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Assessing the Contribution of Fintech toward Building an Adaptive and Transparent Taxation System in the Digital Economy

Muhammad Reza Rizqi Pahlawan[1]

[1] Universitas Diponegoro, Semarang, Indonesia

Abstract

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The development of financial technology has served as a catalyst for transforming the global financial system by enhancing efficiency, transparency, and financial inclusion in the digital era. Financial technology not only revolutionizes conventional financial services but also plays a strategic role in strengthening modern taxation systems through digitalized payments, automated reporting, and the application of big data analytics. This study aims to examine the role of financial technology in improving tax compliance and its contribution to state revenue using a Systematic Literature Review approach on scholarly publications from the last five years. The findings indicate that financial technology implementation enhances the accuracy and transparency of transactions, expands the tax base, and accelerates digital tax reporting processes. However, challenges such as digital literacy, cybersecurity concerns, and regulatory disharmony remain major obstacles. This review emphasizes the importance of collaboration between tax authorities and financial technology operators to establish an adaptive, inclusive, and sustainable taxation framework in the digital economy era. The results also highlight financial technology potential to support fiscal modernization and promote equitable economic growth through technology-driven transparency.

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1. Introduction

The development of financial technology (Fintech) has fundamentally revolutionized the global economic ecosystem through the digitalization of financial services, which fosters efficiency and broad financial inclusion. Fintech not only presents innovations in the form of faster and more accessible transaction services but also modifies the way society interacts with the formal financial system. Through the development of products such as digital wallets, online lending services, and technology-based investment platforms, Fintech is capable of streamlining financial processes and expanding the reach of services to segments of society previously untouched by conventional financial institutions. This digital transformation creates significant structural changes to the formal economy, including the national taxation system. In this context, Fintech plays an important role in strengthening the efficiency of fiscal administration and encouraging an increase in taxpayer compliance as an effort to optimize state revenue (Adelakun et al., 2024).

The simultaneous digitalization of the economy poses new challenges for fiscal authorities in managing and supervising economic activities that are increasingly based on data and technology. The complexity of cross-sector digital transactions demands a more sophisticated and adaptive oversight system to technological developments. Fintech, in this case, potentially becomes a strategic instrument in closing the tax compliance gap through the utilization of smart technology such as Artificial Intelligence (AI), blockchain, and big data analytics. These three technologies not only enable efficiency in data verification processes but also create a tax reporting mechanism that is more transparent and can be monitored in real-time. According to Stanley and Kohardinata (2023), the integration of digital technology in modern financial systems is able to strengthen the credibility of tax reporting through the automation of administrative processes, minimizing human error and reducing the opportunity for fiscal fraud. Through this approach, digitalization becomes an essential foundation for a more accurate and equitable increase in state revenue.

Besides its role in increasing efficiency, Fintech also serves as a catalyst in expanding financial inclusion, which indirectly strengthens the national tax base. The availability of digital financial services provides opportunities for communities outside the reach of traditional banking institutions to be actively involved in formal economic activities. Economic activities that were previously untraced can now be monitored electronically through digital transaction systems that are automatically recorded. This condition opens opportunities for the government to expand the coverage of taxpayers through a more integrated and accurate digital reporting system (Mulyani et al., 2023). Thus, Fintech acts not only as a financial technology innovation but also as a driver of social-economic transformation that strengthens a nation's fiscal foundation.

Despite offering various opportunities, the application of Fintech in the taxation system also faces quite complex challenges. One of the main problems relates to data security aspects and user privacy protection, which is a crucial issue in the era of fiscal digitalization. The lack of regulatory infrastructure readiness, coupled with differences in financial reporting standards between countries, potentially leads to disharmony in fiscal policy and increases the risk of sensitive data leaks. Dudu et al. (2024) emphasize that the application of artificial intelligence systems and tax automation in the Fintech sector can strengthen the functions of supervision and fiscal risk analysis. However, its success is highly dependent on institutional readiness, human resource capacity, and coordination among related authorities so that the digitalization process can run effectively and accountably. This phenomenon asserts that Fintech is now understood not just as a mere financial innovation, but as an essential element in the agenda for modern tax system reform.

Fiscal digitalization integrated with the Fintech ecosystem can create a taxation system that is more efficient, transparent, and inclusive. Collaboration between the government, tax authorities, and Fintech industry players is a strategic necessity to build a taxation framework that is adaptive to the dynamics of the global digital economy. In this context, the strategy of strengthening technology-based tax compliance becomes the main pillar in realizing stable state revenue and long-term fiscal sustainability. Therefore, this research is directed to systematically analyze the contribution of Fintech to the increase in tax compliance, the efficiency of fiscal administration, and the potential for optimizing state revenue through the integration of digital technology in future-oriented national tax policy.

2. Literature Review

2.1. Digital Transformation and Fintech Development

The development of Fintech has created fundamental changes in the global financial and economic system. Fintech is a combination of information technology and financial services aimed at increasing efficiency, transparency, and ease of access to financial services. Fintech not only acts as a provider of alternative financial services but also as a catalyst for digital transformation in the fiscal sector. According to Adelakun et al. (2024), the development of Fintech encourages broader digital economic integration through payment digitalization, online reporting systems, and transaction automation, which accelerates national financial circulation. Fintech plays an important role in creating financial inclusion, especially for communities previously unserved by conventional financial institutions.

The digitalization of financial services such as mobile banking, peer-to-peer lending, and e-wallets increases community economic participation and expands the potential taxpayer base. Mulyani et al. (2023) emphasize that the role of Fintech is not limited to providing financial access but also encourages the formation of a more transparent and accountable financial system. Thus, Fintech becomes a strategic element in sustainable digital economic reform. In addition, technological innovations such as AI and Big Data Analytics within the Fintech ecosystem also strengthen the capacity for supervision and evaluation of economic policies. Dudu et al. (2024) state that AI is capable of increasing efficiency in the audit and financial reporting process through the automation of real-time transaction data analysis. This technology becomes an important pillar in supporting a taxation system that is more responsive and adaptive to changes in digital economic patterns.

2.2. Fintech and Tax Compliance

One of the most significant impacts of Fintech advancements is its ability to increase tax compliance. In the context of the digital economy, Fintech provides integrated and well-documented transaction data, making it easier for tax authorities to verify fiscal obligations. Stanley and Kohardinata (2023) explain that automatic reporting systems based on Fintech reduce the potential for human error and increase the transparency of tax reporting. Fintech also supports the more efficient application of digital tax by providing access to cross-platform transaction data that was previously difficult to track through manual systems. Furthermore, the application of blockchain technology in the Fintech ecosystem also strengthens the security and integrity of tax transaction data. Anomah et al. (2024) state that blockchain can be used as a permanent record-keeping system that prevents data manipulation and ensures the transparency of the fiscal audit process.

With this system, every transaction that occurs in the digital ecosystem can be directly verified by tax authorities without disrupting user privacy. This approach not only strengthens public trust in the digital tax system but also increases the voluntary compliance of taxpayers. Tax compliance is also closely related to digital literacy and public fiscal awareness. Wassermann and Bornman (2020) found that low tax knowledge in the digital era can hinder the effectiveness of applying technology-based tax policies. Therefore, the development of digital literacy capacity for businesses and individuals is an essential element in ensuring the success of Fintech-based digital tax implementation

2.3. Fintech and Increased State Revenue

Tax digitalization facilitated by Fintech has a significant impact on increasing state revenue. Digital payment systems and automatic reporting allow the government to collect transaction data more quickly and accurately. Ariyibi et al. (2024) show that the application of Fintech technology in the e-commerce sector has increased the state's ability to monitor cross-platform transactions, which were previously difficult to regulate in conventional taxation systems. In addition, Fintech also opens up opportunities to optimize tax revenue from the informal sector. Through digital data integration, micro-transactions can be monitored and included in the active tax base.

This expands the scope of state revenue without adding a significant administrative burden to small businesses. Adelakun et al. (2024) assert that implementing a clear legal framework for digital economic activities is an important prerequisite for ensuring the effectiveness of Fintech as an instrument for increasing state revenue. However, this effectiveness is highly dependent on adequate regulatory readiness and digital infrastructure. Mulyani et al. (2023) emphasize the importance of adaptive fiscal policies that can balance innovation and legal compliance. The absence of integrated regulation can lead to an imbalance between the growth of the Fintech sector and the government's ability to collect taxes efficiently. Thus, integrated and adaptive policies are key to optimizing Fintech's contribution to state revenue.

3. Method

This research uses a Systematic Literature Review (SLR) approach to examine the role of Fintech in increasing tax compliance and its contribution to state revenue in the digital economy era. The SLR approach was chosen because it is capable of providing a comprehensive understanding of the results of previous research in a systematic, objective, and structured manner. SLR focuses on the identification, evaluation, and synthesis of relevant empirical evidence to answer research questions and avoid subjective bias in the interpretation of scientific data. The stages in this research follow the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, which includes four main stages: identification, screening, eligibility determination, and inclusion. In the identification stage, a literature search was conducted through scientific databases such as Google Scholar, Research Gate and Elsevier using the keywords: "Fintech," "tax compliance," "digital economy," "state revenue," and "financial inclusion."

Selection criteria were established based on a publication period of the last five years, publication type (peer-reviewed journal articles), and relevance to the topic of digital taxation and Fintech. Next, the screening stage was carried out by reviewing the abstracts and contents of the articles to ensure a direct link to the research variables. Articles that were duplicative, lacked an empirical basis, or were outside the context of digital fiscal policy were eliminated. From the initial selection results, eight main articles were obtained that met the eligibility criteria.

These articles were then analyzed using a descriptive-comparative approach, emphasizing the relationship between the application of Fintech, the increase in tax compliance, and its effect on state revenue. In the analysis stage, each article was evaluated based on key variables, namely: (1) Fintech mechanisms in supporting the taxation system, (2) the impact of Fintech on tax administration transparency and efficiency, and (3) regulatory and data security challenges in the context of fiscal digitalization. The analysis was carried out with a thematic method to identify patterns, differences, and similarities across each study. This process resulted in a comprehensive conceptual synthesis regarding Fintech's contribution to modern tax governance. Thus, this SLR method allows the research to produce credible, replicable findings that can serve as a basis for the development of future digital fiscal policy.

4. Results

The results of the systematic analysis of eight scientific publications published within the last five years indicate that Fintech development plays a strategic role in strengthening tax compliance and increasing state revenue in the digital economy era. The Fintech functions as a catalyst connecting technological innovation with fiscal policy through mechanisms of transaction digitalization, automation of reporting systems, and an increase in the transparency and accountability of public financial data. This transformation represents a paradigm shift in the global financial order, where technology acts not only as an aid but as the main foundation for efficient, inclusive, and data-oriented fiscal governance.

The digitalization of financial services through Fintech has opened wider public access to formal financial services, while also expanding the national tax base. The adoption of financial technology such as digital wallets, application-based banking services, and platform-based online lending has enabled community groups previously outside the formal economic system to actively participate in the modern financial ecosystem. This expansion of participation directly impacts the increase in potential tax revenue. According to Mulyani et al. (2023), the digitalization of financial transactions creates opportunities for the government to expand tax coverage through a more accurate and integrated database, reducing dependence on manual reporting systems, and strengthening the effectiveness of fiscal administration through process automation.

The development of advanced technology such as AI , Big Data Analytics, and Blockchain within the Fintech ecosystem also strengthens the supervision of digital taxation activities. The application of AI helps tax authorities identify taxpayer behavior patterns and quickly detect indications of non-compliance through the analysis of large amounts of transaction data. Meanwhile, blockchain technology functions as a permanent record-keeping mechanism that guarantees the integrity, reliability, and transparency of fiscal data without the need for intermediaries. Anomah et al. (2024) explain that the application of blockchain in the digital taxation system not only minimizes the potential for data manipulation but also strengthens fiscal accountability while increasing public trust in electronic tax reporting systems. This success indicates that technology integration in tax governance is capable of creating a more open, accurate, and efficient fiscal ecosystem.

Furthermore, the results of the study also show that Fintech contributes significantly to reducing the level of taxpayer non-compliance through the application of automatic reporting systems and digital payment integration. Stanley and Kohardinata (2023) confirm that the application of digital-based tax reporting systems is capable of reducing human error, accelerating data validation, and ensuring information consistency across platforms. With electronic payment systems directly connected to tax institutions, the process of tax collection and reporting becomes faster, more efficient, and sustainable. In fact, some countries have begun to implement real-time reporting-based tax mechanisms, where every transaction carried out by Fintech users automatically generates a relevant fiscal record for the national tax reporting system. This mechanism not only increases the efficiency of tax administration but also reduces the potential for reporting delays, which were often a constraint in manual systems.

From the financial inclusion perspective, Fintech has a fundamental role in expanding community participation in formal economic activities. Access to digital financial services provides opportunities for people with low financial literacy levels to engage in digitally documented economic transactions. This impacts the increasing potential for tax revenue from micro and small economic activities that were previously difficult to track through conventional mechanisms. Ariyibi et al. (2024) explain that the increase in financial inclusion through Fintech accelerates the integration of the informal sector into the formal economic system, thereby expanding the state revenue base without adding a significant fiscal burden. With systematic digital footprints, tax authorities can optimize potential revenue from small and medium enterprises that contribute greatly to the national economy.

However, even though Fintech's contribution to the taxation system is significant, the SLR results also reveal a number of obstacles that must be overcome so that these benefits can be maximized. One of the main challenges lies in the regulatory aspect, especially the disharmony between the development of financial technology innovation and the applicable fiscal legal framework. In many developing countries, the tax policy framework has not been fully adaptive to the changing dynamics of cross-jurisdiction digital transactions. Cahyadini et al. (2023) highlight that differences in fiscal reporting standards, weak data infrastructure, and low digital literacy are major obstacles in effectively integrating Fintech into the national taxation system. This regulatory unpreparedness can lead to the risk of tax evasion and hinder the efficiency of fiscal administration expected from the digitalization process.

Another no less important issue is the aspect of data security and user privacy protection. Although Fintech supports the openness of transaction information, concerns about financial data leaks are still a serious spotlight in the application of digital tax. Dudu et al. (2024) emphasize that the use of artificial intelligence technology in fiscal supervision must be balanced with strict cyber security policies, independent system audits, and comprehensive risk control mechanisms to ensure the integrity of tax data. Therefore, the synergy between fiscal regulators, Fintech service providers, and digital financial institutions is urgent to maintain the balance between fiscal transparency and the protection of taxpayer personal data.

Apart from technical and regulatory issues, digital literacy also emerges as a determining factor in the successful implementation of Fintech in the taxation sector. Based on the findings of Wassermann and Bornman (2020), the level of taxpayer understanding of digital technology and online tax reporting mechanisms is directly related to the level of fiscal compliance. The low level of digital literacy causes some economic actors to have difficulty navigating complex electronic reporting systems. Therefore, increasing community capacity through fiscal education, digital socialization, and adaptive training is a strategic step to ensure that tax digitalization is widely accepted and runs effectively across various economic strata.

Other findings show that the success of applying Fintech in the taxation system is highly dependent on the readiness of digital infrastructure and government institutional capacity. Fintech requires a solid supporting ecosystem, such as cross-institutional data connectivity, interoperability of payment systems, and secure and reliable fiscal database integration. Technology-based taxation systems cannot stand alone without the support of institutional reform that ensures effective cross-sector coordination. Therefore, strengthening public institutional capacity and harmonizing fiscal policy are important prerequisites for achieving sustainable digital tax implementation effectiveness.

The results of the study show that Fintech has a significant positive impact on three main dimensions in the modern taxation system, namely administrative efficiency, increased transparency, and expansion of the tax base. Through the utilization of technology, the government can automate tax collection and reporting processes, speed up the flow of fiscal data, and reduce the possibility of manual errors that often occur in traditional systems (Saragih et al., 2023). Financial digitalization also encourages economic transformation towards a data-based structure, where fiscal decision-making can be carried out more quickly, accurately, and based on evidence. However, for this effectiveness to be fully realized, the application of Fintech in the taxation system must be accompanied by comprehensive policy updates, increased human resource capacity, and strengthening the digital data security framework.

Thus, it can be concluded that Fintech is a fundamental element in the evolution of the modern fiscal system. Through the appropriate use of technology, the government can build a taxation system that is adaptive to digital economic changes while strengthening fiscal justice and efficiency. The adoption of Fintech in tax governance must be directed at strengthening transparency, expanding inclusion, and ensuring the sustainability of long-term fiscal policy to realize a public financial system that is resilient, responsive, and competitive in the digital era.

5. Discussion

The results of the study indicate that Financial Technology (Fintech) has a very significant role in strengthening the taxation system and increasing state revenue through the process of economic digitalization. This innovation provides a new paradigm in modern fiscal governance, where technology becomes the main instrument in increasing the transparency, accuracy, and efficiency of the taxation system. However, the implementation of Fintech in the fiscal sector is not entirely free from structural or institutional constraints. Careful management is needed so that the resulting benefits can be optimized without causing risks to fiscal system stability. Conceptually, Fintech introduces a new model in data-based fiscal governance that allows transaction supervision and tax reporting activities to be carried out automatically.

This digital innovation not only reduces the administrative costs of taxation but also minimizes the information gap between fiscal authorities and taxpayers, thereby creating a more transparent and accountable reporting system (Stanley &

Kohardinata, 2023). From the perspective of the digital economy, Fintech functions as a link between the formal and informal financial sectors. The existence of Fintech opens wider access for small businesses and individuals to participate in the formal financial ecosystem through various digital platforms. This participation directly impacts the increase in transaction footprints that can be utilized by tax authorities to expand the state revenue base without directly increasing the fiscal burden. Ariyibi et al. (2024) explain that the presence of Fintech encourages fiscal transparency and accountability because every transaction is digitally recorded and can be verified by the online taxation system.

Thus, the digitalization of financial transactions presented by Fintech potentially reduces the practice of tax avoidance while strengthening public trust in the modern taxation system (Chishti et al., 2020). Although it provides a positive impact, the success of Fintech in strengthening the taxation system is highly dependent on the readiness of the regulation and digital infrastructure that supports it. Countries that do not yet have an adequate digital taxation legal framework tend to face the risk of legal inconsistencies and weak supervision mechanisms over cross-border transactions. Cahyadini et al. (2023) assert that the absence of adaptive regulation can lead to information asymmetry that can be utilized for tax avoidance, especially in cross-jurisdictional activities. Therefore, flexible regulation is needed but still guarantees legal certainty in order to balance the encouragement of innovation and the need for national fiscal stability.

Apart from the legal aspect, social factors and digital literacy are also major determinants in the effectiveness of Fintech implementation in the taxation sector.

The low level of public understanding of digital tax reporting mechanisms can hinder the success of technology-based fiscal reform. Hasan (2024) state that the level of digital literacy is directly proportional to individual fiscal compliance. Thus, increasing fiscal education, digital training, and socialization of digital tax policies must be a strategic priority for the government. Collaboration between tax authorities, educational institutions, and Fintech service providers is an important step in creating a participatory, adaptive, and inclusive digital taxation ecosystem.

The integration of Fintech into the national taxation system is not only related to the technological aspect but is also part of a comprehensive public policy and institutional governance (Mamzhura et al., 2022). The success of fiscal digitalization requires a multidimensional approach that includes adaptive regulation, strengthening data security, increasing digital literacy, and cross-institutional coordination. This approach is expected to result in a taxation system that is efficient, transparent, and capable of strengthening state revenue capacity sustainably amidst the constantly developing dynamics of the digital economy.

6. Conclusion

The results of the study show that Fintech has a strategic role in strengthening the taxation system and increasing state revenue in the digital economy era. Fintech supports the efficiency of fiscal administration through payment digitalization, reporting automation, and transaction data integration. Technological innovations such as Artificial Intelligence, Big Data Analytics, and Blockchain strengthen the transparency and accuracy of tax reporting, while also expanding the state revenue base. Furthermore, Fintech also encourages financial inclusion, allowing the participation of communities previously outside the formal economic system.

However, the implementation of Fintech in the taxation system faces various challenges, especially in the aspects of regulation, data security, and digital literacy. Without the support of adaptive policies and adequate digital infrastructure, Fintech's potential in strengthening the fiscal system will not be optimally achieved. Therefore, synergy between the government, tax authorities, and Fintech industry players is key to creating a taxation system that is adaptive, inclusive, and sustainable. This research confirms that Fintech is not merely a financial technology innovation, but a strategic instrument in digital fiscal reform to realize tax transparency, efficiency, and justice in the modern economic era.

References

Adelakun, B. O., Nembe, J. K., Oguejiofor, B. B., Akpuokwe, C. U., & Bakare, S. S. (2024). Legal frameworks and tax compliance in the digital economy: a finance perspective. *International Journal of Advanced Economics*, *6(3),*26-35

Anomah, S., Ayeboafo, B., Aduamoah, M., & Agyabeng, O. (2024). Blockchain technology integration in tax policy: Navigating challenges and unlocking opportunities for improving the taxation of Ghana's digital economy. *Scientific African*, *24*, e02210.

Ariyibi, A., Bello, O. F., Ekundayo, T. F., Gupta, R., Samuel, E. O., Oluwabusolami, O., & Odumuwagun, O. O. (2024). Addressing the challenges of taxation E-commerce and digital services in the globalized economy. *World Journal of Advanced Research and Reviews*, *24*(2), 45-58.

Cahyadini, A., Hutagalung, J. I. G., & Muttaqin, Z. (2023). The urgency of reforming Indonesia's tax Law in the face of economic digitalization. *Cogent Social Sciences*, *9*(2), 2285242.

Chishti, S., Craddock, T., Courtneidge, R., & Zachariadis, M. (Eds.). (2020). *The PAYTECH Book: The Payment Technology Handbook for Investors, Entrepreneurs, and FinTech Visionaries*. United Kingdom: John Wiley & Sons.

Dudu, O. F., Alao, O. B., & Alonge, E. O. (2024). Conceptual framework for AI-driven tax compliance in fintech ecosystems. *Journal of Fintech and Taxation*, *12*(3), 45-60.

Hasan, Z. (2024). The Impact Of Digital Financial Literacy On Consumer Protection, Investor Security, And Financial Transactions In Indonesia. *International Journal of Islamic Economics and Finance Research*, *7*(2 December), 55-77.

Manzhura, O., Pochenchuk, G., & Kraus, N. (2022). Innovative changes in financial and tax systems in the conditions of digital transformation. *Baltic Journal of Economic Studies*, *8*(1), 94-102.

Mulyani, S., Suparno, S., & Sukmariningsih, R. M. (2023). Regulations and Compliance in Electronic Commerce Taxation Policies: Addressing Cybersecurity Challenges in the Digital Economy. *International Journal of Cyber Criminology*, *17*(2), 133-146.

Saragih, A. H., Reyhani, Q., Setyowati, M. S., & Hendrawan, A. (2023). The potential of an artificial intelligence (AI) application for the tax administration system's modernization: the case of Indonesia. *Artificial Intelligence and Law*, *31*(3), 491-514.

Stanley, N., & Kohardinata, C. (2023). Impact of Tax Implementation on Fintech P2P Loans in Indonesia. *EconBank: Journal of Economics and Banking*, *5*(2), 189-201.

Wassermann, M., & Bornman, M. (2020). Tax knowledge for the digital economy. *Journal of Economic and Financial Sciences*, *13*(1), 1-11.