Financial technology, financial knowledge, and financial attitude of Generation Z: Determinants of financial behavior

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ABSTRACT

Purpose — The aim of this study is to examine the influence of financial technology, financial literacy, and financial attitudes on the financial behavior of Generation Z within the framework of Society 4.0.

Method — This quantitative descriptive research utilizes a questionnaire-based data collection approach distributed online through Google Forms to university students in Sidoarjo. A total of 94 responses were gathered from the questionnaire distribution. Subsequently, to discern the individual impacts, the data from the questionnaire were subjected to analysis employing t-tests and multiple linear regression using SPSS version 2.1.

Result — This study reveals that financial technology has a significant influence on the financial behavior of college students, while financial literacy affects their financial behavior. Additionally, financial attitudes also impact their financial behavior.

Practical implications — This study suggests a pressing need for educational institutions to enhance financial education programs, integrating concepts from behavioral finance and emphasizing practical application, to improve students' understanding of financial behavior and decision-making for effective personal financial management.

Keywords: financial technology, financial knowledge, financial attitude, financial behavior, Generation Z

INTRODUCTION

The era of Society 4.0 is characterized by the extensive use of technology by people to fulfill their daily needs, including in the financial sector, marked by the proliferation of startups in Indonesia creating new financial technology. Technology plays an important role in aiding the economy of individuals in terms of finance. Advancements in economics and technology have led to innovation in financial technology, known as fintech. Fintech is a new innovation that integrates digital technology with financial services, offering alternatives to assist humans (Vhalery, 2021). Generation Z, referred to as the generation born after Generation Y, comprises individuals born between 1995 and 2010 (Anggarini et al., 2021). Besides being known as Generation Z, individuals born during this period are also called the internet generation because they consistently utilize advancements in technology in their daily lives. The numerous conveniences experienced by Generation Z do not eliminate the possibility that they will also encounter financial challenges.

Throughout 2018, Indonesia's fintech industry grew rapidly. According to the Financial Services Authority (OJK) Fintech 2018 report, Go-Pay remains in first place for e-money, and OVO is in second place. It is also reported that the public is increasingly aware of the importance of fintech regulation. Therefore, the government must respond by increasing financial literacy by making regulations that provide more certainty for the industry (Pambudi, 2019). Digital technology makes people's lives easier and more practical. This encourages the advancement of financial technology in Indonesia closer to the community because basically people want convenience in various aspects of life, including meeting daily needs. Digital financial services, also known as
Islamic fintech, have huge growth potential in a country that has the largest Muslim population in the world (Susiyana et al., 2023). This is shown by the largest number of Islamic fintech in the world. Indonesia has 61 Islamic fintech, or around 16.27% of the total global fintech, which makes it the country with the highest number of Islamic fintech in the world. This shows that the industry has great potential to develop.

One of the fintech services often utilized by Generation Z, especially students, is related to the payment system. Additionally, students also make use of banking services such as ATMs, internet banking, and mobile banking, which facilitate transactions (Mujiatun et al., 2022). One of the reasons behind the substantial usage of fintech by Generation Z today is the dominance of this demographic in Indonesia. The results of the 2020 population census recorded that the majority of Indonesia's population consists of Generation Z and millennials who readily embrace and apply innovations in financial technology (Susiyana et al., 2023). Regarding the payment systems mentioned earlier, transactions made through fintech can influence users' financial management practices. Changes in financial behavior resulting from these technological advancements may establish a trend of conducting financial transactions through fintech as a habitual practice (Erlangga et al., 2017). Consequently, the use of fintech can indirectly enhance individuals' access to financial information and services, potentially boosting their financial literacy (Azzahra, 2022). Fintech has evolved into a financial management tool capable of influencing individuals' personal finances and user behavior (Becker, 2017).

A person's financial behavior, also known as "financial behavior," can indicate how effectively they manage their finances. With the development of fintech, there's a corresponding need to enhance student financial knowledge (Haqiqi & Pertiwi, 2022). Financial knowledge encompasses the understanding and skills individuals possess regarding organizing, managing, and mitigating risks associated with financial resources, influenced by their education and environment (Triani & Wahdiniwaty, 2020). When students possess comprehensive financial knowledge and engage in financial management, it indirectly impacts their financial behavior. Previous research by (Azzahra, 2022) and (Dewanti et al., 2023) demonstrates that financial knowledge positively influences financial behavior. However, studies conducted by (Muhidia, 2019a) and (Muhidia, 2019b) did not find a significant positive relationship between financial knowledge and financial behavior. According to (Aditya, 2021), a strong foundation in financial knowledge is necessary, at least partially, for students to utilize this knowledge effectively and change their financial perspectives. Financial attitude reflects how individuals manage their finances based on their personality and experiences (Rai et al., 2019). Evaluating individuals' financial attitude is a way to gauge their financial management efficacy, providing insight into their ability to make sound financial decisions. Individuals with positive attitudes towards financial management find it easier to make informed choices, whereas those with negative attitudes may encounter various financial challenges (Aditya, 2021). Research conducted by (Haqiqi & Pertiwi, 2022), (Talenta Azzahra, 2022), and (Yuliana et al., 2023) indicates that financial attitude positively influences financial behavior. Conversely, studies by (Rizkiawati & Asandimitra, 2018) and (Yerianto & Mustaqim, 2024) suggest that financial attitude does not have a significant positive effect on financial behavior.

This research topic is deemed significant and intriguing to investigate because understanding financial behavior is crucial for everyone, particularly students. As students transition into higher education, they encounter increased responsibility in making financial decisions and managing their own finances (Azzahra, 2022). Hence, it becomes imperative for students to possess strong financial management skills, reflected in their financial behavior. This understanding underscores the importance of exploring this topic further. Therefore, the aim of this study is to explore the impact of financial technology, financial knowledge, and financial attitude on financial behavior.
METHOD

Sampling and data collection

This research focuses on students currently studying at the college or university level in Sidoarjo. Due to the considerable number of students, the sampling technique employed is Accidental Sampling, where respondents are selected by chance. This method targets any university student in Sidoarjo who happens to encounter the questionnaire link, thus becoming part of the research sample. The primary data used in this study are collected directly from respondents. This method is chosen to facilitate broad access to respondents at a reasonable cost, with ease of access, and time efficiency. The questionnaire is distributed in the form of a Google Form via the internet. Data collection occurred over approximately one month, specifically in December 2023, during which 94 responses were successfully gathered for subsequent analysis.

To determine the sample size, the researchers utilized the Lemeshow formula, resulting in a total of 90 samples. Additionally, data processing and analysis were conducted using SPSS application version 2.1. The analysis commenced with a classical assumption test, including normality, heteroscedasticity, and multicollinearity tests, as prerequisites for multiple linear regression analysis. The results of the multiple linear regression analysis are represented by the following equation. Moreover, the partial effect of the independent variables on the dependent variable was assessed using t-test on the research data.

Measurement items

In this study, four variables are measured: financial technology, financial knowledge, financial attitude, and financial behavior. The independent variables are financial technology, financial knowledge, and financial attitude, while financial behavior is the dependent variable. The table below presents the indicators used for each variable in this study.

<table>
<thead>
<tr>
<th>No.</th>
<th>Variables</th>
<th>Indicators</th>
<th>Sub indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Financial Technology (Rasyid, 2017)</td>
<td>Useful</td>
<td>Get more benefits</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Easy to use</td>
<td>Transact easier</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Website design</td>
<td>Accessibility of application features</td>
</tr>
<tr>
<td></td>
<td></td>
<td>System availability</td>
<td>Reliability of application features</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Privacy</td>
<td>Maintain the privacy of user information</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safety</td>
<td>Application usage security</td>
</tr>
<tr>
<td>2.</td>
<td>Financial Knowledge (Dewanti et al., 2023)</td>
<td>Basic knowledge of finance</td>
<td>Understand the benefits of financial management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Money management</td>
<td>Understand how to manage finances effectively</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Credit and debt management</td>
<td>Understanding the credit system</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Savings and investment</td>
<td>Understand how to save money</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Understand the investment system</td>
</tr>
<tr>
<td>3.</td>
<td>Financial Attitude (Dandy &amp; Azmansyah, 2021)</td>
<td>Obsession</td>
<td>Money management strategy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Power</td>
<td>Shopping satisfaction attitude</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Effort</td>
<td>The convenience of having money</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inadequacy</td>
<td>The attitude of not feeling enough</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retention</td>
<td>Attitude of not wanting to spend money</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Security</td>
<td>Independence in money management</td>
</tr>
</tbody>
</table>
Hypotheses development

**Financial technology and financial behavior**

Financial technology, as a digital financial service, enables transactions without the need for physical forms. The development and adoption of financial technology by users in Indonesia require continuous advancement, necessitating efforts from both the government and society to monitor and supervise all financial activities, encompassing state-level, corporate, and personal transactions (Dewi, 2020). Financial behavior encompasses human actions concerning money, investigating how individuals behave in financial contexts, particularly exploring how psychology influences financial decision-making within companies and financial markets. The concept of financial receptivity emerges as a measure of an individual's inclination to fulfill their living expenses relative to their earnings. Positive financial behavior manifests through effective financial management, planned actions, and adept financial control, as seen in how individuals manage their income and expenses. Key indicators related to financial behavior include budgeting, saving habits, timely bill payment, as well as saving and investment practices (Firlianti et al., 2023). The advancement and adoption of financial technology in Indonesia may influence financial behavior by altering individuals' receptivity towards digital transactions, thereby impacting those financial behavior indicators.

H1: Financial technology has a significant effect on the financial behavior

**Financial knowledge and financial behavior**

Financial knowledge positively influences financial behavior, as explained in the Theory of Planned Behavior (TPB), which posits that individuals' behaviors are shaped by their perceived control over them (Ajzen, 1991). Increased financial insight facilitates better long-term financial management, thereby influencing future financial decision-making. Individuals with strong self-control and high financial literacy are better equipped to consider various financial aspects when making decisions. Drawing from theoretical studies, this research utilizes learning theory as a framework for understanding financial behavior. By applying learning theory, individuals can modify their financial behavior through the acquisition of financial knowledge. Thus, it becomes evident that possessing financial knowledge enables individuals to master the art of money management.

H2: Financial knowledge affects financial behavior

**Financial attitude and financial behavior**

Attitude refers to an individual's feelings about personal financial matters, gauged through their responses to statements or opinions (Marsh, 2006). Financial management behavior, on the other hand, pertains to how an individual acts concerning personal finances, assessed through their actions (Marsh, 2006). Marsh (2006) asserts that a person's financial behavior is influenced by their financial attitude; individuals who lack prudence in handling their personal financial matters tend to exhibit poor financial behavior. According to Furnham (1984), financial attitudes influence spending, saving, hoarding, and squandering of money. These attitudes also impact
financial issues such as late bill payments and insufficient income to cover expenses. Additionally, factors like short-term thinking and reluctance to save contribute to financial problems.

H3: Financial attitude influences financial behavior

**Figure 1. Research framework**

![Research framework diagram](image)

Source: Developed by the authors (2024)

**RESULT AND DISCUSSION**

**Descriptive statistics**

Based on primary data collection, the profile of respondents in this study consists of Muslim students employed in Sidoarjo and Surabaya. The gender distribution of respondents is balanced, with 50% men and 50% women. Furthermore, the majority of respondents fall within the age range of 20 to 29 years and report an average monthly net income of IDR 3,000,000 – IDR 4,000,000. Additionally, the surveyed students are employed in factories.

**Preliminary analysis**

The first step involves descriptive statistical analysis, revealing that the dependent variable achieved the highest average value, specifically a financial behavior score of 26.47. Similarly, the independent variable with the highest average value is the Financial Technology variable, scoring 26.39. Conversely, the variable with the lowest average score is Financial Knowledge.

In the second step, a validity test is conducted, consisting of six question items. The results indicate that there are no invalid question items in the validity test for Variable X, as the correlation coefficient (r) for each question item exceeds the critical value of 0.261. Likewise, the validity of Variable Y, determined by distributing six questionnaire question items, is affirmed as each question's correlation coefficient surpasses the critical value. Hence, none of the question items are deemed invalid in the validity test for Variable Y.

In the third step, a reliability test is performed, demonstrating that the financial variables exhibit high reliability, with Cronbach’s alpha values exceeding the critical value of 0.261. Specifically, financial variables yield reliability coefficients of 0.807 for financial behavior, 0.856 for financial knowledge, 0.838 for financial attitude, and 0.809 for financial behavior. Consequently, the consistency of the six questions posed for each of the four variables is ensured.

In the fourth step, classical assumption tests encompass normality, heteroscedasticity, and multicollinearity tests. Results reveal that the data meet classical assumptions and are normally distributed, with a significance value greater than 0.05 for the normality test. Additionally, the heteroscedasticity test indicates that there is no
heteroscedasticity in the data for all research variables, as the significance values exceed 0.05. Furthermore, the multicollinearity test demonstrates that there is no multicollinearity between independent variables, with tolerance values exceeding 0.05 and Variance Inflation Factor (VIF) values less than 10. Hence, the classical assumptions are satisfied.

**Hypotheses testing**

The t-test is employed to examine the effect of the independent variable(s) on the dependent variable. If the calculated t-value (tcount) exceeds the critical t-value (tttable) and the associated significance value (sig) is less than or equal to the chosen level of significance (α = 0.05), then it indicates a statistically significant relationship between the independent and dependent variables. The following table provides the t-test results for this study.

<table>
<thead>
<tr>
<th>Variables</th>
<th>tcount</th>
<th>tttable</th>
<th>Sig.</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial technology</td>
<td>4.930</td>
<td>1.98667</td>
<td>0.000</td>
<td>H1 accepted</td>
</tr>
<tr>
<td>Financial knowledge</td>
<td>2.176</td>
<td>1.98667</td>
<td>0.032</td>
<td>H2 accepted</td>
</tr>
<tr>
<td>Financial attitude</td>
<td>3.888</td>
<td>1.98667</td>
<td>0.000</td>
<td>H3 accepted</td>
</tr>
</tbody>
</table>

Dependent variable: financial behavior

Source: Processed data (2024)

**Discussion**

**The Influence of financial technology on financial behavior**

The results of the regression model testing indicate that Financial Technology has a significant positive effect on financial behavior. This finding is supported by the calculated variable for Financial Technology obtaining a value greater than the critical t-table value (4.930 > 1.98667) and a significance value smaller than 0.05 (0.000 < 0.05). These results are consistent with previous studies (Talenta Azzahra, 2022; Putri et al., 2023; Saputra & Dahmiri, 2022) which also found a positive and significant influence of Financial Technology on financial behavior. The findings suggest that the financial management behavior of university students improves with the utilization of Financial Technology, as indicated by Putri et al. (2023), where students demonstrate enhanced financial management skills alongside increased usage of Financial Technology.

Students now have convenient access to various financial products and services through their smartphones, facilitated by Financial Technology (Putri et al., 2023). The availability of Financial Technology enables students to optimize their work and shopping experiences (Mukti et al., 2022). Moreover, apart from facilitating transactions, a notable feature of Financial Technology is transaction history, which aids university students in monitoring their expenditure patterns while using Financial Technology, as emphasized by Azzahra (2022). This feature helps users understand their spending habits and consumption activities. Additionally, Financial Technology assists students with financial matters such as saving for future needs, making essential payments, and supporting entrepreneurial activities, thereby enabling effective and efficient financial management (Putri et al., 2023).

However, the findings of this study contradict those of previous research (Haqiqi & Pertiwi, 2022; Salsabila et al., 2023; Firlianti et al., 2023), which reported that Financial Technology does not have a significant positive effect on financial behavior. According to Salsabila et al. (2023), Financial Technology may not positively impact financial behavior due to its tendency to promote consumerism, facilitated by the ease of transaction services.
The influence of financial knowledge of financial behavior

The results of the regression model testing indicate that Financial Knowledge partially has a significant effect on Financial Behavior. This is supported by the calculated variable for Financial Knowledge obtaining a value greater than the critical t-table value (2.176 > 1.98667) and a significance value smaller than 0.05 (0.032 < 0.05). These findings align with previous research by Azzahra (2022) and Dewanti et al. (2023), which also demonstrate the significant influence of Financial Knowledge on Financial Behavior. Thus, it can be interpreted that higher levels of financial knowledge among students lead to better financial management behavior.

Students who possess a strong understanding of financial knowledge tend to exhibit good financial behavior. This knowledge serves as a valuable asset in addressing financial challenges and making informed financial decisions. Understanding concepts such as saving and investment enables students to allocate their funds wisely, separating money for daily expenses from savings, and making sound investment choices for their future (Talenta Azzahra, 2022).

Furthermore, comprehension of credit and debt is crucial for university students. It empowers them to use debt effectively, mitigating potential negative consequences. Financially literate students avoid imprudent investments and exercise caution in utilizing credit to prevent accumulating unmanageable debts (Dewanti et al., 2023).

However, these findings contradict the research conducted by Herdjiono & Damanik (2016) and Oviyani (2022), which failed to establish a positive effect of Financial Knowledge on Financial Behavior. Their studies concluded that financial knowledge does not necessarily translate into effective financial behavior. Herdjiono & Damanik (2016) suggested that despite possessing financial knowledge, individuals may struggle to control their financial behavior. Similarly, Oviyani (2022) argued that an individual’s level of knowledge does not always influence their behavior.

The influence of financial attitude on financial behavior

The results of testing the regression model indicate that Financial Attitude partially has a significant effect on Financial Behavior. This is supported by the calculated t-value for the Financial Attitude variable, which exceeds the critical t-table value (3.888 > 1.98667), with a significance value smaller than 0.05 (0.000 < 0.05). These findings are consistent with research conducted by Haqiqi & Pertiwi (2022), Azzahra (2022), and Yuliana et al. (2023), which also demonstrate a significant influence of Financial Attitude on Financial Behavior. Thus, it can be inferred that university students exhibit better financial management when they possess positive attitudes towards financial matters.

The attitude of Generation Z students towards finances significantly shapes their financial management behavior. As previously mentioned by Muhidia (2019b), students with more favorable attitudes towards finances tend to make wiser financial decisions, leading to better financial management practices. A student's ability to assess their personal finances influences their attitudes towards finances, ultimately impacting their decision-making processes related to financial management. Financial attitudes encompass various aspects such as spending and saving habits, risk-taking behavior in investments, and bill payments (Haqiqi & Pertwiti, 2022).

However, these findings contradict the conclusions drawn from previous studies by Anggraini et al. (2022) and Nisa & Haryono (2022), which reported that Financial Attitudes do not affect Financial Behavior. According to Anggraini et al. (2022), the diversity in students' financial attitudes leads to inconsistencies in their effects on financial management, including both financial conditions and goals.
CONCLUSION

The aim of this investigation is to explore the impact of financial technology, financial knowledge, and financial attitudes on the financial behavior of Generation Z individuals within the context of Society 4.0. In this study, it becomes evident that the advent of Society 4.0 underscores a reliance on technology for everyday necessities, including financial activities, marked notably by the rise of financial technology (fintech). Financial technology, alongside financial knowledge and attitudes, intricately intertwine to influence individual financial behaviors. The utilization of fintech has the potential to broaden access to financial resources and information, consequently enhancing financial literacy. The findings of this study reveal that financial technology exhibits a partial yet significant positive effect on the financial behavior of university students. Similarly, financial knowledge and financial attitudes also demonstrate partial positive and significant effects on the financial behavior of these students.

Practically, the implications drawn from the data underscore the necessity of continually enhancing students’ comprehension of financial behaviors. This effort is vital for fostering greater personal responsibility in decision-making processes concerning financial management. Moreover, this study offers practical insights for evaluating student behaviors in managing their personal finances, aiding in addressing the challenges of daily life.

In terms of further research, several recommendations are outlined. Firstly, there is a suggestion to replicate similar studies at a national scale or within various governmental institutions to garner a comprehensive understanding of the model's influence regarding financial technology, financial knowledge, and financial attitudes on Generation Z's financial behavior in the Society 4.0 era. Secondly, while this study focused solely on the variables of financial technology, financial knowledge, and financial attitudes, future research could explore additional factors influencing financial behavior for a more comprehensive analysis.

REFERENCES


