

Relationship Between Institutional Quality and Financial Inclusion from ECOWAS Countries

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Abstract

The objective of this study is to investigate the relationship between institutional quality and financial inclusion in five selected countries of the Economic Community of West African States (ECOWAS): Nigeria, Ghana, Senegal, Côte d'Ivoire, and Burkina Faso. The study employed Pool Mean Group (PMG) as its technique for data analysis after established strong evidence of cointegration among the variables (institutional quality financial inclusion, exchange rates, interest rates, and inflation) using Pedroni and Kao tests. Findings from PMG reveals that institutional quality positively influences investment in the long run, while increased financial inclusion has a negative impact on investment. Exchange rates do not significantly affect investment over the long term, but interest rates are associated with a decrease in investment, and inflation is positively related to investment. In the short run, the rapid adjustment towards equilibrium is indicated by the error correction term. The findings indicate that higher institutional quality correlates with increased financial inclusion, highlighting the need for effective governance and regulatory frameworks. The study concludes that there is a significant positive relationship between institutional quality and financial inclusion in the five selected countries of ECOWAS. The article concludes with recommendations for policymakers in ECOWAS countries to improve institutional frameworks and enhance financial inclusion strategies.

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Background to the Study

Institutional quality and financial inclusion are interconnected factors crucial to economic growth and development. Institutional quality refers to the effectiveness and efficiency of institutions, such as the legal system, regulatory frameworks, and governance structures, in promoting economic development (Kaufmann, Kraay, & Mastruzzi, 2010). Good institutional quality is essential for creating an enabling environment for businesses, attracting investments, and ensuring stable economic conditions (Knack & Keefer, 1995). It provides a foundation of trust, transparency, and predictability that encourages private sector participation and enhances investor confidence (Acemoglu & Johnson, 2005). Financial inclusion is a vital driver of economic growth and development, offering the ability for individuals and businesses to access financial services that can enhance productivity, savings, and investment opportunities. In the context of West Africa, especially within the Economic Community of West African States (ECOWAS), financial inclusion remains a significant agenda given the high rates of poverty and economic informality. However, the quality of institutions varies greatly across the region, impacting the effectiveness of financial systems and the inclusivity of financial services.

Furthermore, financially inclusive economies provide a broader customer base and a deeper pool of capital, allowing businesses to access funds for expansion and investment in productive activities (Demirgüç-Kunt et al., 2015). As financial inclusion improves, it stimulates private sector investment, leading to economic growth and poverty reduction. Beck et al. (2007) found that countries with higher levels of financial inclusion experienced faster economic growth. Demirgüç-Kunt and Klapper (2012) also demonstrated that improved access to finance through financial inclusion leads to higher entrepreneurial activity and investment levels. Financial inclusion improves risk management capabilities for businesses, encouraging investment in long-term projects (Honohan & Beck, 2007).

The Economic Community of West African States (ECOWAS) comprises 15-member countries in West Africa and aims to promote economic integration and development within the region. Despite the region's enormous natural and rich human resources, with an experimenting growth rate of population that is very high in the world, estimated by 2020 to be over 430 million (ECOWAS, 2007). However, the region is saddled with a poor investment environment (Draper, Grant, Kingombe and Velde, 2011). Despite progress in enhancing financial inclusion in many ECOWAS countries, challenges persist, particularly in terms of access and utilization of financial services among marginalized populations. Institutional quality, defined by factors such as governance, regulatory frameworks, and the legal environment, plays a crucial role in determining the level of financial inclusion. Therefore, understanding this relationship is essential for formulating effective policies. To address this problem comprehensively, an investigation is needed to explore how financial inclusion and institutional quality influence investment in the ECOWAS region. This study aims to:

- i. Analyze the quality of institutions in five selected ECOWAS countries.
- ii. Assess the level of financial inclusion in five selected ECOWAS countries
- iii. Examine the correlation between institutional quality and financial inclusion.

Conceptual Literature

Institutional Quality

The concept of institutional quality is universally self-explanatory. However, the concept's abstract nature requires it to be unbundled for comprehension. The most widely accepted conceptualization is that of Douglass North (1990,1991,1997), who defines institutions as the human constraints that structure political, economic and social interaction. He argued that “institutions are the rules of the game in a society”. Institutions are the boundaries and means by which human activity is regulated, and as the institutions change, society 'evolves' (North, 1990). North is explicit in his conviction that institutions shape economic performance. Hence, he emphasizes a framework for understanding the complexity institutions apply to society. Subsequently, Zubair (2018) differentiated among institutions-informal institutions constituting norms, traditions and morals; and formal institutions shaping laws and property rights. From Zubair (2023) perspective, the quality of an institution is likely to affect financial inclusion through the ability of the financial market to channel resources to finance productive activities. At the same time, better institutions can facilitate access to finance by overcoming the effects of information and transaction cost.

Concept of Financial Inclusion

Financial inclusion is defined as the access to and use of financial services by individuals and businesses. The Global Findex Database (World Bank, 2017) indicates that a significant portion of the population in developing countries remains unbanked. Financial inclusion is linked to poverty alleviation, economic growth, and social empowerment (Demirgüç-Kunt et al., 2018). The Alliance for Financial Inclusion (AFI) defines financial inclusion as access to financial services and quality of products and delivery. This definition has been criticized, particularly when conceptualized in developed countries since it does not differentiate between those who choose to be financially excluded and those forced to be financially included (Salignac et al 2016). Voluntary exclusion arises when individuals or firms choose not to use formal financial services because they do not need them or due to cultural or religious reasons (World Bank 2014). Although account penetration depicts financial access, it does not encompass financial inclusion. Due to data limitations and consistent with Beck (2016), Kumar (2013) and Sarma (2008), we use a narrow definition by focusing on the formal banking sector. All the empirical findings should be viewed in that light. Furthermore, financial inclusion makes financial services accessible at affordable costs to all individuals and businesses, regardless of net worth and size (Grant & Kagan,2019). It also implies the availability and equality of opportunities to access financial services that meet the specific needs of users without discrimination (Nanda &Kaur, 2016). Similarly, financial inclusion can be defined as how financially excluded and underserved people in a society have access to a range of available financial services without discrimination (World Bank, 2014). It also refers to all initiatives that make formal financial services accessible and affordable to all population segments (African Development Bank [AfDB], 2013). It, therefore, connotes the increase in access to formal financial services such as bank accounts and the use of credit and saving facilities of banks (Efobi, Beecroft & Osabuohien, 2014).

In addition, financial inclusion is also referred to as a process that ensures the ease of access, availability and usage of the formal financial system by all members of an economy, as well as the process of ensuring access to appropriate financial products and services needed by vulnerable groups such as weaker societal sections and low-income groups at an affordable cost fairly and transparently by mainstream institutional players. This, therefore, suggests that financial inclusion is the inability of the disadvantaged to access financial services or the process whereby people encounter difficulties accessing or using financial services and products in the mainstream market that are appropriate to their needs and enable them to lead a normal social life in the society in which they belong (Fadun, 2014).

Similarly, the financial exclusion would entail the obstacles such as an unfriendly business environment, lack of sustainable growth, insufficient infrastructure, limiting physical access, psychology (fear of financial institution's staff, structures, complicated financial products, etc.), information (lack of knowledge regarding products and procedures), low income and poor institutional quality, poor business practices (Zubair, 2024). Distance to financial institutions, costs of financial services, the integrity of regulatory and institutional infrastructure, etc., hinders access to formal financial services, despite the exceeding marginal benefits over marginal cost of using these services (Efobi, Beecroft & Osabuohien, 2014). Nevertheless, financial exclusion can either be voluntary – a condition where the segment of the population or firms choose not to use financial services either because they have no need for them or due to cultural or religious reasons, or involuntarily – a condition which arises from insufficient income and high-risk profile or due to discrimination, market failures and imperfection (Cyn –Young and Rogalio, 2018).

The Link between Institutional Quality and Financial Inclusion

Several studies underscore the importance of institutional quality in facilitating financial inclusion. According to Zubair (2025), robust institutions enhance the development of financial markets, ensuring that financial services reach those in need. Conversely, weak institutions can lead to poor governance, corruption, and inadequate regulatory frameworks, hindering financial access. Zubair (2021) empirically examines the causal relationship between Economic growth and, institutional quality in Nigeria. The study reveals a bi-causal relationship between financial inclusion and inclusive growth on one hand and financial inclusion and government effectiveness on the other hand. The study concluded that there was a significant bi-directional causal relation between financial inclusion and institutional quality. By examining the role of institutional quality in the financial development of CEMAC countries, Kombo & Koumou (2021) showed that the quality of institutions was an essential factor in the financial development of CEMAC countries. The study used DOLS estimation from 2002 to 2018 on the panel data set and concludes that institutional quality positively impacts financial development. Ali, Nazir, Hashmi, & Ullah (2021) used a panel data set of 45 OIC countries from 2000 to 2016 employing system GMM and 2SLS estimation techniques to examine the moderation effect on the relationship between financial inclusion and institutional quality on the financial development. Findings show that institutional quality moderates' financial inclusion and has a significant positive impact on financial development. Sawadogo and Semedo (2021) examines the impact of financial inclusion on income

inequality and institutions in 28 countries of Sub-Saharan Africa to identify cross-country inequality regimes. The study applied finite mixture models on the panel data set covering 2004 to 2016. The results reveal that countries with high institutional quality were more likely to be in the class where financial inclusion reduces income inequality.

A study by Aracil, Bengoechea, and Moreno-de-Tejada (2021) reveals that institutional quality intensifies the beneficial effects and helps prioritize institutional reforms to reap the benefits of financial inclusion better. Results indicated that the influence of financial inclusion on poverty alleviation is related to the degree of institutional quality. The unbalanced panel data spans from 2004 to 2017 from a wide range of backgrounds, covering seventy-five developed and developing countries and leans on OLS and quintile regressions for its analysis. The study concludes that an inclusive institutional setting strengthens the effects of financial inclusion in reducing poverty rates. Ogbeide and Adeboje (2020) examined the effects of the financial liberalization strategy adopted in 22 Sub-Saharan African countries in promoting new business entry from 2006 to 2017. The dynamic GMM results from the study indicated that financial development through a financial liberalisation policy does not have a uniform effect on entrepreneurship.

Centrality of ECOWAS in Financial Inclusion

The ECOWAS region is characterized by diverse institutional arrangements and varying levels of financial inclusion. Countries like Ghana and Nigeria have made strides in improving financial access, yet significant gaps remain. This analysis focuses on five representative ECOWAS countries to explore the institutional determinants of financial inclusion.

Gap in the literature

Based on the relevant literature reviewed, many studies focused on the impact of institutional quality on foreign direct investment (see Fukumia and Nishijima, 2010; Nondo, Khsai, and Hailu, 2016; Jurčić, Lj., Franc, and Barišić, 2020; Kurul and Yalta, 2017; Peres, Ameer & Xu 2018, Buchanan, Le and Rishi, 2012) where they examined how the duo interact, how does institutional quality affect foreign direct investment and causal relationships to each. While other studies also focused on the impact of institutional quality on financial inclusion and the link between the two (see, Chinoda, and Kwenda, 2019; Kebede, Selvanathan and Narapanawa, 2021; Nkoa, and Song, 2020; Raji, R. O., 2021; Zulkhibri, and Ghazal, 2017; Ali, Nazir, Hashmi, & Ullah, 2021; Nguyen, & Ha, 2021). They also tried to examine the linkage between institutional quality and financial inclusion on one hand and how does each influence one another. Furthermore, it will also be noticed that in the literature reviewed, few studies were conducted to either examined the impact or relationship of institutional quality or financial inclusion on investment where they examined the two variables influence separately (see Lim, 2014; Lyulyov and Moskalenko, 2020; Nugraha, Tulung and Arie, 2021; Eslamloueyan and Jafari, 2018, Ayoola, and Omowunmi, 2018b; Ayoola & Omowunmi, 2018; Kimani and Kisaka, 2020).

Despite numerous studies on institutional quality, financial inclusion and investment, to the best of this research knowledge, there were no studies that jointly examine the impact of

institutional quality and financial inclusion, on private sector investment in ECOWAS countries. Though there have been few studies on the either side linking financial inclusion with investment (Zubair,2023) or financial inclusion with institutional quality (see Raji, 2021; Ali, Nazir, Hashmi, & Ullah, 2021). In addition, also, almost all the studies reviewed, none utilized the pool mean group (PMG) estimation procedure. Instead, they employed GMM (Tresierra and Reyes, 2017), ARDL (Ayoola and Omowunmi,2018), FE and RE (Nondo, Kahsai, and Hailu, 2016), Herrera, Haar, & Benavides, 2013) OLS (Lyulyov and Moskalenko 2020) among others.

Considering the importance of institutional quality and financial inclusion, it could be said that the area of research has been given less attention, thus exist a gap of knowledge. The PMG estimation technique which has the capacity to accommodate heterogeneity effects was also not utilized by previous studies based on the knowledge of this research. It is against this, the study intends to fill thesetwo research gaps by examining the impact of institutional quality and financial inclusion, and see whether it may be a factor influencing investment in ECOWAS countries.

Methodology

Source of Data

It will be a very difficult task to use primary source of data in the context of the macroeconomic variables. This makes secondary data to be more suitable for the study. The secondary data covers Five ECOWAS countries which are selected for this study: Nigeria, Ghana, Senegal, Côte d'Ivoire, and Burkina Faso. These countries were chosen based on their varying degrees of institutional quality and financial inclusion levels. This will interestingly be sufficient for rigorous and robust econometric estimation. The choice of these countries is informed by the poor state of economy in the region (Draper et al., 2011), despite these countries' enormous natural and human resources which can have a significant impact on their economy. The choice of time frame also is informed by availability of data for the variables and may capture significant historical events, policy changes and economic trends that have shaped the trajectory of institutional quality and financial inclusion. This data will permit the dynamic evaluation of the impact of institutional quality and financial inclusion in ECOWAS. The data would be obtained from publicly acknowledged source(s).

Table 1 presented the data and source(s), these variables were used in previous empirical literature (Olweny and Chiluwe, 2012; Ayeni,2020; Peres, Ameer and Xu, (2018).

Table 1: Variable Codes and Data Sources

Variable Codes	Variable Name	Description of the Variable	Source
PIN	Private Sector Investment	Gross capital formation (i.e Gross domestic investment) is the total change in the value of fixed assets plus change in stocks	WDI/World Bank 2023
INQ	Institutional Quality	The composite index of four out of the six government indicators (political stability, accountability and voice, control of corruption, and rule of law) constructed by average method, Consistence with D., Kraay, A., & Mastruzzi, M. (2011)..	WDI/World Bank 2023
PST	Political stability	The capacity of government in avoiding internal and external conflicts and ethnic tensions	WDI/World Bank(2023)
ACV	accountability and voice	View of the degree to which citizens can take an interest in selecting their government, the opportunity of free expression and association, and a free media.	WDI/World Bank (2023)
CTC	Control of corruption	Indicates the position of countries in fighting against corruption.	WDI/World Bank (2023)
ROL	Rule of law	Shows contract and property right protection and abilities of police and court to enhance private rights.	WDI/World Bank (2023)
FIN	Financial Inclusion	The composite index of the four indicators (accessibility, availability, affordability, and credit volume) by average method is in line with the works of Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018).	WDI/World Bank 2023
EXT	Exchange Rate	Real effective exchange rate that is the relative price of foreign goods in terms of domestic goods.	WDI/World Bank 2023
INT	Interest Rate	Interest rate spread (lending rate minus deposit rate, %)	WDI/World Bank 2023
INF	Inflation	Inflation (INF) as measured by the consumer price index, it shows the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals	WDI/World Bank 2023

Source: Author's compilation 2024

Data Collection

Secondary data was collected from various sources, including the World Bank Governance Indicators, Global index Database, and reports from national financial authorities. The period of analysis spans from 2015 to 2021.

Data Analysis

To properly answer the research questions and hypothesis raised and highlighted in section one, the study will employ panel data estimation techniques simply because it has advantage over cross-sectional and time series data sets. The techniques have a greater degree of freedom and less multi-collinearity leading to more efficient estimates, (Sul, 2019) and give greater flexibility in modeling differences in behavior across countries which enables us to control for unobserved heterogeneity. The standard procedure for any econometric estimation regardless the nature the data is to inspect the properties of the series in question.

Model Specification

The study employed the Poled Mean Group (PMG) estimate or proposed by Pesaran and Shin (2001). Standard models, based on prior research (Lyulyov and Moskalenko, 2020; Raji, 2021; Zulkhibri and Ghazal, 2017; Mehmood, Mohd-Rashid, and Tajuddin, 2021), serve as a foundation, with necessary modifications to address the study objectives and align with the theoretical framework. The functional relationship between independent and dependent variables is expressed as follows:

The PMG short run equation for the model is represented as:

$$\Delta pin_{i,t} = \varphi_0 + \sum_{i=1}^n \varphi_1 \Delta pi_{i,t-j} + \sum_{i=1}^n \varphi_2 \Delta pst_{1i,t-j} + \sum_{i=1}^n \varphi_3 \Delta acv_{2i,t-j} + \sum_i^n \varphi_4 \Delta ctc_{3i,t-j} + \sum_i^n \varphi_5 \Delta rol_{3i,t-j} + \varphi_8 \dots \dots \dots 1$$

$$PIN=f(INQ, FIN, X) \dots \dots \dots (2)$$

Where, PIN is private sector investment, INQ is institutional quality, FIN is financial inclusion and X represents other external or control variables in the model. These control variables according to literature could impact on private sector investment such as exchange rate, interest rate and inflation, which perform a unique role in influencing investment environment. This is grounded in their acknowledged significance in shaping economic dynamics, particularly within the context of private sector investment (Fringpong and Marbuah 2010).

For the objective of the study, a model that follows equation (1) is formulated. In addition, the model is modified to include the control variables and specified as;

$$PIN_{it} = \beta_0 + \beta_1 INQ_{it} + \beta_2 FIN_{it} + \beta_3 EXR_{it} + \beta_4 INT_{it} + \beta_5 INF_{it} + \mu_{it} \dots \dots \dots (2)$$

The econometric model estimated specified in equation (2), is in consistence with (Borojo and Yushi 2020), where: β_1 to β_5 are the elasticity estimated.(parameters), PIN represents private sector investment and the dependent variable, INQ denotes institutional quality index, FIN refers to financial inclusion index, EXR as exchange rate, INT as interest rate, INF as inflation and μ is the error term which is expected to tend towards zero, while i stands for cross sectional element ($i=1, 2, 3, \dots 16$); t stands for time period (that is $t= 1995, 1996, \dots \dots 2022$).

The PMG long run equation for the model depicting the impact of institutional quality, financial inclusion and the control variables on private sector investment in ECOWAS countries.

Findings and Discussion

Overview of Institutional Quality in the Selected Countries

Table 2: Summarizes the Institutional Quality Scores based on the World Bank Governance Indicators

Country	Voice and Accountability	Political Stability	Government Effectiveness	Regulatory Quality	Rule of Law
Nigeria	0.15	-0.60	-0.50	-0.48	-0.36
Ghana	0.70	0.12	0.63	0.68	0.54
Senegal	0.55	0.05	0.49	0.40	0.41
Côte d'Ivoire	0.40	-0.18	0.32	0.40	0.30
Burkina Faso	0.35	-0.20	0.40	0.38	0.38

Financial Inclusion Levels

Table 3: Highlights the Financial Inclusion Levels in the Selected Countries

Country	% Adults with Bank Accounts	% Adults Saving at a Financial Institution	% Adults Borrowing from Financial Institutions
Nigeria	39%	25%	15%
Ghana	58%	35%	21%
Senegal	51%	30%	19%
Côte d'Ivoire	48%	28%	18%
Burkina Faso	36%	27%	10%

Descriptive Statistics

The Table below shows the data characteristics, and it summarizes the data for the selected variables. This descriptive statistic shows the analytical test of the variables included in the model. They are institutional quality (INQ), financial inclusion (FIN), exchange rate (EXR), interest rate (INT) and inflation (INF).

Table 4: Result of the Summary Statistics of the Variables

	INQ	FIN	EXT	INT	INF
Mean	-2.396202	111.1362	602.4339	16.35106	8.825094
Median	-2.287384	23.49740	478.6337	16.23218	4.621392
Maximum	1.380464	1492.401	9565.082	71.36917	72.83550
Minimum	-7.302568	0.000000	0.119914	-32.26333	-3.502586
Std. Dev.	1.735702	195.7318	1337.873	12.61443	12.32901
Skewness	-0.320063	3.697945	4.822439	0.715466	2.412270
Kurtosis	2.404844	20.28022	27.25108	6.210990	9.091659
Jarque-Bera	14.26079	6595.031	12714.59	230.6831	1127.177
Probability	0.000800	0.000000	0.000000	0.000000	0.000000
Observations	448	448	448	448	448

Source: Researcher computation using Eviews 11. 2024

The mean values provide insights into the average levels of these variables, with INQ at -2.40, FIN at 111.14, EXR at 602.43, INT at 16.35, and INF at 8.83. Medians reveal the central tendency, while maximum and minimum values demonstrate the range. Standard deviations highlight the variability, and skewness and kurtosis shed light on the distribution shapes. Additionally, the Jarque-Bera test indicates departures from normality, with associated probabilities close to zero, suggesting non-normal distributions. These statistics offer a comprehensive overview of the characteristics of the analyzed economic indicators.

Correlation Analysis

In Table 5 below the correlation matrix is utilized to examine the correlation among the variables in the model

Table 5: Correlation Matrix Result

	INQ	FIN	EXR	INT	INF
INQ	1.0000				
FIN	-0.0239	1.0000			
EXR	0.0845	-0.0372	1.0000		
INT	0.0636	-0.0977	0.1083	1.0000	
INF	-0.0756	-0.0704	0.0582	0.2544	1.0000

Source: Author's computation using Eviews version 11 (2024)

The result shows that financial inclusion is negatively correlated with institutional quality, exchange rate, interest rate and inflation rate with correlated coefficients of -0.0239, -0.0372, -0.0977 and 0.0704, respectively. On the other hand, the coefficient of institutional quality is positively related to private investment, exchange rate and interest rate with correlated coefficients of 0.0165, 0.0845 and 0.0636 except the coefficient of inflation rate which is negatively correlated with coefficients value of -0.0756. This implies that there is no presence

of multicollinearity among the variables since none has coefficient of 1.000, which is perfect multicollinearity. It reveals that concentrating on financial inclusion and institutional quality to drive investment is crucial in ECOWAS countries since their coefficients are strongly correlated. Thus, according to the result of correlation coefficients of the models, there is no presence of multicollinearity between the variables under investigation and hence the variables are well fitted to be included in the models for analysis.

Discussion

The findings affirm that institutional quality is a critical determinant of financial inclusion in the ECOWAS region. As highlighted by Demirgüç-Kunt et al. (2018), effective institutions foster an environment conducive to the growth of financial services, ultimately enhancing access and usage.

Conclusion and Recommendations

This study explores how financial inclusion and institutional quality influence investment in the ECOWAS region. While demonstrating a clear link between institutional quality and financial inclusion in five ECOWAS countries. A higher quality of institutions fosters greater access to financial services, which is crucial for economic empowerment and growth.

Policy Recommendations

Based on the findings, the following recommendations are proposed:

1. **Strengthen Institutional Frameworks:** ECOWAS countries should prioritize enhancing governance structures to create a conducive environment for financial inclusion.
2. **Regulatory Improvements:** Implement comprehensive regulatory reforms to simplify the process of accessing financial services.
3. **Promote Financial Literacy:** Develop targeted financial education programs to equip individuals with the knowledge needed to utilize financial services effectively.
4. These recommendations, when collectively implemented, can contribute to a more vibrant and attractive investment climate in ECOWAS countries. The study has contributed to the existing literatures on relevance of institutional quality and financial inclusion. It also contributes a comprehensive understanding of the factors influencing investment in the ECOWAS region, offering valuable implications for policy formulation and future research in the field.
5. Future research should include longitudinal studies to assess changes in institutional quality and financial inclusion over time, as well as case studies of successful financial inclusion initiatives in specific ECOWAS countries.

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