking advantage of new technological opportunities toward an optimum investment decision.

Another critical view on this study is the moderating role of Fintech. While Fintech, in fact, improves transactions' facilities, it also gives access to substantially faster and easier sources of information (Putri et al., 2023). These, in turn, could give an opportunity for individuals to evaluate investment opportunities themselves. So far, how Fintech interacts with financial literacy levels when investment decisions are concerned is not known.

This present study, therefore, is intended to analyze the influence of financial literacy on investment decisions, considering the moderating role of Fintech use. The current study, therefore, explains how the two factors interact in influencing individual investment decisions and shall provide a clear picture of how to increase the public's participation in investment through financial literacy and technology use.

The novelty of this research lies in the approach it takes by merely combining financial literacy with the use of Fintech as a moderating variable. Previous studies have concentrated solely on either financial literacy or Fintech. This research attempts to bridge these two aspects, checking their interaction in investment decision-making, especially for the Indonesian population.

This will also provide practical implications in everyday life because, with deeper knowledge in financial literacy and the use of FinTech, one will be able to make smarter and more profitable investment decisions. In the long run, this may improve one's personal financial well-being, enhance family economic stability, and reduce the risk of loss that emanates from poor investment decisions.

It also plays an educational role. The government and financial institutions may use the results of this research when elaborating more effective financial education programs, taking into consideration

technology as one means of learning. In the end, technology-based financial education will have to reach more and diversified audiences, including those that are less exposed to financial literacy.

The results of this study can also provide insights to regulators in terms of policy implications, which shall be useful in the formulation of public policy on financial literacy and the usage of Fintech. It will help in the understanding of collaboration's importance between the traditional financial sector and Fintech providers in improving public literacy and access to finance. It can also help formulate policies that support the development of a safe and consumer-friendly Fintech ecosystem.

This also has some meaningful economic implications in the context of economic development. Better financial literacy and adequate Fintech use could make individuals more confident and capable of investing, and hence increase the capital flow in the economy. In fact, that is likely to support inclusive and sustainable economic growth, whereby more and more people begin participating in the formal financial sector.

This present study also provides a theoretical contribution to the literature on financial management and financial technology. This research is expected to enrich the academic discussions related to the moderating role of technology in the relationship between financial literacy and investment decisions, and hence provide the base for future research on similar topics in various geographic and demographic contexts.

The purpose of this research, therefore, is to support the development of the Fintech industry in Indonesia. This will ensure that better understanding of how Fintech can help people make better investment decisions would imply that Fintech companies are able to design more relevant and beneficial products and services for consumers, especially those who are just beginning to engage in investment activities.

In view of all the above considerations, this research attempts to address the pressing need of improving financial literacy and using technology as an aid to smarter and profitable investment decision-making.

2. Method

Financial literacy is defined as the potential of people to understand and apply financial concepts necessary in making effective financial decisions (Kartini & Mashudi, 2022). It means main knowledge about financial instruments like stocks, bonds, deposits, insurance products, interest, inflation, and investment risks related to influencing the future value of one's money (Mustika et al., 2022).

Financial behavior theory also provides that an individual who is highly financially literate is likely to be more rational in the financial decision-making process (Muhammad & Faradisi, 2023). They are in a better position to weigh risks against returns on various investment opportunities. This relates to the theory of planned behavior as proposed by Ajzen, which states that an individual's behavior is motivated by intentions, subjective norms, and perceived behavioral control (Ramdhani, 2016). It means that, in the context of financial literacy, people having good financial knowledge and behavioral control are confident to make their own decisions about investment, hence can invest more wisely. This enhances the probability of making more wise investments (Ubaidillah, 2019).

Past research by (Prita Ary Astini et al., 2022) proved that financial literacy has a significant effect on investment decisions. A person who has sufficient knowledge about finance will be more aware of the benefits arising due to diversification in investment, control of risk, and the return on the same in the long run. They are also less likely to undertake speculative or highly risky investments, which, in the end, might prove beneficial in long-term investment performance. On the contrary, low financial literacy results in inappropriate investment decisions, such as investing without the knowledge of risks or following trends in a non-critical way.

From this conceptual framework, financial literacy is framed within this study as the degree of knowledge, skill, and confidence a consumer has in managing, evaluating, and planning their finances, particularly about investment decisions. The tendency of an individual to choose profitable investment instruments, which are in line with the individual's risk profile, calculates investment decisions.

Thus, from these facts, the hypothesis developed will be that:

H1: Financial literacy has a positive effect on investment decisions.

Fintech is generally defined as innovations in the financial world, using digital technology to make financial services provided more efficient and accessible (Judijanto et al., 2024). Fintech allows access to almost all kinds of financial services, such as payment, credit, investment, and asset management, to be made through an online platform. Regarding investment, fintech makes investors able to monitor financial markets, evaluate performance easily from their investments, and carry out transactions without having to go to financial institutions (Kusuma & Asmoro, 2021).

Diffusion of Innovation Theory said that technology adoption in society could only accelerate the wide spread of innovation, increasing efficiency in different

processes of society in general. According to (Rogers, 2006) this would comprise investment decision-making processes. Fintech would facilitate substantial access to relevant information by people, conducting analysis, and real-time investment portfolio monitoring. This eventually leads to enhancing the quality as well as speed of investment decisions made by investors.

Such is the case, where Fintech has the potential to moderate the relationship between financial literacy and investment decisions (Pradipa et al., 2023). In people with good financial literacy, Fintech is a tool to be used in enhancing capability in favorably accessing information and exploiting investment opportunities. The technology enables financially literate investors to make use of real-time data, automated market analysis, and investment calculators that simplify the analysis of risks and returns from an investment.

In the case of low financial literacy, Fintech likely does not bring many benefits in investment decisions or may even create new risks because of lack of knowledge about how to use the technology. Individuals like these might be more susceptible to technological risks, such as algorithm-based investments, or automated investment services while actually not understanding how they work.

Thus, for this research, Fintech is defined as the usage of digital applications or platforms which enable people to access, manage, and conduct financial transactions, including investments. In this specific research, Fintech can be understood as a moderation variable that can strengthen or weaken the effect of financial literacy on investment decisions.

From these definitions, the second hypothesis to be tested is:

H2: The use of financial technology strengthens the effect of financial literacy on investment decisions.

Theoretically, financial literacy influences investment decisions because, through financial literacy, people acquire the knowledge they need to understand the risks and returns of different classes of investments. This in turn enables them to make better decisions in a more rational manner. The expected moderator role of financial technology would enhance this relationship, as technology can help in acquiring information and optimize decision-making from the knowledge one has.

It is expected that testing of the model in this study will reveal that a highly financially literate individual who employs financial technology in his or her activities is better able to make correct investment decisions than a person without the use of the technology.

The research was conducted in Bali Province, which is specifically focused on small and medium-sized enterprises that have already gained business legality through the decentralized fund from the Directorate

General of Small and Medium-Sized Enterprises. To this date, understanding how investment decisions and the adoption of financial technology impact business sustainability in Bali is critical to addressing the emergent challenges. The reason why the study focuses on SMEs is because it is heavily involved in the local economy, while the developments in technology are rapid.

Data collection is executed through a quantitative approach, where questionnaires were distributed to owners of SMEs as respondents. Data in this research is primary data, which is the main source of information. The population consisted of SMEs in Bali Province totaling 16,650 SMEs. Sample selection was carried out by using purposive sampling with a target of SMEs having obtained business legality through the decentralization fund of the Directorate General of SMEs, and the total sampled came to 100 SMEs.

The relevant variables measured through the questionnaire were financial literacy, investment decisions, usage of financial technology, and business sustainability. All the variables were measured on a Likert scale. The Likert scale, when used for attitude measurement, is usually presented in a standard format with a series of statements to which the respondents would be asked to indicate their level of agreement or disagreement using the options of strongly agree, agree, neutral, disagree, strongly disagree (Albaum, 1997). These questions were designed to find the perception and attitude of the owners of SMEs in Bali about aspects relevant to investment decisions and the use of financial technology in influencing their investment decisions.

Data analysis in the research used Partial Least Squares Structural Equation Modelling version 4.0. PLS-SEM is an advanced statistical technique which can appropriately analyze such complex relationships between variables found in social science research. This method allows both a measurement and structural model to be assessed simultaneously, hence suitable for testing the relationship of financial literacy, investment decisions, use of financial technology, and sustainability practices among SMEs in Bali Province.

3. Result and Discussion

From Table 1, The AVE values for each variable in the output above are greater than 0.5, meaning that all indicators legitimately converge to form their corresponding variables. Furthermore, values for Cronbach's Alpha and CR were found, both of which were greater than 0.6 for every variable. The study's variables and items all satisfy the validity and reliability requirements for measuring the variables, it can be said.

Table 1. Construct Reliability and Validity.

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Financial Literacy	0.768	0.761	0.846	0.531
Financial Technology	0.687	0.698	0.813	0.534
Investment Decision	0.666	0.674	0.684	0.593

Source: Data processed by authors, 2024

From Table 2, The R-squared value for the combined financial literacy on investment decision is 0.72, with an adjusted R-squared of 0.718. This suggests that approximately 72.0% of the variance in investment decision can be explained by the exogenous factors of financial literacy. With an adjusted R-squared exceeding 33%, the impact of financial literacy on investment decision is deemed significant.

Table 2. R-Square

	R-square	R-square adjusted
Investment Decision	0.72	0.718

Source: Data processed by authors, 2024

From table 3, we can read the results:

1. The direct effect of financial literacy on investment decision is 0.808, meaning that if financial literacy increases by one unit, investment decision can increase by 80.8%. This effect is positive.

Table 3. Path Coefficients

	Financial Literacy	Financial Technology	Investment Decision
Financial Literacy			0.808

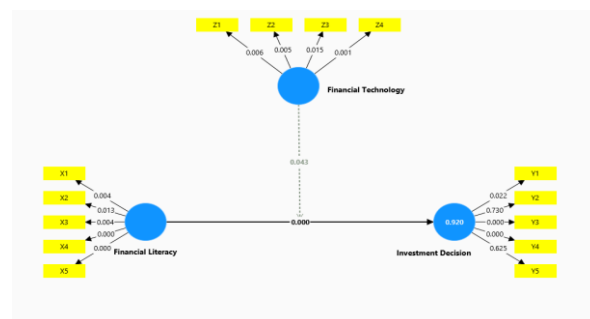


Figure 2. Structural Equation Model Testing

From table 5, we can read the results:
 1. The relationship between Financial Literacy on Investment Decision (0.000):
 Financial literacy has a positive and significant influence on investment decision with an effect of 0.808. Thus, an increase in financial literacy will enhance investment decision, and vice versa. H1 is accepted.

2. Financial Decision as Moderator to relationship between Financial Literacy on Investment Decision (0.054):
 Financial Technology has a positive and significant influence as moderator on financial literacy on investment decision with an effect of 0.054. H2 is accepted.

Table 5. Regression Weight Structural Equational Model.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
Financial Literacy -> Investment Decision	0.808	0.78	0.136	8.075	0.000
Financial Technology x Financial Literacy -> Investment Decision	0.054	0.048	0.027	2.027	0.043

Source: Data processed by authors, 2024

From the results of this study, it was found that both hypotheses are accepted. This means financial literacy positively affects the investment decisions, and the use of Financial technology or Fintech has enhanced the impact of financial literacy on investment decisions.

Influence of Financial Literacy on Investment Decisions

As shown by the result of the first hypothesis test, financial literacy has a significant influence on investment decisions in line with research by (Prita Ary Astini et al., 2022). The result is as would be expected because, from the perspective of financial behavior theory, higher financial literacy might give more rational and competent investment decisions. Additionally, SME owners in Bali Province have better knowledge about financial products, risks of investments, and diversification strategies, meaning they handle their investments wiser. They can thus pick and choose investment instruments that match their risk profile and make better judgments regarding long-term potential returns.

This is also in corroboration with the TPB, wherein good financial literacy builds confidence in decision-making, which enhances one's intention and ability to invest correctly. The owners of SMEs who possess higher financial literacy exhibit higher degrees of behavioral control; therefore, they are more capable of addressing risks and uncertainties pertaining to investment decisions. It is, thus, easy to obtain from the discussion that the influencing power of financial literacy on investment decision-making is very positive, which has been reflected in the study's findings.

Role of Financial Technology in Moderating Influence of Financial Literacy on Investment Decisions

The results of the second hypothesis test indicate that financial technology amplifies the role of financial literacy in investment decisions in line with research by (Pradipa et al., 2023). Indeed, Fintech has ensured that market data, real-time updates, and automated analytical information are readily available; it thus helps SME owners who have good financial literacy more effectively exploit their opportunities for investment. Through Fintech, they are in a position to make quicker and more accurate appraisals of investments and adjust the yield of their investments based on prevailing conditions.

In this context, the use of Fintech acts as a catalyst that amplifies the potency of financial literacy. Therefore, whereas people who are already at a better knowledge of finance can access more information, make a better analysis of markets, and make more correct investment decisions, with the assistance from technology, people who have low levels of financial literacy will not benefit much from technology and also may be exposed to new risks. However, the result of this study shows that Fintech contributed significantly to improving the capability of making prudent investment decisions among respondents with higher financial literacy.

4. Conclusion

This study confirms that financial literacy indeed positively influences investment decisions, and the use of Fintech reinforces such an influence. SME owners who have high financial literacy are, therefore, better

positioned to make informed investment choices because they have developed their knowledge and capacity to respond skillfully to financial risks and opportunities. The integration of Fintech further amplifies these benefits through real-time data and sophisticated analytical tools that optimize decision-making processes. The findings again highlight the relevance of both strong financial literacy and appropriate usage of technology in realizing better investment performances that facilitate sustainable development among SMEs.

There are several limitations identified with the study. Firstly, the research was only conducted within Bali Province, and this might pose some problems in generalizing the results to other regions with different economic and technological contexts. A second limitation is that the research was focused only on those SMEs which obtain business legality through decentralization funds. Probably, other SMEs have different characteristics and experiences. Third, self-reported data in the questionnaires and interviews may introduce bias since respondents may provide socially desirable answers rather than those reflecting their true attitudes and practices. Finally, the research design is cross-sectional, which constrains data capture at only one point in time, whereas changes in investment decisions and financial literacy could be measured more accurately.

The above-mentioned limitations might be mitigated by future research in the following ways. First, the mentioned study conducted for other regions or countries would add to a better understanding of how financial literacy and Fintech shape investment decisions within different contexts. Second, there might be an extension of research to cover more types of SMEs, especially those not dependent on decentralization funds, which would present variable business models and how these interact with financial literacy and technology. Third, longitudinal studies might try to track changes in financial literacy and in investment decisions over time. A mixed-methods design-one that combines quantitative data with qualitative insight-might enhance the robustness of findings for a more nuanced understanding of the interplay among financial literacy, Fintech, and investment decisions.

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