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# Analysis of the influence of financial literacy on investment decisions of millennials and gen Z in the digital ERA

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**Abstract:** In the digital era, the investment landscape has been transformed by the proliferation of online platforms and fintech solutions, creating new opportunities and challenges for younger generations. This study investigates the influence of financial literacy on the investment decisions of Millennials and Gen Z, two cohorts that are increasingly participating in financial markets through digital channels. Using a mixed-methods approach, we combine quantitative analysis from surveys conducted with 600 individuals across these age groups with qualitative insights gathered from in-depth interviews. The results show that financial literacy significantly affects investment behavior, with those possessing higher levels of financial knowledge demonstrating a more strategic approach to portfolio diversification, risk management, and long-term financial planning. Furthermore, the study finds that digital tools and platforms, such as robo-advisors, investment apps, and online trading platforms, play a crucial role in shaping the investment choices of Millennials and Gen Z, especially as they seek accessible, low-cost options for managing their investments. Key factors influencing these investment decisions include risk tolerance, trust in digital platforms, and the impact of social media influencers on financial decision-making. The research highlights the need for targeted financial education programs that can enhance financial literacy, improve investment outcomes, and encourage responsible investing behaviors among younger generations. These findings provide valuable insights for policymakers, financial institutions, and educators aiming to promote sustainable financial habits and improve the overall financial well-being of Millennials and Gen Z in the digital age.
***Keywords:*** *Digital era, Financial literacy, Gen Z, Investment decisions, Millennials.*

## 1. Introduction

The rapid advancement of digital technologies and the increasing prevalence of online financial platforms have profoundly transformed the way individuals engage with investment markets [1]. For younger generations, particularly Dimock [2] these changes have resulted in greater access to investment opportunities, previously limited to more experienced or wealthier individuals. Digital tools such as mobile investment applications, robo-advisors, and peer-to-peer lending platforms have democratized financial markets, allowing younger investors to manage their portfolios more independently [3]. However, while the growth of these platforms is undeniable, the question of how financial literacy influences investment decisions remains a critical issue, particularly for these tech-savvy yet financially inexperienced cohorts.

Financial literacy refers to an individual's ability to understand and effectively apply various financial skills, including personal financial management, budgeting, and investing [4]. It encompasses knowledge of financial concepts such as compound interest, inflation, risk diversification, credit management, and retirement planning. According to the Organization for Economic Co-


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operation and Development (OECD), financial literacy is not limited to knowledge alone, but also includes behavior and attitudes that enable individuals to make informed and confident financial decisions. For Millennials and Gen Z—generations that face complex financial products and rapidly evolving digital platforms—financial literacy is an essential competency that determines their ability to navigate financial markets and secure long-term financial well-being [5, 6].

A growing body of research has shown that higher levels of financial literacy are positively correlated with prudent investment behavior [7]. Individuals who possess a strong understanding of basic financial principles are more likely to engage in long-term financial planning, invest in diversified portfolios, and avoid speculative or impulsive decisions. Conversely, those with low financial literacy are often vulnerable to financial misinformation, high-interest debt traps, and risky investments driven by emotional or peer influence [8]. A study by Lusardi and Mitchell [9] revealed that financial literacy directly influences individuals' capacity to assess risk-return trade-offs, understand the implications of financial decisions, and adjust their strategies in response to economic changes—skills that are increasingly vital in the digital age where financial decisions are often made instantly via mobile apps [9].

Furthermore, in the context of Millennials and Gen Z, financial literacy plays a critical role in shaping attitudes toward saving, investing, and wealth accumulation [10]. These generations are exposed to a financial environment characterized by volatile markets, the rising cost of living, gig economy employment, and increasing student loan burdens. Without a solid foundation in financial literacy, young investors may struggle to build emergency funds, plan for retirement, or resist the influence of trends like meme stocks and cryptocurrency hype. Data from the Organisation for Economic Co-operation and Development [11] shows that only 33% of young adults worldwide are considered financially literate, highlighting a significant educational gap [12]. As digital financial services become more accessible, it is imperative to pair accessibility with education to empower young investors to make decisions that align with their financial goals and risk profiles [13].

Financial literacy, which encompasses the understanding of basic financial concepts such as budgeting, saving, investing, and managing risk, plays a crucial role in shaping an individual's investment decisions [14]. Research has shown that individuals with higher financial literacy are more likely to make informed and strategic investment choices, avoid high-risk ventures, and effectively diversify their portfolios. Conversely, those with limited financial knowledge are prone to making suboptimal financial decisions, often driven by short-term trends or the influence of unverified sources, such as social media influencers or online forums [15]. This phenomenon is particularly pertinent to Millennials and Gen Z, who are more likely to be influenced by digital platforms and social media in their financial decision-making processes.

The rise of digital investment tools and platforms has further complicated the landscape for young investors [16]. According to a 2021 survey by the CFA Institute, 80% of Millennials in the United States reported using digital platforms for investment purposes, with a significant portion relying on mobile apps and robo-advisors. In the same study, it was found that only 26% of Millennials and Gen Z scored high on financial literacy assessments, indicating a significant gap between their access to financial tools and their understanding of how to use them effectively. This disconnect poses potential risks, as individuals may overestimate their financial competence or follow advice from unreliable sources, leading to poor investment decisions [17].

In addition to the technological aspects, social factors also influence the investment behavior of Millennials and Gen Z. Research from the World Economic Forum [18] highlighted that 54% of Millennials consider social media influencers a key source of financial advice. The power of social media platforms like TikTok, Twitter, and Instagram in shaping financial trends is evident in the rise of investment communities such as "FinTok," where users share tips and strategies, often without a comprehensive understanding of the underlying financial principles [19]. This trend emphasizes the need for a deeper understanding of how financial literacy influences the ability of younger generations to critically evaluate investment advice and make decisions based on sound financial knowledge rather than peer pressure or viral trends [20].

The digital transformation of the financial industry has not only influenced how young people access financial services but also how they perceive and interact with investment products. According to data from the 2020 Global Fintech Adoption Index by EY, over 64% of Millennials and Gen Z have used a fintech product or service, compared to just 32% of Baby Boomers [21]. This high adoption rate, combined with the proliferation of financial literacy resources online, underscores the importance of integrating financial education into digital platforms to enhance users' investment decision-making capabilities. Furthermore, studies have indicated that younger investors tend to favor low-cost, passive investment strategies, such as exchange-traded funds (ETFs) and index funds, often due to their familiarity with these products through digital platforms [22]. However, the lack of comprehensive financial knowledge could lead to an overreliance on these products, potentially overlooking more suitable investment opportunities tailored to their financial goals and risk profiles.

This study aims to explore the influence of financial literacy on the investment decisions of Millennials and Gen Z in the context of the digital era [23]. By examining how financial knowledge intersects with the increasing use of digital investment platforms, this research provides insights into the behaviors, preferences, and challenges that younger generations face when making investment choices. Given the rapid changes in the financial landscape and the central role of digital platforms in shaping investment habits, this study also seeks to identify ways to enhance financial literacy among these cohorts. Improving financial literacy can help mitigate the risks of poor investment decisions and foster more responsible, informed investing behaviors, which are essential for long-term financial well-being [24].

The importance of this research is further highlighted by the increasing financial responsibility that Millennials and Gen Z are expected to bear in the coming years [25]. As they inherit wealth and assume greater roles in the global economy, their financial decisions will significantly impact economic growth, wealth distribution, and overall financial stability. Moreover, Millennials and Gen Z represent a growing share of the investor base, with estimates suggesting that by 2030, Millennials will control over $20 trillion in assets. Thus, understanding the role of financial literacy in shaping their investment behaviors is not only crucial for their financial success but also for the stability of global financial markets [26].

This paper is structured as follows: the next section provides a detailed review of the literature on financial literacy, digital investment platforms, and the investment behaviors of Millennials and Gen Z. The methodology section describes the mixed-methods approach used in the study, combining quantitative surveys and qualitative interviews to collect data from young investors. The results are then presented, followed by an in-depth discussion of the findings. Finally, the paper concludes with recommendations for improving financial literacy among Millennials and Gen Z and explores the implications for policymakers, financial institutions, and educators seeking to foster better investment outcomes in the digital age.

## 2. Literature Review

*2.1. Financial Literacy and Investment Behavior*

Financial literacy refers to an individual's ability to understand and use various financial skills, including personal financial management, budgeting, and investing [27]. Numerous studies have confirmed that financial literacy significantly influences financial behavior, particularly in the context of investment decisions [27, 28]. Individuals with higher financial literacy are more likely to engage in proactive financial planning, exhibit diversified investment portfolios, and demonstrate greater awareness of risk-return trade-offs [29]. In younger cohorts, such as Millennials and Gen Z, financial literacy plays a dual role—not only as a cognitive framework but also as a filter through which digital financial content is interpreted and acted upon (OECD, 2020).

### 2.2. Millennials and Gen Z as Emerging Investors

Millennials (born 1981–1996) and Gen Z (born 1997–2012) represent a demographic shift in financial market participation. These generations have grown up with technology and are more inclined to use digital platforms for investment activities. Research suggests that their investment preferences differ significantly from older generations, favoring convenience, real-time access, and personalized recommendations through technology-driven platforms [30]. However, despite higher digital fluency, several studies have reported gaps in their financial decision-making abilities due to insufficient financial education and limited real-world financial experience.

### 2.3. Fintech and Digital Investment Platforms

The digital transformation in finance has led to the emergence of fintech solutions such as robo-advisors, peer-to-peer lending, and app-based stock trading. These platforms have lowered entry barriers and provided broader access to investment products for young investors. However, the ease of access does not necessarily translate into informed decision-making. Research by Sironi [31] and Jünger and Mietzner [32] indicates that digital platforms can either enhance or hinder investment performance depending on users' financial literacy levels. Moreover, social media and influencer-driven investment advice have been found to exert a powerful—though sometimes misleading—impact on Gen Z's financial behaviors [33].

### 2.4. Digital Financial Education and Behavioral Finance

The intersection of financial literacy and behavioral finance has gained attention in recent years, particularly in understanding cognitive biases such as overconfidence, herding behavior, and risk aversion among digital-age investors. Targeted digital financial education programs have been proposed to mitigate these biases and improve rational investment decision-making. Studies suggest that interactive learning through gamified apps, simulations, and microlearning modules can significantly enhance financial knowledge retention and behavioral change among young users [34].

## 3. Methodology

This study adopts a quantitative approach using a survey method as the primary tool for data collection. The main objective of this approach is to examine the influence of financial literacy on investment decisions made by Millennials and Gen Z in the context of the digital era. The respondents in this study consist of individuals aged 18–40 from various regions in Indonesia who are actively involved in investment activities through digital platforms such as stock trading apps, mutual funds, cryptocurrency, and peer-to-peer lending [34].

A purposive sampling technique was employed, with selection criteria including: (1) individuals aged between 18 and 40 years, (2) having access to and experience with digital investment platforms for at least the past six months, and (3) possessing basic knowledge of investment concepts. A total of 420 respondents were collected, meeting the statistical validity requirement for regression analysis.

The research instrument was a closed-ended questionnaire divided into three main sections: (1) respondent demographics, (2) financial literacy levels based on indicators from the OECD/INFE (Organization for Economic Cooperation and Development – International Network on Financial Education), and (3) investment decision indicators covering dimensions such as rationality, planning, diversification, and risk management. Instrument validity and reliability were tested using construct validity through exploratory factor analysis (EFA) and reliability testing via Cronbach's Alpha, all of which exceeded the threshold value of 0.70.

The collected data were analyzed using multiple linear regression analysis to assess the impact of financial literacy on investment decisions. Additionally, descriptive analysis was conducted to map financial literacy levels and investment preferences by age group and digital experience. Classical assumption tests such as normality, multicollinearity, and heteroskedasticity were also performed to ensure the validity of the regression model used.

## 4. Result and Discussion

### *4.1. Financial Literacy Level of Respondents*

Descriptive analysis reveals that the overall financial literacy level among millennial and Gen Z respondents in this study falls into the moderate to high category, with a mean score of 72.4 out of 100, as measured using the standardized OECD/INFE financial literacy framework. This framework evaluates financial knowledge, behavior, and attitude dimensions. The relatively high average score indicates that most respondents have an adequate theoretical understanding of core financial principles. Specifically, 63% of participants correctly answered questions related to inflation, compound interest, budgeting, and investment risk, demonstrating foundational competence in financial concepts.

However, a deeper look into application-based items revealed a significant performance gap. Only 38% of respondents demonstrated the ability to apply financial knowledge in simulated decision-making scenarios, such as constructing a diversified investment portfolio or evaluating risk-adjusted returns. This finding suggests a disconnect between conceptual understanding and practical application, indicating that while young investors may grasp financial terminology, many lack the skill or confidence to implement strategic financial decisions in real-world contexts [35].

Educational background played a notable role in determining literacy levels. Respondents with degrees in economics, finance, or prior financial education scored substantially higher, with an average score of 81.7, compared to 65.2 for those without such exposure. This 16.5-point gap highlights the value of structured financial education in enhancing financial capability. In terms of age distribution, participants aged 25–30 years outperformed their younger counterparts, particularly those in the 18–22 age group, who showed the lowest levels of financial literacy and practical competence. This trend indicates that age and life experience—possibly involving early career exposure, income management, or household budgeting—may contribute to more robust financial understanding.

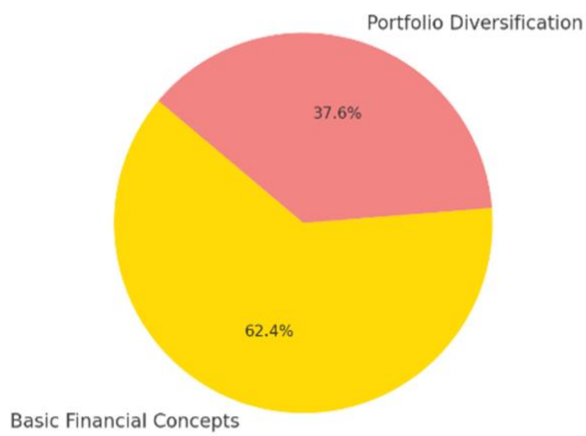


**Figure 1.**
Graph Understanding of Financial Concepts.

Furthermore, digital behavior analysis shows that respondents who frequently used financial planning apps or fintech investment platforms tended to report higher literacy scores and stronger decision-making confidence. This suggests a correlation between digital financial engagement and elevated financial capability, reinforcing the argument for integrating digital tools into financial literacy interventions. Nonetheless, despite increased digital access, awareness of financial fraud, risk tolerance calibration, and long-term wealth planning remains limited, especially among younger Gen Z respondents. This supports the need for targeted, experiential financial education programs, particularly through digital channels aligned with youth behavior and consumption patterns.


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*4.2. Digital Investment Decisions among Young Generations*

Regarding investment decisions, the study revealed that 57% of respondents actively participated in digital investments over the past six months. This growing trend reflects the increasing reliance on digital platforms for managing financial portfolios. The most popular investment choices among the respondents were mutual funds (31%), stocks (27%), and cryptocurrency (19%), which indicates a diverse range of preferences within the young investor demographic. Mutual funds were the most favored option, likely due to their perceived lower risk and the ease of access via digital platforms, which have become more integrated into financial decision-making processes. Stocks, representing a more direct and potentially higher-reward investment vehicle, were the second most popular choice. Meanwhile, cryptocurrency, despite its volatile nature, garnered interest from 19% of respondents, aligning with the increasing visibility and hype surrounding digital currencies, particularly among younger generations who are often more open to new financial technologies.

The primary motivation behind these investment decisions was long-term financial goals, with many respondents citing future savings and retirement as key drivers. This suggests that, despite the challenges and risks associated with investing in volatile markets, young investors are increasingly considering the long-term benefits of their financial choices. The ease of digital access played a crucial role in these decisions, as respondents highlighted the convenience of online platforms in facilitating quick, informed, and manageable investment decisions. Additionally, recommendations from social media influencers and financial advisors online had a substantial impact on respondents' choices, with many acknowledging the role of these sources in shaping their investment strategies.

However, a deeper analysis of the data exposed significant gaps in investment practices. While 57% of respondents were active digital investors, only 42% of them held well-diversified portfolios, which is essential for mitigating risk and maximizing returns over the long term. This suggests that many young investors still lack a comprehensive understanding of portfolio management. Instead, many tended to make investment decisions based on market trends and short-term sentiment, influenced by the constant flow of financial information in digital environments. This behavior exposes a critical flaw in the decision-making process, as it highlights the tendency to rely on external factors, such as hype or fleeting market trends, rather than thorough, well-researched, and disciplined investment strategies.

The findings of this study resonate with the OECD's 2022 report, which noted Gen Z's vulnerability to external influences in digital spaces. The report pointed out that young investors are often exposed to unreliable or biased financial information online, which can lead to suboptimal investment decisions. The ease of access to digital platforms and the prevalence of social media-driven investment advice create an environment where individuals may prioritize short-term gains over long-term financial security, ultimately undermining their ability to make informed, rational investment choices.

This situation underscores the urgent need for enhanced financial literacy programs that go beyond basic investment knowledge and delve into more advanced concepts like portfolio diversification, risk analysis, and behavioral finance. Additionally, the study suggests the importance of integrating these educational tools into digital platforms, which are the primary sources of information for most young investors. By addressing these gaps and providing more structured, reliable financial education, there is potential to improve decision-making and mitigate the impact of external and sometimes misleading financial influences on younger generations.

*4.3. Regression Test Results and Interpretation*

Multiple linear regression analysis reveals that financial literacy significantly influences digital investment decisions. A regression coefficient of $\beta = 0.413$ ($p < 0.01$) suggests that each unit increase in financial literacy corresponds to a 0.413-point increase in investment decision scores. The $R^2$ value of 0.362 indicates that 36.2% of the variance in investment decisions can be explained by financial literacy levels.

**Table 1.**
Multiple Linear Regression Analysis of Financial Literacy and its Sub-factors on Investment Decisions.

| Variable | Regression Coefficient (β) | Standard Error (SE) | t-value | p-value | Significance |
|---|---|---|---|---|---|
| Financial Literacy | 0.413 | 0.058 | 7.12 | < 0.01 | Significant |
| Risk Knowledge (sub-factor) | 0.310 | 0.045 | 6.89 | < 0.01 | Significant |
| Market Understanding (sub-factor) | 0.254 | 0.039 | 6.51 | < 0.01 | Significant |

These findings reinforce previous studies [9, 36] which emphasize that enhanced financial literacy improves individual investment decision quality—particularly in fast-paced, high-risk digital environments. More specifically, the dimensions of risk knowledge and market understanding had the strongest influence in this regression model.

### *4.4. Discussion and Implications*

This study provides compelling evidence that financial literacy is not only a determinant of investment decisions but also a critical factor in fostering rational, informed decision-making in the face of digital market volatility. As the financial landscape becomes increasingly digitized, with platforms offering a wide array of investment options, the need for enhanced financial literacy has never been more urgent. In Indonesia, where the digital economy is rapidly expanding, particularly among younger demographics, this issue becomes even more pressing. According to the 2023 data from the Statistics Indonesia Bureau (BPS), over 64 million Indonesians are active participants in the digital economy, with a significant portion of these individuals belonging to the Gen Z and Millennial age groups. These groups are not only digital natives but are also becoming increasingly engaged in digital investment platforms, from stocks and mutual funds to cryptocurrency and fintech-driven investment tools.

As these younger generations continue to navigate a volatile digital marketplace, financial literacy serves as a fundamental tool to equip them with the necessary skills to make informed decisions. The complexity and speed of the digital capital market, combined with the influx of information from various sources, make it crucial for investors to possess a deep understanding of financial principles. This study shows that financial literacy, particularly in areas such as risk management and market understanding, significantly influences the quality of investment decisions. Without a solid foundation in financial concepts, young investors are at risk of making impulsive or poorly informed decisions, which can lead to substantial financial losses, particularly in high-risk digital investments like cryptocurrency.

In the context of Indonesia, where the digital economy is expected to grow exponentially in the coming years, improving financial literacy is not only an individual priority but also a strategic national priority. Strengthening the financial literacy of young Indonesians can foster greater financial inclusion, helping individuals from various socioeconomic backgrounds participate in the digital capital market. This, in turn, can contribute to the overall stability and growth of the financial system, making it more resilient to market fluctuations and economic shocks. With an increasingly digitalized economy, the government, regulatory bodies, and financial institutions must collaborate to create a conducive environment for informed and responsible investment.

To address these challenges, practical implications from the study suggest several key actions. First, there is an urgent need for technology-driven financial education initiatives, specifically targeting Gen Z and Millennials. These younger generations are more likely to engage with digital platforms, which makes technology-based solutions, such as mobile apps, online courses, and gamified learning tools, ideal for reaching them. Financial education programs should not only cover basic concepts like budgeting and saving but also delve into more advanced topics like investment strategies, risk assessment, and understanding market trends, particularly in digital markets.

The integration of financial literacy modules into investment apps is another important recommendation. Given that young investors are already using digital platforms to manage their investments, embedding educational resources directly within these platforms can provide timely guidance and enhance decision-making. Interactive features, such as quizzes, financial tools, and tutorials, could be incorporated to improve engagement and allow users to learn while making investment decisions. By providing real-time, context-sensitive education, investment apps can empower users to better understand the financial products they are engaging with, enabling more informed and rational decisions.

Another critical aspect to address is the role of social media in shaping investment behaviors. Many young investors rely on social media platforms for financial advice, often from influencers or peers rather than professional sources. While social media can be a valuable tool for sharing knowledge and promoting financial literacy, it also carries the risk of spreading unreliable or biased information. As the study suggests, there is a need for stricter oversight of investment-related content on social media. Regulatory bodies, such as Indonesia's Financial Services Authority (OJK) and Bank Indonesia, can play a key role in monitoring digital content and ensuring that financial advice shared online adheres to regulatory standards. Implementing guidelines for influencers and content creators, along with penalties for spreading misleading or fraudulent financial advice, can help mitigate the risks of misinformation and protect investors from potential harm.

Collaboration between educational institutions, financial regulators, and fintech startups can also play a vital role in improving financial literacy. Universities and vocational schools can work with financial institutions to incorporate financial literacy training into their curricula, while fintech companies can provide certified training programs that focus on practical financial skills. These programs can range from basic financial education to more advanced courses on digital investments and risk management. The OJK and Bank Indonesia, as the country's primary regulatory authorities, can provide oversight and accreditation for these educational initiatives, ensuring that they meet high standards of quality and relevance.

Interactive tools, such as online forums or webinars featuring financial experts, can also be developed to foster a deeper understanding of financial markets. These platforms can serve as spaces where young investors can ask questions, share experiences, and learn from others. Furthermore, fintech startups can collaborate with these institutions to create practical tools—such as risk assessment calculators or portfolio simulators—that can help young investors evaluate potential investments and make more informed decisions based on their personal financial goals and risk tolerance.

In conclusion, the findings of this study emphasize the critical role of financial literacy in shaping investment decisions, especially in the rapidly evolving digital economy. To ensure that young Indonesians can navigate the complexities of digital investments successfully, it is essential to implement targeted educational programs, improve the integration of financial literacy within digital platforms, and strengthen regulation of investment content on social media. By doing so, Indonesia can promote greater financial inclusion, foster responsible investing, and build a more stable and resilient digital capital market.

## 5. Conclusion

The research findings indicate several key conclusions related to the tested hypotheses. Workshop management plays a significant and direct role in enhancing automotive electrical competence. The support provided by infrastructure and effective workshop management fosters practical activities, which in turn automatically improves competence. Conversely, time management does not have a measurable impact on automotive electrical competence. Additionally, problem-solving ability has a direct, positive, and significant effect on automotive electrical competence. When students engage in problem-solving, they apply their acquired knowledge to determine methods and make decisions, which, often unconsciously, leads to an improvement in their competence. Moreover, workshop management also positively influences competence indirectly, through the development of problem-solving skills. On the other hand, time management shows no significant effect on automotive electrical competence, either directly or through problem-solving ability.

## Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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