



Mobile payments in Africa

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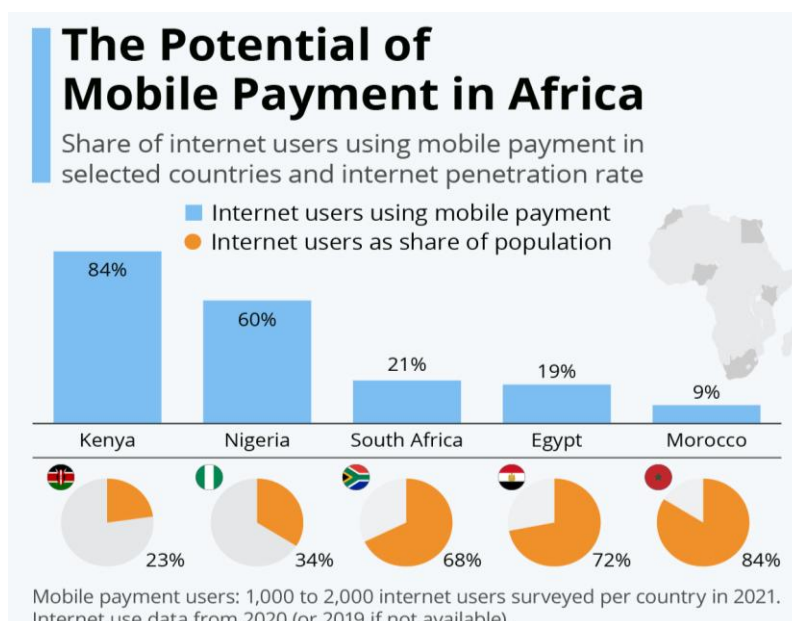
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Introduction

For over a decade, mobile payments, or mobile money, have grown rapidly in African and Asian countries, providing financial services to those outside the traditional banking system. Mobile money enables people to make transactions using their cell phones, often via SMS, transforming access to financial tools for 2 billion people globally. In 2017, the GSM Association reported 276 mobile money systems serving 690 million users worldwide.

The most notable success is Kenya's M-Pesa system, launched in 2007 [1], which handled \$35.6 billion in transfers in 2017, equivalent to 21.7% of the country's PPP. With 25 million users—nearly half of Kenya's population—M-Pesa has become essential to daily life, inspiring similar adoption in countries like Somalia, Uganda, and Tanzania [2].

Beyond convenience, mobile money improves the quality of life, offering financial inclusion and contributing to social and economic progress. Despite challenges in regulation, culture, and technology, mobile payments continue to expand, transforming millions of lives.



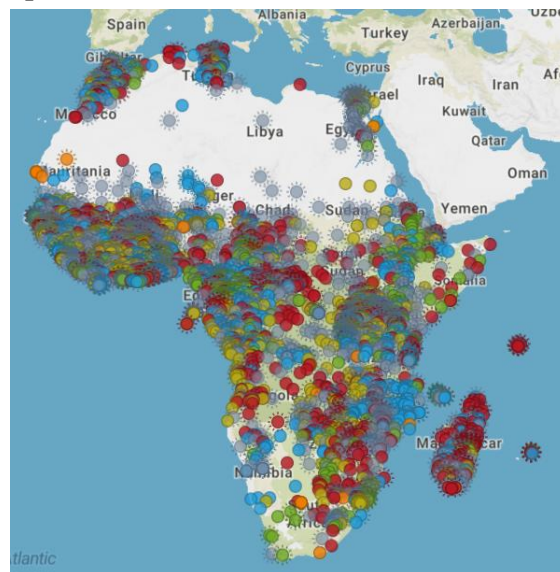
Source: <https://www.statista.com/chart/27017/mobile-payment-in-africa/>

I. Factors Contributing to the Emergence of Mobile Payments in Africa

1. Lack of access to traditional banking services

In many African countries, a large portion of the population has no access to bank accounts or fixed bank branches. According to the World Bank, in regions such as sub-Saharan Africa, more than 60% of adults remain outside the banking system [3]. For these people, mobile money is becoming an alternative, allowing them to store money and make transactions without the need for banks.

Map 1. Geographical Distribution of African Development Bank's



Source: [https://mapafrica.afdb.org/\[object%20Object](https://mapafrica.afdb.org/[object%20Object)

2. Cell phone ubiquity

Cell phone dominance is remarkably high in Africa despite limited banking infrastructure. Even in the lowest-income countries, more than half the population has cell phones. This allows mobile money services to reach a wide range of people, including in remote and hard-to-reach regions.

3. Low operating costs

Maintaining traditional banking systems involves high infrastructure and administrative costs, making them inaccessible to many people. In contrast, mobile money relies on existing telecommunications infrastructure, which significantly reduces operating costs. For users, this means lower transaction fees and greater affordability.

4. Government and international support

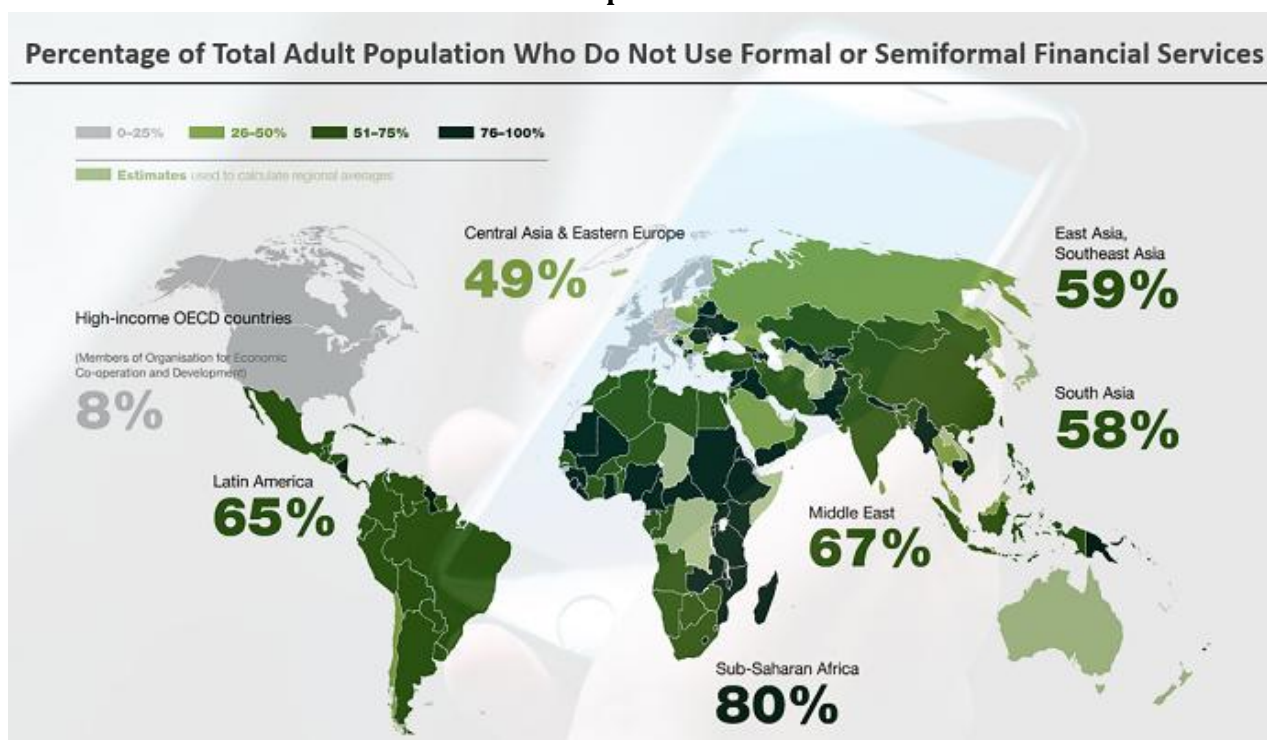
African governments and international organizations such as the World Bank and the GSM Association are actively supporting the development of mobile money systems. By investing in digital infrastructure, introducing favorable regulations, and promoting financial inclusion, they are creating an environment conducive to the popularization of these services. In Kenya, for example, the authorities have been flexible to innovative solutions such as M-Pesa, allowing them to expand swiftly [4].

5. Tailoring to local needs

In countries where a large part of the population lives in rural areas, electronic payment services avoid long trips to banks and allow people to quickly send money to family or friends. In Somalia, for example, where many people live a nomadic lifestyle, mobile payments have proven to be an ideal solution tailored to the needs of nomadic communities [5].

II. Mobile Money's major services in Africa

Map 2.



Source: <https://businessfocus.co.ug/fintech-an-access-route-to-unbanked-populations-in-africa/>

M-Pesa (Kenya)

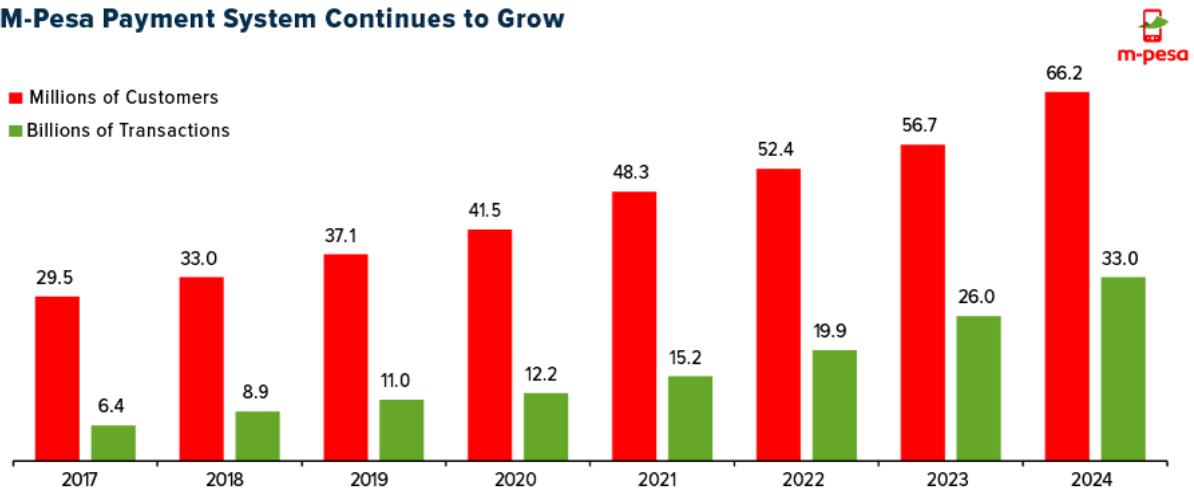
M-Pesa is the dominant mobile payment system in Kenya. In 2023, 59% of the country's GDP, equivalent to 20 billion transactions, flowed through M-Pesa [6]. Launched by Safaricom in 2007, the system initially focused on simple money transfers, quickly gaining popularity among those without access to banks [7].

One of its key successes is the Super App, which integrates mini-apps and runs on low-cost smartphones, eliminating the need to install additional programs. Fuliza's service, which allows customers to use debit when there are insufficient funds in their accounts, is also an important innovation. In 2023, \$6.4 billion passed through Fuliza, with the average transaction being around \$2 [8].

M-Pesa's success stems from adapting to local needs, working closely with regulators, and integrating competitive services into its platform. The company plans to expand further in Africa and introduce new products to meet local challenges.

M-Pesa in Africa

M-Pesa Payment System Continues to Grow



Source: <https://www.usfunds.com/resource/how-m-pesa-is-leading-a-financial-revolution-across-africa/>

M-Pesa in Kenya



Source: <https://www.semafor.com/article/10/25/2023/kenyan-businesses-are-dumping-m-pesa-mobile-money>

Vodafone Cash (Ghana, Egypt)

Vodafone Cash is a popular mobile system operating in West and North Africa. This platform enables P2P transfers (person-to-person), bill payments, and online purchases. In Ghana and Egypt, Vodafone Cash facilitates transactions in both urban and rural areas, supporting the development of local economies.

As of 30 September 2024, Vi has a subscriber base of 212.45 million, making it the 3rd-largest mobile telecommunications network in India and the 12th-largest mobile telecommunications network in the world.



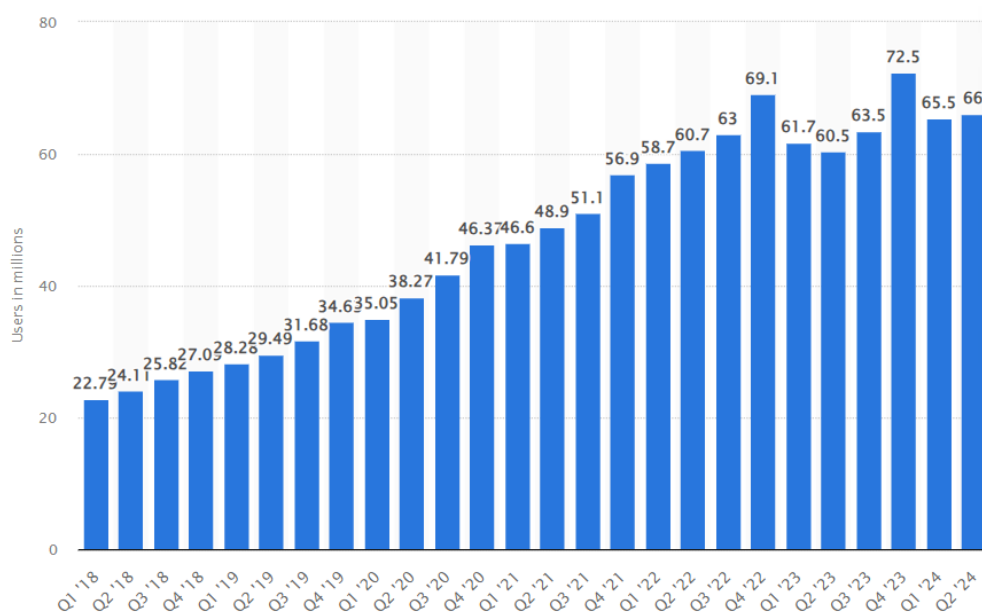
Source: <https://insidetowers.com/cell-tower-newsvodacom-leads-all-fintech-players-in-africa/>

MTN MoMo (Nigeria, Ghana)

The solution offered by MTN, which is one of the largest Mobile Money platforms in Africa, is called MoMo. MoMo operates through easy-to-use mobile apps, but also USSD codes, making the service accessible to users of basic phones [9]. In Nigeria and Ghana, the system supports small businesses by enabling fast transactions and reducing the need for cash.

As of the second quarter of 2024, there were around 66 million active users on MoMo to send and receive mobile money payments. This represents a significant increase of around half a million active users compared to the previous quarter.

Number of MTN Mobile Money (MoMo) active users from 2018 to 2024, by quarter
(in millions)



Source: <https://www.statista.com/statistics/1139539/mtn-mobile-money-active-accounts/>

Orange Money (North Africa)

Orange Money is a solution implemented by the operator Orange in many African countries, including Tunisia, Egypt, and the Ivory Coast. This platform allows for mobile payments, money transfers, and purchases in local and international online stores. It is especially valued in regions where access to traditional banking is limited.

With over 160 million customers and 37 million active Orange Money accounts across 17 countries in Africa and the Middle East, Orange's extensive reach has already proven to be a key driver of financial inclusion [10].

III. Technological innovations in mobile payments

USSD (Unstructured Supplementary Service Data)

USSD technology enables financial transactions on cell phones without requiring internet access. It is a key solution in countries such as Mauritania, Sudan, and Somalia, where most people use simple mobile devices [11]. Users enter codes (e.g., *123#) on the phone's keypad to transfer money or check balances.

NFC (Near Field Communication)

NFC technology, which allows contactless payments, is gaining popularity in major cities such as Nairobi and Lagos. It is mainly used by smartphone users and is a convenient alternative to cash in growing urban areas.

Codes QR

Payments using QR codes are particularly popular in Ivory Coast and Morocco. They enable fast and inexpensive transactions in small businesses and retail outlets. In rural regions where NFC infrastructure is not yet available, QR codes are an effective alternative.

Cryptocurrencies

Although cryptocurrencies are just beginning to enter the African market, their potential is enormous. They can support international money transfers and transactions in regions with limited access to traditional currencies. Currently, the integration of cryptocurrencies into mobile money systems is still in its early stages [12].

IV. Advantages and Challenges of Mobile Money in Africa

Advantages:

1. Increasing financial inclusion

Mobile money allows people previously excluded from the banking system to access financial services. In countries such as Kenya and Tanzania, these systems have become an everyday tool for millions of people.

2. Reduction of transaction costs

Users can save time and money by eliminating the need to visit bank branches. In Uganda, for example, mobile money saves about 12 business hours per quarter.

1. Support for small businesses

Systems such as M-Pesa and Kopo Kopo offer small businesses quick settlement and access to microcredit, which supports local economies.

Challenges:

1. Regulatory problems

In some countries, such as Egypt, administrative barriers hinder the development of mobile money systems.

2. Infrastructure dependence

In regions with poor telecommunications infrastructure, mobile money services may be less available.

3. Data Security

The increasing frequency of cyberattacks and financial fraud highlights the need for robust protective measures.

V. The Future of Mobile Money in Africa

Mobile Money in Africa has a promising future, especially with increasing access to technology and changes in regulation. Mobile payment systems are expected to continue to grow in several key areas:

1. Development of new products and services

Increasing popularity of services such as microcredit, loans, and insurance available through mobile apps, including innovative debit services (such as Fuliza in Kenya). Such services are expected to become increasingly available and expanded in the future.

2. Cooperation with international companies

Companies such as PayPal, Western Union, and Apple are becoming partners, allowing Mobile Money to further expand in international transfers and increase integration into the global financial market.

3. Expansion into new markets

After success in sub-Saharan Africa, Mobile money systems may gain recognition in other parts of the world, such as South Asia and Latin America, particularly in regions with limited banking access.

4. Increased competition and innovation

With increased competition in the market, there will be more innovations, such as near-field contactless (NFC) payments, QR codes, and integration with cryptocurrencies, which could improve users' accessibility and convenience of services.

In the coming years, Mobile Money will continue its role in promoting financial inclusion and supporting economic development in Africa.

Conclusion

Mobile payments have transformed Africa's financial landscape, offering millions of consumers without access to traditional banking the ability to save, send, and receive money. Systems such as Kenya's M-Pesa extend beyond basic transactions by providing microloans and overdraft facilities, making them essential for daily life and small business activities. By reducing reliance on cash and bringing financial services to rural and underserved areas, mobile payments have empowered individuals and boosted local economies.

The impact of mobile payments goes deeper than convenience. These systems have helped bridge the gap between urban and rural communities, given small businesses tools to grow, and created new opportunities for financial independence. These services are successful because they're affordable, easy to use, and tailored to the realities of life in Africa, where traditional banking infrastructure is often limited.

However, there are still challenges to overcome. Regulatory roadblocks, gaps in infrastructure, and security concerns need to be addressed to ensure mobile payments can grow sustainably and securely. Governments, private companies, and international organizations will need to work together to create systems that are both innovative and safe.

Looking ahead, mobile payments have a bright future in Africa. With new technologies like blockchain, NFC, and QR codes, as well as increasing collaboration with global financial players, these systems are set to become even more integrated and impactful. Mobile payments are not just a tool for financial inclusion—they're a foundation for economic growth and a powerful example of how technology can change lives.

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