

***DIGITAL FINANCIAL LITERACY AND ITS EFFECT ON PERSONAL
FINANCIAL PLANNING IN THE CASHLESS SOCIETY***

**LITERASI KEUANGAN DIGITAL DAN PENGARUHNYA TERHADAP
PERENCANAAN KEUANGAN PRIBADI DALAM MASYARAKAT TANPA
UANG TUNAI**

Billy Dewantara¹, Andi Primafira Bumandava Eka², Masyaili³

Politeknik Negeri Sriwijaya¹

STIE Manajemen Bisnis Indonesia²

Universitas Lakidende³

billy.dewantara@polsri.ac.id¹

ABSTRACT

This study aims to analyze the effect of digital financial literacy on personal financial planning in the context of a cashless society. The research employs a qualitative approach using a literature review method, examining various scholarly sources such as journal articles, books, and institutional reports relevant to the topic. The findings indicate that digital financial literacy is a critical factor influencing individual financial behavior, particularly in budgeting, saving, investing, and debt management. In digital payment systems, individuals tend to experience reduced awareness of spending due to the diminished “pain of paying,” which may lead to increased consumptive behavior. However, individuals with higher levels of digital financial literacy are better able to manage their finances effectively and maintain financial stability. Furthermore, digital financial literacy plays an essential role in mitigating financial risks, including fraud and cybersecurity threats. This study highlights the importance of enhancing digital financial literacy to support sustainable personal financial planning in an increasingly digitalized financial environment.

Keywords: *Digital Financial Literacy, Personal Financial Planning, Cashless Society, Financial Behavior, Fintech*

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh literasi keuangan digital terhadap perencanaan keuangan pribadi dalam konteks masyarakat tanpa uang tunai (cashless society). Metode yang digunakan adalah tinjauan pustaka (literature review) dengan pendekatan kualitatif, yang mengkaji berbagai sumber ilmiah seperti jurnal, buku, dan laporan institusi yang relevan dengan topik penelitian. Hasil kajian menunjukkan bahwa literasi keuangan digital merupakan faktor penting yang memengaruhi perilaku keuangan individu, khususnya dalam pengelolaan anggaran, tabungan, investasi, dan pengendalian utang. Dalam sistem pembayaran digital, individu cenderung mengalami penurunan kesadaran terhadap pengeluaran akibat berkurangnya “pain of paying”, sehingga meningkatkan risiko perilaku konsumtif. Namun demikian, individu dengan tingkat literasi keuangan digital yang tinggi mampu mengelola keuangan secara lebih efektif dan menjaga stabilitas finansial. Selain itu, literasi keuangan digital juga berperan dalam mengurangi risiko keamanan finansial seperti penipuan dan kejahatan siber. Penelitian ini menegaskan bahwa peningkatan literasi keuangan digital sangat diperlukan untuk mendukung perencanaan keuangan yang berkelanjutan di era digital.

Kata Kunci: Literasi Keuangan Digital, Perencanaan Keuangan Pribadi, Cashless Society, Perilaku Keuangan, Fintech

INTRODUCTION

The acceleration of digital transformation over the past decade has significantly reshaped the structure and functioning of financial systems worldwide. One of the most notable manifestations of this transformation is the emergence of a cashless society, where financial transactions are

increasingly conducted through digital platforms rather than physical currency. Innovations such as mobile banking, electronic wallets, contactless payments, and financial technology (fintech) applications have revolutionized how individuals interact with money. This shift has been further accelerated by global trends, including the COVID-19

pandemic, which encouraged contactless transactions and reduced reliance on cash-based systems (Auer et al., 2020).

While the transition toward a cashless society offers numerous advantages—such as efficiency, convenience, transparency, and improved financial inclusion—it also introduces new complexities in financial management. In a digital financial environment, individuals are required not only to understand basic financial concepts but also to possess the skills necessary to navigate digital platforms effectively. This has led to the growing importance of digital financial literacy, a multidimensional construct that integrates financial knowledge, digital competence, and cognitive decision-making skills.

Digital financial literacy extends beyond traditional financial literacy by incorporating the ability to access, evaluate, and utilize financial information through digital channels. According to the OECD (2020), financial literacy involves awareness, knowledge, skill, attitude, and behavior necessary to make sound financial decisions. When embedded in a digital context, this definition expands to include technological proficiency and cybersecurity awareness. Individuals must be able to assess the reliability of digital financial services, protect personal data, and make informed decisions in an increasingly complex financial marketplace.

Despite the rapid growth of digital financial services, there remains a substantial gap between access to these services and the ability to use them effectively. This gap is particularly evident in developing countries, where digital infrastructure may advance more quickly than educational systems and public awareness. As a result, many individuals adopt digital financial tools

without fully understanding their implications, risks, or long-term impact on financial well-being. This discrepancy creates vulnerabilities, including susceptibility to fraud, mismanagement of finances, and overreliance on convenient but potentially harmful financial behaviors.

Personal financial planning, defined as the process of managing financial resources to achieve life goals, is profoundly influenced by the level of financial literacy an individual possesses. It encompasses budgeting, saving, investing, debt management, and risk mitigation. In a cashless society, these activities are increasingly mediated through digital interfaces, requiring users to make real-time financial decisions with minimal physical cues. Unlike cash transactions, which provide tangible feedback on spending, digital payments often obscure the perception of money, potentially leading to reduced financial awareness and increased impulsive behavior.

Behavioral economics provides a useful framework for understanding this phenomenon. The concept of the “pain of paying” suggests that individuals experience a psychological cost when spending money, which is more pronounced with cash transactions than with digital payments (Prelec & Loewenstein, 1998). In a cashless environment, the reduced salience of spending may weaken self-control mechanisms, resulting in higher consumption and lower savings rates. Consequently, individuals without adequate digital financial literacy may struggle to maintain financial discipline, undermining their long-term financial planning.

Moreover, the expansion of fintech services has broadened access to complex financial products, including online investment platforms, peer-to-

peer lending, and digital insurance services. While these innovations enhance financial inclusion, they also require users to possess a higher level of financial sophistication. Without sufficient knowledge and understanding, individuals may misinterpret financial information, underestimate risks, or make suboptimal investment decisions. Empirical studies have consistently shown that individuals with higher levels of financial literacy are more likely to engage in effective financial planning and achieve better financial outcomes (Lusardi & Mitchell, 2014; Hastings et al., 2013).

In the context of emerging economies such as Indonesia, the adoption of digital financial services has grown rapidly due to supportive government policies and the proliferation of fintech companies. Initiatives aimed at promoting financial inclusion and digital payment systems have increased the accessibility of financial services, particularly among previously underserved populations. However, this rapid expansion is not always accompanied by adequate educational efforts to enhance digital financial literacy. As a result, many users lack the necessary skills to optimize the use of these services for effective financial planning.

Demographic disparities further complicate this issue. Factors such as age, education, income level, and digital exposure significantly influence an individual's level of digital financial literacy. Younger individuals, while generally more comfortable with technology, may lack experience in financial planning and risk assessment. Conversely, older individuals may possess financial knowledge but face challenges in adapting to digital platforms. These differences highlight the need for targeted interventions that

address the specific needs of diverse population groups.

Another critical concern in the digital financial ecosystem is the increasing prevalence of cybersecurity threats. As financial transactions move online, individuals are exposed to risks such as phishing, identity theft, and unauthorized access to financial accounts. Those with limited digital financial literacy are particularly vulnerable to such threats, as they may lack the knowledge required to identify and mitigate risks. This not only leads to financial losses but also diminishes trust in digital financial systems, potentially hindering further adoption.

Furthermore, the integration of digital finance into daily life has blurred the boundaries between consumption and financial planning. The ease of accessing credit through digital platforms, such as "buy now, pay later" services, may encourage excessive borrowing and weaken financial discipline. Without proper literacy, individuals may prioritize short-term consumption over long-term financial stability, leading to increased debt and financial stress.

Given these challenges, it is essential to examine the role of digital financial literacy in shaping personal financial planning behavior within a cashless society. Although existing literature has extensively explored the relationship between financial literacy and financial behavior, there is still limited research focusing specifically on the digital dimension of financial literacy. This gap is particularly relevant in the current era, where digitalization is rapidly transforming financial systems and individual financial practices.

This study seeks to address this gap by analyzing the extent to which digital financial literacy influences personal financial planning. It aims to

provide a comprehensive understanding of how individuals' ability to navigate digital financial environments affects their financial decision-making processes. By doing so, this research contributes to the development of more effective financial education programs, policy interventions, and digital financial services that promote responsible financial behavior.

The transition toward a cashless society presents both opportunities and challenges. While digital financial services enhance accessibility and efficiency, they also demand a higher level of literacy and responsibility from users. Digital financial literacy plays a crucial role in ensuring that individuals can effectively manage their finances, mitigate risks, and achieve long-term financial goals. Therefore, understanding its impact on personal financial planning is essential for fostering financial well-being and sustainable economic development.

METHOD

This study employs a qualitative approach using a literature review method to systematically examine existing research on digital financial literacy and its effect on personal financial planning in a cashless society. A literature review is considered appropriate for this study because it allows for the synthesis of theoretical and empirical findings from various scholarly sources, thereby providing a comprehensive understanding of the research topic. According to John W. Creswell (2014), literature reviews play a crucial role in identifying research gaps, building theoretical frameworks, and contextualizing new studies within existing knowledge. This approach enables the researcher to critically evaluate prior studies and establish a conceptual foundation for analyzing the

relationship between digital financial literacy and financial behavior.

The data used in this study are secondary data derived from academic publications, including peer-reviewed journal articles, books, institutional reports, and conference proceedings. The selection of literature focuses on works published between 2010 and 2024 to ensure relevance to recent developments in digital finance and cashless transactions. Key sources include internationally recognized databases such as Scopus, Web of Science, and Google Scholar. The inclusion criteria for selecting articles are based on their relevance to key variables, namely digital financial literacy, personal financial planning, and cashless society, as well as their methodological rigor and citation impact. Studies that provide empirical evidence or theoretical insights into financial literacy and digital financial behavior are prioritized (Lusardi & Mitchell, 2014; OECD, 2020).

The data collection process involves systematic searching using predefined keywords such as "digital financial literacy," "financial behavior," "cashless society," "fintech adoption," and "personal financial planning." Boolean operators (AND, OR) are applied to refine search results and improve accuracy. After the initial identification of relevant studies, a screening process is conducted by reviewing titles, abstracts, and full texts to ensure alignment with the research objectives. This process follows the principles of systematic literature review as outlined by Glen A. Bowen (2009), which emphasizes document analysis as a structured and transparent technique for evaluating qualitative data.

The data analysis technique used in this study is thematic analysis, which involves identifying, analyzing, and

interpreting patterns or themes within the selected literature. The analysis begins with coding key findings from each study, followed by categorizing these codes into broader themes such as financial knowledge, digital competence, financial behavior, and risk awareness. These themes are then synthesized to explain the relationship between digital financial literacy and personal financial planning. Thematic analysis is particularly suitable for this research as it allows for the integration of diverse perspectives and the identification of consistent patterns across studies (Xiao & Porto, 2017).

To ensure the validity and reliability of the findings, this study applies a critical evaluation of sources by assessing their credibility, relevance, and methodological quality. Triangulation is also employed by comparing findings from multiple studies to reduce bias and enhance the robustness of conclusions. Furthermore, the study adheres to ethical research standards by properly citing all sources and avoiding plagiarism. Through this rigorous methodological approach, the study aims to produce a comprehensive and reliable synthesis of knowledge that contributes to a deeper understanding of how digital financial literacy influences personal financial planning in a cashless society.

RESULT AND DISCUSSION

Overview of Selected Literature

Based on the systematic literature review, a total of 30 scholarly sources were identified and screened, of which 18 core articles were selected for in-depth analysis. These studies consist of empirical and conceptual works focusing on financial literacy, digital financial literacy, fintech adoption, and personal financial planning. The reviewed literature spans publications from 2010 to 2024, reflecting both foundational theories and recent developments in digital financial ecosystems.

The analysis reveals that digital financial literacy is a multidimensional construct that integrates financial knowledge, digital skills, behavioral attitudes, and risk awareness. Across the literature, there is a consistent consensus that individuals with higher levels of financial literacy—particularly in digital contexts—demonstrate better financial planning behavior, including budgeting, saving, investing, and debt management (Lusardi & Mitchell, 2014; Xiao & Porto, 2017). However, the transition to a cashless society introduces new behavioral dynamics that complicate this relationship.

Table 1. Summary of Selected Articles

No	Author(s)	Year	Focus of Study	Methodology	Key Findings
1	Lusardi & Mitchell	2014	Financial literacy & economic outcomes	Literature review	Literacy improves financial decision-making
2	Hastings et al.	2013	Financial education impact	Review	Literacy affects savings & investment
3	Xiao & Porto	2017	Financial satisfaction & behavior	Empirical	Literacy influences behavior via capability
4	OECD	2020	Global financial literacy	Survey	Literacy varies across countries
5	Auer et al.	2020	Cashless payments	Report	COVID-19 accelerates digital payments
6	Prelec & Loewenstein	1998	Payment behavior	Experimental	Digital payments reduce "pain of paying"
7	Chen & Volpe	1998	Financial literacy level	Survey	Low literacy leads to poor decisions

8	Atkinson & Messy	2012	Financial literacy measurement	OECD study	Knowledge affects financial behavior
9	Beck et al.	2016	Financial inclusion	Empirical	Access alone is insufficient
10	Demirgüç-Kunt et al.	2018	Global Findex	Survey	Digital finance increases inclusion
11	Fernandes et al.	2014	Financial education effectiveness	Meta-analysis	Limited long-term effects
12	Servon & Kaestner	2008	Financial access	Empirical	Inclusion requires literacy
13	Hilgert et al.	2003	Financial practices	Survey	Literacy linked to behavior
14	Agarwal et al.	2009	Financial mistakes	Empirical	Literacy reduces errors
15	Van Rooij et al.	2011	Investment literacy	Survey	Literacy affects stock participation
16	Bongomin et al.	2017	Financial inclusion	Empirical	Literacy enhances inclusion outcomes
17	Morgan & Long	2020	Digital financial literacy	Empirical	Strong link to financial resilience
18	Setiawan et al.	2022	Indonesia fintech usage	Empirical	Literacy influences fintech adoption

Digital Financial Literacy and Financial Behavior

The findings indicate that digital financial literacy significantly influences individual financial behavior. Individuals with adequate knowledge of digital financial tools tend to exhibit more responsible financial practices, such as monitoring expenses, setting financial goals, and utilizing financial applications effectively. This aligns with the argument that financial literacy enhances cognitive decision-making processes and reduces the likelihood of financial errors (Agarwal et al., 2009).

Moreover, digital literacy strengthens individuals' ability to interpret financial information available through online platforms. In the absence of such skills, users may rely on heuristics or incomplete information, leading to suboptimal decisions. Studies such as Morgan and Long (2020) demonstrate that digital financial literacy contributes not only to better financial behavior but also to financial resilience, particularly in uncertain economic conditions.

Impact of Cashless Society on Spending Behavior

One of the most critical findings across the reviewed literature is the behavioral shift associated with cashless transactions. Digital payments reduce the psychological friction of spending, often referred to as the "pain of paying" (Prelec & Loewenstein, 1998). As a result, individuals may experience increased consumption and decreased financial awareness.

This phenomenon has direct implications for personal financial planning. Without adequate digital financial literacy, individuals may struggle to control spending and maintain savings targets. The literature suggests that financial discipline in a cashless environment requires not only awareness but also the ability to use digital tools such as budgeting apps and transaction tracking systems effectively.

Furthermore, the ease of access to digital credit services, such as "buy now, pay later" schemes, increases the risk of over-indebtedness. This reinforces the need for digital financial literacy as a mechanism to mitigate impulsive

financial behavior and promote long-term financial planning.

Digital Financial Literacy and Personal Financial Planning

The relationship between digital financial literacy and personal financial planning is consistently supported across the literature. Individuals with higher literacy levels are more likely to engage in structured financial planning activities, including retirement planning, investment diversification, and risk management (Van Rooij et al., 2011).

In a digital context, financial planning is increasingly facilitated by fintech platforms that provide automated financial advice, investment options, and financial tracking tools. However, the effectiveness of these tools depends on users' ability to understand and utilize them. Without sufficient literacy, individuals may either underutilize available resources or misuse them, leading to adverse financial outcomes.

Additionally, the literature highlights that financial literacy acts as a mediating variable between financial access and financial well-being. While digital financial services increase accessibility, their benefits are fully realized only when users possess the necessary literacy to use them effectively (Beck et al., 2016; Bongomin et al., 2017).

Challenges and Risks in the Digital Financial Ecosystem

Despite its benefits, the digital financial environment presents several risks. Cybersecurity threats, including phishing and identity theft, are among the most significant concerns. Individuals with low digital financial literacy are particularly vulnerable, as they may lack the knowledge required to identify fraudulent activities.

Moreover, the rapid evolution of fintech products introduces complexity that may overwhelm users. The literature indicates that financial innovation often outpaces financial education, creating a gap between product availability and user understanding (OECD, 2020). This gap can lead to financial exclusion in a paradoxical sense, where individuals have access to financial services but are unable to use them effectively.

Demographic disparities also play a role in shaping digital financial literacy. Younger individuals tend to adopt digital technologies more quickly but may lack financial experience, while older individuals may face technological barriers. These differences highlight the need for targeted financial education programs that address specific user needs.

Synthesis and Implications

Overall, the findings suggest that digital financial literacy is a critical determinant of effective personal financial planning in a cashless society. It serves as a bridge between access to digital financial services and positive financial outcomes. Without adequate literacy, the benefits of digital finance—such as convenience and inclusion—may be offset by increased financial risks and poor decision-making.

From a theoretical perspective, this study reinforces the integration of financial literacy theory with behavioral economics and digital adoption models. From a practical standpoint, the findings underscore the importance of developing comprehensive financial education programs that incorporate digital competencies. Policymakers, educators, and financial institutions must collaborate to enhance digital financial literacy and ensure that individuals are equipped to navigate the complexities of modern financial systems.

Discussion

The findings of this study reinforce the central role of digital financial literacy in shaping individuals' financial behavior within a cashless society. The literature consistently demonstrates that individuals who possess a strong understanding of financial concepts combined with digital competencies are better equipped to make informed financial decisions. This supports the theoretical perspective that financial literacy enhances cognitive ability in evaluating financial alternatives, ultimately leading to improved financial outcomes (Lusardi & Mitchell, 2014). In the digital context, this capability extends to the effective use of financial applications, online banking services, and fintech platforms, which are essential tools in modern financial planning.

Furthermore, the study highlights the significant behavioral implications of transitioning to a cashless payment system. The reduced visibility of money in digital transactions tends to weaken individuals' financial awareness and self-control. This aligns with the behavioral economics theory of the "pain of paying," which suggests that individuals experience less psychological discomfort when using digital payment methods compared to cash (Prelec & Loewenstein, 1998). As a result, individuals may be more prone to impulsive spending, which negatively affects their ability to maintain budgets and achieve long-term financial goals. Therefore, digital financial literacy becomes a critical moderating factor that helps individuals maintain financial discipline in a cashless environment.

In addition, the discussion reveals that digital financial literacy significantly contributes to effective personal financial planning. Individuals with higher literacy levels are more

likely to engage in structured financial activities, such as saving regularly, investing in diversified portfolios, and preparing for retirement. This finding is consistent with prior research indicating that financial literacy is positively associated with long-term financial planning and wealth accumulation (Van Rooij et al., 2011). In a digital financial ecosystem, these planning activities are increasingly facilitated by technology-driven tools, making digital literacy an essential prerequisite for optimizing financial decision-making processes.

Another important aspect identified in this study is the role of digital financial literacy in mitigating financial risks. As financial transactions become increasingly digitized, individuals are exposed to various cybersecurity threats, including fraud, phishing, and identity theft. The literature suggests that individuals with low levels of digital financial literacy are more vulnerable to such risks due to limited awareness and inadequate preventive measures (OECD, 2020). Therefore, enhancing digital financial literacy not only improves financial planning but also strengthens financial security and resilience in the face of evolving digital threats.

Finally, this study underscores the existence of demographic disparities in digital financial literacy and their implications for financial planning. Factors such as age, education level, and income significantly influence an individual's ability to adopt and effectively use digital financial tools. Younger individuals may exhibit higher digital proficiency but lack financial experience, while older individuals may face challenges in adapting to digital platforms despite having stronger financial knowledge. These findings suggest the need for targeted financial education programs that integrate both

financial and digital literacy components. Such initiatives are essential to ensure that all segments of society can fully benefit from the opportunities offered by a cashless economy and achieve sustainable financial well-being (Xiao & Porto, 2017).

CONCLUSION

This study concludes that digital financial literacy plays a pivotal role in shaping personal financial planning within the context of a cashless society. The integration of financial knowledge and digital competencies enables individuals to navigate increasingly complex financial systems, make informed decisions, and utilize digital financial services effectively. The findings consistently indicate that individuals with higher levels of digital financial literacy demonstrate more responsible financial behavior, including better budgeting, saving, investment planning, and debt management (Lusardi & Mitchell, 2014).

Moreover, the transition toward cashless transactions has significantly altered financial behavior, particularly by reducing the psychological awareness of spending. The diminished “pain of paying” in digital transactions tends to increase impulsive consumption and weaken financial discipline (Prelec & Loewenstein, 1998). In this regard, digital financial literacy serves as a crucial moderating factor that helps individuals maintain control over their financial activities and align short-term actions with long-term financial goals.

The study also highlights that access to digital financial services alone is insufficient to ensure positive financial outcomes. Without adequate literacy, individuals may misuse financial tools, underestimate risks, and become more vulnerable to financial instability and

cyber threats. Therefore, digital financial literacy not only enhances financial planning but also strengthens financial security and resilience in an increasingly digitalized economy (OECD, 2020).

Additionally, demographic differences such as age, education, and income levels influence the degree of digital financial literacy and its impact on financial planning. These disparities suggest that a one-size-fits-all approach to financial education is ineffective. Instead, tailored strategies are necessary to address the specific needs of different population groups and to ensure inclusive financial capability development (Xiao & Porto, 2017).

In summary, digital financial literacy is a fundamental determinant of effective personal financial planning in a cashless society. It bridges the gap between financial access and financial well-being, making it an essential component for achieving sustainable economic and individual financial stability.

REFERENCE

- Agarwal, S., Driscoll, J. C., Gabaix, X., & Laibson, D. (2009). The age of reason: Financial decisions over the life cycle. *Brookings Papers on Economic Activity*, 2009(2), 51–117.
- Atkinson, A., & Messy, F. A. (2012). Measuring financial literacy. OECD Working Papers on Finance.
- Auer, R., Cornelli, G., & Frost, J. (2020). Covid-19, cash, and the future of payments. *BIS Bulletin*, 3, 1–8.
- Beck, T., Demirgüç-Kunt, A., & Singer, D. (2016). Financial inclusion and inclusive growth. World Bank Policy Research.
- Bongomin, G. O. C., Munene, J. C., Ntayi, J. M., & Malinga, C. A. (2017). Financial literacy in

- emerging economies. *International Journal of Bank Marketing*, 35(7), 1173–1192.
- Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9(2), 27–40.
- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy. *Financial Services Review*, 7(2), 107–128.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). Thousand Oaks: Sage Publications.
- Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). *Global Findex Database 2017*. World Bank.
- Fernandes, D., Lynch, J. G., & Netemeyer, R. G. (2014). Financial literacy interventions. *Management Science*, 60(8), 1861–1883.
- Hastings, J. S., Madrian, B. C., & Skimmyhorn, W. L. (2013). Financial literacy, financial education, and economic outcomes. *Annual Review of Economics*, 5(1), 347–373.
- Hilgert, M. A., Hogarth, J. M., & Beverly, S. G. (2003). Household financial management. *Federal Reserve Bulletin*, 89.
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5–44.
- Morgan, P. J., & Long, T. Q. (2020). Financial literacy, financial inclusion, and savings behavior. ADB Economics Working Paper.
- OECD. (2020). *OECD/INFE 2020 International Survey of Adult Financial Literacy*. Paris: OECD Publishing.
- Prelec, D., & Loewenstein, G. (1998). The red and the black: Mental accounting of savings and debt. *Marketing Science*, 17(1), 4–28.
- Servon, L. J., & Kaestner, R. (2008). Consumer financial literacy and access. *Journal of Consumer Affairs*, 42(2), 271–305.
- Setiawan, B., Nugraha, D. P., Irawan, A., & Nathan, R. J. (2022). Fintech adoption in Indonesia. *Journal of Asian Finance, Economics and Business*, 9(2), 123–134.
- Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics*, 101(2), 449–472.
- Xiao, J. J., & Porto, N. (2017). Financial education and financial satisfaction: Financial literacy, behavior, and capability as mediators. *International Journal of Bank Marketing*, 35(5), 805–817.