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INSTITUTIONAL QUALITY AND POVERTY REDUCTION IN ECOWAS COUNTRIES: EVIDENCE FROM DRISCOLL AND KRAAY

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ABSTRACT

The rising situation of poverty, especially in developing countries, has been a disturbing issue for the academic environment and policymakers for a long time. Despite voluminous research on how various economic factors affect poverty reduction, the problem persists. Within this context, the current study evaluates the influence of institutional quality on poverty reduction among 12 countries of the Economic Community of West African States (ECOWAS) for the period of 1984-2018. The study employs second-generation estimation techniques, specifically the Driscoll and Kraay (1998) estimation technique which is robust to cross-sectional dependence. The main findings indicate that improvement in the institutional quality arrangement will go a long way in reducing the poverty levels in ECOWAS countries. Hence, the policy recommendation is all the countries within the sub-region need to put more effort to strengthen the institutional environment in the sub-region.

Keywords: Institutional Quality, Poverty, Driscoll and Kraay Corruption, Cross-Sectional Dependence.

1.0 INTRODUCTION

The launching of the Sustainable Development Goals (SDGs) is mainly to serve as the new global "developmental roadmap", especially with the termination of the initial 'United Nations (UN) Millennium Development Goals (MDGs) in the year 2015. As stated in the SDGs document, it is expected that by the end of 2030, poverty eradication should be achieved globally. It is also, in this manner that African countries moved to enhance their socio-economic situations through the advancement of regional economic stance. A crucial regional bloc created in this regard is the West African regional formation known as the Economic Community of West African States (ECOWAS) in 1975. Thus, as argued by Radelet (2010), economic growth levels within many African economies and regional integration have been encouraging since around the mid-1990s; however, they have to cope with other various development-related difficulties and emerging crises of which poverty remains central.

The situation in the ECOWAS region is evident as member-states have to adopt multiple interventions within the last two decades to control the alarming situation (Aglina et al, 2016). However, the problem of poverty in countries within the sub-region is on the increase; primarily where around 40% of the global poor exist there (Matthew et al. 2019). Thus, the situation remains a great challenge although improvements in global poverty reduction were recorded where those living within the poverty circle fell by half with about 1.9 billion affected people in the 1990s to around 836 million in the year 2015 (Valensisi, 2020).

The poor economic nature of the African continent as a whole, particularly in the facet of the high poverty level, may be attributed to the deficiency of credible institutional structure. With this regard, high-level of corruption, political instability, prevalence of violence, undemocratic governance, hostile regulatory atmosphere especially for private segments and high price volatility remain evident (Asongu, 2015; Stiglitz, 2011). In particular, weak institutions are some of the features of the countries within the ECOWAS region (Appiah-Otoo et al. 2022). Despite efforts for poverty reduction, the picture remains discouraging in the ECOWAS region as over 40% of the global poor are located. Furthermore, the insufficient research on institutional quality and poverty reduction within the ECOWAS sub-region also calls for this study. Thus, focusing on the institutional arrangement and poverty reduction nexus remains vital, in contrast to the majority of research that emphasizes more on institutions and economic growth nexus.

It is along this spectrum that the current paper seeks to determine the influence of institutional quality on the level of poverty reduction specifically in the West African countries (ECOWAS sub-region). To achieve this aim, and possibly beyond the simple institutions and poverty nexus, this study employs a second-generation estimation technique of Driscoll and Kraay (1998) estimation method. This estimation method has great advantages over the first estimation technique in terms of being robust to cross-sectional dependence (CSD) and also some expected heteroskedastic situations. Hence, the fundamental question of whether institutional quality influences poverty reduction in the ECOWAS sub-region.

Following the introduction, the remaining sections of this paper are as follows: Brief literature review is presented in the second section. The third section contains the methodology and data. The fourth section presents the results and discussions. The ending section is the conclusion and policy recommendations.

2.0 LITERATURE REVIEW

This section presents a review of theoretical and empirical literature related to institutional quality and poverty reduction. A brief theoretical review of the institutions-augmented Solow model is presented below. Following the theoretical literature review is the empirical review.

2.1 Institutions-Augmented Solow Growth Model

The ongoing concern of economic literature regarding the importance of governance and institutional arrangement alongside other factors like geography and culture cannot be over-emphasised. This is related to the continuous pursuit of those "deep determining factors" of economic growth and development especially towards poverty reduction among others. Furthermore, this is rising as a result of dissatisfaction experienced since the late 1980s relating to the then pre-eminent "neoclassical" model of Solow (1956) as introduced in the 1950s. The standard neo-classical growth model recognises the role of capital accumulation or investment as the significant factor that explains the nature of per capita income.

Hence, continuous attempts to empirically test the efficacy of the neoclassical model, only result in ambiguous outcomes in the best situations. These attempts further triggered other efforts of re-considering the notion of the 'factors of production' comprising of human capital (Becker, 1962). Thus, towards the end of the 1980s and early parts of the 1990s, the advancement of endogenous growth models came up to integrate the nature of the technological level and the degree of innovation experienced (Grossman & Helpman, 1993).

Therefore, it is argued that on this ground, the existing growth models have only revealed the "mechanics" or "associates" of growth but failed to reflect on its deeper determining factors truly. On this ground, the emergence of a different dimension of economic literature as an effort towards the continual quest for more robust determinants of economic development also referred to as the "New Institutional Economics" (NIE). This is arising mainly from the original works of Douglass North (see, North & Thomas, 1973; North, 1990). Thus, efforts by the NIE towards extending neo-classical economics have been mainly by integrating institutional analysis to pay more attention to the influence of institutions in determining long-term economic performance.

On this note, a modest "institutions-augmented Solow model" that captures the influences of institutional quality arrangements on the nature and growth rates of output was articulated by Tebaldi & Mohan (2008). Specifically, therefore, a modification was made to the production-function arrangement and the capital-accumulation equation established in the existing traditional Solow model to enable the connections between institutions and the nature of factor productivity. Regardless of the modesty of such a model, it hypothesises a formal linkage for specifying any empirical model for evaluating the influences of institutions on economic performance. Thus, such feasible theoretical attribute of the "institutions-augmented Solow model" also agrees to analyse the position of either ineffective or effective institutions in producing "club convergence" and possible poverty traps.

2.2 Empirical Review

This section presents a brief review of the literature on institutional quality and poverty reduction nexus carried out in different economies and regions of the world. It has been broadly maintained that the influence of institutional arrangement on the level of poverty reduction can occur in diverse patterns. To this, the institutional circumstance can have certain effects on government policies that can also on the other hand result in certain fluctuations in distributional consequences, growth, and development performance.

On this note, Aracil et al. (2022) found that weak institutions in the form of high corruption levels can increase the poverty rates in seventy-five sampled developing and developed economies. The study employs OLS and quantile estimation techniques. To explore the effect of institutional measures on multidimensional poverty, Ullah and Majeed (2023) utilise the spatial autoregressive model in Pakistan. The study reports that the rule of law, political participation and governance all have a decreasing effect on poverty. Additionally, Eslamloueyan and Kahromi (2022) utilise the Generalized Method of Moments (GMM) and report that the institutional measures of socio-economic conditions, government stability, investment profile and political risk are negatively and statistically significant with the level of poverty in Iran. While employing Fully Modified OLS (FMOLS) among West African countries, Appiah-Otoo, et al. (2022) report that institutional measures of government effectiveness, rule of law and regulation quality lead to poverty reduction while corruption control, on the other hand, increase poverty.

Similarly, Singh (2021) utilises the FMOLS to ascertain the linkage between governance and institutional conditions with poverty reduction in the BRICS economies. Furthermore, Kouadio & Gakpa, (2021) examine the role of institutional elements in explaining the poverty reduction situation in the West African region. The study employs a dynamic panel ARDL model class of the Pooled Mean Group (PMG) estimation technique and reports that general improvement in institutional quality arrangements can significantly influence poverty reduction. On their part, Perera & Lee (2013), employ government stability, law and order, corruption, bureaucratic quality as well as democratic accountability representing the indicators of institutional quality. The study employs the System Generalized Method of Moments (GMM) in the developing countries of East and South Asian regions. The study further reports the institutional indicators of corruption, bureaucratic quality and democratic accountability as having a positive relationship with poverty level, while two other variables of improvements in government stability and the level of law and order tend to reduce poverty.

For Dossou et al. (2021), the fixed effect (FE) estimation procedure, the "Panel Corrected Standard Errors" (PCSE) and the two-system generalized method of moment (GMM) estimation techniques were employed. Thus revealing that governance quality facilitates poverty reduction in the 15 Latin American economies. The study by Ullah et al. (2021) employed the Sys-GMM and Driscoll–Kraay standard errors for selected countries of “One Belt and One Road” Countries. The results indicate that institutional quality enrichment leads to a decrease in poverty levels. Furthermore, Kaidi et al. (2019) conclude that policy has a general inverse effect on poverty while economic freedom as an indicator of institutional quality has an effect on the poverty level but is determined by financial indicators. The study employs the technique of three-stage least squares among 132 countries.

Despite such large empirical studies within the institutional arrangement and poverty reduction nexus, very little or none has focused on the ECOWAS countries and more specifically by employing the second-generation estimation techniques.

3.0 Methodology and Data

To ascertain the influence of institutional quality indicators on poverty reduction level, the following equations will be investigated which follows previous studies of Perera & Lee (2013) with some modifications.

$$\boldsymbol{P(v)_{i,t} = \alpha + \beta_1 Inst(s)_{i,t} + \beta_2 GDPPC_{i,t} + \beta_3 GEX_{i,t} + \mu_{i,t}} \qquad (\mathbf{1})$$

where $\boldsymbol{P_{it}}$ signifies the poverty measure within such countries, while $\boldsymbol{v}$ corresponds to poverty measures of poverty headcount, poverty gap as well as squared poverty gap. Similarly, the poverty measures are within the "Foster–Greer–Thorbecke category" of poverty (Foster et al., 1984). The explanatory variables are the ***Inst***, which stands for the main variables of interest i.e., institutional quality for country ***i***, as represented by $\boldsymbol{s}$, which corresponds to corruption, democratic accountability, bureaucratic quality, government stability, as well as law and order. Lastly, the control variables are GDPPC which denotes GDP per capita, and GEX is government expenditure. This study utilises data from 12 ECOWAS countries (i.e., n = 12), for the period of 1984-2018 (i.e., T = 35).

3.1 ECONOMETRIC PROCEDURE

Employing the second-generation estimation techniques to achieve the underlining objective, enables the current study to apply the following econometric procedures:

3.2 Cross-sectional dependence (CSD) test

It is essential to carry out the cross-sectional dependence (CSD) test as the initial step before deciding on the other suitable procedures. The CSD shows that residuals are not cross-correlated with zero error covariance, hence remain an important part of panel unit root determination. Thus, Chang (2002) upheld that when such an important assumption is not met, the outcome of the other procedures may not be valid. At the point of computing correlation, it eradicates the means. Here, the alternate hypothesis (i.e., H1) is rejected if the data has no CSD (Munir et al. 2020).

3.3 Panel Unit Root Test

To carry out the appropriate integration order in the presence of CSD, Wu et al. (2016) recommended that "parametric and non-parametric tests" should be employed. Similarly, with the presence of CSD, the second-generation unit root test can stand to be superior compared to the conventional tests as they are robust to CSD and heterogeneity (Salahuddin et al. 2015). This study utilises Pesaran (2007) as well as Breitung & Das (2005).

3.4 Panel Cointegration Test

Furthermore, the existence of CSD also necessitates the use of a second-generation cointegration technique. Similarly, to the situation of unit root tests regarding panel data with the presence of CSD, the first-generation cointegration technique may not be robust in panel analysis. This study, therefore, employs Westerlund (2007) panel cointegration test because it is robust in managing the issues of CSD for panel data.

3.5 Driscoll-Kraay Standard Error Panel Estimation

This study employs the model of robust standard errors (SE) as offered by Driscoll and Kraay (1998), which is appropriate to panel regressions with CSD to estimate the influence of institutional quality on poverty reduction in selected ECOWAS countries. Notably here, the Driscoll and Kraay (1998) SE employs the average values of products of explanatory variables as well as the residuals. Furthermore, such average values are utilised as weights to derive other estimators that have standard errors which are also robust estimators to CSD (Özokcu and Özdemir 2017). Similarly, such extensions are not just robust to CSD but also those expected heteroskedastic situations (Le & Tran-Nam, 2018). Additionally, it also supports both a balanced and unbalanced panel data situation. Hence, the method of Driscoll and Kraay SE for pooled OLS is in the linear form below:

$$\boldsymbol{P(v)_{i,t} = \alpha + \beta_1 Inst(s)_{i,t} + \beta_2\, GDPPC_{i,t} + \beta_3 GEX_{i,t} + \mu_{i,t}} \qquad (\mathbf{1})$$

where $\boldsymbol{P(v)_{it}}$, is the dependent variable (DV), while X_{it} is a (K + 1) × 1 vector of independent variables (IV) with 1 as the initial component, thus $\boldsymbol{\theta}$ is (K + 1) × 1 vector of anonymous coefficients, *i* symbolises the individual cross-sectional segments, with *t* as time.

4.0 RESULTS AND DISCUSSIONS

4.1 Descriptive Statistics

Table 2 contains the descriptive statistics for the variables in this study. The Table shows that GDPPCC has the highest value, while GEX has the second highest for mean, median and standard deviation values, accordingly. In addition, each of the institutional quality indicators represented by CORR, BQ, GS, DA, & LO (that is corruption, bureaucratic quality, government stability, democratic accountability, and law and order) all have positive value for mean, median and standard deviation, respectively. Equally, all poverty measures of HC, POVGAP and SQPOVGAP are having positive values for mean, median and standard deviation also. Lastly, the maximum and minimum values are also presented which represent the highest and lowest appearance values of each series.

Table 1

Description of variables

Variable	Description	Measurement	Sources
HC	Poverty Prevalence	The headcount poverty index states the population segment with income per person less than the poverty line ($1.25 a day). It reveals the poverty prevalence level.	World Bank
POVGAP	Poverty Depth	The Poverty gap gives the shortfall in income/consumption from the poverty line per day. It is expressed as a percentage of the poverty line. It gives the depth of poverty as well as its incidence.	World Bank
SQPOVGAP	Poverty Severity	The squared poverty gap index entails the mean of the squared distances from the position of the poverty line as a fraction of the poverty line. It indicates the poverty severity level.	World Bank
CORR	Corruption	It reflects the level of corruption within the political circle. It is the degree to which government officials are likely to demand illegal payments. (Highest score: 6 points).	International Country Risk Guide" (ICRG).
BQ	Bureaucratic Quality	Bureaucratic Quality assesses the strength and capability of the bureaucratic setting "towards administering without extreme changes in policy or harsh disturbances in government services''. Good scores indicate that "bureaucracy is fairly independent of political pressure". (Highest score: 4 points).	ICRG dataset
GS	Government Stability	This assesses both the "government's capability to execute its declared program(s) and its ability to stay in office". (Highest score: 12 points).	ICRG dataset
DA	Democratic Accountability	Democratic Accountability gives an evaluation of how credible/well the existing government responds to its citizens. (Highest score: 6 points)	ICRG dataset
LO	Law and Order	"Law and Order" constitute a single element with two components evaluated separately. "The strength and impartiality" of the legal structure are assessed by "the Law" element, while "Order" evaluates the popular observance of the law. (Highest score: 6 points).	ICRG) dataset
GDPPCC	GDP per capita	The GDP per capita measures the gross domestic product divided by the midyear population. It is the "annual percentage growth rate of GDP per capita based on constant local currency with aggregates using constant 2010 US dollars".	WDI
GEX	Government Expenditure	Government (final) expenditure includes all current expenses by the government for purchasing goods and services (as well as compensation of employees). GEX is measured as a percentage of GDP.	WDI

Table 2

Descriptive Statistics Summary

Variables	Mean	Median	Maximum	Minimum	Std. Dev.	Observations
HC	0.52859	0.55636	0.58249	0.45853	0.05582	420
POVGAP	0.24492	0.22265	0.68601	0.00738	0.14538	420
SQPOVGAP	0.14389	0.11193	0.49097	0.00265	0.11304	420
CORR	1.59585	1.75000	3.00000	0.00000	0.83827	420
BQ	1.18581	1.00000	3.00000	0.00000	0.89197	420
GS	7.23298	7.15000	8.00000	6.50000	0.67297	420
DA	2.82981	3.00000	5.00000	0.00000	1.21390	420
LO	2.77862	3.00000	3.00000	2.50000	0.24623	420
GDPPCC	795.18580	584.83000	2563.90000	272.99000	472.41310	420
GEX	13.19611	12.36414	73.57668	0.00000	8.03064	420

Source: Authors' computation

4.2 Correlation Analysis

The correlation analysis in Table 3 shows that CORR has a positive (pairwise) correlation with the indicators of BQ, DA, LO, and GEX; on the other hand, CORR has a negative (pairwise) correlation with GS and logGDPPER. For the degree of correlation, it is below average between CORR and BQ, and LO. On the other hand, it is very low between CORR with GS, DA, LO, LogGDPPER, and GEX.

Table 3

Correlation Analysis (Pairwise)

	CORR	BQ	GS	DA	LO	LogGDPPER	GEX
CORR	1.0000						
BQ	0.3768	1.0000					
GS	-0.0719	-0.2244	1.0000				
DA	0.0582	0.1633	0.1992	1.0000			
LO	0.2865	-0.0219	0.1853	0.0906	1.0000		
LogGDPPER	-0.0119	0.1954	0.0378	0.2018	-0.1886	1.0000	
GEX	0.0417	-0.1391	0.0342	-0.0147	0.1671	-0.1854	1.0000

Source: Authors' computation

4.3 Panel Unit Root Analysis

Having established the existence of CSD, this study employs two different tests by Pesaran (2007), and Breitung & Das (2005) for the unit root analysis. Pesaran (2007) shows that the variables of POVGAP, SPOVGAP, HC, BQ, and GS are all stationary at level, while other variables of CORR, DA, LO, LogGDPPC, and GEX are stationary at first difference. However, for Breitung & Das (2005), all the variables (POVGAP, SPOVGAP, HC, CORR, BQ, GS, DA, LO, LogGDPPC and GEX) are all stationary at first difference. Thus, with a combination of integration order in I(0) and I(1) for the variables, the panel cointegration test will be a second-generation test.

Table 4

Panel Unit Root Analysis

	Pesaran (2007)			**Breitung & Das (2005)**		
	Level	First Difference		Level	First Difference	
Variable	Zt-bar	Zt-bar	Order of integration 0 or I	Zt-bar	Zt-bar	Order of integration 0 or I
POVGAP	-2.230*	-6.754***	I(0)	4.4825	-7.8263***	I(I)
SQPOVGAP	-3.231***	-6.454***	I(0)	4.0491	-7.4657***	I(I)
HC	-1.590*	-9.471***	I(0)	2.0538	-12.0502***	I(I)
CORR	2.516	-3.227***	I(1)	-1.9371	-7.6775***	I(I)
BQ	-2.189*	-6.615***	I(0)	1.0630	-3.0720***	I(I)
GS	-4.958***	-11.160***	I(0)	-3.4705	-11.1947***	I(I)
DA	-0.980	-7.217***	I(1)	-0.0552	-11.1803***	I(I)
LO	3.273	-4.687***	I(1)	-1.0795	-13.8547***	I(I)
logGDPPC	2.786	-7.803***	I(1)	6.3218	-5.4132***	I(I)
GEX	-0.995	-9.230***	I(1)	-1.2194	-2.9868***	I(I)

***, **, * denotes the level of significance at 1%, 5% & 10% respectively.

Source: Authors' computation

4.4 Panel Cointegration

The second-generation panel cointegration test by Westerlund (2007), which remains robust to CSD is employed to check for the "long-run relationship" among the variables (see, Tang *et al*. 2020). The result shown in Table 5 expresses the existence of a long-run relationship among the variables utilised in the model.

Table 5

Westerlund panel cointegration tests

Variables	Statistic	Statistics	P-value
HC	Variance ratio	1.1261	0.0000***
POVGAP	Variance ratio	1.7897	0.0367*
SQPOVGAP	Variance ratio	2.3735	0.0008***

***, **, * denotes the level of significance at 1%, 5% & 10% respectively.

Source: Authors' computation.

4.5 Discussion on Driscoll and Kraay's Estimation Results

From Table 6, the results for the panel regression estimator based on the Driscoll & Kraay SE technique are presented. Nonetheless, three categories of relationship can be identified from the empirical literature: (i) institutional quality increases poverty, (ii) institutional quality decreases poverty, and (iii) institutional quality has no association with poverty (i.e. insignificant). By this, the level of corruption is statistically significant with a direct coefficient for poverty in terms of depth, and severity, while it is insignificant for poverty prevalence. The result shows that a one-point rise in corruption level results in a 13% increase in poverty depth and a 10% increase in poverty severity, while poverty prevalence is insignificant. Thus, corruption level increases poverty depth and severity, while it does affect poverty prevalence. This finding is in support of studies by Kouadio & Gakpa, (2021), Gupta et al. (2002) and Tebaldi & Mohan (2010). These studies found a direct relationship between corruption and poverty. However it is, against that of Chong & Calderon (2000); Hasan et al. (2007) and Perera & Lee, (2013), who maintained that corruption level may not have any effects on poverty in some developing countries. Hence, to reduce poverty in the ECOWAS countries, therefore, corruption levels should be reduced also.

The findings for bureaucratic quality revealed that there is a negative and significant relationship between all the measures of poverty. It shows that an improvement in bureaucratic quality by one-point results in the reduction of all the poverty situations of prevalence, depth level, and severity fall by 1%, 4% and 3%, respectively. This shows that such an improvement in the bureaucratic quality stance of ECOWAS countries leads to a decrease in all poverty dimensions. Such findings go in line with Kouadio & Gakpa (2021), Chong & Calderon (2000a), and Tebaldi & Mohan (2010), who maintained that improvement in bureaucratic quality reduce poverty levels. It however goes in contrary to it runs contrary to Perera and Lee (2013), who found bureaucratic quality to increase poverty.

From Table 6, government stability is not significant in influencing poverty prevalence, while it is significant in influencing poverty depth and poverty severity. This happens as a one-point improvement in the indicator of government stability reduces poverty depth and poverty severity by 5%, and 2% respectively. This is in line with Kar (2022), Singh (2021), Perera & Lee (2013) who maintained that improvement in government stability will result in a reduction in poverty level regardless of the measures of poverty employed. On the contrary, however, it disagrees with the findings of Cuestas and Intartaglia (2016) who maintained that it increases poverty.

For democratic accountability as an institutional indicator, poverty prevalence is insignificantly affected. For the depth and severity of poverty in ECOWAS countries, the results have negative and significant effects from democratic accountability. With this, a one-point strength of democratic accountability reduces the prevalence and severity by 2%. Hence, strengthening democratic accountability does not affect poverty prevalence in ECOWAS countries, while it tends to reduce the poverty depth and severity in the sub-region. This aligns with the studies of Digdowiseiso (2022), Kouadio & Gakpa (2021) and Perera & Lee (2013), that found democratic measures to undermine poverty; it is contrary to Hassan et al. (2019) who found an increasing influence of democratic accountability on poverty.

The empirical estimation for law and order shows that it has posed a negative and significant influence on the poverty prevalence measure where a one-point enhancement of law and order leads to a decline in poverty level by 2%. This finding is supported by Ullah and Majeed (2023); Perera and Lee (2013), who maintained that law and order reduce poverty. It is however not significant for the other poverty measures of depth and severity. Thus, as law and order become effective in ECOWAS countries, only poverty prevalence will decline, while others remain ineffective.

Finally, the empirical estimations for economic growth and government expenditure are significant with a negative coefficient for all the measures of poverty as represented by poverty prevalence, poverty depth and poverty severity. For economic growth, as it grows by 1%, poverty prevalence declines by 5%, poverty depth declines by 13%, and poverty severity by 9% in the ECOWAS countries. The findings tally with that of Perera and Lee (2013), Kraay (2006) and Adams (2004) which maintained that economic growth serves a valuable role to the poor in the reduction of poverty levels. It is however in contrast with Donaldson (2008), as well as Dollar and Kraay (2002) who have revealed that economic growth tends to be always detrimental to the poor. In the case of government expenditure, its improvement by one-point results in the reduction of all the poverty measures in the ECOWAS countries. This finding agrees with that of Gupta *et al.* (2002) and Anderson et al. (2018) who upheld that government expenditure has a reduction effect on poverty.

Table 6:

Driscoll and Kraay's Estimation Results

DV: POVERTY	**Poverty Prevalence (i.e. HC)**				**Poverty Depth (i.e. POVGAP)**				**Poverty Severity (i.e. SQPOVGAP)**			
Variables	Coefficient	Drisc/Kraay Std. Err.	t-Stat	P-Value	Coefficient	Drisc/Kraay Std. Err.	t-Stat	P-Value	Coefficient	Drisc/Kraay Std. Err.	t-Stat	Prob-Value
CORR	.027009	.0196128	1.38	0.177	.1286273	.0444056	2.90	0.007***	.0951838	.0325772	2.92	0.006***
BQ	-.0088226	.0018622	-4.74	0.000***	-.0402572	.0078824	-5.11	0.000***	-.0278406	.0070598	-3.94	0.000***
GS	-.0060288	.0056312	-1.07	0.292	-.0484542	.0125943	-3.85	0.001***	-.0430377	.0100796	-4.27	0.000***
DA	.0020828	.0034815	0.60	0.554	-.0185613	.009266	-2.00	0.053*	-.0180261	.0075377	-2.39	0.022**
LO	-.0175221	.007689	-2.28	0.029*	-.0294994	.0270521	-1.09	0.283	-.013218	.0235765	-0.56	0.579
logGDPPC	-.0523685	.0022501	-23.27	0.000***	-.1273672	.0152454	-8.35	0.000***	-.0878356	.0122737	-7.16	0.000***
GEX	-.001043	.0003334	-3.13	0.004***	-.0018256	.0008306	-2.20	0.035*	-.0017826	.000634	-2.81	0.008***
Breusch-Pagan LM test				0.000***				0.000***				0.000***
Mean VIF				1.31				1.31				1.31
F-Statistics	930.52				83.19				61.85			
R-squared	0.2656				0.4187				0.3984			

Note: ***, **, and * denote the level of significance at 1%, 5% & 10%, respectively.

Source Authors' computation

5. CONCLUSION AND RECOMMENDATIONS

With the rising interest in institutional quality and poverty nexus especially in the economic development literature, this paper employs second-generation estimation techniques to achieve its objective. Hence, to the best of our knowledge, little or no study has utilised such techniques, especially in the ECOWAS sub-region. In particular, therefore, the Driscoll and Kraay (1998) estimation technique was employed to investigate such relationship in ECOWAS countries. Such techniques, unlike the first generation, are robust to autocorrelation, heteroskedasticity, and CSD issues, thus resulting in more reliable outcomes.

The findings of this study indicate that improvement in the institutional quality indicators can be accompanied by a decline in the levels of poverty. On this note, therefore, any improvement in corruption control, government stability, democratic accountability and bureaucratic quality can significantly go a long way in reducing the level of poverty. Although corruption control, government stability and democratic accountability could not influence the measure of poverty prevalence, such institutional indicators must be strengthened towards poverty reduction within the sub-region. Law and order is also significant in reducing poverty prevalence only in the sub-region, while other poverty measures were not significantly influenced. Furthermore, the control variables of GDP and government expenditure are all effective in poverty reduction in the ECOWAS countries.

In light of such findings, policy formulations alongside the existing ones can be put in place within the ECOWAS sub-region. Firstly, it is very vital to accept that institutional arrangement should not be undermined by all those concerned in the process of policy design and formulation, especially towards effective poverty reduction. The policy framework should also include the informal aspects of institutional quality in order to derive optimal support for poverty reduction in the sub-region. Similarly, reforms in various economic spaces within the sub-region must be designed and executed in a pro-poor fashion to reduce the poverty situation significantly. Thus, political authorities of the ECOWAS countries must strengthen the institutional measures that will support the war against corruption at all levels, healthy adherence to accepted rules and regulations, encourage smooth political stability, and improvement in the bureaucratic features. Furthermore, arrangements that are in support of the poor should also articulate positive growth and government expenditure outlays within such countries. This will no doubt reduce the level of poverty in the sub-region especially with influence of economic growth and government expenditure on poverty within the sub-region. Finally, despite the contributions of this study, it may have some limitations as it dwells only on ECOWAS countries. Hence, other regions and countries within the African continent can be studied. Furthermore, other institutional quality dimensions and poverty can be studied in future research.

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