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Attaining Sustainable Development Goals through Financial Inclusion: Exploring Collaborative Approaches to Fintech Adoption in Developing Economies

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Abstract: This study proposes a multi-stakeholder framework to enhance fintech use in Africa, aiming to improve financial inclusion and achieve the Sustainable Development Goals. This article analyzes past research and frameworks built to help stakeholders in developing nations adopt fintech, some of which have been tested in African states with limited success. The study recommends prioritizing national ownership, creating an enabling environment for private sector investment, partnering with multilateral development banks and other stakeholders, fostering innovation and digital literacy, and focusing on cost-effective, non-government-guaranteed financing. In accordance with the G20's High-Level Principles for Digital Financial Inclusion, a country-specific strategy can boost financial technology and digital financial services uptake in Africa. Each government may build a legislative climate that supports innovation and competition, strengthens its digital infrastructure, increases digital literacy and awareness, and collaborates with private sector stakeholders to extend financial inclusion. Partnerships with businesses, international organizations, and other nations can help The Better Than Cash Alliance (TBTCA) promote fintech adoption. Countries can use fintech companies to build and implement national digital payment infrastructure by joining the Alliance. Finally, the mSTAR program advises cooperating with USAID to promote marginalized people, incorporate digital financial services, increase public–private engagement, and educate and train policymakers, practitioners, and technologists. These ideas can help African governments adopt fintech products faster and enhance financial inclusion.

Keywords: fintech; financial inclusion; maximizing finance for development; the G20 high-level principles for digital financial inclusion; mSTAR; developing countries; sustainable development goals

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1. Introduction

The Sustainable Development Goals (SDGs) provide a framework for addressing poverty, hunger, gender inequality, and climate change, which are some of the world's most critical concerns [1]. Because Africa faces such formidable development obstacles, these goals are particularly significant there. Significant investments in infrastructure, education, healthcare, and job creation are needed to accomplish the SDGs in Africa, as well as targeted initiatives to support the most vulnerable people. However, the success of these actions largely relies on having a sound financial system. Just as a strong foundation provides support for structures, a functioning financial system acts as the backbone by channeling resources and facilitating efficient allocation. By making financial services more widely available and affordable, fintech contributes significantly to alleviating poverty, advancing sustainable agriculture and food security, expanding access to healthcare, advancing gender equality, and facilitating the use of clean energy across Africa.

Nevertheless, Africa's financial system exhibits weaknesses from its levels of financial exclusion. This is primarily due to banks reluctance to establish branches in neighboring African countries, especially in rural areas [2,3]. Currently highlighted by [4] over 40% of Africa's population remain unbanked—an indication that a significant portion of individuals lacks access to financial services. The author also surprisingly found that a staggering 90% of transactions throughout the continent still heavily depend on cash based methods. This continued reliance on cash transactions and the exclusion of a portion of the population from the financial system highlights the urgent necessity for increased efforts towards enhancing financial inclusion in Africa.

In this scenario, financial inclusion emerges as an approach to help Africa achieve its development goals and meet the targets set by the Sustainable Development Goals (SDGs). By ensuring that everyone regardless of their location or financial status has access, to quality financial services we can use financial inclusion as a powerful catalyst for positive change. In this regard, financial technology (fintech) is seen as a tool to advance inclusion across Africa. Arner et al. [5] argues that financial technology (fintech) is the key driver for financial inclusion, which in turn underlies sustainable balanced development, as embodied in the UN Sustainable Development Goals (SDGs). It has the potential to reduce poverty support agriculture and food security improve healthcare access promote gender equality and encourage the adoption of energy solutions.

However, despite the progress in banking and online lending platforms in Africa that have extended financial services to underserved populations, there are still obstacles to overcome, such as a lack of regulations, inadequate investment in fintech infrastructure, and a lack of coordination between fintech startups and traditional financial institutions. If fintech is to promote financial inclusion and contribute to Africa's progress towards the Sustainable Development Goals, these obstacles must be overcome. This is in tune with [5] which suggest that, the full potential of fintech to support the SDGs may only be realized with a progressive approach to the development of underlying infrastructure to support digital financial transformation.

The sector for digital payments has expanded more quickly as a result of smartphones' rising popularity and the spread of technology. Due to health rules that include prohibitions on physical contact during the COVID-19 pandemic, fintech makes it possible for customers to acquire financial services more quickly and effectively than traditional businesses [6].

Fintech adoption optimization can increase the financial access to traditional financial institutions, especially for vulnerable populations like the unbanked population, which is primarily concentrated in rural areas away from traditional financial institutions [7]. It is impossible to overstate the potential of fintech to promote financial inclusion in developing economies [8].

Amidst the SDGs' objectives, financial inclusion and the potential of financial technology (fintech) to drive economic growth have garnered significant attention. However, there remains a dearth of comprehensive studies focusing specifically on fintech adoption strategies tailored to the African context. The central research question of this study is: How can we suggest effective and contextually relevant fintech adoption strategies to foster financial inclusion in Africa, and thereby contribute to the continent's progress towards the SDGs? In response to this gap, our research is dedicated to exploring and analyzing fintech adoption strategies developed by prominent institutions like the World Bank Group and other reputable authors, with a particular focus on their relevance and applicability in Africa.

To achieve the research objective, the research followed an approach that involved the following methods:

(i) *Literature review*; beginning with an extensive review of the existing literature to gather information about fintech adoption strategies, policies, and frameworks proposed by reputable authors and organizations like the World Bank Group. This review allowed us to identify studies, reports, and academic papers that shed light on fintech adoption initiatives in various regions particularly in developing countries such as Africa.
(ii) *Analytical review*; to assess the suitability and applicability of fintech adoption strategies, the study will then conduct an analysis of the approaches suggested in the literature. This analysis is conducted in order to be able to suggest how they can be applied in the African context.

2. Literature Review

2.1. SDG and Financial Inclusion

The Sustainable Development Goals (SDGs) are a collection of objectives developed by the United Nations to eradicate poverty, protect the environment, and guarantee that everyone lives in peace and prosperity. These objectives address a wide range of topics, including promoting economic growth and addressing social issues for the greater good [9–12]. Simply put, sustainable development seeks to prevent major resource depletion or destruction that might harm future generations who would depend on those resources [13], while all countries are expected to make progress towards the SDGs, some regions, like Africa, face unique challenges.

The SDGs particularly relevant to Africa include:

1. **SDG 1—No Poverty**: Some of the world's poorest countries can be found in Africa, and the continent as a whole has a poverty rate that is higher than any other region;
2. **SDG 2—Zero Hunger:** Due to the negative effects of the COVID-19 epidemic, hunger, which was already a serious issue in Africa, has worsened. The United Nations estimates that over two hundred and fifty million people in Africa are undernourished.
3. **SDG 3—Good Health and Well-being**: Since many rural areas in Africa lack even the most fundamental medical facilities, with the World Health Organization stating that Africa bears the heaviest load of avoidable disease worldwide [14].
4. **SDG 5—Gender Equality**: As women in Africa are more likely to be poor, experience gender-based violence, and be excluded from political and economic decision-making, according to the United Nations (UN) [15,16].
5. **SDG 6—Clean Water and Sanitation**: As over four hundred million people in Africa lack access to basic sanitation facilities, and over two hundred million people having no access to clean water [17]; and
6. **SDG 7—Affordable and Clean Energy**: Because as of 2020, over five hundred and eighty million Africans do not have access to electricity, and many more rely on traditional biomass for cooking and warmth (International Energy Agency).

In order to make progress on the SDGs in Africa, it will be necessary to adopt a strategy that is specific to the continent and its issues.

The idea of financial inclusion is to ensure that everyone has access to affordable and essential financial services within the formal financial sector. By providing equal opportunities for people to access crucial financial services, it aims to promote inclusion [18,19]. This is particularly important in sub-Saharan African (SSA) countries, where conventional banking systems have often been characterized as underdeveloped, risk-averse, concentrated in urban areas, and excluding the less privileged [20–22]. The system has specifically shown reluctance or an inability to reach significant populations that are considered "under/unbanked", leading to non-monetized and less productive economic sectors [2,23,24].

According to the World Bank Group (2018), financial inclusion has the potential to play an essential role in helping Africa reach the SDGs. It is especially crucial if it provides people who are often excluded from traditional financial systems with access to affordable financial services such as payment and remittance facilities, savings accounts, loans, and insurance services [3]. Demirgüç-Kunt and Klapper [25] also found it to be a critical component in enabling households to smooth consumption and cope with financial shocks, which can help address concerns related to finance.

Although 7 out of the 17 Sustainable Development Goals (SDGs) have been highlighted as being enabled by financial inclusion, according to the World Bank, authors like [21] claim that only 4 of the SDGs, including 1—Poverty, 2—Hunger, 5—Gender Equality, and 8—Decent Work and Economic Growth, are directly impacted by inclusive financial services, while the impact on other SDGs is less obvious. However, a summary of the contribution of financial inclusion to SDGs attainment is presented in Table 1.

Table 1. Expected impact of financial inclusion on Sustainable Development Goals.

Goals	Descriptions	Expected Impact of Financial Inclusion
SDG 1	No poverty end poverty in all its forms everywhere	Access to financial services by all, especially the poor and vulnerable by 2030; this will help them smooth consumption and accumulate assets
SDGs 2	No hunger—end hunger, achieve food security and improved nutrition, and promote sustainable agriculture	Access to financial services should double the agricultural productivity and incomes of small scale producers by 2030
SDGs 3	Good health and wellbeing—ensure healthy lives and promote well-being for all at all ages	Reduce delays in seeking medical services and advice for members of the household; reduce poverty-related stress and depression in households
SDGs 5	Gender equality—achieve gender equality and empower all women and girls	Reforms must be undertaken to give women equal rights to economic resources and access to finance in particular
SDGs 8	Decent work and economic growth—promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all	Strengthen the capacity of domestic financial institutions to encourage and expand access to banking, insurance and financial services for all

Source: [3].

According to several research findings, financial inclusion significantly influence the fight against poverty. A 2007 study by Beck, Demirguç-Kunt, and Levine found that financial development was responsible for 60% of overall income growth, with around 40% of the growth benefiting the poorest quintile, thus reducing income disparity. This highlights the critical role that financial inclusion plays in promoting economic growth and enhancing the income prospects of society's most vulnerable citizens. Financial inclusion helps to reduce poverty and encourages a more fair distribution of wealth by providing access to financial services and opportunities for saving, investing, and risk management [3]. To demonstrate the beneficial effects of financial inclusion on the reduction in poverty and income inequality [26–29] provide strong data from India, Malawi, Kenya, and Indonesia, respectively. These studies show that efforts to reduce poverty have been significantly aided by increasing access to financial services in rural areas, such as through the establishment of remote banking locations and improved financing options. Financial inclusion has enabled people and businesses in rural areas to improve their economic well-being by providing financial resources and opportunities to previously underserved groups. Additionally, it has helped bridge the divide between various societal groups, resulting in reduced income disparity and more inclusive economic growth.

In solving hunger issues, financial inclusion has provided farmers with access to financing, insurance, and other financial services, enabling them to adopt new technologies and techniques that boost agricultural output and reduce the likelihood of crop failures, thus contributing to the solution of hunger problems [30]. Increased financial access, particularly through commitment savings accounts in rural Malawi, has positively impacted the well-being of low-income households, as shown in a 2011 study [27]. These households were able to increase their farm output due to this financial inclusion project, which led to increased productivity and economic stability. Similarly, a study carried out in Ghana in 2014 by [31] demonstrated that farmers with access to insurance were able to significantly enhance their farming methods. They could invest more in fertilizers, expand the size of their farming operations, hire more workers, and ultimately increase crop yields and income.

Expanding women's access to banking and other economic opportunities can also help advance gender parity in Africa. Previous research indicates that women in developing nations are more likely than men to be independent contractors, thus necessitating a greater demand for access to financial services [32]. Research from several countries also shows that having access to financial services increases the proportion of household income that women control, whether through their own work or cash transfers [33], which encourages more women to become entrepreneurs, increases their family spending on healthcare and education, and gives them a greater voice in public policy [33,34].

Financial development plays a crucial role in providing the essential financial support for economic growth and development. Financial institutions optimize resource allocation and improve economic development processes through their market-oriented operations [35,36]. They enable companies to acquire the resources they need to grow operations, invest in innovation, and create employment opportunities by efficiently channeling funds to productive areas.

The World Bank emphasizes that an inclusive financial system is crucial for promoting effective resource allocation and providing individuals with the tools they need to overcome various challenges related to stability, equitable resource distribution, poverty reduction, and sustainable developments [37]. An inclusive financial system fosters economic stability and progress by ensuring that a wide range of people and businesses have access to financial services. It helps individuals overcome financial barriers and improve their quality of life while also promoting a more equitable allocation of resources. Encouraging financial inclusion can also enhance a country's efforts to reduce poverty and work towards achieving long-term sustainable development goals, thereby developing a diverse financial ecosystem that generates more job opportunities and improves the national economy [35].

Various studies have investigated financial inclusion and its effects on job creation, economic growth, and development, including works by [32,38–45].These studies collectively support the significance of financial inclusion in achieving Sustainable Development Goals (SDGs) and driving sustainable economic growth.

However, despite the importance of financial inclusion towards SDG attainment, the continent still lags behind other continents, with fewer than one adult out of every four having access to a formal financial institution account [46]. This highlights the ongoing challenges in achieving comprehensive financial inclusion in Africa.

2.2. SDGs, Financial Inclusion, and Fintech

The use of financial technology, or "fintech", to increase financial inclusion and advance SDGs in Africa is becoming increasingly important. Fintech's ability to simplify and reduce the cost of financial services is one way it can help more people gain access to these services. The World Bank reports that there are already more than 400 million mobile money accounts in use worldwide, with a significant portion located in sub-Saharan Africa [47]. By making it easier for people with low incomes and small businesses to save, borrow, and make payments, fintech can help expand access to the financial system [48]. Mobile banking, in particular, enables serving more customers at a lower cost as it eliminates the need for expensive physical infrastructure like bank branches and ATMs [49].

Fintech and financial inclusion are not independent objectives; they are essential tools for furthering sustainable development. The various ways that fintech for financial inclusion can directly or indirectly support the relevant Sustainable Development Goals (SDGs) are highlighted in Table 2. By utilizing these tools, we can work towards addressing the numerous social, economic, and environmental issues stated in the SDGs, ultimately creating a more sustainable future.

Table 2. How FT4FI could further the United Nations Sustainable Development Goals.

Goals	Descriptions	Impact: Direct = D/Indirect = I	How FT4FI Can Further Goals
SDGs 1	No poverty	I	Allow for online financing, including credit and crowdfunding; create new income opportunities through online markets and payments; reduce impact of disasters with local impact
SDGs 2	Zero hunger	I	Enhance financial stability; stabilize cash flows through saving and lending
SDGs 3	Good health and well-being	I	Provide health insurance and financial stability
SDGs 5	Gender Equality	D	Strengthening female entrepreneurship and financial controls
SDGs 8	Decent Work	D	Allow for online financing, including credit and crowd-funding; create new (online) income opportunities; ensure funding and use symmetry (long-term for long-term projects, short-term for short-term projects)

Source: [50].

Economies are encouraged to prioritize the creation of policies for digital financial transformation, with a specific emphasis on the role of fintech in promoting financial inclusion, in order to effectively address the challenge of reaching the Sustainable Development Goals [50]. Recognizing the importance of fintech in tackling this crucial question enables economies to explore cutting-edge solutions to improve access to financial services, thus advancing the overall SDG agenda. This strategy acknowledges the potential of digital financial transformation to promote sustainable development and provides economies with a mechanism to successfully tackle this challenging task.

Despite the growth in fintech adoption in Africa, there are challenges that must be overcome. These include the lack of regulation, which can create uncertainty and increase the risk of fraud [51], the need for greater collaboration between fintech companies and traditional financial institutions [52], and the requirement for greater investment in fintech infrastructure to ensure that fintech services are accessible to more people, particularly in rural areas [53].

This study aims to suggest several frameworks that can be used to further enhance fintech adoption, with the ultimate goal of improving financial inclusion and aiding in the attainment of the SDGs in Africa. By addressing these challenges and implementing effective frameworks, economies can harness the potential of fintech to drive financial inclusion and sustainable development in the region.

Despite the abundance of studies in Africa related to the SDGs and financial inclusion, there is a lack of research specifically focusing on the intersection of SDGs [11,54–56], SDG and financial inclusion [3,31,35,41,43–45,57,58], while there are some studies in this area, such as [5], which may not be directly applicable to Africa, and [59], which only focuses on mobile money, there is a need for more comprehensive and collaborative frameworks that consider all aspects of fintech.

Huet [60] highlights the significant contribution of the private sector to the development of digital technology in Africa, while the governmental sector has played a role in spreading digitization across the continent, the involvement of private businesses has been crucial in fostering innovation, investment, and sustainable growth.

Ladipo [61], emphasizes that it is now widely recognized that achieving the Sustainable Development Goals requires collaboration and shared responsibilities among developing nations, development organizations, and the private sector. In order to effectively work towards the SDGs, these paths emphasize the necessity for shared obligations, commitments, and contributions.

This study aims to propose collaborative frameworks that consider the role of fintech in advancing financial inclusion and achieving the SDGs in Africa. By involving both the private sector and other stakeholders, these frameworks can foster innovation, investment, and sustainable growth in the region.

3. Collaborative Approaches to Improve Fintech Adoption

To achieve its financial inclusion and sustainable development goals, Africa must adopt fintech through a multi-stakeholder approach. Organizations have built a wide variety of frameworks and models to support this strategy. In this paper, we'll look at a few possible strategies for increasing the adoption of fintech across Africa.

i. **The World Bank Group's Maximizing Finance for Development (MFD) approach:** The World Bank Group's strategy for promoting the long-term economic development of poor nations is called "Maximizing Finance for Development" (MFD) [62]. The Hamburg Principles outline the collective approach of MDBs (Multilateral Development Banks) to attract private sector financing for growth and sustainable development, and MFD is a key aspect of this endeavor that was agreed upon at the G20 level [63]. In addition to emphasizing the need for national ownership, the principles call for prioritizing commercial finance and pursuing cost-effective, non-government-guaranteed financing, as well as contributing to the most efficient use of limited public resources. Low-income, fragile, or conflict-affected countries can benefit greatly from the MFD strategy. The availability and applicability of private solutions may vary from country to country and industry to industry. World Bank [33] states that reforms in these nations will center on establishing markets and institutions capable of attracting and managing private capital, so that projects can be undertaken with a manageable level of risk. Without this preparatory work, many of these countries will continue to be denied access to the private finance choices available to more developed nations. Cameroon, Cote d'Ivoire, Egypt, Indonesia, Iraq, Jordan, Kenya, Nepal, and Vietnam are among the nine countries where the World Bank Group is testing out the MFD strategy after clients there asked for private sector solutions to progress crucial development initiatives [33].

- **MFD strategy:** To apply this strategy to improve fintech adoption in other African countries, governments and stakeholders in the private sector could take the following steps:
    1. Prioritize national ownership: As emphasized in the Hamburg Principles, national ownership is critical for the successful implementation of the MFD strategy. African governments should take ownership of the financial inclusion agenda and develop policies that enable private sector involvement in fintech adoption.
    2. Create an enabling environment for private sector investment: Governments can create an enabling environment for private sector investment by implementing reforms that promote transparency, the rule of law, and a stable macroeconomic environment. This will help attract private sector capital to the fintech sector.
    3. Partner with multilateral development banks (MDBs) and other stakeholders: MDBs like the World Bank Group can provide technical assistance, financing, and policy advice to support fintech adoption. Governments can also collaborate with other stakeholders in the private sector, such as fintech companies and investors, to promote innovation and increase access to financial services.
    4. Foster innovation and digital literacy: African countries can foster innovation in fintech by supporting research and development, encouraging entrepreneurship, and promoting digital literacy. This will help create a pipeline of new fintech products and services that meet the needs of underserved populations.

5. Focus on cost-effective, non-government guaranteed financing: As highlighted in the Hamburg Principles, the MFD strategy prioritizes cost-effective, non-government guaranteed financing. African countries can explore innovative financing mechanisms, such as blended finance and impact investing, to mobilize private sector capital for fintech adoption.

ii. **The G20's High-Level Principles for Digital Financial Inclusion:**
According to [64], the G20 is in a unique position to promote digital financial services and spur the growth of inclusive economies. Two billion adults around the world are left out of the economic mainstream because they lack access to formal banking services. Despite significant progress in this area, the remaining gaps can only be closed with the help of digital financial services and effective supervision, enabled by digital technology.
SDGs 2016 further revealed that initial initiatives and policy actions were sparked by the 2010 G20 Principles for Innovative Financial Inclusion. Building on that accomplishment, the 2016 High-Level Principles for Digital Financial Inclusion will help countries develop action plans tailored to their specific needs and circumstances to fully realize the opportunities presented by digital technologies [64].
Governments and business sector stakeholders in Africa might consider the following measures to apply these efforts and boost fintech adoption:

1. Create a strategy that fits your country's needs and situation: Utilize the G20's High-Level Principles for Digital Financial Inclusion as a starting point to create policies and programs in Africa that encourage the widespread adoption of financial technologies and broaden access to these services.
2. Promote a regulatory climate conducive to fintech growth and innovation: Strengthen oversight and consumer protections by establishing clear norms and standards for digital financial services. African governments can develop an enabling regulatory environment that encourages innovation and competition.
3. Boost people's ability to access digital infrastructure like mobile networks and payment systems: Digital infrastructure is essential for the smooth operation of digital financial services. To extend the availability of fintech services across Africa, governments might seek to improve connectivity in unserved regions.
4. Increase digital literacy and awareness: Low levels of digital literacy and awareness are barriers to fintech adoption in many African countries. Governments and other stakeholders can use education and outreach programs to increase digital literacy and awareness, especially among marginalized communities.
5. Promote public–private collaborations: Collaborate with fintech companies, investors, and other private sector stakeholders to increase access to financial technology and expand financial inclusion. By working together, African governments and the private sector can better meet the needs of underserved communities.

By implementing these measures, African countries can harness the potential of digital financial services to drive inclusive economic growth and bridge the gap in financial inclusion for their populations.

iii. **The Better Than Cash Alliance's Accelerating Digital Payments:**
The Better Than Cash Alliance is a United Nations-based coalition of countries, businesses, and international organizations working together to accelerate the adoption of secure digital payment systems as a means of advancing the Sustainable Development Goals [65]. The alliance includes notable contributors such as the Bill & Melinda Gates Foundation, Citi, Ford Foundation, MasterCard, Omidyar Network, USAID, and Visa Inc., and it is hosted by the United Nations Capital Development Fund [66].
To implement the Better Than Cash Alliance's strategy and increase the use of financial technologies in other African nations, the following steps can be taken:

1. Form partnerships: African nations can collaborate with businesses, international organizations, and other countries to accelerate the transition to safe digital payment systems. This partnership approach will provide additional resources and knowledge to the effort of increasing fintech adoption.
2. Join the Better Than Cash Alliance: Any country interested in the objectives of the alliance can become a member. By joining, countries can receive support in implementing ICT for financial services, including technical assistance, best practices, and other resources to facilitate the transition to digital payment systems.
3. Enact supportive regulations: Governments can implement rules and regulations that facilitate the introduction of digital payment systems. By expanding access to financial services and creating a conducive environment for fintech enterprises to thrive, countries can encourage the widespread use of digital payment methods.
4. Promote awareness and education: Raising financial awareness and educating the public about the benefits of digital payment methods will encourage more people to adopt these technologies. Governments can run campaigns to inform citizens about the advantages and safety of using digital payment systems.
5. Develop national digital payment infrastructure: African countries can collaborate with financial technology firms to design and implement robust national digital payment infrastructure. This partnership will bring in expertise and resources from the private sector, resulting in better and more efficient payment options for the population.

By implementing these measures, other African nations can accelerate their journey towards a cashless economy, increase financial inclusion, and contribute to the achievement of the Sustainable Development Goals.

iv. **The United States Agency for International Development's (USAID) Mobile Solutions Technical Assistance and Research (mSTAR) project:**
mSTAR
FHI 360 [67] describe mSTAR as a mechanism utilized by USAID, being a mechanism utilized by USAID, is a versatile approach to promote the rapid adoption and scale-up of digital technologies in various development sectors, including health, education, food security, and civil society. Its goal is to increase access to and utilization of mobile technology for underserved communities, NGOs, government agencies, and businesses, in collaboration with USAID's implementation partners. FHI 360 [67] also states that mSTAR operates in three interconnected areas of research:

1. Digital Finance: The advent of digital finance enables instant, secure, and transparent electronic payments from anywhere in the world, even with just a cell phone. Branchless banking models, made possible by the widespread availability of mobile phone technology, are extending financial services beyond the traditional banking system, offering opportunities for the 2.5 billion unbanked individuals worldwide to take control of their finances.
2. Data Useful in Making Choices: Mobile data tools empower decision-makers to continuously improve their initiatives by assessing what works and what does not. The collection and analysis of data through mobile technologies aid in evidence-based decision-making.
3. Digital Inclusion: Providing access to technology forms the foundation for transformational products and services. mSTAR assists USAID in financing innovative mobile data demonstration cases intended for scale, revising policy and contract language to incorporate mobile data solutions into USAID programs, and enhancing learning on mobile data among USAID staff and implementers.

Through conferences and workshops for USAID staff, practitioners, and technologists, mSTAR promotes the appropriate and effective use of mobile technologies in development (M4D). It aims to create partnerships that foster enabling policy and regulatory environments, develop new business models, and provide relevant local content, making technology accessible to underserved populations.
Several countries are participating in this initiative, each with specific focus areas:

- Bangladesh: Shifting payment flows from cash to electronic with the support of more than 50 implementing partners from USAID's health and agriculture portfolios.
- Mozambique: Introducing the mVacciNation application in partnership with Vodafone and GAVI to improve data capture, patient compliance, and supply chain efficiency for vaccines using mobile phones.
- Burma: Demonstrating the integration of digital financial services (DFS) into the agriculture sector by evaluating and supporting policy through USAID to local DFS actors.
- Liberia: Pioneering the adoption of a mobile money system to facilitate safe money transfers to government workers, reducing the need for them to make lengthy trips to banks and enhancing overall efficiency.

By leveraging mobile technologies, mSTAR aims to contribute to the achievement of development goals and foster inclusive economic growth in participating countries. The mSTAR initiative and its guiding principles can indeed be used to increase the use of financial technologies in other African nations in the following ways:

1. Collaborate with USAID: African nations can partner with USAID and its implementing partners to advance the use of digital technology across various economic sectors. USAID can provide financial support, knowledge, and technical assistance to countries that require assistance in adopting financial technologies.
2. Focus on digital inclusion: Governments can prioritize providing support to underrepresented populations, including women, rural communities, and people with disabilities, by giving them access to technology, training, and relevant information. By increasing digital literacy and expanding access to digital technologies, countries can create an environment conducive to the adoption of fintech solutions.
3. Incorporate digital financial services (DFS): Countries can evaluate and support policies that facilitate the integration of digital financial services into various sectors such as agriculture, healthcare, and government services. By updating policies and contract language to include mobile data solutions in national programs, countries can accelerate the adoption of fintech solutions.
4. Promote public–private collaboration: Governments can encourage collaborations between the public and private sectors on research and development, policymaking, and implementation of fintech solutions. By forming partnerships with businesses, NGOs, and INGOs, countries can help marginalized communities gain access to technology and accelerate their fintech adoption.
5. Educate and train stakeholders: Countries can organize conferences, workshops, and training programs to educate policymakers, practitioners, and technologists on how to effectively use mobile technologies in development. By sharing expertise, best practices, and lessons learned, countries can speed up the global adoption of fintech solutions and increase their own capacity in this area.

By implementing these strategies and embracing the principles of the mSTAR initiative, African nations can unlock the transformative potential of financial technologies and leverage them to advance their development goals and promote inclusive growth.

4. Conclusions and Recommendations

The study aimed to propose collaborative approaches between the government and private sector to improve fintech adoption for the purpose of enhancing financial inclusion, which will also boost the attainment of the SDGs in Africa. In conclusion the use of fintech, in Africa has a lot of potential to promote inclusion and contribute to economic development in the region. The strategic frameworks proposed by organizations like the World Bank Groups Maximizing Finance for Development (MFD) the G20s High Level Principles for Digital Financial Inclusion and the Better Than Cash Alliance provide opportunities for African nations to leverage technologies and achieve their development goals.

To effectively implement the MFD approach African governments and private sector stakeholders need to collaborate in order to encourage innovation improve literacy and foster entrepreneurship. It is also important for them to seek assistance and policy advice from development banks and other partners. The G20 principles offer a chance for African countries to promote financial services and bridge the gap in access to formal banking systems thus fostering inclusive economies. Establishing partnerships and creating a supportive regulatory environment are crucial steps towards harnessing the transformative power of fintech in Africa.

The Better Than Cash Alliance has emerged as an initiative that brings together countries and businesses with a goal of accelerating secure digital payment systems adoption and enhancing financial inclusion. Joining this alliance offers resources and expertise in transitioning towards payment systems. Governments can play a role by creating regulations that enable systems while also promoting awareness about digital payment methods, through education campaigns ultimately driving their widespread adoption.

The mSTAR project, by USAID, plays a role in promoting technologies and ensuring that underserved communities have access to them. Through collaboration with USAID and its partners valuable resources and technical support are provided to replicate initiatives in African countries. By prioritizing marginalized populations and encouraging literacy nations can effectively utilize technologies and make substantial contributions to sustainable development.

In essence embracing these frameworks and working together can accelerate the adoption of fintech, in Africa enhance inclusion and contribute significantly to achieving the Sustainable Development Goals. By harnessing the potential of technologies African nations are well positioned to shape a prosperous future and foster inclusive and sustainable economies throughout the continent.

The practical implication of the study will be that, by implementing the suggested collaborative approaches into practice, governments, regulators, fintech firms, and development organizations will be encouraged to collaborate, share resources and expertise, and work towards common goals. By doing this, they will be better able to take advantage of one another's strengths and effect real change in promoting financial inclusion and achieving the SDGs.

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