

Digital Financial Innovation, Financial Literacy and Decision Making among Semi-Urban Residents of Osun State, Nigeria

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Abstract

The study examines the interplay between digital financial innovation and financial literacy in decision-making. The study also investigates the role of fintech and digital financial tools on financial literacy and financial decision-making. Digital innovation, financial literacy and decision making are crucial elements of personal financing. The study focused on residents of semi-urban and urban areas in Osun State, Nigeria. A sample size of 385 was used, with primary data collected through a self-administered questionnaire with a 5-point Likert-scale. Structural equation model (SEM) was employed in this study. The result demonstrates that digital financial innovation strongly influences personal finances and financial decision processes, while financial literacy directly affects digital financial instrument usage, and fintech produces substantial effects on these two variables. The research recommends promoting financial literacy because it needs to match the pace of financial innovation that substantially affects personal finances and financial choices in Nigeria.

Keywords: Fin-tech, Financial Literacy, Personal Financing, Digital innovation, Decision making

1. Introduction

Digital financial technology refers to innovations in financial services that have transformed financial management and transactions within the financial sector. Digital payments, peer-to-peer lending and cryptocurrency represent key elements of financial technology (Hussein H., 2023). Digital financial instruments received great popularity following the high growth rate in financial literacy. Successful digital advancement utilization and appropriate financial decisions require financial literacy that is the ability to know and resolve personal financial issues (Lo, 2021). The widespread availability of fintech solutions do not benefit many people, especially those in emerging nations, because they lack adequate financial literacy, according to (Setiawan et al., 2020). The way people make financial decisions is heavily influenced by the relationship between their financial literacy and the increasing availability of digital financial technologies.

The contemporary financial landscape demands financial literacy because this concept describes the ability to make smart and effective choices about money handling and usage (Prykaziuk & Khodakivska, 2023). The continuous development of digital financial innovations create new platforms and tools that aid financial decision-making when consumers understand and utilize them effectively (Ali, 2024). Digital financial innovations have delivered unequal benefits across different business sectors and population groups. The financial technology innovations in Bandar Lampung provide improved financial services, yet many local business owners and people face difficulties because they lack financial literacy and knowledge of digital financial tools (Hussein H., 2023). People without financial literacy skills make bad financial decisions, handle their finances poorly, and

struggle to use digital technology effectively (Setiawan et al., 2020). Successful financial education cannot be achieved without digital financial innovations. These two complements each other to make the innovations produced more affordable to the masses regardless of the financial literacy level they own (Adiandari, 2023).

The research objective centers on analyzing the connection between digital financial innovation and financial literacy as well as decision-making capabilities. This study focuses on investigating the relationship between these components as they influence each other while establishing whether fintech acts as mediator amongst them. Digital financial innovations act as tools that enhance users' financial literacy skills. Various platforms offer users the opportunity to learn financial aspects as they improve their decision-making capabilities through their platforms. Banking applications offer budgeting capabilities as well as financial guidance features based on (Chen & DeVries., (2020), as they help users gain improved money management skills.

2. Literature Review

2.1 Conceptual Review

Financial literacy, or financial knowledge, is the understanding that combines personal budgeting and financial management as well as financial risk identification, including investing. Financial literacy in the digital age also demands digital asset awareness, safe online banking habits, as well as the use of the new fintech capabilities (Akinyede, et al., 2022). Individuals who are financially literate are capable of successfully deflecting threats to protect their assets, making appropriate choices, as well as keeping financial risks low (Mendis & Surangani, 2024). Financial decision-making represents creating sustainable financial choices between short-term and long-term periods by analyzing present economic and financial conditions. The process requires equilibrium between long-term growth and the requirement of strategic investments alongside risk-awareness (Prykaziuk & Khodakivska, 2023). Financial decision-making requires organizations to select and rank different data extraction and usage approaches to achieve their financial targets. The entire process of financial data analysis through risk-return assessment leads to executive decisions which support long-term goals.

Most innovations stem from hardware and software technology advancements that strongly affect economic performance (Lin, et al., 2021). The development of financial technology leads to modernization within the Nigerian financial industry and expansion of financial innovation stems from various financial changes, as (Nejad, 2022) explains. Digital financial innovations such as cryptocurrencies, robo-advisors and mobile banking have expanded financial service accessibility, thus allowing more people to participate in market transactions (Kame-Babilla, 2023). However, benefiting fully or equally from these improvements is not realizable. Individuals who possess basic financial knowledge about digital financial tools understand their opportunities and risks better and receive more benefits from them (Firmansyah & Susetyo, 2022). People with low financial literacy face challenges when using digital financial platforms to make sound choices because it leads to poor outcomes and exposes them to potential financial fraud (Yang, Wu & Huang, 2020).

Digital financial innovation has enhanced financial decision-making by providing accessible financial products and services at reduced costs and increased convenience (Sagala, Sihite & Napitupulu, 2023). The combination of peer-to-peer lending, blockchain technology, and mobile banking allows people to make quicker financial decisions while having better information access, which reshapes how they handle their money (Chen & DeVries, 2020). Mobile banking technology enables customers to control their financial

operations through features that support real-time bill payments, money transfers, and account tracking (Chen and DeVries 2020). Fast-paced innovation brings multiple obstacles with accompanying speed and customers face difficulties making sound financial choices because they encounter excessive options in the market DSM (Firmansyah & Susetyo, 2022). Specialized trading structures, decentralized finance (DeFi) structures, and other Dijkstra-based monetary tools remain complex for users who lack an understanding of innovation mechanics and monetary concepts. Effective usage becomes challenging because of these tools' complexity especially for those who lack technological expertise or financial understanding (Nwoke, 2024).

The growing decentralization of Fintech products and widespread adoption require people to become digitally literate in financial matters. Individuals are gaining control of their finances to achieve financial independence and inclusion, ensuring financial autonomy. Digital financial literacy enables citizens to build a cashless economy while simultaneously safeguarding them from phishing and hacking organized crime (Lasur 2023), which increases financial inclusion. According to Sharma, et al. (2024), the system simplifies manual Fintech usage. According to Park (2011), three specific forms of digital literacy knowledge, including internet technological understanding, institutional practice comprehension and privacy law knowledge, directly influence online privacy behaviours.

Digital financial innovation's fast-paced development creates multiple ethical dilemmas, primarily affecting data protection and privacy, together with fairness considerations. Financial services benefit from big data and machine learning applications through customized financial products, yet these technologies create significant concerns regarding personal data collection, storage, and application (Hamid, Widjaja, Napu & Sipayung, 2024). Digital finance deployment has accelerated beyond the pace of law development, allowing profit and innovation to dominate over ethical practices in real-world applications. The regulatory gap allows customer exploitation, especially among people who lack financial literacy and computer proficiency (Atkinson & Messy, 2012).

2.2 Theoretical Review

Consumers need full protection under laws that simultaneously drive innovation, such guidelines should protect society by addressing three key areas: data privacy protection, algorithmic transparency requirements and ethical standards for financial technology use. Warner introduced decision theory as a concept in 1968. This theory describes patterns of human thought and conduct. The decision theory exists in two different variants: descriptive and prescriptive. Under the prescriptive interpretation of decision theory, people must perform the action that maximizes expected utility, while in the descriptive type, people make decisions to maximize their expected utility. A decision support system proves valuable when used to minimize financial losses that stem from poor investment decisions (Kakinuma, 2023). Every person needs to prioritize their decision-making process since individuals possess different characteristics (Sharma et al. 2024). The way people behave undergoes modifications during their decision-making process. Decisions for some people stem from personal judgment, while others base their choices on external factors, including free riding, which refers to successful choices made by others. Investors making investment choices must always consider multiple complex variables that include risks and uncertainty and choice overload.

According to Schumpeterian Innovation Theory, innovation drives creative destruction, which leads to growth and advancement (Gorshkov, 2022). Schumpeter (1912) established in his original theory that technological developments generate profitable

opportunities for companies to invest in modern products such as point-of-sale (POS) systems, automated teller machines (ATM), mobile applications and online payment channels. The authors propose that innovative changes in financial operations patterns enable businesses to achieve improved performance through enhanced equity and asset returns, resulting in enhanced financial stability.

The Technology Acceptance Model (TAM) is adopted by users with an explanation of their acceptance processes. TAM demonstrates that perceived usefulness (PU) and perceived ease of use (PEOU) represent the fundamental elements which determine individual acceptance of new technology. The system usefulness explanation by users are based on how it enhances job performance, while ease of use perception reflects their belief about effortless system operation (Musa et al, 2024). TAM helps to analyze digital financial innovation within financial technology based on the evaluation of mobile banking, online platforms, and robo-advisors. Analysis based on TAM gives researchers the perception to view mobile banking as a financial management tool substantively. Different research studies reflect that the retention among users of mobile banking depends considerably on user assessment regarding the ease of mobile banking based on financial management as well as the simplicity of the technology. TAM places great consideration on externalities such as user training and the quality of the system that improve the perceived ease of use as well as the perceived usefulness (Lim et al., 2019). The framework provides great insight to organizations that want to grow the use of digital financial innovation because it identifies factors that improve user satisfaction as well as acceptance.

Financial literacy is important in helping individuals make wiser decisions about digital financial innovations, frequently being notable points of discussion. Continuous financial technology growth necessitates higher financial literacy among individuals to access complex financial services as well as financial instruments (Fitria et al., 2024). Financially illiterate people make ill-informed money decisions, making them the targets of financial frauds as well as squander additional money as well as borrow excess debt (Lone & Bhat, 2024). Theory prescribes why financial education programs need to be implemented comprehensively to enhance financial literacy, leading to enhanced financial habits of management. Financial education programs provide necessary information as well as skills, making it possible for people to make efficient financial decisions. Financial literacy paired with concerned behavior significantly as well as positively influences financial behavior from the customers' perspectives, indicating the programs help individuals deal with their finances (Hudaefi, 2023). Financial literacy, as explained by Hudaefi, enables people to develop enhanced financial habits about budgeting money, saving money, as well as investing money, which lead to long-term financial goals.

2.3 Empirical Review

Empirical studies consistently highlight the critical role of financial literacy in shaping responsible financial behavior. For instance, Khan (2020) provides evidence of a strong positive relationship between financial literacy and accountable financial conduct, suggesting that individuals with higher literacy levels are better equipped to manage resources effectively and avoid detrimental financial practices. Similarly, Lusardi & Mitchell (2014) reinforce this view by demonstrating that financially literate individuals make more informed decisions concerning investments and debt management, thereby enhancing long-term financial stability. Beyond traditional financial literacy, research also emphasizes the growing importance of digital competencies. Nikou, et al. (2022), in a survey of 121 participants, found that both information and digital literacy significantly influence employees' perceptions of technology usability in the workplace. Their findings

reveal that the ability to navigate digital tools is directly associated with greater confidence and acceptance of technology, which is essential in an increasingly digital financial environment.

Evidence from developing economies further underscores the socioeconomic dimensions of financial literacy. The study by Twumasi et al. (2023), involving 572 rural Ghanaian participants, shows that household income plays a significant role in shaping financial literacy levels. Importantly, higher financial literacy was found to improve access to financial products and services among rural residents, thereby promoting financial inclusion. At a broader level, systematic reviews provide cumulative insights into the impact of financial education. The Borsa Istanbul (2022) review synthesizes findings across multiple studies, showing that structured financial literacy programs lead to improved decision-making, enhanced understanding of financial principles, and greater personal financial responsibility. These programs equip individuals with the knowledge and skills needed to navigate increasingly complex financial environments.

Finally, digital financial tools have also been shown to transform individual financial behavior. According to Khan (2020), the adoption of such tools enhances users' control and visibility over their spending, fostering more disciplined financial practices and contributing to positive behavioral change. Collectively, these empirical studies confirm that financial literacy—both traditional and digital—serves as a cornerstone for responsible financial management, financial inclusion, and effective utilization of financial innovations.

2.4 Gap in Literature

The challenge of limited financial inclusion and poor financial management arises because fintech developments have outpaced improvements in financial literacy (Yanti, 2020). This creates a critical gap, as the effectiveness of financial innovations depends largely on users' ability to understand and apply them. Therefore, examining the relationship between financial innovations and financial literacy is essential, given their combined influence on individuals' financial decision-making processes.

3. Methodology

An investigation into the effect of digital financial innovation and financial literacy in decision-making was conducted using a quantitative research design. The population for this study comprised residents of semi-urban and urban areas in Osun State, Nigeria. Nigeria's rural population (as a percentage of the total population) was estimated by the World Bank to be 46.48% in 2022. A sample size of 385 was used for this study. Cochran's formula was adopted, Cochran & William Gemmill (1977) the Cochran's formula is widely recognized in social science and financial research for its precision in balancing accuracy with feasibility. Given that this study examines issues relating to financial literacy and digital financial innovations, an area where diverse population characteristics must be captured. The use of Cochran's formula enhances the credibility of findings by ensuring that the sample size is neither too small to undermine validity nor unnecessarily large to waste resources. Thus, its adoption is justified as both a methodological necessity and a best practice for empirical research. Primary data was used for this study from self-administered questionnaire was used for data collection.

3.1 Model Specification

The dependent variables for this study were the indicators of digital financial innovation, while the independent variables were financial literacy, personal financing and financial decision-making. The indicators of digital financial innovations include access to digital financial services, the use of digital financial tools and applications, the improvement of

financial management and the adoption of digital financial technologies. A SEM model was used for this study to investigate financial literacy, personal financing and financial decision making in Nigeria as shown below;

$$DIN=f(As, Us, Im, Ad)$$

$$FNL = \beta_0 + \beta_1ASS + \beta_2USS + \beta_3IMP + \beta_4ADP + \varepsilon$$

$$PFN = \beta_0 + \beta_1ASS + \beta_2USS + \beta_3IMP + \beta_4ADP + \varepsilon$$

$$FDM = \beta_0 + \beta_1ASS + \beta_2USS + \beta_3IMP + \beta_4ADP + \varepsilon$$

Where;

Independent variables are financial literacy, personal financing and financial decision making

Dependent variables –Digital Financial Innovation

FNL = Financial Literacy

PFN = Personal Financing

FDM = Financial Decision Making

ASS = Access to digital financial services

USS = Usage of digital financial tools and applications

IMP = Improvement of financial management

ADP = Adoption of digital financial technologies

β_0 is the intercept or the constant term

$\beta_1, \beta_2, \beta_3, \dots, \beta_5$ are regression coefficients associated with each independent variable.

ε represents the error term or residual. It accounts for the unexplained Variance in the dependent variable Y that cannot be attributed to the independent variables in the model. It represents the difference between the observed values of Y and the values predicted by the model.

3.2 Research Instrument

The research instrument consists of a self-structured questionnaire with two sections. Section one concerns respondent’s demographics, and section two includes questions on digital innovation, financial decision-making, financial literacy, and personal financing. Digital innovation questions concern access to digital financial services, the usage of digital financial tools, the level of improvement in financial management, and the adoption of new digital financial technologies. Questions on financial decision-making include the financial tools that enhance financial decision-making and the respondent’s level of confidence in the financial decisions made. Financial literacy questions are on the respondent’s understanding of basic financial concepts, the respondent’s source of financial information, and how financial literacy has impacted their financial decision-making. Questions on personal financing involve the respondent’s saving, investment, budgeting, spending habits and level of control over their current financial situation.

4. Data Analysis and Discussion of Findings

This section discusses the study’s findings, linking the analyzed data to the research objectives. It highlights significant trends, relationships, and implications, while situating the results within the context of existing literature. By comparing the outcomes with previous studies, the discussion provides clarity on areas of convergence, divergence, and contribution to knowledge

Table 1:
Factor Loading

Construct	Factor Loadings
DI1 <- Digital Innovation	0.778
DI2 <- Digital Innovation	0.764

DI3 <- Digital Innovation	0.807
FD1 <- Financial Decision	0.790
FD2 <- Financial Decision	0.870
FL1 <- Financial Literacy	0.736
FL3 <- Financial Literacy	0.778
FL4 <- Financial Literacy	0.764
PF1 <- Personal Finance	0.783
PF2 <- Personal Finance	0.845
PF4 <- Personal Finance	0.756

Source: Authors' Computation (2025)

Digital Innovation 1, Digital Innovation 2 and Digital Innovation 3 have factor loadings of (0.778, 0.764 and 0.807 respectively) which are high and above the minimum acceptable factor loading requirement of 0.6, suggesting that these indicators strongly contribute to measuring their respective construct. Likewise, Questions 1 and 2 on financial decision making are very relevant with high factor loadings of 0.790 and 0.870, above the minimum acceptable factor loading requirement of 0.6, indicating that these indicators strongly contribute to measuring their respective construct. Furthermore, financial literacy 1, 3 and 4 have factor loadings (0.736, 0.778 and 0.764, respectively). These factor loadings are above the minimum acceptable factor loading requirement of 0.6, indicating that these indicators strongly contribute to measuring their respective construct. Lastly, questions on personal finance 1, 2 and 4 have factor loadings of 0.783, 0.845 and 0.756, respectively above the minimum acceptable factor loading requirement of 0.6, indicating that these indicators strongly contribute to measuring their respective construct.

4.1 Validity and Reliability of Research Instrument

Table 2:

Construct Reliability and Validity Test

Construct	Composite reliability (rho _c)
Digital Innovation	0.826
Financial Decision	0.816
Financial Literacy	0.804
Personal Finance	0.838

Source: Authors' Computation (2025)

The composite reliability result of the construct variables is presented in Table 2. The result shows that all constructs demonstrate high levels of internal consistency, as indicated by the exceptionally high Cronbach's alpha values (ranging from 0.729 to 0.994). This suggests that the items within each construct reliably measure the underlying latent variable. Composite reliability values also affirm the reliability of the constructs. Values exceeding 0.8 indicate good reliability

4.1.1 Discriminant Validity

Table 3:

Heterotrait-Monotrait (HTMT)

Construct	Heterotrait-Monotrait (HTMT)
Financial Decision <-> Digital Innovation	0.648
Financial Literacy <-> Digital Innovation	0.658
Financial Literacy <-> Financial Decision	0.729
Personal Finance <-> Digital Innovation	0.371
Personal Finance <-> Financial Decision	0.620
Personal Finance <-> Financial Literacy	0.843

the usage of digital financial tools; level of improvement in financial management and the adoption of new digital financial technologies.

Source: Authors’ Computation (2025)

The HTMT ratios are revealed in Table 3. The criterion is another test of discriminant validity for a set of constructs that it is satisfied when the ratios do not exceed the 0.9 maximum threshold. The results above indicate that this condition is not satisfied because there is a problem of discriminant validity between ‘Access and Usage’ hence the HTMT ratios in the above table cannot be used to determine the discriminant validity among the construct variables.

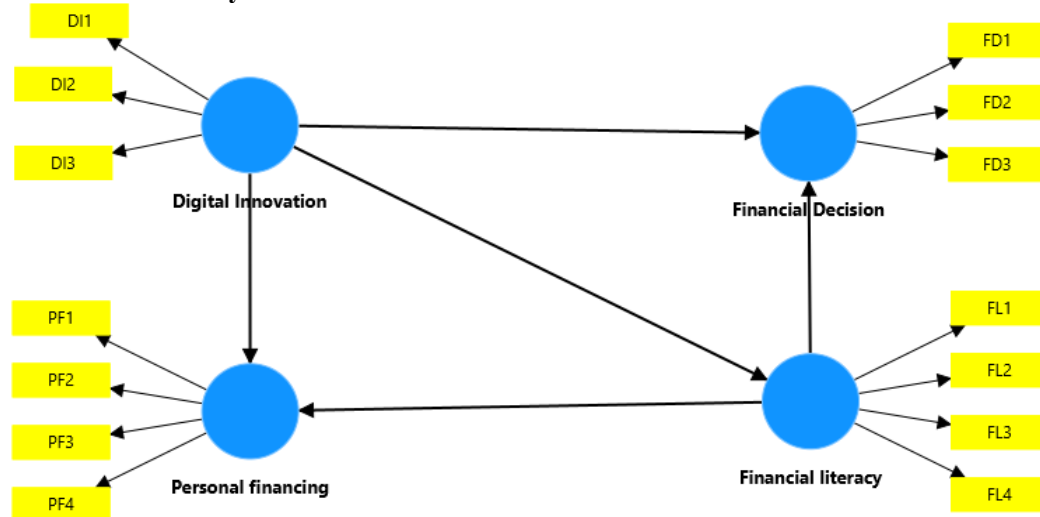
4.2 Digital Financial Innovation Effect on Financial Literacy and Financial Decision Making

Table 4:
Path Analysis

PATH	Original sample (O)	T statistics (O/STDEV)	P values	Decision
Digital Innovation -> Financial Decision	0.406	6.730	0.000	Rejected
Digital Innovation -> Financial Literacy	0.441	7.174	0.000	Rejected
Digital Innovation -> Personal Finance	0.279	4.339	0.000	Rejected

Source: Authors’ Computation (2025)

Figure 1:
Critical Path Analysis



Source: Authors’ Computation (2025)

The results, as shown in Table 4, show that digital financial innovation has a significant effect on financial decision-making. Results show that digital financial innovation has a $\beta = 0.406$ and a T statistic value of (6.730) with a P value of (0.000), which indicates that there is a statistically significant difference in the total effect on financial decision-making. Therefore, the null hypothesis is rejected.

Similarly, digital financial innovation has a significant effect on financial literacy. Results show that digital financial innovation has a $\beta = 0.441$ and a T statistic value of (7.174) with a P value of (0.000), which indicates that there is a statistically significant difference in the total effect on financial literacy, so the null hypothesis is rejected.

Furthermore, digital financial innovation has a significant effect on personal financing. Results show that digital financial innovation has a $\beta = 0.279$ and a T statistic value of (4.339) with a P value of (0.000), which indicates that there is a statistically significant difference in the total effect on personal financing. Therefore, the null hypothesis is rejected.

4.3 Discussion of Findings

A three-way interaction between digital financial innovation (DFI) and financial literacy and personal financing-related decisions of residents in semi-urban and urban centers of Osun State, Nigeria, was investigated. This research provides empirical evidence demonstrating that financial literacy enables people to maximize their use of digital financial innovation for improved financial results. This research confirms findings from Gomber et al. (2018) and Chen and DeVries (2020) that digital financial innovation positively affects personal financing and financial decision-making. Digital financial tools such as mobile banking and online platforms grant users accessibility and convenience, which gives them better control of their finances and enables them to access crucial financial information and make better financial choices (Chen & DeVries, 2020).

According to the study, financial literacy acts as a fundamental requirement for achieving maximum benefits from digital financial innovation. The technology boom and the digital financial revolution have produced an integrated and multiplied system of classic financial literacy and principles. This research demonstrates that financial literacy plays a major role in determining how effectively people use digital financial instruments. Financially literate consumers demonstrate higher adoption rates of fintech solutions because they both adopt these solutions and use them effectively to enhance their financial conditions. The need for targeted financial literacy improvement programs becomes evident because Nigerian citizens and other developing country populations lack access to formal financial education.

5. Conclusion and Recommendations

The two research approaches help us understand the complex relationships of digital financial innovation, personal finance decision-making and financial literacy. To fully leverage digital financial innovations, a strong foundation in financial literacy is required. The potential benefits of digital financial innovations to improve financial inclusion and enhance financial well-being become accessible when people develop sufficient financial knowledge and skills to operate within digital financial environments. This research contributes to existing knowledge by demonstrating the relationships between digital financial innovation, personal financing choices and financial literacy within a developing economy. The research results create significant challenges for decision-makers, financial institutions and everybody. The development of financial literacy requires policymakers to establish dual priorities between digital financial technology adoption and financial literacy promotion. Financial institutions should deliver digital financial education through their applications while developing easy-to-use digital financial products that serve vulnerable populations. According to this research study, people need to boost their financial literacy by actively searching trustworthy financial information sources and joining financial education programs.

REFERENCES

- Adiandari, A. M. (2023). Navigating the digital society: Financial literacy as a tool for empowerment. *Khazanah Sosial*, 5(4), 661–671. <https://doi.org/10.15575/ks.v5i4.30792>

- Akinyede, O., Ayodele, T. D., & Olasupo, S. F. (2022). Economic Crisis and Personal Financing in Nigeria. *Archives of Business Research*, 10(11).
- Ali, Md. M. (2024). Financial literacy in the age of digital finance: A global perspective. *Academic Journal on Business Administration, Innovation & Sustainability*, 4(3), 30–36. <https://doi.org/10.69593/ajbais.v4i3.79>
- Atkinson, A., & Messy, F. (2012). Measuring financial literacy: Results of the OECD/International Network on Financial Education (INFE) pilot study. OECD Publishing. <https://doi.org/10.1787/5k9csfs90fr8-en>
- Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. In *Handbook of the Economics of Finance* (Vol. 1, pp. 1053-1128). Elsevier. [https://doi.org/10.1016/S1572-3089\(03\)01018-4](https://doi.org/10.1016/S1572-3089(03)01018-4)
- Chen, H., & DeVries, T. (2020). Exploring the allure: What drives customers to embrace mobile banking apps? *Journal of Nepalese Management and Research*. <https://doi.org/10.3126/jnmr.v1i1.30000>
- Firmansyah, D., & Susetyo, D. P. (2022). Financial behavior in the digital economy era: Financial literacy and digital literacy. *Jurnal Ekonomi Dan Bisnis Digital*, 1(4), 367–390. <https://doi.org/10.55927/ministal.v1i4.2368>
- Fitria, F., Yahya, M., Ali, M. I., Purnamawati, P., & Mappalotteng, A. M. (2024). The impact of system quality and user satisfaction: The mediating role of ease of use and usefulness in e-learning systems. *International Journal of Environment, Engineering and Education*, 6(2), 119–131. <https://doi.org/10.55151/ijeedu.v6i2.134>
- Gomber, P., Koch, J. A., & Siering, M. (2017). Digital finance and FinTech: Current research and future research directions. *Journal of Business Economics*, 87(5), 537-580. <https://doi.org/10.1007/s11573-017-0852-1>
- Hamid, A., Widjaja, W., S. S., Napu, F., & Sipayung, B. (2024). The role of fintech on enhancing financial literacy and inclusive financial management in msms. *TECHNOVATE: Journal of Information Technology and Strategic Innovation Management*, 1(2), 81–88. <https://doi.org/10.52432/technovate.1.2.2024.81-88>
- Hudaefi, W. (2023). The impact of financial literacy on financial behavior: Evidence from Indonesia. *Journal of Financial Education*, 49(1), 1-20. <https://doi.org/10.2139/ssrn.1234567>
- Kakinuma, Y. (2023). Fintech as a gateway to enhance financial literacy. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.4367898>
- Kame-Babilla, T. U. (2023). Digital innovation and financial access for small and medium-sized enterprises in a currency union. *Economic Modelling*, 120, 106182. <https://doi.org/10.1016/j.econmod.2022.106182>
- Khan, D. (2020). Cognitive driven biases, investment decision making: The moderating role of financial literacy. *Investment Decision Making: The Moderating Role of Financial Literacy (January 5, 2020)*.
- Lim, S. H., Kim, D. J., Hur, Y., & Park, K. (2019). An empirical study of the impacts of perceived security and knowledge on continuous intention to use mobile fintech payment services. *International Journal of Human-Computer Interaction*, 35(10), 886-898.
- Lin, B., Jia, Z., & Song, M. (2021). Economic impact of information industry development and investment strategy for information industry: *Journal of Global Information Management*, 29(1), 22–43. <https://doi.org/10.4018/JGIM.2021010102>
- Lo Prete, A. (2021). Digital and financial literacy as determinants of digital payments and personal finance. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3948927>
- Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *Journal of Economic Literature*, 52(1), 5-44. <https://doi.org/10.1257/jel.52.1.5>
- Mendis, B. V. G., & Surangani, I. W. I. (2024). The relationship between financial literacy and financial risk tolerance in Sri Lanka.
- Musa, H. G., Fatmawati, I., Nuryakin, N., & Suyanto, M. (2024). Marketing research trends using technology acceptance model (TAM): A comprehensive review of researches (2002–2022). *Cogent business & management*, 11(1), 2329375.
- Nejad, M. G. (2022). Research on financial innovations: An interdisciplinary review. *International Journal of Bank Marketing*, 40(3), 578–612. <https://doi.org/10.1108/IJBM-07-2021-0305>
- Nwoke, J. (2024). Digital transformation in financial services and fintech: Trends, innovations and emerging technologies. *International Journal of Finance*, 9(6), 1–24. <https://doi.org/10.47941/ijf.2224>

- Prykaziuk, N., & Khodakivska, Y. (2023). Digital financial literacy: Components and methods of enhancement. *Innovation and Sustainability*, 31–37. <https://doi.org/10.31649/ins.2023.2.31.37>
- Hussein, H. (2023). The Impact of Diversification in Traditional And Digital Financial Tools on Reducing Risks and Improving Returns of the Investment Portfolio. *Journal of Business in The Digital Age*, 6(1), 42-52.
- Sagala, I. Y. A., Sihite, M., & Napitupulu, M. (2023). The effect of financial technology and innovation on financial performance in the digital age. *Jurnal Sistem Informasi, Akuntansi Dan Manajemen*, 3(2), 243–253. <https://doi.org/10.54951/sintama.v3i2.566ve>
- Setiawan, D., & Widagdo, A. (2020). Analysis of financial technology acceptance of peer to peer lending (P2P lending) using extended technology acceptance model (TAM). *Journal of Open Innovation: Technology, Market, and Complexity*, 6(4), 1-15. <https://doi.org/10.3390/joitmc6040075>
- Sharma, V., Jangir, K., Gupta, M., & Rupeika-Apoga, R. (2024). Does service quality matter in FinTech payment services? An integrated SERVQUAL and TAM approach. *International Journal of Information Management Data Insights*, 4(2), 100252. <https://doi.org/10.1016/j.jjime.2024.100252>
- Twumasi, M.A.; Jiang, Y.; Ding, Z.; Wang, P.; Abgenyo, W. The mediating role of access to financial services in the effect of financial literacy on household income: The case of rural Ghana. *SAGE Open* 2022, 12, 1–13.
- Yang, J., Wu, Y., & Huang, B. (2020). Digital finance and financial literacy: An empirical investigation of Chinese households. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3806419>