



DEVELOPMENT OF FINTECH AS A CATALYST FOR FINANCIAL INCLUSION: A PATHWAY TO POVERTY REDUCTION

Muallif: Ibragimova Farangiz Aybek qizi ¹

Affilyatsiya: University of World Economy and Diplomacy ¹, PhD student ¹

E-mail: mrsfarangiz.ibr@gmail.com ¹

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ABSTRACT

This extended scientific article investigates the role of financial technologies (fintech) in alleviating poverty, focusing on how fintech innovations—such as mobile money, digital payments, peer-to-peer lending, and microfinance platforms—contribute to financial inclusion and economic empowerment. Through a detailed analysis of fintech's impact on traditionally underserved populations, the paper addresses how these technologies improve access to financial services, reduce transaction costs, and enhance financial literacy. Regulatory challenges, financial literacy gaps, and the digital divide are also critically assessed. Finally, it highlights fintech's role in achieving the United Nations' Sustainable Development Goals (SDGs) with a special focus on low- and middle-income countries.

Key words: financial technologies (fintech), poverty reduction, financial inclusion, mobile money, peer-to-peer lending, financial literacy, economic empowerment, digital divide, regulatory frameworks, economic development, SDGs, digital finance.

INTRODUCTION

Financial technologies (fintech) have emerged as a critical tool for achieving financial inclusion, particularly in low- and middle-income countries (LMICs). The rapid digitalization of financial services, driven by advances in mobile connectivity and internet access, has revolutionized the way people engage with the financial sector. Fintech encompasses a broad range of financial services, including mobile banking, digital payments, online lending, and blockchain technologies, all of which contribute to providing essential financial services to those who have historically been excluded from the formal financial system.

According to the World Bank, as of 2022¹, approximately 1.4 billion adults remain unbanked globally, with a disproportionate number of them residing in rural and impoverished areas. Lack of access to formal financial services limits their ability to save, invest, or secure loans, creating a cycle of economic exclusion that perpetuates poverty. Fintech is increasingly recognized as a powerful tool for disrupting this cycle by enabling greater financial access through innovative technologies.

¹ World Bank Global Findex Database (2022)

In addition to promoting financial inclusion, fintech has the potential to enhance economic development by reducing transaction costs, providing tailored financial products, and improving financial literacy. Mobile money platforms, for example, have enabled millions of previously unbanked individuals to access basic financial services, while peer-to-peer lending and crowdfunding platforms have expanded credit opportunities for micro and small enterprises.

Despite significant progress, poverty remains a pervasive challenge, with over 700 million people worldwide living on less than \$2.15 a day. Global poverty reduction was dealt a severe blow by the COVID-19 pandemic and a series of major shocks during 2020-22, causing three years of lost progress. Low-income countries were most impacted and have yet to recover. In 2022, a total of 712 million people globally were living in extreme poverty, an increase of 23 million people compared to 2019². Access to financial services is a critical factor in breaking the cycle of poverty, yet approximately 1.4 billion adults remain unbanked, unable to save, invest, or access credit to improve their livelihoods. Fintech offers a powerful solution to this problem by extending financial inclusion, lowering transaction costs, and providing tailored financial products to those traditionally excluded from the financial system.

This article aims to provide a detailed exploration of how fintech contributes to poverty reduction and financial inclusion. We will explore the key themes of accessibility, cost reduction, financial literacy, regulatory frameworks, and the digital divide. Additionally, the study investigates the role of fintech in achieving specific Sustainable Development Goals (SDGs) related to poverty, economic growth, and inequality.

Understanding the role of fintech in poverty reduction is essential for both policymakers and financial institutions. As the world increasingly moves toward digital solutions, identifying the mechanisms through which fintech can be leveraged to promote financial inclusion and economic empowerment is crucial for sustainable development. The findings from this research will contribute to the growing body of knowledge on digital finance and its impact on global poverty alleviation efforts.

This paper adopts a multi-faceted approach, relying on both qualitative and quantitative data to assess the impact of fintech on poverty reduction. Data sources include reports from international financial institutions (such as the World Bank and International Monetary Fund), fintech industry reports, academic literature, and case studies of fintech initiatives in various countries.

Financial technology (fintech) has significantly increased accessibility to financial services, particularly in regions where traditional banking infrastructure is lacking. By the end of 2023, 5.6 billion people (69% of global population) subscribed to a mobile service, representing an increase of 1.6 billion people since 2015³. Growth in mobile internet penetration has been even faster. At the end of 2023, 58% of the world's population used mobile internet, equating to 4.7 billion users – an increase of 2.1 billion since 2015. However, the usage gap remains: 3 billion people live in areas covered by mobile broadband networks but do not use mobile internet. Addressing the usage gap

² The World Bank's Poverty and Shared Prosperity Report 2022. www.worldbank.org

³ GSMA. (2024). The Mobile Economy Report 2024

is crucial to closing the digital divide, thereby unlocking the benefits of life-enhancing applications beyond communication, including digital finance.

The impact of mobile connectivity is evidenced by its contribution to the economy. In 2023, mobile technologies and services generated 5.4% of global GDP, a contribution that amounted to \$5.7 trillion of economic value added, and supported around 35 million jobs⁴.

Fintech has played a transformative role in increasing access to financial services. Mobile money platforms such as M-Pesa in Kenya, for example, have successfully bridged the gap for millions of unbanked individuals. According to GSMA's Mobile Economy Report 2024, 5.6 billion people globally subscribed to a mobile service by the end of 2023. This includes a significant portion of previously unbanked populations, especially in Sub-Saharan Africa, where traditional banking infrastructure is sparse.

Moreover, mobile internet penetration is also accelerating, with 4.7 billion people using mobile internet by the end of 2023. The significance of mobile technology cannot be understated; mobile phones serve as the primary channel through which many low-income individuals access financial services. The report from GSMA further suggests that mobile money has become a key driver of financial inclusion in regions with limited access to traditional banking.

Case Study: Mobile Money in Sub-Saharan Africa

In Sub-Saharan Africa, mobile money has become the cornerstone of fintech-driven financial inclusion. M-Pesa, launched in Kenya in 2007, has evolved into a major financial ecosystem, enabling users to send and receive money, pay bills, and even secure small loans⁵. By 2022, M-Pesa had over 50 million users across Africa, facilitating transactions worth billions of dollars annually.

The success of M-Pesa has inspired similar initiatives in other countries. For example, MTN Mobile Money and Orange Money have replicated M-Pesa's model, contributing significantly to the expansion of financial services in Uganda, Tanzania, and other regions. According to the World Bank's Global Findex Database (2021)⁶, the use of mobile money accounts in Sub-Saharan Africa has grown exponentially, with more than 21% of adults now using mobile money as their primary financial service.

Another key factor enabling financial inclusion is the development of digital identity systems. Digital identity allows individuals to prove their identity online, enabling access to financial services. Programs such as India's Aadhaar system, which assigns a unique 12-digit identification number to every citizen, have proven effective in increasing financial inclusion⁷. According to a World Bank report, Aadhaar has enabled over 80 million Indians to open bank accounts, receive government benefits, and access financial services securely.

One of fintech's most significant contributions to poverty reduction is the reduction of transaction costs. Traditional banking systems often impose high fees for basic services, such as transferring money or making payments, which

⁴ GSMA. (2024). The Mobile Economy Report 2024

⁵ 2023 Mobile Industry Impact Report: Sustainable Development Goals, GSMA, 2023

⁶ World Bank. (2021). The Global Findex Database 2021

⁷ Reserve Bank of India (RBI). (2022). Project Financial Literacy: Empowering Rural India.

disproportionately affects low-income individuals. Fintech, by contrast, offers more affordable and efficient solutions.

Digital payments, particularly through mobile money, have drastically reduced transaction costs for users in LMICs. According to the IMF's 2023 Financial Access Survey⁸, mobile-based financial transactions cost, on average, 60% less than equivalent services provided by traditional banks. Peer-to-peer lending platforms, such as Kiva, have also disrupted traditional lending models by offering lower interest rates and more flexible terms, enabling small enterprises and individuals to access affordable credit.

Peer-to-peer (P2P) lending platforms and microfinance initiatives have become crucial elements of fintech's impact on poverty alleviation. These platforms allow individuals and small businesses to access credit without the need for traditional financial intermediaries. Kiva, one of the largest P2P lending platforms, has facilitated over \$1.6 billion in loans to underserved communities worldwide.

In the context of microfinance, platforms such as Tala and Branch have pioneered mobile-based microloans, particularly in Africa and Southeast Asia. These platforms use alternative data, such as mobile usage patterns and social media activity, to assess creditworthiness, bypassing traditional credit scoring mechanisms that often exclude low-income individuals. This approach has significantly expanded access to credit in regions where formal banking systems are either unavailable or prohibitively expensive.

Role of Fintech in Promoting Financial Literacy

Financial literacy is a key component of financial inclusion, as it empowers individuals to make informed decisions about their financial lives. Many fintech platforms are increasingly incorporating educational components, offering users tools to manage their finances, understand interest rates, and budget their expenses.

Digital platforms such as Khan Academy, in partnership with financial institutions, offer free courses on personal finance, saving, and investment. Similarly, mobile money providers often incorporate financial literacy into their platforms. For example, M-Pesa's interface includes easy-to-understand language and tutorials that help users understand how to manage their accounts and make informed financial decisions.

In Asia, fintech platforms have partnered with local governments and NGOs to promote financial literacy among low-income populations. In India, the Reserve Bank of India (RBI) has collaborated with fintech companies to launch Project Financial Literacy, which provides financial education to underserved rural communities via mobile platforms. The program has reached millions of Indians, helping to bridge the knowledge gap that often prevents individuals from accessing formal financial services.

The Role of Governments in Fintech Regulation

Governments play a critical role in enabling or hindering the growth of fintech. Effective regulatory frameworks are essential for ensuring that fintech innovations can scale while protecting consumers and maintaining financial stability. In many countries, regulatory sandboxes have been established to allow fintech startups to test their products in a controlled environment, fostering innovation while mitigating risks.

Countries like the United Kingdom and Singapore have been at the forefront of fintech regulation, creating favorable environments for fintech startups. In the UK, the

⁸ International Monetary Fund. (2023). Financial Access Survey 2023

Financial Conduct Authority (FCA) launched a regulatory sandbox in 2016, allowing fintech companies to experiment with new products under close supervision. According to a report from the FCA, 90% of companies that participated in the sandbox were able to bring their innovations to market successfully.

In contrast, regulatory environments in many LMICs remain underdeveloped. Governments often face challenges in balancing innovation with consumer protection, especially when it comes to mobile-based financial services. For example, in some African countries, mobile money transactions are taxed heavily, discouraging adoption and limiting the potential of fintech to promote financial inclusion. Additionally, the lack of a clear legal framework for P2P lending and crowdfunding in many regions has stifled innovation in these areas.

While fintech holds great promise for financial inclusion, its benefits are not evenly distributed. The digital divide—defined as the gap between those who have access to digital technologies and those who do not—remains a significant barrier to fintech adoption in many parts of the world. As of 2023, approximately 2.9 billion people still do not have access to the internet, with most of them residing in low-income countries. Bridging this divide is critical to ensuring that fintech can reach its full potential as a tool for poverty reduction. Governments, NGOs, and private sector players must work together to invest in digital infrastructure, particularly in rural areas where connectivity remains limited.

The digital divide also has a pronounced gender dimension. Women, particularly in LMICs, are less likely than men to own mobile phones or have access to the internet, limiting their ability to benefit from fintech innovations. According to the GSMA Mobile Gender Gap Report 2023, women in LMICs are 19% less likely than men to use mobile internet, a disparity that represents approximately 264 million fewer women than men online⁹.

Addressing gender disparities in digital access is critical for promoting inclusive economic development. Initiatives such as GSMA's Connected Women program, which aims to reduce the mobile gender gap, are essential for ensuring that women can participate in and benefit from the digital economy.

Being connected to mobile internet, however, is only the first step. To harness the full potential of mobile technology, individuals must engage with new and enriching online services that can accelerate social and economic inclusion. As Figure 1 shows, the proportion of mobile subscribers engaging in activities on their phones relevant to the SDGs has grown significantly since 2015, amplifying mobile's influence across several areas. These improvements are particularly important in LMICs, where access to traditional services is often lacking, especially in areas such as education and healthcare.

In 2016, the mobile industry became the first sector to commit to the 17 UN Sustainable Development Goals (SDGs), which are as follows¹⁰:

1. no poverty
2. zero hunger
3. good health and well-being

⁹ The Mobile Gender Gap Report 2023, GSMA, 2023

¹⁰ 2023 Mobile Industry Impact Report: Sustainable Development Goals, GSMA, 2023



4. quality education
5. gender equality
6. clean water and sanitation
7. affordable and clean energy
8. decent work and economic growth
9. industry, innovation, and infrastructure
10. reduced inequalities
11. sustainable cities and communities
12. responsible consumption and production
13. climate action
14. life below water
15. life on land
16. peace, justice, and strong institutions
17. partnerships for the goals

Each year since then, the GSMA has measured the impact of the mobile industry across all SDGs. In 2022, the average SDG impact score across the 17 goals was 53. This means the industry achieved 53% of its potential contribution to the SDGs – up from 33% in 2015.

The United Nations Sustainable Development Goal 1 (SDG 1) aims to eradicate extreme poverty by 2030¹¹. Fintech, by providing affordable and accessible financial services to the unbanked, contributes directly to this goal. Mobile money, digital payments, and P2P lending platforms have already lifted millions of people out of poverty by providing them with the tools to save, invest, and access credit. For example, a study by the Massachusetts Institute of Technology (MIT) found that mobile money services in Kenya lifted approximately 194,000 households out of poverty between 2008 and 2016.¹²

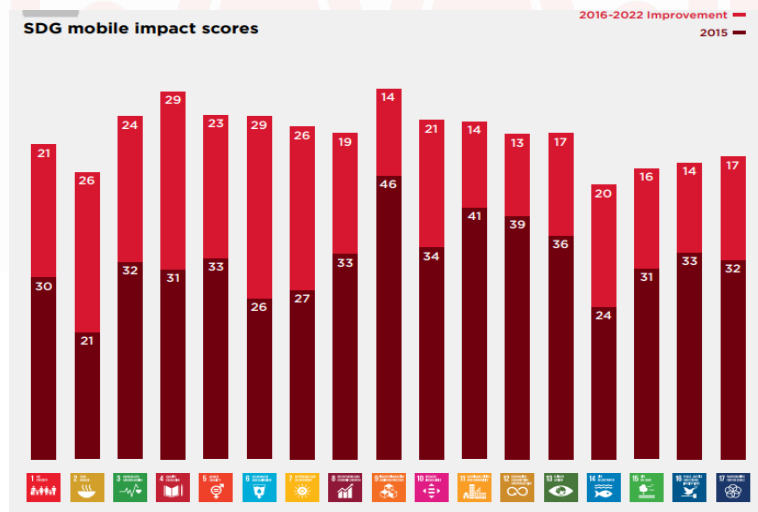


Figure 1. 2023 Mobile Industry Impact Report: Sustainable Development Goals, GSMA, 2023.

¹¹ 2023 Mobile Industry Impact Report: Sustainable Development Goals, GSMA, 2023

¹² Massachusetts Institute of Technology (MIT). (2016). Mobile Money and Poverty Reduction in Kenya



By providing a secure and convenient way to save and transfer money, mobile money services enabled households to invest in education, health, and small businesses, leading to improved economic outcomes.

Fintech also contributes to SDG 9, which focuses on building resilient infrastructure, promoting inclusive and sustainable industrialization, and fostering innovation. By enabling the digitalization of financial services, fintech helps build more inclusive financial ecosystems that support innovation and economic growth.

Mobile-based platforms for payments, savings, and credit have created new opportunities for entrepreneurs in LMICs. According to the International Finance Corporation (IFC), fintech innovations have the potential to add over \$3.7 trillion to the GDP of emerging markets by 2025¹³. This growth is driven by increased financial access for SMEs, which are often the backbone of economies in LMICs.

While it is important to recognise the mobile industry's progress on the SDGs since 2015, the average SDG impact score stalled in 2022. Following the current trajectory, the mobile industry is projected to achieve 76% of its full potential impact on the SDGs by 2030. The slowdown observed in 2022 emphasises the uncertainty ahead and the importance of accelerating the industry's contribution to the SDGs. This can be achieved by:

- ensuring continuous industry commitment to drive and scale impact on the SDGs through integrating purpose into core business
- reforming policy to support sustainable levels of investment in mobile broadband infrastructure, contributing to SDG 9: Industry, Innovation and Infrastructure, which in turn enables the industry to impact a range of other SDGs
- facilitating the use of mobile-enabled activities and scaling IoT solutions to power enterprise digitisation
- leveraging the role of the international community, UN agencies and multilateral development banks to prioritise investment in digital development
- tapping into the potential of AI, big data analytics and mobile innovation to address societal challenges.

RESULTS

The data collected and analyzed in this study underscores the profound impact that fintech has had on financial inclusion and poverty reduction. Mobile money, digital payments, P2P lending, and microfinance platforms have expanded access to financial services for millions of previously unbanked individuals, particularly in low- and middle-income countries. These technologies have not only provided new opportunities for saving and investing but have also reduced the cost of financial transactions and promoted financial literacy.

In terms of accessibility, fintech has been particularly successful in Sub-Saharan Africa, where mobile money platforms like M-Pesa have reached millions of users. The expansion of mobile connectivity has been a key driver of this success, with 5.6 billion people now subscribed to mobile services globally.

¹³ International Finance Corporation (IFC). (2021). Fintech in Emerging Markets: Opportunities for Growth

In terms of cost reduction, fintech platforms have drastically reduced the cost of financial transactions, making financial services more affordable for low-income individuals. This has been particularly important in regions where traditional banking services are prohibitively expensive.

In terms of financial literacy, fintech platforms have played a critical role in educating users about personal finance, savings, and investment. Initiatives in countries like India have helped bridge the financial literacy gap, enabling more individuals to access and benefit from financial services.

The findings from this study highlight the transformative potential of fintech in promoting financial inclusion and reducing poverty. However, significant challenges remain. The digital divide continues to limit access to fintech innovations, particularly in rural areas and among marginalized populations such as women. Additionally, regulatory challenges in many low- and middle-income countries hinder the growth of fintech, limiting its potential to reach underserved populations.

Closing the digital divide will be essential for ensuring that fintech can reach its full potential. This will require targeted investments in digital infrastructure, as well as initiatives to improve digital literacy and reduce the gender gap in access to mobile and internet services. Regulatory frameworks also need to evolve to encourage innovation while ensuring consumer protection and financial stability.

Looking ahead, fintech's contribution to achieving the Sustainable Development Goals is promising. However, further efforts are needed to ensure that these technologies reach the most vulnerable populations, particularly those in rural areas and marginalized groups such as women. By addressing these challenges, fintech can play a critical role in promoting inclusive economic development and reducing poverty on a global scale.

CONCLUSION

Financial technologies have emerged as a powerful tool for promoting financial inclusion and reducing poverty. By offering affordable, accessible, and efficient financial services, fintech has enabled millions of previously unbanked individuals to engage in the formal financial system. However, for fintech to reach its full potential, concerted efforts are needed to bridge the digital divide, promote financial literacy, and develop regulatory frameworks that foster innovation while ensuring consumer protection.

As fintech continues to evolve, it will play an increasingly important role in achieving the United Nations Sustainable Development Goals, particularly those related to poverty reduction, economic growth, and inequality. By leveraging the potential of fintech, governments, financial institutions, and international organizations can work together to promote inclusive economic development and improve the lives of millions of people worldwide.

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