

Digital Financial Transformation, Financial Inclusion, and Sustainable Economic Development

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ABSTRACT

Digital transformation has transformed various aspects of the modern financial system and spurred the emergence of Financial Technology (FinTech) as an innovation capable of improving public access to formal financial services. This study aims to analyze the role of digital financial transformation in enhancing financial inclusion and its implications for sustainable economic development. The study employs a descriptive qualitative approach using a literature review method, drawing on various scientific articles, reports from international institutions, and relevant policy documents from the past five years. Data were analyzed using content analysis techniques to identify the relationship between FinTech, financial inclusion, and sustainable economic development. The results indicate that the development of FinTech contributes to expanding access to financial services, increasing transaction efficiency, and strengthening public participation in the formal economic system. The increased financial inclusion resulting from digital financial transformation also supports the creation of more inclusive economic growth, boosts productivity, and strengthens the economic resilience of communities. This study confirms that financial inclusion serves as the primary mechanism linking digital financial transformation to sustainable economic development. Therefore, the development of an inclusive digital financial ecosystem is a critical strategy for supporting sustainable economic development in the digital age.

Keywords: *Digital Finance, Financial Inclusion, Financial Technology, Sustainable Development, Sustainable Economic Development.*

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1. | INTRODUCTION

Digital transformation has been one of the main drivers of change in the global economic system over the past decade. The development of information and communication technology has changed the way people conduct transactions, access financial services, and participate in economic activities. In this context, Financial Technology (FinTech) emerged as an innovation that is able to improve the efficiency, accessibility, and quality of financial services through the use of digital technology. The presence of FinTech has not only changed the business model of the financial sector, but also created new opportunities to expand people's access to formal financial services that were previously difficult to reach (Buckley et al., 2019; Sahay et al., 2020).

The development of FinTech is increasingly important because there is still a considerable gap in financial access in various countries. Although the level of ownership of financial accounts has increased in recent years, some people still face various obstacles in obtaining safe, affordable, and sustainable financial services. This condition makes financial inclusion one of the important agendas in modern economic development. Financial inclusion is not only related to the availability of financial services, but also includes the ability of people to utilize those services to improve economic and social well-being (Hutson et al., 2022; Ozili, 2023).

Various studies show that increasing financial inclusion has a significant contribution to economic growth, poverty reduction, and improved community welfare. Access to savings, credit, digital payments, and other financial products allows individuals and businesses to better manage economic risks, increase productivity, and expand business opportunities. Therefore, financial inclusion is increasingly seen as a strategic instrument in supporting more equitable and sustainable economic development (Koomson et al., 2020; Khan et al., 2022).

In recent years, FinTech has developed into one of the key instruments in driving financial inclusion. Various services such as digital payments, e-wallets, digital banking, and peer-to-peer lending are able to reduce geographical and administrative barriers that have limited people's access to formal financial services. The use of digital technology allows the transaction process to take place faster, lower operational costs, and a wider range of financial services. This condition shows that FinTech has great potential as a catalyst for increasing financial inclusion in the digital economy era (Feyen et al., 2021; Cao et al., 2023).

On the other hand, current economic development is not only oriented towards increasing economic growth, but also on the sustainability of development in the long term. The Sustainable Development Goals (SDGs) agenda emphasizes the importance of development that is able to integrate economic, social, and environmental aspects in a balanced manner. In this context, the financial system has a strategic role in providing access to financing, expanding economic opportunities, and improving people's welfare in an inclusive manner. Buckley et al. (2019) emphasized that FinTech and financial inclusion are important instruments that can support the achievement of sustainable

development through a more inclusive digital financial transformation. This view is also strengthened by the OECD (2021) and the United Nations (2023) which place digital finance as one of the supporting elements for sustainable economic development.

However, the results of previous research show that studies on the relationship between FinTech, financial inclusion, and sustainable development are still developing and not yet fully integrated. Most research focuses more on the influence of FinTech on financial inclusion or the impact of financial inclusion on economic growth separately. Research examining the mechanisms of linkages between FinTech, financial inclusion, and sustainable economic development within a single conceptual framework is still relatively limited (Sahay et al., 2020; Khan et al., 2022; Ozili, 2023). In addition, some research emphasizes the technological and financial innovation aspects rather than their implications for sustainable economic development in the long term (Cao et al., 2023).

Based on these conditions, this study aims to analyze the role of digital financial transformation in increasing financial inclusion and its implications for sustainable economic development. This research is expected to make a theoretical contribution in strengthening the understanding of the relationship between FinTech, financial inclusion, and sustainable development as well as providing policy implications for the development of a more inclusive and sustainable financial system.

2. | LITERATURE REVIEW

Financial Technology and Financial Inclusion

Financial Technology (FinTech) is an innovation in the financial services sector that utilizes digital technology to improve the efficiency, accessibility, and quality of financial services. The development of FinTech has resulted in various services such as digital payments, mobile banking, peer-to-peer lending, crowdfunding, and various application-based financial platforms that allow people to obtain financial services more easily and quickly. The presence of FinTech is one of the most influential forms of digital transformation in the modern financial system because it is able to reduce geographical barriers, transaction costs, and various administrative obstacles that previously limited people's access to formal financial services (Buckley et al., 2019).

From a financial inclusion perspective, FinTech is seen as an instrument that is able to expand people's access to financial products and services. The use of digital technology allows individuals who previously did not have access to formal financial institutions to make transactions, save, obtain financing, or manage financial activities more effectively. Through the digitization of financial services, people can obtain financial access without having to rely on the existence of physical offices of financial institutions. This condition provides greater opportunities for community groups that have been experiencing limited access to conventional financial services (Sahay et al., 2020).

Furthermore, the development of FinTech also contributes to the improvement of the efficiency of financial markets through the provision of faster, flexible, and low-cost services. Cao et al. (2023) explained that technology-based financial innovation is able to increase public participation in the formal financial system while strengthening the integration of the digital economy. Therefore, FinTech not only serves as a technological innovation, but also as a mechanism that encourages increased financial inclusion and the expansion of economic opportunities for society more broadly.

Financial Inclusion and Sustainable Economic Development

Financial inclusion is a condition when all levels of society have adequate access to various formal financial products and services that are affordable, safe, and in accordance with their needs. This concept not only includes access to financial accounts, but also includes the ability of people to use financial services effectively to improve economic welfare. In modern economic development, financial inclusion is seen as one of the important factors that can strengthen economic stability, increase productivity, and reduce social and economic disparities.

Increasing financial inclusion provides opportunities for individuals and business actors to gain access to financing sources, savings instruments, payment services, and various other financial products. This access allows the community to better manage economic risks, increase productive investment, and expand business opportunities. Khan et al. (2022) show that increasing financial inclusion has a positive relationship with the achievement of various sustainable development indicators, especially those related to poverty reduction, welfare improvement, and inclusive economic growth.

In addition, the development of financial inclusion also contributes to the creation of more sustainable economic development. Koomson et al. (2020) found that access to formal financial services can reduce people's economic vulnerability and increase their capacity to face various social and economic risks. In line with this, the United Nations (2023) places financial inclusion as one of the supporting instruments for achieving the Sustainable Development Goals (SDGs), especially in encouraging inclusive economic growth, equitable distribution of economic opportunities, and improving people's welfare in a sustainable manner.

3. | RESEARCH METHOD

This study uses a descriptive qualitative approach to analyze the role of digital financial transformation in increasing financial inclusion and its implications for sustainable economic development. The qualitative approach was chosen because this study aims to understand, interpret, and explain the conceptual relationship between Financial Technology (FinTech), financial inclusion, and sustainable economic development based on various empirical and theoretical findings that have been published in the scientific literature. The descriptive method is used to describe phenomena that occur in a systematic, factual, and comprehensive manner so that it is

able to provide a deeper understanding of the development of digital financial transformation in the context of modern economic development.

The data source used in this study is secondary data obtained through library research. Data was collected from various scientific articles, international institution reports, academic books, as well as policy documents relevant to the research theme. The main references used are from publications published in the last five-year period to ensure that the discussions presented reflect the latest developments related to FinTech, financial inclusion, and sustainable development. Some of the sources referenced in this study include publications from the World Bank, the International Monetary Fund (IMF), the Organisation for Economic Co-operation and Development (OECD), the United Nations (UN), as well as various scientific articles indexed by Google Scholar and discuss the relationship between digital finance, financial inclusion, and sustainable development.

Data collection techniques are carried out through identification, selection, and review of literature that has relevance to the research objectives. The selected literature is a publication that discusses the concept, development, benefits, challenges, and implications of FinTech for increasing financial inclusion and sustainable economic development. Furthermore, the data that has been collected is analyzed using content analysis techniques. This technique is carried out by grouping various findings of previous research into several main themes, namely the development of Financial Technology, the contribution of FinTech to financial inclusion, the role of financial inclusion in economic development, and the relationship between digital financial transformation and the achievement of sustainable development goals.

The analysis is carried out through several stages which include data reduction, data presentation, and conclusion drawn. At the data reduction stage, various information obtained from the literature is selected based on suitability with the focus of the research. Furthermore, relevant data is compiled and classified according to the theme of the discussion to facilitate the interpretation process. The final stage is carried out by drawing conclusions based on the relationship patterns found in various previous studies. Through this approach, this research is expected to be able to produce a comprehensive picture of how digital financial transformation through FinTech can strengthen financial inclusion and support the realization of inclusive and sustainable economic development.

4. | RESULTS

Digital Finance Transformation as a Driver of Financial Inclusion

The development of digital technology has driven significant changes in the global financial system. One of the most prominent forms of transformation is the emergence of Financial Technology (FinTech) which allows the provision of financial services faster, more efficiently, and more easily accessible to the public. This transformation not only changed the way financial institutions operated, but also expanded the

opportunities for people to participate in the formal financial system. The presence of digital technology in the financial sector has reduced various obstacles that have been the cause of low access to financial services, such as limited physical infrastructure, high transaction costs, and complex administrative processes (Buckley et al., 2019).

Various studies show that the development of FinTech contributes positively to the increase in financial inclusion. Sahay et al. (2020) explained that digital financial services are able to reach community groups that were previously not served by formal financial institutions. The use of digital devices allows people to make financial transactions, save funds, obtain financing, and access various other financial services without having to visit a financial institution branch office. Thus, financial digitalization is one of the effective strategies to expand financial access more equitably.

Advances in digital payment technology also play an important role in driving financial inclusion. Feyen et al. (2021) emphasized that digital payment is one of the innovations that can improve transaction efficiency while expanding the use of formal financial services. The digital payment system makes it easy for people to make transactions quickly, safely, and at low cost. In addition, the development of digital wallets and mobile banking has also strengthened the integration of people into the growing digital economy ecosystem.

Similar findings were put forward by Hutson et al. (2023) through the Global Findex Database which showed a significant increase in the use of digital payments in recent years. The increase shows that the digitization of financial services has opened up greater opportunities for people to access formal financial services. Increasing access to digital financial services contributes to increased account ownership, the use of electronic payment instruments, and public involvement in various formal economic activities.

In addition to expanding access to finance, FinTech also plays a role in improving the efficiency of the financial market. Cao et al. (2023) stated that technology-based financial innovation is able to reduce operational costs and improve the quality of financial services. This efficiency provides benefits not only for financial institutions, but also for the public as service users. With lower costs and simpler processes, financial services have become more accessible to various groups of people.

Ozili's research (2023) shows that financial inclusion supported by digital technology has the potential to increase people's economic participation more broadly. Individuals who have access to formal financial services tend to be better able to manage their finances, make investments, and take advantage of the various economic opportunities available. Therefore, increasing financial inclusion not only has an impact on the financial sector, but also contributes to strengthening overall economic activity.

In the context of modern economic development, digital financial transformation also provides greater opportunities for business actors, especially micro, small, and medium enterprises (MSMEs). Access to digital financing allows business actors to

obtain sources of capital that were previously difficult to reach through the conventional financial system. The presence of various digital financing platforms has expanded funding alternatives that can be used to support productive activities and business development. This condition shows that FinTech not only increases individual financial inclusion, but also encourages the development of the business sector which is the backbone of the economy.

Overall, the results of the study show that FinTech has a very important role in expanding access to finance, improving the efficiency of financial services, and strengthening public participation in the formal economic system. These findings strengthen the view that digital financial transformation is one of the strategic instruments in increasing financial inclusion in the digital economy era.

Financial Inclusion's Contribution to Sustainable Economic Development

Increased financial inclusion not only provides benefits in the form of access to financial services, but also has broader implications for sustainable economic development. Financial inclusion allows people to access a variety of financial instruments that can be used to improve welfare, reduce economic vulnerability, and expand economic opportunities. In the context of sustainable development, access to financial services is seen as one of the important factors that support inclusive and equitable economic growth.

Khan et al. (2022) explain that financial inclusion contributes to the achievement of various sustainable development goals through increasing people's access to economic resources. When individuals have access to adequate savings, credit, and payment services, they have a greater ability to engage in productive activities and improve their quality of life. Therefore, financial inclusion is one of the instruments that can strengthen economic development in the long term.

Koomson et al. (2020) found that access to formal financial services can reduce the level of economic vulnerability of people. Individuals who have better access to finance tend to be better prepared to face various economic risks because they have the means to save, obtain financing, and manage financial needs more effectively. This condition contributes to increasing the economic resilience of the community while supporting the creation of more sustainable development.

The relationship between financial inclusion and sustainable development is also explained by Buckley et al. (2019) who stated that financial inclusion is one of the main pillars in supporting the achievement of the Sustainable Development Goals (SDGs). According to them, an inclusive financial system can increase people's economic participation, expand business opportunities, and strengthen overall economic stability. Thus, financial inclusion has a strategic role in creating more inclusive and sustainable development.

The role of digital technology in supporting sustainable development is further strengthened by the OECD (2021) which emphasizes that digital finance can improve the efficiency of economic resource allocation. The use of financial technology allows

the distribution of services and financing sources to be carried out more quickly and on target. In addition, financial digitalization can also increase transparency and accountability in various economic activities so as to support the creation of a more sustainable economic system.

Similar findings were also submitted by the United Nations (2023) which places financial inclusion as one of the supporting factors for achieving the SDGs. Access to financial services allows people to increase economic productivity, obtain better job opportunities, and strengthen household economic resilience. Therefore, the development of an inclusive financial system is an important part of efforts to realize sustainable development.

From a digital economy perspective, the relationship between FinTech, financial inclusion, and sustainable development forms an interrelated mechanism. Arner et al. (2020) explain that digital financial transformation can accelerate the achievement of development goals through increased access to finance and economic efficiency. As people gain wider access to digital financial services, the opportunity to increase productive economic activity is also greater.

Chueca Vergara and Ferruz Agudo (2021) added that FinTech innovation has strategic value in supporting sustainable development because it is able to create efficiency, expand access to finance, and increase economic productivity. In the long run, the combination of the development of financial technology and increased financial inclusion can result in an economic system that is more adaptive to change and better able to create inclusive growth.

Based on these findings, it can be concluded that financial inclusion has a significant contribution to sustainable economic development. Increasing access to financial services not only strengthens people's economic activities, but also supports the achievement of broader development goals. Therefore, FinTech development and the expansion of financial inclusion need to be seen as an integral part of sustainable economic development strategies in the era of digital transformation.

5. | DISCUSSION

The results show that digital financial transformation has a significant role in increasing financial inclusion and supporting sustainable economic development. This finding is in line with the views of Buckley et al. (2019) who place FinTech as one of the strategic instruments in expanding access to financial services while supporting the achievement of sustainable development goals. Through the use of digital technology, various obstacles that have been limiting people's access to financial services can be reduced, so that public participation in the formal economic system becomes wider.

The findings of this study also strengthen the argument of Sahay et al. (2020) that the development of FinTech has created new opportunities to improve financial access for groups of people who were previously unreachable by formal financial services. The digitization of financial services allows the transaction process to take place faster, more efficiently, and more flexibly so that it is able to answer the various limitations

contained in the conventional financial system. Thus, FinTech not only functions as a technological innovation, but also as a means to improve the equitable distribution of economic access.

From the perspective of financial inclusion, the results of the study show that increasing access to financial services contributes to strengthening people's economic activities. These findings support the research of Khan et al. (2022) who stated that financial inclusion has a positive relationship with various sustainable development indicators. Access to savings, financing, and digital payment services allows individuals and business actors to increase their productive capacity so that they are able to participate more actively in economic activities. These conditions ultimately contribute to improving welfare and reducing economic disparities.

Furthermore, the results of this study show that the relationship between FinTech and sustainable development does not occur directly, but through mechanisms to increase financial inclusion. These findings are an important contribution because they answer one of the research gaps found in various previous studies. Most previous studies have tended to examine the relationship between FinTech and financial inclusion or between financial inclusion and economic growth separately (Ozili, 2023). This research shows that financial inclusion acts as a bridge that connects digital financial transformation with the achievement of more inclusive and sustainable economic development.

The results of the study also indicate that the development of the digital financial system has broader implications than just improving transaction efficiency. OECD (2021) explains that digital finance can increase the effectiveness of economic resource allocation and strengthen the quality of development. In this context, expanding access to finance through digital technology can create new economic opportunities, increase productivity, and strengthen people's economic resilience in facing various social and economic challenges.

In addition, the research findings support the United Nations report (2023) which places financial inclusion as one of the important elements in achieving the Sustainable Development Goals (SDGs). Access to formal financial services enables communities to increase economic capacity, expand business opportunities, and reduce vulnerability to economic risks. Therefore, FinTech development followed by increased financial inclusion can be an effective strategy to support more sustainable development.

The results of this study reinforce the view of Chueca Vergara and Ferruz Agudo (2021) that FinTech innovation has strategic value in encouraging sustainable economic development. The novelty of this research lies in the preparation of a conceptual framework that integrates the relationship between FinTech, financial inclusion, and sustainable economic development in one interrelated flow. Thus, this research provides a theoretical contribution that can enrich the digital economy literature as well as become a basis for policy formulation oriented towards more inclusive and sustainable economic development.

6. | CONCLUSION

Digital financial transformation has become one of the important factors driving changes in the modern economic system. The development of Financial Technology (FinTech) provides greater opportunities for people to gain access to various financial services more easily, quickly, and efficiently. Through the digitalization of financial services, various barriers that previously limited people's access to the formal financial system can be minimized so that financial inclusion can be improved more broadly. The results of the study show that FinTech has a significant contribution in expanding access to finance, improving transaction efficiency, and strengthening public participation in formal economic activities. The increase in financial inclusion resulting from the development of financial technology not only has an impact on the financial sector, but also has a positive influence on economic development more broadly. Better access to financial services allows people to increase productivity, expand business opportunities, better manage economic risks, and improve their well-being in a sustainable manner.

The study also shows that the relationship between FinTech and sustainable economic development takes place through increased financial inclusion as a key mechanism. Thus, financial inclusion acts as a link that explains how digital financial transformation can contribute to the creation of more inclusive and sustainable economic growth. These findings reinforce the importance of developing a digital financial ecosystem that is able to reach all levels of society. This study emphasizes that the integration between FinTech, financial inclusion, and sustainable economic development is a relevant approach in supporting economic development in the digital era. Therefore, strengthening digital financial innovation and expanding access to finance needs to be encouraged as part of an inclusive, adaptive, and sustainable economic development strategy.

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Conflict of Interest Statement

The authors declare that there is no conflict of interest.

Ethical Approval and Originality Statement

Ethical approval was obtained for this study. The manuscript represents original work and has not been previously published, nor is it under consideration by another journal.

Data Disclosure Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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