

Can Inflation in West African Monetary Zone (WAMZ) Converge without Ex-Ante Monetary Policy Coordination?

Tunde Abubakar Bakare-Aremu

Department of Economics, National Open University of Nigeria, FCT, Abuja

Corresponding author Email: abakare-aremu@noun.edu.ng

Abstract

This paper reviews the trend of the West African Monetary Zone (WAMZ) country-specific inflation, and argues that the union may not be feasible with insistence on inflation convergence to predetermine the benchmark. This is because, monetary policy asymmetry in force currently is assumed to be responsible for the inflation differential. Based on a 6-country panel dataset, that span the year 2001-2019, this study estimates the descriptive statistics and adopts econometrics method, to ascertain the tendency of WAMZ's inflation of converging over-time. Also, the study estimates the time of convergence using the Neoclassical Beta (β) convergence as foundation for methodology adopted. The descriptive results show that most of the participating countries did not attain the desired inflation convergence target over the sample period. And that, the un-weighted average zonal inflation rates were most often above a single digit target which also vary widely among the countries. The result of the Beta convergence indicates non-convergence of zonal inflation, which maybe as a result of divergence (asymmetric) policy thrust. However, it is hopeful that if there is ex-ante policies coordination, meeting this inflation convergence criterion would not be a "herculean" task. Therefore, this study concludes that, major country-specific monetary policy instruments that results to inflation divergence are the pursuit of distorted financial prices, and expansionary monetary policies, propelled by public credit which tended to crowd out private sector. However, this study recommends that ex-ante zonal policy coordination is technically essential for ex-post inflation convergence in WAMZ.

Keywords: Inflation Rates, Neoclassical Convergence Theory, Monetary Zone

JEL Classification Codes: F13, F33, G15

1. Introduction

Six ECOWAS member countries make up the West African Monetary Zone (WAMZ), which was created in 2000. By 2015, it hopes to implement the Eco, a single currency. Nevertheless, because ex-ante policy cooperation was required due to simultaneous failure of all member states to meet the convergence criteria, this goal was not met. The five original members of WAMZ were Sierra Leone, Guinea, Nigeria, Ghana, and The Gambia; Liberia joined on February 16, 2010. The company was founded in the year 2000. The other countries are all English-speaking, with Guinea being the only one that speaks French. The goal of the WAMZ is to establish a strong, stable currency to rival the CFA franc, whose value is tied to the Euro and backed by the French Treasury. The CFA franc and Eco will eventually combine to form a one, stable currency that will be used throughout West and Central Africa. In charge of creating the new currency's introduction is the West African Monetary Institute, which is based in Accra, Ghana (Bakare-Aremu, 2016).

But one of the requirements (criteria) for the creation and adoption of the common currency by the countries that make up the West African Monetary Zone (WAMZ) is the preservation of low inflation among member states. This monetary union can only make sense if a number of conditions are met. As these nations strive for currency unification, ex-ante independent monetary actions that can promote convergence towards a single digit and reduce inflation differentials are expected. Convergence is the long-term tendency for the pace of income growth or per capita production in various geographic regions to level off (Bakare-Aremu, 2017). Stated differently, convergence occurs when the economy of the "poor" country tends to grow faster than the economy of the "rich" country; that is, over time, the per capita production or income level of the "poor" country will catch up to that of the "rich" country.

According to this interpretation, inflation convergence is the tendency for all WAMZ member states to achieve a single-digit inflation rate within the framework of an asymmetric monetary policy thrust (Bakare-Aremu, 2020). Lack of policies coordination perhaps could be responsible for non-achievement of all the nine criteria and also for continuous postponement of take-off period and of recent a reduction (from nine to six) and restructure of the criteria in 2014 in Abuja. Since the inception of WAMZ in 2000, it has been noted that the primary convergence criterion has proven to be the most challenging to meet. Numerous research, including those by Ojo (2005); Nnanna (2007); Adamgbe and Agu (2012); Taylor (2013); Balogun (2014); Bakare-Aremu (2020) have demonstrated

that the asymmetry of monetary policy makes the prospects for inflation convergence weak.

Understanding what causes the inflation differences across these nations is necessary if progress is to be made towards inflation rate convergence. It is especially important to ascertain how these countries' monetary policy initiatives particularly those related to interest rates, currency rates, credit policy, and financial sector openness, contribute to inflationary spirals. In order to test for convergence tendency in the face of asymmetric monetary policy thrust, this paper has two main objectives: first, it uses descriptive analysis to establish the extent of divergence in the presence of independent monetary policy conditions, and second, it uses Neoclassical convergence theory and methodology to find out the prospect for inflation convergence in the absence of ex-ante monetary policy coordination (Bakare-Aremu, 2020).

The rest of this research study provides a succinct overview of relevant literature; discusses inflationary tendencies in WAMZ and presents a descriptive study of the same. Whereas it equally covers the theoretical background and analysis of methodology, lastly, the empirical results are presented, and the concluding thoughts and policy implications were subsequently provided.

1.1 Stylized Facts about Inflationary Trend in WAMZ

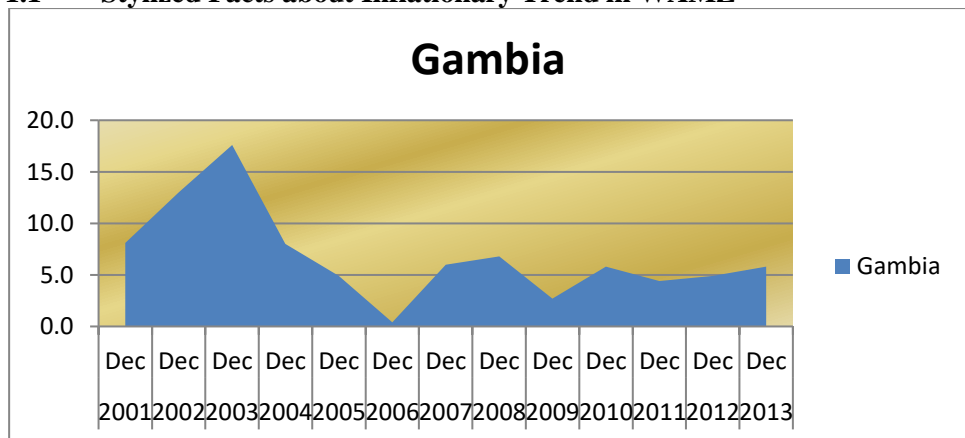


Figure 1: The Gambia's Inflationary Trend between 2001 to 2013

Source: Author's Design.

Gambia is one of the countries in WAMZ countries that has stable polity and this has enormous impact on its inflationary trend, except for three of the early years which span between 2002 and 2003, but henceforth it has

not only been stable but also meet the WAMZ convergence requirement. The success recorded in Gambia is due to monetary and fiscal discipline in the country which could be emulated by other member states.

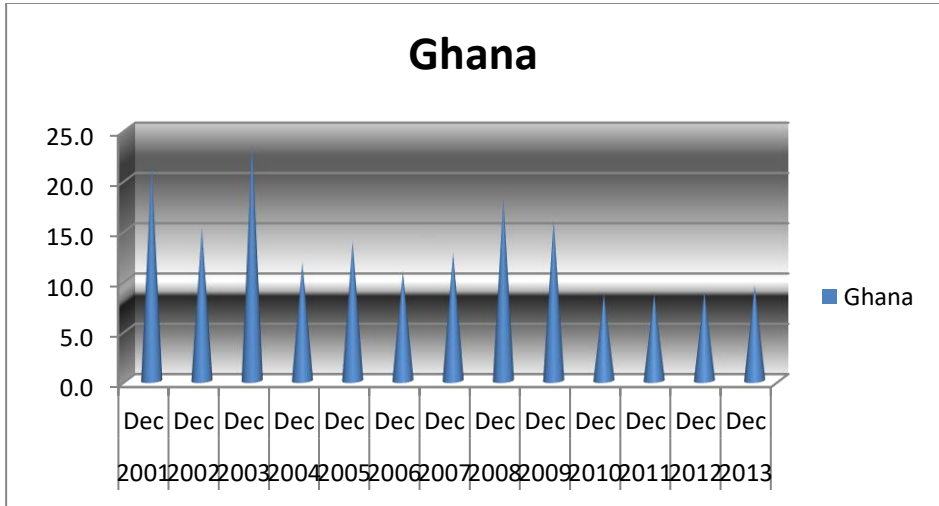


Figure 2: The Ghana's Inflationary Trend between 2001 to 2013

Source: Author's Design (2023)

Ghana's inflationary trend began strongly and continued on a high note for nearly ten years before declining to a single digit between 2010 and 2013. This decline may have been caused by the currency redenomination policy and other monetary policy changes intended to adjust the monetary policy environment and reach the desired asymmetric single digit inflation rate.

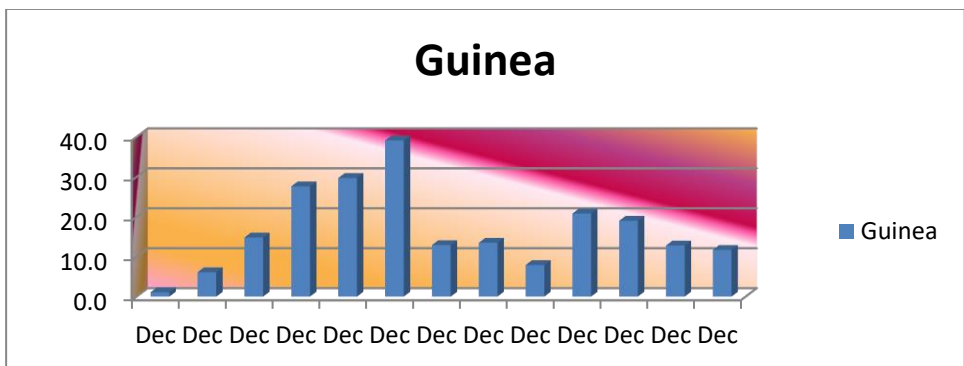


Figure 3: The Guinea's Inflationary Trend between 2001 to 2013

Source: Author's Design

The monetary and economic union of Guinea, one of the Francophone countries in the CFA Zone, was achieved symmetrically, which accounts for the first two years of low inflation after Guinea left the zone. The subsequent inconsistency in the inflation trend, in my opinion, may be the consequence of Guinea's transition from the symmetric monetary policy zone (WAEMU) to the asymmetric monetary police zone (WAMZ). This translates to mean, in essence, that all WAMZ member states are pursuing asymmetric monetary policy, which is the cause of the inconsistent inflationary trend.

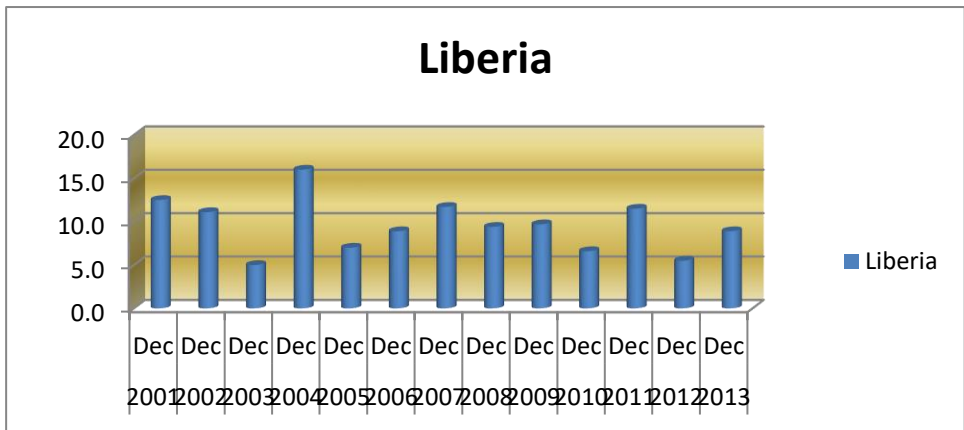


Figure 4: The Liberia's Inflationary Trend between 2001 to 2013

Source: Author's Design

Due to recurrent conflicts and diseases, Liberia is among the least stable countries in the Western African Monetary Zone (WAMZ). It should be noted that such conditions are unfavourable to sustainable development and favourable economic outcomes, as unstable political systems inevitably give rise to unstable and disorganised fiscal and monetary policies, which are crucial to the success of single-digit inflation. Single-digit inflation was nevertheless possible in the ensuing years: 2003, 2005, 2006, 2008, 2009, 2010, 2012, and 2013, albeit inconsistently, despite these social and political controversies.

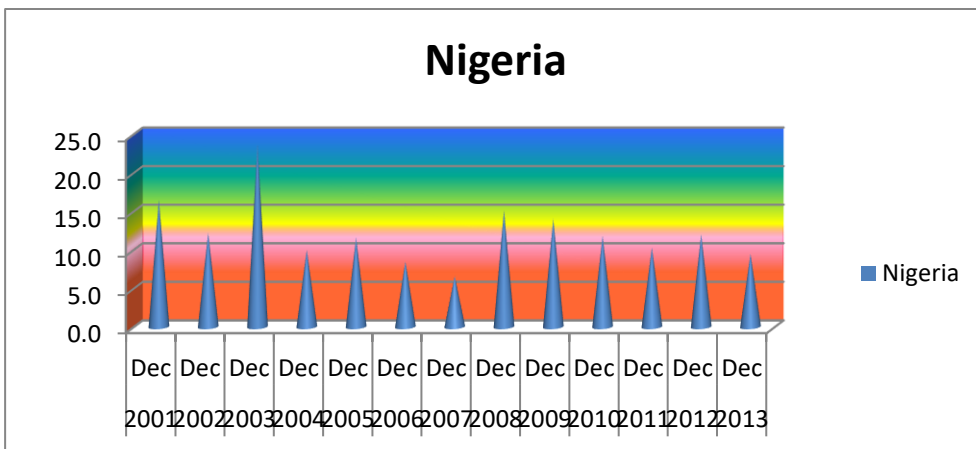


Figure 5: The Nigeria's Inflationary Trend between 2001 to 2013

Source: Author's Design (2023)

Nigeria is one of the leading countries in term economic strength and stability. The stable polity as encourage stable fiscal and monetary policies but marred with gross corruption, almost in all economic facet, this reduced the assumed stability in polity to quasi-stable polity which accounted for some of its short comings. Nigeria performed above average in meeting single digit inflation just like the Gambia and Ghana. Nigeria was able to achieved single digit inflation rate in the following years with some level of consistence in 2002 and from 2004 till 2013 except 2008 and 2009 which could be the aftermath of global financial crisis of the year 2007.

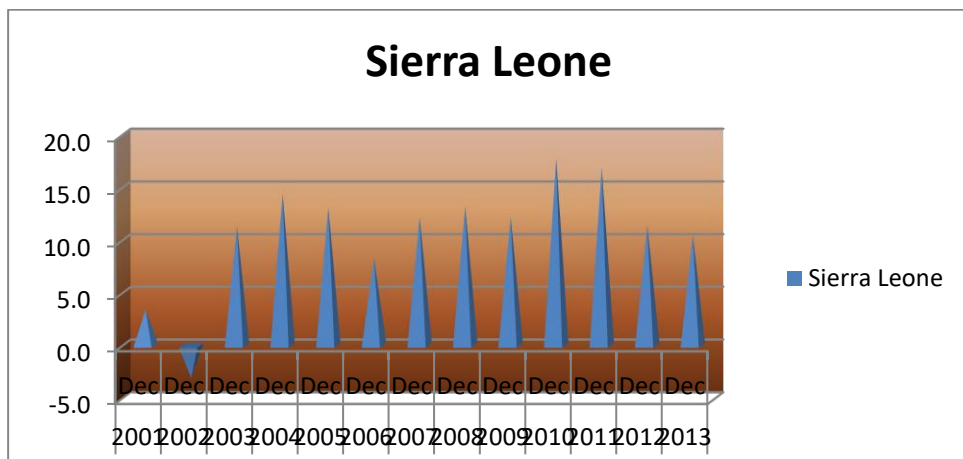


Figure 6: The Sierra Leone's Inflationary Trend between 2001 to 2013

Source: Author's Design (2023)

Like Liberia, Sierra Leone saw intermittent warfare for nearly fifteen years. Because of this, policy coordination within the nation was severely harmed. As a result, the unstable political environment prevented strong monetary and fiscal policy initiatives to combat high inflation rates through intermediate targets in order to achieve ultimate goals. This country is only able to achieved the single digit inflation rate in four years of the thirteen years under review, these years are 2001, 2002, 2006 and 2013.

1.2 Analysis of Zonal Inflationary Trends

One of the key variables (economic indicators) is inflation which, following Abradu-Otoo and Donyina-Ameyaw (2007) “we simply define as the rate of change in consumer prices as reflected in the Consumer Price Index (CPI)”. According to Kitcher and Ken (2007), “for low-income countries, a moderate inflation rate of up to 10 percent is viewed to have positive effect on the economy by allowing growth of investment and stimulating production”. However, when inflation goes beyond reasonable limits, it creates new problems for the system. This appears to have been the case in most WAMZ countries during the past two and a half decades.

It is clear from the table that inflation has been a challenge for the zone, though with varying incidence. The Gambia had the lowest rate of inflation during the review period. This figure is actually considered high given that prior to 2002 and 2003, when inflation in The Gambia jumped to 13 percent and 18 percent respectively, it had remained in the single digit. This was followed by Guinea and Ghana at 22.9 percent and 31.7 percent respectively. Sierra –Leone, perhaps for the obvious reason of her political challenges, recorded an average inflation rate of 70 percent during that period. Similarly, between 1997 and 2007, she recorded an inflation rate of 6.2 percent compared to Nigeria’s 12.7 percent and Ghana’s 15.8 percent (West Africa Monetary Institute [WAMI], 2013). Most of the member countries have individually made tremendous progress in the war against inflation. For example, Sierra-Leone, which had an average inflation rate of 41 percent between 1986 and 2006, recorded only 12.2 percent inflation in 2009. Annual average inflation rate for the WAMZ grew from 10.1 percent in 2001 to over 17.7 percent in 2003 and drops continuously to the tune of 11.8% in 2010.

The Gambia, which had its inflation rate at single digits in 2001, experienced an upsurge in 2002 and 2003 when inflation rose to 13.0 and 17.6 percent before dropping significantly in subsequent years up to single digit inflation. Closely related to this is Liberia’s inflation rates which were single digit for about seven years, although, not consecutively but oscillate

through three ‘cycles’ corresponding to the following years; 2002, 2004 and 2007. Ghana’s inflation rate remained in the double digits throughout the review period except 2010. Ghana and Nigeria were the major culprit in terms of inability to significantly control inflation until 2004. Both countries had inflation figures exceeding 23 percent in 2003. However, the numbers have since dropped considerably. By 2007 Nigeria’s inflation rate had come down to 6.6 percent and later rose to 11.8 percent in 2010 while that of Ghana had dropped to 12.8 percent and dropped further to 8.6 percent in 2010. The following table shows the inflation trends in the zone.

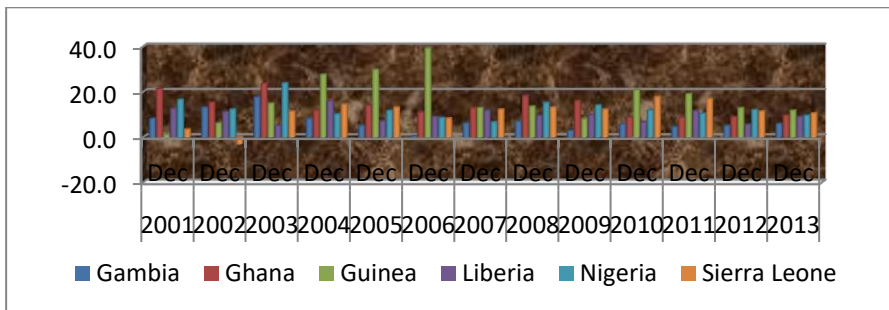


Figure 7: The WAMZ's Inflationary Trend between 2001 to 2013

Source: Author's Design.

All member states' inflation rates must be single digits, or less than ten percent (10%), in order for convergence to occur. A cursory glance at Figure 3.7, however, would indicate that this condition was not met simultaneously during the study period. This implies that the West Africa Monetary Zone area has not achieved a common single-digit inflation rate, which could be emphasised by the lack of coordination of monetary policy within the zone. This is not to argue that any of the WAMZ member nations could not accomplish the necessary single-digit inflation, but achieving this aim simultaneously is crucial. Achieving single-digit inflation in the subsequent years—albeit not simultaneously—Gambia, Guinea, and Sierra Leone only managed to achieve this target in five, three, and four years, respectively, whereas countries like Nigeria, the Gambia, and Liberia scored above average.

2. Empirical Review

Willians (2022) analyse whether inflation convergence is sufficient for monetary unification in WAMZ using a pairwise approach in addition to other methods. The result indicates a relatively slow process of convergence. Additionally, the paper stresses the need for utmost care due to the technical

nature of collaboration required before the projected West African Monetary Union or Common Currency Area could be realised.

In a related study, Bakare-Aremu (2020) uses the methodological foundation of beta convergence to test the convergence of the economic growth of the six member states that comprised the WAMZ in order to determine whether the region is a common currency area. The study achieves a non-convergence growth level, indicating that the common currency area may not materialise unless there is policy coordination in WAMZ. The paper suggests that the West Africa Monetary Institute (WAMI) oversee a central policy coordinating. Obalade *et al.*, (2023) look into the possibility of the West African Monetary Zone establishing a currency union. The study employed the Markov Switching Model (MSM) to generate novel results that illustrated how the member states' real exchange rates were more varied prior to the formation of WAMZ. The report suggests creating a centrally coordinated policy organisation.

The literature is not in agreement about how effective integrating monetary policy is at fostering macroeconomic convergence, according to Popkova, Egbe, Akopov, and Popovsky, (2012). Other than the relative inefficiency of independent monetary and exchange rate policies to affect domestic economic activities, they argue that the associated costs of shocks particular to a country are significantly bigger than those expected by monetary union. According to their findings, macroeconomic convergence may benefit from early adoption of a common exchange rate and monetary policies through regional economic integration, which may also hasten the emergence of a regional currency.

In a related work, Honohan and Lane (2003) estimated the panel data model to assess the variables that affected the inflation fluctuations in the euro region from 1999 to 2001. Their results show that a member country's external exposure, cyclical circumstances, fiscal policy, and price level convergence are the main factors determining inflation differentials in the euro area. In a different study, Horvath and Koprnicka (2008) examine the variables influencing inflation variations between the euro region and a panel of recent EU members from 1997 to 2007. Their main findings suggest that, in comparison to the euro area, higher prices and an appreciation of exchange rates are linked to narrower inflation differentials, but a fiscal deficit and a positive production gap seem to be responsible for bigger inflation differentials. According to these results, genuine convergence factors—as opposed to cyclical variation—seem to have a greater bearing on inflation developments in the new EU countries than in the euro area.

Mara and André (2011) have conducted a study wherein they provide novel insights into inflation differentials within the Euro Area. The data they use covers the years 1999-2010, which includes the period of the recent global financial crisis. The authors examine the evolution of inflation dispersion and differentials from the beginning of EMU using both descriptive and econometrics methodologies. Their results verify that there have been inflation differentials throughout the sample period, which was not the case before the crisis. Their gravity model estimation results validate that labour and product market rigidities, variations in cyclical positions, productivity differentials, and price level equalisation are significant factors influencing the inflation differential. They come to the conclusion that persistent structural and national factors, rather than equilibrating, transitory forces, are responsible for inflation differentials. This necessitates countercyclical fiscal policy measures at the national level as well as structural labour and product market reforms.

Ary-Tanimoune, Combes, and Tapsoba (2017) evaluate the effects of nation-specific policy conflicts between monetary and fiscal in order to ascertain the consequences for the establishment of an ECOWAS common currency by looking at a panel dataset spanning the years 1990 to 2006. The authors classified the monetary and fiscal policy stance into four possible regimes of policy mix using the primary structural fiscal balance and the monetary condition index, respectively. The majority of these regimes are found in the WAEMU subsample, whose level of integration is higher than that of non-WAEMU nations. Their results validate the presence of heterogeneity in the economic structure and policy mix incoherence. They come to the conclusion that *ex ante* regional policy coordination, which promotes more policy mix coherence, appears to be a prerequisite for macroeconomic convergence.

The Eco was assessed using the principles of the Optimum Currency Area structure in a study by Taylor (2013) on the readiness of WAMZ countries for the creation of the proposed common currency, with an emphasis on macroeconomic shocks, the degree of product/export base diversification, and the volume of trade among member nations. The author used a variety of empirical techniques, such as creating correlation matrices for GDP growth and inflation, calculating a gini of similarity between industries (agriculture, manufacturing, and services), and creating a gravity equation with variables to examine the additional effects of belonging to ECOWAS, the CFA currency zone, and the WAMZ area. The mixed results suggest that, over time, the WAMZ countries may be able to successfully develop a single currency with *ex ante* policy integration, starting with the

most comparable countries, which goes against the original hypothesis that these countries are not properly prepared.

In a different study, Adamgbe and Agu (2012) estimate the monetary policy preferences in the WAMZ using Bayesian estimation techniques of dynamic general equilibrium models. The result indicates that despite regional efforts, the goal of achieving convergence, that is, single-digit inflation for all member states—has not yet been achieved. Their research, however, reveals preferences for output stabilisation above inflation, pointing to the passive application of monetary policy as a tool for demand management. In a related study, Balogun (2014) examined the possibility of stability of convergence criteria of WAMZ, using the law of one price as the theoretical foundation, and panel data methodological procedure, the study found that convergence may not be possible without policy coordination; the study therefore recommends that WAMZ may consider alternative criteria.

An examination of the issue of macroeconomic convergence from a methodological perspective reveals that most authors use panel data sets and analyse them using one or more of the variants of panel data analysis techniques. For example, the set of related studies that are closely related to this research study uses the aforementioned technique of analysis and includes the following studies: Popkova *et al.*, (2012); Ary-Tanimoune, Combes, and Tapsoba (2007); Adamgbe and Agu (2012); Taylor (2013). These studies, among others, discuss inflation as part of the macroeconomic convergence criteria in WAEMU, the proposed WAMZ, and ECOWAS monetary union. Therefore, on three grounds—the scope, purpose, and technique of analysis—it is anticipated that this study will differ from Taylor (2013); Balogun (2014); Adamgbe and Agu (2012); Popkova, *et al.*, (2012); Mara and Andre (2011); and Latif (2010), to name a few.

Specifically, Balogun's study, which covers the years 1986 to 2012, used a pooled regression method to determine the aggregate effect of independent monetary policies on inflation convergence potential, whereas Taylor's study covered the years 1990 to 2008 and used a gravity model (for trade data), a correlation matrix (for GDP and inflation data), and a Gini of similarity (for diversification data). While Adamgbe and Agu, and Mara and Andre, not only differs in scope and method but also in area and zone, while the latter looked at WAEMU, the former discussed West Africa country. Latif's study equally differs in scope and area but the methodology for this study stems from his work. This study however, greatly differs from earlier studies in that, its covers period (2001-2019), the six WAMZ's member states and unlike Balogun (2014); Taylor, (2013), the study adopts Neoclassical convergence theory.

Nonetheless, the intent of this study was to demonstrate that, in the absence of ex-ante economic policy coordination, there is little chance that the monetary and fiscal policies of WAMZ member nations can promote convergence. Balogun (2014) states that this tends to contradict the traditional arguments surrounding the optimum currency area (OCA), which hold that the optimal operations of the OCA ex-post depend on the ex-ante pursuit of macroeconomic policy convergence that minimises unionisation costs and leads to similar shocks (Mundell, 1961; Kenen, 1969). As an alternative, it establishes the framework for the West African Economic and Monetary Union's (WAEMU) alternative strategy, which is based on the endogeneity theory (Rose, 2000) and holds that the imposition of a monetary union could act as a veritable instrument of macroeconomic convergence and trade creation without requiring ex-ante compliance to policy convergence criteria (i.e., an unconditional convergence).

3. Methodology

Static panel data estimate techniques were applied in order to take advantage of the cross section and time series dimension of the study data. When appropriate for each model, the study evaluated the three approaches (Pooled OLS, Fixed Effect Mode (FEM), and Random Effect Model (REM), and the best result were shown following the diagnostic test. In order to account for issues like bias resulting from missing variables in pure cross-sectional regressions, fixed effects estimates are utilised (Islam, 1995; Caselli *et al.*, 1997; Baltagi, 2001). The unobservable country-specific effects, which are thought to be fixed parameters that need to be estimated, are taken into account by the fixed effects model.

Given the type of data used in this study—cross-sectional and time series—panel data analysis was used since it made it possible to address issues with autocorrelation and heteroskedacity that arise with pure time series analysis. Additionally, the techniques employed are one of the three variations of panel analysis, which comprise fixed, random effect, or pooled ordinary least squares; the selection of which is based on diagnostic tests such the Huasman and Wald redundant tests.

3.1 Model Specification

It is considered in this study that the inflation in the West Africa monetary zone is of the Cobb-Douglas form, as shown below in equation 1 which is in accordance with neoclassical model Solow (1956), and Swan (1956). Where $Y(t)$, $K(t)$, $A(t)$, and $L(t)$ represent, respectively, production

capital, level of technology and the labour of country considered at time t while $A(L)$ represents the country's labour input as an efficiency unit.

$$Y_t = K(t)^\alpha (A(t)L(t))^{1-\alpha} \tag{1}$$

The parameters α and $1 - \alpha$ are the elasticities of the production of capital and labour. On competitive market, production factors are valued at their marginal costs. Labour (L) and level technology (A) are assumed to increase at exogenous growth rates n and g . While the growth rate of population, denoted by (n) , differs from one country to another. The accumulation of the factors is described by the following equation:

$$K(t) = S_k * Y(t) - k * K \tag{2}$$

Where S_k is the investment ratio and K the rate of depreciation of the stock of physical capital. Finally, level of technology A and labour L change at given exogenous growth rates g and n . The resolution of the per capital stationery state

$$(y^* = Y/L) \tag{3}$$

implies that there is under a logarithmic form:

$$y^* = \ln A_0 + g_t + \frac{\alpha}{1-\alpha} \ln S_k + \frac{\alpha}{1-\alpha} \ln(n + g + k) \tag{4}$$

The standard convergence specification is obtained by an approximation of the Taylor series around the stationery state, which finally leads to:

$$\ln y_t = (1 - e^{-\lambda\theta}) \frac{\alpha}{1-\alpha} \ln s_k - (1 - e^{-\lambda\theta}) \frac{\alpha}{1-\alpha} \ln(n + g + k) - (1 - e^{-\lambda\theta}) \ln y_{t-\theta} + (1 - e^{-\lambda\theta}) A_0 + g (1 - e^{-\lambda\theta} (t - 0)) \tag{5}$$

Where θ is the period of time which equation 5 applies, while λ is the convergence rate. This cross-sectional specification is in line with Islam (1995), and offers several advantages. More importantly, it makes it possible to control the differences in the initial stages of technology AO , that are reflected on the countries' specific fixed effects. Thus, the assumptions that n and sK are constant during the period θ are more realistic when they are applied to shorter periods. Finally, a panel approach makes it possible to have a greater number of observations.

Using the conventional notation in the literature on panel data, equation (5) can be rewritten as:

$$\ln y_{it} = \gamma \ln y_{i,t-\theta} + \beta_1 \ln s_{it} + \beta_2 \ln(n + g + k) + \mu_i + \eta_t + \omega_{it} \tag{6}$$

With $\gamma = e^{-\lambda\theta}$; $\beta_1 = \frac{\alpha}{1-\alpha} (1 - e^{-\lambda\theta}) = \beta$; $\beta_2 = -\beta$

$$\mu_i = (1 - e^{-\lambda\theta}) \ln A_0 = \text{specific effect region (invariant time)}$$

$\eta_t = g \left(t_2 - e^{-\lambda \theta t_1} \right)$ =specific effect “time” (invariant region)

ω_{it} =the term of error is habitually assumed to be $(0, \delta^2)$

Imposing restrictions on β_2 in Equation (7) gives the final empirical model:

$$\ln Y_{it} = \gamma \ln Y_{it-1} + \beta \ln x_{it} + \mu_i + \eta_t \tag{7}$$

However, to test for the study objective of existence of convergence among inflation rates in WAMZ, this study estimates the model 4.8 for inflation convergence within the zone which is in line with (Solow (1956); Swan (1956); and Latif (2010).

$$(1/T)\ln(Y_{i,t}/Y_{i,0}) = \alpha + \beta \ln(Y_{i,0}) + \varepsilon_i \tag{8}$$

Where y represents rate of inflation, T is the time within the scope of study, β and α are the parameters to be estimated, β must be negative and statistically significant for convergence of the variable of intent to occur and finally ε is the error term.

4. Results and Discussion

Table 1: Inflation Convergence Status Result

Dependent variable INFRC		
VARIABLES	Pooled OLS	Fixed Effect
LOGINFR(-1)	-0.0024	-0.0041
	(0.8217)	(0.7216)
INFR	0.0196	-0.0039
	(0.0027)	(0.0036)
_CONS	0.0357	0.0542
	(0.1225)	(0.0529)
Wald F-test	0.9179	
P.V	0.4756	
Convergence speed	0.02	
Half Life	289years	

Source: Author’s Computation via E-views 12.

The panel results in Table 1 illustrate the pooled ordinary least square and the fixed effect model results, where the values in brackets represent the probability of the preceding Beta values. It shows that the coefficient of LOGINFR(-1) = -0.0024, but its probability value of 0.8217 indicates non-statistically significant. Therefore, for convergence to hold, these two conditions must be met, that is, necessary and sufficient. Inflation

rates (INFR) are one of the main convergence variables i. The coefficient of LOGINF (-1) needs to be statistically significant and less than zero in order to meet the requirements. The inability of this result to satisfy the two conditions that result to a very low convergence speed of 0.02 percent per annum and a half life that separate them from the stationary state is two hundred and eight nine years (289years) which equally imply a long run equilibrium that is almost indefinite. The result simply indicates that it is almost impossible to achieve inflation convergence in west Africa Monetary zone (WAMZ) without prior monetary policy coordination. This study therefore base on the results join the earlier authors such as Balogun (2014); Taylor (2013); Adamgbe and Agu (2012); Williiam (2022); Bakare-Aremu (2016); and Latif (2010) that asymmetric monetary policy should be jettison, for a more robust policy coordination or vertical integration (in the case of WAEMU) should be adopted or rather an ex-post coordination.

5. Conclusion and Recommendations

From the foregoing, it should be noted that west African monetary zone may be a mere dream, if some drastic steps and policy re-direction are not taken by the authority in-charge, since several authors have reiterated same information over and over for betterment and success of WAMZ. This study equally trails the view of other authors that a vertical integration would do better for the zone as in the case of West Africa Economic and Monetary Union (WAEMU), where there exists a central monetary authority for the zone, a central policy coordination would go a long way to achieving the inflation convergence as required for take-off in WAMZ.

In line with the findings of this study, the following recommendations are provided for timely actualization of WAMZ;

- i. That horizontal policy integration in force should be jettison for a more robust vertical policy integration, in which West Africa Monetary Institute will be charged with the responsibility of providing policy coordination with follow-up support.
- ii. Asymmetric monetary policy thrust should be discarded for centrally monetary policy coordination, as stated earlier all hands must be on deck to make WAMZ a reality, in this case centrally coordinated monetary policy must be put in place through a committee of all member's state Central Bank Heads.
- iii. Lastly, without requiring ex-ante compliance to policy convergence standards, the establishment of a monetary union could operate as a veritable vehicle of macroeconomic convergence and trade formation.

References

- Abradu-Otoo, P., & Donyina-Ameyaw, S. (2007). A small macroeconometric model of Trade and Inflation in Ghana. *A paper presented at the University of Ghana-Cornell University International Conference.*
- Adamgbe, E. T., & Agu, C. C. (2012). Monetary policy preferences in the West African monetary zone: Evidence from dynamic general equilibrium models. Electronic copy available at: <http://ssrn.com/abstract=2200319>.
- Ary-Tanimoune, N., Combes, J., & Tapsoba, R. (2017). Policy mix coherence: What does it mean for monetary policy in West Africa? *CERDI, Etudes et Documents, E 2012.13*, <http://www.cerdi.org/ed>.
- Bakare-Aremu, T. A. (2020). Is West African monetary zone a common currency area? *Journal of Economics and Policy Analysis (JEPA), Department of Economics, Faculty of Social Sciences, University of Lagos*, 5(1) 99-110.
- Bakare-Aremu, T. A. (2017). Effect of financial liberalisation on macroeconomic convergence variables in the West Africa Monetary Zone (WAMZ). *Journal of Social Sciences, Faculty of Social Sciences, National Open University, Abuja*, 2(2), 1-56.
- Bakare-Aremu, T. A. (2016). Financial liberalization and macroeconomic convergence in West Africa monetary zone. An unpublished PhD Thesis of the Department of Economics, Faculty of Social Sciences, University of Lagos, Akoka, Lagos.
- Baltagi, H. B. (2011). *Economic analysis of panel data*. Delhi. Wiley and Sons, incorporated.
- Caselli, F., Esquirel, G., & Lefort F. (1997). Reopening the Convergence Debate. a new look at cross country growth empirics. *Journal of Economics Growth*, 1(3), 363-389.
- Honohan, P., & Lane, P. (2013). Divergent inflation rates in EMU. *Economic Policy*, 358-394.
- Horvath, R., & Koprnicka, K. (2008) Inflation differentials in EU new member states: An empirical evidence. William Davidson Institute Working Paper Number 937 October 2008, Electronic copy available at: <https://ssrn.com/abstract=1311529>
- Islam, N. (1995). Growth empirics, a panel data approach - The quality. *Journal of Economics, MIT press*, 110(4), 1127 –1147.
- Kenen, P. (1969). The theory of optimum currency areas: An eclectic view. In: Mundell, R. and Swoboda, A., Eds., *Monetary Problems of the International Economy*, The University of Chicago Press, Chicago.
- Kitcher, P., & Ken, R. (2007). Threshold effects in the relationship between inflation and economic growth, IMF working paper WP/00/1100

- Latif, A. G. D. (2010). Convergence and economic integration in Africa: The Case of the Franc Zone Countries. *Africa Economic Research Consortium, RP 2000*.
- Mara, P., & André, V. P. (2011). Euro zone Inflation Differentials and the ECB./ (Research papers in economics - REPEC) D/2011/1169/014. www.repec.org
- Mundell, R. B. (1963). The theory of optimum currency areas. *American Economic Review*, 51(4) 657-663.
- Nnanna, O. J. (2007). Eco currency: Is a third postponement avoidable? *West African Journal of Monetary and Economic Integration*, 7(1), 1-14.
- Obalaele, A. A., Moodley, T., Ncama, N, Nkhize, N., Pillay M., & Singh, T. (2023) Can WAMZ form a currency union? *Comparative Analysis of Trade and Finance in Emerging Economies*, (31), 91-107.
- Ojo, M. O. (2005). Towards a common currency in West Africa: progress, lessons and prospect. *West African Journal of Monetary and Economic Integration*, 5(2), 47-79.
- Popkova, E. G., Egbe, J. O., Akopov S. E., & Popovsky, S. N. (2012). The integration of economic monetary policy systems of West African States; Positive or negative implications. *Business and Entrepreneurship Journal*, 1(1), 1-12
- Rose, A. (2000). One money, one market: Estimating the effect of common currency on trade. *Economic Policy Review*, 30, 7-45.
- Solow, R. M. (1956). A contribution to the theory of economic growth. *Quarterly Journal of Economics*, 70, 65-94.
- Swan, T. W. (1956). Economic growth and capital accumulation. *Economic Record*, 32, 334-361.
- Taylor, J. A. (2013). Is West Africa ready for a common currency: A study of WAMZ and the ECO”, The UCLA Undergraduate Journal of Economics 2013, 1-50 © Princeton University
- William, W. (2022). The West Africa Monetary zone: Is inflation convergence sufficient for common currency area. *Social Sciences Research Network*. <https://paper.ssrn.com>.