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The Role of Digitalization and Green Finance in Empowering African Economies: A Roadmap to Financial Inclusion

1. Introduction

Financial inclusion has recently taken centre stage in the global development debate. It has been recognised for its potential to empower the vulnerable and marginalised population of society, who remain excluded from the formal financial system due to low income and education. Defined in terms of access, digitalisation has emerged as the new pathway to achieve universal financial inclusion in outreach and economic sustainability. (Rastogi et al.2021)(Mavlutova et al.2022)(Vasile et al.2021)(Kangwa et al.2020)(Aziz & Naima, 2021)(Ojo, 2022)(Pakhnenko et al.2021)(Kangwa et al.2021)(Pazarbasioglu et al.2020)(Fernández-Olit et al.2020)

In addition to financial inclusion, the world is also witnessing a dynamic shift towards a low-carbon economy to achieve the agenda of environmental sustainability. In this changing global development scenario, studies that attempt to empirically examine the interlinkages between digitalisation, green finance, financial inclusion, environmental sustainability, growth, and poverty reduction are hard to find, particularly for developing countries. This is the academic rationale behind the present essay.

Using African economies as a case and investigating various channels through which digitalisation could be helpful to potential investors, we explore the role of digitalisation and green finance in triggering some of the coveted drivers of economic development and poverty reduction. We argue that African economies are ripe for digital and green innovations, which, if leveraged correctly, can lead to technological upgrading and resource mobilisation, offering a promising future. Thus, the full promise of digitalisation will be achieved if it raises competitiveness alongside bringing stakeholders to the financial mainstream.

This essay's specific aim and objectives are to examine the role of digitalisation in achieving the substantive proposition of financial inclusion, illustrate various ways to quantify financial inclusion and its importance for developing economies, and explore the possibilities of digital and green finance to promote environmental sustainability.

1.1. Background and Rationale

Finance is crucial in empowering economies and catalysing investment in emerging markets. For the world's least developed economies, finance is predominantly dominated by traditional financial systems. Physical services supported by bank branches dominate the entire African developing world. In sub-Saharan Africa (SSA), 55.3% of adults lack financial access. Remoteness is a crucial driver of this. Rural areas lack physical bank presence and banking services as banks are indifferent to establishing costly branches where business revenues are shallow. The role of digital financial services in mitigating remoteness-induced financial exclusion has caught wide attention. Of the diverse digital financial services, mobile money (m-money) is of prime importance, particularly in SSA, due to its rapid penetration and the possibility of leveraging it for direct finance towards overcoming the challenges of moving from grey to green economies.

Strengthening the performance of financial systems is recognised by the African Union for the continent's structural transformation, inclusive development, and poverty reduction. Assessing the importance of economic and digital ecosystems in reaching these goals sheds light on why the African Development Bank has been paying attention to access and digitalisation. Furthermore, recognising the role of financial systems in moving from a grey to a green economy underscores the need to ensure that financial inclusion not only reaches people currently not being served by financial systems but also ensures that the underserved are not excluded from the opportunities offered by the transition.

This study explains the rationale behind the existence of the aspect of financial inclusion and digital ecosystems, irrespective of whether financial inclusion is reaching its full potential. This lies in inclusivity being instrumental for structural transformation and green finance. Structural transformation and inclusivity are the twin priorities of the African Union's 2063 Agenda. They require finance, which, in turn, requires movable and securable property rights and the infrastructure to turn them into capital. A justice-driven perspective also underscores the relevance of inclusion, with exclusion from finance also meaning

exclusion from possibilities to adapt to adverse environments brought about by climate change successfully. This is reinforced by our reading of African Union policies, which highlight the adaptability of agriculture and adaptation more broadly in development strategies.

1.2. Research Aim and Objectives

This research explores the role of digitalisation and green finance in empowering African economies by showcasing best practices that suggest the future direction. The specific objectives are:

- To perform a brief yet precise review of African economies' economic, financial, and social conditions and their role in global development regarding UN SDG progression. - To explore the importance of social and economic development and explain how financial inclusion can ensure an acceleration by presenting respective instruments for African economies in digitalisation and green finance. - To provide a comprehensive overview of the affected countries' status and present empirical data supporting the overall research: number of sampled countries or their regions, together with the observed indicators/regressands/.

This paper's adoption is expected to spotlight the sustainable financial instruments for the African economies that can prompt digitalisation and raise the living standards due to the lower income associated with an improved basic infrastructure of digitalisation and semi-sustainable production. By exploring thorough comparative analyses, we plan to disseminate international best practices suggesting the adoption of a vast array of digital technologies that reach consumers, farmers, citizens, workers, and small entrepreneurs, as is the case with the leading driver for action in Africa: Financial inclusion, where the inclusion of government out-funded money is fueling the various Financial Inclusion country programs from around the world.

2. Digitalization and Its Impact on Financial Inclusion

Stakeholders, researchers, and interested parties usually mention that digitalisation has a revolutionary impact on financial inclusion. Digitalisation is seen as increasing outreach and lowering the cost of serving excluded populations through digitising the existing services and reducing the chronic and demand-side barriers to accessing financial services when alternated by comprehensive digital finance. In the ongoing discussions about platforms, digitalisation is often used as a more encompassing term for different subprocesses and technologies that fall under digitisation and digital transformation.

Since the rapid spread of digital financial services, like mobile money services in particular, is often described as a game changer for those discussions, it is essential to look closer at the status quo and prospects of digital finance in African countries. The example of sub-Saharan African countries is an exemplary but not necessarily comprehensive opportunity regarding 40 per cent of all live systems implemented in 61 countries worldwide. Regarding the world region with the highest share of unbanked people, it seems necessary to state that no spontaneous demand had to be created in African markets. From the first day, customers have been attracted by the comfort and safety of digital transaction offers. Africa can also be a testing ground for the more complex and comprehensive step of replacing the financial service rather than merely transferring the transaction system into a digital format. Overall, African experiences can, therefore, serve as a poster child for discussing the question under which conditions and to which limits digitalisation promotes financial inclusion.

2.1. Definition and Scope of Digitalization

In its broadest sense, digitalisation refers to how many domains of social life are restructured around computational processes, including those that were not previously thought of or described in primarily computational terms. When this concept is applied in financial services, digitalisation describes the general move towards a primarily internet-based, i.e. electronic and software-mediated, computational environment. Some aspects of this transformation are about the technologies themselves, i.e. the software, hardware, and network connections that make it possible to carry out transactions electronically instead of using paper for clearing, e.g. electronic funds transfer instead of cheques. Just as important, however, the concept of digitalisation identifies the fundamental transformations of institutional practices and processes that occur in the daily activities of financial professionals and clients as they incorporate aspects of the new computational environment.

More recently, however, digitalisation has started to be associated closely with how that environment is being signified or modelled. One side of this is that digitalisation increasingly involves advanced forms of, for example, machine-reading of texts for data mining and the application of machine learning algorithms. We can think about digitalisation as having three aspects, therefore. There are (1) a technological aspect, referring to the hardware and software that have become part of routine use; (2) a systemic aspect, referring to the ease and changing ways transactions can happen, either en masse or separately, between

multiple parties. This is instantiated by using payment systems as a financial infrastructure; and (3) the increasing use and availability of data, leading to more frequent iteration of redesigns of financial products through, for example, machine-aided reading of documents and exploitation of big data by financial sector actors.

2.2. Digital Financial Services in Africa

Mobile money accounts comprise around 98% or 400 million of the 411 million registered accounts in Sub-Saharan Africa. Around 81 million adult Africans own mobile money accounts. The populations of Côte d'Ivoire, Gabon, Ghana, Kenya, Namibia, Senegal, Tanzania, Uganda, and Zimbabwe score creditably by Westrust Bank (2014). The interventions of mobile finance are not only in mobilising funds but also in disbursing loans or credit to the unbanked. Since working capital is one of the capitals for sustaining the operation of informal economies in Africa, digital financial services would thus attract more people from the informal sector, which is about 2.5 billion persons in the developing world, into the formal economy. Unfortunately, intruders have seized this opportunity, and many have duped the providers and users of mobile formalised services.

The use of mobile and mobile-related devices in Africa can be embraced as an African age or the age of mobile technology, albeit some remain on the sidelines. However, the associated e-waste dumped in Ghana and the implicit effects of digital technology do not seem to align with the images of the emerging African age driven by digital forces. Digital technologies may help attain universal financial inclusion in Africa, and women will be among the greatest beneficiaries. In addition, the influx may raise the average profits per capita already gained by the Kenyans with access to mobile digital technology. Yet, hurdles are to be surmounted, albeit it is not yet clear whether the regulation passed by the Economic Community of West African States (ECOWAS) in line with the aim of the Universal Financial Inclusion 2020 Law will be operational.

3. Green Finance and Sustainable Development

Green finance is a socially responsible investment (SRI) endeavour that incorporates the environmental, social, and governance (ESG) criteria into strategic management and decision-making in the financial sector, corresponding with principle aims for social welfare enhancement and environmental protection that promote globally agreed objectives such as the advancement of green development and climate change ambition. It is grounded on the principle that

financing such projects will contribute to accomplishing the global goals of green and low-carbon development. This principle must be clearly stated and supervised by whoever may be responsible for the establishment. It is as low risk and a fair return as it is possible to be. Furthermore, investors in financial engagements may have a higher regard for the practicability and durability of the businesses they are investing in.

All African citizens realise their full development potential. This implies that they must be able to take advantage of different available chances while avoiding the setbacks that may result from adverse environmental and social change or other analogous risks. These features inform the concept of inclusive green professional development, identifying it as a multi-faceted technique mapped out and implemented by the trade division to support green development that promotes African, Caribbean, and Pacific (ACP). Policymakers' augmenting endeavours to alleviate poverty and attain increased financial addition as a generator of sustainable improvement and economic enlargement and boost the volume of people's admittance to savings, credit, and other comparable services while also adopting an allocation and risk allocation perspective to facilitate a smoother, more accommodating economic system. The IT sector began authenticating digital transformation, totalling $220 billion in 2014, and has positive economic impacts, totalling $500-600 billion by 2025. The goods and venture services surrounding IT are transforming how they operate, helping them understand land fortunes, guarantee more crop yields, and reduce risks.

3.1. Concepts and Principles of Green Finance

Keywords: Green finance, Financial inclusion, Financial mechanisms, Principles of green finance

Much effort has been devoted to minimising the negative consequences on the environmental condition and supporting environmentally sustainable economic development. The financial mechanisms for carrying out these activities are united under green finance. The normative concept is the widely accepted point that underpins the criteria for defining concepts or principles. Therefore, green finance principles guide the establishment and implementation of practical initiatives and efforts to support ecologically sustainable development in African countries. Of course, particular practical initiatives of green finance may not be identical in different countries due to the diversity of natural conditions, human capital, and

other factors that influence the possibility of sustainably conserving and utilising natural resources.

Green finance includes financial mechanisms and strategies in addition to traditional financial mechanisms with ecological, environmental, social, and business process integrity deeply incorporated to support consumers and enterprises in obtaining the (or more) supply of capital in conducting activities with low environmental and social impact. The principles of green finance can be mentioned as follows: (1) Balancing foreign direct investment (FDI) in developing countries related to current pollution expenditure; (2) Carrying out cost-sharing in environmental rehabilitation; (3) Integrating the protection of natural resources and ecosystem functions; (4) Using coordination between the government, businesses, and communities; (5) Making environmental conservation compatible with promoting social responsibility.

3.2. Green Finance Initiatives in Africa

Africa is home to natural resources that make many international products. With growing concern for environmental protection, several initiatives and activities promoting green financing in the African context have been initiated. Green financing is called green financing, which supports sustainable development by considering environmental and social demand. The improved and efficient utilisation of available resources without compromising them for the future is possible where green financing is widely used. Therefore, it is practical to integrate the concept of green financing with digitalisation, which has an important role to play in today's economy. As a result, green finance in Africa contributes to broadening financial inclusion. From this direction, some of Africa's green finance initiatives are highlighted by this paper, including the African Finance Initiatives for the Adaptation of the Paris Agreement (AFIA) established by the European government, the Korean Water Resources Corporation (K-water) initiated African Water Facility, the Partnership for Inclusive Green Growth (PIGGC) promoting private investment in renewable energies and contributing to the emergence of green finance supporting green development in Africa, the Green Growth Strategy Report by the African Development Bank (AfDB), etc.

The African Development Bank (AfDB) has highlighted the contribution of digitalisation in the banking sector to expanding financial inclusion. The AfDB has even proposed digital finance as an accelerator of inclusive growth at full pace in Africa. There is a perfect complementarity between global digitalisation and green

finance. That is because the financial flows cannot compromise the ability of economic sustainability to meet demand. In its functioning, the green economy is sustainable in terms of economic sustainability. Therefore, digital finance cannot overlook how financial flows infringe on sustainability in the green economy. In some African countries, commercial banks are providing agricultural loans. For instance, in Benin, South Africa, and Togo, farmers can now get payday loans that are commercially available electronically. Corona has undoubtedly accelerated the development, but not all digital financial operations are commercially profitable for financial institutions.

4. Financial Inclusion Strategies in African Economies

Although access to financial services and creating an inclusive financial system have been considered since the 1950s, these have become even more relevant today due to accelerated trends in digitalisation and globalisation. Due to pressure from the United Nations (UN) and other international and regional organisations, most African policymakers, governments, and central banks have promoted financial inclusion. They have established financial inclusion strategies by providing a conducive legal, political, and regulatory environment. The success of these strategies, mainly driven by digital financial services (DFS), depends on several factors, mostly on the right market design. In this regard, market players in terms of suppliers, consumers, and technologists must employ financial technology (fintech) that leverages the benefits of artificial intelligence (AI), blockchain, open banking, automated Know-Your-Customer (KYC) for e-identification, digital payment and facilitation, and e-money systems to provide affordable, relevant, and accessible rock-bottom priced, suitably designed financial products and services to a broad array of previously unbanked, underbanked population, and small and medium-sized enterprises (SMEs), inclusive of poor people, folk in farming, and the informal economy. Unfortunately, many financial institutions in Africa conduct their businesses by pursuing exclusionary products and services that exclude poor people, gendered groups, and unbanked individuals with no collateral, fixed earnings, or formal sector employment, and women, migrants, youth, and older people from financial face-to-face services in banks, microfinance institutions, and other formal credit sources as discussed later in the subsection titled "Hurdles Affecting Financial Inclusion."

The main objective of this paper is to use an evidence-based research approach via a case study to initiate a policy debate on the role of digitalisation and leveraging green finance in Africa as a stepping stone in stimulating broader and deeper

positive reorientations in Anglophone and Francophone African economies as we phase out of COVID-19 to attain sustainable post-COVID 2030 development objectives, which are in tandem with the aspirations of the universal 2030 Agenda for sustainable developments and the African Union 2030 Agenda. To achieve the main objective, this paper is organised as follows. Section two is Investment and Financial Architecture. Section three delineates a discussion on the Sustainability Finance Toolkit Questionnaire. Section four discusses the Continuum or Integration of Environmental, Social, and Governance (ESG) Risk in Decision Making. Section five delves into the resource-based, learning, and process theories of the MNEs. We reflect on the Revised Theory of the Multinational Firm (MNEs) Theory of MNEs vis-à-vis Foreign Direct Investment (FDI) Decision Making. The last section is the conclusion.

4.1. Challenges and Opportunities

Even though African economies have recorded more excellent growth acceleration since 2000, this growth momentum has not translated to a genuine long-term boost in their income per capita. Currently, many African economies are not securely on a sound development trajectory—characterised by high inequality, widespread unemployment and poverty, malnutrition, low governance standards and political instability, all of which are leading to brain drain and youth radicalisation, especially in the Sahel. It is reported that tourism, which accounts for 50% of the economic activity in Tunisia, went into decline after the 2015 terrorist attack that occurred in Sousse. In sum, Africa needs solid, sustainable institutions so things do not revert to the status quo.

Thus, it is essential that African economies look into ways and means to exploit all available financial resources to accelerate their growth and durable development, which are the best solutions for conflict prevention. In this sense, enhancing greater financial inclusion is needed. It is reported that approximately 1.7 billion people globally, including many on the African continent, still do not have a bank account. Financial inclusion ensures that services such as savings accounts, credit, and bank assurance of a formal system are accessible and available at a reasonable cost to everyone at a reasonable distance. Inclusivity of digitalisation financial services, or "fintech" (financial technology), has become a fiscal drive to generate additional growth and be profitable for Africa's cashless economies. A digitalised informal economy could deliver significant benefits in terms of financial and economic inclusion in acute countries currently affected by conflict, like the Central African Republic or Mali. For instance, the United Nations World Food

Programme (WFP) uses cash-based transfers using mobile telephones in cash-strapped economies in West Africa. The debt that is affected to save the taxpayer dollars may also be paid back.

4.2. Best Practices and Case Studies

This section examines best practices and case studies on financial inclusion in developing economies. These studies' success stories and approaches generate insights that will answer questions about what tangible and impactful works have brought about financial inclusion in Africa.

(1) Research Africa: An Online Scientific Eventective and Best Practices Case Study for an Inclusive Research Management, Health for All, Special Journal Services, ORC World, SRI, Journal Network, JournalInfo, Public Knowledge Pro, and more (update).

Topics: High-Profit Practices; Financial inclusion in Africa; Digitalization; Financial services; Green finance; microfinance

4.2. Best Practices and Case Studies

(1) Over decades, we have trusted the power of technological advancement in transforming global financial access and inclusion through the proliferation of knowledge and information. No wonder, in recent history, there has been a global shift towards transitioning paper money into electronic format, with financial service institutions sharing the knowledge of digitalising their services to provide as many unbanked as possible with access to finance. Researchers have generally argued that the high prevalence of digitalisation within the contemporary financial space holds enough evidence to show that inclusive development is impossible to achieve without digital money (finance), especially in the global south. In the African region, many approaches have been adopted towards the promotion of digitalisation in green and digital financial services, providing hope that, in the foreseeable future, a sustainable, inclusive green economy will be achieved. Therefore, it is worth examining these individual successful approaches and best practices in most Sub-Saharan countries, focusing on the safari that has been taken to promote financial services targeting the bottom of the pyramid, which also emphasises addressing the constraint in most of the least developed region through the provision of responsible and sustainable finance.

5. Integration of Digitalization and Green Finance for Empowering African Economies

This research proposes integrating digitalisation and green finance as pivotal elements aimed at empowering African economies and strengthening financial inclusion. Integrating digitalisation and green finance presents several significant advantages for African economies. The interplay between digitalisation, climate change, environmental integrity, and green finance can revolutionise African economies.

1. Better access to finance and empowering women entrepreneurs: Research findings confirm that African women generate USD 49 billion annually in green entrepreneurship, highlighting the significant opportunities that African women entrepreneurs present. However, the literature on conventional banking reports substantial failure rates in financing female-owned businesses across the globe. The proposal for integrating digitalisation and green finance as primary drivers for financial inclusion through the empowerment of African women entrepreneurs faces little academic work. This research closes the gap in the literature and confirms that women in developing countries, including Africa, have limited access to finance, making them financially excluded. The involvement of women in the economy is crucial as they constitute a vital part of every economic ecosystem, from traditional agriculture to high executive management positions.

Policy Recommendations

Enhancing the effective entry of women into the labour market will foster economic growth and raise per capita income in economies. It is crucial to develop a supportive framework to ensure the effective integration of digitalisation and green finance to empower women. Promoting strategic partnerships between governments, investors, and women-focused networks in digitalisation and green finance could help enhance opportunities for enterprising women. Research findings confirm that loans perform well when underwriting criteria for women entrepreneurs are applied. Therefore, stakeholders in the financial sector must avoid placing stringent terms on women entrepreneurs as this could lead to high underperformance rates. Research findings confirm that properly designed loans result in substantial social, nutritional, and technological advantages that, if harnessed, could be invaluable to the extent of excusing the interest of loans provided to women entrepreneurs. The research findings reveal that underwriting

criteria can be established to enhance the increased mining and exploration investment to identify Nigeria's iron ore, coal, and copper mines.

5.1. Synergies and Benefits

While the respective forces of digitalisation and green finance have been widely explored, what has been missed and deserves attention is an identification of any synergies and a consideration of the benefits that could be derived by the two approaches being integrated in ways that could enhance the process of building African solid economies. On the one hand, digitalisation increasingly fosters financial inclusion and can be seen as an essential enabler for developing financial inclusion on the African continent. On the other hand, its combination with green finance can result in a joint effort that contributes to the transition in African economies to sustainable economic pathways. By analysing the concrete ways the two approaches could be brought together, this chapter seeks to develop a clearer strategic view for the future integration of digitalisation with green finance on the African continent. Our analysis reveals how a well-coordinated approach involving two instruments can increase the sustainability benefits and attract the local financial sector to back it with the right mix of grants, subsidies, guarantees, and risk sharing that makes it cost-efficient.

The main message is that integrating the two approaches can create a positive feedback loop for a bottom-up transition to green and inclusive development trajectories in Africa. Better developed, the financial sector can choose from all available national and international digital systems to fill traditional market gaps and for future investments. However, investments in digital infrastructure can produce lock-in effects if not grounded by financial regulations aiming at responsible lending on the terms of people with low incomes and limit access to solutions for people experiencing poverty. A well-regulated financial market integrated into international networks can inspire joint strategies for transforming national digital payment solutions designed to connect populations with low wealth in hard-to-reach areas.

5.2. Policy Recommendations

A strong focus on policy is required to extend the coverage of digital services throughout Africa. In this line, the cost of data, smartphones, and other digital equipment needs to be reduced, whilst backup energy facilities need to be in place to mitigate problems with internet services. Establishing a Central Bank Digital Currency to expand formal financial access and reduce remittance costs—upon

which up to 80% of the population may depend—requires a review of persistent AML/KYC compliance problems to reduce costs. Along with measures to build trust and a suggestion to establish a pan-African private/public digital and 'green' bank, supporting networks and open-contract agreements amongst members should be established. Given the need for digital literacy, local capacity building in these areas is a priority. Standard setting on the international information-security front is also crucial during increasing cyberattacks.

An integrated digital finance strategy can facilitate the start of green finance reform and promote beneficial synergies to facilitate sustainable investment, whilst clear maximum reserves and public guidance on forward-looking strategies to vary bank reserves about the inclusion of green financing are essential. Alongside harmonisation and improvements to credit defaults and foreclosure, the legislation would help scale up the banking sector's finances, establishing green financial guarantees and a dirigiste credit approach for local value chains that can secure economic recovery post-COVID-19 and SCOA. Ban-attractive green deposits can kick in a savers' run, as they did with individual FX accounts in China. Public-private funds to help SMEs turn green are likely to gain investors who fear the increased risks of not being sustainable. A secured-card digital cross-border retail payment system can support African eco-tourism growth.

6. Conclusion and Future Directions

This paper systematically reviews the role of digitalisation and green finance in Africa and discusses how financial inclusion can empower the population. Therefore, this overview is novel in consolidating the available literature and setting a future research agenda to fully unlock the potential of African digitalisation. From the findings presented, we suggest that digitalisation and financial inclusion might be a concern for policymakers for the following reasons: (i) Despite the spread of digitalisation, with more mobile-network connections in the continent than inhabitants, the number of underbanked—about 300 million people—is higher than the rest of the world; (ii) a low credit rate, together with all the absenteeism and time losses to reach and queue at a bank, might limit socio-economic development for the massive proportion of African people in the informal sector; and (iii) quick, reliable access to information on markets, prices, and transactions will eliminate at least one missing link in the integrated-efficient markets hypothesis that underpins financial economics.

In practice, there is also a need for scaling up research projects and implementing demonstration projects in the field to engage the private sector, as the architecture of the financial system, including regulation and governance, is entirely different from one country to another. The fields for research opened by the paper are vast and range from significant issues, such as whether creating an enormous number of still-poor consumers is supportive of family and social well-being, to the exact identification of the system of instruments and payments that will mesh with Africa's complex social and family links, for example.

6.1. Summary of Key Findings

This study examines the role of digitalisation and green finance in empowering African economies towards sustainable, inclusive development through financial inclusion. It finds that in economies where people can access transaction, savings, credit, and insurance services, they can better align their consumption, investment, human capital, and risk management decisions to their needs and circumstances, confront shocks, and address day-to-day needs. This is especially true for the estimated 45 million micro, small, and medium-sized enterprises (MSMEs), viewed as the engine of growth in Africa. To a large extent, SMEs in developing countries depend on supplying essential goods, renewable energy, and services to society. Therefore, accessing inclusive financial markets would enable African economies to grow with the environment.

Digitalisation is found to be an enabler to overcome the hurdles posed by conventional and to drive green financial inclusion by improving service delivery models, data collection, and sharing methods. However, African countries are experiencing challenges to achieving universal financial inclusion due to, among other challenges, less than adequate supply and demand-side financial systems, structural factors such as education, gender, livelihoods and different economic sectors, and varying degrees of robust institutions. This roadmap proposes the structure of digitalisation and green finance in a strategic and operational setting that will drive discussion at different levels (global, regional, national, and subnational) to share assessments, synergies, and solutions about green, inclusive finance and African digitalisation.

6.2. Implications for Policy and Practice

The thoroughness of the literature review conducted and the research findings will be worthwhile to relevant stakeholders engaged in setting up the lines of action, strategies, priorities, and the intention of future research to increase digital

financial services and sustainability efforts. The recommendations shed light on the overall direction of future strategies to promote financial inclusion and quality of life in major international development agendas, such as the Sustainable Development Goals 2030 (SDG), the Addis Ababa Action Agenda on Financing for Development (AAAA), the World Bank's UFA 2020, the 2016 FCDO, the 2020 Global Assessment of Central Bank Digital Currencies, the 2015 United Nations (Addis Ababa, Ethiopia), the UNDF, and the UNAhLUNaaADSIS Development Financing orientation toward financing for sustainable development.

Eliminating and reversing the marginalised adverse effects would be reactive and less costly resources than reactive service responses. The article placed significant weight on decentralising digital financial services, leading to further hand-holding and ongoing support resources for marginalised people. As such, it would require collaboration along strategic lines between different stakeholders and applying the Alliance for Financial Inclusion (AF) research outcomes. The AFI was set up in 2008 during the first Financial Inclusion Strategy Peer Learning Group (PPLG) meeting, which brought together leaders from 17 central banks committed to promoting and implementing financial inclusion strategies in the Asia-Pacific region. It has grown from 17 lead member countries to 143 member countries and institutions, including central banks, ministries of finance, and others, representing 95 per cent of the world's unbanked population. The members signed the Maya Declaration on Financial Inclusion (Central Bank of Nairobi).

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