The Influence of Financial Knowledge and Locus of Control on Personal Financial Management with Demographics as a Moderating Variable (Case Study on Generation Z)

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Abstract: *Nowadays, Generation Z is closely related to financial issues, which are connected to the increasing prevalence of financial technology in Indonesia. These issues include pay-later cases, problems regarding the understanding of online gambling, and a consumptive nature. This study aims to determine the influence of financial knowledge and locus of control on personal financial management, with demographics as a moderating variable. The study employs an experimental method using a 2 x 2 between-subjects design. The population of this study is Generation Z in Indonesia, divided into two groups: those who are employed and those who are not. The sample consists of 51 participants selected through purposive sampling. They were given manipulated cases adjusted to their profiles and then asked to make financial decisions. The results of this study show a significant influence of financial knowledge and locus of control on personal financial management. However, there is no indication that demographics moderate the relationship between financial knowledge and financial management. It also applies to the locus of control and financial management.*

Keywords: *Demography, Financial knowledge, Generation Z, Locus of control, Personal financial management*

1. Introduction

Financial Technology (Fintech) is the intersection of modern technology related to the Internet with business activities in the financial services industry. According to Dick Fong, Feng Han, Louis Liu, John Qu, and Arthur Shek (2021), digital technology advancements are progressing rapidly, particularly in finance, which has technology that goes beyond mere advancement. Nowadays, fintech has a close relationship with millennials and Generation Z, as these generations have grown up in a fully connected digital era and are accustomed to using technology. Fintech is also changing how these generations manage their finances by providing easy and fast access through digital banking applications.

Generations are groups of individuals divided based on their age, which affects their growth phases in the world. Generation Z, or Generation, was born between 1995 and 2010. Their remarkable understanding of technology characterizes Generation Z, as they have been exposed to it since birth. Consequently, they are highly connected to technology and reliant on the digital world, which may lead to them being less skilled in real-world communication (Sirajul Fuad Zis, Nursyirwan Effendi, and Elva Ronaning Roem, 2021). Despite this, the very close connection between fintech and millennials and Generation Z still presents challenges. According to R. Okie Hikmat Puji (2023), millennials and Generation Z can be characterized as having a consumptive mindset. This consumptive nature is not only due to the use of online loan services but also similar services like pay-later schemes, which are widely used by the younger generation. Besides being consumptive, one of the damaging financial risks in the advancement of financial technology is online fraud. The current generation has a desire to get rich quickly by any means, including online gambling.

Furthermore, the concept of locus of control is an important factor that influences personal financial management. A study by Mega Widiawati (2020) found that individuals with a strong locus of control tend to exhibit better financial management. Those with an internal locus of control believe that they have control over their finances, making decisions and taking responsibility for their financial outcomes. On the other hand, individuals with an external locus of control are more likely to attribute their financial situation to external forces such as luck, fate, or other people.

According to the Organization for Economic Co-operation and Development (OECD) (2020), with many highly risky phenomena impacting their future finances, it is evident that the current younger generation lacks a deep understanding of personal financial management. Consequently, the younger generation, growing alongside technological advancements, faces challenges such as low financial literacy, often termed financial illiteracy, resulting in a lack of financial knowledge and recognition of the importance of locus of control in personal financial management based on previous research in six studies. Of these, five studies yielded positive results regarding personal financial management, while one study showed negative results. It's worth noting the limitation of the research, which is that there was only one study explaining the moderating effect on the relationship between financial knowledge and personal financial management.

2. Literature Review and Hypothesis Development

2.1 Personal Financial Management

According to Irma Laili Fajriyah (2021), personal financial management is the science of managing the finances of individuals or households. Personal financial management is considered crucial in controlling their day-to-day finances to avoid financial problems, especially in the long term. On the other hand, financial management refers to how individuals manage their income and financial situation, which relates to their orientation toward daily personal financial issues (Rani Arifah Normawati, 2022). Research conducted by J. Birkenmaier (2019) provides insights into the structure of elements or components of financial management, such as cash management, emergency fund ownership, loans or debts, and individual credit management. Additionally, financial management is defined in terms of how individuals budget, spend, borrow, and manage financial risks. Essentially, financial management can be seen through the components from previous research, allowing individuals to pay attention to factors that need consideration in addressing their economic issues. Furthermore, financial literacy becomes the initial step for individuals to maximize their income and manage their expenses in line with their desired goals (Mega Widiawati, 2020).

2.2 Financial Knowledge

According to the National Financial Literacy Strategy of Indonesia (SNLKI) (2021), financial literacy is the understanding, skills, and confidence of individuals that influence attitudes and behaviors in decision-making and financial management to achieve economic well-being. Thus, financial literacy plays a significant role. According to the Organization for Economic Co-operation and Development (OECD) (2014), as explained in Gian Paolo Stella's research (2020), financial literacy is analyzed through three factors: financial knowledge, financial skills, and financial attitudes. Financial knowledge is a crucial component of financial literacy that assists individuals in making informed financial decisions and addresses the level of basic financial knowledge (Organization for Economic Co-operation and Development (OECD), 2020).

2.3 Locus of Control

Locus of control is an individual's perspective on how they perceive and control situations that happen to them. When an individual has a strong locus of control, it indicates that their financial management is also good (Mega Widiawati, 2020). According to Atik Atikah (2020), the locus of control is also referred to as the center of control that assesses individuals' beliefs about whether the events they experience are influenced or controlled by themselves. In her research, she explains that the center of control is categorized into two types: internal locus of control and external locus of control. Individuals who believe that every event in their life is a result of their behavior are categorized as having an internal locus of control. On the other hand, individuals who believe that every event in their life is a result of factors beyond their control, such as fate, chance, circumstances, and luck, are categorized as having an external locus of control.

2.4 Demographics

According to Indah Pratiwi (2015), demographic factors can be considered when making financial decisions. Individuals who have an understanding and knowledge of finance may not necessarily practice it, so they may not necessarily be considered financially literate. This is supported by research from J. Birkenmaier and Q.J. Fu (2019), which explains that demographic factors are seen in terms of income, education, employment status, age, and geographical location. In this study, the demographic factors to be considered are age, gender, education, and the individual's place of residence.

H1:Financial Knowledge Influences Personal Financial Management
H2:Locus of Control Influences Personal Financial Management
H3:The relationship between Financial Knowledge and Personal Financial Management is moderated by Demographics
H4:The relationship between Locus of Control and Personal Financial Management is moderated by Demographics

3. Research Methods

This research study aims to analyze the effects of financial knowledge, locus of control, and demographics on personal financial management. The study uses an experimental method with manipulated cases and a between-subjects design with two factors. It seeks to understand how different participant groups in each treatment condition may influence personal financial management (Table 1)

Table 1. Between-Subjects Design

Treatment	Generation Z (Employee)	Generation Z (Unemployee)
Locus of Control (High)	Cell A	Cell C
Locus of Control (Low)	Cell B	Cell D

This research uses primary data taken from Generation Z in Indonesia. The data collection method for this experimental research involves participants who meet the sample criteria filling out a biodata form containing their full name, status, age, gender, and place of residence. During the experiment, participants are given one out of four cases tailored to the sample. Subsequently, participants will make financial decisions based on the case they receive. Diverse demographic data were obtained, aiming to gather information about the participants' full name, gender, age (14-29 years old), employment status (employee or unemployed), and location of residence (urban or rural).

4. Results and Discussion

4.1 Reliability Test

In this study, Cronbach's Alpha reliability test measures data consistency. Data is considered reliable if Cronbach's Alpha value is > 0,60. The reliability test results, which exceed 0,60 for all cells, are displayed in Table 2.

Table 2. Summary of Reliability test

Cell	Cronbach's Alpha	Details
Cell A	0,682	Reliable
Cell B	0,694	Reliable
Cell C	0,645	Reliable
Cell D	0,690	Reliable

4.2 Normality data test

In this study, the Kolmogorov-Smirnov and Shapiro-Wilk tests were used to test the normal distribution of data. If the significance level is greater than 0,05, then the data is considered normally distributed. The normality test results show significance values greater than 0,05 for all cells and are presented in Table 5.

Table 3. Summary of Normality Data Test

Cell	Kolmogorov – Smirnov			Shapiro – Wilk		
	Stat.	df	Sig.	Stat.	df	Sig.
A	0,197	12	0,200	0,918	12	0,273
B	0,142	12	0,200	0,964	12	0,834
C	0,186	12	0,200	0,913	12	0,231
D	0,180	12	0,200	0,872	12	0,070

4.3 Unpaired Sample t-Test

An independent samples t-test was conducted to compare the means of different samples (Table 4). The result of the independent samples t-test has a significance value from the Levene test greater than 0,05, indicating that the samples come from a homogenous population. Therefore, based on the assumption of equal variances (equal variances assumed), with a significance value for the mean difference test (2-tailed) > 0,05, we can conclude that there is no difference between the samples of employees and unemployed people.

Table 4. Unpaired Sample t-Test

	t-Test	
	t	Sig. 2 Tailed
Equal Variances Assumed	-1,330	0,190
Equal Variances Not Assumed	-1,332	0,189

4.4 Direct effect analysis

Table 5 presents the results of a direct effect analysis, examining the influence of Financial Knowledge and Locus of Control on Personal Financial Management across two distinct groups: employees and unemployed individuals. Firstly, regarding the relationship between financial knowledge and personal financial management, the hypothesis is strongly supported for both employees and Unemployed individuals, as indicated by a probability (Sig) value of 0.000 in both cases. For employees, this result suggests that those with higher financial knowledge are more likely to manage their finances effectively. Similarly, for unemployed individuals, the strong support for this hypothesis implies that even in the absence of employment, individuals with greater financial knowledge can manage their finances more effectively.

Table 5. Summary of direct effect analysis

Sample	Hypothesis	Probability	Conclusion
Employee	Financial Knowledge influences Personal Financial Management	0.000	Supported
	Locus of Control influences Personal Financial Management	0.000	Supported
Unemployee	Financial Knowledge influences Personal Financial Management	0.000	Supported
	Locus of Control influences Personal Financial Management	0.000	Supported

Secondly, the analysis of the relationship between locus of control and personal financial management shows strong support for the hypothesis in both groups, with a probability value of 0.000. For employees, this indicates that those who believe they have control over their financial outcomes are more adept at managing their finances. The same conclusion holds for unemployed individuals, suggesting that having a strong locus of control contributes to better financial management, regardless of employment status.

The analysis reveals that both financial knowledge and locus of control are significant predictors of personal financial management across different employment statuses. The consistent support for these hypotheses across both groups underscores the universal importance of financial literacy and psychological factors in financial behavior. For employees, enhancing financial knowledge through workplace financial education programs could significantly improve personal financial management. Employers might consider offering seminars, workshops, and resources to help employees develop better financial skills. Additionally, fostering a sense of personal agency and control over financial outcomes could be achieved through coaching and mentorship programs.

Community-based financial education programs and resources can be vital in helping unemployed individuals manage their finances effectively. Financial literacy programs targeting unemployed individuals should emphasize practical skills and knowledge that can be applied immediately to improve financial well-being. Encouraging a strong locus of control through supportive counseling and empowerment initiatives can also play a crucial role in enhancing their financial management capabilities.

The findings highlight the importance of integrating financial education and psychological support into broader financial management strategies. Policymakers, educational institutions, and financial advisors should consider these factors when designing interventions aimed at improving financial literacy and management skills across diverse populations. The strong support for the hypotheses in both samples indicates that financial knowledge and locus of control are crucial determinants of personal financial management. Enhancing these attributes can lead to better financial outcomes for individuals regardless of their employment status.

4.5 Moderating effect analysis

Table 6 summarizes the results of a moderating effect analysis, specifically examining the role of demographics in moderating the relationships between Financial Knowledge, Locus of Control, and Personal Financial Management for both employees and unemployed individuals. For the employee sample, the analysis indicates that demographics do not significantly moderate the relationship between financial knowledge and personal financial management, with a probability value of 0.141. This suggests that demographic factors such as age, gender, or education level do not significantly impact how financial knowledge translates into personal financial management among employees. Additionally, the hypothesis that locus of control directly influences personal financial management is also not supported, with a probability value of 0.343, indicating no significant direct effect in this context.

Table 6. Summary of moderating effect analysis

Sample	Hypothesis	Probability	Conclusion
Employee	The relationship between Financial Knowledge and Personal Financial Management is moderated by Demographics	0.141	Not Supported
	Locus of Control influences Personal Financial Management	0,343	Not Supported
Unemployee	Financial Knowledge has a direct influence Personal Financial Management	0.195	Not Supported
	The relationship between Locus of Control and Personal Financial Management is moderated by Demographics	0,088	Not Supported

For the unemployed sample, the direct influence of financial knowledge on personal financial management is not supported, with a probability (Sig) value of 0.195. This suggests that, for unemployed individuals, financial knowledge alone does not significantly influence their ability to manage personal finances. Furthermore, the hypothesis that demographics moderate the relationship between locus of control and personal financial management is also not supported, with a probability (Sig) value of 0.088, indicating that demographic factors do not significantly impact this relationship.

For employees, the lack of a moderating effect of demographics on the relationship between financial knowledge and personal financial management suggests that financial education programs can be broadly applicable without needing significant customization for different demographic groups. However, since the locus of control does not show a significant direct influence, it may indicate that other factors, possibly organizational or environmental, play a more critical role in personal financial management for employees.

For unemployed individuals, the finding that financial knowledge does not significantly directly influence personal financial management suggests a need for more comprehensive support systems. Financial literacy alone may not be sufficient; other factors, such as access to financial resources, psychological support, and community support networks, may be necessary to improve financial management outcomes. The non-significant moderating role of demographics in the relationship between locus of control and personal financial management further suggests that interventions should be designed to be inclusive and broadly applicable rather than targeted based on demographic factors.

These results underscore the complexity of financial management behaviors and suggest that while financial knowledge and locus of control are important, demographic factors do not significantly moderate their impacts. Therefore, policymakers and financial educators should focus on creating universally accessible financial education and support programs rather than tailoring them too specifically based on demographic characteristics. The moderating effect analysis reveals that demographic factors do not significantly alter the relationships between financial knowledge, locus of control, and personal financial management. This finding suggests that financial education and support initiatives can be designed with a broad audience in mind, ensuring inclusivity and accessibility to enhance financial management skills across different populations.

5. Conclusion

The direct effect analysis clearly indicates that financial knowledge and locus of control are significant predictors of personal financial management for both employees and unemployed individuals. For employees, higher financial knowledge translates into more effective personal financial management. This underscores the importance of financial literacy programs in the workplace, which can enhance employees' ability to manage their finances more competently. Similarly, a strong locus of control among employees is associated with better financial management, suggesting that fostering a sense of personal agency and control can be beneficial.

For unemployed individuals, the importance of financial knowledge and locus of control remains significant. Despite their employment status, individuals with greater financial knowledge and a strong sense of control over their financial outcomes are better at managing their finances. This highlights the need for accessible financial education programs and psychological support systems that can empower unemployed individuals to manage their finances effectively.

The moderating effect analysis, however, reveals that demographic factors do not significantly influence the relationships between financial knowledge, locus of control, and personal financial management for either employees or unemployed individuals. For employees, this suggests that financial education and support programs do not need significant customization based on demographic characteristics. The non-significant direct effect of locus of control in this context may indicate the presence of other influential factors, possibly organizational or environmental, that impact personal financial management.

For unemployed individuals, the lack

of a significant direct effect of financial knowledge on personal financial management suggests that financial literacy alone may not suffice. Comprehensive support systems, including psychological and community support, are essential to enhance financial management outcomes. The absence of a significant moderating effect of demographics further implies that interventions should be inclusive and universally applicable.

These findings collectively highlight the critical roles of financial knowledge and locus of control in personal financial management while also indicating that demographic factors do not significantly alter these relationships. Consequently, policymakers, financial educators, and support organizations should focus on creating broadly applicable and inclusive financial education and support programs. Such initiatives should aim to enhance financial literacy and foster a strong sense of personal control over financial outcomes, regardless of employment status or demographic characteristics.

In conclusion, while financial knowledge and locus of control are crucial determinants of personal financial management, demographics' non-significant moderating role suggests that universal, inclusive approaches to financial education and support are likely to be most effective in improving financial outcomes across diverse populations.

6. Research Limitation

This research was conducted in accordance with scientific procedures and was maximized to meet the existing standards of scientific writing. However, there are several limitations in the implementation and data processing. In this study, the cases provided were only in the form of illustrations or scenarios adjusted to the participants, so these cases may not fully represent the actual situations in the field. The research was conducted only on Generation Z aged 18-29, with the employed group having an average work experience of 1-5 years, which means that participants might still be biased by their situation before they were employed. Additionally, the study was only carried out in the provinces of Central Java and the Greater Jakarta area (Jabodetabek), not covering the entire region of Indonesia.

7. Suggestion

Based on the results of the data analysis and discussion in the research above, several recommendations and notes are as follows. Future research could compare Generation Z and Generation Y within the employee group, considering the potential bias in Generation Z due to their limited work experience (an average of 1-5 years). In future experimental research, samples of financially capable and financially incapable individuals could be used to understand the influence of locus of control on personal financial management. Additionally, it would be beneficial for future research to include additional procedures, such as interviews with participants to assess whether the treatment provided was appropriate, thus improving the quality of the data. It is also important for the public to seek financial understanding from sources such as the education provided by the Indonesia Stock Exchange and the "Sikapiuangmu" program by Otoritas Jasa Keuangan Indonesia. This aims to provide individuals with a strong foundation in managing personal finances more wisely. Finally, the public should increase awareness of financial proportions and allocations, current needs versus future needs, and balancing self-satisfaction with financial management.

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