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The Role of Digital Payment Systems in Economic Growth in Developing Economy

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Abstract
Digital payment platforms are changing the way money works in developing countries. They offer trustworthy, easy-to-use, and efficient options instead of just relying on cash. More people are now able to access financial services that were once out of reach, which helps them take part in the economy. This paper looks at how digital payments are helping the economy grow, especially in making informal work more formal, supporting small and medium businesses, and increasing financial transparency. By looking at recent data and examples like M-Pesa in Kenya, E-Cedi in Ghana, and UPI in India, this paper shows how these platforms are enabling more people to get involved economically. It also points out ongoing challenges such as risks to cybersecurity, a lack of digital knowledge, and poor infrastructure. The study emphasises the importance of comprehensive policies and collaboration between sectors to address these challenges and fully utilize digital payments as a driver of inclusive, long-term economic growth in emerging markets.

I. Introduction

Developing countries are seeing big changes in their financial landscapes, mainly because digital payment methods are becoming more popular. Tools like mobile money wallets instant payment options, and QRcode transactions are now key for driving economic growth and engaging communities, especially in places where traditional banking services are hard to find. These digital systems provide affordable, safe, and efficient ways to handle transactions, helping to close the gaps in financial access and open up more economic opportunities (BIS, 2024; Yagin & Sufauan, 2023).

Recent data underscores the significant impact of digital payments on economic development. According to a study, a one percent rise in the use of digital payments is associated with a 0.1 % improve in GDP per capita over a two-year period as well as a 0.06% decrease in employment in the unorganised sector (Aguilar et al., 2024). The finding highlights the role of digital payments is not only stimulating economic growth but also in formalizing economic activities. (World Bank, 2024) emphasizes the importance of digital transformation in fostering inclusive economic growth. Digital payments are a key component of the Digital Economy for Africa (DE4A) initiative which aims to digitally connect every person, company and government by 2030. Similarly, (BIS,2024) notes that fast payment systems enhance financial inclusion by providing immediate, user-friendly and cost-effective transaction methods which are particularly beneficial in regions with limited banking infrastructure.

In India, the Unified Payments Interface (UPI) is a great example of how digital payments can change the way we handle money. By January 2025, UPI had already processed more than 16.99 billion transactions, totalling Rs. 23.48 lakh crore. This shows just how popular and embedded it has become in our everyday financial habits (National Payment Corporation of India, 2025). With more people opting for digital payment options, it's clear that our economy is shifting online. This change can lower costs, increase transparency, and help financial systems operate more efficiently.

Digital payments also play a role in bringing economies into the formal sector by creating records that can be tracked, which broadens the tax base and supports better governance. According to the (BIS, 2024), using digital payments is linked to a decrease in informal work and improvements in productivity. These trends are encouraging. This indicates that digital payment systems are more than just ways to handle money; they are key to building stronger and more organized economic systems in developing countries (Crowdfund Insider, 2024; Yagin & Sufauan, 2023).

To sum it up, bringing digital payment systems into developing countries is a significant step that can greatly impact financial inclusion, economic growth, and the official recognition of economic activities. As these systems evolve, they can truly transform economic landscapes and support the journey toward more inclusive and sustainable development.

Objectives of the Study

1. To analyse the impact of digital payment systems on economic growth in developing countries.
2. To assess how digital payments contribute to financial development.
3. To examine the role of digital payments in formalizing informal economies.
4. To evaluate the challenges associated with digital payment adoption.

Research Methodology

Approach: Qualitative and descriptive analysis.
Data Source: Secondary data from scholarly journals, institutional reports (World Bank, IMF, BIS), and real-time case studies.
Analysis: Comparative analysis and synthesis of existing empirical findings and real-world case implementations.

Financial Integration and Economic Empowerment

In developing countries where large fractions of the population remain unbanked and outside the financial system, financial inclusion is still a pillar of equitable and sustainable economic growth. Emerging digital payment platforms, have greatly improved financial accessibility by providing secure, low-cost and convenient financial services to disadvantaged and isolated populations (Greenland & Toth, 2024). Such systems have allowed millions to save, borrow and transfer money securely, it is all without requiring access to traditional banking infrastructure.

The year (World Bank, 2024) records as emblematic of the exponential impact that the digital financial services industry has had toward enabling account ownership tracks toward 1 billion adults accessing their accounts electronically via mobile and internet platforms since 2011. Even M-Pesa in Kenya, as well as mobile money services in other regions, have profoundly contributed to financial inclusion and economic empowerment in sub-Saharan Africa. Mobile financial services have transformed household financial behavior, enabling greater stability for M-Pesa adopters to the point where they are better able to weather economic shocks (Chinoda & Kapingura, 2024). M-Pesa has had striking effects on poverty and women's economic autonomy by allowing better access to remittance payment and microcredit.

As of 2024, M-Pesa had over 34 million active users in Kenya alone, owing to a network of agents surpassing 300,000 service points (TechAfrica News, 2024). This level of coverage has allowed even people from rural and neglected areas to obtain the financial resources needed digitally, further bridging the inclusion gap. The platform has also contributed to fostering and sustaining the economy by adding additional services such as digital loans, saving programs, and insurance products.

M-Pesa's recent receipt of the Excellence in Financial Inclusion award at the 2024 African Fintech Summit stands as an example of growing appreciation towards advancements within the continent as well as the recognition towards their impact (TechAfrica News, 2024). M-Pesa still remains one of the foundations that fights for development and transformation on the continent by demonstrating that inclusive financing and technology can have commercial and social benefits.

Economic Formalization and Taxation

The informal economic sector which lies outside the scope of formal taxation and regulatory oversight is still predominant in the developing countries. Formal economy record and uc tax capture are aided by transactions made through digital payment systems due to the creation of traceable digital records (Aguilar et al., 2024).

By the end of 2023, UPI had gained acceptance from nearly 38 percent of individuals in rural and semi urban areas, contributing to over 75 percent of the retail industry's digital transactions (Economic Times, 2023). Increased credit access to the underserved demographic population with regions of higher UPI usage saw a 4 percent increase in loans to new-to-credit borrowers and an 8 percent increase in subprime borrower lending (Times of India, 2023). All this evidence points towards the possibility that digital UPI payment infrastructure helps reduce informal economic activity while promoting financial inclusion.

According to a study conducted by Bank for International Settlements, an increase in the use of digital payments by 1% will reduce informal employment by 0.06 percent (BIS, 2024). The formalization of informal retail payment systems through the implementation of India's UPI system which is now accounts for over 80 percent of retail transactions illustrates the impact of these digital platforms on the informal economy (Moneycontrol, 2025).

Support for SMEs and Entrepreneurial Growth

Small and medium-sized enterprises (SMEs) are crucial for innovation and employment in developing societies. However, they face problems with accessing finance and reaching customers. According to Minarni (2025), payment systems increase reliability, lower operational costs, and broaden market access.

The integration of payment systems with e-commerce and mobile banking allows SMEs to reap the benefits of the digital economy. For example, India's Unified Payments Interface (UPI) allows millions of small vendors to accept payments without expensive infrastructure which helps facilitate wider access to markets (Financial Express, 2025). UPI interoperability enables merchants to use a single UPI ID and QR codes increasing the ease of transaction and lowering the need for multiple QR codes.

Around 70% of Indian MSMEs expect to conduct over half their retail sales through UPI or other digital payment systems in the next few years (IndBiz, 2023). Not only does this shift simplify payment systems, but it also improves credit transparency, which allows access to formal credit lines, thus leading to increased entrepreneurial activities.

Case Studies

India: UPI and Digital Rupee

The introduction of the Unified Payments Interface (UPI) has revolutionized India's payment landscape and serves as a benchmark for other nations seeking to establish efficient and scalable digital payment frameworks. UPI enables instantaneous bank-to-bank transfers, with an impressive total of over 16.99 billion transactions recorded in January 2025, amounting to Rs. 23.48 lakh crore (Financial Express, 2025). This surge in digital payments is particularly notable in rural regions, where traditional banking access has been limited, highlighting the growing popularity of digital transactions.

The success of UPI can be attributed to its interoperability and user-friendly design, which allow both individuals and businesses to conduct financial transactions with ease. Furthermore, alongside UPI, the Reserve Bank of India is advancing the Digital Rupee initiative, which promotes the adoption of Central Bank Digital Currency (CBCD). This effort aims to offer a secure and stable digital currency alternative, potentially decreasing reliance on physical currency and enhancing transaction efficiency. The Digital Rupee is expected to simplify cross-border payments, mitigate inflation, and strengthen economic security, all while aligning with the government's broader objectives of financial inclusion (Aguilar et al., 2024).

Kenya: The contribution of M-Pesa to Financial Inclusion

Kanya's M-Pesa has revolutionized the financial landscape by providing millions of unbanked individuals with easy access to mobile money services. Launched in 2007, M-Pesa eliminates the necessity for a conventional bank account, enabling users to send and receive funds, pay bills, and obtain microloans directly from their mobile devices. Its affordability and user-friendly interface have significantly contributed to its widespread adoption, particularly in rural regions with limited banking facilities. As noted by (Chinoda & Kapingura, 2024), M-Pesa's innovative approach has empowered thousands to escape poverty by improving access to vital financial services and enhancing remittance flows. Furthermore, the platform has facilitated the growth of small enterprises by providing secure, cashless payment options. M-Pesa's success has not only transformed Kenya's financial ecosystem but has also paved the way for similar mobile money initiatives in other nations, such as Tanzania and Uganda, highlighting the potential of mobile payment solutions to enhance financial inclusion across the continent.

Ghana: E-Cedi for Offline Access

Ghana's E-Cedi initiative exemplifies a progressive approach to integrating digital payment systems into offline settings, particularly in a nation where internet access is often unreliable, especially in rural areas. This innovation allows for financial transactions to be conducted without the need for a stable internet connection. The Bank of Ghana has launched the E-Cedi pilot project with the aim of developing a Central Bank Digital Currency (CBDC) that facilitates exchanges both online and offline through USSD codes or SMS.

This strategy guarantees that individuals in remote locations, who may have limited or no internet access, can still engage in the digital economy (Yaqin & Safuan, 2023). The initiative is anticipated to enhance financial inclusivity by providing secure digital payment options to underserved communities, including low-income individuals and those in rural areas. The offline capabilities of the E-Cedi are expected to significantly decrease dependence on cash, enhance financial tracking, and contribute to a more resilient and inclusive economy.

Digital Payments and Economic Growth

The connection between the adoption of digital payment systems and economic growth has received considerable focus in recent years. This relationship indicates that digital payments can act as a driving force for enhancing economic performance. Research has shown that digital payments encourage economic activity by improving efficiency, boosting consumer spending, and facilitating better fiscal management.

As noted by (Aguilar et al., 2025), the broad implementation of digital payment systems significantly enhances productivity by allowing quicker and more secure transactions. This convenience encourages increased consumer spending as individuals utilize digital platforms for routine purchases and services. Additionally, digital payments lower transaction costs, which can result in greater economic output and a rise in economic formalization. This viewpoint is further corroborated by the (McKinsey Global Institute, 2024), which estimates that by 2025, the global embrace of digital finance could elevate the GDP of emerging markets by $3.7 trillion.

This figure highlights the vast potential of digital financial services to create new business opportunities, particularly in developing countries with limited access to traditional banking. The (IMF , 2024) emphasizes the impact of mobile money services on GDP growth. When effectively regulated and expanded, mobile money systems can enhance economic inclusion by offering financial services to marginalized communities. These systems also foster fiscal transparency by generating traceable and auditable records that diminish corruption risks and support improved policymaking.

As such, the growth of digital payment systems represents a key opportunity for fostering economic growth particularly in emerging economies. Government and regulators must therefore prioritize digital financial inclusion and work to overcome barriers such as infrastructure gaps, regulatory uncertainty, and digital literacy to fully capitalize on these benefits.

Challenges and Barriers

Despite the transformative potential of digital payment systems in developing economies, several significant challenges impede their widespread adoption and effective utilization:

- **Cybersecurity and Fraud Risks:** The swift growth of digital transactions has resulted in a significant increase in cybercrime. In the fiscal year 2024, the incidence of high-value cyber scams in India more than quadrupled, with losses exceeding $20 million. Fraudulent activities, including AI-driven scams and spoofing, have become widespread, highlighting the need for improved cybersecurity measures and public awareness initiatives to address these threats (Rajeshwaran et al., 2025).

- **Infrastructure and Connectivity:** Dependable digital infrastructure continues to pose a major challenge in numerous rural regions. In India, only 38% of rural users participate in digital transactions, in contrast to 65% in China. The extensive adoption of digital payments in these areas is hindered by problems such as unreliable internet connectivity, limited power supply, and inadequate point-of-sale terminals (Ali et al., 2017).

- **Digital Literacy and Trust:** The effective utilization of electronic payment methods is obstructed by a low level of digital literacy, particularly among older individuals and those with minimal formal education. Fewer than half of internet users in Africa are adept at navigating the digital landscape, emphasizing the urgent need for comprehensive digital literacy initiatives to build competence and trust (Bhatia & Khan, 2024).

- **Policy and Regulatory Barriers:** The lack of coherent and flexible regulatory frameworks can inhibit innovation and create fragmented ecosystems. In numerous developing nations, regulatory authorities struggle to keep up with the fast-paced evolution of digital financial services, resulting in gaps in consumer protection and market regulation (Putrevu & Mertzanis, 2024).

A multifaceted strategy is needed to address these issues, including infrastructure investments, extensive digital literacy programs, strong cybersecurity defences, and the creation of flexible regulatory frameworks to promote a safe and welcoming digital payment ecosystem.

Policy Recommendations

To harness the full potential of digital payments for economic development, a coordinated policy approach is essential. The following strategies are recommended:

1. **Expand Infrastructure**: Robust digital payment ecosystem rely on consistent internet access. Governments should prioritize investment in mobile and broadband infrastructure, particularly in underserved rural and semi-urban areas. This expansion will reduce connectivity gaps and enable inclusive participation in digital financial services.

2. **Strengthen Regulatory Oversight**: Establishing clear, transparent, and enforceable regulatory frameworks is critical. These should balance consumer protection especially regarding data privacy and fraud prevention with incentives for innovation. Regulatory sandboxes can be a useful tool to test new technologies while ensuring compliance.

3. **Enhance Financial Literacy**: Digital financial inclusion must go hand-in-hand with education. Nationwide awareness campaigns should be launched to improve public understanding of digital payment tools, cybersecurity and financial planning. Special attention should be paid to reaching women, the elderly and low-income populations.

4. **Promote Public-Private Partnership**: Strategic collaboration between governments, fintech companies, telecom operators and financial institutions can accelerate adoption. These partnerships can develop user-friendly platforms, streamline onboarding processes and subsidize infrastructure costs especially for SMEs and informal sector participants.

II. Conclusion

Digital payment systems have evolved from optional conveniences to essential components of economic infrastructure in developing nations. Their swift adoption is transforming the financial interactions among individuals, businesses, and governments, fostering transparency, enhancing service delivery, and integrating marginalized populations into the formal economy. By enabling efficient, cost-effective, and secure transactions, digital payment platforms improve access to credit, encourage entrepreneurial ventures, and empower Small and Medium Enterprises (SMEs), thus promoting job creation and innovation.

These systems play a crucial role in formalizing informal sectors, allowing governments to boost tax revenues and enhance regulatory oversight. The Unified Payments Interface (UPI) in India exemplifies how scalable and interoperable digital solutions can facilitate widespread economic participation. However, realizing the full potential of digital payments requires a comprehensive and inclusive strategy.

Challenges such as limited infrastructure, insufficient digital literacy, privacy and security concerns, and legislative hurdles must be addressed through collaborative efforts. Governments, regulators, fintech companies, and civil society must unite to create an ecosystem that is not only technologically sound but also fair and user-friendly. In conclusion, digital payments significantly advance sustainable development and financial inclusion. Their strategic growth offers great potential for nurturing inclusive, resilient, and innovation-driven economies.

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