economies

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Drivers of Financial Inclusion: Insights from Sub-Saharan Africa

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Abstract: Financial inclusion has garnered global attention due to the detrimental effect that financial exclusion has on tackling socioeconomic challenges such as poverty. Using a dynamic panel approach, our study examines the drivers of financial inclusion in the context of Sub-Saharan Africa (SSA) over the period 2000 to 2017. We discover that financial globalization and literacy rates positively and significantly drive financial inclusion. We also find that rural population growth has a profound adverse impact on financial inclusion. The study further reveals that bank profitability, bank stability, and economic growth have a negative albeit insignificant effect on financial inclusion. The positive effect of financial globalization on financial inclusion has important policy implications for Sub-Saharan African countries. In this respect, the integration of the local financial system with global financial markets will facilitate efforts to achieve financial inclusion in the region.

Keywords: financial inclusion; financial globalization; economic growth; Sub-Saharan Africa; GMM technique

Citation: Bashiru, Shani, Alhassan Bunyaminu, Ibrahim Nandom Yakubu, and Mamdouh Abdulaziz Saleh Al-Faryan. 2023. Drivers of Financial Inclusion: Insights from Sub-Saharan Africa. *Economies* 11: 146. https://doi.org/10.3390/economies11050146

Academic Editor: Robert Czudaj

Received: 31 August 2022
Revised: 30 October 2022
Accepted: 14 November 2022
Published: 12 May 2023

1. Introduction

Financial inclusion has taken center stage in the development agenda of countries in their attempts to economically empower their citizens (Izquierdo and Tuesta 2015; Park and Mercado 2018). According to Raichoudhury (2020), financial inclusion involves deliberate measures used to promote access and utilization of services delivered by the financial sector. Broadly, the degree to which financial services are designed to cover the excluded (low-income earners or the vulnerable) in an economy is termed "financial inclusion" (Sinclair 2013). Countries, particularly developing economies, over the years have made immense efforts in their quest to broaden the frontiers of financial inclusion. However, some challenges exist with most people still encountering formidable hurdles in their attempt to access mainstream financial services in Africa, leaving many households grappling with financial exclusion (Beck and Cull 2015). One major development that has widened the net of financial inclusion in Africa is mobile money operations where small and medium enterprises (SMEs), the poor, and rural dwellers have been given the platform to financial inclusion (Gikunda et al. 2014; Abor et al. 2018). Financial institutions, through their intermediation activities, contribute significantly to promoting economic growth (Ahamed and Mallick 2019; Ünvan and Yakubu 2020; Yakubu et al. 2021). Deposit mobilization and channeling of such deposits into productive sectors of the economy, including the provision of credit and technical advice to individuals and business borrowers, constitute major roles of an effective financial system (Claessens and Rojas-Suarez 2016; Menyelim et al. 2021). Chen and Divanbeigi (2019) posit that financial inclusion widens the frontiers of access to bank accounts and accelerates opportunities for credit acquisition for individuals and

entrepreneurs. An effective financial system is also required to provide payment mechanisms, manage risk, and facilitate transactions among economic units (Demirgüç-Kunt et al. 2013; Muralidharan et al. 2016). However, some scholars opine that the benefits of financial inclusion resonate in economies with higher net domestic output and productivity, adding that weaker economies hardly enjoy and exhibit the much-touted benefits of financial inclusion (Pitt 2014; Park and Mercado 2018). Mian and Sufi (2014) established the downside of financial inclusion, suggesting that an astronomical surge in financial inclusion is a recipe for a future financial crisis. Nevertheless, financial inclusion has been found to boost the liquidity of entrepreneurs, thereby boosting their operational capabilities and leading to the potential creation of job avenues and poverty alleviation (Bruhn and Love 2014). Providing a wide range of financial services and creating openings for accessing these services is imperative when promoting business transactions and meeting the expectations of vulnerable people including the poor and the deprived (Célerier and Matray 2018; Davidovic et al. 2019). Following the Maya Declaration for the unbanked in 2011, an initiative by the Alliance for Financial Inclusion (AFI), governments and policymakers have also strengthened their commitments to promoting financial inclusion. International organizations such as the World Bank have also shown profound interest in achieving global financial inclusion. The World Bank's declaration of achieving global financial inclusion by 2020 is one of its flagship initiatives geared at addressing the canker of financial exclusion. In Sub-Saharan Africa, most countries have implemented significant financial reforms and interventions to enhance the level of financial inclusion in the region. Aside from the Maya Declaration, other initiatives aimed at promoting financial inclusion in SSA include the Financial Literacy Campaign, the National Financial Inclusion Strategy (NFIS), and policies relating to cashless systems by the respective central banks. Despite these initiatives to create a more financially inclusive sector, it is crucial that the deprived and vulnerable people can easily access financial services offered by financial institutions in the region (Adedokun and Ağa 2021).

While the impact of financial inclusion, particularly on economic growth and poverty reduction is well researched (see Inoue and Hamori 2016; Sharma 2016; Mohammed et al. 2017; Williams et al. 2017; Kim et al. 2018; Lal 2018), its determinants are under-examined. Moreover, the limited extant studies on the factors influencing financial inclusion are largely focused on micro-level determinants or individual characteristics. How macro-level indicators affect financial inclusion is given little attention. Likewise, research on the impact of bank-level factors on financial inclusion is scanty, hence requiring more research efforts. This study seeks to contribute to the inadequate empirical studies on the drivers of financial inclusion employing Sub-Saharan African countries.

Our study takes a unique approach and contributes to the financial inclusion determinants literature in several ways. First, we investigate how financial globalization affects financial inclusion. Global financial markets have become increasingly intertwined as national borders have disintegrated as a result of globalization (Avcı 2020). Given the overall impact of globalization on the financial system, it is worthwhile to investigate the relationship between financial globalization and financial inclusion. Dymski (2005) postulated that "financial globalization would lead to worse financial inclusion. This assertion was built on the idea that, due to financial globalization, an integrated market would change the financial firm's strategic operations, specifically in the form of homogenization and stratification of financial market practices that cater to different segments of the consumers". There has been a dearth of empirical studies to support or refute this assertion. Therefore, this study examines whether financial globalization promotes or reduces financial inclusion. The researchers are unaware of any empirical study addressing this relationship in the African context, and thus present a potential first attempt. Second, we introduce banking sector stability and banking sector profitability as additional potential factors influencing financial inclusion. Moreover, in determining the factors affecting financial inclusion, most prior studies have either used a single measure of financial inclusion or several indicators focusing on one facet of financial inclusion (e.g., Akudugu 2013; Ana et al. 2014; Evans

and Adeoye 2016; Zins and Weill 2016; David et al. 2018; Wokabi and Fatoki 2019). Such studies could produce biased findings as the multidimensionality of financial inclusion is ignored. To deal with the inherent biases and ensure robust results, we construct an index of financial inclusion reflecting the demand-side dimension which describes the usage of financial services, and the supply-side dimension indicating accessibility. Finally, we employ recent data covering 33 Sub-Saharan countries.

The paper is further organized as follows. Section 2 reviews the literature on the determinants of financial inclusion. Section 3 explains our data and analytical strategy. Section 4 discusses the findings and Section 5 concludes with policy implications.

2. Literature Review

2.1. Theoretical Background

The systems theory and the financial literacy theory of financial inclusion are the main theoretical pillars of this study. According to the systems theory of financial inclusion, the outcomes of financial inclusion are accomplished through the functioning of the various existing subsystems (Ozili 2020). These sub-systems include the financial, economic, and social systems. The desired outcome of financial inclusion might be considerably impacted by a significant change in a sub-system (one component of the system). The theory postulates that the sub-systems' effectiveness will determine whether a national financial inclusion strategy will succeed or fail. In essence, the system theory acknowledges the importance of existing economic, financial, and social systems, as well as their interconnections in fostering financial inclusion.

The financial literacy theory asserts that the willingness of individuals to subscribe to financial services offered by the formal financial sector is significantly driven by the level of financial literacy. The theory explains that increasing the financial literacy of people via education is necessary for achieving the financial inclusion agenda. With enhanced financial literacy, individuals can make use of additional formal financial sector products such as investment and mortgage products. According to the theory, financial literacy is used as a national strategy for achieving financial inclusion. It gives a platform for educating the populace on financial management and the advantages of utilizing formal financial services.

2.2. Empirical Literature

The research on the determinants of financial inclusion is still in its early stages. Among the few studies, Aterido et al. (2013) examined whether gender gap matters in financial accessibility in Sub-Saharan Africa. The study concluded that men are more favorably disposed to embracing financial systems than women in the selected countries. Using micro-level data, Ghosh and Vinod (2017) assessed the role of gender in financial inclusion in India. The results show considerable disparities in both access and utilization of finance by gender. The findings revealed that, in comparison to their male counterparts, female-dominated households are less likely to have formal bank accounts. Likewise, families headed by women are not likely to secure and use cash loans compared to a family unit headed by males. Similarly, Mohammed et al. (2017) found that women in Sub-Saharan Africa are disadvantaged and suffer high levels of financial exclusion. According to Demirgüç-Kunt et al. (2013), the wide disparities between men and women in account ownership in developing countries can be attributed to early marriages and discriminatory practices against women. Efobi et al. (2014) demonstrated that the opportunities for younger people to access financial services are lower. In the view of Allen et al. (2016), those who are predisposed to financial exclusion are the poor, the youth, and those who live in rural areas. Wokabi and Fatoki (2019) assessed the factors influencing financial inclusion in East Africa. Employing the fixed effect, random effect, and ordinary least squares techniques, the study found that the income levels of rural dwellers serve as a major driver of financial inclusion. The study further discovered that high unemployment levels retard financial inclusion, albeit to an insignificant extent. Mhlanga and Dunga (2020)

revealed that education level, age of head of the family, off-farm income, and degree of financial literacy are dominant elements propelling financial inclusion among small-scale farmers in Zimbabwe. In the case of South Africa, Wentzel et al. (2016) posited that the number of dependents, age, the main source of income, and home language significantly inhibit the ability of people to be financially included. Prymostka et al. (2020) found that low-income levels, lack of faith in banking institutions, and exorbitant charges on banking services obstruct financial inclusion in Ukraine. In a global sample, Eldomiaty et al. (2020) documented that effective governance, political stability, corruption control, and accountability significantly drive financial inclusion. Zins and Weill (2016) utilized the World Bank's Findex database involving 37 countries in Africa and concluded that wealthy men with a good educational background are susceptible to financial inclusion, and advanced the view that drivers of financial inclusion in formal sectors differ from those of the formal sector. Using the FinScope in Tanzania, Ndanshau and Njau (2021) reported that middle-aged individuals, urban dwellings, formal employment, higher income, and educational levels enhance financial inclusion. Oumarou and Celestin (2021) empirically established that while real GDP, mobile phone penetration, and literacy rate positively affect financial inclusion, rural population and interbank credit reduce the growth in the level of financial inclusion in the West African Economic and Monetary Union (WAEMU) Countries. In a comparative analysis, Bekele (2022) examined the determinants of financial inclusion in Kenya and Ethiopia. Applying a generalized linear model, the findings showed that financial inclusion is significantly and positively driven by gender, age, employment status, and mobile phone ownership. Employing data from 85 countries comprising developed and developing economies, Anyangwe et al. (2022) investigated how culture affects financial inclusion within the framework of Hofstede's cultural dimensions. The results showed that financial inclusion is more unlikely in countries with high power distance, more masculine, and high uncertainty avoidance cultures. The authors however noted that individualistic, long-term oriented, and indulgent cultures make financial inclusion more likely.

To summarize, current studies on the determinants of financial inclusion are more skewed toward socioeconomic or micro-level factors with little attention to the effect of bank-specific and macro-level indicators. Our study seeks to advance the scholarly discourse on the drivers of financial inclusion by examining the effect of bank-level and macroeconomic factors on financial inclusion. Additionally, most of the studies have employed traditional panel techniques such as least squares methods, which are criticized for producing biased estimates. To address the shortcomings of the traditional panel approaches, we use the generalized method of moments (GMM) technique.

3. Methodology

3.1. Data

The study employs country-level data from 33 Sub-Saharan African countries covering from 2000 to 2017. The data are collected from the International Monetary Fund's Financial Access Survey, World Bank's Global Financial Development Database, and the KOF Swiss Economic Institute. The countries selected for the study include Benin, Botswana, Burkina Faso, Cameroon, Central African Republic, Chad, Congo Republic, Côte d'Ivoire, Equatorial Guinea, Gabon, Ghana, Guinea, Kenya, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mauritius, Mozambique, Niger, Nigeria, Rwanda, Senegal, Seychelles, Sierra Leone, South Africa, Sudan, Swaziland, Tanzania, Togo, Uganda, and Zambia. Data availability informed the choice of these countries and the study period.

3.2. Description of Variables

3.2.1. Dependent Variable

Financial inclusion serves as the dependent variable. Following the work of Yakubu and Musah (2022), we construct an index of financial inclusion relying on five sub-measures utilizing the Principal Component Analysis (PCA). The sub-measures include ATMs per 100,000 adults (ATM), operational branches of banks per 100,000 adults (BRA), bank ac-

counts per thousand adults (BAC), customers borrowing from commercial banks per 100,000 adults (BOR), and customers depositing with commercial banks per 100,000 adults (DEP). With the PCA technique, the index for the *j*th factor is specified as:

$$FINDEX_j = W_{J1}X_1 + W_{J2}X_2 + W_{J3}X_3 + W_{J4}X_4 + W_{J5}X_5 + \ldots\ \ldots + W_{JP}X_P \quad (1)$$

where $FINDEX_j$ is the composite index for financial inclusion. The weight of the factor score is denoted by W_j. X indicates the original figure of the specific components and P connotes the number of factors included in the equation. The *FINDEX* is therefore a function of five factors. That is:

$$FINDEX = f\ (ATM, BRA, BOR, BAC, DEP) \quad (2)$$

The principal component analysis (PCA) decreases the dimensionality of large datasets, improving interpretability while minimizing information loss (Jolliffe and Cadima 2016). The results of the PCA are presented in Table 1.

Table 1. Principal components analysis.

Eigenvalues: (Sum = 5, Average = 1)					
Number	**Value**	**Difference**	**Proportion**	**Cumulative Value**	**Cumulative Proportion**
1	3.626199	2.881331	0.7252	3.626199	0.7252
2	0.744868	0.415627	0.1490	4.371067	0.8742
3	0.329241	0.148069	0.0658	4.700308	0.9401
4	0.181173	0.062653	0.0362	4.881481	0.9763
5	0.118519	—	0.0237	5.000000	1.0000
Eigenvectors (loadings):					
Variable	**PC 1**	**PC 2**	**PC 3**	**PC 4**	**PC 5**
ATM	0.474489	−0.306518	0.206871	−0.617609	−0.506627
BRA	0.474344	−0.224371	−0.403819	0.648532	−0.375489
BOR	0.396356	0.628722	0.610522	0.261925	−0.079183
BAC	0.458320	−0.459663	0.238762	0.070588	0.718792
DEP	0.427438	0.499122	−0.603647	−0.352673	0.281789
Ordinary correlations:					
	ATM	**BRA**	**BOR**	**BAC**	**DEP**
ATM	1.000000				
BRA	0.789854	1.000000			
BOR	0.555448	0.529809	1.000000		
BAC	0.858733	0.809724	0.488058	1.000000	
DEP	0.602916	0.678084	0.707369	0.511534	1.000000

3.2.2. Independent Variables

Financial globalization, banking sector stability, banking sector profitability, economic growth, literacy rate, and rural population are the independent variables in this study. Financial globalization shows how the local financial system is integrated with the global financial markets. The financial globalization index is measured on a scale of 0 to 100 where a score closer to 100 shows a greater level of financial globalization (Yakubu and Bunyaminu 2022). Banking sector stability is measured using banks' z-score (Ünvan et al. 2022). This proxy captures the default possibilities in the banking sector by comparing bank capitalization and returns with returns volatility. In line with Doran et al. (2018), we measure economic growth by GDP per capita. Banking sector profitability is measured by return on assets (Risfandy 2018; Yakubu 2019; Issaka Jajah et al. 2022; Sedera et al. 2022). Literacy rate is the adult total literacy rate (percentage of people ages 15 and above). Rural population as a percentage of the total population is used to measure rural population.

3.3. Model Specification and Empirical Approach

This study employs a panel approach. With panel analysis, observations are pooled across units for several periods. The panel regression model is specified as:

$$Y_{it} = \alpha + \beta' X_{it} + \varepsilon_{it} \tag{3}$$

where i is the cross-sectional dimension and t is the time dimension. The dependent variable is denoted by Y and X shows the independent variables in the model. α is the constant and the vector coefficients are represented by β. ε is the error term.

In analyzing the data, techniques such as ordinary least squares, fixed effects, and random effects could be employed. However, it is vital to take into consideration the possibility of endogeneity being present. Endogeneity problems make the use of OLS and other traditional panel methods susceptible to producing biased results. To alleviate the endogeneity problem, the study employed the GMM estimation technique developed by Arellano and Bond (1991). The GMM approach yields estimates that are heteroskedasticity and autocorrelation consistent (Roodman 2009, as cited in Bunyaminu et al. 2022). With the GMM approach, the dynamic model is specified as follows:

$$Y_{it} = \alpha Y_{it-1} + \beta' X_{it} + v_i + \varepsilon_{it} \tag{4}$$

where Y_{it-1} and v_i denote the lagged dependent variable and the uncaptured country characteristics, respectively.

Given the variables of our study, Equation (4) can be restated as follows:

$$\begin{aligned} FINDEX_{it} = \alpha FINDEX_{it-1} + \beta_1 FINGLO_{it} + \beta_2 STAB_{it} + \beta_3 PRO_{it} + \beta_4 GDPPER_{it} \\ + \beta_5 LITRA_{it} + \beta_6 RURPOP_{it} + v_i + \varepsilon_{it} \end{aligned} \tag{5}$$

From Equation (5), *FINDEX*, *FINGLO*, *STAB*, *PRO*, *GDPPER*, *LITRA*, and *RURPOP* represents financial inclusion index, financial globalization, banking sector stability, banking sector profitability, economic growth, literacy rate, and rural population, respectively.

4. Empirical Results

4.1. Descriptive Statistics

Table 2 presents the descriptive statistics for all the variables. FINDEX is the composite index of financial inclusion which is averaged at 1.13×10^{15} with a minimum value of -1.0815 and a maximum value of 12.0180. This shows a low growth rate of financial inclusion in the sampled countries. Financial globalization has a mean of 48.7594, suggesting that the sampled countries are less financially globalized. Z-score which proxies bank stability has an average value of 11.2521 with a minimum value of 2.1599 and a maximum of 44.4128. Economic growth and literacy rate have average values of 2.2861 percent and 12.3426, respectively. The average rural population as a percentage of the total population is 61.4290 percent. Overall, financial globalization shows higher variability considering its standard deviation value for the period under study.

Table 2. Descriptive statistics.

Description	FINDEX	FINGLO	STAB	PRO	GDPPER	LITRA	RURPOP
Mean	1.13×10^{15}	48.7594	11.2521	2.0857	2.2861	12.3426	61.4290
Maximum	12.0180	87.3016	44.4128	9.9077	56.7882	94.3705	85.3900
Minimum	−1.0815	22.5008	2.1599	−14.3010	−36.2032	0.0000	11.0240
Std.Dev.	1.9059	11.4642	5.9691	1.7534	5.0307	26.1681	16.1442
Skewness	3.3212	0.3166	1.5940	−1.5558	1.7311	1.9157	−0.7049
Kurtosis	16.2503	3.4160	7.6776	25.5609	35.5803	5.2074	3.3142
Observations	594	594	568	594	594	564	594

4.2. Correlation and Multicollinearity Analysis

The Pearson correlation coefficients are presented in Table 3. For variables to be free from the problem of multicollinearity, Kennedy (2003) suggests that the correlation coefficients must not exceed 0.80. Based on this threshold, the analysis shows that the variables are weakly correlated, hence no multicollinearity issues are detected. This is further justified by the results of the variance inflation factor (VIF) analysis.

Table 3. Correlation and multicollinearity analysis.

Variables	FINGLO	STAB	PRO	GDPPER	LITRA	RURPOP
FINGLO	1.0000					
STAB	0.0857 **	1.0000				
PRO	−0.0200	−0.0318	1.0000			
GDPPER	0.0898 **	−0.0436	0.0901 **	1.0000		
LITRA	0.1170 ***	0.1226 ***	−0.0194	0.0072	1.0000	
RURPOP	−0.3148 ***	−0.0714 *	0.1522 ***	0.0934 **	0.0740 *	1.000
VIF	1.1579	1.0267	1.0317	1.0329	1.0445	1.1733
Tolerance	0.8636	0.9740	0.9693	0.9681	0.9574	0.8523

***, **, * denote significance at 1%, 5% and 10%, respectively.

4.3. Regression Results

Table 4 presents the regression results. We estimate the models using the pooled OLS, fixed effects, and GMM techniques. However, given the inherent endogeneity issues of the traditional methods (OLS and fixed effects), the interpretations of our findings are based on the GMM estimates. In the model estimation, we use the lag values of the regressors as instruments.

From the results of the GMM estimation, the coefficient of the lag of the financial inclusion index ($FINDEX_{t-1}$) is positive and significant. This indicates a self-reinforcing effect of financial inclusion. That is, the present level of financial inclusion significantly depends on the previous level of financial inclusion. The Hansen J statistic demonstrates that the problem of over-instrumentation has been reduced to a minimum. Furthermore, the Arellano–Bond test (AR(1) and AR(2)) results confirm that no first and second-order autocorrelation exists.

The findings establish a positive significant effect of financial globalization on financial inclusion. The result indicates that as financial globalization improves by a percentage, financial inclusion increases by 0.0063 percent. The small coefficient indicates a low level of the countries' financial systems' linkages to the international market. The positive result however shows that increasing financial market integration will lead to the creation of innovative financial products that include the low-income groups. The findings indicate a negative insignificant effect of banking sector stability and profitability on financial inclusion. The insignificant effect of these variables depicts that financial inclusion does not respond to the stability and profitability of the banking sector in SSA countries. Contrary to the results of Gebrehiwot and Makina (2019) and Stakić et al. (2021), our findings reveal a negative albeit insignificant influence of economic growth on financial inclusion. This suggests that an increase in the level of economic activities does not automatically translate into a surge in demand for financial services. The study finds that literacy rate has a significant positive impact on financial inclusion, suggesting that as more people become literate, the demand for financial services increases. The implication is that with a high literacy rate, individuals can better understand various financial products and services as well as the level of benefits and risks associated with such products. Our findings corroborate Hasan and Hoque's findings (Hasan et al. 2021). Furthermore, the results document that the growth in rural population and financial inclusion are negatively and significantly related. It can be argued that given the limited number of channels for providing financial services, such as bank branches in rural areas in Africa, the increase in

rural population may put a strain on existing service channels, and therefore a decline in the provision of financial services.

Table 4. Regression results.

Variables	OLS	Fixed Effects	GMM Estimates
$FINDEX_{t-1}$			0.8351 ***
			(0.0139)
FINGLO	0.0763 ***	0.0466 ***	0.0063 ***
	(0.0064)	(0.0069)	(0.0009)
STAB	0.0100	−0.0290 **	−0.0020
	(0.0132)	(0.0124)	(0.0021)
PRO	0.0866 **	0.0004	−0.0024
	(0.0394)	(0.0239)	(0.0026)
GDPPER	0.0106	−0.0002	−0.0003
	(0.0162)	(0.0086)	(0.0007)
LITRA	0.0010	0.0025 *	0.0013 ***
	(0.0027)	(0.0015)	(0.0001)
RURPOP	−0.0187 ***	−0.1996 ***	−0.0347 ***
	(0.0048)	(0.0135)	(0.0051)
Constant	−2.8907 ***	10.3666 ***	
	(0.5090)	(0.8767)	
Diagnostics			
R-squared	0.2964	0.8305	
Adj. R-squared	0.2885	0.8176	
F-statistic	37.2842	64.3441	
Prob. (F-statistic)	[0.0000]	[0.0000]	
Hausman test		90.1541	
(*p*-value)		[0.0000]	
Arellano–Bond AR(1) test			−1.2141
(*p*-value)			[0.2247]
Arellano–Bond AR(2) test			0.4719
(*p*-value)			[0.6370]
Hansen test			28.7290
(*p*-value)			[0.2754]

Notes: ***, **, * denote significance at 1%, 5%, and 10%, respectively. Values in ( ) and [ ] are standard errors and *p*-values, respectively.

In a nutshell, it can be inferred that the improvement of financial globalization coupled with literacy rate improves financial inclusion in the selected countries. Thus, our findings lend support to both the systems theory and financial literacy theory of financial inclusion.

5. Conclusions and Policy Implications

Governments in African countries are dedicated to enhancing financial inclusion and have therefore acknowledged the influential role of financial devolution in the developmental strides of their countries. Studies on financial inclusion have received much interest from researchers and policymakers in recent years. Using a dynamic panel approach, this paper critically assessed the drivers of financial inclusion in the context of Sub-Saharan Africa over the period 2000 to 2017. Applying the generalized method of moments (GMM) technique, the results show that financial inclusion is strongly and positively influenced by financial globalization and literacy rate. We find that rural population growth significantly decreases financial inclusion. However, banking sector stability and the profitability of the sector have an insignificant effect on financial inclusion. Furthermore, the findings report that acceleration in economic activities results in a profound adverse influence on financial inclusion, though the effect is insignificant. From the results, we conclude that financial globalization and literacy rate have a positive impact on financial inclusion. The findings lend credence to the systems theory and financial literacy theory of financial inclusion. By implication, a quantum leap in any of these variables will spike the probability of demand

for financial products and services resulting in heightened levels of financial inclusion in Sub-Saharan Africa.

We recommend countries in Sub-Saharan Africa to open up their economies to allow their local financial systems to integrate into the global financial markets as a step toward widening financial inclusion through the creation of innovative financial services. To improve the overall literacy rate, policies that aim to boost the enrollment rate in schools, particularly in rural areas, are necessary. It will also be of significance to educate the rural population on the need to subscribe to financial services offered by financial institutions. Additionally, policymakers in the financial sector should constantly monitor the financial services sector and adopt efficacious strategies to promote stability of the sector to avoid financial shocks and disintegration in order to maintain consumer confidence and safeguard customer deposits.

The limitation of the study is that institutional factors that may affect countries' efforts toward achieving financial inclusion are not controlled for in the analysis. It will be worth pursuing such factors in future research. Our study employed only secondary data. As a result, we propose that future studies extend the analysis by collecting both secondary and primary data, particularly on socioeconomic factors. Furthermore, a comparative analysis of the drivers of financial inclusion (for example, between Africa and Asia) will provide a more fascinating picture.

Author Contributions: Conceptualization, A.B. and I.N.Y.; Methodology, A.B. and I.N.Y.; Validation, I.N.Y. and M.A.S.A.-F.; Formal analysis, A.B. and I.N.Y.; Resources, A.B., S.B. and M.A.S.A.-F.; Data curation, I.N.Y.; Writing—original draft, A.B. and I.N.Y.; Writing—review & editing, S.B. and M.A.S.A.-F.; Visualization, A.B. and M.A.S.A.-F.; Supervision, A.B. and S.B.; Project administration, S.B. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Informed Consent Statement: Not applicable.

Data Availability Statement: Data are available upon request.

Conflicts of Interest: The authors declare no conflict of interest.

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