

# THE DEVELOPMENT OF FINANCIAL TECHNOLOGY, FINANCIAL LITERACY, AND FINANCIAL MANAGEMENT BEHAVIOR IN GENERATION Z (A CASE STUDY OF ECONOMICS STUDENTS AT UIN MAULANA MALIK IBRAHIM MALANG)

## ABSTRACT

This study aims to analyze the impact of financial technology (fintech) usage on financial literacy and financial management behavior among Generation Z students at the Faculty of Economics, UIN Maulana Malik Ibrahim Malang. The research employs a quantitative design with a survey approach, conducted over a specific data collection period at the university. The methodology involves distributing structured questionnaires to active students, focusing on their experiences and perceptions regarding fintech and its influence on their financial practices. The findings reveal a significant positive relationship between fintech usage and financial literacy, indicating that students who frequently engage with fintech applications tend to have a better understanding of financial concepts. Furthermore, the study demonstrates that enhanced financial literacy positively affects students' financial management behavior, leading to more responsible financial decision-making. In conclusion, the research underscores the importance of integrating fintech into financial education, as it not only improves financial literacy but also fosters better financial management practices among students. The insights gained from this study can inform the development of targeted financial education programs that cater to the needs of Generation Z, equipping them with the necessary skills to navigate future financial challenges effectively.

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Study Design  
Place and Duration of Study  
Methodology  
Results  
Conclusion

**Keywords:** financial technology, financial literacy, financial management behavior, Generation Z, students.

## 1. INTRODUCTION

Developing countries, including Indonesia, face the challenge of undertaking significant economic transformation to compete in the global market and achieve sustainable economic growth in an era of globalization and intensified competition. The economic transformation process involves a shift from traditional sectors to modern sectors, increasing productivity, economic diversification, and increasing per capita income (1). The development in technology and digitalization can no longer be avoided, advances in digital technology, in England, the industrial revolution of the 18th century caused changes in industrial structure, which impacted almost everything, both in good and bad ways.

Various industrial sectors in Indonesia are offered with new innovations that can change the business model of each industry to be more effective and efficient. With the development of information technology, technology has emerged that leads to financial innovation with a touch of modern technology in the service sector called fintech (financial technology). (2), Fintech is an industry that moves very quickly and dynamically where there are many different business models. Meanwhile, according to (3) Financial Technology, also Fintech, is finance through new innovations (4)

Fintech is the maximum use of technology in improving financial services. The fintech concept adapts technological developments combined with the financial sector. Fintech comes with various types of business, including: Payment Channel System, Peer to Peer (P2P) Lending, Crowdfunding, and others. The most dominant fintech business actor in Indonesia currently is the payment type. Payment systems are electronic services that replace currency and demand deposits as a means of payment, for example emoney cards, gopay, ovo and bitcoin. Fintech itself is now a trend in many countries around the world, including Indonesia. This is not surprising considering the estimate that Indonesia's digital economy will be the largest in Southeast Asia by 2025. Due to potential demographic factors such as a large portion of the productive age population, a growing middle income group, an increase in the number of digital technology users, and estimates that the number of internet users in Indonesia will reach 200 million in 2020, the fintech industry in Indonesia is increasingly promising to develop in 2020 (5)

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The current development of fintech in Indonesia is similar to rainy season mushrooms. According to data from United Overseas Bank (UOB), around 30% of companies in Indonesia have used fintech. Fintech makes all financial transactions easier for business users. The existence of fintech has many advantages for consumers, such as easy access, many choices, price variations and various products. Ironically, good financial knowledge is not matched by easy access to fintech.

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Fintech is now very easy to access, all levels of society must be educated about financial management, financial products, and the benefits and risks of fintech. Financial literacy refers to the way users use the fintech phenomenon. Someone who is wise in managing finances always looks at it from two points of view, the first must be able to see the current technological growth with various types of financial technology very quickly, and the second must be able to see the user's ability to manage technological risks that continue to develop. By choosing a fintech application that suits your needs rather than your desires, as well as knowledge through financial literacy, you will minimize existing risks. Financial skills can help you avoid excessive desires. Next, after gaining sufficient financial knowledge, continue to learn about good and credible fintech. Good and credible fintech, namely fintech supervised by the OJK, good data security by providing mandatory security options to its users, being transparent regarding costs and service conditions, and having a good reputation and rating from its users.(6)

Financial literacy is essential, especially for Indonesian people. By having good financial literacy knowledge, people can choose carefully about the good use of finances. Those who understand finances can make decisions and manage their own finances using funds effectively (7)

The latest data from the Financial Services Authority (OJK) shows that the financial literacy of the Indonesian population is still low, at 49.68%. This will affect its users. Reduced financial literacy will lead to unwise financial decisions, such as taking out debt without considering the interest risk or investing without considering the risk of loss. Additionally, users are vulnerable to fraud and loss of funds due to incomplete understanding of fintech service products. It is very important to understand finance in today's digital time.

Results of the 2022 National Survey of Financial Literacy and Inclusion (SNLIK), the level of financial literacy in society has actually continued to increase since the first measurement was carried out in 2013. This shows that from year to year, the number of people who are financially literate has increased. In 2013, the financial literacy index was still low at 21.84%. Then it rose to 29.7% in 2016, then rose again to 38.03% in 2019 and rose again to 49.68% in 2022. The financial literacy index of 49.68% shows that out of 100 people, 49 to 50 people who is well literate. Well literate is a condition where a person have good knowledge and confidence about financial services institutions and financial products and services, including features, benefits and risks, rights and obligations related to financial products and services, as well as having the correct skills, attitudes and behavior in using financial products and services.

Financial Behavior or what can be called financial behavior is behavior related to financial applications. According to (9), financial behavior is a scientific discipline in which the interaction of various scientific disciplines is embedded and is continuously integrated so that discussions are not carried out in isolation. Financial behavior is an issue that is widely discussed today. They tend to think short term and are synonymous with impulsive shopping practices so that often individuals with sufficient income still experience financial problems due to irresponsible financial behavior. Financial Behavior is a person's ability to manage (planning, budgeting, auditing, managing, controlling, searching and storing) daily financial funds. Financial management behavior can also be interpreted as the process of making financial decisions, harmonizing individual motives and company goals. Financial management behavior is related to the effectiveness of fund management, where the flow of funds must be directed in accordance with predetermined plans. The indicators in this variable are the types of financial planning and budgeting you have, techniques for preparing financial planning, savings activities, insurance activities, pensions and unexpected expenses, investment activities, credit/debt, and bills, monitoring financial management, and evaluation of financial management (4)

Students are the millennial generation who want to always follow the latest technology trends. Technological advances have brought many changes to student lifestyles. The use of technology is increasingly common among the younger generation, including students. Students are part of society who are very close to issues of internet access, technology and information. This is not only because of academic demands which require them to always look for the latest information, but also because of scientific demands which require them to always look for the latest information. Students are a potential market segment as users of financial technology. The reason is, first and foremost, today's students come from the millennial generation, who are familiar with technology. Second, students receive relatively large amounts of money every month from their parents. Third, fintech-based transportation, such as trains, public buses and online motorcycle taxis, is very popular among students. Fourth, many shopping centers frequently visited by students have financial technology payment systems. Stores such as Indomart and Alfamart are examples. Students started talking about Fintech, which means carrying out financial transactions between humans and technology.

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Over time, the development of fintech can be influenced by financial literacy and have an impact on the financial behavior of users, especially students. According to (10) behavioral finance originates from different scientific structures. The first scientific structure is psychology, which analyzes how thoughts and behavior are influenced by the physical and external environment. The second scientific structure is finance, which includes payment systems, distribution and use of resources.

The third scientific structure is systematic sociology, which focuses on human or group behavior and how social relationships influence people's attitudes and behavior. Indicators of financial behavior include organizing, spending, saving, and waste (11) In reality, based on the data that has been mentioned, the role of the younger generation is very important, especially economics students in the fintech process, which is very important because they are agents of change who have great potential in influencing the direction of a country's economic development. Economics students have important skills and knowledge in economic analysis, business planning, and economic development strategies. They are equipped with an understanding of economic theories, market analysis, financial management, and economic policy (12).

Based on previous studies, the role of economics students in driving national economic transformation has been recognized as important. Research conducted by (13) in Ghana shows that economics students have a significant influence in spurring economic development through entrepreneurial activities and business innovation. Meanwhile, another study conducted by (14) in Iran revealed that economics students have great potential to contribute to the development of economic policies that are effective and appropriate to the local context.

In the context of national economic transformation in Indonesia, especially the development of fintech, a case study regarding the role of generation Z in economics students from the State Islamic University (UIN) Maulana Malik Ibrahim Malang is relevant for further exploration. UIN Malang has a quality and leading economics study program, whose economic education integrates Islamic values. Students from the UIN Malang economics study program not only gain comprehensive economic knowledge, but are also equipped with strong morality and ethics in accordance with Islamic teachings (15) This study aims to investigate the impact of financial technology developments on financial literacy and financial management behavior in generation Z, with a special focus on economics study program students at the Maulana Malik Ibrahim State Islamic University, Malang. Economics students are expected to have a deeper understanding of financial concepts, but their exposure to financial technology also provides new dynamics that need to be understood.

This research is relevant because it will provide a better understanding of how financial technology influences generation Z's financial behavior in the context of higher education, as well as potential implications for future financial education and policy. Through a case study approach at UIN Maulana Malik Ibrahim Malang, this research will collect in-depth and contextual data to describe the interaction between financial technology, financial literacy, and financial management behavior in this group. Thus, this research not only fills gaps in academic knowledge but also provides useful insights for the development of more effective and adaptive financial education strategies to support generation Z's readiness to face future financial challenges.

## **2. LITERATURE REVIEW**

### **2.1. Fintech**

Fintech is an abbreviation of Financial Technology, which refers to technological innovations that are changing the traditional way of conducting finance, covering various aspects such as digital payments, peer-to-peer lending, and online investment. This definition of fintech reflects the combination of information technology and financial services which continues to develop along with the acceleration of digitalization throughout the world. According to (16) Financial Technology (FinTech) is the hybridization of technology in the process of traditional technology-based financial services. Based on research by (17) Financial Technology is the creation of new financial service models through the development of information technology.

Digital Financial Innovation includes all forms of innovation that add value to financial services. Financial technology (FinTech) is the use of technology to provide solutions in the financial sector (18). FinTech activities include crypto and digital money, peer-to-peer lending, smart contracts that carry out agreements between buyers and sellers with information technology security, as well as technology-based insurance and regulation (19). In Indonesia, FinTech is developing in line with consumer needs, policies and existing technological infrastructure. Now, FinTech not only includes digital payments and online loans, but also other digital financial innovations, such as investment management, insurance, digital financial support, and crowdfunding services in the form of shares, as reinforced by Financial Services Authority Regulation No. 37/POJK.04/2018.

According to Catradiningrat in research conducted by (20) fintech is an entity that combines technology with financial services, creating creative disruption in the financial market by changing the existing order. Fintech has similarities to conventional finance but does not have a physical office. Fintech can be grouped into four categories: deposits, lending and capital raising, market provisioning, payments, clearing & settlement, and investment & risk management. Fintech allows the emergence of companies that provide technology to support financial services (start-ups) independently outside traditional financial institutions. Anyone who is able to innovate and develop technology-based financial service applications can become a player in the fintech industry.

The fintech industry encompasses various types of technology-enabled financial services and products. Based on research conducted by (21) fintech can be classified into several main categories:

1. Payments and Transfers: Includes e-wallets, mobile payment platforms, and international money transfers.
2. Loans and Funding: Covers peer-to-peer lending, crowdfunding, and microfinance platforms.
3. Investment Management: Includes robo-advisors, online trading platforms, and portfolio management applications.
4. Insurtech: Technological innovation in the insurance industry.
5. Regtech: Technology solutions for regulatory compliance and risk management.
6. Blockchain and Cryptocurrency: Includes blockchain and digital currency based applications.

Each of these categories has experienced significant development in recent years. For example, in the payments and transfers category, (22) reported rapid growth in the use of digital wallets and contactless payments, especially during the COVID-19 pandemic. The development of fintech is driven by various technological innovations. According to research conducted by (23), some of the key technologies driving innovation in fintech include:

1. Artificial Intelligence (AI) and Machine Learning: Used for credit risk analysis, fraud detection, and automated customer service.
2. Blockchain: Provides the potential for more secure, transparent and efficient transactions.
3. Cloud Computing: Enables scalability and flexibility in the provision of fintech services.
4. Big Data Analytics: Helps in better decision making and personalization of services.
5. Internet of Things (IoT): Opening up new opportunities in insurance and risk management.

A study conducted by (24) shows that the integration of these technologies has enabled fintech to offer faster, cheaper and more personalized financial services compared to traditional financial institutions.

Although it offers many opportunities, fintech also presents a number of challenges and risks. Research conducted by (25) identified several main risks in fintech adoption, including:

1. Cybersecurity Risks: Increased reliance on digital technology increases vulnerability to cyberattacks.
2. Data Privacy Risks: Extensive collection and use of consumer data raises concerns about privacy.
3. Systemic Risk: Increased interconnection in the financial system may increase systemic risk.
4. Regulatory Risk: Regulatory uncertainty and differences in regulatory approaches between countries create challenges for fintech companies.

Looking ahead, several key trends are expected to shape the fintech landscape of the future.

According to research conducted by (26) several emerging trends include:

1. Increased use of AI and machine learning in financial decision making.
2. Growth in the use of blockchain technology for various financial applications.
3. Increased focus on cybersecurity and data protection.
4. Developments in biometric technology for authentication and security.
5. Increased collaboration between fintech companies and traditional financial institutions.

The study conducted by (27) also highlights the potential of fintech in driving sustainable finance and socially responsible investment as a significant area of future growth.

According to (28), there are several indicators used to measure Financial Technology, namely:

1. Ease of Use (ease of use)

How easy it is for customers to use the available information technology applications.

2. Benefits of Use (usefulness)

Advantages or benefits received by customers from using available information technology applications, such as speeding up the transaction process, increasing the efficiency of transaction costs, ease and flexibility of transactions.

3. Trust

Trust in financial technology products provides a private space that can only be accessed by Privacy users. The security provided to customers when using information technology applications includes protection from cybercrime, viruses, system failures, and so on.

## 2.2. Financial Management Literacy

Financial literacy management is an important element of financial literacy, encompassing the knowledge, skills and attitudes necessary to manage personal finances well. A person is considered to have financial literacy if they have sufficient abilities and skills to utilize resources to achieve their goals. According to (29) financial literacy includes knowledge, skills and beliefs that influence attitudes and behavior in improving the quality of decision making and financial management in order to achieve prosperity. Based on research by (30) financial literacy is a series of processes or activities to increase the knowledge, confidence and skills of consumers and the general public so that they are able to manage their finances better.

According to (31) a study of student financial literacy at universities shows that students with business majors tend to understand finances better than those from other majors. However, no effort has been made to track financial knowledge and skills as students complete their studies. In addition, there has been no attempt to correlate individual financial literacy levels with various scientific disciplines.

From this description, it can be concluded that students' understanding of financial literacy is influenced by the major they take during their studies. According to (32), to avoid personal financial problems, it is important for individuals to have understanding and skills in financial management. Financial problems often arise due to a lack of understanding and skills in finance and financial management.

According to (33), the younger generation, including students, face complex challenges in managing their finances in the future. They have more freedom in making personal financial decisions, but often learn from experience and mistakes. The problem is the extent of their financial readiness to live independently and build a family (20)

(34) divides financial literacy levels into four categories, namely:

1. *Well literate*: Have in-depth knowledge and confidence in financial service institutions and their products and services, including an understanding of the features, benefits, risks, rights and obligations involved, as well as skills in using these financial products and services.
2. *Sufficiently literate*: Have knowledge and confidence in financial services institutions and their products and services, including an understanding of the features, benefits, risks, rights and obligations involved.
3. *Less literate*: Only have basic knowledge about financial services institutions and their products and services.
4. *Not literate*: Do not have knowledge or confidence in financial service institutions and their products and services, and do not have the skills to use these financial products and services.

Research conducted by the (35) stated that financial management literacy has variable indicators that cover several aspects to measure an individual's ability to manage finances. The following are several indicators, including:

1. Understanding of Financial Concepts: Ability to understand basic terms and concepts in finance, such as interest, investment, and budget.
2. Ability to Manage a Budget: Ability to plan and manage a personal budget, including spending and savings.
3. Financial Decision Making: The ability to make informed decisions regarding financial products, such as choosing a bank account, investment, or loan.
4. Analysis and Evaluation of Financial Information: Ability to analyze financial information and evaluate the risks and benefits of financial decisions taken.
5. Long Term Financial Planning: Ability to plan for future financial needs, including retirement and education planning.
6. Attitude towards money: Individual attitudes and behavior towards money management, including discipline in saving and spending wisely.
7. Knowledge of Financial Products: Understanding of the various financial products available, such as insurance, investments, and loans.

Various factors can influence a person's level of financial management literacy. Based on a longitudinal study conducted by (36) these factors include:

1. Education: The level of formal education is generally positively correlated with financial management literacy.
2. Socio-economic: A family's socio-economic status can influence exposure to financial concepts and practices from an early age.
3. Gender: Several studies show that there is a gender gap in financial management literacy, although this gap has tended to narrow in recent years.
4. Age: Financial management literacy tends to increase with age, but then decreases in old age.

5. Financial Experience: Individuals who have more experience in managing personal finances tend to have higher financial management literacy.
6. Technology Access: In the digital era, access to and skills in using financial technology can influence financial management literacy.

Given the importance of financial management literacy, various strategies have been developed to improve it. (37) identified several effective approaches:

1. Financial Education in Schools: The integration of financial education into the school curriculum has been proven to be effective in increasing financial management literacy from an early age.
2. Financial Education Programs for Adults: Training programs targeted to specific age groups and professions can help improve financial management literacy among adults.
3. Utilization of Technology: Mobile applications and online platforms can be effective tools for conveying financial information and practicing financial management skills.
4. Regulations and Public Policy: Policies that encourage transparency in financial products and protect consumers can help increase people's financial management literacy.
5. Multisector Collaboration: Collaboration between governments, financial institutions, and non-profit organizations can produce more comprehensive initiatives to improve financial management literacy.

Although there are many initiatives to improve financial management literacy, several challenges still need to be overcome. Research by (38) identified several key challenges:

1. Digital Divide: Although technology can be a powerful tool for increasing financial management literacy, gaps in technology access can widen gaps in financial literacy.
2. Behavioral Biases: Psychological factors and cognitive biases can influence how individuals apply their financial knowledge in decision making.
3. Financial Product Complexity: Innovations in financial products often exceed the average consumer's ability to understand them, creating new challenges in financial management literacy.
4. Cultural Differences: Strategies for increasing financial management literacy need to be adapted to different cultural and social contexts.

### 2.3. Financial Management Behavior

Financial management is closely related to the application of financial literacy. Financial management behavior reflects a person's ability to manage funds or daily finances, including budgeting, planning, auditing, managing, controlling, searching and storing. This relates to individual responsibility in managing finances productively, with the aim of managing and controlling finances effectively.

According to (39) financial behavior is part of financial literacy which is believed to have a positive impact on a person's financial well-being. Gradually, conscious financial behavior can be seen in decision making, comparison of opportunity costs, and search for alternatives to reduce waste. (40) added that behavioral finance studies how humans behave in financial decisions, especially how psychology influences financial decisions, companies and financial markets. These two concepts clearly show that behavioral finance is an approach that explains how humans invest and manage finances, which is influenced by psychological factors.

Financial behavior reflects how individuals respond to the financial decisions they face. Behavioral finance theory is rooted in psychology, revealing how emotions and cognitive storage influence investors' decisions. In the current global economic era, it is important for every individual to be a wise consumer, managing personal finances by building a strong financial understanding. Self-control is the main key in implementing healthy financial behavior in everyday life (30)

Various factors can influence an individual's financial management behavior. Research by (41) identified several main factors, including:

1. Demographic factors: Age, gender, education level, and income level have been shown to have a significant influence on financial management behavior. For example, individuals with higher levels of education tend to exhibit better financial management behavior.
2. Psychological factors: Attitudes toward money, locus of control, and level of financial anxiety can influence how individuals manage their finances. Individuals with an internal locus of control tend to show more proactive financial management behavior.
3. Social factors: The influence of family, peers, and social media also play an important role in shaping financial management behavior. Financial socialization in the family has a long-term impact on children's financial management behavior in adulthood.
4. Financial literacy: The level of understanding and knowledge of financial concepts has a positive correlation with good financial management behavior. The importance of financial literacy in improving the quality of financial decision making.

5. Technological factors: With the development of fintech, the accessibility and use of financial technology has also become an important factor influencing financial management behavior. Adoption of digital financial applications can increase individual financial awareness and control.

According to (6) financial management behavioral indicators include the following things:

1. the types of financial planning and budgets that are owned
2. Techniques for preparing financial planning
3. Saving activities
4. Insurance activities, pensions and unexpected expenses
5. Investment activities, credit/debt, and bills
6. Monitoring financial management
7. Evaluation of financial management

Various factors can influence an individual's financial management behavior. (42) identified several key factors, including:

1. Demographic factors (age, gender, education, income)
2. Psychological factors (attitude towards money, locus of control)
3. Social factors (influence of family, peers, media)
4. Financial literacy
5. Access to financial services

In the context of the digital era, access to financial technology is also an important factor influencing financial management behavior. The digital era has brought significant changes to the financial landscape, creating both new opportunities and challenges in personal financial management.

Research by (43) identified several key challenges:

1. Information overload: The abundance of financial information available can cause confusion and difficulty in decision making.
2. Financial product complexity: Increasingly sophisticated financial products require a higher level of understanding.
3. Cyber security risks: The rise in online transactions also increases the risk of fraud and financial data breaches.
4. Rapid changes in financial technology: Individuals need to continually update their knowledge and skills to keep up with the latest developments.

### **2.3.1. Measurement of Financial Management Behavior.**

Accurate and comprehensive measurement of financial management behavior is critical for research and intervention in this area. Several measurement instruments that have been developed by (44) include:

1. Financial Management Behavior Scale (FMBS): This scale measures four main dimensions of financial management behavior: cash flow management, credit management, savings and investments, and insurance management.
2. Financial Capability Scale (FCS): This scale measures not only financial behavior but also financial capability more broadly, including access to financial services and confidence in financial decision making.
3. Multidimensional Financial Management Practices Scale: A multidimensional scale that covers aspects such as retirement planning, risk management, and digital financial literacy.

### **2.3.2. Strategy for Improving Financial Management Behavior**

Based on a deeper understanding of the factors influencing financial management behavior, several strategies have been proposed by (45) to improve this behavior:

1. Financial education: Financial education interventions can have a significant positive impact on financial behavior, especially if designed with the specific context and needs of the target audience in mind.
2. Use of technology: Proper integration of financial technology can help individuals track expenses, set financial goals, and make better investment decisions.
3. Nudging and choice architecture: an update of the concept of "nudge" in a financial context, showing how small changes in choice architecture can encourage better financial behavior without limiting freedom of choice.
4. Holistic approach: An approach that integrates psychological, social, and contextual factors in financial behavioral interventions, emphasizing the importance of understanding individuals' motivations and barriers to managing their finances.

## **3. Hypothesis**

### **3.1. The Influence of Fintech Developments on Financial Management Behavior in Generation Z**

Financial Technology, or better known as fintech, has experienced rapid development in recent years, changing the landscape of the financial industry significantly. Fintech refers to the use of innovative technology in the financial sector to improve the efficiency, accessibility and quality of financial services (46). The evolution of fintech has been driven by a variety of factors, including technological advances, changing consumer preferences, and the need for more inclusive and efficient financial solutions. Fintech is not only changing the way financial services are provided but also influencing individual financial behavior. Financial behavior, according to (40) studies how humans behave in financial decisions, especially how psychology influences financial decisions, companies and financial markets. Behavioral finance is an approach that explains how humans invest and manage finances, which is influenced by psychological factors. This theory suggests that emotions and cognitive biases can influence the financial decisions made by individuals. The influence of fintech on financial management behavior has become an increasingly important topic in contemporary financial research. The use of fintech-based financial management applications, as shown in research by (47), can increase financial awareness and encourage better savings behavior. However, fintech also carries potential risks, such as overtrading in investments or excessive borrowing through peer-to-peer lending platforms.

In line with this, research by (48) and (49) shows that fintech payments have a positive or significant influence on students' financial management behavior. This is due to the understanding and effective use of fintech by students, the majority of whom often use fintech payment services for their daily needs. Correspondingly, a study by (50) shows that the adoption of fintech-based financial management applications can increase users' financial awareness and encourage better savings behavior.

However, not all literature supports the view that fintech developments have a significant impact on management behavior. As research conducted by (51) shows that although fintech can facilitate innovation in companies, its presence alone is not enough to directly change management behavior. This research emphasizes that the impact of fintech on managerial behavior is often mediated by other factors such as entrepreneurship and corporate culture, meaning that the adoption of fintech technology may not necessarily lead to significant changes in traditional management practices. In addition, research conducted by (52) discusses the limitations of fintech, especially related to data privacy aspects, and concludes that the challenges presented by fintech do not always encourage changes in management behavior. Companies that already have a strong regulatory compliance culture tend to maintain their management practices despite technological changes, including fintech. Thus, although fintech introduces new tools and approaches, their impact on changing management behavior remains questionable and depends on the specific context of each company.

Fintech developments and behavioral finance interact, creating new dynamics in the way individuals manage their finances. Wise adoption of fintech can improve personal financial management, while awareness of possible risks must also continue to be increased. Therefore, the first hypothesis in this research is formulated as follows:

**H1= Fintech developments influence financial management behavior in Generation Z**

### **3.2. The Influence of Fintech Developments on Financial Behavior Through Financial Literacy in Generation Z**

Fintech refers to the emergence of new financial service models that have emerged as a result of advances in information technology (17). In line with this, financial behavior, as stated by (39) is an important component of financial literacy which is believed to have a positive impact on individual financial well-being. Conscious financial behavior can be reflected in the decisions taken, comparison of opportunity costs, as well as the search for alternatives to reduce waste. In addition, financial literacy itself, according to research by (30) involves a series of processes and activities aimed at increasing individual knowledge, confidence and skills in financial management. In other words, financial literacy plays an important role in helping individuals to manage their finances more effectively.

The development of financial technology (fintech) has changed the landscape of individual financial management. Various studies show that fintech adoption can have a positive impact on financial management behavior, but it also has potential risks that need to be watched out for. Research by (50) revealed that the use of fintech-based financial management applications can increase financial awareness and encourage better savings behavior. This is in line with findings from (48) and (49) which show that fintech payments have a positive and significant effect on students' financial management behavior. Ease of access, affordable costs, and the ability to transact and invest through fintech payments are considered as driving factors for changes in financial behavior. According to (47) also warn about potential risks, such as overtrading in investments or excessive borrowing

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through peer-to-peer lending platforms. This emphasizes the importance of adequate financial literacy to face an increasingly complex financial landscape.

Financial literacy, which includes an understanding of basic financial concepts, money management, savings and investments, and risk management, is becoming increasingly important in the fintech era (53). (54)even emphasized that in addition to understanding traditional financial concepts, individuals also need to understand the risks and opportunities associated with digital financial products, including online security, data privacy, and how fintech platforms work. Financial behavior itself reflects how individuals respond to the financial decisions they face. Research conducted by (55)states that increasing financial literacy plays a positive and significant role in making it easier to use fintech payments and developing better financial management behavior for students. This is reinforced by previous research conducted by (5)(56)and (20)and (30)(57)where the results that have been studied have a positive and significant influence on fintech payments and student financial management behavior. This is because the higher the level of financial literacy an individual has, the better the individual's financial behavior will be. Conversely, if an individual has a low level of understanding of financial literacy, it can be concluded that the individual will face financial problems in his personal life. This is in line with research conducted by (55)and (58)which used financial management literacy as a mediating variable between financial technology (fintech) and financial management behavior. Both research shows that the use of fintech payments has a positive influence on students' financial management behavior. However, this influence is stronger when supported by a good level of financial literacy. Therefore, the second hypothesis in this study is formulated as follows:

**H2: The Influence of Fintech on Financial Management Behavior through Financial Literacy Generation Z**

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### 3. METHODOLOGY

#### 3.1 Types of research

The type of research used is quantitative research. Quantitative research according to (59), quantitative research is an approach that emphasizes objective measurement and statistical analysis of data collected through surveys, questionnaires, or other measurement tools. This research uses a survey method with a questionnaire approach to determine the relationship between variables assisted by the Smart PIs statistical tool. This method was chosen because researchers wanted to know about the influence of financial technology on financial management behavior and financial management literacy as an intervening variable in generation Z at the Faculty of Economics, UIN Maulana Malik Ibrahim Malang.

#### 3.2 Research Location

The purpose of determining the location is to simplify and clarify the place that will be targeted in the research. The research location is a place where researchers can capture research objects that will be used as targets in the research. This research will be conducted at the State Islamic University of Maulana Malik Ibrahim Malang, with a focus on students from the Faculty of Economics. The State Islamic University of Maulana Malik Ibrahim Malang was chosen as the research location because it has a quality economics study program and students with economic educational backgrounds that are relevant to the research topic. This.

#### 3.3 Population & Sample

##### 3.3.1 Population

According to (60), population in the context of social research refers to a collection of individuals or objects that have characteristics that can be observed and measured. This population is the entity that is the object of research and from which samples will be taken. Populations can be people, groups, organizations, or even documents that have certain things in common that are relevant to the research being conducted. The population that is the object of this research is students from the 2021-2023 class of the Faculty of Economics, UIN Maulana Malik Ibrahim Malang.

##### 3.3.2 Sample

(61)defines a sample as a subset of the population selected for research. This sample must represent the population accurately so that the research results can be generalized back to the wider population. The sample can be considered representative of the total population of the symptoms observed and researched. The sample criteria for this research include:

1. Respondents were students from the 2nd to 6th semester of the Faculty of Economics or students from the 2021 to 2023 class of the Faculty of Economics, UIN Maulana Malik Ibrahim Malang.

**Table 1**  
**Number of Faculty of Economics Students 2021 – 2023**

Year	Number of FE students
2021	461
2022	492
2023	606
<b>Total</b>	<b>1,559</b>

Source: FE UIN Maulana Malik Ibrahim Malang

2. Respondents consisted of students from the economics faculty majoring in management, accounting and sharia banking, class 2021 to 2023.

**Table 2**  
**Number of Students in Each Department at the Faculty of Economics 2021 - 2023**

Major	Year			Amount
	2021	2022	2023	
Management	214	244	300	758
Accountancy	147	145	205	497
Sharia Banking	100	103	101	304

Source: FE UIN Maulana Malik Ibrahim Malang

### 3.3.3 Sampling Technique

The total population in this study were students from the Faculty of Economics at UIN Maulana Malik Ibrahim Malang class 2021 to 2023. The sample size in this study was determined using the Solvin formula as follows:

$$n = \frac{N}{1+N(e)^2}$$

Information:

n : Sample size or number of respondents

N: Population Size

e : Percentage of sampling error accuracy;

e: 10%

The population in this study was as many as 1,559 students, so that the allowance percentage used is 0.1 and the calculation results can be rounded to achieve suitability. So to calculate the number of samples for this research, use the following calculation:

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{1,559}{1+1,559(0.1)^2}$$

$$= 94$$

Based on the sample calculation above, the number of samples that can be used as respondents in this research is adjusted to be as many as 100 sample from students at the Faculty of Economics, UIN Maulana Malik Ibrahim Malang.

### 3.4 Data and Data Types

The data used in this research is primary data. According to (62), primary data is data collected directly by researchers from the first source for specific research purposes. This data is obtained through various methods such as interviews, observations, and questionnaires specifically designed to answer specific research questions. Meanwhile, (63) explains that primary data is information collected directly from original sources by researchers through methods such as surveys, interviews, experiments, and observations. This primary data is considered more relevant and specific to the research being conducted because it is collected with the aim of answering specific research questions. According to (64), primary data is data collected directly by researchers through direct interaction with participants or research objects. Primary data collection methods include in-depth interviews, participatory observation, and discussion groups that allow researchers to obtain information directly from the source. Primary data is obtained by distributing questionnaires or questionnaires to a number of respondents by having criteria as students of the Faculty of Economics, UIN Maulana Malik Ibrahim Malang. Further criteria are students who are majoring in management, accounting, and Islamic banking.

### 3.5 Data collection technique

(65) states that data collection techniques in quantitative research include various methods such as surveys, questionnaires and structured interviews. Surveys are the most commonly used method because they can reach many respondents in a short time and at relatively low cost. A questionnaire

**Comment [Uko108T7]:** Primary Data is used for this study. No need for explanation of the meaning of primary data.

is a data collection tool that contains a series of written questions that must be answered by respondents. Structured interviews involve questions and answers conducted face-to-face or by telephone with pre-prepared question guides. Data collection techniques are methods or steps for collecting research data from sources (subjects and research samples) carried out by researchers. Data collection techniques are the basis used to compile research instruments so that they can be said to be an obligation. The data collection technique used in this research was survey and questionnaire methods.

1. Surveys

According to (66), the survey method is one of the main tools in social research that allows researchers to collect quantitative data from large populations. This survey can be used to understand the behavior, attitudes and characteristics of the population studied. Fowler emphasized the importance of good survey design to ensure the validity and reliability of the data collected. The survey design process includes sample selection, questionnaire development, questionnaire testing, data collection, and data analysis.

2. Questioner

According to (66), questionnaires are an important instrument in survey research used to collect quantitative and qualitative data. Questionnaires help researchers get a clear picture of respondents' views, attitudes and behavior regarding a particular topic. Questionnaires usually consist of different types of questions, including closed questions (e.g. multiple choice) and open questions, which allow respondents to provide answers in a broader format.

**3.6 Operational Definition of Variables**

The operational definition of a variable is a specific and measurable explanation of how the variables in the research will be measured or observed. This definition is important to ensure that the variables under study can be measured consistently and the results can be compared. According to (67), operational definitions of variables provide clear guidance regarding how a variable is operationalized in a research context. This involves practical steps that explain how the variable will be measured or evaluated in research. The variables used in this research are as follows:

1. Independent Variable

According to (59)explains that an independent variable is a variable that stands alone and is not influenced by other variables in the research. Conversely, this variable can influence or cause changes in other variables, which are usually the dependent variables. In a quantitative approach, independent variables are often categorized into levels or groups to see how differences in these categories affect the dependent variable. In a qualitative approach, independent variables are identified through the data analysis process and can emerge from themes or categories that develop during the research.

2. Dependent Variable

According to (67)explains that the dependent variable is the main focus of research analysis, where researchers measure how changes in the independent variable affect the results shown by the dependent variable. Meanwhile, (60)explains that the selection of dependent variables must be based on the research objectives and hypotheses formulated. The dependent variable must be measured accurately and reliably to ensure the validity of research findings.

3. Intervening variables

According to (68)an intervening variable is a variable that mediates or explains the relationship between the independent variable and the dependent variable. This variable is not measured directly but serves as a mechanism that connects the other two variables. (68)also emphasizes the importance of mediation analysis in identifying the role of intervening variables. This analysis method allows researchers to test complex relationship models and provides a more holistic understanding of research data.

To group variables well and avoid mistakes in determining data analysis and next research steps. The measure of respondents' answers to the financial literacy and investment knowledge questionnaire on investment decisions and financial behavior as an intervening variable uses a Likert scale, so the answers will be scored at the following levels:

**Table 3**  
**Likert Scale**

Weight	Question	Likert Scale
5	SS	Strongly agree
4	S	Agree
3	CS	Simply agree
2	T.S	Don't agree
1	STS	Strongly disagree

**Comment [Uko108T8]:** Journal publications is not for explanation of terminologies. Remove and state your data collection techniques

**Comment [Uko108T9]:** Remove completely. Not needed for journal publications

Source: (69)

In determining the indicators and scales used for the variables involved in this research, the following operational variables are required:

**Table 4**  
**Operational Definition of Variables**

Variable	Indicator	Items	Scale	Source
Fintech Technology (payment) (X)	X.1 Trust	X.1.1. I believe that making transactions using fintech payments will not cause me any worries in the future	Likert Scale	Arwani, A. (2020).
	X.2 Benefits/Uses	X.2.1 I believe that when I use a fintech payment service it will allow me to pay more quickly		
		X.2.2 I think there are many features that I need from a fintech application X.2.3 Fintech payments can be accessed anytime and anywhere		
X.3 Ease of Use	X.3.1 I think fintech payment is very easy to use			
Financial Literacy (M)	M.1 Understanding Financial Concepts	M.1.1 I understand the difference between assets and liabilities	Likert Scale	OECD. (2013).
	M.2 Ability to Manage Budget	M.2.1 I am able to prioritize expenses based on urgency and importance.		
	M.3 Financial Decision Making	M.3.1 I consider various alternatives before making financial decisions		
Financial Management Behavior (Y)	Y1.1 types of financial planning and budgeting	Y1.1.1 I have short-term financial planning for daily/weekly/monthly needs. Y1.1.2 I make long-term financial planning to achieve certain financial goals.	Likert Scale	Humaira, I., & Sagoro, E.M. (2018).
	Y1.2 techniques for preparing financial planning	Y1.2.1 I use software or digital tools to assist in preparing a budget		

Source: Processed data, 2024

### 3.7 Data analysis

This research data was analyzed using the Partial Least Square (PLS) approach, this is strengthened by the opinion of (70) who explain that data analysis in quantitative research involves the use of statistical techniques to test hypotheses and interpret data. One approach that is often used is Partial Least Squares Structural Equation Modeling (PLS-SEM), which allows researchers to evaluate the relationship between latent variables in a structural model.

There are two sub models required in PLS-SEM analysis, namely the measurement model or outer model and the structural model or inner model.

#### 1. Descriptive Statistical Test

Descriptive statistical tests are a part of statistics that focuses on collecting, presenting and summarizing data to provide a clear and structured picture of a data set. According to (71) descriptive statistics involves techniques such as calculating measures of centrality (such as mean, median, and mode) and measures of spread (such as range, variance, and standard deviation) to describe data

characteristics. These techniques are used to simplify and summarize data in a more understandable form, without making inferences or generalizations about a larger population.

## 2. Test the Measurement Model or Outer Model

### a. Convergent Validity

According to (70) convergent validity can be measured using Average Variance Extracted (AVE). An AVE of more than 0.5 indicates that the construct has good convergent validity. (70) also emphasizes the importance of ensuring that the indicators used in the measurement model are not only relevant but also highly correlated with each other to provide an accurate picture of the construct being measured.

### b. Discriminant Validity

According to (70), one way to assess discriminant validity is to analyze the cross loading of the data. Cross loading refers to the correlation between indicators (or measurement variables) with the expected construct and other constructs. In this context, if the cross loading for each indicator on the expected construct is greater than 0.7 with that construct and smaller than 0.7 with other constructs, then it is said that discriminant validity has been achieved. This figure of 0.7 is a threshold that is often used to indicate that the indicator is more relevant for the expected construct compared to other constructs.

### c. Reliability

According to (72) reliability is a fundamental aspect that influences the validity of research results. Explained that the purpose of evaluating reliability is to ensure that a measurement instrument, such as a questionnaire or test, provides stable and consistent results when used on various occasions and in various contexts. In other words, reliability measures how well a measuring instrument can be repeated and produce the same results. One method commonly used to measure reliability is Cronbach's Alpha. Cronbach's Alpha is a statistic that calculates the internal consistency of a measuring instrument. Internal consistency refers to the extent to which the items in an instrument measure the same construct.

Cronbach's Alpha ranges from 0 to 1, where higher values indicate better internal consistency. In general, a Cronbach's Alpha value greater than 0.7 is considered to indicate good reliability. According to (72) a Cronbach's Alpha value above 0.7 indicates that the measuring instrument has an acceptable level of internal consistency and can be relied upon for research.

## 3. Test the Structural Model or Inner Model

### a. R-Square

R-Square (or  $R^2$ ) is a measure that indicates the proportion of variance in a dependent variable that can be explained by the independent variables in the model. (73) explains that R-Square indicates how well the model explains variations in the data. A higher R-Square value indicates a model that is better at explaining data variability. In the context of PLS-SEM, the R-Square value helps in assessing the strength of the relationship between the latent variables.

### b. Q-Square

Q-Square (or  $Q^2$ ) is a predictive measure that shows how well a model can predict the value of a dependent variable based on an independent variable. (74) explains that Q-Square measures how well the model can replicate the data used. A  $Q^2$  value of more than 0 indicates that the model has good predictive ability.  $Q^2$  is often used to evaluate the quality of predictive models in PLS-SEM.

## 4. Hypothesis Testing

### a. Direct Effect Test

The direct effect test measures the direct effect of the independent variable on the dependent variable without going through the mediator variable. (74) explains that direct influence tests can be carried out using methods such as regression or path analysis in PLS-SEM to test direct relationships between variables. The results of this test provide insight into the strength and direction of the relationship between the variables studied.

### b. Indirect Effect Test

The indirect effect test evaluates the effect of the independent variable on the dependent variable through the mediator variable. (68) explains that the indirect effect test can be carried out using mediation analysis, which evaluates how the mediator variable influences the relationship between the independent and dependent variables. This is important for understanding the mechanisms behind variable relationships and provides further information regarding the processes occurring in the model.

## 4. RESULTS AND DISCUSSION

### 4.1 General Description of Research Objects

**Comment [Uko108T10]:** This is an original research paper and not an academic textbook. Explanation of the data analysis concepts and their measurements yardstick might not be needed. The first paragraph with little additions on what makes the outer model and the inner model in prose form will suffice

These findings show that fintech plays an important role in increasing financial literacy among generation Z. As a generation that grew up with digital technology, these students tend to more easily adopt financial innovations offered by fintech. The use of digital banking applications, e-wallets and online investment platforms not only helps them with daily financial management, but also provides education about more complex financial concepts such as investment and risk management.

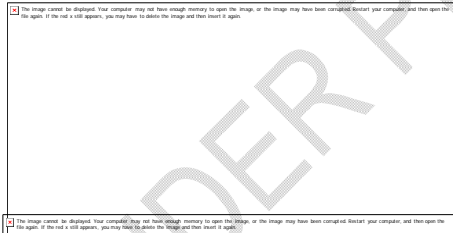
However, although technology has helped in increasing financial literacy, this research also found that there are challenges to be faced, such as a lack of in-depth understanding of the risks associated with the use of financial technology. This underscores the importance of more comprehensive financial education in the academic environment, which focuses not only on the use of technology but also on understanding risk and making responsible financial decisions.

In this research, the respondents selected were students from the Accounting study program at the Faculty of Economics, UIN Maulana Malik Ibrahim Malang. The criteria used to select respondents include the following aspects:

1. **Age:** Respondents are in the age range of 18 to 25 years. This age range was chosen because it is included in the generation Z category, which is the main target in this research regarding the use of financial technology (fintech).
2. **Gender:** Respondents consisted of men and women in equal proportions. This was done to ensure that the analysis carried out reflected the perceptions of both genders regarding the use of fintech.
3. **Level of education:** Respondents are students who are studying at undergraduate level in the Accounting study program. Respondents are at least in semester 3 or above, with the assumption that in this semester they already have basic knowledge about financial management and have started to get involved in activities that require independent financial management.
4. **Use of Fintech:** The respondents selected were those who already had experience using fintech services, either in the form of digital banking applications, e-wallets, or online investment platforms. This is important to ensure that respondents have the relevant background to provide valid answers regarding the research topic.
5. **Financial Interest and Knowledge:** Additional criteria involve interest and basic knowledge of finance. Respondents are expected to have an interest in or at least basic knowledge of personal financial management, which can contribute to the quality of the data collected.

#### 4.1.1 Research Data Analysis

In this research, Microsoft Excel was used to enter and calculate data for each indicator. Next, SmartPLS version 3 software is used to input and calculate these indicators. All latent variables in this research have reflective indicators.



**Figure 1. Inner model and outer model path diagram**

Source: PLS 3 result data, processed (2024)

The results of the research model calculations using Smart PLS 3 software are in below:

Source: PLS 3 result data, processed (2024)

Based on the picture above, it can be seen that all indicators have loading factor values above 0.7

**Comment [Uko108T11]:** This should come under methodology with just a simple statement like "the sample used were purposively selected using criteria such as age, fintech exposure etc" All these stories not needed



**Figure 2. Convergent Validity Test**

Source: PLS 3 result data, processed (2024)

Based on the table above, it shows that the loading factor indicator value for fintech ranges from 0.701 – 0.888, the loading factor indicator value for financial management behavior ranges between 0.863 – 0.909, and the loading factor indicator value for fintech ranges between 0.729 – 0.882. All indicators are declared valid because the loading factor value is above 0.70.

Comment [Uko108T12]: Why is Y3 missing in the analysis



**Figure 3. Discriminant Validity Test**

Source: PLS 3 result data, processed (2024)

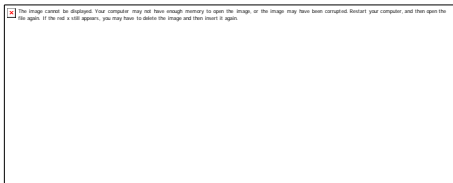
Based on the Discriminant Validity Test, it shows that the cross loading correlation value of all Fintech indicators on the latent variable is greater than the cross loading correlation value of other latent variables because it ranges between 0.70 – 0.88, then all Fintech indicators are declared valid. The cross loading correlation value of all Financial Management Behavior indicators towards the latent variable is greater than the cross loading correlation value of other latent variables because it ranges between 0.86 - 0.90, so all Financial Management Behavior indicators are declared valid. The cross loading correlation value of all Financial Literacy indicators on the latent variable is greater than the cross loading correlation value of other latent variables because it ranges between 0.72 – 0.88, then all Financial Literacy indicators are declared valid.



**Figure 4. Average variance Extracted test**

Source: PLS 3 result data, processed (2024)

Based on the test results, it shows that the AVE value for each variable is > 0.50. This means that the variables Fintech, Financial Management Behavior and Financial Literacy are reliable.



### Figure 5. Composite Reliability Test

Source: PLS 3 result data, processed (2024)

Based on the results of the Composite Reliability test, it shows that the Composite Reliability value of the Financial Technology variable is 0.893, the Composite Reliability value of the Financial Management Behavior variable is 0.880, and the Composite Reliability value of the Financial Literacy variable is 0.864. This means that all variables can be said to be reliable because they have a Composite Reliability value greater than 0.70.



### Figure 6. R-Square Test

Source: PLS 3 result data, processed (2024)

Based on the table above, predictive-relevance values can be obtained using the following calculations:

$$Q^2 = 1 - (1 - R^2_{Y1})(1 - R^2_{Y2})$$

$$Q^2 = 1 - (1 - 0.397)(1 - 0.289)$$

$$Q^2 = 1 - 0.428733$$

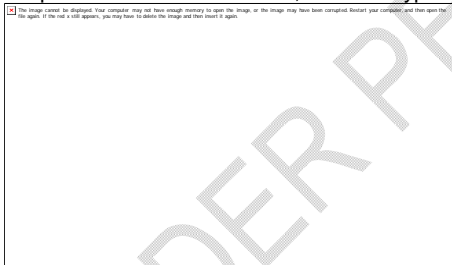
$$Q^2 = 0.57$$

The results of the Q square calculation in this study were equal to 0.57 or 57%. This means that the model in this research is suitable for explaining the endogenous variable, namely Financial Behavior.

### 41.2 Hypothesis Testing Results

The result table for inner weights from the results of running bootstrapping is used to determine the direct influence of variables from each hypothesis. The T-value used in this research is 1.96 with a significance level of 0.005. In line with the statement by Hair, et al (2014) which states that the t value is 1.96 with a significance level of 0.05 as a reference for assessing the statistical significance of the relationship between variables in the model. This means that if the T-statistic value exceeds 1.96 and the p-value is at or below 0.05, then the hypothesis can be considered significant.

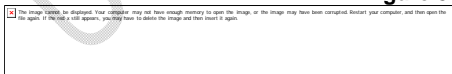
Comment [Uko108T13]: Be consistent in reference style



### Figure 7. Bootstrapping Value



### Figure 8. Path Coefficient



### Figure 9. Total Indirect Effect

Source: PLS 3 result data, processed (2024)

- Fintech has a positive and significant influence on Financial Management Behavior. With an original sample value of 0.381 (positive), the t-value > t-table (0.381 > 1.96) and the p-value 0.000 < 0.05.
- Fintech has a positive and significant influence on Financial Literacy. With an original sample value of 0.538 (positive), the t-value > t-table (0.538 > 1.96), and the p-value 0.000 < 0.05.
- Financial Literacy has a positive and significant influence on Financial Management Behavior. With the original sample value of 0.337 (positive), the t-value > t-table (0.337 > 1.96), and the p-value 0.002 < 0.05.

- d. Fintech has a positive and significant influence on Financial Management Behavior through Financial Literacy. With the original sample value of 0.181 (positive), the t-value  $>$  t-table (2.573  $>$  1.96), and the p-value  $0.006 < 0.05$

#### **4.2 Discussion**

##### **4.2.1 The Influence of Financial Technology on Financial Management Literacy**

Based on the results of the test analysis carried out, it shows that Financial Technology (X) has a positive and significant effect on Financial Management Literacy (Z), with an original sample value of 0.538 (positive), t-count  $>$  t-table (0.538  $>$  1.96), and the p-value is  $0.000 < 0.05$ . The majority of students studied have good literacy about personal finance, where the background of these students are economics students who belong to generation Z. There is a close relationship between the use of fintech and financial management literacy, where fintech makes a substantial contribution in increasing financial literacy, p. This indicates that the more individuals utilize fintech services, the better their understanding of financial management. This significant relationship confirms that fintech is not only a transaction tool, but also an effective educational tool in improving one's financial management abilities. The increasingly widespread use of fintech can be a major driver in the development of financial literacy, especially in helping individuals manage their finances better and wiser.

This is in line with research conducted by (53)&(54) which states that by understanding traditional financial concepts, individuals also need to understand the risks and opportunities associated with digital financial products, including online security, data privacy, and how fintech platforms work, which will reflect how individuals respond to the financial decisions they face.

##### **4.2.2 The Influence of Financial Management Literacy on Financial Management Behavior**

The results of the test analysis carried out show that there is a positive and significant influence between financial literacy (Z) on financial behavior (Y), which produces an original sample value of 0.337 (positive), t-count  $>$  t-table (0.337  $>$  1.96), and the p-value is  $0.001 < 0.05$ . This shows that the higher the financial literacy of Generation Z, the better their financial behavior will be. On the other hand, generation Z with a low level of financial literacy is more likely to face financial problems in their lives. Financial literacy plays an important role in shaping a person's behavior, especially for generation Z who often use fintech products. Therefore, a good understanding of financial literacy is necessary to avoid problems and achieve financial well-being.

This is in line with research conducted by (30)&(55) which states that financial literacy is a series of processes or activities to increase consumers' knowledge, confidence and skills so that they can develop better financial management behavior.

##### **4.2.3 The Influence of Financial Technology on Financial Management Behavior**

Based on the results of the tests that have been carried out, it is concluded that Financial Technology (Z) has a positive and significant influence on Financial Behavior (Y), which produces an original sample value of 0.381 (positive), t-count  $>$  t-table (0.381  $>$  1.96) and p-value  $0.000 < 0.05$ . This research shows that the use of fintech can support generation Z in increasing their insight and knowledge regarding financial technology, as well as providing positive experiences in carrying out transactions through fintech. This is very important because a deep understanding and knowledge of technology can help someone better assess their financial condition. The benefits obtained from using fintech have a positive impact, which ultimately can help individuals manage their finances more efficiently and effectively.

In line with this, research by (48) and (49) shows that fintech payments have a positive or significant influence on students' financial management behavior. This is due to the understanding and effective use of fintech by students, the majority of whom often use fintech payment services for their daily needs. Correspondingly, a study by (47) shows that the adoption of fintech-based financial management applications can increase users' financial awareness and encourage better savings behavior.

##### **4.2.4 The Influence of Fintech on Financial Management Behavior through Financial Literacy**

Based on the results of data analysis tests, Financial Technology (X) has a positive and significant effect on Financial Behavior (Y) through the Financial Management Literacy variable (Z), where the original sample value is 0.181 (positive), the t-count value  $>$  t-table (2.573  $>$  1.96), and p-value  $0.004 < 0.05$ . Thus, it shows that there is a close relationship between behavior and literacy regarding good personal financial management and the use of fintech, which then contributes to better financial management behavior among students, and it can be concluded that increasing financial literacy has a positive and significant impact in making things easier. fintech adoption and help shape better financial management behavior for generation Z.

This is in line with research conducted by (55) which states that increasing financial literacy plays a positive and significant role in making it easier to use fintech payments and building better

financial management behavior for students. This is reinforced by previous research conducted by (56) and (20) and (57) where the results that have been studied have a positive and significant influence on fintech payments and student financial management behavior. This is because the higher the level of financial literacy an individual has, the better the individual's financial behavior will be. Conversely, if an individual has a low level of understanding of financial literacy, it can be concluded that the individual will face financial problems in his personal life.

## **5. CONCLUSION AND RECOMMENDATION**

### **5.1 CONCLUSION**

Based on research that has been conducted, the influence of financial technology (fintech) on financial management behavior among generation Z, especially students at UIN Maulana Malik Ibrahim Malang. The results of the analysis show that the use of fintech significantly increases students' financial literacy and financial management behavior. Fintech provides easier access for generation Z to understand financial concepts through digital banking applications and investment platforms.

Generation Z often actively uses fintech products and tends to have a better understanding of financial management, which contributes to better financial management behavior. With an original sample value of 0.381 and a p-value of 0.000, this research confirms that the more often they use fintech, the better their financial behavior will be. In addition, financial literacy functions as a mediator that strengthens the relationship between fintech and financial management behavior. The results show that increasing financial literacy is very important in facilitating fintech adoption, with an original sample value of 0.181 and a p-value of 0.006.

From this research, two hypotheses were tested: first, fintech influences financial management behavior; and second, fintech has an influence through financial literacy. These two hypotheses are supported by the results of the analysis that has been carried out.

### **5.2 RECOMMENDATION**

Suggestions from this research include the need for fintech companies to design products that suit the needs of generation Z, the integration of financial education in the curriculum in educational institutions, further research can consider including new variables that might influence the relationship between fintech, financial literacy, and financial management behavior, such as social and cultural factors that can influence the adoption of financial technology, and are expected to make a greater contribution to understanding the relationship between financial technology, financial literacy and financial management behavior among generation Z.

## **EXPRESSION OF GRATITUDE**

We would like to express our heartfelt gratitude to all individuals and institutions that contributed to the preparation and completion of this research. Our sincere thanks go to our academic advisors and faculty members at UIN Maulana Malik Ibrahim Malang for their invaluable guidance and support throughout the research process. We also extend our appreciation to our fellow students who participated in the survey, providing essential data that made this study possible. Special thanks to the administration of UIN Maulana Malik Ibrahim Malang for facilitating our research activities. This research was funded by Faculty of Economics, State Islamic University of Maulana Malik Ibrahim Malang, whose support was crucial in enabling us to conduct this study. We acknowledge the role of Faculty of Economics, State Islamic University of Maulana Malik Ibrahim Malang in the design of the research, data collection, analysis, and interpretation of results. Their insights and resources significantly enhanced the quality of our work. Lastly, we would like to thank our families and friends for their unwavering encouragement and understanding during the course of this research. Without their support, this project would not have been possible.

## COMPETING INTERESTS

The authors declare that there are no competing interests related to this research. All authors have disclosed any financial and personal relationships with individuals or organizations that could potentially influence the work presented in this manuscript. There are no employment, consulting, honoraria, paid expert testimony, patent applications/registrations, or other funding sources that could create a conflict of interest. If any such relationships were to exist, they would have been disclosed here. Therefore, the authors affirm that there are no competing interests.

## REFERENCES

1. Skopje A, Year M, Issue Y 1. Macedonian Marketing Association Macedonian International Journal of Marketing. 2015.
2. Nurcholidah L, Harsono M. Kajian Fintech dalam Konsep Behaviouristik. *J Sains Sosio Hum*. 2021 Jun 8;5:66–71.
3. Hsu PH, Tian X, Xu Y, Billett M, Cumming D, Fan J, et al. Financial development and innovation: Cross-country evidence \* Financial development and innovation: Cross-country evidence. 2013.
4. Ansori M. Development and Impact of Financial Technology (Fintech) on the Islamic Financial Industry in Central Java. 2019 Apr 30;5(1):31-45.
5. Damayanti SM, Zakarias R. Millennial Generation as Fintech Users: Its Impact on Financial Literacy and Inclusion in Indonesia. 2020;7(2):105-20.
6. Moko W, Sudiro A, Kurniasari I. The effect of financial knowledge, financial attitude, and personality on financial management behavior. *Int J Res Bus Soc Sci*. 2022;11(9):184-192. doi:10.20525/ijrbs.v11i9.2210.
7. Rachmaniyah F, Shoimah S, Azar MAS, Isnaini AN. Education on Digital Marketing Strategies and Simple Financial Records with Smart Phone Applications to Increase Sales of Onion Crackers Umkm in Kedali Village, Lamongan. *J Pengabdian Kpd Mas J-Abdimas*. 2022 Jun 30;9(1):45-8.
8. I Know It's a Touchy Subject; However, a Bit of Balance Would Seem to Be in Order. *Focus Autistic Behav*. 1993 Oct 1;8(4):10–1.
9. Arianti BF. The Effect of Income and Financial Behavior on Financial Literacy Through Investing Decisions as an Intervening Variable. *J Account*. 2020 Mar 28;10:13-36.
10. Statman M. What Is Behavioral Finance? In: Behavioral finance and investment management. 2008.
11. Setiawan M, Effendi N, Santoso T, Dewi VI, Sapulette MS. Digital financial literacy, current behavior of saving and spending and its future foresight. *Econ Innov New Technol*. 2022 May 19;31(4):320–38.
12. Arya NK. Economics Education: A Tool for Enhancing Employability, Decision-making, and Policy Analysis Skills of Present and Future Students. *University News [Internet]*. 2023 Dec [cited 2024 Sep 5];61(51):88-90.
13. Owusu AA, Cobbold C. Factors that Influence Learning Strategy Use among Senior High School Economics Students in Ghana: A Quantitative Approach. *Int J Learn Teach Educ Res*. 2020 May;19(5):167-185. DOI: 10.26803/ijlter.19.5.10.
14. Mohseni-Cheraghlou A. Iran's Unrealized Economic Potential. Middle East Institute. Available from: <https://www.mei.edu/publications/irans-unrealized-economic-potential>. Published 2024.
15. Afif MY, Sulhan M. Analysis of Behavioral Finance, Financial Literacy and Their Impact on Financial Distress. *Revital J Ilmu Manaj*. 2022 Jun 13;11(1):1–9.
16. Subarjo Joyosumarto, Tika Noorjaya. *BANKIR: 21st Century Banking Institution Leadership*. Jakarta: Elex Media Komputindo; 2018. 336 p. Indonesian. ISBN: 9786020459080.
17. Andiani D, Maria R. The Effect of Financial Technology and Financial Literacy on Financial Behavior in Generation Z. *J Akunt Bisnis Dan Ekon*. 2023 Oct 27;9:3468-75.
18. Nizar MA. Financial Technology (Fintech): Concept and Implementation in Indonesia. 2017.
19. Haddad C, Hornuf L. The emergence of the global fintech market: economic and technological determinants. *Small Bus Econ*. 2019 Jun 15;53(1):81–105.
20. Saleh M, FatimaSari F. The effect of financial literacy and the quality of financial learning on the use of fintech for management and accounting students at Fajar University. *Journal of Management & Organization Review (MANOR)*. 2020 Nov 30. DOI: 10.47354/MJO.V2I2.243.
21. Milian EZ, Spinola M de M, Carvalho MM de. Fintechs: A literature review and research agenda. *Electron Commer Res Appl*. 2019 Mar 1;34.

22. Chen MA, Wu Q, Yang B. How Valuable Is FinTech Innovation? *Rev Financ Stud.* 2019 May 1;32(5):2062–106.
23. Gai K, Qiu M, Sun X. A survey on FinTech. *J Netw Comput Appl.* 2018 Feb 1;103:262–73.
24. Mention AL. The Future of Fintech. *Res Technol Manag.* 2019 Jul 4;62(4):59–63.
25. Ryu HS. What makes users willing or hesitant to use Fintech?: the moderating effect of user type. *Ind Manag Data Syst.* 2018;118(3):541–69.
26. Lee I, Shin YJ. Fintech: Ecosystem, business models, investment decisions, and challenges. *Bus Horiz.* 2018 Jan 1;61(1):35–46.
27. Gomber P, Koch JA, Siering M. Digital Finance and FinTech: current research and future research directions. *J Bus Econ.* 2017 Jul 1;87(5):537–80.
28. Pesqué-Cela V, Tian L, Luo D, Tobin D, Kling G. Defining and measuring financial inclusion: A systematic review and confirmatory factor analysis. *J Int Dev.* 2021 Jan 18;33.
29. Maulana R, Murniningsih R, Prasetya WA. The influence of financial literacy, financial inclusion, and fintech toward business sustainability in SMEs [Internet]. Vol. 440, *Jurnal Ilmiah Manajemen.* 2022. p. 440–52. Available from: <http://ejournal.pelitaindonesia.ac.id/ojs32/index.php/PROCURATIO/index>
30. Renata Gita, Wiryawan Saputra Accounting Study Program College of Economics Harapan Bangsa Bandung B. Financial Behavior in the Millennial Generation Case Studies at Several Private Universities in Bandung. *J Account Bus Stud.* 2021;6(1).
31. Sholeh B. The Effect of Financial Literacy on the Financial Behavior of Students of the Pamulang University Economic Education Study Program. *Pekobis J Econ and Business Educators.* 2019 Nov 1;4:57.
32. Aquino A, Waldelmi I, Listihana WD. Analysis of Sharia Financial Literacy on Usury among Members of BMT / Sharia Cooperatives.
33. Saputra, B. W. (2021). Financial Behavior in the Millennial Generation Case Studies at Several Private Universities in Bandung. *Journal Of Accounting And Business Studies*, 6(1).
34. OJK (2017). Financial Literacy. Retrieved 2019, from <https://www.ojk.go.id/id/kanal/edukasi-dan-perlindungan-konsumen/Pages/Literasi-Keuangan.aspx>.
35. OECD. PISA 2012 Assessment and Analytical Framework: Mathematics, Reading, Science, Problem Solving and Financial Literacy [Internet]. Paris: OECD Publishing; 2013 [cited 2024 Sep 5]. Available from: [https://www.oecd-ilibrary.org/education/pisa-2012-assessment-and-analytical-framework\\_9789264190511-en](https://www.oecd-ilibrary.org/education/pisa-2012-assessment-and-analytical-framework_9789264190511-en)
36. Lind T, Ahmed A, Skagerlund K, Strömbäck C, Västfjäll D, Tinghög G. Competence, Confidence, and Gender: The Role of Objective and Subjective Financial Knowledge in Household Finance. *J Fam Econ Issues.* 2020 Dec 1;41(4):626–38.
37. Fernandes D, Lynch JG, Netemeyer RG. Financial literacy, financial education, and downstream financial behaviors. *Manag Sci.* 2014;60(8):1861–83.
38. Urban C, Schmeiser M, Collins JM, Brown A. The effects of high school personal financial education policies on financial behavior. *Econ Educ Rev.* 2020 Oct 1;78.
39. Chaulagain R. Relationship between Financial Literacy and Behavior of Small Borrowers. *NRB Econ Rev.* 2021 May 28;29:21.
40. Wicaksono ED. The Effect of Financial Literacy on Credit Card Payment Behavior Among Employees in Surabaya. In 2015 [cited 2024 Aug 30]. Available from: <https://www.semanticscholar.org/paper/Pengaruh-Financial-Literacy-Terhadap-Perilaku-Kartu-Wicaksono/38e68a911c7174cda0b1c373b2dd6177872b782a>
41. Henager R, Cude BJ. Financial Literacy of High School Graduates: Long- and Short-Term Financial Behavior by Age Group. *J Fam Econ Issues.* 2019 Sep 15;40(3):564–75.
42. Potrich ACG, Vieira KM, Kirch G. Determinants of financial literacy: Analysis of the influence of socioeconomic and demographic variables. In: *Revista Contabilidade e Finanças. FEA;* 2015. p. 362–77.
43. Brüggen EC, Hogreve J, Holmlund M, Kabadayi S, Löfgren M. Financial well-being: A conceptualization and research agenda. *J Bus Res.* 2017 Oct 1;79:228–37.
44. Xiao JJ, O'Neill B. Consumer financial education and financial capability. *Int J Consum Stud.* 2016 Nov 1;40(6):712–21.
45. Netemeyer RG, Warmath D, Fernandes D, Lynch JG. How Am i Doing? Perceived Financial Well-Being, Its Potential Antecedents, and Its Relation to Overall Well-Being. *J Consum Res.* 2018 Jun 1;45(1):68–89.
46. Thakor AV. Fintech and banking: What do we know? *J Financ Intermediation.* 2020 Jan 1;41.
47. Carlin B, Olafsson A, Pagel M. FinTech and Consumer Financial Well-Being in the Information Age. 2019.

48. Mulkoti, V. W., Rinofah, R., & Kulsulmawardhani, R. (2022). The effect of fintech payment and repeatability litigation on student repeatability management practices. *AKUINTEBEIL: Journal of Accountancy and Repeatability*, 19(01), 52-58.
49. Kulsulmar, F., & Melndari, A. S. (2021). Fintech Payment: Its Influence on Financial Management Behavior of Students in Palembang. *Buletin Ekonomi: Manajelmeln, Ekonomi, Pelmbangunan, Akulntansi*, 19(01), 69-76.
50. Carlin B, Olafsson A, Pagel M. *FinTech Adoption Across Generations: Financial Fitness in the Information Age*. 2017.
51. Clavijo S, Vera N, Beltran D, Londoño JD. *Digital Financial Services (FINTECH) in Latin America* [Internet]. Rochester, NY; 2019 [cited 2024 Aug 30]. Available from: <https://papers.ssrn.com/abstract=3334198>
52. Maritz A, Donovan J. *Entrepreneurship and innovation: Setting an agenda for greater discipline contextualization*. *Educ Train*. 2015 Feb 9;57(1):74-87.
53. Huston SJ. *The Journal Of Consumer Affairs Measuring Financial Literacy*. 2010.
54. Lusardi A, Hasler A, Yakoboski PJ. *Building up financial literacy and financial resilience*. *Mind Soc*. 2021 Nov 1;20(2):181-7.
55. Sholekha, I., Nurhidayah, N., & Amin, M. S. (2024). The Effect of Fintech Payment on Student Financial Management Behavior Mediated by Financial Literacy. *E-JRM: Electronic Journal of Management Research*, 13(01), 1234-1242.
56. Arsanti, C., & Riyadi, S. (2018). Analysis of the Effect of Financial Literacy on Student Financial Behavior (Case Study of PEIRBANAS Intsitute Students, Faculty of Economics and Business). *Pelrbanas Relview*, 03(02), 110-122.
57. Hidayati AR, Nugroho DS. *Effect of Financial Literacy and Fintech Payment of Financial Management Behavior with Internal Locus of Control as Moderator*. *J Bus Manag Econ Dev*. 2023 May 31;1(02):221-9.
58. Lusardi A, Mitchell OS. *The economic importance of financial literacy: Theory and evidence*. *J Econ Lit*. 2014;52(1):5-44.
59. Creswell JW. *Research design : qualitative, quantitative, and mixed methods approaches*. Sage Publications; 2003. 246 p.
60. *The Practice of Social Research - Product Details - Cengage Instructor Center* [Internet]. [cited 2024 Sep 5]. Available from: <https://faculty.cengage.com/titles/9780357360767>
61. Adhikari GP. *Scholars' Journal Calculating the Sample Size in Quantitative Studies*. *Sch J* [Internet]. 2021;4. Available from: <https://www.nepjol.info/index.php/scholars>
62. Creswell J. *Qualitative Inquiry & Research Design: Choosing Among Five Approaches*. SAGE Publ. 2013 Jan 1;11.
63. Ajayi VO. *A Review on Primary Sources of Data and Secondary Sources of Data*. *Eur J Educ Pedagogy*. 2023;2(3). Available from: [https://www.researchgate.net/publication/370608670\\_A\\_Review\\_on\\_Primary\\_Sources\\_of\\_Data\\_and\\_Secondary\\_Sources\\_of\\_Data](https://www.researchgate.net/publication/370608670_A_Review_on_Primary_Sources_of_Data_and_Secondary_Sources_of_Data)
64. Flick U. *An Introduction to Qualitative Research* [Internet]. 7th ed. SAGE Publications; 2022 [cited 2024 Sep 5]. Available from: <https://study.sagepub.com/flick6e>
65. Kuphanga D. *Questionnaires in Research: Their Role, Advantages, and Main Aspects* [Internet]. 2024 Mar [cited 2024 Sep 5]. Available from: [https://www.researchgate.net/publication/378868278\\_Questionnaires\\_in\\_Research\\_Their\\_Role\\_Advantages\\_and\\_Main\\_Aspects](https://www.researchgate.net/publication/378868278_Questionnaires_in_Research_Their_Role_Advantages_and_Main_Aspects)
66. Ponto J. *Understanding and Evaluating Survey Research*. *J Adv Pract Oncol*. 2015;6(2):168-171.
67. Trochim WM. *The Research Methods Knowledge Base* [Internet]. 2007 [cited 2024 Sep 5]. Available from: [https://www.researchgate.net/publication/243783609\\_The\\_Research\\_Methods\\_Knowledge\\_Base](https://www.researchgate.net/publication/243783609_The_Research_Methods_Knowledge_Base)
68. Hayes AF. *Introduction to Mediation, Moderation, and Conditional Process Analysis*. 3rd ed. New York: The Guilford Press; 2022. Available from: <https://afhayes.com/introduction-to-mediation-moderation-and-conditional-process-analysis.html>
69. Joshi A, Kale S, Chandel S, Pal DK. *Likert Scale: Explored and Explained*. *Br J Appl Sci Technol*. 2015 Jan 10;7(4):396-403.
70. Hair JF, Sarstedt M, Hopkins L, Kuppelwieser VG. *Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research*. *Eur Bus Rev*. 2014;26(2):106-21.
71. Coutts J, Hayes AF. *Descriptive statistics: Measures of central tendency, dispersion, correlation, and regression*. 2020.

Available from: <https://www.researchgate.net/publication/338919704> Descriptive statistics Measures of central tendency dispersion correlation and regression

72. Mohajan HK. Validity and reliability of the research instrument: How to test the validation of a questionnaire/survey in a research. 2017. Available from: <https://www.researchgate.net/publication/319998004> Validity and Reliability of the Research Instrument How to Test the Validation of a Questionnaire Survey in a Research
73. Hair JF, Hult GTM, Ringle CM, Sarstedt M. The partial least squares approach to structural equation modeling. 2016. Available from: <https://www.researchgate.net/publication/311766005> The Partial Least Squares Approach to Structural Equation Modeling
74. Ghozali, I., & Latan, H. (2015). Partial least squares concepts, techniques and applications using the smartpls 3.0 program for empirical research. Semarang: UNDIP Publishing Agency, 4(1).

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