The Influence of Financial Inclusion and Financial Technology on the Intention to Use Online Loans: Financial Behavior as An Intervening Variable

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Abstract

This study investigates the influence of financial inclusion and financial technology (fintech) on the intention to use online loans, with financial behavior acting as an intervening variable. In light of the increasing popularity of online loans and the concerns around consumer financial behavior, the research explores how enhanced access to financial services and fintech platforms impacts users' financial decisions. Using a quantitative design, the study collected data from 150 teachers in Malang Regency through questionnaires and applied path analysis using SPSS 23 to examine the relationships between variables. The results indicate that financial inclusion and fintech significantly improve financial behavior, which, in turn, positively affects the intention to use online loans. The study's novelty lies in its identification of financial behavior as a key mediator, offering a new model to explain how financial inclusion and fintech shape online loan usage. The findings are particularly valuable for policymakers aiming to improve fintech regulation, platform providers looking to enhance consumer engagement, and educators focusing on financial literacy programs.

Keywords: *Financial Inclusion, Financial Technology, Online Loans, Financial Behavior, Path Analysis, Fintech Services, Consumer Behavior, Financial Literacy.*

Introduction

Technological development in Indonesia has accelerated rapidly, bringing both positive and negative impacts for businesses and other sectors. According to the Financial Services Authority (OJK, 2017), the technological revolution in Indonesia has seen significant advancements. The influence of technology extends beyond just sales and purchases in the business world, notably impacting the financial sector. Currently, financial technologies in Indonesia include P2P lending, crowdfunding, e-wallets, payment gateways, investments, and digital banking. The rapid growth of technology, supported by the advent of Artificial Intelligence (AI), has placed the Indonesian government, including Malang City, on alert as they prepare for the Fourth Industrial Revolution (4IR). This revolution notably affects the finance and banking sectors. Financial technology (fintech) has been a primary concern for the Financial Services Authority (OJK), which introduced Regulation No. 77/POJK.01/2016. This regulation, agreed upon by all relevant authorities, establishes a series of policies to regulate fintech. The regulator remains vigilant in monitoring the development of companies in the financial services sector that leverage technological advancements. Fintech refers to services related to lending and financing, primarily utilizing information technology (OJK, 2023).

Today, many Indonesians are using online loan services, which are becoming increasingly popular across all demographics, including professionals such as teachers. For instance, a teacher in Malang accrued a debt of IDR 40 million from 24 different online loan providers (OJK, 2017). The debt originated from a need to pay university tuition fees of IDR 2.5 million in one of Malang's universities. Indonesia faces numerous challenges, including unequal access to education, cybercrime, difficulties accessing healthcare, housing crises, sexual harassment, climate change, natural disasters, corruption, refugee crises, legal inequality, urban poverty, youth unemployment, and the ease of access to online loans. The number of online loan debt cases increased in 2023, exacerbated by the difficulty of securing employment due to poor credit histories. The OJK Financial Information Service System (SLIK OJK), commonly referred to as BI Checking, has become

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a widely discussed topic on social media platforms like X (formerly known as Twitter). This is due to the increasing number of companies using SLIK OJK as part of their screening process, especially for financial-related positions (Presidential Decree of the Republic of Indonesia, 2016). According to Databox 2023 the percentage of teachers facing financial challenges is disproportionately high compared to other professions: 42% are teachers, followed by 21% who are victims of layoffs, 18% are housewives, 9% are employees, 6% are students, and 4% are traders. Therefore, financial literacy is crucial for the public, particularly teachers, who are educators by profession. The lack of financial literacy compared to the rise of financial inclusion and fintech, especially among teachers in Malang, has been identified as one of the factors that increase the propensity for online loan use (Bilarminus, 2021). One of the key advantages offered by this approach is its interdisciplinary nature. In the context of financial inclusion and the use of financial technology, an interdisciplinary approach integrates concepts and methodologies from various fields such as economics, finance, behavioral science, information technology, and sociology. By adopting an interdisciplinary approach, research can delve deeper into the complexity of factors influencing financial inclusion and the adoption of financial technology (Anisyah et al., 2021).

Literature Review

Financial Inclusion

Financial inclusion refers to the availability of access to various financial institutions, products, and services in line with the needs and capacities of the public to improve overall well-being (OJK Regulation No. 76/POJK.07/2016, 2016). The Financial Services Authority (OJK), in collaboration with the Financial Services Industry and related institutions, continues to enhance financial inclusion, not only through the development of financial products and services but also by addressing the four pillars of financial inclusion: expanding financial access, ensuring the availability of financial products and services, increasing the usage of these products and services, and improving both the quality of financial products and services and their usage.

Financial Technology

Financial Technology (Fintech) is defined as a form of technological innovation in financial services that can generate new business models, applications, processes, or products with a material impact on the provision of financial services (Nizar, 2020). Fintech has been deemed more competitive than traditional banking systems, particularly during the COVID-19 crisis, as seen in Bulgaria (Vasenska et al., 2021). Financial transactions via fintech tend to adopt a risk-reduction approach. Fisabilillah and Hanifa (2021) found that peer-to-peer (P2P) lending technology has a significant positive impact on economic growth in Indonesia. According to Siregar (2016), fintech development in Indonesia can be categorized into several types:

Payment Channels: Electronic services designed to replace cash and banknotes as payment tools, using cards and e-money.

Digital Banking: A technology-based banking service designed to meet customers' needs, including innovations such as ATMs, internet banking, mobile banking, SMS banking, phone banking, and video banking.

Lending (P2P): A financial service that leverages digital technology to connect borrowers and lenders.

Digital Insurance: A technology-based insurance service for customers.

Crowdfunding: The collection of funds via websites or other digital platforms for investment or social purposes.

Financial Behavior

Financial behavior is not only linked to emotions and behavior but also involves psychology (Miotto & Parente, 2015). Over the past three decades, the field of financial behavior has expanded significantly to help individuals make better investment decisions (Hasibuan et al., 2017). Financial behavior is defined as how well households or individuals manage financial resources such as savings, budgeting, insurance, and investments. Financial behavior can be evaluated by examining how individuals handle cash, debt, savings, and other expenses (Arifin, 2017). According to Akben (2015), individuals often make financial decisions based on emotional and cognitive biases rather than rational or computational thinking. Dew and Xiao (2011) further state that financial behavior refers to the financial decisions individuals make in everyday life, such as managing cash, loans, savings, and investments. Hasibuan, Lubis, and Walad (2017) view financial behavior as the ability of individuals to manage, handle, and use financial resources effectively. Research suggests that individuals with responsible financial behavior are more likely to manage and generate wealth efficiently (Susilowati et al., 2017). Studies identify financial literacy, financial socialization, and financial attitudes as factors influencing financial behavior (Akben, 2015; Arifin, 2017; Zulfaris et al., 2020). Gathergood (2012) also confirms that financial behavior is affected by spending and saving habits.

Methodology

Research Type

This study uses a quantitative research design with path analysis to explore the relationships between financial inclusion, fintech, financial behavior, and the intention to use online loans. The sample consists of 150 teachers from Malang Regency, selected through random sampling. Data were collected using structured questionnaires, measuring financial inclusion, fintech usage, financial behavior, and online loan intentions. SPSS 23 software was used for data analysis, including hypothesis testing and calculation of coefficients to assess direct and indirect effects. The model was designed to determine how financial inclusion and fintech influence financial behavior and, subsequently, the intention to use online loans. This study is an explanatory research using a quantitative approach. Quantitative research involves the use of surveys through questionnaires to collect data from individual investors (Sugiyono, 2015). This method is employed to understand how or why certain phenomena occur by examining the relationships between independent and dependent variables.

Population and Sample

According to Sugiyono (2017), the population is a generalization area consisting of objects or subjects with certain qualities and characteristics selected by the researcher for study and from which conclusions are drawn. The population for this study consists of approximately 4,116 teachers in Malang. The sample is used to represent the population. In this study, the researcher employed probability sampling, specifically utilizing the random sampling technique. The sample size used, based on the Slovin formula, is 150 respondents. Sugiyono (2011) defines a sample as a portion of the population that possesses the characteristics under study. The sample is selected from the population using specific techniques, ensuring that the sample is representative. In this research, the author selects a sample of respondents to ensure it sufficiently represents the population for the purposes of the study.

Data Collection Techniques

Data collection is a critical aspect of research, as the primary goal is to obtain data. With the presence of data, an appropriate method for data collection must also be in place (Sugiyono, 2011).

Type of Data

The data source used in this study is primary data. Primary data refers to information directly collected by the researcher from original or directly related sources regarding the research subject. According to Sugiyono (2011), primary data is the data source that provides information directly to the data collector.

The primary data used in this study was obtained through questionnaires filled out by respondents, which included their personal information and responses to the survey questions.

Data Collection Method

In this study, data was collected and then analyzed to address the research problem, ensuring that the collected data is accurate and reliable. The data collection method used in this study is a questionnaire. A questionnaire is a data collection technique in which respondents are given a set of questions to answer (Sugiyono, 2011).

Data Analysis

Data analysis is a systematic process of organizing, interpreting, and processing data to draw meaningful conclusions. It is a critical step in transforming raw data into useful information. The data analysis process involves several stages, including data collection, data organization, data processing, hypothesis testing, and report writing of the results. In this study, path analysis was used to analyze the collected data. According to **Mubaroq,** path analysis is a statistical tool used to analyze causal relationships between variables with the aim of determining both direct and indirect effects, either simultaneously or individually, of several causal variables on a resulting variable.

Results

The results show that both financial inclusion and financial technology have a significant positive impact on financial behavior, which, in turn, influences the intention to use online loans. The path analysis reveals that financial behavior plays a key role as a mediator between financial inclusion/fintech and online loan usage. The relationship between the dependent and independent variables can be expressed through the following function:
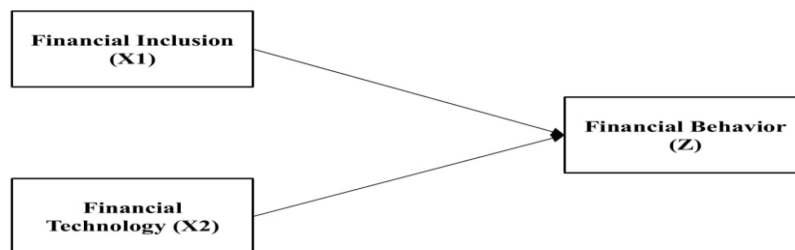
First Substructural Path Equation

Fig.1. First Substructural Path Equation

The Figure 1 explains:

The effect of Financial Inclusion (X1) on Financial Behavior (Z).

The effect of Financial Technology (X2) on Financial Behavior (Z).
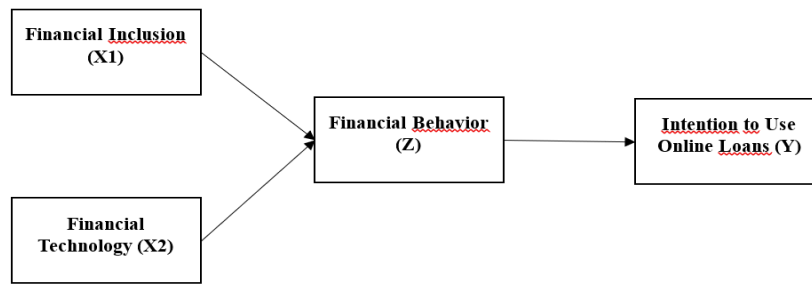
Second Substructural Path Equation

Fig.2. Second Substructural Path Equation

The Figure 2 explains:

The direct effect of Financial Inclusion (X1) on the Intention to Use Online Loans (Y) through Financial Behavior (Z).

The direct effect of Financial Technology (X2) on the Intention to Use Online Loans (Y) through Financial Behavior (Z).
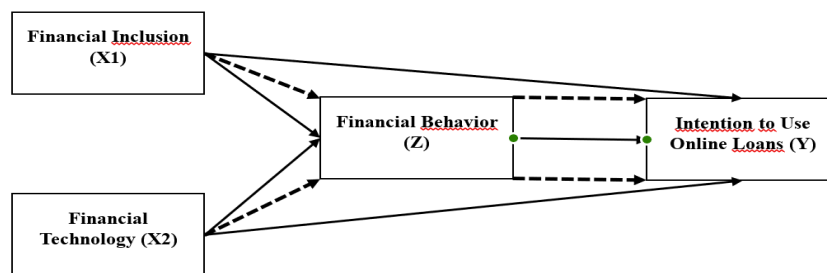
Third Substructural Path Equation

Fig.3. Third Substructural Path Equation

The Figure 3 explains:

The indirect effect of Financial Inclusion (X1) on the Intention to Use Online Loans (Y) through Financial Behavior (Z).

The indirect effect of Financial Technology (X2) on the Intention to Use Online Loans (Y) through Financial Behavior (Z).

Table 1. Path Analysis Sub-structure 1

Coefficients			
	Unstandardized Coefficients		Standardized Coefficients
Model	B	Std. Error	Beta
(Constant)	2,17	1,03	
X1	,32	,06	,41

X2	,31	,05	,42

Note: X1=Financial Inclusion; X2=Financial Technology

In Sub-structure 1, the obtained Standardized Coefficients Beta for (X1) to (Z) is 0.41. Meanwhile, for the variable (X2) to (Y), the Standardized Coefficients Beta value is 0.42.

Table 2. Path Analysis Result Sub-structure 2

Coefficient			
	Unstandardized Coefficients		Standardized Coefficients
Model	B	Std. Eìrror	Beìta
(Constant)	10,62	,88	
X1	,24	,05	,17
X2	,10	,05	,20
Z	,18	,03	,52

Note: X1=Financial Inclusion; X2=Financial Technology; Z= Financial Behaviour

In Sub-structure 2, the obtained Standardized Coefficients Beta values are 0.17 for (X1), 0.20 for (X2), and 0.52 for (Z) with respect to (Y).

Table 3. Results of Hypothesis Test 1 and 2

Variable	T test	T table	Sig
Financial Inclusion → Financial Behaviour	3,22	1,98	0,002
Financial Technology → Financial Behaviour	5,95	1,98	0,000

The results of the partial t-test, as shown in Table 3, can be interpreted as follows:

Based on the t-value for variable (X1) of 3.22, which is greater than the t-table value of 1.98, and a significance level of 0.002, which is smaller than the threshold of 0.05, the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. This indicates that the Financial Inclusion variable has a significant and positive effect on Financial Behavior.

Based on the t-value for variable (X2) of 5.95, which is greater than the t-table value of 1.98, and a significance level of 0.000, which is smaller than the threshold of 0.05, the null hypothesis (H0) is rejected and the alternative hypothesis (Ha) is accepted. This indicates that the Financial Technology variable has a significant and positive effect on Financial Behavior.

Table 4. Results of Hypothesis Tests 3,4 and 5

Variabel	T hitung	T tabel	Sig
Financial Inclusion → Intention to Use Online Loans	4,32	1,98	0,000
Financial Technology → Intention to Use Online Loans	4,81	1,98	0,003
Financial Behaviour → Intention to Use Online Loans	5,95	1,98	0,000

Table 4 shows the results of the t-test (partial test) for substructure 2, which can be analyzed as follows:

Financial Inclusion has a t-value of 4.32> 1.98 and a significance level of 0.000 < 0.05, meaning H0 is rejected and Ha is accepted. Therefore, Financial Inclusion has a significant and positive effect on Intension To Use Online Loans

The t-value for variable (X2) is 4.81 > 1.98 with a significance level of 0.003 < 0.05, meaning H0 is rejected and Ha is accepted. This indicates that Financial Technology has a significant and positive effect on Intension To Use Online Loans

For the Financial Behavior variable, the t-value is 4.211 > 1.981 with a significance level of 0.005 > 0.05, meaning H0 is accepted and Ha is rejected. This indicates that Financial Behavior has a significant and positive effect on Intension To Use Online Loans

Results of Determination Coefficient Test

Table 5. Results of Sub-Structural 1 R-Square

R-Square	R-Square Adjusted	Description
0.75	0.74	Strong

Based on Table 5, the Adjusted R Square value is 0.74, indicating that Financial Inclusion and Financial Technology explain 74.5% of Financial Behavior, while the remaining 25.5% is explained by other variables not included in this study.

Table 6. Results of Sub-Structural 2 R-Square

R-Square	R-Square Adjusted	Description
0.75	0.74	Strong

Based on Table 6, the results of the coefficient of determination test in substructural model 2 show an Adjusted R Square value of 0.74. This means that the variables of Financial Inclusion, Financial Technology, and Financial Behavior explain about 74.8% of the variance in the interest in online loans. The remaining 25.2% is explained by other variables not examined in this study.

Discussion

Financial Inclusion (X1) has a significant influence on Financial Behavior (Z). This indicates that increased access to formal financial services improves individuals' financial behavior in managing and using their financial resources. The study finds that broader access to financial services, such as bank accounts, microloans, and insurance services, positively contributes to the respondents' personal financial management and decision-making. Private teachers who are more engaged in the financial system tend to exhibit better financial management patterns, such as more structured budgeting and rational investment decisions. These findings emphasize the importance of effective financial inclusion programs that not only expand access to financial services but also enhance individuals' financial knowledge and skills. By improving financial inclusion, there is expected to be a significant improvement in financial behavior.

Financial Technology (X2) has a significant influence on Financial Behavior (Z). This suggests that easy access to financial technology, such as digital banking apps and e-wallets, enhances an individual's financial capability and behavior. The study reveals that the adoption of fintech applications and platforms, including budgeting, investment, and digital payment tools, plays a crucial role in influencing how private teachers manage and organize their finances. With the convenience and innovative features offered by fintech, respondents demonstrated improvements in personal budget management, investment planning, and expense tracking. Fintech enables them to make smarter and more efficient financial decisions through the available analysis and reporting tools. These findings highlight the significant potential of fintech in improving the quality of personal financial management, showing that the utilization of financial technology can substantially improve financial behavior among private teachers.

Financial Inclusion (X1) has a significant influence on interest in online loans (Y). This indicates that better access to formal financial services increases individuals' interest in utilizing online loans. The study reveals that increased accessibility and involvement in the financial system, such as having a bank account and using digital financial services, positively affect the tendency of private teachers to use online loans. Teachers who are more financially educated and integrated into the financial system tend to be more confident and inclined to choose online loans as a financial solution. The convenience and flexibility offered by online loans become more appealing to those who understand the benefits and risks of digital financial services. These findings underscore the importance of enhancing financial inclusion as a step toward expanding the adoption of online loan services, while also demonstrating that financial knowledge and access to services drive interest and usage of online loans.

Financial Technology (X2) has a significant influence on interest in online loans (Y). The use of technology that simplifies access to financial products increases individuals' interest in utilizing online loan services. The study finds that advances in financial technology, including online lending platforms that offer quick and easy application processes, have boosted private teachers' interest in using these services. With features like instant approval, competitive interest rates, and transparency in fees, fintech provides attractive and efficient financial solutions. Private teachers are more open to using online loans as an alternative source of funding compared to traditional methods, which are often more complicated and time-consuming. These findings highlight the positive impact of fintech in expanding access to lending services and reflect the shift in financial behavior toward greater use of digital technology among respondents.

Financial Behavior (Z) has a significant influence on interest in online loans (Y). Individuals with more disciplined and prudent financial behavior tend to show greater interest in online loan services that can help them meet their financial needs. The study finds that teachers with more organized and planned financial behavior, such as budgeting skills, expense monitoring, and rational decision-making related to finance, tend to be more cautious in selecting sources of financing. However, positive financial behavior also contributes to their growing interest in online loans, especially because these services offer ease of access, quick approval, and flexible payment options that suit their needs. Private teachers with better financial awareness are more likely to weigh the risks and benefits of online loans before deciding to use them. These findings emphasize that good financial behavior not only influences the decision to borrow but also drives interest in online lending platforms that are perceived as practical and suitable for their needs.

Financial Inclusion (X1) significantly affects interest in online loans (Y) through Financial Behavior as an intervening variable (Z). This means that access to formal financial services influences individuals' financial behavior, which in turn increases their interest in online loans. The study reveals that broader access to financial services, such as bank accounts and other digital services, improves private teachers' financial behavior in terms of budget management, financial decision-making, and risk awareness. Improvements in financial behavior subsequently increase their interest in online loans, as financially educated teachers who are more engaged in the financial system feel more comfortable using digital lending services. With better understanding of how to manage finances and utilize financial products, they become more discerning in choosing online loans that align with their needs and capacities. These findings highlight that financial inclusion not only broadens access to financial services but also influences financial behavior, ultimately increasing interest in online loan services significantly.

Financial Technology (X2) significantly affects interest in online loans (Y) through Financial Behavior as an intervening variable (Z). Better access to financial technology leads to positive changes in financial behavior, which subsequently increases interest in online loan services. The study finds that the convenience and innovative features offered by fintech, such as financial planning apps, digital payments, and lending platforms, directly contribute to improving teachers' financial behavior. Fintech assists private teachers in budgeting, monitoring expenses, and making better financial decisions. With improved financial behavior, private teachers become more selective and informed when considering the use of online loans. Fintech not only simplifies the process of applying for online loans but also fosters more responsible financial behavior, thus increasing interest in online loan services. These findings confirm that broader adoption of financial technology can improve individuals' financial behavior, which in turn enhances interest in the use of online loan services significantly.

Conclusion

This study explored how financial inclusion and financial technology influence individuals' interest in online loans, with financial behavior acting as an intervening variable. The analysis results show that better financial inclusion and the adoption of financial technology significantly contribute to the increased interest in online loans. This indicates that better access to financial services and technological advancements facilitate the use of online loans. Financial behavior plays a crucial role as a mediator in this relationship, clarifying that individuals' financial behavior, such as their financial understanding and management, influences how they respond to online loan offers. These findings underscore the importance of a deep understanding of financial behavior when designing financial inclusion strategies and financial technology adoption, as well as the importance of financial education to enhance consumers' financial skills and knowledge. In conclusion, to promote positive online loan usage, policies should focus on improving financial inclusion, better integration of financial technology, and strengthening healthy financial behavior.

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