



STATE FRAGILITY AND MACROECONOMIC OUTCOME: A COMPARATIVE ASSESSMENT OF WAMZ COUNTRIES

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ABSTRACT

Countries all around the world are experiencing different forms and measures of fragility. The fragility of states could arise from institutional weaknesses, violent conflicts, natural resources, ethnic compositions, unfavourable socio-economic developments, and shocks that may have arisen from domestic or international systems. Given that, globalization enhances regional trade, this study was carried out to examine empirically the effect of state fragility measures on the macroeconomic outcome (gross domestic product per capita) of WAMZ countries. The study utilized annual panel/pooled data from 2003-2022. The results from the study revealed that while Nigeria and Sierra Leone were affected by all the measures of state fragility, the economies of Liberia and Ghana were majorly affected by security threats. However, Ghana and Guinea's economies were negatively affected by the security threats index, human rights and rule of law index, and public services index. Conclusively, the study observed that majority of the WAMZ countries lack the needed resilience (in terms of institutional strength, capacity, social cohesion, state security, and development) to respond adequately and effectively to shocks that come from these state fragility indices.

Keywords: State fragility, economic growth, Sub-Saharan Africa, WAMZ countries, State Capture

JEL: B16, B23, C31, D53, E44

INTRODUCTION

Sub-Saharan Africa (SSA) is thought to account for 80% of the world's fragile states, which are marked by severe structural and economic limitations (OECD, 2021). Expected favourable macroeconomic performance is not enhanced by the current conditions of fragile states (Limited human and material capital buildup, unsteady macroeconomic conditions, poor health and educational results, unsteady political climate, and inadequate infrastructure). These nations' economies frequently struggle to mobilise domestic capital due to their fragilities, which begs the question of these fragile states' prospects for growth. Thus, it becomes imperative to comprehend how state instability affects capital inflows and economic growth.

The economies of the West African Monetary Zone (WAMZ) have underperformed when compared to other zones on actual metrics of macroeconomic performance, notwithstanding notable advancements made by African states during the last 20 years. At the same time, on practically every measure of state fragility, nations in the WAMZ dominate the top 50 percentile



of rankings. The WAMZ countries' overall subpar macroeconomic performance has been attributed mostly to this circumstance. If one were to examine such a thesis in the context of the widely held beliefs of the Washington Consensus—which similarly maintains that macroeconomic policies have a major role in determining macroeconomic outcomes in developing economies—it would be firmly supported. The macroeconomic outcome (unemployment rate) of the WAMZ countries raises questions about which of the following channels of transmission—security threat index, economic decline index, public services index, human rights and rule of law index, and state legitimacy index—is most relevant, given the possibility of complex and interconnected channels of transmission from state fragility conditions to the macroeconomy.

Rather than adopting the generalist approach that the international community has suggested, analysis that places fragility in the framework of fragile state financial prudence necessitates a methodical, tailored approach (Kaplan, 2014). Fundamentally, every fragile state is distinct and needs a customised strategy that takes into account its background, economic potential, vulnerabilities, and makeup. Because of this, it is difficult to theorise state fragility in relation to fragile states. In an effort to conceptualise fragility and identify its primary dimensions, the Fund for Peace continues to be a trailblazer in investigating on fragile state dynamics (Fund for Peace, 2015).

The four categories of drivers of fragility—economic, social, political, and environmental—all typically involve exclusion and inequality. The demand made by people or groups within society for inclusion and access to opportunities, resources, services, rights, or identity—a demand that sparked social unrest, rebellions, and acts of violence—is the fundamental component of social drivers of fragility. The restricted involvement or voice of some groups, or the state capture by some elites that threatens to deny other elites or sectors of society, can be political drivers. This might show itself as a breakdown of political agreements or a loss of institutional legitimacy. Humanitarian catastrophes and competition for limited natural resources, like water or pasture, can result from environmental pressures and climate change; nations or communities impacted by geographic insularity, like island states and remote regions within a state, are especially vulnerable in this regard. Prominent economic factors include large and expanding economic disparities, the state being economically dominated by a tiny minority, or society's failure to produce enough jobs, especially for young people. Even though these fragility drivers fluctuate in intensity throughout nations, it is anticipated that the degree of fragility will also be determined by how well society and the government are able to address and mitigate the impacts.

More and more people believe that development and fragility reduction depend on a functioning state. This explains why the goal of WAMZ should be to develop policies that will assist the nations that make up its zone in addressing circumstances that could lead to national fragility. Taking these into consideration, it is anticipated that creating a disaggregated state fragility index using a variety of indicators, including the state legitimacy index, economic decline index, public services index, human rights and rule of law index, and security threat index, will help to improve the operationalization of the concept and clarify the conversation surrounding fragile states and how macroeconomic outcomes can be attained in these nations. As a result, the findings of this research will have a significant impact on the financial industry, politicians, economic planners, other development partners, and the governments of the WAMZ nations.



LITERATURE REVIEW

Understanding what a state is and how important it is to the stability of its institutions should usually come first in the study of fragility. Herbert Spencer is linked to the structure-functional theory, sometimes known as structural functionalism (1903). Structural functionalism's basic tenet is that society is examined from a macro perspective, taking into account social structure as well as social functions. In light of this, Herbert Spencer (1903) referred to the state as "organs" that serve to ensure the "body's" overall proper operation. Simply defined, it highlights "effort to input"—adding as much rigour as possible to each feature, custom, or practice—and how those impacts affect the way a system—which is intended to be coherent and stable—functions. This viewpoint is typically necessary to demonstrate how various state organs or organisations carry out their mandates in order to maintain process stability and advance the creation of an ideal society. Moreover, social dysfunction, which is broadly defined as any social pattern that jeopardises the smooth running of society, may occasionally emerge.

Based on the aforementioned, it is reasonable to say that in a democratic context, there will be political stability, harmony, and unity of purpose free from conflict between various organs or bodies if these bodies carry out their constitutionally given duties. Anarchy, poor governance, infiltration, violations of human rights, political instability, mesmerization of democratic ethos and procedures, identity crisis, and inefficiency are among the conditions that result from discord among the government's organs.

The economies of the WAMZ countries have been severely damaged over time, threatening their union and corporate existence. These crises have been severe and varied. These crises took many forms, including as insurgencies, terrorism, religious uprisings and extreme attacks, interethnic conflicts, electoral crises, and conflicts over the distribution and management of resources. The primary issue among these problems is the democratic and governance dilemma, which has been found to be the source of all the chaos in African states.

Lessnoff (1990) asserted that the social contract is seen in today's evolving discourse as a mechanism for maintaining balance between the responsibilities and expectations of the dominant institutions and the rest of society. Therefore, as long as the social compact can successfully create and maintain a balance between the responsibilities and expectations of society and those of the institutions and authority of the state, it remains legitimate and functional; otherwise, the state is rendered ineffective. According to the social contract theory, citizens of a political community formally or implicitly grant the state permission to sacrifice a portion of their freedom in exchange for the state's protection of their fundamental human rights, security, and availability of adequate public goods and services.

Moreover, the classical and neo-classical economists make the assumption that growth, capital accumulation, productive labour, and technology all have a positive and fundamental link. From classicalist to neo-classicalist growth theories, the underlying tenet of each is that capital accumulation, labour productivity (population), and technological advancements are positively and fundamentally tied to growth. One of its underlying presumptions is that scientific processes independent of economic forces govern the rate of technological advancement. They argued that in the event of displacement, an economy bounces back swiftly and naturally and eventually reaches a stable growth rate.



The main argument in this discussion is that nations experiencing "fragility" impede economic growth in a rapid and sustained manner. Over time, the meaning of "state fragility" has changed and has been increasingly relevant in discussions of development in more recent times. Ziaja (2012) claims that the majority of the states that are portrayed as "fragile" have already been examined and analysed in relation to "state failure." The concept continues to garner significant attention from the international community despite the ongoing discussion regarding the term's appropriateness. These states are characterised by common symptoms including weak internal cohesion and inadequate governance systems, however there are differing explanations for them and no agreed-upon definition. According to the OECD (2014), a fragile state is defined as an economy that is low to middle-income, has limited ability to fulfil important state tasks, and is unable to provide citizens with the necessary services they need to survive. This description is consistent with the numerous existing definitions of state fragility. Since these states fundamentally represent a significant threat to global development, new research in this area aims to explain the economic and developmental consequences of fragility for these states (Deléchat, 2018).

The term "fragile states" refers to an intriguingly diverse group of countries that are prone to internal conflict and frequently have subpar economic performance. Poverty and fragility are frequently linked, with a growing percentage of the world's impoverished residing in fragile states (OECD, 2013). They are therefore more susceptible to changes in financial flows and more reliant on outside assistance than developing nations that are not fragile. It's interesting to note that many of the models now in use on fragility—a topic of growing attention in academia and research—tend to overlook the fragility and its effects in middle-income nations (World Bank, 2015).

Ikpe (2007) asserts that low-income states have received the majority of attention in the literature on fragile states. A more accurate picture of the degree of state fragility, however, is shown by separating the underlying circumstances from the development and security consequences. Furthermore, cross-country fragility models often fail to distinguish between fragile states and "pockets of fragility" inside a country (Kaplan, 2015). For example, a nation may have indicators of different state fragility traits at a given time, but this does not necessarily mean that the state is fragile. Consequently, fragile states are those that consistently exhibit aspects of fragility over a prolonged period of time, whereas state fragility is the manifestation of a fragile state in any of its dimensions at any given time.

Nigeria and its neighbours have shown the international ramifications of creating a fragile state, which can affect neighbouring nations. Although definitions and conditions vary, fragile states are typified by weak institutions, poor governance, low capacity, and restrictions on pursuing collective national interests. Although there may be some fragility in any nation, not all of them fit the definition. According to Kaplan (2015), governments in fragile nations frequently struggle to provide basic services to maintain population security, and they confront significant and persistent barriers to both economic and human development. Consequently, these nations generally exhibit a heightened vulnerability to political instability, encompassing civil unrest, as well as economic instability (resulting from deficient public service delivery, poor economic administration, and challenges in adapting to or overcoming shocks).

It is extremely difficult for fragile countries to develop resilience because of the various causes of



fragility and the interactions that reinforce each other; many appear to be stuck in what is known as a "fragility trap." The term "fragility trap" describes a vicious cycle of underdevelopment, unstable or conflicting politics, and brittle social cohesion. Because of this, the process of moving past fragility is neither easy nor quick. The emergence of fragility, which has acquired traction across multiple studies, has served as the foundation for many of the points made in earlier research. With the crucial assistance of development partners, fragile states can better achieve their goals of establishing state legitimacy, lowering the likelihood of violence reoccurring, and developing their capability by implementing exclusive macroeconomic management.

African fragile nations possess unique attributes that can be leveraged to impact macroeconomic participation in macro policy, hence attaining macroeconomic stability and equitable prosperity. One of the three features, according to Geda (2017), is dispelling the myths in political economics about what causes conflict and how it affects economic growth, regardless of whether that growth is purposefully distributed or not. This emphasises the requirement of macroeconomic management within an institutional framework and the relationship between growth and conflict in a broader political economy. Secondly, the mobilization of domestic resources to finance expansion is generally constrained. If a nation is resource-rich or heavily dependent on aid inflow, which may include debt, this results in a significant dependency of growth on the export of natural resources. The weak institutional structure comes in third. Countries with poor governance, underdeveloped human capital, and a heavy reliance on foreign funding for additional financial support to enhance capacity are more likely to have weak institutional structures.

Geda (2019) also noted that while strengthening economic governance and important institutions tend to be more important in the long run, both improvements in governance and the growth of inclusive and democratic politics are critical to the macroeconomy's stability in the short term. Over time, mounting debt leads to macroeconomic instability. Therefore, in the short term, banking sector composition and rehabilitation assist nations in avoiding macroeconomic instability. In the near term, reliance on domestic resources leads to macroeconomic instability; in the long run, however, it loses statistical significance.

Even while the countries of Africa share many traits and problems, it will be challenging, if not impossible, to identify a single strategy for removing them from the fragile state in which they find themselves (Geda, 2019). As a result, actions and policies will need to be customised to the unique conditions of each nation. For a nation to strengthen security, develop democratic institutions, promote inclusive growth free of political grievances (which will deter violence), build institutional capacity, and implement functional macroeconomic management, these policies will need to be long-term in nature (IMF, 2014; Jones, 2013; Geda, 2019).

Higher fragility nations are more vulnerable to crises, unstable macroeconomic conditions, and slower growth. Nonetheless, security and social factors were found to be the primary drivers of fragility, whereas the political factor is also minimal (Chuku & Onye, 2018). Nonetheless, the fragility conditions of these nations, rather than just the macroeconomic policies they have implemented, better explain the disparities in the macroeconomic performances of African nations. Although fragile nations suffer a variety of issues, some have managed to overcome their extreme problems and emerge from fragility (Deléchat, Fuli, Mulaj, Ramirez & Xu, 2018). These nations have established more dependable structural institutions, an inclusive political climate, and



consistent and dependable economic policies. A key element in such a successful transition away from fragility is creating a sustainable fiscal space with robust fiscal institutions. Economic growth will only be achieved by nations that are able to establish robust structural institutions that will both monitor the fiscal space and close fiscal gaps by effectively allocating their resources. Higher income and profit taxes are typically linked to a reduction in fragility.

Key indicators like refugee flows are at record highs despite the world economy growing and the greater focus on tackling insecurity and fragility on a global scale. This implies that foreign policies have not always been successful, even in the best of intentions. Fragile societies are often caught in a syndrome of interlocking traits that makes it difficult to make continuous development, regardless of what initially produced the predicament. However, macroeconomic stabilisation in a fragile state requires a comprehensive strategy that involves enhancing institutional development, inclusive and democratic politics, and improved governance (IMF, 2014). The way that fragility impacts or reduces capital accumulation was validated by Nkurunziza (2017). While Knack and Keefer (1995) and Easterly and Levine (1997) demonstrated that revolutions have a detrimental impact on economic performance, capital accumulation was considered conceptually to be a primary driver of growth and macroeconomic success.

According to Wolf (2005), physical and human capital investments, as well as both domestic and international investments, are the pathways via which fragility influences macroeconomic outcomes. By shifting incentives toward the accumulation of less specialized capital goods—which often have lower returns and are easily sold in response to fragility shocks—state fragility alters the composition of investments. Additionally, it lowers the amount of investments made overall, particularly foreign direct investment (FDI). In their 2017 study, Chuku and Onye examined the relationship between state fragility and macroeconomic outputs in sub-Saharan African nations, with a focus on macroeconomic volatility, crisis, and performance. They also discovered a few significant transmission mechanisms. It was discovered that economies with greater degrees of fragility have lower growth rates, more crises, and greater macroeconomic instability.

This study aims to examine state fragility and macroeconomic outcomes through a comparative assessment of WAMZ countries. The hypotheses developed to accomplish the study's goal are:

H₀1: There is no significant relationship between the security threat index and the unemployment rate of the WAMZ countries.

H₀2: There is no significant relationship between the economic decline index and the unemployment rate of the WAMZ countries.

H₀3: There is no significant relationship between the public services index and the unemployment rate of the WAMZ countries.

H₀4: There is no significant relationship between human rights and rule of law index and the unemployment rate of the WAMZ countries.

H₀5: There is no significant relationship between the state legitimacy index and the unemployment rate of the WAMZ countries.

METHODOLOGY

This study employed secondary data in investigating the impact of state fragility measures on



macroeconomic outcomes in selected WAMZ countries. The World Bank Data Banks and the Fund for Peace's public data at the time this study was conducted had a significant influence on the sample size. The exploratory research design was chosen to determine the impact and relationship between the study's variables of interest based on the theoretical framework and study's hypotheses. The research made use of annual panel/pooled data covering the years 2003–2022, or twenty (20) observations. The years in which the data were selected for analysis place limitations on this study, and the dependent and independent variable selections are restricted to the proxies used in this investigation.

Based on the theories under review in this study, and the hypotheses, a model showing the impact and relationship amongst/between the variables of interest were specified as thus:

$$\text{GDPPC} = (\text{STI}, \text{EDI}, \text{PSI}, \text{HRI}, \text{SLI}) \quad 1$$

$$\text{GDPPC}_{it} = \alpha_0 + \alpha_1\text{STI}_{it} + \alpha_2\text{EDI}_{it} + \alpha_3\text{PSI}_{it} + \alpha_4\text{HRI}_{it} + \alpha_5\text{SLI}_{it} + \varepsilon_{it} \quad 2$$

Where:

| | | |
|-------|---|------------------------------------|
| GDPPC | = | Gross domestic product per capita |
| STI | = | Security threat index |
| EDI | = | Economic decline index |
| PSI | = | Public services index |
| HRI | = | Human rights and rule of law index |
| SLI | = | State legitimacy index |

The econometric equation is fashioned after the PMG/ARDL model in line with the dependent variable. Theoretically, it is expected that state fragility indexes should negatively impact the GDPPC of the selected WAMZ countries ($\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 < 0$) as a priori expectations, ceteris paribus. In order to look into the link between the variables of interest under investigation, the study used panel data analysis and descriptive analysis. This is based on the idea that by employing data with greater variability and less collinearity, panel data regression estimates increased research efficiency by reducing generalized bias and enabling control over individual heterogeneity. The panel data approach combines time series and cross-sectional statistical analysis. Panel inputs can help identify stationarity and uncorrelated shocks in a model better by combining the time series and cross-sectional dimensions of the data.

The panel PMG/ARDL methodology was used because panel construction allows for a closer study of its technical efficiency. The model estimators can be less biased since the degree of freedom will grow when individual heterogeneity is controlled, which is another benefit of the PMG/ARDL data technique. The data gathered using the E-Views 11.0 computer software was analyzed by the study utilizing descriptive statistics, a panel summarized unit root test, and the PMG/ARDL (long-run and short-run) tests.

The purpose of the PMG/ARDL model is to determine the macroeconomic results of the chosen WAMZ countries as well as the long- and short-term relationship between state fragility indices. In comparison to previous co-integration techniques, the PMG/ARDL method offers several advantages. It may be applied regardless of whether the underlying variables are fully 1(0), 1(1),

or jointly co-integrated. It can also be estimated with minimal sample features, as indicated below:

$$\begin{aligned}
 GDPPC_{it} = & \alpha_{10} + \sum_{k=1}^n \alpha_{1\alpha} \Delta GDPPC_{it-\vartheta} + \sum_{k=1}^n \alpha_{2\alpha} \Delta STI_{t-\vartheta} + \sum_{k=1}^n \alpha_{3\alpha} \Delta EDI_{t-\vartheta} + \sum_{k=1}^n \\
 & \alpha_{4\alpha} \Delta PSI_{t-\vartheta} + \sum_{k=1}^n \alpha_{5\alpha} \Delta \text{LogHRI}_{t-\vartheta} + \sum_{i=0}^n \alpha_{6\alpha} \Delta SLI_{it-\vartheta} + \beta_6 GDPPR_{Ct-i} + \beta_7 STI_{t-i} + \\
 & \beta_8 EDI_{t-i} + \beta_9 PSI_{t-i} + \beta_{10} HRI_{t-i} + \beta_{11} SLI_{t-i} + \epsilon_{2it}
 \end{aligned} \tag{3}$$

where ϵ_{2it} is the error term and Δ represent the first difference operator, $GDPPC_{it}$ is the proxy for the macroeconomic outcome of the selected WAMZ countries. On the other hand, STI , EDI , PSI , HRI , and SLI are proxies for measuring state fragility. The ideal lag time for every variable is found using these formulas, which estimate the $(n+1)k$ number of regressions. The number of variables in the estimation is k , and the total number of lags that were employed is n . Based on factors such the Schwarz Bayesian criterion (SBC) and Akaike information criterion (AIC), an optimal lag selection is made. The following long-run model was estimated in the case where co-integration between the variables was shown:

$$\begin{aligned}
 \Delta GDPPC_{it} = & \alpha_0 + \sum_{\vartheta=1}^n \phi_{i\alpha} \Delta GDPPC_{it-\vartheta} + \sum_{i=0}^n \vartheta_{1\alpha} \Delta STI_{it-\vartheta} + \sum_{i=0}^n \theta_{i\alpha} \Delta EDI_{it-\vartheta} + \sum_{i=0}^n \\
 & \pi_{1\alpha} \Delta PSI_{t-\vartheta} + \sum_{i=0}^n \tau_{1\alpha} \Delta HRI_{it-\vartheta} + \sum_{i=0}^n \mu_{1\alpha} \Delta SLI_{it-\vartheta} + \epsilon_{it}
 \end{aligned} \tag{4}$$

The short-run dynamics' ARDL specification can be obtained by constructing an error-correcting model with the following structure:

$$\begin{aligned}
 \Delta GDPPC_{it} = & \alpha_2 + \sum_{\vartheta=1}^n \beta_{2\alpha} \Delta GDPPC_{it-\vartheta} + \sum_{i=0}^n \gamma_{2\alpha} \Delta STI_{it-\vartheta} + \sum_{i=0}^n \delta_{2\alpha} \Delta EDI_{it-\vartheta} + \sum_{i=0}^n \\
 & \omega_{2\alpha} \Delta PSI_{t-\vartheta} + \sum_{i=0}^n \sigma_{2\alpha} \Delta HRI_{it-\vartheta} + \sum_{i=0}^n \mu_{2\alpha} \Delta SLI_{it-\vartheta} + \varphi ECT_{it-\vartheta} + \epsilon_{it}
 \end{aligned} \tag{5}$$

where Ect_{it} is the error correction term and is defined as:

$$\begin{aligned}
 ECT_{it} = & \Delta GDPPC_{it-\vartheta} - \alpha_1 - \sum_{\vartheta=1}^n \phi_{1\alpha} \Delta GDPPC_{it-\vartheta} - \sum_{i=0}^n \vartheta_{1\alpha} \Delta STI_{it-\vartheta} - \sum_{i=0}^n \theta_{1\alpha} \Delta EDI_{it-\vartheta} - \\
 & \sum_{i=0}^n \pi_{1\alpha} \Delta PSI_{t-\vartheta} - \sum_{i=0}^n \tau_{1\alpha} \Delta HRI_{it-\vartheta} - \sum_{i=0}^n \mu_{1\alpha} \Delta SLI_{it-\vartheta}
 \end{aligned} \tag{6}$$

In equation (6) above, the rate of adjustments is denoted by φ , and all the coefficients in the short run equation correspond to the dynamics of the model's convergence to equilibrium in the short run. The long-term relationship between the model's series was determined using the F-statistics. Hence, the hypothesis stated in the null and alternate form is as follows:

$$\begin{aligned}
 H_0: & \rho_1 = \rho_2 = \rho_3 = \rho_4 = \rho_5 = 0 \\
 H_1: & \rho_1 \neq \rho_2 \neq \rho_3 \neq \rho_4 \neq \rho_5 \neq 0
 \end{aligned}$$

The t-statistics critical and the tabulated values are compared as a decision criterion.

RESULTS AND DISCUSSIONS

The order of integration for the variables of interest was ascertained by the study using the summarised group unit root test of stationarity. Analysis of the PMG/ARDL model may be erroneous due to non-stationary variables. Group unit root tests fall into two categories: individual unit root procedures, in which parameters are free to travel between cross-sections, and common unit root tests, in which permanent parameters are common throughout cross-sections. This assumption led to the development of a shared unit root procedure by Levin, Lin, and Chu.

This form serves as the foundation for the Im, Pesaran, and Shin W-stat, ADF-Fisher Chi-square, and PP-Fisher Chi-square tests. The variables were found to be non-stationary at levels, as indicated by the summarised group unit root test results in Table 1. This means that not all of the group's variables were found to be jointly stationary at 1 percent, 5 percent, and 10 percent significance at levels, indicating that not all of the variables were jointly integrated in all of the methods under examination. In order to lessen the volatility in the data set, additional stationarity analysis was applied to the variables. Therefore, the null hypothesis was rejected when the variables were free from unit root when differenced once at the 1%, 5%, and 10% level of significance and to be stationary in all techniques.

The PMG/ARDL long run estimates revealed that, all things being equal, a percentage increase in security threats index (STI), human rights and rule of law index (HRI) and public services index (PSI) will lead to a 0.39 percent, 0.25 percent and 1.63 percent non-significance decrease respectively in gross domestic product per capita of the WAMZ countries in the long run. On the other hand, a percentage increase in economic decline index (EDI) and state legitimacy index (SLI) will lead to a 2.38 percent and 3.78 percent significance decrease respectively in gross domestic product per capita of the WAMZ countries in the long run.

Additionally, the error term adjustment coefficient (COINTEQ01), which is significant at the 5% significance level, is negative, as shown by the PMG/ARDL in Table 2. As a result, there is a long-term cointegration connection between the variables that is stable and statistically significant, with a divergence of 26.56 percent from the short-term imbalance being balanced in the long run.

When all other variables (STI, EDI, HRI, SLI, and PSI) are held constant, the outcomes in Table 2 reveals that the constant variable, which is -0.21, indicates that the gross domestic product per capita declined by 0.21% in the short run, and was non-significant at 5% significance level. Furthermore, changes in the aggregate values of security threats index (STI) and economic decline index (EDI) both had a non-significant positive effect of 0.88 percent and 0.26 percent respectively on gross domestic product of WAMZ countries in the short run; while human rights and rule of law index (HRI) had a significant negative effect of 1.91 percent on gross domestic product of WAMZ countries in the short run. Lastly, the PMG/ARDL outcomes showed that variations in the aggregate values of state legitimacy index (SLI) and public services index (PSI) both had a non-significant negative effect of 0.44 percent and 0.63 percent respectively on gross domestic product of WAMZ countries in the short run.

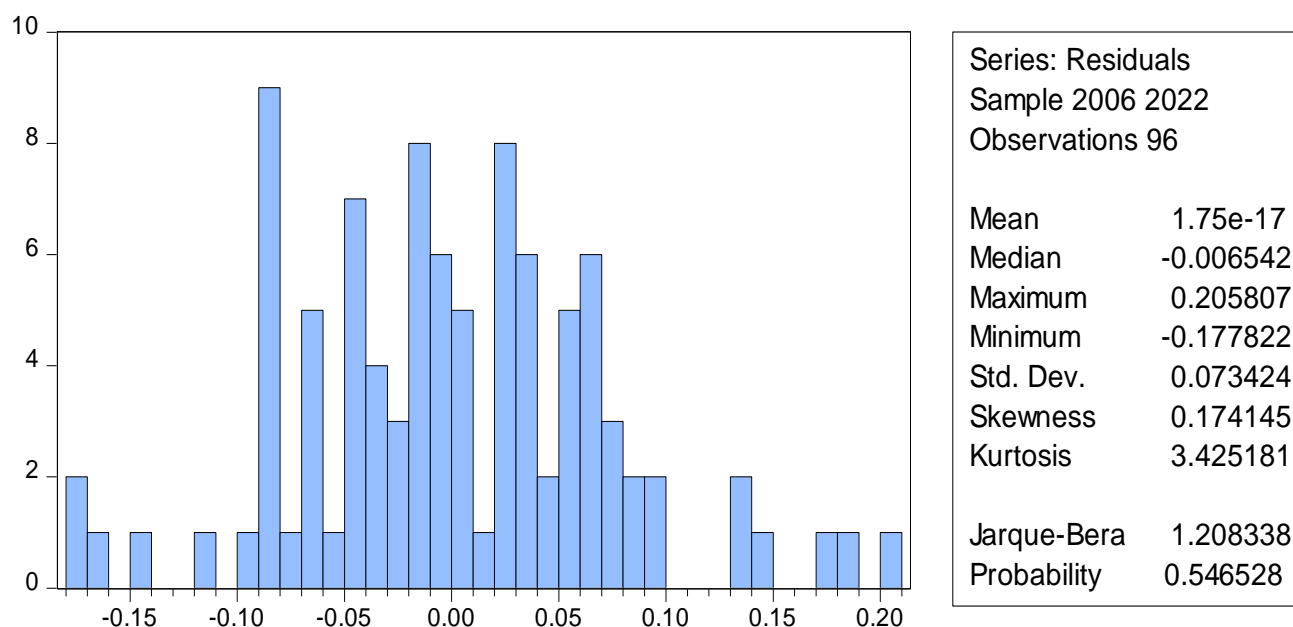


Fig. 1: Histogram normality test

The PMG/ARDL model's estimations are tested for normality using the histogram normality test. To ascertain if the model's residuals were normally distributed or not, the Jarque-Bera statistics were used. The decision rule stated that for the model's residuals to be normally distributed, the probability of the Jarque-Bera statistics needed to be greater than five percent (0.05). This is due to the null hypothesis' assertion that the model's residuals have a normal distribution. This is desirable because it satisfies the normality assumption of the classical ordinary least square (OLS) framework. The model's residuals are normally distributed, according to the Jarque Bera statistics of 1.208 and its matching probability of 0.5465 (54.65 percent), which is greater than 0.05 (5 percent), as seen in figure 1.

The PMG/ARDL result as showed in Table 3 revealed that the overall effect of state fragility on the macroeconomic outcome (GDDPC) of individual WAMZ countries could not negatively impact Gambi (0.02) and Ghana (0.22**) while WAMZ countries such as Guinea (-0.97), Liberia (-0.16), Nigeria (-0.22) and Sierra Leone (-0.14) were negatively affected in the short run, ceteris paribus. With regards to individual state fragility measures, security threat index (STI) impacted the gross domestic product per capita of Gambia (0.51), Guinea (1.59**) and Nigeria (3.88**) positively, while its impact on Ghana (-0.10), Liberia (-0.51) and Sierra Leone (-0.09) was negative in the short run, ceteris paribus.

Economic decline index (EDI) impacted the gross domestic product per capita of Ghana (0.05), Guinea (2.56**), Liberia (0.28) and Sierra Leone (0.15) positively, while its impact on Gambia (-0.67) and Nigeria (-0.78) was negative in the short run, ceteris paribus. Furthermore, human rights and rule of law index (HRI) impacted the gross domestic product per capita of Gambia (-1.67), Ghana (-2.8), Guinea (-4.49**), Nigeria (-2.39**) and Sierra Leone (-0.58) negatively, while its impact on Liberia (0.52) was negative in the short run, ceteris paribus.

In the short run, state legitimacy index (SLI) impacted the gross domestic product per capita of



Gambia (0.78), Ghana (0.08) and Guinea (0.76) positively, while its impact on Liberia (-0.72**), Nigeria (-2.28**) and Sierra Leone (-1.28) was negative in the short run, ceteris paribus. Lastly, security threat index (STI) impacted the gross domestic product per capita of Ghana (-0.41), Guinea (-2.23**), Nigeria (-2.09**) and Sierra Leone (-0.13) negatively, while its impact on Gambia (0.80) and Liberia (0.24) was positive in the short run, ceteris paribus.

CONCLUSION

This study was carried out to examine empirically the effect of state fragility measures in the macroeconomic outcome (gross domestic product per capita) of WAMZ countries by adopting at least state fragility measures (security threat index, economic decline index, human rights and rule of law index, state legitimacy index and public services index). Poverty is increasingly linked to fragile nations, which increase their reliance on outside assistance and leave them open to changes in the flow of capital. While middle-income countries with relatively stable economies and significant growth potential have displayed some of the largest and longest-lasting subnational occurrences of armed conflict and large-scale violence, existing models on fragility often ignore the fragility of middle-income countries (World Bank, 2015).

Findings from this study concluded that, given the prevailing trend in the selected state fragility index measures adopted in this study, the macroeconomic outcome (gross domestic product per capita) of the WAMZ countries would be negatively impacted shortly. A critical assessment of the influence of individual state fragility index measures adopted in this study on the gross domestic product per capita of individual WAMZ countries revealed that, in the short run, Gambia was only affected negatively by the economic decline index and human rights and rule of law index; while Ghana was hit negatively by security threats index, human rights and rule of law index and public services index. On the other hand, Guinea as a WAMZ countries was negatively affected by human rights and rule of law index and public services index; while Liberia was negatively impacted by security threats index and state legitimacy index. The study further concluded that, Nigeria and Sierra Leone were the worst hit WAMZ countries with almost all the adopted state fragility index measures affecting their respective gross domestic product per capita negatively, and mostly significant with respect to Nigeria. Specifically, Nigeria was affected negatively by economic decline index, human rights and rule of law index, state legitimacy index and public services index; while Sieria Leone was affected negatively by security threats index, human rights and rule of law index, state legitimacy index and public services index, ceteris paribus.

In summary, these nations usually exhibit a higher risk of political unrest, poor public service delivery, poor economic management, and trouble absorbing or reacting to shocks. In order to respond appropriately and effectively to shocks these state fragility indices measure, the majority of WAMZ countries lack the institutional strength, ability, social cohesion, state security, and development that these countries require.

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