The Influence of Financial Literacy and Financial Technology on Financial Inclusion Faculty of Islamic Religion Muhammadiyah University of Makassar

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A B S T R A C T

This study aims to analyze the effect of financial literacy and financial technology on financial inclusion of the Faculty of Islamic Studies, Muhammadiyah University of Makassar. Financial literacy includes financial knowledge, behavior and attitudes in managing finances, while financial technology refers to the use of technological innovation in financial services to improve effectiveness and efficiency. Financial inclusion, as a dependent variable, is defined as an individual's accessibility to formal financial services to improve financial well-being. The study used a quantitative approach with an associative descriptive method. The sample consisted of 77 students selected using the proportionate stratified random sampling technique. Data collection was carried out through a Likert-based questionnaire, which included indicators of financial literacy, financial technology, and financial inclusion. Data were analyzed using multiple regression tests to test the relationship between variables. The results of the study showed that the sig. value. For the effect of X1 on y is 0.169> 0.05 and the t value is 1.388 <t table 1.665, so it can be concluded that H0 is rejected, which means there is no significant effect of X1 on Y and the sig. value. The influence of X2 on y is 0.041 < 0.05 and the calculated t value is 2.079 > t table 1.665, so it can be concluded that H1 is accepted, which means there is a significant influence of X2 on Y.

1. Introduction

Rapid economic growth in the era of globalization demands careful financial management. Good financial management allows individuals and organizations to determine the optimal use of funds. In this context, financial literacy is important because it provides the knowledge and skills needed to make wise financial decisions. Moreover, in the digital era, Financial Technology (Fintech) has become an important tool in increasing financial inclusion, especially in developing countries like Indonesia. The Financial Services Authority (OJK) noted that fintech plays a significant role in reaching people who were previously difficult to access by conventional banking [3].

However, although financial inclusion in Indonesia continues to grow, the level of financial literacy, especially among students, is still relatively low. Based on the 2019 National Survey of Financial Literacy and Inclusion (SNLIK), the level of financial literacy of Indonesian students only reached 32.1 percent, indicating a gap between the use of financial products and their understanding of them [7]. This condition highlights the need to improve financial literacy among students so that they are able to use financial services more wisely.

This study aims to examine the influence of financial literacy and financial technology on financial inclusion of the Islamic religion faculty of Muhammadiyah University of Makassar. The results are expected to provide a significant contribution in improving financial literacy and

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encouraging the optimal use of financial technology.

1.1 Background

Financial literacy includes a series of abilities to understand, manage, and make effective financial decisions, which can ultimately improve individual welfare [1] and [4]. However, the consumptive lifestyle often found among students can hinder them from achieving financial well-being. Previous studies have shown that Economics and Business (FEB) students have a higher level of financial literacy than students from other faculties, who tend to rely solely on the internet as a source of information [10] and [12]. Along with the increasing penetration of the internet, financial technology (fintech) has become an alternative that makes it easier for people to access financial services. The presence of fintech supports financial inclusion by allowing people who do not have access to traditional banks to still be able to transact and obtain financing [3]. For students, fintech can also be an important tool to manage their finances more efficiently, in line with the principles of financial literacy which emphasize wise decision-making in managing financial resources [9].

1.2 Problem Statement

Along with economic growth in the era of globalization, financial management becomes crucial, especially for students as the younger generation. However, the level of financial literacy of Indonesian students aged 18–25 years is still low, only 32.1% (SNLIK, 2019), indicating that the use of formal financial products is often carried out without adequate understanding [7]. This increases the risk of errors in financial management. Financial technology (fintech) offers easy access to financial services, but its use is still limited among non-economic students, who have a lower understanding of financial literacy than economic students [3] and [10]. There has been no specific research on the effect of financial literacy and fintech on the financial inclusion of non-economic students at the University of Muhammadiyah Makassar. This study aims to fill this gap by analyzing these factors on financial inclusion.

1.3 Objectives and Scope

This study aims to examine the impact of financial literacy and financial technology (fintech) on financial inclusion among students of the Faculty of Islamic Studies at the Muhammadiyah University of Makassar. The main objective is to assess whether financial literacy affects students' financial inclusion, because financial literacy is an important aspect in determining an individual's ability to manage finances effectively [1]. In addition, this study intends to analyze the role of fintech in driving financial inclusion, given its ability to increase access to financial services, especially for those who are not yet covered by traditional banking services [3]. The scope of this study focuses on non-economic students, because this group has been shown to have lower financial literacy compared to their peers who are engaged in economics [12] and [14], so further investigation is needed on how fintech and financial literacy can improve their financial inclusion. These findings are expected to provide valuable insights to improve financial literacy programs and fintech adoption among students, ultimately contributing to the broader goal of increasing financial inclusion in Indonesia.

2. Literature Review

2.1 Related Work

Previous studies have shown a significant relationship between financial literacy, fintech, and financial inclusion. Octaviani Salsabella and Handri (2022) and Liska et al. (2022) found that financial literacy and fintech have a positive effect on financial inclusion [7] and [6]. Kerthayasa and Darmayanti (2023) emphasized the role of fintech in increasing financial inclusion, especially for people who are not covered by traditional banking [4]. Rajendra Bomantara et al. (2023) and Sahib & KR (2023) revealed low financial literacy among non-economic students, who rely more on the internet as a source of information [10] and [12]. Research by Salwa et al. (2022) also confirmed that financial literacy and fintech have a significant effect on financial inclusion [13]. Based on these results, although financial literacy and fintech have been shown to contribute to financial inclusion, this study focuses on students of the Faculty of Islamic Studies at the Muhammadiyah University of Makassar.

2.2 Research Gap

Although many studies have explored the influence of financial literacy and fintech on financial inclusion, most of them focus on economics students or the general public. Research by Rajendra Bomantara et al. (2023) and Sahib & KR (2023) shows that non-economics students have lower levels of financial literacy than economics students, but there has been no study that specifically discusses the influence of financial literacy and fintech on financial inclusion among non-economics students. In addition, although fintech is considered to be able to increase financial inclusion [3], its use is still limited among non-economics students. Therefore, this study aims to fill this gap by analyzing the influence of financial literacy and fintech on financial inclusion of the Islamic religious faculty at the Muhammadiyah University of Makassar.

3. Methodology

This study uses a quantitative approach with descriptive and associative methods to analyze the effect of financial literacy and fintech on financial inclusion. This approach was chosen to see the relationship between variables systematically and scientifically. Data were collected through a questionnaire designed to measure financial literacy, fintech, and financial inclusion at the Faculty of Islamic Studies, Muhammadiyah University of Makassar. Based on the population strata of students at the Faculty of Islamic Studies, a sample size of 77 students was obtained.

3.1 Data Collection

The main data in this study were obtained through a questionnaire distributed to 77 students at the Faculty of Islamic Studies, Muhammadiyah University of Makassar. This questionnaire contains questions that cover three main variables: financial literacy, fintech, and financial inclusion, which are measured using a Likert scale. This questionnaire is designed based on indicators quoted from the Financial Services Authority OJK (2017) [8]. Data collection was carried out online via Google Form to make it easier for respondents to fill in and researchers to analyze the data.

3.2 Analysis Techniques

The collected data will be analyzed using multiple regression analysis to test the partial effect between financial literacy and fintech on financial inclusion. Before that, the data will be tested using validity and reliability tests to ensure the accuracy of the research instrument. After that, the classical assumption test will be carried out, including normality, multicollinearity, and heteroscedasticity tests, to ensure that the regression model used meets the requirements. This analysis will be carried out using SPSS software to obtain valid and reliable results.

3.3 Validation

To ensure the validity of the data, the questionnaire instrument will be tested using a validity test, where the results of the r count calculation are compared with the r table at a significance level of 0.05. The instrument is declared valid if the r count is greater than the r table. In addition, the reliability of the measurement will be tested using Cronbach Alpha, with a reliability value considered adequate if it is more than 0.600 [15]. After the validity and reliability tests, the data will be further analyzed to test the research hypothesis using the t test for partial effects and the coefficient of determination test for simultaneous effects between the variables studied.

4. Results and Discussion

4.1 Research Instrument Test

a. Data quality test

Table 4.1
Results of the Validity Test

Question item	^{r}count	^{r}table	Information
X1.1	0,593	0,186	valid
X1.2	0,501	0,186	valid
X1.3	0,574	0,186	valid
X1.4	0,624	0,186	valid
X1.5	0,672	0,186	valid
X1.6	0,604	0,186	valid
X1.7	0,688	0,186	valid
X1.8	0,418	0,186	valid
X1.9	0,474	0,186	valid
X1.10	0,450	0,186	valid
X2.1	0,529	0,186	valid
X2.2	0,675	0,186	valid
X2.3	0,587	0,186	valid
X2.4	0,701	0,186	valid
X2.5	0,832	0,186	valid
X2.6	0,884	0,186	valid
X2.7	0,824	0,186	valid
X2.8	0,854	0,186	valid
Y1	0,692	0,186	valid
Y2	0,798	0,186	valid
Y3	0,791	0,186	valid
Y4	0,885	0,186	valid

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Y5	0,627	0,186	valid
Y6	0,659	0,186	valid

Based on the comparison between the calculated r and the table r, it can be concluded that all questions for each variable are valid.

Table 4.2
Results of the Reliability Test

Variable	Cronbach's Alpha	Kriteria	Informaation
Financial Literacy	0,756	0,600	Reliebel
Financial Technology	0,872	0,600	Reliebel
Financial Inclusion	0,838	0,600	Reliebel

Based on table 4.2, it can be concluded that the Cronbach's alpha value of all variables is more than > 0.600, so it can be said to be reliable.

b. Respondent characteristics

Table 4.3
Respondent Characteristics

Social Characteristics	Frequency (N)	Percentage (%)
Gender		
Man	0	0
Woman	77	100%
Total	77	100%
Age		
18-22 Year	70	90,90%
23-29 Year	5	6,49%
30-39 Year	2	2,59g%
>40 Year	0	0
Total	77	100%
Current Semester		
Semester 1	0	0
Semester 3	0	0
Semester 5	69	87,7%
Semester 7	8	12,3%
Total	77	100%
Area Of Origin		
Gowa	13	16,8%
Sinjai	4	5,19%
Makassar	4	5,19%
Takalar	2	2,59%
Maros	2	2,59%
Southeast Sulawesi	2	2,59%
Luwu	8	10,3%
Bima	3	3,89%
Enrekang	2	2,59%

Pangkep	2	2,59%
Bantaeng	1	1,29%
Felores, NTT	3	3,89%
Wajo	4	5,19%
Bulukumba	1	1,29%
Central Sulawesi	4	5,19%
Jeneponto	1	1,29%
Polewali Mandar	1	1,29%
Banjarmasin	1	1,29%
Sidrap	3	3,89%
Pinrang	2	2,59%
Bitung	1	1,29%
Gorongtalo	1	1,29%
Bolaang Mangodow	1	1,29%
West Kutai	1	1,29%
Bone	4	5,19%
East Kutai	1	1,29%
West Halmahera	1	1,29%
Parigi Moutong	1	1,29%
Selayar	1	1,29%
Parepare	1	1,29%
Banda Naira	1	1,29%
Total	77	100%
Employment Status		
Work	16	19,8%
Doesnt' Work	61	80,2%
Total	77	100%
Income or pocket money per month		
< Rp 500.000	40	50,6%
Rp 500.000 – Rp 1.000.000	25	34,6%
Rp 1.000.000 – Rp 2.000.000	9	11,1%
> Rp 2.000.000	3	3,89%
Total	77	100%
Study Program		
Islamic Education	6	7,7%
Arabic Language Education	71	92,3%
Total	77	100%

The characteristics of the respondents in this study provide an overview of the social and demographic background of the participants consisting of 77 students of the Faculty of Islamic Studies, Muhammadiyah University of Makassar. In terms of gender, all respondents were female (100%). The majority of respondents were aged between 18–22 years (90.9%), with a small portion aged 23–29 years (6.49%) and 30–39 years (2.59%). Most respondents were in semester 5 (87.7%), followed by semester 7 (12.3%). Based on their area of origin, respondents came from various regions in Indonesia, with the majority coming from Gowa (16.8%) and the rest spread across various regions such as Luwu, Sinjai, Makassar, and other areas. Most respondents were unemployed (80.2%), while 19.8% had jobs. In terms of monthly income or pocket money, half of the respondents have an income of less than IDR 500,000 (50.6%), while the rest are in the income range of IDR 500,000 to more than IDR 2,000,000. The majority of respondents are from the Arabic Language Education study program (92.3%), while the rest are from Islamic Religious Education (7.7%). These data reflect the diverse backgrounds of the respondents who are the subjects in this study.

c. Classical Assumption Test

Table 4.4 Results of normality test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		77
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	3,06552448
Most Extreme Differences	Absolute	,163
	Positive	,163
	Negative	-,148
Test Statistic		,163
Asymp. Sig. (2-tailed)		,000[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Based on the results of the Kolmogorov Smirnov test above, it shows that the sig. value is 0.000 < 0.05, so the data is not normally distributed.

Table 4.5 Results of the Multicollinearity test

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	12,320	3,412		3,610	,001		
	X1	,135	,097	,173	1,388	,169	,749	1,336
	X2	,190	,091	,259	2,079	,041	,749	1,336

a. Dependent Variable: Y

Based on the table above shows the results of X1 with a tolerance value of 0.749> 0.10 or equal to a VIF value of 1.336 <10.0, then there is no Multicollinearity or the level of coloniality can be accepted. And the results of X2 with a tolerance value of 0.749> 0.10 or equal to a VIF value of 1.336 <10.0, then there is no Multicollinearity or the level of coloniality can be accepted.

Table 4.6 Results of the Heteroscedasticity test

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	8,465	2,480		3,414	,001
	Financial Literacy (X1)	-,220	,071	-,393	-3,122	,003
	Financial Technology (X2)	,067	,066	,127	1,008	,317

a. Dependent Variable: Abs_RES

Based on the table above shows the results of variable X1 with a significance value of 0.003 <0.05, then there is a symptom or problem of heteroscedasticity. While the results of variable X2 show a significance value of 0.317> 0.05, then there is no symptom of heteroscedasticity.

d. Multiple linear regression

Table 4.7 Results of multiple linear regression analysis

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	12,320	3,412		3,610	,001
	Financial Literacy (X1)	,135	,097	,173	1,388	,169
	Financial Technology (X2)	,190	,091	,259	2,079	,041

a. Dependent Variable: Financial Inclusion

Based on the table, it is explained that the constant coefficient value is 12.320, while the regression coefficient value for financial literacy (X1) is 0.135 and the regression coefficient value for financial technology (X2) is 0.190.

e. Hypothesis Testing

Table 4.8 Results of partial test (t-test)

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	12,320	3,412		3,610	,001
	LITERASI KEUANGAN	,135	,097	,173	1,388	,169
	FINANCIAL TECHNOLOGY	,190	,091	,259	2,079	,041

a. Dependent Variable: INKLUSI KEUANGAN

Based on the table above, it shows that:

First hypothesis testing (H0)

It is known that the sig. value for the influence of X1 on y is 0.169> 0.05 and the t-value is 1.388 <t table 1.665, so it can be concluded that H0 is rejected, which means there is no significant influence of X1 on Y.

First hypothesis testing (H1)

It is known that the sig. value for the influence of X2 on y is 0.041 <0.05 and the t-value is 2.079> t table 1.665, so it can be concluded that H1 is accepted, which means there is a significant influence of X2 on Y

Table 4.9 Results of the Correlation and Determination Coefficient Test

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,376[a]	,142	,118	3,10667

a. Predictors: (Constant), FINANCIAL TECHNOLOGY , LITERASI KEUANGAN

b. Dependent Variable: INKLUSI KEUANGAN

Based on the output above, it is known that the R Square value is 0.142, so 0 < 0.142 < 1, it can be concluded that the independent variables provide almost all the information needed to predict dependent variations or have a large influence.

5. Discussion

5.1 Comparison with Prior Research

The results of this study indicate that financial literacy does not have a significant effect on financial inclusion, while financial technology has a significant effect on financial inclusion. This result is in line with the research of Bakhtiar et al. (2022), which stated that there is a significant effect between financial technology and financial inclusion, but differs in terms of financial literacy, which is considered significant in the study [2]. This study also supports the findings of Kusumawardhani et al. (2020), which showed differences in the level of financial literacy between economics and non-economics students, indicating that the faculty context can influence the results of the study[5].

5.2 Limitations

This study has several limitations that need to be considered. First, the data collected was limited to students of the Faculty of Islamic Studies, Muhammadiyah University of Makassar, so the results of this study may not be generalizable to the wider student population, especially students from other faculties who have different characteristics [5]. Second, this study used a survey method with a questionnaire as a data collection tool, which has the potential to introduce respondent bias, such as answers that do not fully reflect the actual conditions [11]. Third, this study only analyzed two independent variables, namely financial literacy and financial technology, although there are other factors that can also influence financial inclusion, such as government policy support or socio-economic factors [7]. In addition, this study did not accommodate a longitudinal approach, so it could not explore causal relationships in depth over time [12]. These limitations are opportunities for future research to expand the scope of subjects, variables, and more comprehensive analysis methods.

5.3 Future Research

Future research is suggested to expand the scope of the subject by involving students from various faculties and universities to be more representative [5]. Other variables such as government policies and socio-economic factor analysis can also be added for well-being [7]. A longitudinal approach needs to be considered to explore the causal relationship in depth, as proposed by Sahib & KR (2023).

6. Conclusion

This study concludes that financial technology has a significant influence on financial inclusion, while financial literacy does not show a significant influence. This indicates that ease of access, effectiveness, and interest in financial technology-based services play an important role in encouraging financial inclusion among students of the Faculty of Islamic Studies, Muhammadiyah University of Makassar. However, less than optimal financial literacy is a challenge in wise financial management, especially for non-economic students. These results differ from previous studies, such as Octaviani & Handri (2022) and Liska et al. (2022), which found that both variables had a significant effect on financial inclusion. Thus, this study emphasizes the importance of efforts to improve financial literacy to support the effectiveness of financial technology in expanding access to financial services.

7. Recommendation

Based on the research findings, it is recommended that educational institutions, especially Universitas Muhammadiyah Makassar, strengthen financial literacy programs for students, especially through practical training and relevant education. This is important to improve their understanding in managing finances wisely, as suggested by Octaviani & Handri (2022). In addition, the development of financial technology needs to be continuously encouraged by increasing ease of access and user-friendly features, so that it can reach more students. The government and the Financial Services Authority (OJK) are also expected to provide policy support and initiatives to encourage financial inclusion through technology integration. Further research is also needed to identify other factors that can strengthen financial inclusion, such as socio-economic roles and public policy support.

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