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Institutional Quality and Financial Inclusion in Sub-Saharan Africa

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ABSTRACT

The study examined the effect of institutional quality on access to financial products and services in sub-Saharan Africa. In particular, it understudied the effect of political stability and no violence and regulatory quality on banking penetration in sub-Saharan Africa. Panel data spanning 2006 to 2021 was collated from 12 sub-Saharan African countries. The Durbin-Wu-Hausman specification test indicated that the Random-Effect panel model gave more appropriate and efficient outcome than the Fixed-Effect model. The results portend that regulatory quality exerts a significant effect on access to financial products and services in sub-Saharan Africa. The results also suggested that there is a positive relationship between regulatory quality and the number bank branches in the sub-region. Further findings reported that political stability and no violence exerts an adverse and statistically significant effect on access to financial products and services in sub-Saharan Africa. The policy recommendation is that, regulators need to carry out regulatory impact assessment to assuage adverse regulations and enhance the regulatory environment in the subcontinent. This should further be complemented with a functional judicial system, accountability, and concerted systemic fight against corruption. These may encourage political, economic, and social stability and create a stable and conducive climate for private sector growth and financial inclusion.

Introduction

Banking penetration and account usage in Africa, particularly sub-Saharan Africa has been chronic. World Bank (2019) indicate that the penetrative reach of bank branches was about 1 and 2 per 1,000 people (aged 15 and above) in 2006 and 2007 respectively. In the following 3 years, the figure increased to 3 per 1,000 adults. From 2011 to 2014, bank branch spread increased to about 4 per 1,000 adults. In 2018, the spread of bank branches increased to 5 per 1,000 adults. Also, records for geographical penetration of banking services showed that there is 1 bank branch per 1,000m^2 in sub-Saharan Africa (Ajide, 2017). Physical banking

presence like in Nigeria, and other developing African countries are concentrated in urban city centres. Given the geographic and demographic spread of bank branches, it is safe to say that the 656 million rural households in SSA have limited access to banking services.

Furthermore, records indicate that between the period spanning 2011 to 2014 there was only a paltry 25% increase in loan accounts compared to approximately 42% increase in the ownership of deposit accounts in SSA (European Investment Bank, 2017). Again, recent data from (World Bank, 2019), indicate that there has been a decline in the percentage of private-sector loan accounts to GDP in sub-Saharan Africa. Records indicated that in 2006 loan account ownership stood at 59.8% of GDP. It picked at 60% of GDP in 2007 and declined to about 46% in 2018. This implies that there has been a 23% decline in the use of loan accounts in SSA. However, it is imperative to note that this decline may be as a result of varying degrees of financial inclusion in the 46 countries that make up the SSA.

The absence of a proper inclusive financial system that is devoid of depth and breadth has cultivated a culture of direct or self-financing in Africa. Evidently, this has caused households, small and micro enterprises, that are financially excluded, to forcefully rely on informal networks, personal savings and retained earnings to pursue their various investments and business endeavours (Gebrehiwot and Makina, 2019), thus leading to economic retardation. In addition, this exposes households and firms to unnecessary unsystematic risks and shocks associated with obtaining funds from the informal system (Katoroogo, 2016; Allen et al., 2016). This is a classic case in developing countries, and this impedes their growth efforts.

Financial exclusion typically denotes inability to access affordable banking and other non-bank financial products and services by the poor and vulnerable groups (Wentzel et al., 2016). It obstructs fixed capital formation, access to loanable funds and gross capital investment (Kama & Adigun, 2013; Efobi et al., 2014; Allen et al., 2016; World Bank, 2017). Lack of access to bank networks, bank runs, lack of formal education, financial illiteracy, low per capita income, excessive bank charges, and more are constraints to penetrative reach and usage of services and products offered by financial institutions (Triki & Faye, 2013; Odili, 2020).

Objectives of the study

The main objective of the study is to determine the effect of institutional quality on banking institution in sub-Saharan Africa (SSA). The specifically considered the following objectives;

1. Examine the effect of regulatory quality on access to financial products and services in SSA.
2. Examine the effect of political stability and no violence on access to financial products and services in SSA.

Conceptual Review

Number of Bank Branch Networks

Prior to the advent and use of financial technology, proximity or nearness of financial service providers to consumers was an integral component in the usage of financial intruments and services in developing countries. This assertion is still reasonably valid, owing to studies establishing that people and small businesses that are resident in rural areas are less likely to own a deposit or loan account, than urban residents (Allen et al., 2016; Wokabi & Fatoki, 2019; Ngo, 2019; Asuming et al., 2019). This further highlights the need for penetrative outreach via the spread of bank branch networks. According to Gorfu and Mamo (2013), the determinants of the physical location of a bank branch are:

a. Changes in income, population and business activity.
b. Financial technology. For instance, with advances in Fintech, customers may prefer channels of delivery that are more comfortable and time-friendly.
c. Regulatory requirements. For intances, in Nigeria, banks are required to spread their branch networks based on their operational license, which could be regional, national and international.
d. Minimization of risk by spreading its deposit and loan portfolios.
e. Consolidate of its competitive advantage. For instance, this could be a strategic consideration in penetrating and spreading banking presence, to bank the under-banked and un-banked.

The consumption and use of financial services is largely predicated on access and availability of these products and services to economic unit. For instances, access (either physical and or virtual) to banking services determines the ownership of deposit accounts, and by extension loan account. People in need of banking products and services could physically go to the banking hall to either open account, make deposit, withdraw, check account balance, and caryout a whole lot of services. However, financial technology (Fintech) has made it possible for consumers to perform a whole lot of these at the comfort of their homes with the aid of internet and a mobile gadget. However, the use of digital technology in effecting transactions is largely dependent on the level of the individual's educational status and income (Nwafor, 2018). Those who are in the 'bottom of the pyramid' are less likely to use virtual technology in opening, operating a bank account, and other routine services. Again, this applies to those who can hardly read nor write. The universe of these class of people dwells in rural areas than in the city centre (Nwafor, 2018). This connotes that there is need for banks to have heterogenous bank branch networks that criss-cross both rural and urban settlements, in addition to realtime online platforms.

Banking the unbanked, and in addition, the underbanked requires the expansion of banking operations to the reach of households and economically disadvantaged small businesses. According to the law of large numbers, the more the branches, the better the business of banking. Bank financial intermediaries are, thus required to use an array of branch networks to pool deposits and further tranform the size, maturity and risk to meet the unique credit needs of the consumers (Casu et al., 2006; Markjackson et al., 2017). Thus, access connotes the demand for financial services. This implies that the absence of access could impair the level of access and use of financial services. In affirming this position, in 1993, Geographers in Britain adduced their lack of access to banking services to absence of branch networks due to closure (Ngo, 2019).

The business of banking simply entails deposit mobilization and allocation of loans and advances. The demand and use of financial services is predicated on access (that is, physical and virtual). Thus, the primary objective of policies of FI is access, whilst usage and quality follows suit (Ngo, 2019). The totality of these forms what financial inclusion entails.

Political Stability and No Violence

Businesses, households, and other economic agents can only strive and make progress in a conducive and friendly environment. The absence of this kind of habitat implies that economic progress both at the micro and macro levels would be disrupted. Further implying that, the presence of political violence could translate to economic retardation, inefficiency and underdevelopment (Alesina et al., 1992).

Change in government either by legitimate or illegitimate means creates macroeconomic uncertainties for business owners and investors. It is true that the machinery of government is

a continuum, however, in Africa, every change in government usually translate to changes in policy direction. These changes or shocks in government policy affect the dynamics in the market place, businesses and the flow of foreign capital. Thus, this gives sufficient reason to economic players to be circumspect at all times. This affects economic growth adversely (Ali, 2001).

Policy instability compels the real sector to shift their investment decisions to periods of certainty. Again, this implies that political and economic volatility serves as a huge impediment to real sector investment and growth (Radu, 2015). Policy distortions are reoccurring normal in developing countries, more so is sub-Saharan Africa which is characterized by poverty and acute income disparities. The region is prone to political instability and violence (Olanrewaju et al., 2019) due to electoral fraud and concomitant violence, military juntas, militancy, terrorism, religious crises and the likes of it (Compaoré et al., 2020).

The link between economic progress and a stable political environment is well established in literature (Kurecic & Kokotovic, 2017). Scholars who hold this notion are of the belief that a system that is devoid of political and other forms of disruptions are bound to accentuate investment (both domestic and foreign) and that this stimulates output growth at the national and sub-national units (Abu et al., 2015). This implies that a stable, predictable and certain socio-political system creates platforms for businesses and households to strive. Political stability engenders policy consistency and the absences of violence, chaos, and social disruptions enhance confidence and safety of capital resources. These altogether enhance the wellbeing of the people. However, the question of if political stability and no violence lead to inclusive finance in developing countries is yet to be clearly seen.

This present study hypothesize that political stability and no violence are critical conduits for penetrative reach and expansion of bank service outlets and financial inclusion in sub-Saharan Africa.

Regulatory Quality

According to the new institutional economic theory, regulatory institutions matters in the quest for economic development. Thus, regulatory quality is one of the pivots of stability and growth. Regulatory legislations provide the legal framework of engagement between the regulator and the providers of financial services on the one hand, and on the other hand, the contractual relationships between the suppliers of funds and their customers.

Financial regulations proscribe, require, and specify guidelines for financial service providers. The goal of regulation is to ensure a conducive financial system that imbibes stability, soundness of financial interactions and relationships amongst the critical stakeholders. Take for instance, regulatory authorities provide guidelines on the establishment and licensing of financial intermediaries, minimum capital requirement, liquidity requirement, and even prudential guidelines on lending operations.

The absence of a proper regulatory framework gives service providers opportunities to explore loopholes and engage in reckless activities that could derail confidence and induce instability. Again, according to (Jansson and Wenner, 1997) inappropriate regulation tend to raise the cost of financial intermediation without offering a corresponding reduction in the risk to financial institutions. This connotes that financial regulations are tailored to build confidence, enhance effectiveness and efficiency, and a sound, and stable financial superstructure and economic system (Jansson & Wenner, 1997).

Quality regulation standards play an essential role in expanding access and usage of quality financial services. This is complemented by strong regulatory institutions with adequate legislations and implementation of set standards in the financial system. There is evidence that developed nations with quality institutions have more penetrative reach, access and usage of financial services than nations with poor institutional and regulatory framework (Olanrewaju et al., 2019). Proponents of this notion are of the belief that strong and quality regulatory institutions guarantees the formulation of reforms and implementation of regulations that encourage expansion, formal participation and use of financial services.

Again, extant studies have shown that liberal financial policies are essential conduits for efficient resource mobilization and allocation. It is believed that liberal financialization policies creates a conducive environment for competition and innovation in the financial services market. The ripple effect of this is a financial system that has ample suppliers of credit facilities and other services that meets the needs of the deficit sector (Shaw, 1973). Repressive policies on the hand, leads to poor loan and deposit account creation as a result of contractionary liquidity and reserve requirements and fixed lending interest rates that do not reflect current market dynamics. Thus, quality regulatory policies help enhances banking penetration, accumulation of deposit accounts, and access to and usage of loan accounts.

This present study hypothesize that regulatory quality is a critical factor for penetrative reach and expansion of banking service outlets and financial inclusion in sub-Saharan Africa.

Empirical Review

Muriu (2020) examined the institutional determinants of financial inclusion in 125 countries cutting across Europe, Pacific, Middle East, North Africa, sub-Saharan Africa, East, Central, and South Asia. The institutional quality measures employed includes rule of law, political stability and regulatory quality. The number of deposit accounts was used as an indicator of financial inclusion. The study used income level and population size as the control variables. To achieve the objective of ascertaining the institutional determinants of financial inclusion, the fixed effect analytical technique of panel data estimation was used for estimation. The results affirm economic theory by indicating that the quality of institutions, that is, "rule of law, political stability, and regulatory quality" are key determinants of financial inclusion (deposit account ownership). The results further suggest that the effect in SSA was more robust than other sub-groups.

Alter and Yontcheva (2015) set out to examine the depth of financial development and possible factors undermining efforts of having a robust financial system in sub-Saharan Africa, particularly the trading block of the Central African Economic and Monetary Community. Cross-country data spanning through 1997 to 2012 was collated from 42 SSA countries for the analysis and estimation. Loan accounts (% of GDP) and financial development gap was used as the explained variables. The explanatory variables are a combination of macroeconomic variables (per capita GDP, CPI, ratio of debt to GDP, and the ratio of natural resources to GDP), institutional variables (public sector effectiveness, rule of law, and political stability), bank-level factors (deposit accounts and interest rate spread), geograpy and population related factors (population size, population density, and the % of urban population), and technological factors (mobile subscription and internet usage). The estimated linear model indicates that per capital GDP has a significant direct association with loan accounts and an insignificant nexus with financial development gap. The reverse is the case for the other macroeconomic variables. Findings also suggest that deposit accounts have a positive significant effect on loan accounts (% GDP), while interest rate spread was found to be negative and insignificant. The variables of geography and population were found to be negatively associated with loan accounts and the ratio of financial inclusion gap.

Ajide (2017) examined how institutional factors determine the level of financial inclusion in sub-Sahara Africa (SSA). Panel data spanning through 2004 to 2010 from 18 countries formed the sample frame of the study. The dependent variables used were bank branch networks, ATMs per 1000 persons and 1000 km^2, whilst the independent variables were the institutional measures (of voice and governance, political stability, governement effectiveness, regulatory quality, rule of law, and control of corruption) and other effect or control variables of GDP per capita, inflation, real interest rate, loan accounts, z-score, and bank concentration. The study followed the example of Arellano and Bond and Arellano and Bover's system of generalized method of moment for estimating dynamic models. The results indicate that the institutional indicators of the explanatory variables and the other effect variables are significant determinants of financial access in SSA.

Rafeeq (2018) employed a cross-country panel data to ascertain the contributiong factors to financial inclusion in two groups of countries regarded as high income (8) and low income (40) countries. A combination of macroeconomic, social and institutional variables were used as factors that could influence financial inclusion. GDP per capita, rule of law, urbanization, age dependency ratio, and information and communication form the explanatory measure of the study. Panel data spanning 2004 to 2015 was collated and estimated using the fixed-effect technique of estimating panel data. In poor sovereign nations, the estimates indicate that the measure of income, GDP per capita is not significantly associated to financial inclusion. This is not the case for high-income countries. In low income countries, the results indicate that rule of law, urbanization, age dependency ratio, and access to the internet are stimulants to financial access and usage. For high-income countries, rule of law and income were found to enlarge the inclusion gap, whilst the other variables (urbanization, age dependency rate, and access to internet) were found to be significantly associated to financial inclusion.

Allen et al. (2016) employed cross-country data spanning 123 countries and 124,000 persons to ascertain the foundamentals of deposit account ownership, use, and frequency of usage across countries and individuals. The results from the estimations indicate that nearness to formal financial networks and minimal costs associated to operating an account are key drivers of financial inclusion. Other key determinants of financial inclusion found in the study are rule of law (legal rights) and a stable political system. This implies that institutional quality is a key determinant of financial inclusion.

Berdibayev and Kwon (2020) examined in a cross-country study, the the contributing factors to digital financial services in 120 countries. GDP per capita, internet access or usage, number of ATM insfrastructure, political stability, core skills (literacy rate), mobile 3G network, mobile 4G network, mobile internet tariff, handset prices, control of corruption, and cyber-security were employed as the regressors to determine the changes in the ratio of digital payments or receipts in a year (digital payment services). The POLS results indicate that the key determinants of digital financial service inclusion are income (GDP per capita), internet access, literacy rate (core skills), number of ATM usage, mobile 4G network coverage, a stable polity, and control of graft. This implies that a unit change in the standard deviation of the said variables directly leads to a change in the endogenous variable. The study found that the other measures cannot scale up digital financial service inclusion.

Methodology

The ex-post facto research design and quantitative methods are employed to ensure that conditions prior to the conduct of this study can properly be understood and explained using econometric techniques. The study collated panel data spanning 2006 to 2021 from 12 sub-Sahara African countries from World Development Indicators (WDI) and Worldwide Governance Indicators (WGI).

The descriptive statistics and panel unit root tests preceded the estimation of the panel regression analyses. In addition, the redundant Fixed Effect test and Hausman test for endogeneity, also known as the Durbin-Wu-Hausman specification test was employed to determine the most preferable model between pooled OLS and the Fixed Effects, and the Fixed Effects (FE) and the Random Effects (RE) panel regression techniques respectively.

The econometric model is expressed as;

$$\ln BBN_{it} = a_0 + a_1 \ln RQU_{it} + a_2 \ln PSTA_{it} + a_3 \ln POPC_{it} + a_4 \ln GDPC_{it} + u_{it}$$

A priori expectations: a_1 & $a_2 > 0$

Description of a priori expectations;
Regulatory Quality (RQU): Improvement or increase in regulatory quality is expected to exert a positive consequence on access to and usage of financial service.
Political Stability and No violence (PSTA): Politically stable and violence free society is expected to breed policy consistency. Thus, the coefficient of this variable is expected to exert a positive effect on access to and usage of financial services.
Potential customers (population) (POPC) and GDP per capita (GDPC): These are control variables. All this being equal, banking penetrative reach could also be influenced by the potential customer base and the per capita income of the people, hence its inclusion as a control variable in the model.

Econometric Results

Table 4.1: Summary Descriptive Statistics

Variable	Mean	Median	J-B Stat.	Min	Max
BBN	5.89	4.53	67.17***	0.48	22.04
RQU	-0.44	-0.44	31.56***	-2.16	0.61
PSTA	-0.30	-0.13	7.06**	-2.21	1.20
POPC	84.83	37.94	224.37***	2.39	498.66
GDPC	2.35	2.27	31.78***	-9.44	11.32

Source: Author's computation
**** p < 0.01; ** p < 0.05; * p < 0.1*

Table 4.1 shows that the average values for the variables are positive except for the RQU and PSTA. The minimum value of BBN shows that some of the commercial banks in the SSA countries are having few branches compared to the average value. Both the mean and median value of GDPC is almost the same; however, the minimum value shows that one of the SSA countries experienced negative growth in a particular year. The mean value of the RQU reveals that regulatory quality in the region is very low and the mean value of the PSTA also reveals that the degree of political instability is very high in sub-Saharan Africa.

The classical regression model is based on the assumption of residual normality. However, the result of the Jarque-Bera statistics test which is used in testing for the normality of variables shows that only DIR is normally distributed as the test is not significant at any

conventional levels. This study anyway proceeds to the estimation of the regression models following the asymptotic law of large number. The theory simply states that the estimator will converge to the population (true) value if the sample size is large. Since we have 180 observations altogether, this justifies that the results of the regressions are asymptotically credible.

Table 4.2: Panel Unit Root Results

Variables	Levin, Lin & Chu (LLC)	Im, Pesaran and Shin (IPS)	Order of Integration	Remark
NBB	-8.17428***	-5.87121***	1(I)	Stationary at 1st difference
RQU	-4.02592***	-3.30836***	1(I)	Stationary at 1st difference
PSTA	-2.52321***	-1.84967***	1(I)	Stationary at 1st difference
GDPC	-19.6417***	-12.8333***	1(I)	Stationary at 1st difference
POPC	-15.9015***		1(I)	Stationary at 1st difference

Source: Author's computation

Note: *** denotes that the coefficients are significant at 5%. The levels of significance are reported based on the probability values.

Table 4.2 reports the results of the panel unit root tests using the Levin, Lin & Chu (2002) and Im, Pesaran, and Shin (1997). The above implies that the selected regressand and regressors are integrated at order 1(I). The results indicate that both the LLC and IPS techniques reported the same orders of integration for all the selected variables.

Table 4.3: Regression Results of Number of Bank Branch Networks (BBN)

Variables	Dependent Variable: BBN		
	Pooled-OLS Estimates	Fixed-Effect Estimates	Random-Effect Estimate
RQU	0.218***	0.340***	0.491***
	(0.071)	(0.094)	(0.082)
	{3.066}	{3.603}	{6.009}
PSTA	-0.211***	-0.114***	-0.230***
	(0.050)	(0.042)	(0.038)
	{-4.231}	{-2.721}	{-6.083}
POPC	0.002	1.711***	0.152**
	(0.025)	(0.155)	(0.059)
	{0.075}	{11.072}	{2.583}

GDPC	0.020*	0.009	0.002
	(0.011)	(0.005)	(0.004)
	{1.731}	{2.022}	{0.505}
Adj-R^2	0.79	0.97	0.44
F-Stat	119***	344***	25***
CI-test	-	87.05***	-
Hausman	-	-	151.85***

Source: Author's computation

*** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$, () standard error, {}t-statistics

Table 4.3 above shows the pooled-OLS, fixed-effect, and the random-effect estimates for the first model with the BBN as the dependent variable. It should be noted that the CI-test is the common intercept test or the redundant fixed effect test which tests for the reliability between the Fixed-Effect estimates and pooled-OLS estimate, while the Hausman test tests the reliability between the random-effect estimate and the fixed-effect estimate.

For the CI-test, a low p-value counts against the null hypothesis that the Pooled-OLS model is adequate, in favour of the fixed effects alternative. In other word, a very low probability value favours the Fixed-Effect estimate over the pooled-OLS estimate. Also, for the Hausman test, a low p-value count against the null hypothesis that the Random-Effects model is consistent, in favour of the Fixed-Effects model. In other word, a very low probability value favours the Random-Effect estimate over the fixed-effect estimate.

In the Pooled-OLS result, all the parameters except for the POPC are statistically significant at the conventional level. It can be seen from the result that a unit rise in the income per capita (GDPC) results in about a 2% units increase in the average number of commercial bank branch networks (BBN). The result likewise shows that a unit rise in the regulatory quality (RQU) results in about a 21.8% units increase in the average number of commercial bank branch networks (BBN). However, a unit rise in the PSTA resulted in about a 21.1% units decrease in the average number of commercial bank branch networks (BBN). The coefficient of determination (R^2) shows that about 80% of the variation in BBN is explained by the regressors. The F-stat (119) is shown to be statistically significant and this implies that all the regressors' parameters are jointly significant and different from zero.

In the Fixed-Effect result, only the parameters for RQU, PSTA and POPC are statistically significant. The result shows that a unit rise in the regulatory quality (RQU) results in about a 34% unit increase in the average number of commercial bank branch networks (BBN). However, a unit rise in the PSTA will result in about 11.4% decrease in the average number of commercial bank branch networks (BBN). The results also show that if POPC rises by one percent, the average number of commercial bank branch networks (BBN) goes up by about 1.711%. The findings also indicate that GDPC is positive and statistically insignificant. The coefficient of determination (R^2) shows that about 97% of the variation in BBN is explained by the regressors. The F-stat (344) is shown to be statistically significant and this implies that all the regressors' parameters are jointly significant and different from zero.

In the random-effect results, the parameter for GDPC and PSTA is statistically insignificant at the conventional levels. The result likewise shows that a unit rise in the regulatory quality (RQU) results in about a 49.1% increase in the average number of commercial bank branch networks (BBN). The result as well shows that if POPC rises by one percent, the average

number of commercial bank branch networks (BBN) goes up by about 0.152%. The coefficient of determination (R^2) shows that about 46% of the variation in BBN is explained by the regressors. The F-stat (25) is shown to be statistically significant and this implies that all the regressors' parameters are jointly significant and different from zero.

Looking at the two effect models, the CI-test is statistically significant as well as the Hausman test under the random-effect model results. By implication, the statistical significance of the CI-test implies that the Fixed-Effect model is more appropriate than the Pooled-OLS model, and the statistical significance of the Hausman test implies that the Random-Effect model gives a clearer and more efficient outcome than the Fixed-Effect model.

Discussion of Findings

The estimated results suggest that regulatory quality and political stability and no violence has a significant effect on the number of commercial bank branches in sub-Saharan Africa. Aside political stability and no violence, regulatory quality met the a priori expectations. The results are specifically discussed in the following section.

Regulatory quality and the number of bank branch networks:

Regulatory quality is an indicator of the institutional framework in the study locale. The result indicates that regulatory quality bears a significant effect on the number of bank branches in sub-Saharan Africa. The results also suggested that the relationship between regulatory quality and the number bank branches is positive. This implies that a proper and robust regulatory framework has the capacity to cultivate increase in bank branches in SSA.

Following this, it can be argued that regulatory quality matters and ensures a conducive financial system that imbibes stability, soundness of financial interactions and relationships among stakeholders. Thus, the positive significant relationship found in this study can be adduced to mean that quality regulation aids access and the penetrative reach of financial instruments and services in sub-Saharan Africa. What this means is that a robust and strong regulatory environment with adequate legislations and implementation of set standards in the financial system significantly aids increase in the number of investments in bank branch networks.

In a study of how institutional factors determine the level of financial inclusion, Ajide (2017) reported that regulatory quality is a significant determinant of financial access in SSA. Similarly, Hannan and Hanweck (2007) stated that regulations allowing for the spread of physical branches exert a positive effect on the number of bank branch networks. Thus, this gives empirical credence to our results. The results are also re-echoes by the New Institutional Economic (NIE) theory which holds that regulatory institutions promote stability, enhance investment, capital formation and economic growth.

Political stability and the number of bank branch networks:

Political stability and no violence is an indicator of the governance and institutional framework in SSA. It was used to ascertain how the perception of possible instability affects bank branch spread in the region.

The regression outputs reported that political stability and no violence exerts an adverse and statistically significant effect on the number of commercial bank branches in the region. This implies that the connection between the variables is negative and that every increase in the level of political instability and presence of violence causes disruption of banking operations

and the spread of bank branches in SSA region. This is in line with the findings of (Ajide, 2017) who reported a negative nexus between the explanatory variable and the expansion of bank branches in the region. However, the findings of significance reported in this study is consistent with the findings of statistical significance reported between political stability and bank branch spread in SSA (Ajide, 2017).

Further observation shows that the result did not meet the positive a priori expectation. This implies that the political climate in the region has been unstable and affected by other forms of disruptions. These disruptions breeds divestment and impede banking operations (Abu et al., 2015; Kurecic & Kokotovic, 2017). Thus, the findings of significant negative relationship indicate that the system was riddled with the risk of uncertainty and instability. This is contrary to the New Institutional Economic (NIE) theory, which posits that institutions promote stability, minimize violence, enhance investment, capital formation, and growth (Yongjian et al., 2005).

However, the adverse relationship reported in our findings may be attributed to the presence of political instability and violence (Olanrewaju et al., 2019) due to electoral fraud, militancy, terrorism, religious crises and the likes of it (Compaoré et al., 2020). Another reason for the negative relationship may be as a result of macroeconomic shocks and uncertainty caused by change in government. These reoccurring incidences affect the dynamics in the market place, and this gives sufficient reason to economic players to be circumspect at all times (Ali, 2001).

Consequently, the study contends that an unstable political climate ravaged with social disruptions and violence does not augur well for the macro economy, and thus, exerts a decreasing or negative effect on the spread of bank branch infrastructure (or demographic penetration) in sub-Saharan Africa.

Conclusion and Recommendations

The study examined the effect of institutional quality on access to financial products and services in sub-Saharan Africa. In particular, it understudied the effect of political stability and no violence and regulatory quality on banking penetration in sub-Saharan Africa. The Durbin-Wu-Hausman specification test indicated that the Random-Effect panel model gave more appropriate and efficient outcome than the Fixed-Effect model. The results indicate that regulatory quality bears a significant effect on access to financial products and services in sub-Saharan Africa. The results also suggested that there is a positive relationship between regulatory quality and the number bank branches in the sub-region. Further findings reported that political stability and no violence exerts an adverse and statistically significant effect on access to financial products and services in sub-Saharan Africa. The policy recommendation is that, regulators need to carry out regulatory impact assessment to determine the impact of new regulatory guidelines on the people and the economy. This would help assuage adverse regulations and enhance the regulatory environment in the subcontinent. This should further be complemented with a function al judicial system, accountability, and concerted systemic fight against corruption. These may encourage political, economic, and social stability and create a stable and conducive climate for private sector growth and financial inclusion.

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