**Research Article** 



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## Digital Economy and Financial Inclusion in Selected Sub-Saharan African Countries

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# ABSTRACT

This study examined the influence of the digital economy on financial inclusion across three Sub-Saharan African countries. These countries were selected based on their adoption of modern technologies in delivering financial services. The analysis covered the period from 1996 to 2022 and employed the Pooled Mean Group (PMG) estimation method. Findings indicated that the digital economy, represented by a comprehensive composite index encompassing five dimensions, was significantly and positively associated with financial inclusion in both the short and long term. Regulatory quality also demonstrated a significant positive relationship with financial inclusion, but only in the long term. Additionally, foreign direct investment had a positive impact on financial inclusion, though this was limited to the short term. A country-specific analysis further highlighted diverse relationships between financial inclusion and the explanatory variables across the selected nations. The study concluded by recommending actionable policies to promote the growth of the digital financial sector in Sub-Saharan Africa, aiming to expand access to and usage of inclusive financial services in the region.

Keywords: Digital economy, financial inclusion, pooled mean group.

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#### **INTRODUCTION**

An economy that uses contemporary technology for manufacturing and service delivery is known as a "digital economy." It accompanied by advancements in is technology, particularly in the realm of digitalization. The aspiration of economies for expansion and advancement has made the integration of contemporary technology essential for achieving economies of scale, optimization, and effective resource distribution. Global economic innovation. competitiveness, and growth are being driven mostly by digital technology. This is vital for advancing Sustainable Development Goal 9, which emphasizes creating robust infrastructure, encouraging innovation and sustainable. inclusive industrialization. Achieving this goal involves creating robust and adaptable infrastructure systems that can withstand economic and environmental challenges, development ensuring that industrial benefits all segments of society, and driving innovation to address global and local issues effectively. By prioritizing these aspects, countries can enhance economic growth, reduce inequalities, and contribute to longterm environmental sustainability, ultimately paving the way for a more inclusive and prosperous future. Digital technology use in the finance industry can enhance financial services access and quality in an economy. It has been discovered that digital technologies enable local residents who are unable to have a bank account, and financially excluded, to be able to obtain additional financial services (Anarfo & Abor, 2020). Digital technology is seen as key to financial integration and sustainable development, with ongoing debate about its role in driving financial inclusion (Asongu et al., 2021; Nchofoung & Asongu, 2022; Kouladoum et al., 2022). Due to the quick development of technologies, the financial services sector undergone digital transformation, has

providing easier access to financial services. Together with banks, governments, and other organizations, the burgeoning financial sector in SSA has created a digital payment ecosystem (Anakpo et al., 2023). About 40% of the region (469 million) has a mobile money account been registered in 2019, with 181 million accounts active monthly (Mpofu & Mhlanga, 2022).

In recent times, the discussion on financial inclusion and the digital economy in SSA has generated significant attention in academic research, policy debates, and development efforts. international This article explores the complex relationship, highlighting the challenges and opportunities of digitalization in improving financial access across the region. SSA is characterized by a significant unbanked and underbanked population, with a substantial proportion excluded from formal financial services. Findings show that about 44% of the adult population in developing countries does not have access to financial services (Anakpo et al., 2023). Traditional barriers such as limited physical infrastructure, lowincome levels, and regulatory constraints have impeded financial inclusion. However, recent years have witnessed a paradigm shift, driven by the proliferation of digital technologies. According to the Global Findex Database, from 26.9% in 2014, 34.4% of SSA adults issued or received digital payments in 2017, while account ownership in SSA increased from 43% in 2017 to 55% in 2021, yet it remains significantly below the global average of 76%. In SSA, the emergence of mobile services-which money were first introduced by Kenyan platforms like M-Pesa-has changed everything. Millions of people now have access to basic financial services through mobile money, which makes it possible to save, transact, and obtain credit in areas without traditional banking infrastructure. Financial inclusion

has also been expedited by the rise of fintech companies. These entrepreneurs target previously disadvantaged communities by using digital platforms to provide numerous financial services, including insurance and peer-to-peer financing (Wahua, Mkombo, Okai & Acquah-Yalley, 2023). Many SSA governments have embraced digital solutions to drive financial inclusion. Initiatives such as national ID systems, egovernment services, and cash transfer programs delivered through digital channels contribute to expanding financial access. Despite progress, digital financial inclusion in SSA remains limited. Addressing this gap could boost economic activity and foster regional development. Perhaps, the impact of ICT on development and financial inclusion appears to be greater in developed nations than in developing ones (Kouladoum et al., 2022). Kenya, Nigeria and South Africa have been recognized as the leading economies in SSA region, in the adoption of digital financial services (World Bank, 2023). Apart from being the most populated country in Africa, Nigeria prides as the leading West African country which adopts modern technology, especially in the provision of financial services. CIPLINA

### CONCEPTUAL CLARIFICATION

#### Digital Economy and Financial inclusion in Kenya, Nigeria and South Africa

About 68% of adults in Kenya, where M-Pesa was originally made available for purchase in 2007, currently use digital payments. With mobile banking account ownership rising from roughly 20% in 2006 to 80% in 2019, M-Pesa enabled a notable increase in access to formal financial services, building on the widespread practice of transferring prepaid airtime sparked by Africa's rapid adoption of mobile phones (Natile, 2020). The platform has become well-known throughout the world as an effective digital financial inclusion program that promotes economic expansion and helps accomplish the Sustainable Development Goals (SDGs) (Natile, 2020). Over time, other mobile money providers, including Airtel Money, Orange Money, and Essar yuCash, have emerged in Kenya, though M-Pesa continues to dominate the market, cementing its leadership in the sector.

Similar to the experience in Kenya, the M-Pesa wallet and the Mzansi account were introduced in South Africa in 2004 to enhance financial services penetration, most especially for women. Some people, especially women, may be reluctant to use mobile money services because they lack digital literacy and are unfamiliar with the technology, even if digitalization has improved financial inclusion in South Africa (Ncube, 2023). Through digitalization in South Africa, the numbers of mobile money accounts have improved from 7% to 20% in between 2014 and 2019. Moreover, the Financial Services Conduct Authority is playing significant roles in promoting financial literacy (Atkinson & Messy, 2013), and enhancing the improvement in financial services delivery such as microfinance (Ncube, 2023). Yet, some South Africans still lag behind in financial services access needed to thrive, due to the need to visit the bank branch to open the account as well as the high transaction fees which could be expensive for low-income earners.

Nigeria's significant mobile penetration, with over 100 million active mobile phone subscriptions, serves as a foundation for digital financial inclusion (Nigerian Communications efforts Commission, 2021). With services like bill payment, money transfers, and savings available to consumers nationwide, mobile money services from telecom providers like MTN, Airtel, and 9mobile have grown in Furthermore, the popularity. National Financial Inclusion Strategy (NFIS), which

was introduced in 2012, is one of the strong regulatory frameworks that the Central Bank of Nigeria (CBN) has put in place to encourage digital financial access (Central Bank of Nigeria, 2012). This strategy intends to alleviate the financial exclusion rate to 20% by 2030 through targeted interventions and partnerships with various stakeholders. Whereas, Agent banking is playing a vital role in extending financial services to underserved areas, leveraging existing retail networks to provide banking services. Additionally, Nigeria's vibrant fintech ecosystem has witnessed the emergence of startups offering innovative solutions, such as digital wallets, peer-topeer lending platforms, and microinsurance services.

Despite progress, challenges related to the digital infrastructure persist. Limited network coverage, electricity shortages, and inadequate internet access in remote areas hinder the extensive use of online financial (Attipoe Wahua, services & 2023). Harmonizing regulatory frameworks across a challenge. SSA countries remains Inconsistent regulations may impede crossborder financial services and create uncertainties for both traditional financial institutions and fintech startups.

The growing reliance on digital channels exposes users to cybersecurity Addressing these concerns risks. is paramount to ensuring the trust and confidence necessary for the extensive digital financial services adoption. The digital economy generates vast amounts of data. Leveraging this data for credit scoring, risk assessment, and customer profiling can enhance financial institutions' ability to serve the unbanked and underbanked populations. Whereas technology provides avenue to expand the utilization of financial services, such as lending, insurance, savings, and payments, digital platforms offer an opportunity to deliver financial education

and literacy programs at scale. Empowering users with financial knowledge can improve their capacity to use all accessible financial services and make well-informed decisions.

Encouraging collaboration among SSA countries to harmonize regulations and facilitate cross-border financial services can stimulate economic prosperity and enhance financial inclusion. Broader economic integration initiatives might remove obstacles and provide services across borders in the most useful manner. The African mandate to overcome systemic barriers hindering the growth and adoption of digital financial services emphasizes the need for strategic investments across the continent's ecosystem. The Africa Fintech Network and the African Development Bank inked a \$525,000 grant agreement in April 2023, to boost fintech development in Nigeria. Additionally, a \$650,000 grant agreement was signed with the Chadian government to offer cutting-edge digital financial and non-financial services that empower young people and women. These initiatives are directly relevant to financial inclusion, as they foster access to critical financial services, promote economic participation, and support the growth of economies, ultimately digital driving sustainable development and reducing inequality. In this light, this study between investigates the connection financial inclusion and the digital economy in Sub-Saharan African nations, specifically Kenva, Nigeria, and South Africa, between 1996 and 2022.

### THEORETICAL FRAMEWORK

A couple of theories are employed to investigate the interplay between financial inclusion and other macroeconomic variables. Some support the Classical Theory (Matsebula & Sheefeni, 2022) which advocates for the non-interference of government in economic activities, as well

as all market participants having adequate market knowledge for market efficiency. The technology adoption theory also proposed that the availability of digital financial services can lead to greater uptake among unbanked or underbanked populations, provided these services address their needs and preferences (Mkombo & Wahua, 2024). Whereas, the institutional theory suggests that institutional factors such as regulatory support for digital financial services, the presence of innovative fintech startups, and partnerships between financial institutions and technology firms affects financial significantly services MIRALTY delivery through digital means.

### **EMPIRICAL REVIEW**

Numerous studies underscored the transformative effect of mobile money on financial inclusion in SSA (Jack & Suri. 2014). Prior research has consistently demonstrated that the use of mobile money platforms increases access to essential financial remittances. services like payments, and savings.Research has relevance of fintech explored the innovations in bridging financial inclusion gaps in SSA. Studies indicate that fintech leveraging digital platforms, startups, contribute to expanding access to credit, insurance, and other financial services, especially for people and companies that conventional financial institutions have traditionally underserved.

Moreover, studies have emphasized the impact of government-led digital initiatives on financial inclusion. National ID systems, e-government services, and digital cash transfer programs have been found to enhance access to financial services for marginalized populations, with potential implications for poverty reduction and economic development (World Bank, 2016).

Shen et al. (2021) examined the relationship between digital financial

inclusion and economic growth relationship across 105 countries and discovered that earlier is beneficial to the later. Additionally, they found that it generates spatial spillover effects, benefiting neighboring countries as well. This study included the role of digital finance while computing the composite index for financial inclusion. The able to decompose researchers were dimensions of digital financial inclusion into four; availability, usage, affordability and financial literacy, with different indicators for each dimension.

In a recent study, Kouladoum et al. (2022) analyzed the effect of digital technologies on financial inclusion across 43 Sub-Saharan African countries. The authors employed the Generalized Method of Moment (GMM) and IV-Tobit estimation technique. They discovered that digital technology significantly impacts financial inclusion, and that both the financial inclusion and digital technologies rate increases at the same rate in the SSA.

Similarly, Adeveno et al. (2023) examined the relationship between ICT, financial inclusion and tax performance in 46 SSA countries for the period 2010 to 2018. They employed the ordinary least squares (OLS) estimation technique and discovered that financial inclusion and ICT positively influences tax performance in SSA.

In addition, Matsebula and Sheefeni (2022) examined the relationship between financial inclusion and macroeconomic stability in South Africa, employing VAR model to analyze annual time series data from 2004 to 2019. Using commercial bank branches to proxy financial inclusion, the discovered positive researchers а relationship between financial inclusion and output but in the short-run and long-run period. This study emphasizes the role of financial inclusion on economic growth and inflation in South Africa, while our study

concentrates on the relationship between digital technologies on financial inclusion.

In 2020. Melubo and Musau accessed the impact of digital banking on financial inclusion of women enterprises in Narok country, Kenya. They conducted a descriptive analysis of primary data obtained 184 from surveyed women owned enterprises, and discovered that digital banking services, proxied by agency banking, mobile banking, ATM services and online banking, significantly and positively influenced financial inclusion (access and use of banking services) of women enterprise in the study location. They also discovered that women enterprises in the country are mostly less educated and have less access to internet facilities which limits their use of online banking services. As much as this study provides evidence on the positive impact of digital services on financial inclusion, it focuses only on women enterprises.

Despite the wealth of cross-sectional studies, there is a dearth of longitudinal research tracking the long-term impact of financial inclusion initiatives, digital hindering our understanding of sustained outcomes. The evolving regulatory landscape in SSA countries plays a critical impact in enhancing the digital economy's impact on financial inclusion. There is need for fresh studies to unpack the complex interplay between regulatory frameworks, fintech innovations, and financial inclusion outcomes.

This research is motivated with the aim of deriving actionable policy implications from findings, providing governments and stakeholders with evidence-based insights to inform the development of effective digital financial inclusion strategies. This study focuses on leading SSA countries with relatively, substantial technologically developed economies in the region. In this regard,

Kenya, Nigeria and South Africa were selected for investigation in this study.

### **METHODOLOGY**

In line with the theories identified, this study examines the impact of digital economy on financial inclusion using the following model:

(1) 
$$FI = F (DE, FDI, RegQual)$$

In model 1, FI is financial inclusion, DE is digital economy, FDI is foreign direct investment, and *RegQual* is regulatory quality. Since financial inclusion measures the level of access to and usage of formal financial services among individuals or households, it is represented with multiple dimensions to include ATMs, Domestic credit to private sector, Commercial bank branches and Account Ownership at a financial institution. Similarly, digital economy could denote mobile penetration rate, internet penetration rate and ecommerce (Beck et al., 2007; UNCTAD, 2020), and is represented by Individuals using the Internet, Mobile cellular subscriptions. and Fixed broadband. Consistent with prior research. а comprehensive index was developed to assess the levels of financial inclusion and digitization in Kenya, Nigeria, and South Africa.FDI describes net inflows of capital intended to obtain a long-term managerial stake (at least 10% of voting stock) in a business that operates in a nation other than the investor's own. According to the balance of payments, it includes short-term capital, equity capital, reinvested earnings, and other long-term capital. Regulatory Ouality reflects the perceptions of the government's capacity to design and implement effective policies and regulations that facilitate and encourage private sector development. FDI could enhance digital transfer from more technologically advanced economy, while the quality of regulatory framework could enhance a conducive environment for the adoption of digital financial services, hence, their inclusion in the model.

The model is further presented in the econometrics form, and reflects the panel nature of the data:

(2) FIIit =  $\alpha$ 0it +  $\alpha$ 1DECit +  $\alpha$ 2FDIit +  $\alpha$ 3ReqQualit +  $\epsilon$ t

In model 2, FII is the financial inclusion index, DEC is digital economy index, FDI and *RegQual* remain the same;  $\alpha_0$  is constant;  $\alpha_1, \alpha_2$ , and  $\alpha_3$  are the coefficients of lung-run elasticities associated with the independent variables;  $\varepsilon$  is the error term; t is the period spanning 27 years: *i* is the numbers of countries - 3. The Panel Autoregressive Distributed Lag (ARDL) estimation technique was used in this study. Panel ARDL is a modeling technique used allows heterogeneous relationships across for different entities (Baltagi, 2008). The generalized ARDL model is presented below: DISCIPLINA

(3)

$$y_{t} = \gamma_{0i} + \sum_{i=1}^{a} \delta_{i} y_{t-1} + \sum_{i=0}^{b} \beta_{i} x_{t-i} + \varepsilon_{it})$$

In this model,  $y_t$  represents a vector, and the variables in  $X_t$  are the regressors, which can be purely I(0) and I(1) or co-integrated.  $\beta$ and  $\delta$  are coefficients; while  $\gamma$  is a constant intercept. The variable i indexes the numbers of variable in the model, ranging from 1 to k. a and b denote the optimal lag orders for the dependent and independent variables, respectively, while  $\varepsilon_{it}$  is the vector of error terms.

The short-run ECM is used to estimate the PMG and specified in its natural form as follows:

(4) 
$$\Delta y_t = \gamma_0 + \sum_{i=1}^a \delta_1 \Delta y_{t-1} + \sum_{i=1}^b \delta_2 \Delta \beta_i x_{t-i} + \gamma ECM_{t-1} + \mu_t$$

In equation (4),  $ECM_{t-1}$  is the error correction term (ECT) which represents the mechanism that adjusts the system from short-run to long-run during disequibilirium. The ECT typically reflects the speed at which variables return to their long-run relationship after experiencing short-term shocks or disequilibria. All variables' annual data spans from 1996 to 2022, sources from the World Development Indicators (WDI). The observation was selected due to data availability for the variables across the respective countries.

Operational	measurement of variables		
Variables	Variable Description	Notation	Source
	Numbers of ATMs	ATM	WDI
	Domestic credit to private sector	DCred	WDI
	Commercial bank branches	CBB	WDI
	Account Ownership at a financial		
Dependent	institution or with a mobile-	Act_Own <sub>it</sub>	WDI
	money-service provider		
			Estimated using
	Financial Inclusion Index	FinInc	Principal Component
			Analysis
	Individuals using the Internet	Int	WDI
<b>T</b> 1 1 /	Mobile cellular subscriptions	Mob	WDI
	Fixed broadband	Tel	WDI
independent			Estimated using
	Digital Economy Index	DigEco	Principal Component
			Analysis
Control	FDI, net inflows	FDI	WDI
	Regulatory Framework	ReqQual	WDI
Sour	ce. Author's Compilation using	World Development	t Indicator (2024)

#### Table 1:

DATA	AND	RESULTS

The descriptive statistics is presented in Table 2, which shows the variables' attributes like the mean, maximum, minimum, standard deviation among others. From the analysis, the standard deviation for the respective variables is large enough to explore the variations in the data.

#### Table 2:

Descriptive	statistics	1.1	0, 0	SHA	
Variables	Mean	Std. dev.	Min	Max	Obs.
ATM <sub>it</sub>	19.34014	20.73319	0.68	68.96	81
$DCred_{it}$	52.03985	47.51793	6.174444	142.422	81
$CBB_{it}$	5.586836	2.223863	2.6	10.83	81
Act_Own <sub>it</sub>	51.1775	15.5529	29.67	85.38	81
$FII_{it}$	-2.39E-09	1.000015	-0.8834161	2.666999	81
Int <sub>it</sub>	18.50799	20.94101	0.008833	74.357	81
$Mob_{it}$	62.17645	52.62059	0.0102333	168.9244	81
$Tel_{it}$	3.166864	4.026464	0.0443834	11.84703	81
DEC <sub>it</sub>	4.16E-09	1.000002	-1.343086	2.357687	81
$FDI_{it}$	1.25414	1.341881	-0.0395224	9.677949	81
$ReqQual_{it}$	-0.2775211	0.5754776	-1.292818	0.8195863	81

Source: Author's Compilation (2024)

The correlation matrix is presented in Table 3, which suggests that there is no linear dependence among the regressors in order to avoid multicollinearity. From the result, as depicted in Table 3, all the regressors are not linearly dependent on one another.

Table 3:					
Correlation	ation matrix				
Variables	FII <sub>it</sub>	DEC <sub>it</sub>	$FDI_{it}$	ReqQua	
FII <sub>it</sub>	1				
$DEC_{it}$	0.6447	1			
$FDI_{it}$	0.1399	0.2487	1		
$ReqQual_{it}$	0.0428	0.4445	0.0815	1	
Sau	maan Anth	an'a Cam	milation (	2024)	

Source: Author's Compilation (2024)

Next is to perform the panel unit root test as a condition for estimating the pooled mean group model. The test was conducted using the IPS (Im, Pesaran and Shin) test. This test assumes that the slopes are heterogenous. The test is estimated using one lag and is presented in Table 4.

#### Table 4:

Variables	Le	Levels		First Difference	
	Statistic	P-value	Statistic	P-value	
FII <sub>it</sub>	0.6439	0.7402	-1.9995	0.0228**	
DEC <sub>it</sub>	-0.0703	0.472	-3.1215	0.0009***	
FDI <sub>it</sub>	-1.4038	0.0302**			
ReqQual <sub>it</sub>	0.628	0.735	-4.3107	0.0000***	

Source: Author's Compilation (2024)

As depicted in Tale 4, it was revealed that  $FDI_{it}$  is stationary at levels while  $FII_{it}$ ,  $DEC_{it}$ and  $RegQual_{it}$  are stationary at first difference. This result satisfies the prerequisite for the use of Panel ARDL estimation technique. Since Cointegration presents itself as the joint significance of the levels equation, by performing the Pooled Mean Group (PMG) analysis, we can infer statistical cointegration from the

**Table 5:** PMG estimation result

D.FII <sub>it</sub>	Coefficient	Std. error	Ζ	P-value
DEC <sub>it</sub>	0.057888	0.1943111	5.44	0.000***
FDI <sub>it</sub>	0.085058	0.0758892	1.12	0.262
ReqQual <sub>it</sub>	0.368571	0.5207146	-4.55	0.000***
	Sho	rt-Run Coefficients		
ECT	-0.7103302	0.0800176	-0.89	0.375
D1.DEC <sub>it</sub>	0.1270359	0.0556655	-2.28	0.022**
D1.FDI <sub>it</sub>	0.0079752	0.0018095	-4.41	0.000***
D1.ReqQual <sub>it</sub>	0.2012814	0.2432468	0.83	0.408
_cons	0.1465024	0.0631502	2.32	0.020**
*** indicates signi	ficance at 1% while	** indicate 5% signit	ficance level	

Source: Author's Compilation (2024)

significance of the long-run coefficient and the error correction term. This is premised on the PMG assumption of long-run homogeneity and short-run heterogeneity among the observations. The pooled mean group estimation was conducted and the result is presented in Table 5 below. The next step is to carry out the ARDL bound test for long-run co-integrating relationship among variables in the model.

Result from the panel data estimation reveals that, in the long-run digital economy significantly improves financial inclusion (0.0579) in the observed countries. Whereas, the quality of regulations reported a beneficial impact (0.3686) on financial inclusion. FDI shows no statistically significant association with financial inclusion on the period covered in the study. On the other-hand, the results shows that in the short-run, both digital economy (0.127)and FDI (0.008) exhibit positive association with financial inclusion while regulatory quality has no significant short run relationship with financial inclusion.

the The relationship between dependent and explanatory variables is further estimated in the individual country, and the results are presented in Table 6 above. From Table 6, it could be seen that digital economy and FDI significantly improves financial inclusion in Kenya and

Nigeria, while regulatory quality reported no statistically significant association with financial inclusion in the two countries. Whereas, the result also revealed that digital economy and regulatory quality has a positive association with financial inclusion in South Africa while FDI has no significant association with financial inclusion.

From the country specific results, it could be consulted that digital economy is instrumental to financial inclusion in the respective countries and in cognizance with previous studies (Shen et al. 2021; Kouladoum et al., 2022). The shocking revelation is the role regulatory quality places in this relationship. Perhaps, the quality of regulatory institutions is sufficient to explain variations in access to financial services in South Africa that in Nigeria and Kenya. Yet, FDI asserts influence on both Kenya and Nigeria, but not instrumental to financial inclusion in South Africa

#### Table 6:

PMG	cross-sectional	results
	0.000 000000000000000000000000000000000	

Country	D.FII <sub>it</sub>	Coefficient	Std. error	Ζ	P-value
Kenya	ECT	-0.6105003	0.0311183	-1.98	0.048**
	$D1.DEC_t$	0.139649	0.0918328	-1.52	0.012**
	D1.FDI <sub>t</sub>	0.0053009	0.0115637	-0.46	0.0497**
	D1.ReqQual <sub>t</sub>	-0.1943131	0.1442984	-1.35	0.178
	_cons	0.0238274	0.0269035	0.89	0.376
Nigeria	ECT	-0.6254788	0.0170967	3.66	0.000***
	$D1.DEC_t$	0.0249346	0.0796608	-0.31	0.039**
	D1.FDI <sub>t</sub>	0.0072007	0.0301654	-0.24	0.009***
	D1.ReqQual <sub>t</sub>	0.1538527	0.142685	1.08	0.281
	_cons	0.233859	0.0511564	4.57	0
South Africa	ECT	-0.2141481	0.0495866	-4.32	0
	$D1.DEC_t$	0.216524	0.069728	-3.11	0.002***
	D1.FDI <sub>t</sub>	-0.0114241	0.0112618	-1.01	0.31
	D1.ReqQual <sub>t</sub>	0.6443046	0.2742998	2.35	0.019**
	_cons	0.1818207	0.0981159	1.85	0.064

Source: Author's Compilation (2024)

#### CONCLUSION

Financial inclusion, a cornerstone of economic development, has become a key focus for policymakers and researchers in developed and developing countries. Digital banking and mobile money are two examples of digital financial services that have been crucial in enhancing financial inclusion across Nigeria, Kenya, and South Africa. Platforms like M-Pesa in Kenya and mobile banking apps in Nigeria have significantly enhanced financial services penetration. Fintech innovations have been instrumental in enhancing credit access to the underserved in the country. In Kenya, platforms like Tala and Branch have gained prominence, while Africa has South witnessed the emergence of innovative lending solutions.

In all three countries, regulatory reforms have been implemented to foster financial inclusion. Initiatives such as the National Financial Inclusion Strategy in Nigeria, regulatory sandboxes in Kenya, and Africa's National Credit Act South amendments aim to create an enabling environment for inclusive financial services. In addition, government-led initiatives, such of the digital economy for financial as cash transfer programs, conditional cash transfers, and social welfare programs, have been effective in driving financial inclusion in all three countries. Nigeria's N-Power program, Kenya's Inua Jamii program, and South Africa's Child Support Grant are notable examples. Financial services have become more widely known and used as a result of investments in financial literacy and education initiatives. Various efforts have been made to improve financial literacy by NGOs, financial institutions, and government organizations in South Africa, Kenya, and Nigeria.

Nevertheless, challenges such as limited digital literacy, particularly in rural areas, and concerns about cybersecurity and

fraud prevention persist. Others related to consumer protection, data privacy, and the need for standardized regulations pose hurdles to the widespread adoption of fintech solutions. While inefficiencies in program implementation, lack of awareness, and potential corruption risks require continuous evaluation and improvement to increase the effect of government-led initiatives on financial inclusion, gaps in the uniform application of regulations and a need for continuous adaptation to the evolving financial landscape require policymakers to address these issues for sustained financial inclusion.

#### **POLICY RECOMMENDATIONS**

In Sub-Saharan Africa (SSA), there is a complicated and dynamic interaction between financial inclusion and the digital economy. While challenges persist, the potential transformative of digital technologies to drive financial inclusion in the region is evident. A holistic approach, combining technological advancements. regulatory frameworks, and collaborative efforts, is essential to unlock the full benefits inclusion in SSA.

Addressing infrastructure challenges requires substantial investment in technology and telecommunications. Partnerships the public between and commercial sectors can be extremely important in promoting the required developments. It is essential to cultivate an atmosphere supports that inclusive creativity. The business sector, financial institutions, and governments should work together to establish an environment that supports the creation of solutions suited to particular requirements **SSA** the of populations.

The enhancement of financial inclusion in the respective countries calls for the implement comprehensive digital literacy programs to empower individuals in local languages, especially in rural areas, with the necessary skills to use digital financial services; develop a conducive regulatory environment for fintech innovations. ensuring that regulatory frameworks promote innovation while safeguarding consumer interests; invest in improving mobile infrastructure to enhance network connectivity, particularly in remote areas, facilitating broader access to mobile banking and payment services; strengthen collaborations between financial institutions and telecommunications companies to leverage existing mobile infrastructure for seamless delivery of financial services; explore the use of blockchain technology to facilitate secure and cost-effective crossborder payments, reducing transaction costs and improving financial accessibility; attract international support and investment to fund financial inclusion initiatives, ensuring that external resources complement domestic efforts to achieve sustainable results.

Implementing these strategies in the contexts of Nigeria, Kenya, and South Africa, could enable stakeholders achieve a more inclusive financial landscape in these countries. In addition to these, continuous collaboration, innovation, and a commitment to addressing unique challenges will be key to achieving meaningful and sustained B financial inclusion.

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