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FINTECH FOR SOCIAL IMPACT: EVALUATING THE ROLE OF DIGITAL FINANCE IN POVERTY ALLEVIATION

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ABSTRACT

Objective: This study aims to evaluate the contribution of fintech in reducing poverty through economic empowerment of low-income communities by utilizing digital technology.

Research Design & Methods: This research uses a qualitative method with a systematic literature review approach to analyze fintech's contribution to reducing poverty through economic empowerment of low-income communities, utilizing data from previous literature studies.

Findings: Fintech services such as micro-lending, micro-insurance, and mobile savings can empower disadvantaged individuals, but challenges such as digital infrastructure, low financial literacy, and social risks such as debt cycles need to be addressed to achieve optimal social impact.

Implications & Recommendations: The importance of investing in digital infrastructure and financial literacy programs to improve the poor's understanding of fintech services and the need for collaboration between the government, fintech providers, and civil society organizations to formulate policies that support financial inclusion and protect consumers.

Contribution & Value Added: This research contributes to illustrating how fintech can be an effective tool in reducing poverty, improving welfare, and supporting the achievement of the Sustainable Development Goals (SDGs).

Keywords: Fintech, Poverty, Digital Services

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INTRODUCTION

Poverty remains one of the major challenges facing humanity in the 21st century. Poverty reflects limited financial resources that are often associated with health problems, the formation of adverse social groups, lack of access to recreational activities, social stigma, low living standards, economic hardship, and unhealthy diets. Therefore, alleviating poverty in various forms remains a major focus of policymakers and international organizations such as the United Nations (UN) and the World Bank. According to the World Bank (2023), poverty remains one of the biggest challenges for developing countries, with more than 700 million people living below the extreme poverty line.

There is no question that financial sector development has a significant role in poverty alleviation efforts. Financial development is considered capable of expanding the poor's access to financial services by overcoming barriers such as market failures, including information asymmetry and high borrowing costs for borrowers (Jalilian and Kirkpatrick, 2002). In addition, financial development supports the poor in using their savings or obtaining loans to start micro-enterprises. This, in turn, expands access to financial services, creates more employment opportunities, increases income, and overall contributes to poverty reduction (Naceur and Zhang, 2013). The emergence of financial technology (fintech) provides new hope in overcoming these barriers. By providing financial services through digital platforms, fintech can reach populations previously underserved by the traditional banking system. Services such as micro-lending, micro-insurance, and mobile savings have proven effective in increasing financial inclusion, especially among the poor. Research shows that fintech can help reduce economic inequality by increasing people's access to essential financial resources (Song and Appiah-Otoo, 2021).

Financial technology (fintech) eliminates the need for banks to act as intermediaries between lenders and borrowers (Abbasi et al., 2021). Through P2P lending services, lenders and borrowers can connect directly through an online platform, where lenders assess creditworthiness based on data provided by borrowers before determining their lending decisions (Guo et al., 2016). Fintech also expands opportunities for small and medium enterprises (SMEs) to obtain loans at lower interest rates (Odinet and College, 2018). In addition, fintech accelerates the credit application process, allowing borrowers to obtain funds faster, which helps SMEs utilize funds more effectively and in a timely manner (Abbasi et al., 2021). The technology also makes investment management services for SMEs more affordable, increases efficiency, and has great potential to support poverty reduction.

Adopting fintech in developing countries, including Indonesia, has positively impacted financial inclusion, especially for people who previously did not have access to banking services. This technology not only helps individuals manage their finances better but also drives local economic growth through increased small-scale economic activity. However, its implementation faces various challenges, such as low digital literacy, lack of technological infrastructure, and regulatory constraints. In addition, fintech plays an important role in women's empowerment by expanding their access to financial services and increasing economic participation. Through inclusive policy support, such as digital infrastructure development and interoperable payment systems, fintech has the potential to accelerate poverty alleviation and support the achievement of the Sustainable Development Goals (SDGs). This study aims to evaluate the contribution of fintech in reducing poverty through economic empowerment of low-income communities by utilizing digital technology.

LITERATURE REVIEW

Fintech and Financial Inclusion

Financial Technology (Fintech) is defined as technology-based innovations in financial services that aim to improve efficiency, accessibility, and affordability. Guild (2017) explains that fintech is a transformation tool that can reach people who previously did not have access to formal financial services through innovations such as digital transfers, electronic payments, and peer-to-peer lending platforms. These technologies enable marginalized populations to access financial services that were previously unavailable, accelerating the process of financial inclusion globally. Financial inclusion refers to the availability of access to formal financial services for all people, especially the poor and vulnerable. Fintech technology can strengthen financial inclusion through the development of digital infrastructure that supports services such as digital identity, integrated electronic payment systems, and inclusive digital financial markets (Buckley et al., 2019).

Fintech is a technology-based innovation in financial services that improves accessibility, efficiency, and affordability, especially for groups that are underserved by the traditional financial system, such as the poor or those living in remote areas (Demir et al., 2020). In Indonesia, fintech is playing an important role in reaching the unbanked population, especially in rural areas, although it still faces infrastructure challenges (Setiawan et al., 2021). In Asia and Africa, fintech has proven to accelerate financial inclusion through innovations such as mobile savings and e-payments (Khera et al., 2022). By overcoming traditional barriers such as high costs and geographical limitations, fintech can support inclusive development and strengthen the economic stability of underprivileged communities.

Micro-lending and Poverty Reduction

Micro-lending is defined as a financial service that provides small loans to individuals or groups that do not have access to traditional bank credit. According to Bayulgen (2007), micro-lending is an economic empowerment tool that aims to help the poor start or expand their small businesses, thereby increasing their income and quality of life. This service overcomes barriers such as lack of collateral or credit history, which often prevent the poor from obtaining formal loans. Previous research shows that micro-lending has a significant impact on poverty reduction, particularly through empowering small businesses. Research in China shows that these services help small businesses expand, increase household consumption, and create new jobs, directly strengthening the economies of poor households (Song and Appiah-Otoo, 2021). This finding is supported by the research of Hamid et al. (2011), who found that good micro-lending program design can increase the positive impact of loans on the income of poor households. However, they also note that the impact is greater on the less poor than the poorest group.

Micro-insurance for Risk Groups

Micro-insurance is a form of insurance designed to protect low-income individuals or groups from the financial risks of unexpected events such as illness, accidents, or natural disasters. It offers affordable and risk-proportionate premiums, making it accessible to at-risk groups that are often underserved by traditional insurance (Kishore S, 2016). Health micro-insurance, for example, has been shown to increase the access of the poor to affordable health services, reducing health expenditures that could push them further into poverty (Novakovic et al., 2019). In addition, these services complement social protection systems that do not yet cover the entire population in developing countries, helping informal communities better manage their financial risks (Arun and Steiner, 2008).

Although it has great potential, micro-insurance faces challenges such as high operational costs and limited access in some areas. Collaboration between the government, private sector, and non-governmental organizations is needed to improve the scalability and sustainability of this program (Loewe et al., 2002). In the long run, micro-insurance is not only a risk protection tool but also an economic empowerment tool, helping at-risk groups build financial stability and protect their assets from the impact of adverse events (Adhana, 2017). Using simple product design, public education, and service innovation, micro-insurance can be an important component of poverty reduction and social development strategies.

Mobile Savings: A Solution for Financial Management among the Poor

Mobile savings is a technology-based service that enables individuals, especially from low-income groups, to save safely and regularly using mobile devices. Mobile savings have transformative potential in improving access to financial services for the unbanked poor. The service provides a simple and accessible platform, enabling people with small incomes to save with flexible frequency and amounts (Kendall, J., and Voorhies, 2014). In addition, these services also have a significant social impact. In Kenya, mobile savings enable poor families to manage daily needs and save for long-term needs, such as children's education or the purchase of business equipment. Mobile savings provide greater flexibility and security than traditional methods, although there are still constraints, such as low levels of awareness and transaction costs (Wamuyu, 2016).

METHODS

This research uses a qualitative method with a systematic literature review approach by relying on literature analysis to explore the contribution of fintech in reducing poverty through economic empowerment of low-income communities by utilizing digital technology. The data used in this research will be drawn from relevant previous studies and recent industry reports. The research will review existing findings on fintech's contribution to poverty reduction. The results of this study will be thematically analyzed to identify relevant patterns and relationships between fintech and poverty in the economic empowerment of low-income communities by utilizing digital technology. The following are some of the findings that contain information on the contribution of fintech in reducing poverty through economic empowerment of low-income communities, summarized in Table 1.

Table 1. The findings information on the contribution of fintech in reducing poverty

No.	Authors	Insights	Methods Used
1.	(Alhassan and Jin, 2023)	- Microfinance, including microloans, micro insurance, and mobile savings, can have a positive impact on poverty levels in developing countries. However, results are mixed, with some studies showing marginal or negative success, making generalizations about its effectiveness difficult.	Critical review of existing literature Examination of empirical studies on microfinance outcomes.
2.	(AL-Maamari et al., 2022)	- Microloans, microinsurance, and mobile savings contribute significantly to poverty alleviation in developing countries by expanding access to finance, encouraging savings accumulation, and increasing economic independence, especially for women. These initiatives are instrumental in driving sustainable community progress and improving the quality of life of their users.	Discussion and review of prior research.
3.	(Saha and Qin, 2023)	- This paper shows that financial inclusion, including services such as microloans and savings, significantly reduces extreme poverty in developing countries. - These services increase household income and expenditure opportunities, thereby contributing positively to poverty alleviation among their users.	Static and dynamic panel estimation methods
4.	(Cull and Hartarska, 2023)	- Microloans, micro insurance, and mobile savings can have a positive impact on poverty alleviation by increasing financial inclusion, enabling smallholder farmers to participate in agricultural value chains, and providing essential financial services, although their success varies by region and depends on customized product design.	Descriptive qualitative method. Reality analysis in meeting customer needs.
5.	(Kimani, 2022)	- Access to microfinance loans, including home improvement financing and school fee loans, significantly improves living conditions and literacy rates, contributing to poverty reduction in developing countries.	Desk study review methodology. Review of relevant empirical literature
6.	(Abera, 2019)	- This paper specifically analyzes microcredit in Ethiopia, which shows significant short-term impacts on poverty alleviation through increased household productive assets, human capital investment, and increased family expenditure, indicating that microfinance services can effectively contribute to poverty alleviation.	Empirical analysis using a 2009 dataset from four locations in Ethiopia
7.	(Miled and Rejeb, 2018)	- Correlation of Microfinance and Poverty Reduction. Higher gross loan portfolios of microfinance institutions per capita show an association with lower poverty levels, confirming the important role of microfinance services in the economic empowerment of the poor.	Cross-sectional data analysis. Panel data analysis

No.	Authors	Insights	Methods Used
8.	(Boateng et al., 2015)	- Microfinance, including microloans, positively impacts poverty alleviation in Ghana by increasing income levels, education, family growth, and housing for beneficiaries, although it does not specifically address microinsurance and mobile savings.	Descriptive research design with case study method. Structured questionnaire for data collection from beneficiaries.
9.	(Kumari et al., 2019)	- The majority of existing studies find a positive relationship between microfinance and poverty reduction. - Several studies have found mixed or inconclusive impacts of microfinance on poverty reduction. - Most studies have focused on the impact of microcredit and micro-savings on poverty, while fewer studies have looked at the impact	Case Study
10.	(Alex and Kengere, 2023)	- Microloans, micro-savings, and micro-insurance services have a positive impact on reducing poverty by increasing financial inclusion, income, and access to health and education services in rural Rwanda.	Descriptive and analytical research design
11.	(Hamid et al., 2011)	- Micro-health insurance has a positive impact on reducing poverty in rural Bangladesh. - Micro health insurance helps low-income families access affordable healthcare, prevents financial burden, and supports the allocation of resources to productive needs that improve long-term well-being.	Cross-sectional household survey design to collect primary data

RESULT

Previous research has shown that financial technology (fintech) services such as micro-lending, micro-insurance, and mobile savings have a significant role to play in reducing poverty levels in developing countries. Micro-lending provides access to small loans that enable individuals and small businesses to start or expand their economic activities, which in turn increases household income and creates employment opportunities. Meanwhile, micro-insurance provides financial protection against risks such as accidents, illnesses, or natural disasters that are often a huge burden for the poor. On the other hand, mobile savings allow individuals to save in a safer, easier, and more flexible way, especially for those who do not have access to traditional financial institutions. These services not only support increased financial inclusion but also help low-income people manage risk, build financial security, and break the cycle of persistent poverty. The following is an analysis of related results from several relevant studies:

Microloans as a Microeconomic Booster

Micro-lending plays a crucial role in promoting macro-economic growth and reducing poverty in developing countries. Microfinance programs have been proven to increase incomes, reduce poverty, and empower women, making them an effective tool for social and economic change (Pahlevi and Suherty, 2023). In Indonesia, sharia-based microfinance institutions such as Baitul Maal wat Tamwil (BMT) have shown high effectiveness in improving the welfare of micro-entrepreneurs by providing access to capital that is difficult to reach through conventional channels. These institutions are trusted by various groups, both Muslims and non-Muslims because they uphold the principles of honesty, fairness, and kindness in every transaction made (Suaidah and Arjun, 2023).

Micro-lending has proven to be an important mechanism in empowering small business owners by providing access to working capital, allowing them to expand operations and create new employment opportunities. This financial support drives business growth and helps address economic disparities, especially in underserved communities. Research in China shows that micro-lending not only stimulates household consumption but also strengthens economic stability among the poor (Song and Appiah-Otoo, 2021). Similarly, in Indonesia, micro-lending services play an important role in addressing the financing barriers faced by small businesses, particularly those operating in the informal sector, which makes up a large part of the rural economy (Aba and Linardy, 2021). Bridging this financing gap, micro-lending contributes to broader socio-economic development, reduces poverty, and increases financial inclusion in areas that are still hard to reach by traditional banking services.

The development of micro, small, and medium enterprises (MSMEs) has a strategic role in driving national economic growth through job creation and unemployment reduction (Mulyati, 2016). One key instrument in supporting MSMEs is microloans, which have proven to be a transformative tool to address financial exclusion and empower the underprivileged. Microfinance Institutions (MFIs) provide access to finance for individuals who are not covered by the traditional banking system, thereby enabling them to engage in entrepreneurial and microenterprise activities and foster economic independence (Hamid et al., 2011). Successful programs such as Amanah Ikhtiar Malaysia (AIM) demonstrate the positive impact of microloans in improving the financial resilience and entrepreneurial activities of participants (Revindo and Gan, 2017). However, the success of microfinance depends not only on access to capital but also on adaptive program design that takes into account local socio-economic and cultural conditions. Interventions beyond financial assistance, such as ongoing mentoring, are key to ensuring optimal benefits for recipients, making micro-lending a key catalyst in supporting MSME sustainability while accelerating the reduction of economic inequality (Pahlevi and Suherty, 2023).

The implementation of microloans varies based on the local socio-economic context and institutional model, so it is important to customize this practice to make it more effective. For example, group-based lending is successful in Asia due to its social accountability, whereas Kenya favors individual loans despite the higher risk of default (Kodongo and Kendi, 2013). Microloan program outcomes vary depending on institutional design, borrower characteristics, and the economic environment, with some studies reporting significant income increases while others show minimal effects (Chliova et al., 2013). Challenges such as high interest rates and rigid repayment structures often undermine the benefits of microloans, requiring flexibility in terms of a graduated interest scale to support microentrepreneurs (Goda and Gomera, 2022). Measures such as financial literacy training and business development support are also key to success, as programs that integrate these elements tend to be more consistent in alleviating poverty (Onyeiwu et al., 2021). In addition, a comprehensive evaluation framework is needed to measure long-term impacts, including indicators such as asset accumulation, education levels, and social mobility (Bayulgen, 2007).

Micro-insurance for Financial Protection

Microinsurance is a form of insurance tailored to provide financial protection to low-income people who are vulnerable to economic risks. Coverages offered by microinsurance include life, health, accident, and property insurance, all of which aim to protect individuals and families from the financial burden of unexpected events (Uddin, 2017). Micro-insurance, including micro-takaful, is an important tool in providing financial protection for low-income people and micro-enterprises in developing countries, especially in the informal sector that is not covered by traditional insurance. With models such as Partner Agent, which involves local organizations such as fishermen cooperatives, these services can reach more individuals and provide more affordable protection (Rimawati et al., 2019). In developing countries such as India, Brazil, and Vietnam, microinsurance plays a crucial role in increasing financial inclusion and providing social protection for the poor who are often unable to access traditional insurance (Silva and Afonso, 2013; Tam and Nga, 2024; Uddin, 2017). Significant benefits of microinsurance include improving access to health services, which are often unaffordable for low-income households, as well as providing a financial safety net that enables poor households to weather economic crises without getting into debt (Dror et al., 2009).

Fintech-based microinsurance offers a much-needed financial protection solution for the poor, especially in developing countries. By providing insurance for health risks, natural disasters, or loss of income due to the death of the head of the household, microinsurance enables individuals and families to weather crises without having to sacrifice productive assets or get entangled in high-interest debt (Babar, 2023). This is particularly important as low-income communities often lack access to traditional insurance systems, which in turn hinders their ability to protect themselves from unexpected risks. Microinsurance enables them to have a sense of financial security and stability, which is fundamental to improving their quality of life.

Research in Sub-Saharan Africa shows that microinsurance not only helps individuals cope with health or disaster risks but also strengthens families' economic resilience. Microinsurance has been shown to support families in investing in education and small business development, which in turn increases economic opportunities and strengthens their ability to escape the cycle of poverty (Ediagbonya and Tioluwani, 2022). Therefore, fintech-based microinsurance plays an important role in creating a more inclusive social protection system, which provides long-term benefits to the poor by improving access to financial services and supporting better financial planning in the future.

While the benefits and coverage of micro-insurance are still limited, these programs have proven to be effective, such as ICICI Lombard's micro-health insurance in India, which provides medical expense coverage for farmers, and Takaful Ikhlas in Malaysia, which offers sharia-based products for low-income groups. However, challenges such as the inability to pay premiums require government intervention through subsidies or zakah funds to improve accessibility (Sirojudin and Midgley, 2012). Micro-insurance is increasingly recognized as a vital component of social protection systems, reducing economic vulnerability and promoting financial inclusion (Sirojudin and Midgley, 2012).

Mobile Savings for Financial Security

Digital savings platforms and mobile banking have played a significant role in improving financial inclusion and stability, especially in developing countries like Indonesia. With easy access through mobile phones, these services enable people, including women and migrant workers, to save regularly, even in small amounts, reduce reliance on high-interest informal loans, and better manage their finances. Research in Africa shows that mobile savings support productive investments and immediate needs such as health and education (Djoufouet and Pondie, 2023). In Indonesia, apps like OVO and GoPay help people plan their finances in a more structured and secure way, improve access to emergency funds, and support future planning (Rahmi, 2019). In addition, mobile banking expands access to formal financial services for women in rural areas that were previously hard to reach by conventional banks, providing them with opportunities to improve their savings habits and gain greater access to credit (Rahadiantino and Rini, 2021). The adoption of this technology shows great potential in improving the financial well-being of people who were previously marginalized by the traditional banking system.

In addition to its role in improving access to finance, fintech also strengthens the economic resilience of migrant workers' families through improved financial and digital literacy. Migrant workers who regularly send money to their families in Indonesia need their families' ability to manage these funds wisely, which can help improve their economic stability and quality of life. Mobile banking, such as BRI Mobile Banking, provides convenience through practical features that allow transactions without having to visit a physical bank, although challenges such as message charges remain a barrier for some users (Ismawanto et al., 2019). In addition to the benefits for individuals, mobile banking has also proven to strengthen the financial performance of Islamic banks, improve efficiency, and expand the competitiveness of the banking sector in serving previously underserved segments (Widyandri and Laila, 2022).

The success of fintech in expanding financial inclusion can be seen in various global practices. In Kenya, the M-Pesa platform enables the unbanked to manage basic transactions, save, and even access financial services such as micro-loans and microinsurance, significantly improving the economic resilience of rural communities (Suri and Jack, 2016). In Indonesia, GoPay has changed how informal communities access financial services, providing a quick and easy payment solution for online motorcycle taxi workers, small merchants, and communities in remote areas. Initiatives such as GoPayLater and the microloan feature not only make financial management easier but also encourage savings habits among its users (Rahadiantino and Rini, 2021). By integrating financial technology into daily life, people can reduce dependence on the informal financial system and build greater financial stability.

Adopting financial technology in areas with low levels of digital literacy faces significant challenges, ranging from limited infrastructure to a lack of public understanding of fintech services. In rural areas, these barriers are often exacerbated by perceived high service fees, low trust in new technologies, and limited regulatory support. Research in Nigeria reveals that community-based strategies can be a solution to increase understanding and trust in fintech services, particularly through education and digital literacy campaigns (Ediagbonya & Tioluwani, 2022). In addition, in the microinsurance sector, limited benefits and a small proportion of premiums are the main challenges limiting the scope of services and its attractiveness to the public as well as conventional insurers, who are concerned about the potential decline in market demand (Dror et al., 2009; Ho and Hsu, 2020).

On the other hand, mobile money services, such as in Zimbabwe, show great potential in expanding financial inclusion. However, barriers such as low digital literacy and regulations that limit the function of digital savings for investment are also obstacles (Chitimira and Ncube, 2023). Overcoming these challenges requires policies that support innovation, intensive education, and product development relevant to the community's needs. For example, improving digital literacy can help users understand the benefits of fintech services and reduce reliance on high-risk informal lending (Maireva, 2023; Tam and Nga, 2024). Taking a holistic approach involving governments, service providers, and communities, fintech can be a tool for inclusive and sustainable financial transformation in developing and developed countries (Bera, 2018).

DISCUSSION

Fintech's Positive Impact on Poverty Reduction

Financial technology (fintech) has become a significant tool in reducing poverty, especially in developing countries. By providing services such as micro-lending, mobile savings, and micro-insurance, fintech can open up access to finance that was previously out of reach for the poor. These services enable individuals and small businesses to obtain flexible credit, save money safely, and protect themselves from unexpected financial risks. Research has shown that fintech significantly helps improve the ability of poor households to meet basic needs, expand economic opportunities, and improve their quality of life. In China, for example, fintech-based micro-lending services have been shown to boost small business development, create new jobs, and increase household consumption. These impacts strengthen individual economic stability and support overall economic growth (Song and Appiah-Otoo, 2021). Utilizing digital technology, fintech enables greater financial inclusion and creates economic opportunities for people whom the traditional banking system has underserved. This makes fintech one of the strategic solutions in global poverty alleviation.

Digital Barriers to Fintech Adoption

Digital barriers are one of the biggest challenges in applying fintech to reduce poverty. While fintech provides innovative financial solutions, not all poor people have adequate access to technology. The main barrier is limited access to devices such as smartphones or computers and low internet penetration in many rural areas. This makes it difficult for most of the poor to use digital-based fintech applications, limiting the ability of such services to achieve widespread financial inclusion. In addition to limited access to technology, the low level of digital literacy among the poor is also a significant obstacle. Research shows that many individuals in rural areas lack the basic skills to operate fintech applications. As a result, they are reluctant or afraid to try these services, even though they can bring great benefits to their lives. In Sub-Saharan Africa, low digital literacy is a major barrier to utilizing financial technology, especially in rural communities with limited access to education (Ediagbonya & Tioluwani, 2022).

In addition, language barriers and the complexity of fintech app design often make it difficult for users. Many fintech platforms do not provide user-friendly interfaces or are unavailable in local languages, reducing their appeal to people with low literacy or who speak local languages. Research in Indonesia has also found that overly complex and non-localized app design is a major barrier to adopting digital financial services among the poor (Rahmi, 2019). Overcoming these barriers requires an integrated approach. The government and fintech service providers must collaborate to improve digital literacy through training programs and awareness campaigns. In addition, the design of fintech applications should be tailored to users' needs, ensuring that people with limited technological literacy can easily access the services. With these efforts, digital barriers can be overcome, and fintech can be more effective in supporting equitable financial inclusion.

On the other hand, fintech has succeeded in increasing financial inclusion through technologies such as e-wallets and digital payments, especially in the Asian and African regions. These technologies enable wider access to financial services, even for those previously underserved by traditional banks (Khera et al., 2022). In addition, fintech provides an opportunity for women's empowerment, enabling them to access financial services to support self-employment and household investments, although financial literacy challenges remain (Kulshrestha, 2023). Blockchain technology is also an important element in improving the transparency and security of fintech services, thus building better trust among users. With blockchain integration, fintech services can offer more efficient solutions to the financial needs of the poor (Shruthi, 2023). In Africa, crowdfunding is emerging as a promising innovation to support MSME funding, although internet access challenges in the region remain a major obstacle (Makina, 2019). At the MSME level, fintech in Indonesia is helping to increase access to digital financial services, although digital literacy remains a major challenge. Regulatory and infrastructure support is needed to expand fintech adoption and achieve national financial inclusion targets (Nugraha et al., 2022). With these opportunities and challenges, fintech has great potential to be a significant tool for economic and social transformation, especially if infrastructure and regulatory barriers are effectively addressed.

Infrastructure Constraints in the Use of Fintech

Poor infrastructure, especially in rural and remote areas, is one of the main obstacles to adopting fintech services. Many areas in developing countries face limited internet connectivity and access to mobile technology, making it difficult for people to utilize digital financial services. These barriers reduce the potential for fintech to reach those most in need of financial inclusion. Research shows that in Sub-Saharan Africa, infrastructure constraints such as unstable internet access and weak mobile networks are major factors hindering successful fintech adoption. This exacerbates the financial access gap between urban and rural areas (Agwu, 2020). The same is true in Indonesia, where poor internet networks in some areas reduce the efficiency of fintech services, even for those who already own digital technology devices (Rahmi, 2019). The government and private sector must invest in digital infrastructure development to overcome this obstacle, such as expanding broadband networks and strengthening internet access in remote areas. This support is crucial to ensure that fintech services can reach all levels of society so that financial inclusion can be realized evenly. In addition, collaboration between fintech service providers, telecommunication providers, and policymakers is needed to accelerate infrastructure development and expand the coverage of digital services.

Social Risks in the Use of Fintech

While fintech has brought many benefits in increasing financial inclusion and reducing poverty, its use can pose social risks, especially for more vulnerable individuals. One of the main risks is the possibility of trapping users in a cycle of debt. Many poor people who lack a deep understanding of financial management struggle to manage the loans they take out through fintech platforms. This can lead to the accumulation of debt that is difficult to repay, especially if the interest rate is high or if they fail to use the loan for productive purposes. Research shows that without adequate financial education, people who utilize fintech services such as micro-lending are at risk of financial crisis. Studies in India reveal that low financial literacy increases the likelihood of users borrowing excessively or failing to save regularly, exacerbating their vulnerability to financial risks (Babar, 2023).

In addition, individuals from more vulnerable groups, such as women in rural areas or people working in the informal sector, will likely face additional difficulties in understanding and utilizing fintech services responsibly. These social risks are often exacerbated by the lack of regulation overseeing fintech practices, such as high interest rates or hidden fees that may burden users. To mitigate these social risks, measures such as providing a comprehensive financial literacy program, strengthened regulations to protect consumers, and simple and easy-to-understand fintech product design are needed. By ensuring users understand the risks and benefits of fintech services and providing support for better financial management, fintech can become a truly inclusive and beneficial tool for people in need.

CONCLUSION

Fintech has great potential in reducing poverty through inclusive, affordable, and technology-based financial services. Services such as micro-lending, micro-insurance, and mobile savings have proven effective in empowering disadvantaged individuals, enabling them to access credit, protect themselves from financial risks, and build economic resilience through safe savings. By leveraging digital technology, fintech can open up economic opportunities for groups underserved by the traditional banking system while supporting small business growth and creating jobs. However, to achieve optimal social impact, the study also identified some key challenges that must be overcome. Digital infrastructure barriers, such as poor internet connections and limited mobile networks in remote areas, hinder the widespread deployment of fintech services. In addition, the low level of digital and financial literacy among the poor is a major obstacle to the maximum utilization of these services. Social risks, such as the potential trapping of users in debt cycles, must also be addressed through adequate education and regulation.

Promoting financial inclusion requires investment in digital infrastructure in remote areas and comprehensive financial and digital literacy programs to improve the poor's understanding of fintech services. Collaboration between the government, fintech providers, and civil society organizations is important to formulate policies that support inclusion, protect consumers, and encourage inclusive innovation. In addition, fintech service providers should ensure their apps are user-friendly and support multiple local languages. With this integrated approach, fintech can effectively reduce poverty, improve welfare, and support the achievement of the Sustainable Development Goals (SDGs).

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