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RESEARCH ARTICLE

Why The Digital Payment System Would Create Financial Stability in Sub-Sahara African Countries

Paulin Tchumtcha Wembe*

RMIT University, Blockchain Innovation HUB

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***Corresponding Author:**

pwembe@gmail.com

ABSTRACT

The payment system is a critical component of financial sector stability and inclusion. Payment systems help to maintain financial stability by reducing systemic and settlement risks, serving as a buffer against loss contagion, facilitating proper liquidity management, and effectively transmitting monetary policy. It refers to the mechanisms used to clear and settle monetary and other financial transactions. Payment systems and services that are secure, affordable, and easily accessible help to drive economic development, financial stability, and financial inclusion. Most sub-Saharan African countries' payment systems have remained unchanged since the end of Second World War. Payment remains dependent on fiat paper currency. This paper discusses how the transition from fiat paper currency to digital payment systems will improve financial inclusion, economic development, and financial stability of the country.

This paper describes how a digital payment system based on low-power Internet of Things (IoT) devices can enable financial inclusion. Transaction accounts allow people, including the "unbanked," to make and receive payments in a cost-effective manner. Payment systems also promote economic and financial development: improvements in the national payments system save the economy money, whereas efficient post-trade processing and secure securities custody benefit financial markets in Sub-Saharan African countries.

INTRODUCTION

In the dynamic landscape of Sub-Saharan Africa, the pursuit of economic stability and financial inclusivity stands as a paramount challenge. With a myriad of obstacles ranging from underdeveloped banking infrastructure to widespread cash dependency, the region grapples with achieving sustainable growth and prosperity for its populace. The myriad of obstacles has garnered significant attention in the current literature. Scholars have identified various explanatory factors contributing to this obstruction, underscoring the complex interplay of economic, political, and institutional dynamics in the region. One significant factor highlighted in the literature is the structure of the private sector (Altenburg and Drachenfels, 2008). The composition and behaviour of private enterprises influence the demand for financial services and the effectiveness of intermediation within the banking sector. Moreover, the structure and efficiency of the banking system itself have been scrutinized as crucial determinants of financial development (Moyo and Sibindi, 2020; Anarfo et al., 2019; Berg and Fuchs, 2013). Inefficient banking systems can hinder the allocation of capital and the provision of credit, constraining economic growth and development. Monetary and fiscal policy also play a pivotal role in shaping the financial landscape (Modugu and

Dempere, 2022; Ndikumana, 2016). Sound macroeconomic policies that promote stability and investor confidence are essential for fostering a conducive environment for financial development. Political and institutional instability pose significant challenges to financial development in the region (Tawah, 2022; Abubakar et al., 2020; Kagochi, 2019). Weak governance structures, corruption, and regulatory uncertainties can undermine investor confidence and deter financial intermediation. Furthermore, macroeconomic uncertainty (Obiora et al., 2022) and fluctuations in foreign capital flows (Adekunle et al., 2020; Donou-adonsou et al., 2020) add another layer of complexity to the financial development landscape, influencing investment decisions and capital flows within the region. While these contributions have shed light on the underlying factors driving the barrier in financial development in Sub-Saharan Africa, there remains a need for further research and policy interventions to address these challenges effectively. Enhancing the structure and efficiency of the banking sector, strengthening governance frameworks, and implementing sound macroeconomic policies are critical steps towards fostering a more robust and inclusive financial system that supports sustainable economic growth and development in the region. However, amidst these challenges lies a promising solution: the integration and expansion of digital payment systems. According to recent research by Anarfo et al. (2019), Haini (2019), and Anwar et al. (2020), the relationship between financial inclusion and economic growth in Sub-Saharan Africa is nuanced and multifaceted. These studies suggest that, based on six alternative financial development indicators, this relationship is both demand-following and supply-driven. In other words, financial inclusion is not solely determined by the availability of banking services but also by the demand for these services within the population. Banking, therefore, plays a pivotal role in mediating the relationship between borrowers and lenders, facilitating access to credit and investment opportunities. This underscores the importance of robust and inclusive banking infrastructure in driving economic growth and development across the region.

In recent years, technological advancements have heralded a transformative wave across the continent, offering unprecedented opportunities to leapfrog traditional barriers and foster inclusive economic growth. The adoption of digital payment systems holds particular significance, presenting a pathway towards greater financial stability, inclusion, and resilience in Sub-Saharan Africa. This article explores the multifaceted benefits of embracing digital payments, elucidating how their implementation can revolutionize the financial landscape and empower individuals, businesses, and governments alike.

HOW ARE THE PAYMENT SYSTEMS IN SUB-SAHARAN AFRICAN COUNTRIES?

It's true that the quality of payment systems in sub-Saharan Africa can vary greatly, with cash remaining the dominant form of payment for most people due to limited development in noncash alternatives. Some countries have made strides in introducing electronic payment systems such as ATMs, these systems are still not widely accessible across the region. The payment systems in Sub-Saharan African countries vary significantly depending on factors such as economic development, technological infrastructure, regulatory frameworks, and cultural preferences (Stolp et al., 2018). However, several common trends and characteristics can be observed across the region:

Mobile Money: Mobile money has emerged as a dominant payment system in many Sub-Saharan African countries, driven by the widespread adoption of mobile phones and the limited penetration of traditional banking services. Services like M-Pesa in Kenya, MTN Mobile Money in Uganda, and EcoCash in Zimbabwe have revolutionized financial inclusion by allowing users to send and receive money, pay bills, and access basic financial services using their mobile phones (AfricaNenda, 2022, Research Briefs, 2021, Kazan et al., 2016).

Agent Banking: Agent banking networks play a crucial role in extending financial services to rural and underserved communities in Sub-Saharan Africa. Agents, often local shopkeepers or entrepreneurs, act as intermediaries for cash-in and cash-out transactions, allowing individuals to deposit and withdraw money from their mobile money accounts in remote areas where bank branches are scarce (AfricaNenda, 2022).

Prepaid Cards: Prepaid cards are another popular payment method in Sub-Saharan Africa, particularly for government disbursements, social welfare programs, and employee salaries. These cards provide a convenient and secure way for recipients to access funds without the need for a traditional bank account (AfricaNenda, 2022).

Interbank Payment Systems: Interbank payment systems facilitate electronic funds transfers between financial institutions, enabling businesses and individuals to make large-value payments, settle transactions, and manage liquidity. These systems, such as Real-Time Gross Settlement (RTGS) and Automated Clearing House (ACH), are essential for facilitating interbank transactions and promoting financial stability (AfricaNenda, 2022).

Digital Wallets and Payment Apps: With the proliferation of smartphones and internet connectivity, digital wallets and payment apps are gaining traction in Sub-Saharan Africa. Platforms like Paga in Nigeria, Flutterwave in Ghana, and SnapScan in South Africa offer users a convenient way to make payments, split bills, and manage their finances using their mobile devices (AfricaNenda, 2022).

Cross-Border Remittances: Remittances from the diaspora are a significant source of income for many households in Sub-Saharan Africa. Cross-border payment platforms like WorldRemit, Western Union, and Remotely facilitate international money transfers, allowing individuals to send funds to family members and businesses across borders (AfricaNenda, 2022, Adekunle et al., 2020, Naboulsi and Neubert 2018).

Despite the progress made in modernizing payment systems across Sub-Saharan Africa, challenges such as regulatory barriers, interoperability issues, cybersecurity threats, and financial literacy gaps persist. Addressing these challenges requires collaboration between governments, financial institutions, technology providers, and regulatory authorities to foster innovation, enhance infrastructure, and promote financial inclusion and stability across the region.

MAIN PROBLEMS THAT FACE PAYMENT SYSTEMS IN SUB-SAHARAN AFRICAN COUNTRIES

Certainly, in discussing the potential for digital payment systems to create financial stability in Sub-Saharan African countries, several key problems can be addressed:

Limited Access to Banking Services: A significant portion of the population in Sub-Saharan Africa remains unbanked or underbanked due to the scarcity of physical banking infrastructure, particularly in rural areas. This lack of access restricts individuals' ability to save, borrow, and invest, hindering their participation in the formal economy (Harvey et al., 2021).

High Reliance on Cash: Cash transactions dominate the economy in many Sub-Saharan African countries, leading to inefficiencies, security risks, and limited transparency. Cash-based economies are more susceptible to issues like theft, corruption, and illicit financial activities, undermining economic stability and growth. (Siry et al., 2023, AfricaNenda, 2022)

Financial Exclusion: The absence of banking services and formal financial institutions excludes millions of people from accessing essential financial services such as savings accounts, loans, and insurance. This exclusion perpetuates poverty cycles and hampers economic development by limiting opportunities for entrepreneurship and investment (Siry et al., 2023, AfricaNenda, 2022).

Remittance Challenges: Remittances from family members working abroad are a significant source of income for many households in Sub-Saharan Africa. However, traditional remittance channels often involve high fees and lengthy processing times, reducing the amount of money received by recipients and impeding their ability to meet basic needs or invest in productive assets (Siry et al., 2023, Adekunle et al., 2020, AfricaNenda, 2022).

Fraud and Security Concerns: Traditional cash-based transactions are susceptible to fraud, theft, and counterfeit currency, eroding trust in the financial system and discouraging participation. Moreover, the lack of secure and transparent payment mechanisms inhibits economic growth by deterring foreign investment and hindering cross-border trade (Siry et al., 2023, AfricaNenda, 2022).

Addressing these challenges through the adoption and expansion of digital payment systems offers a transformative opportunity to enhance financial stability, inclusion, and resilience in Sub-Saharan Africa. By leveraging technology to overcome traditional barriers, governments, financial institutions, and private sector actors can facilitate greater access to financial services, promote transparency and accountability, and stimulate economic growth and development across the region.

How a digital payment system based on low-power Internet of Things (IoT) devices can enable financial inclusion.

A digital payment system built upon low-power Internet of Things (IoT) devices has the potential to revolutionize financial inclusion in Sub-Saharan Africa by addressing several critical challenges:

Accessibility: Low-power IoT devices can operate in areas with limited connectivity and infrastructure, reaching underserved populations in remote rural areas. By leveraging existing cellular networks or innovative connectivity solutions like LoRaWAN, these devices can facilitate financial transactions even in areas with unreliable or intermittent internet access (Chilamkurthy et al. 2022, Chui et al. 2021, Islam et al., 2018).

Affordability: IoT devices can be designed to be cost-effective and energy-efficient, making them accessible to individuals with limited financial resources. Low-cost devices coupled with efficient power management solutions ensure that the barriers to entry for adopting digital payment systems are minimized, enabling even the most economically disadvantaged individuals to participate in the formal financial ecosystem (Chilamkurthy et al. 2022, Kejriwal 2021, Islam et al., 2018).

Simplicity and Convenience: Low-power IoT devices can be designed with user-friendly interfaces and intuitive functionalities, ensuring that individuals with varying levels of digital literacy can easily navigate the payment process. Simple features such as biometric authentication or NFC (Near Field Communication) technology can streamline transactions, making them accessible to users who may not have experience with traditional banking services (Chilamkurthy et al. 2022, Islam et al., 2018).

Security: Leveraging IoT technology, digital payment systems can incorporate robust security measures to protect users' financial information and transactions. Encryption protocols, secure authentication mechanisms, and tamper-resistant hardware can safeguard against fraud, theft, and unauthorized access, building trust among users and encouraging greater adoption of digital financial services (Chilamkurthy et al. 2022).

Interoperability: Low-power IoT-based digital payment systems can be designed to be interoperable with existing financial infrastructure, including banks, mobile money platforms, and payment processors. This interoperability facilitates seamless transactions between different service providers, enabling users to access a wide range of financial services and transfer money across various channels without restrictions (Chilamkurthy et al. 2022).

Financial Literacy and Education: IoT-enabled digital payment systems can also serve as platforms for delivering financial literacy and education initiatives to underserved communities. Through interactive interfaces and educational content, users can learn about basic financial concepts, savings strategies, and responsible financial management practices, empowering them to make informed decisions and improve their financial well-being (Chilamkurthy et al. 2022, Chui et al. 2021, Islam et al., 2018).

By leveraging low-power IoT devices to build digital payment systems tailored to the unique needs and constraints of Sub-Saharan Africa, governments, financial institutions, and technology providers can accelerate progress towards greater financial inclusion, economic empowerment, and sustainable development across the region.

CONCLUSION

In conclusion, the evolution of payment systems in Sub-Saharan African countries reflects a dynamic landscape characterized by innovation, adaptation, and the pursuit of financial inclusion. Mobile money, agent banking, prepaid cards, interbank payment systems, digital wallets, and cross-border remittances have emerged as pivotal components of the region's financial ecosystem, transforming the way individuals, businesses, and governments transact and manage their finances.

While these advancements have made significant strides in expanding access to financial services and driving economic growth, challenges such as regulatory complexities, interoperability barriers, cybersecurity risks, and limited financial literacy persist. Addressing these challenges requires concerted efforts from policymakers, regulators, financial institutions, technology providers, and development partners to foster an enabling environment for innovation, enhance infrastructure, and promote inclusive and sustainable financial systems.

Looking ahead, the continued evolution of digital payment systems and integration of Internet of Things have immense potential to further accelerate financial inclusion, drive economic development, and improve the livelihoods of millions of people across Sub-Saharan Africa. By harnessing the power of technology, collaboration, and innovation, stakeholders can unlock new opportunities, bridge existing gaps, and build a more inclusive and resilient financial ecosystem that empowers individuals, fosters entrepreneurship, and drives progress towards shared prosperity and sustainable development in the region.

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