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ARTICLE

Does Institutional Quality Drive Economic Growth in the West African Monetary Zone?

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Abstract

This study investigates the influence of institutional quality on economic growth within the West African Monetary Zone (WAMZ) using panel Autoregressive Distributed Lag (ARDL) model techniques on data from 1990 to 2022. The findings highlight the crucial role of institutional quality in fostering long-run economic growth in the region. Notably, the control of corruption demonstrates a positive and significant impact on growth over the long run. However, its effect is insignificant in the short run. Conversely, economic freedom appears to impede growth in both time frames, with its short-run impact being statistically insignificant. The analysis indicates that the economy adjusts to long-run equilibrium at a rate of 83.39% following short-run deviations. Additionally, there is a unidirectional causality from control of corruption to economic growth, alongside a bidirectional causality between the economic freedom index and growth. Based on these findings, this study recommends that WAMZ governments prioritize strengthening legal and regulatory frameworks to combat corruption and enhance institutional transparency. Furthermore, the WAMZ government and policymakers should ensure a balanced approach between deregulation and necessary oversight, which is crucial for fostering sustainable economic growth in the region.

Keywords: Panel ARDL, Economic growth, Institutional quality, WAMZ.

JEL Classification: F24, F21, O17

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1. Introduction

The impact of institutional quality on economic growth has become a focal focus in development economics, particularly in regions like the West African Monetary Zone (WAMZ), where economic progress has been inconsistent. However, the potential for sustainable economic growth is significant. Institutional quality refers to the effectiveness, efficiency, and integrity of governance structures, which include aspects such as control of corruption, regulatory efficiency, and political stability (Basley & Persson, 2022; IMF, 2023; Williamson, 2021; Fukuyama, 2020). These institutional factors play a crucial role in fostering sustainable economic growth by creating a favourable environment for investment, ensuring effective public

service delivery, and promoting fair resource allocation (Sachs, 2021; Acemoglu & Robinson, 2020).

In WAMZ, member states such as Gambia, Ghana, Guinea, Liberia, Nigeria, and Sierra Leone have been making significant efforts to promote economic integration and a potential monetary union since 2000. However, the region is faced with a slow growth rate, an exchange rate crisis, rising inflation, and increased debt burdens. Despite the challenges, the region holds immense potential for growth. According to the UNCTAD stat (2024), the average GDP growth rate for WAMZ countries has been uneven over the past decade. For example, Nigeria, the largest economy in

the region, experienced real GDP growth rates of 1.18% in 2021, 0.82% in 2022 and -0.06 in 2023, following a contraction of -4.16% in 2020 due to the COVID-19 pandemic. Similarly, Ghana's growth rate, which was 4.31% in 2019, fell to -1.54% in 2020 before rebounding to 2.99% in 2022 and fell to 0.8% in 2023. These statistical facts highlight the region's potential for growth and the need for strategies to mitigate the impact of external shocks on its growth trajectory.

While structural factors like poor infrastructure and limited industrialization contribute to these challenges, the role of institutional quality in shaping economic outcomes has gained increasing attention. Scholars and institutions like North (1990) and **World Bank (2022)** emphasize that effective governance, rule of law, and political stability are not just desirable but essential. These factors reduce risks and uncertainties, fostering an environment conducive to economic growth. Additionally, insights from **Stiglitz (2022)**, **Rodrik (2021)**, and **Sachs (2021)** underscore the need for dynamic, adaptable, and sustainable institutions that can address both current challenges and future development needs of the region.

Despite the establishment of WAMZ to promote economic integration and foster development, the region continues to face significant economic challenges, including low growth rates, widespread poverty, institutional inefficiencies, and political instability. Previous studies, such as those by **Akpan et al. (2020)** and **Akinbobola and Saibu (2004)**, have highlighted the role of structural factors such as inadequate infrastructure and industrial development. However, there is a growing recognition of the importance of institutional quality in driving economic performance. Governance issues such as corruption, weak rule of law, and ineffective public administration are prevalent in WAMZ, raising questions about how these institutional deficiencies impact the region's growth (**Adetokunbo & Yusuf, 2024; Puruweti, 2017**).

Corruption poses a significant challenge in WAMZ, particularly in countries like Nigeria and Sierra Leone. In Nigeria, the Corruption Perceptions Index (CPI) ranked the country 145th out of 180 countries in 2023, indicating a high prevalence of corruption and a negative impact on economic growth and public trust in government institutions (Transparency International, 2024). Similarly, Sierra Leone's governance challenges have been linked to corruption, particularly in public procurement and the allocation of resources, adversely affecting the country's development efforts (**World Bank, 2020**). Meanwhile, other WAMZ countries like Ghana rank 70th, Gambia ranks 98th, Guinea ranks 141st, and Liberia 136th. Studies show that high levels of corruption in these countries correlate with poor economic performance, lower foreign direct investment, and inadequate public service delivery, thus impeding overall growth (**Iyoha & Oriakhi, 2009**).

Empirical studies by **Ajileye and Anyanwu (2024)**, **Hussen (2023)** and **Okosu (2021)** have produced mixed outcomes regarding the relationship between institutional quality and economic growth. However, there remains a significant gap in the literature specifically addressing the effect of institutional quality

on economic growth within the West Africa Monetary Zone (WAMZ) during the period from 1990 to 2022. While institutional quality has been extensively studied in other regions, the distinct economic challenges and governance issues in WAMZ make it necessary to conduct a more focused analysis. This study seeks to fill that gap by examining how critical indicators of institutional quality, such as the control of corruption and the economic freedom index, have influenced economic performance in WAMZ countries from 1990 to 2022. Understanding the role institutions play in shaping economic growth in this region is critical for developing effective policies to address its persistent developmental challenges.

To achieve the objective of this research, this study is organized into sections. Section One provides the introduction, while Section Two reviews the relevant literature, including both theoretical and empirical studies. Section Three describes the data and methodology employed, and Section Four reports the empirical findings. Finally, Section Five concludes with policy recommendations.

2 Literature Review

2.1 Theoretical Reviews

2.1.1 Theory of Inclusive vs Extractive Institutions

Acemoglu and Robinson's (2012) theory on inclusive and extractive institutions offers valuable insights into the role of institutional quality, particularly within the unique economic landscape of the West Africa Monetary Zone (WAMZ). Inclusive institutions, which encourage broad-based participation and equitable resource access, are essential for driving innovation and productivity, both critical for sustainable growth in a region with diverse economies and structural challenges. In the WAMZ context, inclusive institutions could empower underrepresented groups, enhance economic participation, and reduce dependency on resource-based revenues. In contrast, extractive institutions, which consolidate power and wealth among elites, can hinder broader economic engagement and create imbalances that stifle growth. This framework underscores the need for WAMZ economies to build inclusive political and economic structures that facilitate equitable access to opportunities, thereby supporting long-term development goals across the region.

2.1.2 Good Governance Theory

Kaufmann et al. (2010) good governance theory underscores the importance of robust, accountable institutions in promoting growth. This theory emphasizes that high-quality institutions such as anti-corruption agencies, regulatory bodies, and judiciaries are pivotal for transparency and accountability, elements that are especially crucial in the WAMZ, where governance challenges have historically limited development. Institutions fostering accountability can protect public interests, ensuring that governance is not only responsive but also upholds the rule of law, which in turn can enhance investor confidence and stimulate local economies (**Besley & Ghatak, 2010; Mauro, 1995**). These elements of good governance are vital for WAMZ countries to improve their global standing, reduce corruption, and foster environments conducive to sustainable growth.

2.2 Empirical Review

The relationship between institutional quality and economic growth has garnered increasing attention, particularly in developing regions like the West African Monetary Zone (WAMZ). A recent empirical study by [Adetokunbo and Yusuf \(2024\)](#) explored the dynamics between institutional quality and economic growth in Nigeria. Their findings challenge the conventional wisdom that simply opening up markets will automatically lead to growth. In their analysis, they observed that while trade openness can potentially stimulate growth, this is only true when institutional quality is high. Conversely, when institutions are weak, trade openness can have detrimental effects. [Parsa and Datta \(2023\)](#) conducted a comprehensive analysis involving 77 countries and revealed that institutional quality influences growth. Their work indicates that improvements in legal frameworks, property rights, and governance are essential for advancing growth in medium-income nations. Empirical research by Khan, [Dong and Bibi \(2023\)](#) illustrates that regulatory quality is a significant driver of FDI inflows across various economies using a two-step system GMM model on the panel data spanning the period from 2002 to 2019. Their findings indicate that other institutional indicators yield mixed results, particularly in developed nations where control of corruption and political stability are paramount in attracting investment. This distinction suggests that for developing regions like WAMZ, efforts to enhance FDI must focus specifically on improving governance and reducing corruption rather than pursuing blanket institutional reforms. Tailoring institutional strategies to local contexts will likely yield more effective results in attracting foreign investment and fostering sustainable economic growth. Thus, their study confirms the outcome of the study by [Chen and Jiang \(2023\)](#) and [Puruweti \(2017\)](#).

Similarly, the findings of [Chen and Jiang \(2023\)](#) and [Junaid et al. \(2021\)](#) further support the argument that institutional quality transcends domestic boundaries and has significant regional implications. These studies illustrate that robust institutions not only attract FDI but also contribute to economic spillovers within regions. In WAMZ, where countries are interconnected by shared economic challenges, enhancing institutional quality in one member state could catalyze growth in neighboring countries. This interconnectedness underscores the importance of regional cooperation on institutional reforms, as collective efforts can yield more significant economic benefits than isolated initiatives. Therefore, the unique challenges faced by countries in WAMZ demand tailored solutions that consider each nation's specific institutional weaknesses and strengths. As evidenced by the mixed outcomes observed in various studies reviewed, this study re-examines the impact of institutional quality on economic growth in the West Africa Monetary Zone for the period from 1990 to 2022.

3 Methodology

3.1 Theoretical Framework

This study adopts the Endogenous Growth Theory, which emphasizes the role of knowledge, innovation,

The panel ARDL long-run equation is as follows:

and human capital in driving long-term economic progress ([Romer, 1990](#); [Lucas, 2019](#)). In the WAMZ region, where economies often rely on agriculture and resource exports, growth stimulated by internal factors such as investments in education, research, and institutional quality is critical. Unlike exogenous models that consider technological advancements as external factors, endogenous growth theory posits that internal investments in human capital and innovation are central to sustaining growth ([Solow, 1956](#); [Solow, 2020](#)). For WAMZ, strong institutions play a pivotal role by creating supportive environments for innovation, protecting intellectual property, and encouraging productivity improvements ([Adams & Page, 2005](#)). This approach positions institutional quality as a cornerstone for sustainable growth, making it particularly relevant for WAMZ countries seeking to diversify their economies and build resilience against external shocks.

3.2 Data and Sources

The study examines the impact of institutional quality on economic growth in the WAMZ region by employing various well-defined variables. The dependent variable, the Real GDP per capita growth rate (RGDPG), represents economic growth and is measured as percentage change, with data sourced from the United Nations Conference on Trade and Development (UNCTAD). Institutional quality is assessed through two key indicators: Control of Corruption (COC) and the Economic Freedom Index (EFI). COC, an index from the World Bank Indicators (WDI), measures the extent to which corruption is controlled within a country, with higher values indicating better control of corruption. The EFI, obtained from the Heritage Foundation, is also an index, with higher scores reflecting a greater level of economic freedom.

Two control variables are included to provide a comprehensive framework. Trade openness (TOP) is measured as trade as a percentage of GDP, sourced from the World Bank Indicators (WDI), and reflects the degree of trade integration in the WAMZ region. Inflation (INF), measured by the GDP deflator, is sourced from the WDI and captures changes in the price level within the economy. Together, these variables provide a comprehensive framework for analysing how institutional quality influences economic growth in the WAMZ region.

3.3 Estimation Methods and Model Specification

This study employed the Panel Autoregressive Distributed Lag (PARDL) model, following the framework of [Pesaran and Shin \(1998\)](#) and [Pesaran, Shin, and Smith \(2001\)](#), to address endogeneity and efficiently estimate dynamic panel data. PARDL allows the exploration of short-run and long-run effects while accounting for individual-specific heterogeneity and cross-sectional dependence, making it ideal for examining economic growth dynamics in the WAMZ region. Additionally, the Pairwise Granger causality test was applied to determine causal relationships among variables. The study utilized secondary data covering the period from 1990 to 2022 for its analysis.

$$RGDPCG_{it} = \alpha_i + \sum_{j=1}^p \alpha_{1,i,j} RGDPC_{i,t-j} + \sum_{j=0}^{q1} \alpha_{2,i,j} COC_{i,t-j} + \sum_{j=0}^{q2} \alpha_{3,i,j} EFI_{i,t-j} + \sum_{j=0}^{q3} \alpha_{4,i,j} TOP_{i,t-j} + \sum_{j=0}^{q4} \alpha_{5,i,j} INF_{i,t-j} + \beta_{1,i,j} RGDPCG_{i,t-1} + \beta_{2,i,j} COC_{i,t-1} + \beta_{3,i,j} EFI_{i,t-1} + \beta_{4,i,j} TOP_{i,t-1} + \beta_{5,i,j} INF_{i,t-1} + \varepsilon_{it} \quad (1)$$

Where $\beta_1 - \beta_5$ are the long-run coefficients of real GDP per capita growth rate, control of corruption, economic freedom index, trade openness and inflation rate, respectively. Once the long-run relationship between the dependent variables and the independent variables is established, the panel ECM model equation is as follows:

$$RGDPCG_{it} = \alpha_i + \sum_{j=1}^p \alpha_{1,i,j} \Delta RGDPC_{i,t-j} + \sum_{j=0}^{q1} \alpha_{2,i,j} \Delta COC_{i,t-j} + \sum_{j=0}^{q2} \alpha_{3,i,j} \Delta EFI_{i,t-j} + \sum_{j=0}^{q3} \alpha_{4,i,j} \Delta TOP_{i,t-j} + \sum_{j=0}^{q4} \alpha_{5,i,j} \Delta INF_{i,t-j} + \theta_i ECM_{i,t-1} + \varepsilon_{it} \quad (2)$$

Where Δ is the first difference of variables, $\alpha_1 - \alpha_5$ are the short-run coefficients and θ_i represents the coefficient of the ECM, which measures the speed of adjustment made every year towards long-run equilibrium. Given the limited number of annual observations, the study chose one maximum lag length.

4 Empirical Findings and Discussions

4.1 Descriptive Statistics Summary

Table 1: Descriptive Statistics

	RGDPCG	COC	EFI	TOP	INF
Mean	1.832615	-0.753520	53.44923	64.30496	12.81645
Median	2.020000	-0.830678	54.45000	58.32438	9.791391
Maximum	19.46000	0.038148	64.20000	186.2600	100.6077
Minimum	-25.19000	-1.502068	0.000000	16.35219	-5.607896
Std.Dev	5.033564	0.376131	6.530124	27.90187	15.14893
Skewness	-1.492717	0.428643	-4.263235	1.242907	3.699641
Kurtosis	13.58131	2.257659	35.60824	5.451703	19.94451
Observation	130	130	130	130	130
Countries	6	6	6	6	6

Source: E-Views 12 Output

The descriptive statistics presented in Table 1 are based on a panel dataset, with annual data collected from six countries within the WAMZ region for the period from 1990 to 2022. Each statistic represents an average measure across these countries. The real GDP per capita growth rate (RGDPCG) has an overall mean of 1.83% and a median of 2.02%, suggesting moderate economic growth on average across the region. The RGDPCG spans a wide range, with a maximum of 19.46% during periods of economic expansion and a minimum of -25.19% reflecting periods of contraction. The standard deviation of 5.03 indicates substantial variability around the mean, suggesting fluctuating economic growth rates across the six countries. The Control of Corruption (COC) index shows a mean score of -0.75 and a median of -0.83, with values ranging from -1.50 to 0.038. This variation reflects the differing levels of corruption control across the sample. The standard deviation for COC is 0.38, indicating moderate dispersion around the mean.

The Economic Freedom Index (EFI), another institutional quality measure, has a mean score of 53.45 and a median of 54.45, with a standard deviation of 6.53, suggesting relative variability in economic freedom levels across the countries. Trade openness (TOP) averages 64.30 with a median of 58.32 and values ranging from 16.25 to 186.26, indicating differing degrees of trade policy openness among the countries. Additionally, inflation (INF) shows a mean of 12.82 and

a median of 9.79, with extreme values ranging from -5.61 to 100.61, reflecting both inflationary and deflationary periods. The standard deviation of 15.15 highlights significant fluctuations in inflation across the countries studied.

For country specifics, the trend analysis of economic growth within the West African Monetary Zone (WAMZ) countries from 1990 to 2022 reveals considerable variation across the region, as presented in Figure 1 below. The Gambia, with a mean real GDP growth rate of 0.209%, has exhibited relatively stable growth, driven by sectors such as agriculture and tourism. In contrast, Ghana's growth has been more volatile, with a maximum growth rate of 11.30% and a minimum of -1.54%. This volatility is largely due to the country's reliance on commodity exports, including oil, cocoa, and gold. Ghana's growth surged in the 2000s following oil discoveries, but the fluctuations highlight the risks of such dependency.

Guinea's economic growth, with a mean of 2.064%, has been more moderate, but it has faced periodic disruptions due to political instability. Liberia, with a maximum GDP growth of 7.43%, experienced sharp economic fluctuations during its post-conflict recovery, especially in the early 2000s. Nigeria, with a higher mean GDP growth rate of 2.215%, is highly dependent on oil prices, which led to substantial growth spikes in 2003-2008, 2010-2014, and 2021-2022, but also

notable dips during periods such as 1997-1999, 2008-2009, and the COVID-19 pandemic. Sierra Leone mirrors Liberia's post-conflict economic volatility, with a peak growth rate of 19.46%. Still, it has faced significant challenges in stabilizing its economy due to political instability and vulnerabilities in key sectors like mining.

For governance, figure 2 presents the trends in the control of corruption across the WAMZ countries, illustrating varying progress. The Gambia, with a mean control of corruption score of -0.546, has made gradual improvements, though corruption remains a persistent challenge, particularly in governance and public services. Ghana, with a mean score of -0.156, saw notable anti-corruption progress in the early 2000s, likely due to governance reforms. However, recent years have seen a decline, possibly linked to the difficulties of maintaining anti-corruption efforts amidst the expanding oil industry and political changes. Guinea's control of corruption has worsened, with a mean score of -1.038, reflecting ongoing governance challenges and instability, underlining the need for substantial structural reforms. Liberia's post-civil war performance has been mixed, with initial improvements followed by fluctuating trends, suggesting an unstable anti-corruption framework. Nigeria consistently recorded a low score of -1.177, which underscores persistent corruption, particularly in the oil sector, despite various reform attempts. Sierra Leone, with a mean score of -0.785, showed early gains after the end of its civil war but has struggled with stagnation in anti-corruption efforts, especially in the mining sector.

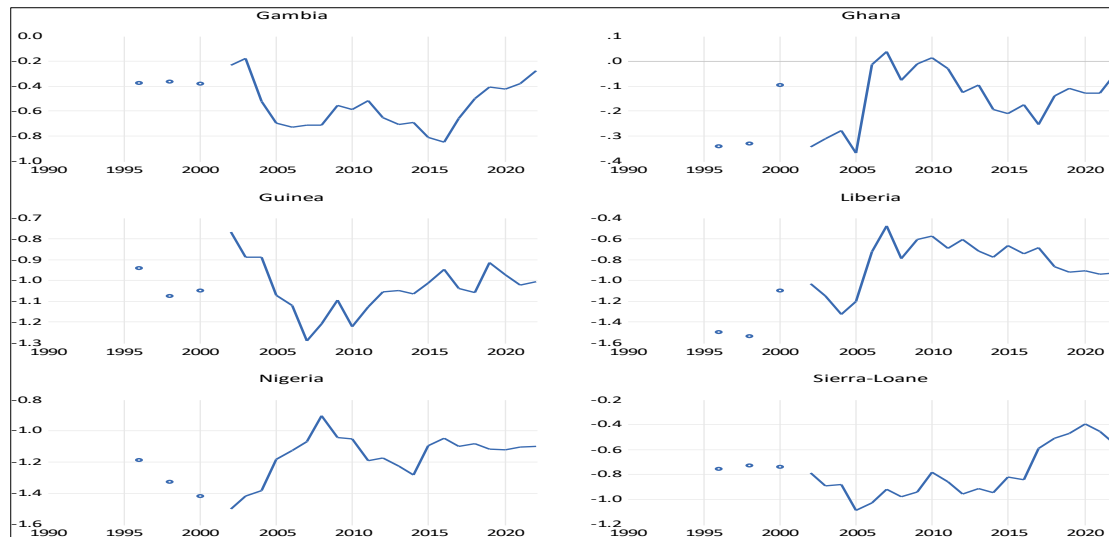
The analysis of the Economic Freedom Index (EFI), as illustrated in Figure 3, also reveals diverse levels of economic freedom across WAMZ countries. The Gambia, with a mean EFI of 56.30, has experienced fluctuations in its economic freedom, influenced by government controls in the early 2000s. Still, more recent trends suggest a shift toward liberalization, reflecting improvements in regulatory quality and market openness. Ghana, with a more consistent EFI mean of 58.82, has made steady progress in economic freedom, likely due to market-oriented reforms, including privatization and trade liberalization initiatives in the 2000s and 2010s. Guinea's EFI, with a mean score of 54.037, has fluctuated significantly, particularly during periods of political instability, highlighting the challenges of achieving a stable market economy amid poor governance. Liberia's mean EFI of 49.39 shows improvements following the end of the civil war, with a noticeable increase in economic freedom in the mid-2010s, though some instability persisted into the late 2020s. Nigeria, with a more volatile EFI trend (mean of 54.20), reflects a mixed policy approach heavily influenced by oil dependency and inconsistent governance. Sierra Leone has made progress in increasing its economic freedom (mean EFI of 46.504), particularly after the civil war. Still, the country faces challenges in ensuring long-term stability, compounded by recent crises such as the Ebola epidemic.

Figure 1: WAMZ Countries Real Gross Domestic Product Growth Rate



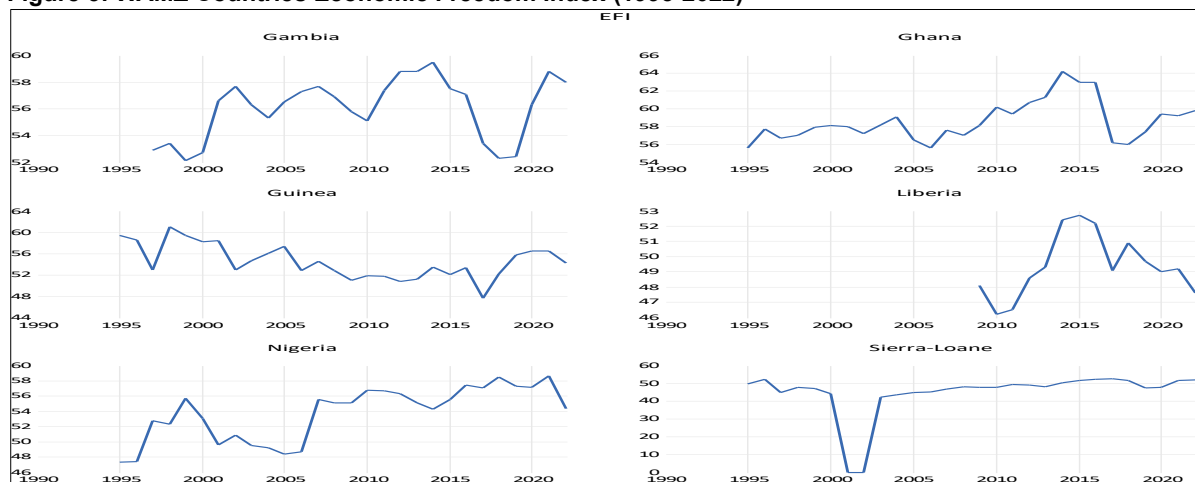
Source: EViews 12 Output

Figure 2: WAMZ Countries Control of Corruption Score (1995-2022)



Source: EViews 12 Output

Figure 3: WAMZ Countries Economic Freedom Index (1995-2022)



Source: EViews 12 Output

4.3 Stationarity Test

The study employed Im, Pesaran, Shin, Levin, Lin & Chu t^* , ADF-Fisher chi-square, and PP-Fisher chi-square Panel Unit root test to confirm the variables' stationarity.

Table 2: Im, Pesaran and Shin Levin, Lin & Chu t^* , ADF-Fisher chi-square and PP-Fisher chi-square Panel Unit root Test

Level	RGDPCG	COC	EFI	TOP	INF
IPS	-4.679	-1.878	-2.675	-1.357	-6.815
LL&C	-3.992	-1.711	-2.221	-0.24	-7.814
ADF	45.888	21.813	25.839	18.785	69.361
PP	71.176	19.192	22.344	45.816	70.505
First-Diff					
IPS	-1.878	-4.174	-6.332	-8.459	-11.36
LL&C	-1.711	-4.839	-6.293	-6.547	-8.364
ADF	114.594	39.605	64.749	88.869	118.214
PP	159.821	66.944	104.194	153.159	206.668
Integration Order	1(0)	1(0)	1(0)	1(1)	1(0)

Source: EViews 12 Output

4.4 Panel Causality Test

Table 3: Pairwise Granger Causality Tests

Null Hypothesis:	Obs	F-Statistic	Prob.
COC does not Granger Cause RGDP	114	4.79368	0.0101
RGDP does not Granger Cause COC		0.16953	0.8443
EFI does not Granger Cause RGDP	140	3.43179	0.0352
RGDP does not Granger Cause EFI		4.16077	0.0176
TOP does not Granger Cause RGDP	171	8.28254	0.0004
RGDP does not Granger Cause TOP		2.31959	0.1015
INF does not Granger Cause RGDP	175	0.07882	0.9242
RGDP does not Granger Cause INF		0.11583	0.8907

Source: E-Views 12 Output

The study used a 5% significant level to test the presence of a panel unit root for each of the variables. The stationarity test result revealed that the real gross domestic product per capita growth rate, control of corruption, economic freedom index, and inflation rate are stationary at level 1(0). This result indicates that the variables have a consistent pattern and are stable over the period. Conversely, trade openness is stationary at first difference 1(1). This outcome suggests that trade openness is stable over time but fluctuates in the short run. Therefore, these outcomes indicate that the variables employed in this study are consistent and have a predictable trend and reliability to determine the impact of institutional quality on economic growth in the WAMZ region. Thus, the co-integration test is conducted to determine the long-run relationship between the dependent and the independent variables.

The result from Table 3 reveals a unidirectional causality as control of corruption. Granger causes economic growth. In contrast, the economic growth rate does not cause control of corruption. Thus, enhancing the control of corruption will foster economic growth in the WAMZ region. The findings also reveal a bidirectional causality between the economic freedom index and economic growth. Therefore, monitored economic freedom will foster economic growth in the WAMZ region. Furthermore, trade openness causes economic growth. At the same time, there is no causal effect between the inflation rate and economic growth in the WAMZ region during the period studied.

4.5: Co-integration Test

Table 4: Kao Residual Co-integration Test

	t-Statistic	Prob.
ADF	-5.246975	0.0000

Source: E-Views 12 Output

Table 5: Johansen Fisher Panel Co-integration Test

Hypothesized No. of CE(s) (from trace test)	Fisher Stat*	Prob (From Max-Eigen)	Fisher Stat*	Prob
None	137.1	0.0000	94.81	0.000
At most 1	59.59	0.0000	38.37	0.000
At most 2	30.21	0.0008	19.94	0.0298
At most 3	18.87	0.0419	13.21	0.2121

Source: E-Views 12 Output

Table 4 presents the result of the Kao co-integration test. The result shows that the t-statistics is -5.24675 with a probability value of 0.0000. Hence, the null hypothesis that institutional quality does not have a long-run effect on economic growth is rejected, and the alternative hypothesis is accepted. This indicates that the variables are co-integrated in the long run despite the short-run fluctuations. Therefore, the study concludes that there is a long-run effect between institutional quality and economic growth in the WAMZ region.

Likewise, Johansen-Fisher panel co-integration examines the order of the co-integrating equation. From

Table 5, the trace test statistic and the max-eigen statistics are 137.1 and 94.81, with probability values of 0.0000 for co-integration of None and, at most, 1. Thus, this suggests that the null hypothesis is rejected, and the alternative hypothesis is accepted. Hence, the variables co-integrate at None and most one. Therefore, the study concludes that there is a robust long-run relationship among the variables. Accordingly institutional quality has a long-run relationship with economic growth in the WAMZ region. So, the long-run and short-run impact of institutional quality on economic growth is examined.

4.6: Panel Autoregressive Distributed Lag Estimation

Table 6: Impact of institutional quality on economic growth in the WAMZ region.

Variable Selection model	Coefficient (1, 1, 1, 1)	Std.Error	t-Statistic	Probability
Long Run impact				
COC	5.087582	2.196529	2.316192	0.0227
EFI	-0.532693	0.130392	-4.085314	0.0001
TOP	0.054197	0.017365	3.121024	0.0024
INF	-0.000122	0.024727	-0.004930	0.9961
Short Run Impact				
D(COC)	-1.944713	3.842960	-0.506046	0.6140
D(EFI)	0.049744	0.348313	-0.209188	0.8348
D(TOP)	0.023717	0.072841	0.338003	0.7361
D(INF)	-0.107824	0.110370	-1.014573	0.3129
ECMt-1	-0.833868	0.086865	-9.599626	0.0000
Constant	25.32556	2.698048	9.386624	0.0000
Wald Test				
Test statistics	Value	Df	Probability	
F-statistics	10.65616	(4, 93)	0.0000	
Chi-square	42.62463	4	0.0000	

Source: E-Views 12 Output

Table 6 presents the results of an econometric analysis examining the short-run and long-run impact of institutional quality on economic growth in the WAMZ region. This study finds that institutional quality, through measures such as control of corruption, economic freedom index, trade openness, and inflation rate, plays a significant role in shaping the region's long-run economic growth.

In the long run, control of corruption has a substantial positive effect on economic growth. Specifically, a one-unit increase in the control of corruption (as measured on its scale) is associated with a 5.09-unit increase in economic growth. This outcome suggests that improvements in governance and anti-corruption measures can boost economic productivity. This finding supports the notion that better control of corruption fosters a more transparent and accountable environment conducive to growth. Hence, this finding aligns with similar studies by [Ajileye and Anyanwu \(2024\)](#) and [Trabelsi \(2023\)](#).

Conversely, the economic freedom index presents a negative relationship with growth. The coefficient of -0.5327 indicates that a one-unit increase in the economic freedom index is associated with a 0.53-unit decrease in economic growth, holding other factors constant. This negative impact suggests that the complexities of economic freedom reforms, particularly in regions like WAMZ, may lead to short-term economic challenges, such as market instability or ineffective policy implementation, which hinder growth. This finding contrasts with expectations of a positive relationship and is more in line with the results of [Ajileye and Anyanwu \(2024\)](#).

Trade openness has a positive, albeit moderate, impact on growth in the long run. The coefficient of 0.0542 suggests that a one-unit increase in trade openness, as a percentage of GDP, is associated with a 0.05-unit rise in economic growth. This result underscores the

importance of international trade integration, as reducing trade barriers and promoting export-led growth can stimulate the regional economy. Thus, policies that foster greater trade openness could play a pivotal role in driving long-term economic development in the WAMZ region. The inflation rate has a minimal and negative long-run effect on growth, with a coefficient of -0.00012. Although this negative impact is statistically insignificant, it implies that inflationary pressures can exert some downward pressure on economic growth in the region. Hence, unchecked inflation may cause long-run instability, so policymakers should pay more attention to the factors driving inflation in the region.

The error correction mechanism (ECMt-1) provides valuable insight into the speed at which the WAMZ economies return to equilibrium after short-term shocks. With a coefficient of -0.8339, the error correction term suggests that approximately 83.39% of any short-term deviation from the long-run growth path is corrected each year. Thus, this indicates a strong tendency for the region's economies to stabilize in the long run. This adjustment rate reinforces the robust relationship between institutional quality and growth. Additionally, the constant term of 25.33 signifies the baseline level of growth when all other variables are held constant, indicating the intrinsic growth potential of the WAMZ region.

The Wald test for joint significance shows high F-statistics and Chi-square values, both with a probability of 0.0000, confirming the collective influence of institutional quality variables, including control of corruption, economic freedom index, trade openness and inflation rate on economic growth. This finding underscores the critical role that institutional quality plays in the development of the WAMZ region, supporting the conclusions of prior research by [Hussen \(2023\)](#) and [Okosu \(2021\)](#).

5 Conclusion and Recommendations

This study examines the role of institutional quality in stimulating economic growth in the WAMZ region. The findings indicate that control of corruption positively and significantly influences long-term economic growth, underscoring the crucial role governance and transparency play in promoting sustainable development. However, in the short run, the effect of control of corruption was insignificant, suggesting that institutional reforms take time to yield tangible economic outcomes. In contrast, the economic freedom index produced an unexpected result, showing that it deters growth in both the short and long run. This outcome suggests that while economic freedom is typically linked to an increase in other regions, in the WAMZ context, more freedom with inadequate regulation may lead to inefficiencies and instability.

Overall, the study concludes that improving institutional quality, particularly through enhanced governance and anti-corruption measures, could significantly boost economic growth within the WAMZ region.

Based on these findings, the study recommends that WAMZ governments and policymakers prioritize the enforcement of robust legal and regulatory frameworks to curb corruption and promote transparency within institutions. Anti-corruption laws should be strengthened, and independent bodies must be adequately resourced to function effectively. Moreover, the adverse effects of economic freedom on growth in the region indicate the need for a balanced approach between deregulation and necessary oversight. Simplified regulatory frameworks should reduce bureaucratic hurdles while ensuring fair competition and preventing monopolies, ultimately fostering innovation and attracting investment.

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