

A Conceptual Framework of FinTech Adoption and Financial Inclusion to Sustainable Economic Growth in Thailand.

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Abstract

This research aims to develop a conceptual framework to explain the relationship between FinTech Adoption and sustainable economic growth in Thailand. This framework integrates six determinants of technology adoption: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Perceived Trust & Security, and Government/Institutional Support. It proposes that Financial Inclusion, which consists of the dimensions of access, usage, and quality of service, is an important mediating variable.

This research has synthesised knowledge from the Unified Theory of Acceptance and Use of Technology (UTAUT), literature on financial development, and related empirical research to establish a causal connection. The synthesis proposes that the six factors have a positive influence on FinTech Adoption, which in turn will directly lead to more comprehensive Financial Inclusion. Subsequently, this increased Financial Inclusion will serve as a driving force for Sustainable Economic Growth, operating through channels such as improving the digital economy's share of GDP, strengthening SME capabilities, and reducing inequality and poverty. Furthermore, the framework highlights the role of government/institutional support, which directly influences the goal of sustainable growth.

The conceptual contributions of this study provide theoretical insights by presenting an integrated conceptual framework that serves as a guideline for policymakers, financial institutions, and FinTech entrepreneurs to formulate strategies that promote a digital financial ecosystem driving inclusive and sustainable growth in Thailand.

Keywords: *FinTech Adoption, Financial Inclusion, Sustainable Economic Growth.*

Introduction

Over the past decade, Digital Transformation has become a key driving force, transforming the economic and social landscape worldwide. Financial technology, or FinTech, has played a crucial role in revolutionising the financial industry, making financial services more efficient, accessible, and lower cost (Firmansyah et al., 2022). In Thailand, the government has established a national strategy to become a Digital Economy through policies such as “Thailand 4.0” and the National e-Payment Master Plan, which promote the widespread adoption and use of FinTech (World Bank, 2022; Bank of Thailand, 2023; Kaewpitoon, 2025). The adoption of FinTech is not merely a matter of consumer convenience; it is also seen as a strategic tool with the potential to drive two crucial development goals: Financial Inclusion and Sustainable Economic Growth (Sahay et al., 2020; Arner et al., 2020)

Although there is a large body of research that studies the factors influencing FinTech Adoption using technology acceptance theories like UTAUT (Unified Theory of Acceptance and Use of Technology) (Al-Sharafi et al., 2025), and another group of research that studies the relationship between Financial Inclusion and economic growth (Pompella & Costantino, 2021), the majority of this research still tends to examine these relationships in isolation. There is a lack of an Integrated Framework that can systematically explain the cause-and-effect relationship pathway. In other words, a Research Gap exists in understanding how the adoption of FinTech affects Sustainable Economic Growth through Financial Inclusion. The traditional UTAUT theory explains technology adoption well at the individual level but has not yet been extended to cover macro-level outcomes such as economic growth. Moreover, the current literature indicates that Trust, Security, and Institutional Support are especially crucial factors in financial transactions, yet no model has yet fully integrated these factors into the relationship pathway toward sustainable growth (Duarte et al., 2018; Ozili, 2024).

This research is a documentary study and a synthesis of relevant literature, aimed at presenting a modern conceptual framework responsive to both theoretical and practical needs. This framework will help fill the theoretical gap. It can serve as a helpful guideline for policymakers and stakeholders in designing a FinTech ecosystem conducive to the country’s inclusive and sustainable economic development.

Research Objectives

This research aims to develop a conceptual framework by extending the Unified Theory of Acceptance and Use of Technology (UTAUT) with literature on economic development to understand the pathway from the determinants of FinTech Adoption to the macro-level outcome of Sustainable Economic Growth in Thailand. This study focuses on the influence of six determinants of technology adoption: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Perceived Trust & Security, and Government/Institutional Support (Firmansyah et al., 2022). Furthermore, the research will investigate the crucial role of Financial Inclusion as a Mediating Variable, serving as a mechanism linking micro-level FinTech Adoption to macro-level economic outcomes (Sahay et al., 2020).

The expected benefits from this research include the enhancement of theoretical understanding of the mechanism by which digital technology can be translated into sustainable development (Mavlutova et al., 2022), and the creation of practical benefits, by serving as a strategic guideline for policymakers (such as the Bank of Thailand), financial institutions, and FinTech entrepreneurs in designing policies and ecosystems that promote the effective adoption of financial technology to achieve the United Nations' Sustainable Development Goals (SDGs) related to reducing inequality and promoting inclusive economic growth (Arner et al., 2020). Ultimately, this research will help expand the application of the UTAUT theory from its original focus on only user acceptance behaviour to the analysis of overall economic and social impacts.

Literature Review

Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT), developed by Venkatesh et al. (2003), is a combination and synthesis of concepts from eight theories on technology acceptance behavior, namely: the Theory of Reasoned Action (TRA), the Technology Acceptance Model (TAM), the Motivational Model (MM), the Theory of Planned Behavior (TPB), the Combined TAM and TPB (C-TAM-TPB), the Model of PC Utilization (MPCU), the Diffusion of Innovation (DOI), and the Social Cognitive Theory (SCT). The UTAUT theory is relevant to decisions about using a system or purchasing a product, especially when uncertainty is present. Past research, such as that by Octaviani et al. (2023) and Adiratna & Wulansari (2021), shows that the UTAUT theory can be applied in contexts not directly related to technology, such as online shopping behaviour. However, a critical analysis indicates that although UTAUT can explain technology use behaviour well, it still has limitations in situations where consumers face risk.

The UTAUT theory consists of four main factors: (1) Performance Expectancy: the perception that using technology will help one perform better; (2) Effort Expectancy: the perception of the ease of use; (3) Social Influence: the influence from others on the decision to use; and (4) Facilitating Conditions: supporting conditions that facilitate the use of the system. Data from several research papers indicates that the factors of Performance Expectancy, Effort Expectancy, and Social Influence have a direct effect on Behavioural Intention. These three factors directly affect behavioural intention and are often used to predict behaviour related to the use of new systems or technologies (Adiratna & Wulansari, 2021; Octaviani et al., 2023; Petcharat & Leelasantitham, 2021). Four moderators, gender, age, experience, and voluntariness of use, help increase the accuracy of the prediction.

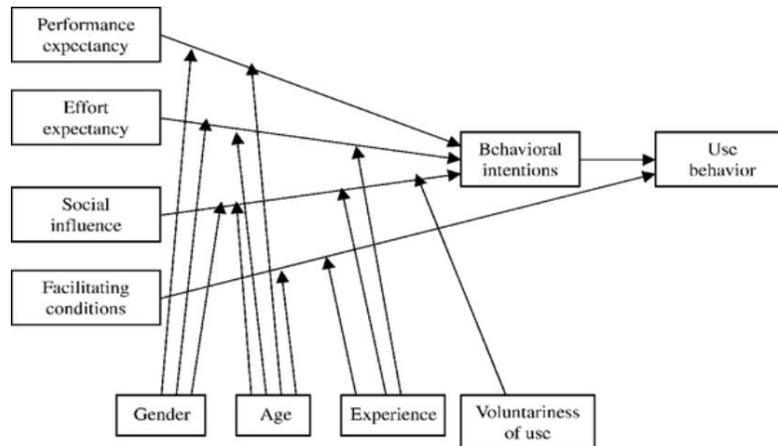


Figure 1 : A diagram of the Unified Theory of Acceptance and Use of Technology.

Institutional Theory

Institutional Theory is a theory in organisational sociology that holds that the decisions and structures of organisations are not solely the result of a rational pursuit of efficiency. Instead, they are highly influenced by the Institutional Environment, which comprises rules, norms, and beliefs that are socially accepted (Rudko et al., 2025). This theory is critically important for understanding innovation adoption at the macro or industry level because it helps explain why new technologies, such as FinTech, are accepted or resisted, with environmental factors acting as determinants. While a theory like UTAUT focuses on explaining behaviour at the individual level, Institutional Theory complements the understanding of the external pressures that affect both organisations and users (Usman et al., 2025). This study therefore employs Institutional Theory to explain the significance of the variable “Government/Institutional Support,” a key factor influencing the direction of technology adoption at the national level (Hartley et al., 2022).

According to the concept of DiMaggio and Powell (1983), the institutional pressures that cause organizations in the same industry to have similar forms (Isomorphism) are divided into three main types: 1) Coercive Isomorphism: This arises from the influence of laws, regulations, and policies from the government or regulatory agencies. In the context of FinTech, this refers to the policies of the central bank (e.g., the National e-Payment project), personal data protection laws (PDPA), and various regulatory frameworks (Regulatory Sandbox), which are conditions that "force" financial service providers to adapt and adopt technology (Usman et al., 2025). 2) Mimetic Isomorphism: This occurs when an organization faces uncertainty and chooses to imitate the strategies or models of other organizations that are perceived as successful. In the FinTech industry, commercial banks might develop Mobile Banking systems with similar functions or adapt successful business models from abroad to reduce risk and build market acceptance (Tipu, 2022). And 3) Normative Isomorphism: This arises from professionalism and social norms, such as education, professional networks, and societal expectations. Currently, Digital

Transformation has become a key norm for the financial industry. Financial institutions without digital services may be seen as outdated and lose credibility in the eyes of consumers, thereby putting pressure on the widespread adoption of FinTech (Mishra et al., 2025).

The Concept of Sustainable Development

The concept of Sustainable Development focuses on development that can meet the needs of the present generation without compromising the ability of future generations to meet their own needs (World Commission on Environment and Development, 1987). This is considered a development approach that balances humanity, the economy, and the environment to create long-term stability, fairness, and a high quality of life (Jabareen, 2008). This concept consists of three essential dimensions that must operate in harmony, namely: 1) The Economic Dimension: Aims to create stable and inclusive economic growth, emphasizing efficiency in resource use and the fair distribution of economic benefits (Jabareen, 2008; Mavlutova et al., 2023). 2) The Social Dimension: Aims to reduce inequality, create equality of opportunity, and promote the population's quality of life through access to resources, education, and social services that are inclusive of all groups (World Commission on Environment and Development, 1987). And 3) The Environmental Dimension: Aims to use natural resources efficiently, coupled with conserving ecosystems and reducing the impacts of climate change, to maintain the balance between economic growth and environmental quality (Jabareen, 2008).

In the context of the digital economy and financial technology (FinTech), the concept of sustainable development has been extended to encompass the use of digital technology to promote Financial Inclusion, which is a key mechanism for reducing limitations related to geography, income, and economic inequality (Arner, Buckley, Zetsche, & Veidt, 2020; Mavlutova et al., 2023). FinTech can play a crucial role in enhancing economic sustainability by supporting small and medium-sized enterprises (SMEs), improving the efficiency of the financial system, and promoting transparency in financial processes. For Thailand, the concept of sustainable development aligns with the 20-Year National Strategy (B.E. 2561–2580), which aims to drive the country towards “security, prosperity, and sustainability.” It is also directly linked to the United Nations’ Sustainable Development Goals (SDGs) (OECD, 2019), especially SDG 8 on “decent work and economic growth” and SDG 9 on “industry, innovation, and infrastructure,” which are the foundation of sustainable digital economic development (Kaewpitoon, 2025).

In summary, the concept of sustainable development is not limited to balancing economic, social, and environmental considerations. Still, it is also a strategic framework that can be applied to financial technology to genuinely drive the country towards a “sustainable and inclusive digital economy” (Arner et al., 2020; Mavlutova et al., 2023).

Research Methodology

This research is a Documentary Research Methodology, which involves the in-depth review, analysis, and synthesis of academic literature, research, and related theories. No empirical data collection or statistical hypothesis testing is conducted in this study. The focus is on the body of knowledge related to FinTech Adoption, Financial Inclusion, and Sustainable Economic Growth, as well as foundational theories such as UTAUT. Data sources consist of peer-reviewed articles from credible databases (such as Scopus, Web of Science, Google Scholar, and ThaiJO) published between 2020 and 2025. The content of the selected documents will be systematically analyzed and compared to developing a comprehensive Conceptual Framework and creating Conceptual Propositions suitable for extension into future empirical research.

Proposed Conceptual Framework and Hypotheses

This article presents, based on an extensive synthesis of prior literature, this study proposes a conceptual framework and a set of hypothesis-based propositions to explain the relationships among the constructs, starting with FinTech Adoption as the antecedent factor, through Financial Inclusion as the mediating variable, to Sustainable Economic Growth as the final macro-level outcome. This framework synthesizes knowledge from the Unified Theory of Acceptance and Use of Technology (UTAUT), as illustrated in Figure 1, and from the literature on financial development. The result of the literature synthesis leads to the establishment of four hypotheses that explain the relationships among the variables in each part of the conceptual framework. The constructs in this conceptual framework using indicators derived from the World Bank (2022) and Sahay et al. (2020) as follows: Measurement Indicators 1) Financial Inclusion (FI) World Bank and International Monetary Fund Financial Inclusion in this conceptual framework is proposed as a latent construct comprising three measurable dimensions: Access Percentage of population with transaction accounts Number of mobile banking/e-wallet accounts per adult Usage Frequency of digital payments Use of digital credit, savings, or insurance products Quality Affordability of financial services Consumer protection and trust in financial services. And 2) Sustainable Economic Growth (SEG) macro-level outcome. Sustainable Economic Growth is conceptualized as a multidimensional construct reflecting both economic performance and inclusiveness, with proposed indicators including GDP growth rate adjusted for stability, Growth of SMEs and digital economy contribution to GDP, Reduction in income inequality (e.g., Gini coefficient), Employment generation, and productivity growth. Accordingly, the following hypotheses are theoretically proposed for future empirical examination.

FinTech Adoption, particularly of digital payment services (Digital Payments) and digital lending (Digital Lending), plays a crucial role in overcoming the limitations of traditional finance, both in terms of cost and geographical distance (Chen et al., 2022). The use of technology helps reduce transaction costs. It enables financial institutions to serve the unbanked and underbanked populations, as well as small and medium-sized enterprises (SMEs), more effectively (Sahay et al., 2020). Research in developing countries

suggests that the proliferation of mobile money technology (Mobile Money) is directly linked to increases in the number of financial accounts and access to microcredit, which are key indicators of Financial Inclusion (Firmansyah et al., 2022; Jha & Dangwal, 2025). This expectation is framed into hypotheses as follows:

H1: FinTech Adoption has a positive influence on the level of Financial Inclusion in Thailand.

When the population and the business sector can access and use financial services inclusively, overall economic activity increases. Access to credit enables households and SME entrepreneurs to invest more effectively, manage risks more efficiently, and increase productivity, which is a key mechanism for driving economic growth (Ramesh & Guruprasad, 2024). Furthermore, Financial Inclusion helps reduce income inequality and alleviate poverty, which is an essential component of "sustainable" growth (Sustainable Growth) because it builds a strong economic foundation and distributes benefits more inclusively (Demir et al., 2022). Reports from the International Monetary Fund (IMF) also confirm that countries with high levels of Financial Inclusion tend to experience more stable economic growth (Irfan et al., 2024). This expectation is framed into hypotheses as follows:

H2: Financial Inclusion has a positive influence on Sustainable Economic Growth.

Besides its indirect impact through Financial Inclusion, FinTech Adoption can also directly boost economic growth. The use of digital technology in the financial sector enhances the overall efficiency of the payment system, reduces transaction costs across all industries, and fosters innovation and new business models in the Digital Economy (Suryono et al., 2021; Firmansyah et al., 2022). The increase in the volume of electronic transactions and e-commerce directly expands the size of the economy and creates economic value-added, which does not necessarily have to go through the mechanism of adding new financial service users but is instead an enhancement of the efficiency of the existing economic system (Adewuyi et al., 2020; Xi & Wang, 2023). This expectation is framed into hypotheses as follows:

H3: FinTech Adoption has a direct positive influence on Sustainable Economic Growth.

Government and institutional support (Institutional Support), such as the establishment of a national payment infrastructure (e.g., the PromptPay system), the issuance of clear regulations that promote competition (Regulatory Sandbox), and policies promoting digital financial literacy (Digital Financial Literacy), are critically important environmental factors (Kaewpitoon, 2025). This support not only directly promotes FinTech Adoption but also acts as a Moderator that accelerates the conversion of FinTech Adoption into widespread financial inclusion. In an environment where the government provides support, FinTech service providers can more easily develop and offer services. At the same time, consumers will have greater confidence and be more open to new technologies, thereby strengthening the positive impact of FinTech Adoption on Financial Inclusion (Firmansyah et al., 2022). This expectation is framed into hypotheses as follows:

H4: Institutional Support positively moderates the relationship between FinTech Adoption and Financial Inclusion.

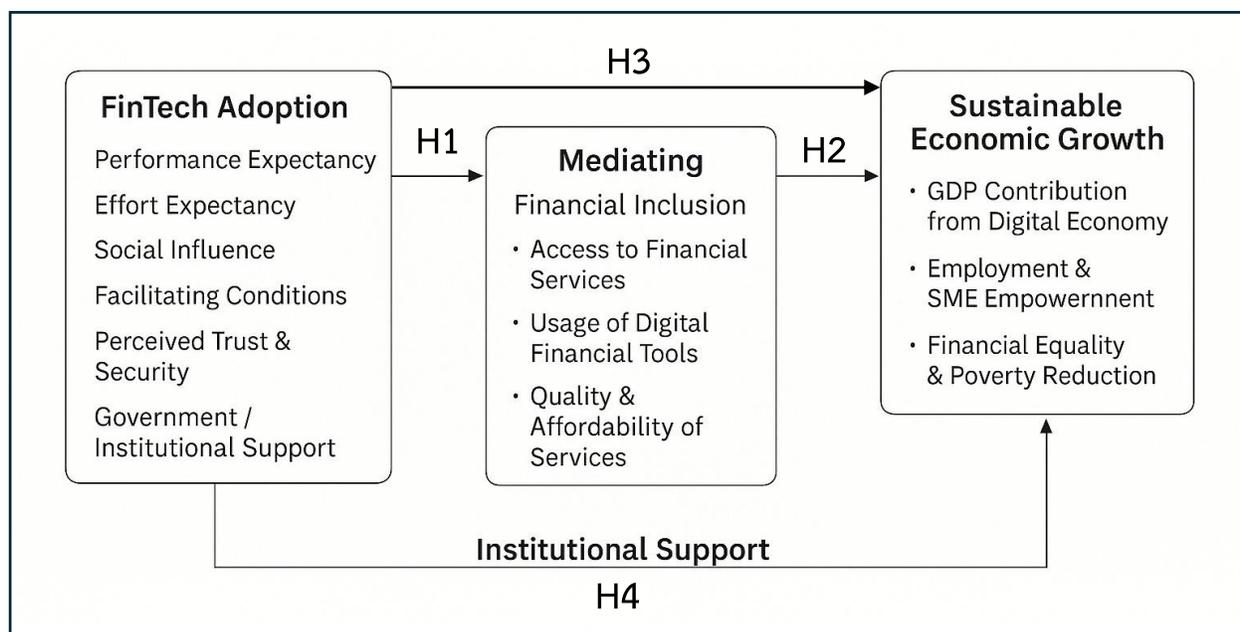


Figure 2: Conceptual Framework

Conclusion and Discussion

This research aims to develop a conceptual framework that applies the Unified Theory of Acceptance and Use of Technology (UTAUT) to analyze the relationship pathway between FinTech Adoption and Sustainable Economic Growth, directly supporting Thailand’s 20-Year National Strategy of “Security, Prosperity, and Sustainability. The proposed model comprises six determinants of technology adoption: Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Perceived Trust and Security, and Government/Institutional Support. In this conceptual framework, Financial Inclusion is designated as a critical component that aligns with the global policy directions of the IMF and the World Bank regarding inclusive digital finance.

The conceptual insights derived from the literature synthesis suggest that the six factors are theoretically associated with FinTech Adoption. In particular, perceived trust and security, and government/Institutional Support, are considered the most crucial factors, due to the sensitive nature of financial transactions and the necessity of a stable policy environment. This framework shows that the positive impact of FinTech Adoption on the macroeconomy is primarily transmitted through Financial Inclusion. This emphasizes that mere technology adoption is insufficient; rather, the ability of technology to expand access, usage, and the quality of financial services for the broader population is the key mechanism driving growth. Furthermore, the role of Financial Inclusion as a mediating variable also helps to explain how micro-level technology adoption can be transformed into tangible economic outcomes at the macro level. Helping small and medium-sized enterprises (SMEs) access capital and empowering individuals with tools for saving and investing directly impacts employment, innovation, and poverty

reduction, which are central to the World Bank's mission of shared prosperity. Furthermore, the direct influence of government support on sustainable growth reinforces that government policy plays a crucial dual role: not only promoting technology adoption but also creating an environment that enables this adoption to generate widespread economic benefits, consistent with the IMF's focus on financial resilience and Thailand's digital economy goals.

Framing the conceptual framework by defining Financial Inclusion as the primary mediating variable in the technology acceptance model will help create a model that more accurately and holistically explains FinTech's role in national development. For policymakers and financial institutions, this study emphasizes the importance of developing strategies that promote both technology adoption and Financial Inclusion simultaneously. This includes investing in digital financial literacy (to facilitate conditions), establishing robust data security regulations (to build trust), and promoting an ecosystem that focuses FinTech innovation on serving the unbanked/underbanked. Ultimately, the integration of these components represents a potential approach for leveraging FinTech to achieve the goal of inclusive and Sustainable economic growth, aligning with the country's Sustainable Development Goals (SDGs).

Recommendations

The proposed conceptual framework is intentionally designed to facilitate future empirical validation.

1) Collect real data from the target population and apply the Structural Equation Modeling (SEM) method to test the model fit and examine the relationships between the various variables, including the mediating role of the Financial Inclusion variable. 2) Conduct a comparative research study using Multi-group SEM analysis to examine the differences in FinTech Adoption behavior and its resulting impacts between population groups in urban and rural areas, which may have different infrastructure and socio-economic contexts. And 3) Incorporate key demographic and socioeconomic variables, such as gender, age, income level, education level, and Digital Literacy, as Control Variables in the quantitative analysis to increase the accuracy and explanatory power of the model.

References

- Adewuyi, A. D. E. M. O. L. A., Oladuji, T. J., Ajuwon, A. Y. O. D. E. J. I., & Nwangele, C. R. (2020). A conceptual framework for financial inclusion in emerging economies: Leveraging AI to expand access to credit. *IRE Journals*, 4(1), 222-236. <https://www.irejournals.com/paper-details/1708933>
- Adiratna, H. D., & Wulansari, A. (2021). Factors influencing purchase intention of elancing using UTAUT Model: A case study of Mahajasa. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 6(9), 590-602. <https://doi.org/10.47405/mjssh.v6i9.1056>

- Al-Sharafi, M. A., Muhammed, I., Alzaeemi, S., Albashrawi, M. A., Chae, I., & Dwivedi, Y. K. (2025). Factors shaping FinTech adoption: a systematic review, key determinants, theoretical insights, conceptual framework and future research directions. *Information Discovery and Delivery*. <https://doi.org/10.1108/IDD-04-2025-0098>
- Arner, D. W., Buckley, R. P., Zetsche, D. A., & Veidt, R. (2020). Sustainability, FinTech and financial inclusion. *European Business Organization Law Review*, 21(1), 7–35. <https://doi.org/10.1007/s40804-020-00183-y>
- Bank of Thailand. (2023). Payment systems roadmap (No. 5): Enhancing Thailand’s digital payment ecosystem. Bank of Thailand. <https://www.bot.or.th>
- Buckley, R. P., Zetsche, D. A., Arner, D. W., & Veidt, R. (2021). FinTech, financial inclusion and the UN Sustainable Development Goals. In I. Chiu & G. Deipenbrock (Eds.), *Routledge handbook of financial technology and law* (pp. 247–272). Routledge. <https://doi.org/10.4324/9780429325670-14>
- Chen, X., Teng, L., & Chen, W. (2022). How does FinTech affect the development of the digital economy? Evidence from China. *The North American Journal of Economics and Finance*, 61, 101697. <https://doi.org/10.1016/j.najef.2022.101697>
- Demir, A., Pesqué-Cela, V., Altunbas, Y., & Murinde, V. (2022). Fintech, financial inclusion and income inequality: a quantile regression approach. *The European Journal of Finance*, 28(1), 86-107. <https://doi.org/10.1080/1351847X.2020.1772335>
- DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, 48(2), 147–160. <https://doi.org/10.2307/2095101>
- Duarte, F. D., Gama, A. P. M., & Gulamhussen, M. A. (2018). Defaults in bank loans to SMEs during the financial crisis. *Small Business Economics*, 51(3), 591-608. <https://doi.org/10.1007/s11187-017-9944-9>
- Firmansyah, E. A., Masri, M., Anshari, M., & Besar, M. H. A. (2022). Factors affecting fintech adoption: A systematic literature review. *FinTech*, 2(1), 21–33. <https://doi.org/10.3390/fintech2010002>
- Hartley, J. L., Sawaya, W., & Dobrzykowski, D. (2022). Exploring blockchain adoption intentions in the supply chain: perspectives from innovation diffusion and institutional theory. *International Journal of Physical Distribution & Logistics Management*, 52(2), 190-211. <https://doi.org/10.1108/IJPDLM-05-2020-0163>
- Irfan, M., Kazmi, S. J. A., Saeed, A., Mehmood, I., & Mirza, M. B. (2024). FinTech, financial inclusion, and income inequality. *UCP Journal of Business Perspectives*, 2(1), 73–92. <https://doi.org/10.24312/ucp-jbp.02.01.362>
- Jabareen, Y. (2008). A new conceptual framework for sustainable development. *Environment, Development and Sustainability*, 10(2), 179–192. <https://doi.org/10.1007/s10668-006-9058-z>

- Jha, S., & Dangwal, R. C. (2025). FinTech services and financial inclusion: A systematic literature review of developing nations. *Journal of Science and Technology Policy Management*, 16(7), 1167–1198. <https://doi.org/10.1108/JSTPM-03-2023-0034>
- Kaewpitoon, P. (2025). The role of financial stability in supporting sustainable economic development: Policy solutions and strategic directions for strengthening Thailand's financial system. *Public Administration and Law Review*, 2(22), 37–46. <https://doi.org/10.36690/2674-5216-2025-2-37-46>
- Mavlutova, I., Spilbergs, A., Verdenhofs, A., Natrins, A., Arefjevs, I., & Volkova, T. (2023). Digital transformation as a driver of the financial sector sustainable development: An impact on financial inclusion and operational efficiency. *Sustainability*, 15(1), 207. <https://doi.org/10.3390/su15010207>
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340–363. <https://doi.org/10.1086/226550>
- Mishra, N. K., Raj, A., Mukherjee, I., & Chakraborty, A. (2025). Blockchain adoption in supply chain management based on the technology–organization–environment framework: Evidence from developing and developed economies. *Journal of Business & Industrial Marketing*, 40(3), 815–832. <https://doi.org/10.1108/JBIM-04-2024-0253>
- Octaviani, R. D., Prabowo, H., & Sari, D. (2023). Determinants of Indonesian Gen Z's purchase behavior on online travel platforms: Extending UTAUT model. *Innovative Marketing*, 19(4), 54. [http://dx.doi.org/10.21511/im.19\(4\).2023.05](http://dx.doi.org/10.21511/im.19(4).2023.05)
- Organisation for Economic Co-operation and Development. (2019). Measuring the digital transformation: A roadmap for the future. OECD Publishing. <https://doi.org/10.1787/9789264311992-en>
- Ozili, P. K. (2024). Bank loan loss provision determinants in non-crisis years: evidence from African, European, and asian countries. *Journal of Risk and Financial Management*, 17(3), 115. <https://doi.org/10.3390/jrfm17030115>
- Petcharat, T., & Leelasantitham, A. (2021). A retentive consumer behavior assessment model of the online purchase decision-making process. *Heliyon*, 7(10), e08169. <https://doi.org/10.1016/j.heliyon.2021.e08169>
- Pompella, M., & Costantino, L. (2021). Financial innovation and technology after covid-19: a few directions for policy makers and regulators in the view of old and new disruptors. *Ekonomika*, 100(2), 40-62. <https://doi.org/10.15388/Ekon.2021.100.2.2>
- Ramesh Hegde, P., & Guruprasad, L. S. (2024). Nexus between digital financial inclusion and economic growth: a panel data investigation of Asian economies. *Journal of Economic and Administrative Sciences*. <https://doi.org/10.1108/JEAS-09-2023-0253>
- Rudko, I., Bashirpour Bonab, A., Fedele, M., & Formisano, A. V. (2025). New institutional theory and AI: Toward rethinking of artificial intelligence in organizations. *Journal of Management History*, 31(2), 261–284. <https://doi.org/10.1108/JMH-09-2023-0097>

- Sahay, M. R., von Allmen, M. U. E., Lahreche, M. A., Khera, P., Ogawa, M. S., Bazarbash, M., & Beaton, M. K. (2020). *The promise of fintech: Financial inclusion in the post COVID-19 era*. International Monetary Fund. <https://doi.org/10.5089/9781513512242.087>
- Singh, S., Sahni, M. M., & Kovid, R. K. (2020). What drives FinTech adoption? A multi-method evaluation using an adapted technology acceptance model. *Management Decision*, 58(8), 1675-1697. <https://doi.org/10.1108/MD-09-2019-1318>
- Suryono, R. R., Budi, I., & Purwandari, B. (2020). Challenges and trends of financial technology (Fintech): a systematic literature review. *Information*, 11(12), 5. <https://doi.org/10.3390/info11120590>
- Tipu, S. A. A. (2022). Organizational change for environmental, social, and financial sustainability: A systematic literature review. *Review of Managerial Science*, 16(6), 1697–1742. <https://doi.org/10.1007/s11846-021-00494-5>
- Usman, N., Griffiths, M., & Alam, A. (2025). FinTech and money laundering: Moderating effect of financial regulations and financial literacy. *Digital Policy, Regulation and Governance*, 27(3), 301–326. <https://doi.org/10.1108/DPRG-04-2024-0068>
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 27(3), 425–478. <https://doi.org/10.2307/30036540>
- World Bank. (2022). The Global Findex database 2021: Financial inclusion, digital payments, and resilience in the age of COVID-19. World Bank. <https://doi.org/10.1596/978-1-4648-1897-4>
- World Commission on Environment and Development. (1987). *Our common future*. Oxford University Press.