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Achieving Sustainable Development Goals through Financial Inclusion: Collaborative Approaches to Fin-Tech Adoption in Developing Countries

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Abstract: This research suggests a multi-stakeholder framework to increase the use of fintech in Africa, which would help the continent boost its financial inclusion and reach its Sustainable Development Goals (SDGs). The study evaluates previous research and frameworks that have been created to aid in the adoption of fintech by several stakeholders in developing nations, some of which have been tested in African nations with limited success. To begin with, the study suggests the use of the World Bank's Maximising Finance for Development (MFD) approach through the prioritization of national ownership, creation of 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 the same vein, in line with the G20's High-Level Principles for Digital Financial Inclusion, the adoption of financial technologies and digital financial services in Africa can be promoted through the creation of a country-specific strategy. Each government can create a regulatory environment that encourages innovation and competition, improve its digital infrastructure, increase its digital literacy and awareness, and collaborate with private sector stakeholders to expand financial inclusion. Furthermore, The Better Than Cash Alliance's strategy to increase fintech adoption can also be implemented through partnership with businesses, international organizations, and other nations. By joining the Alliance, countries can enact rules and regulations that facilitate fintech adoption, promote awareness and education, and design and execute national digital payment infrastructure with the help of fintech companies. Finally, the mSTAR initiative suggests collaborating with USAID, in order to provide support to underrepresented populations, incorporate digital financial services, increase public-private collaboration, and educate and train policymakers, practitioners, and technologists. By implementing these strategies, African nations can accelerate the adoption of fintech solutions and increase financial inclusion.

Keywords: fin-tech; financial inclusion; Maximizing Finance; Digital Financial Inclusion; The Better Than Cash Alliance; mSTAR; developing countries; Sustainable Development Goals

1. Introduction

The Sustainable Development Goals provide a framework for addressing poverty, hunger, gender inequality, and climate change, some of the world's most critical concerns. 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 are targeted initiatives to support the most vulnerable people. Financial inclusion requires that all people and businesses, regardless of their geography or financial standing, should have equal access to high-quality financial services. This strategy has the potential to be an instrumental factor in helping Africa achieve the SDGs. In order to help low-income households and small enterprises save, borrow, and make payments, financial technology, or fintech, has been suggested as a viable instrument for attaining financial inclusion. 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.

Mobile banking and online lending platforms are two examples of fintech that have seen explosive growth in Africa in recent years, helping to bring financial services to previously unbanked and underbanked people. From 2% in 2010 to 21% in 2017, mobile money usage in sub-Saharan Africa has skyrocketed, and the region is expected to execute over $495 billion in transactions in 2020. Alternative credit scoring models are used by online lending services like Branch and Tala to instantly extend credit to borrowers. There are still obstacles to overcome, however, 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.

In order to help Africa improve its financial inclusion and ultimately reach the SDGs, this research intends to offer some comprehensive multi-stakeholder frameworks that could boost fin-tech adoption there.

2. Literature Review

2.1. SDG and Financial Inclusion

The Sustainable Development Goals 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 lowering social issues for the greater good [1–4]. Simply put, sustainable development seeks to prevent major resource depletion or destruction that might harm future generations who would depend on those resources [5]. 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; **No Poverty**, as some of the world's poorest countries can be found in Africa, and the continent as a whole has a poverty rate that's higher than any other region; Due of the COVID-19 epidemic, an already serious issue in Africa—**zero hunger**—has become even worst in that, the United Nations estimates that over two hundred and fifty million people in Africa are undernourished; **Good Health and Well-being**, since many rural areas in Africa lack even the most fundamental medical facilities, with the World Health Organisation stating that Africa bears the heaviest load of avoidable disease worldwide [6]. **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) [7]. **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 [9]; and **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 ensuring that everyone has access to cheap, fundamental financial services in the formal financial sector. By giving everyone the same chance to gain access to crucial financial services, it seeks to advance inclusion [10,11]. This is especially important in the sub-Saharan African (SSA) countries where the conventional banking systems in sub-Saharan African (SSA) countries have often been characterised as underdeveloped, conservative in taking risks, situated in cities, and excluding the less privilege [12–14]. The system has specifically demonstrated reluctance

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or an inability to reach the significant populations that are regarded as "under/unbanked," leading to non-monetized and less productive economic sectors [15–17].

According to the World Bank Group (2018), financial inclusion has the potential to play an important role in helping Africa reach the SDGs. It may be essential especially if it gives people who are frequently shut out of traditional financial systems access to cheap financial services like payment and remittance facilities, savings accounts, loans, and insurance services [19]. Demirgüç-Kunt and Klapper [20] also found it to be a critical component in allowing households to smooth consumption and cope with financial shocks which can assist solve the concerns related to finance.

Although 7 out of the 17 Sustainable Goals have been highlighted as being enabled by financial inclusion, according to World Bank, authors like [13], claimed 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, although 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 Inclusion4
SDGs 1	No poverty e 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 e 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 to ensure healthy lives and promote wellbeing 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 e 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 to 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: [19]

According to research, financial inclusion significantly and favourably affects the **fight against poverty**. According to a 2007 study by Beck, Demirguç-Kunt, and Levine, financial development was responsible for 60% of overall income growth, with around 40% of the growth going to the poorest quintile by reducing income disparity. This underlines 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 granting access to financial services and possibilities for saving, investing, and risk management [19]. In order to demonstrate the beneficial effects of financial inclusion on the decrease of poverty and income inequality [21–24] further give strong data from India, Malawi, Kenya, and Indonesia, respectively. These studies show that attempts to reduce poverty have been significantly aided by increasing access to financial services in rural areas, such as through the construction of remote banking locations and improved financing options. Financial inclusion has enabled people and businesses in rural areas to enhance their economic well-being by supplying financial resources and possibilities to previously underserved groups. Additionally, it has aided in bridging the divide between various societal groups, resulting in lessened income disparity and more inclusive economic growth.

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In solving **hunger issues**, financial inclusion gave farmers access to financing, insurance, and other financial services, so they can engage in new technology and techniques that boost agricultural output and lessen the likelihood of crop failures, thereby contributing to the solution of hunger problems [25]. Increased financial access, particularly through commitment savings accounts in rural Malawi, has positively impacted the wellbeing of low-income households [22]. These households were able to increase their farm output because to this financial inclusion project, which increased productivity and economic stability. In a similar vein, study carried out in Ghana in 2014 showed that farmers who had access to insurance were able to significantly enhance their farming methods [26]. They were able to spend more money on fertilisers, increase the size of their farming operations, hire more workers, and increase crop yields and income.

By expanding women's access to banking and other economic opportunities, it can also help advance **gender parity** in Africa. According to earlier research, women in developing nations are more likely than men to be independent contractors, necessitating a greater demand for access to financial services [32]. Research from a number of nations also shows that having access to financial services raises the proportion of household income that women control, whether through their own work or cash transfers [18], which encourage more women to become entrepreneurs, increase their family spending on healthcare and education, and give them a greater voice in public policy [18,28].

The provision of the essential financial support for **economic growth and development** is made possible in large part by financial development. Financial institutions aid in resource allocation optimisation and improved economic development processes through their market-oriented operations [29]. It enable companies to acquire the resources they need to grow operations, invest in innovation, and generate employment opportunities by effectively channeling funds to productive areas.

The World Bank asserts that an inclusive financial system is essential for promoting effective resource allocation and providing people with the tools they need to overcome various challenges to stability, equitable resource distribution, poverty reduction, and sustainable development [30]. An inclusive financial system promotes economic stability and progress by ensuring that a wide range of people and enterprises have access to financial services. It helps people get past financial obstacles and improve their quality of life while also promoting a more equitable allocation of resources. Countries can also improve their efforts to reduce poverty and work towards achieving long-term sustainable development goals by encouraging financial inclusion. This emphasises the need for developing a diverse financial ecosystem that gives people more jobs and improves the national economy. Thus, Jia, *et al.* [29] argues that, engaging excluded populations with informal financial services including security savings practises, credit and payment, insurance and pension, and other financial services can effectively accomplish sustainable economic growth. Other studies that investigate financial inclusion and their effects on job creation, economic growth and development can be found in [31–39]. Although one may conclude that, the significance of financial inclusion towards SDG attainment cannot be over emphasized, the continent still lagged behind other continents, with fewer than one adult out of every four does not have access to a formal financial institution account [40].

2.2. SDGs, Financial Inclusion and Fintech

The use of financial technology, or "fintech," to increase financial inclusion and advance SDGs in Africa is growing in importance. Fintech's ability to simplify and lower the price 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 around the world, with a large share located in sub-Saharan Africa [41]. By making it easier for people with low incomes and small enterprises to save, borrow, and make payments, this technology can help expand access to the financial system [42]. Serving more customers at a lesser cost is made possible by mobile banking since it eliminates the need for expensive physical infrastructure like bank branches and ATMs [43].

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FinTech and financial inclusion are important tools for furthering sustainable development; they are not independent objectives. The various ways that FinTech for financial inclusion can directly or indirectly support the relevant SDGs are highlighted in Table 2. By utilising these tools, we may work to address the numerous social, economic, and environmental issues stated in the SDGs in order to create a sustainable future.

Table 2. How FT4FI Could Further the United Nations Sustainable Development Goals.

Goals	Descriptions	Impact: Direct=D /Indirect=I	Expected Impact of Financial Inclusion4
SDGs 1	No poverty	1	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	1	Enhance financial stability; stabilise cash flows through saving and lending
SDGs 3	Good health and well-being	1	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: [44]

Economies are encouraged to prioritise the creation of policies for the digital financial transformation, with a specific emphasis on the role of FinTech in promoting financial inclusion, in order to effectively face the challenge of reaching the SDGs [44]. Recognising the importance of FinTech in answering this important question would enable economies to investigate cutting-edge solutions to improve access to financial services, hence advancing the overall SDG agenda. This strategy acknowledges the potential for the digital financial transformation to advance sustainable development and offers economies a mechanism to successfully handle this challenging challenge.

Lack of regulation, which can create uncertainty and increase the risk of fraud [45], the need for greater collaboration between fintech companies and traditional financial institutions [46], and the need for greater investment in fintech infrastructure to ensure that fintech services are accessible to more people, particularly in rural areas [47] are all challenges that must be overcome despite the growth in Fintech adoption in Africa. This study there aims at suggesting a number of frameworks that can be used to further enhance fintech adoption, inroder to improve financial inclusion which will ultimately aid in attaining the SDGs in Africa.

Although there are plethora of studies in Africa relating to SDG [3,48–50], SDG and Financial Inclusion [19,26,29,35,37–39,51,52], there is a dearth of literature on SDG, Financial inclusion and Fintech. Of the few studies, Douglas et al. [54], focused on developing strategies that may not be suitable for Africa; whereas [53], although related to Africa, focused only on one aspect of fintech product - mobile money. This study will instead focused on proposing a number of collaborative frameworks that will consider all the aspects of Fintech. Huet [55] stressed on the crucial contribution made by the private sector to the development of digital technology in Africa. Although the governmental sector played a significant role in the spread of digitization across the continent, private businesses' involvement has been crucial in fostering innovation, investment, and sustainable growth. Ladipo [56], puts that, it is now commonly acknowledged that developing nations, development organisations, and the private sector must work together and share responsibilities in order to accomplish the Sustainable Development Goals (SDGs). In order to effectively work towards the SDGs, these paths emphasise the necessity for shared obligations, commitments, and contributions.

3. Collaborative Approaches to Improve Fin-tech Adoption

For Africa to achieve its financial inclusion and sustainable development goals, it must adopt fintech through a multi-stakeholder approach. Organisations have built a wide variety of frameworks and models to back up 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 "Maximising Finance for Development" (MFD).

   The Hamburg Principles outline the collective approach of MDBs to attract private sector financing for growth and sustainable development, and MFD is a key aspect of this endeavour that was agreed upon at the G20 level. In addition to emphasising the need for national ownership, the Principles call for prioritising 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. Reforms in these nations will centre 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.

- **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 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, rule of law, and a stable macroeconomic environment. This will help to 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 to create a pipeline of new fintech products and services that meet the needs of underserved populations.

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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:**

Today, 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 (which may be enabled by digital technology).

Initial initiatives and policy actions were sparked by the 2010 G20 Principles for Innovative Financial Inclusion. Based on that accomplishment, these 2016 High-Level Principles for Digital Financial Inclusion will help countries develop action plans that are tailored to their specific needs and circumstances in order to fully realise the opportunities presented by digital technologies.

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: this can be done by looking at the G20's High-Level Principles for Digital Financial Inclusion, as described in the preceding paragraph. These guidelines can be used as a starting point for the creation of policies and programmes in Africa that encourage the widespread adoption of financial technologies and the broadening of access to these services.
2. Promote a regulatory climate conducive to fintech growth and innovation: this can be done by strengthening oversight and consumer protections: By creating clear norms and standards for digital financial services, African governments may 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: due to the fact that they are 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: this is because low levels of digital literacy and awareness are a barrier to fintech adoption in many African countries. Education and outreach programmes can be used by governments and other stakeholders to increase digital literacy and awareness, especially among marginalised communities.
5. Promote public-private collaborations: with the aim of increasing access to the use of financial technology and expand financial inclusion. In order to satisfy the needs of underserved communities, African governments can collaborate with fintech companies, investors, and other private sector stakeholders.

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 organisations working together to hasten the adoption of secure digital payment systems as a means of advancing the Sustainable Development Goals. The Bill & Melinda Gates Foundation, Citi, Ford Foundation, MasterCard, Omidyar Network, USAID, and Visa Inc. all contribute to the Better Than Cash Alliance, which is hosted by the United Nations Capital Development Fund.

To speed up the transition to a cashless economy and reach its goal of 80 percent financial inclusion by 2017, the Rwandan government has taken a number of measures. By formally joining the Better Than Cash Alliance in 2014, it demonstrated its dedication to implementing ICT for financial services. Members of the alliance receive help in making the change. These initiatives

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are meant to aid those who, without access to conventional banking systems, must rely nearly exclusively on the unregulated cash market.

In 2015, India also joined the Better than Cash Alliance in an effort to digitise payments towards the goal of financial inclusion and to share the success stories of the world's largest financial inclusion programme, the Pradhan Mantri Jan Dhan Yojana. To accelerate the transition from cash to digital payments in order to advance the Sustainable Development Goals, the governments of several states have formed an alliance with the aim of creating knowledge and programmes where people, governments, and businesses can make and receive digital payments. Later, both Ethiopia and South Africa signed on as allies.

The following are some ways in which other African nations can implement the Better Than Cash Alliance's strategy to increase the use of financial technologies:

1. Forming partnerships with businesses, international organisations, and other nations: This can assist in speeding up the transition to safe digital payment systems. Because of this, the effort to increase fintech acceptance will have access to additional resources and knowledge.
2. Joining the Better Than Cash Alliance: the organisation is open to any country that wants it. Countries can get help implementing ICT for financial services by To aid countries in making the change to digital payment systems, the alliance can offer technical assistance, best practises, and other resources.
3. Governments might enact rules and regulations that facilitate their introduction: To that end, we must take steps to expand access to financial services and foster an atmosphere conducive to the growth of fintech enterprises. This move will ultimately encourage the widespread use of digital payment systems.
4. Awareness and Education: the countries in question should promote financial awareness and educate the public about the advantages of digital payment methods. More people will feel comfortable using digital payment methods if this happens.
5. Design and Execute national digital payment infrastructure: Countries can do this by working with financial technology firms. This will bring in knowledge and resources from the commercial sector, resulting in better payment options.

iv. **The United States Agency for International Development's (USAID) Mobile Solutions Technical Assistance and Research (mSTAR) project:**

When it comes to health, education, food security, and civil society, mSTAR is a broad and flexible mechanism for USAID to promote the rapid adoption and scale-up of digital technologies to advance broad development goals. The goal of mSTAR is to help underserved communities, NGOs, government agencies, and businesses get greater access to and utilisation of mobile technology through USAID's implementation partners. mSTAR operates in three main, connected areas of research.

Using the advent of digital finance, it is possible to make instant, secure, and transparent electronic payments from anywhere in the world, using as little as a cell phone. Financial services were formerly the exclusive domain of the wealthy, but now the 2.5 billion unbanked people around the world have an opportunity to take control of their finances thanks to new "branchless" banking models made possible by the widespread availability of mobile phone technology; Data Useful in Making Choices Decision-makers can make continuous improvements to their initiatives by using mobile data tools to assess what is and is not working; Digital Inclusion by providing access to technology, the basis upon which transformational products and services are built; This project assists USAID in determining how to finance innovative mobile data demonstration cases intended for scale, revising policy and contract language to incorporate mobile data solutions into USAID programmes, and increasing learning on mobile data among USAID staff and implementers. Through conferences and workshops for USAID staff, practitioners, and technologists, it will promote the appropriate and effective use of mobile technologies in

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development (M4D), helping the organisation achieve its goals of creating partnerships to create enabling policy and regulatory environments, creating new business models, and providing relevant local content to make technology accessible to underserved populations, among other things. It will also support the Regional Development Mission for Asia (RDMA).

Several countries are participating in this initiative, including Bangladesh, which is shifting its payment flows from cash to electronic with the help of more than 50 implementing partners from USAID's health and agriculture portfolios; Mozambique, in partnership with Vodafone and GAVI, introduced the mVacciNation application to improve data capture, patient compliance, and supply chain failures for vaccines using mobile phones; Burma in demonstrating how to integrate digital financial services (DFS) into the agriculture sector by evaluating and supporting policy through USAID to local DFS actors; and Liberia, which was actually the first African country to support the project, after seeing the importance of a mobile money system for facilitating the safe movement money to government workers, reducing the need for them to make lengthy trips to banks, and improving overall efficiency.

The mSTAR initiative and its guiding principles can be used to increase the use of financial technologies in other African nations, in the following ways;

1. join forces with the USAID: African nations can collaborate with United States Agency for International Development (USAID) and its implementing partners to advance the use of digital technology in all economic sectors. If a country needs money, knowledge, or technical assistance, USAID can provide all three.
2. Providing underrepresented populations with the required help needed: this may involve supporting groups like women, rural communities, and people with disabilities with access to technology, training, and appropriate information can help countries focus on digital inclusion. Countries may foster an atmosphere conducive to the adoption of fintech solutions by increasing digital literacy and expanding access to digital technologies.
3. Incorporation of digital financial services (DFS): This can be achieved by evaluating and supporting policies that facilitates it: Various sectors, such as agriculture, healthcare, and government services, can benefit from this. Countries can hasten the adoption of fintech solutions by updating policy and contract language to include mobile data solutions in national programmes.
4. Increase Public-Private Collaboration: Governments can help marginalised communities gain access to technology by encouraging public-private collaboration on research and development, policymaking, and implementation. Countries can accelerate their adoption of fintech by forming partnerships with businesses, non-governmental organisations (NGOs), and international organisations (INGOs).
5. Educate and train policymakers, practitioners, and technologists: this training may be on how to use mobile technologies effectively in development by hosting conferences, workshops, and training programmes. It is possible to speed up the global adoption of fintech solutions and increase capacity by encouraging countries to share expertise, best practises, and lessons learned.

4. Conclusions and Recommendations

The study aimed at proposing collaborative approaches between government and private sector on the better ways to improve Fintech adoption for the purpose of improving financial inclusion which will also boost the attainment of the SDGs in Africa. Five SDGs that can be efficiently attained through greater financial inclusion were first highlighted by the study. SDG 1's goal of ending extreme poverty is achieved in part because to increased access to financial services, even in rural regions. Furthermore, greater productivity boosts food production and security, aligning with SDG 2's goals of decreasing hunger and ensuring food security. This is made possible through better access to capital, agricultural insurance, and credit facilities in the primary sector. SDG 3's goal of achieving good health and wellbeing can be achieved if people escape poverty, meet their food needs, and gain access to insurance services. Financial inclusion has also made it possible for female entrepreneurs to explore businesses that were previously out of reach, helping to advance SDG 5's goal of fostering gender equality. These four (4) SDGs, which deal with financial exclusion, lay a strong framework for accomplishing more general socioeconomic objectives, such as SDG 8 of fostering shared economic prosperity.

Secondly, the study highlighted Fintech's potential to increase economic growth and expand access to financial services (financial inclusion) in Africa which is crucial to meeting the SDGs. Only if governments, private sector entities, and development organisations work together, fintech may realise this potential, fully. We therefore proposed four fintech adoption models that require the joint effort of various stakeholders – most importantly the government and private sector. The Accelerating Digital Payments Toolkit from the Better than Cash Alliance, the World Bank Group's Maximising Finance for Development approach, the G20's High-Level Principles for Digital Financial Inclusion, and the USAID's Mobile Solutions Technical Assistance and Research project are all examples of frameworks and models that support this strategy.

The practical implication of the study will be that, by implementing the suggested collaborative approaches into practice, Governments, regulators, fintech firms, and development organisations 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 the direction of promoting financial inclusion and achieving the SDGs.

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