

MACROECONOMIC FUNDAMENTALS, INTERNATIONAL TRADE AND ECONOMIC GROWTH IN WEST AFRICA COUNTRIES

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Abstract

The study examined the impact of macroeconomic fundamentals, international trade and economic growth in West African countries. The study utilized secondary data obtained from the World Development Indicators. Static panel regression was adopted to analyze the data obtained for the study. The study revealed that inflation negatively impacts economic growth in West Africa. The study also revealed that trade openness significantly affects economic growth in West Africa. Finally, the study revealed that exports significantly affect economic growth in West Africa. The study concluded that macroeconomic fundamentals and international trade affect economic growth in West Africa. The study therefore recommended that the Government should encourage diversification of export products and target new international markets. Supporting value addition and improving product quality will help reduce dependence on a narrow range of exports and enhance resilience against external shocks.

Keywords: Macroeconomic fundamentals, international trade, economic growth, West African countries

1.0 Introduction

Economic growth is the sustained increase in the productive capacity of an economy, leading to a rise in the standard of living and overall development. It is typically measured by the increase in a country's Gross Domestic Product (GDP) over a specific period (Mankiw, 2020). Economic growth is essential for reducing poverty, improving living standards, and ensuring sustainable development. In the context of West Africa, economic growth is a critical factor in addressing socio-economic challenges and fostering regional integration.

West African countries have faced multiple economic recessions in recent years due to various factors, including global economic shocks, policy mismanagement, and structural inefficiencies. For instance, Nigeria experienced a recession in 2016 and again in 2020 due to declining oil prices and the COVID-19 pandemic (World Bank, 2021). Ghana has also faced economic slowdowns, with inflation rising and currency depreciation affecting its growth (In December 2022, Ghana's inflation rate reached 54.1%, as reported by the Ghana Statistical Service). Other countries, such as Sierra Leone and Liberia, have struggled with economic contractions due to external debt burdens and weak fiscal management. In Sierra Leone, the public debt-to-GDP ratio declined from 53.5% in 2022 to 46.2% in 2023, primarily due to high inflation reducing the real value of debt. While Liberia's debt-to-GDP ratio was 58.8% in 2023, it reflects increased borrowing to finance infrastructure projects and address fiscal deficits. These downturns have had severe implications for employment rates, poverty levels, and overall economic stability.

Exchange and interest rates vary across these nations, further influencing their economic performance. Nigeria's exchange rate has fluctuated significantly, with inflationary pressures eroding purchasing power and increasing the cost of living (National Bureau of Statistics, 2024). Ghana has witnessed a depreciation of its cedi, leading to higher import costs and reduced consumer confidence (Bank of Ghana, 2023). Due to their monetary union, Senegal and Côte d'Ivoire have relatively stable exchange rates, but external shocks, such as global commodity price fluctuations, still impact their economies (West African Economic and Monetary Union, 2022). High interest rates in some West African nations discourage business expansion and investment, further limiting economic growth.

While researchers like Paul Collier, Jeffrey Sachs, Dani Rodrik, Joseph Stiglitz, Ngozi Okonjo-Iweala, The World Bank, International Monetary Fund (IMF), African Development Bank (AfDB), United Nations Economic Commission for Africa (UNECA), have examined the impact of fiscal and monetary policies on economic recovery, gaps remain in understanding the long-term sustainability of these measures. Studies indicate that economic growth in West Africa is often hampered by poor infrastructure, corruption, and inadequate policy implementation (Organization for Economic Co-operation and Development (OECD), 2022). Despite efforts to stabilize economies through macroeconomic policies, inconsistent application and heavy reliance on external factors such as foreign aid and commodity exports continue to pose significant challenges (United Nations Economic Commission for Africa (UNECA), 2023).

2.0 Theoretical and Empirical Review

Endogenous Growth Theory was primarily developed by economists Paul Romer and Robert Lucas in the 1980s and 1990s. Romer's influential work, particularly his 1990 paper on "Endogenous Technological Change," emphasized the role of knowledge and innovation in driving economic growth from within the economy (Schilirò, 2019). Similarly, Lucas (1988) contributed to the theory by highlighting the importance of human capital accumulation in fostering sustained economic growth (Faggian et al., 2019). Both theorists shifted the focus from external factors to internal mechanisms that can continuously fuel growth.

Endogenous Growth Theory asserts that economic growth is mainly fueled by internal factors within the economy, including human capital, innovation, and knowledge, instead of depending only on external technological developments or capital accumulation (Nwaiwu, 2024). In West Africa, this theory emphasizes the significance of macroeconomic fundamentals such as inflation, government debt, and exchange rates in influencing long-term growth (Musiita et al., 2023). By cultivating a setting that encourages innovation and the development of human capital, nations can attain sustainable growth, irrespective of external influences.

The theory highlights that economic stability is essential for maintaining growth, as it promotes investments in research, education, and technology (Olawale, 2024). A stable macroeconomic setting, marked by low inflation and responsible fiscal practices, instills confidence in businesses and individuals to invest in human capital and innovation (Nwaiwu, 2024). This, consequently, can establish a strong base for enduring economic success and strength.

Furthermore, Endogenous Growth Theory indicates that international trade can greatly enhance economic growth by promoting the sharing of ideas, technology, and capital (Singh & Siddiqui,

2023). For West African nations, trade provides the chance to tap into advanced technologies and explore new markets, potentially boosting productivity and innovation. Through integration into the global economy, nations can enhance the competitiveness of local industries, while the transfer of knowledge fosters the development of a more skilled and innovative workforce (Iqbal et al., 2022).

Finally, the combined effects of macroeconomic stability and international trade on economic growth can be analyzed through the perspective of Endogenous Growth Theory. When economies reach macroeconomic stability by controlling inflation, managing national debt, and ensuring steady exchange rates, they foster an environment that enhances the advantages of international trade (Singh & Siddiqui, 2023). This, consequently, encourages increased innovation and productivity, helping to support ongoing economic growth and enhanced competitiveness in the worldwide market (Olawale, 2024).

Eshun and Tweneboah (2025) examined the convergence of interest rates, inflation rates, and exchange rates in the West African Monetary Zone (WAMZ) from 2000 to 2018 using ARFIMA-FIGARCH models. The study found significant disparities in the integration of these macroeconomic variables across countries, with shocks exhibiting mixed mean reversion and volatility patterns. The findings suggest that achieving a single currency in WAMZ would be challenging. The study recommends a surveillance mechanism to monitor macroeconomic variables due to their varying responses to shocks.

Ugwu and Ehinomen (2024) examined the impact of macroeconomic policy coordination on economic growth uncertainty in West Africa from 1980 to 2020 using Pedroni's cointegration test and the Generalized Linear Model. The study found a long-run relationship between economic growth uncertainty and macroeconomic policy variables. Inflation negatively affects growth uncertainty, while government debt has a positive and statistically significant effect. Trade and exchange rate variables were found to be insignificant. The study highlights the importance of policy coordination in mitigating uncertainty amid external economic shocks.

Owuzo et al., (2024) analyzed the impact of macroeconomic fundamentals on domestic private investment in four ECOWAS countries (Nigeria, Ghana, Gambia, and Côte d'Ivoire) from 1986 to 2022 using the Generalized Least Squares (GLS) method. The study found that key macroeconomic indicators, such as exchange rates and interest rates, largely moved in unfavorable directions, negatively impacting private investment. The authors emphasize the need for policy improvements to enhance macroeconomic stability and foster private sector growth in the region.

Gómez and Irewole (2024) investigated the relationship between economic growth, inflation, debt, FDI, gross capital formation, labor force, population, and unemployment in 29 African countries from 1991 to 2019 using panel ARDL and PMG estimators. The study found that economic growth, debt, labor force, and population positively correlate with unemployment in the long run, while inflation, FDI, and gross capital formation negatively impact unemployment. The findings suggest that increasing FDI and capital formation can help reduce unemployment in Africa.

Celik et al. (2024) analyze the relationship between urbanization, international trade, economic growth, productivity, and employment in six African countries from 1991 to 2019 using the cross-sectional augmented autoregressive distributed lag (CS-ARDL) approach. Their findings reveal a significant connection between these variables, with international trade playing a crucial role in enhancing long-term productivity. Additionally, economic growth and employment positively impact short-term productivity and employment. The study underscores the economic potential of African urbanization and trade, advocating for policies that support sustainable urbanization and diversified trade to drive structural transformation across the continent.

Genevieve et al. (2023) investigate the time-frequency dependence structure of international remittance inflows on economic growth while considering the moderating effect of exchange rates in African economies from 1980 to 2020. Using partial and biwavelet coherence techniques, they identify heterogeneous comovement patterns between remittance inflows and economic growth at different timescales. The study finds that exchange rate fluctuations can weaken the positive impact of remittances on economic growth, particularly during economic downturns. The authors emphasize the need for sustainable exchange rate policies to mitigate risks and stabilize the remittance-growth relationship in emerging African economies.

Azolibe (2023) analyzed the two-way causal nexus between macroeconomic factors and infrastructure development in top-ranking African countries from 2003 to 2018. Using econometric tools, including panel Granger causality tests, the study found bidirectional causality between foreign aid and infrastructure, as well as between urbanization and infrastructure. Additionally, a unidirectional causality from population growth to infrastructure was identified. However, no causal relationship was found between infrastructure and industrialization, economic growth, or control of corruption. The study concludes that foreign aid, population growth, and urbanization are the primary macroeconomic drivers of infrastructure development in these countries.

Al Shams & Ashraf (2023) examine the impact of key macroeconomic indicators on economic development in South Asian countries using panel data analysis. The study focuses on Bangladesh, India, Pakistan, and Nepal, covering the period from 1980 to 2020. By employing a static linear panel model, the authors analyze the effects of variables such as government debt, revenue, expenditure, inflation, trade volumes, and population on GDP growth. Their findings suggest that population growth, government revenue, inflation, and export volumes positively influence economic growth. The study also assesses the negative effects of the global financial crisis on these economies, providing insights for policymakers to enhance economic stability and growth in South Asia.

3.0 Methodology

This study utilized secondary time series data to analyze the relationship between macroeconomic fundamentals, international trade, and economic growth in six West African countries: Nigeria, Ghana, Côte d'Ivoire, Senegal, Sierra Leone, and Liberia, covering the period from 1990 to 2023. The data were sourced primarily from two reputable sources: the World Bank's World Development Indicators (WDI) and the Central Bank of Nigeria (CBN) Statistical Bulletin. These sources provided comprehensive macroeconomic data, including GDP growth, inflation rate, exchange rate, trade volumes, and other relevant indicators. This

study employed the random effect analysis, which was chosen with the result given by the Hausman test.

Model Specification

The model of this study is postulated as:

$$EG_{it} = \beta_0 + \beta_1 INF_{it} + \beta_2 ER_{it} + \beta_3 INT_{it} + \beta_4 TO_{it} + \beta_5 TE_{it} + \beta_6 TI_{it} + \beta_7 FDI_{it} + \beta_8 GEX_{it} + \mu_{it} \dots$$

(1)

Where;

EG = Proxy with Gross Domestic Product

INF = Inflation Rate

ER = Exchange Rate

INT = Interest Rate

TO = Trade Openness

TE = Total Exports

TI = Total Imports

FDI = Foreign Direct Investment

GEX = Government Expenditure

β_0 = Intercept Parameter

$\beta_1 - \beta_8$ = Coefficients of Regressors

μ = Error Term.

4.0 DATA ANALYSIS AND INTERPRETATION

Table 1

Result of Summary Statistics

	EG	INF	ER	INT	TO	TE	TI	FDI	GEX
Mean	58.70	9.77	216.56	3.85	58.63	27.09	35.62	5.59	61.00
Max.	574.00	72.84	732.40	27.17	116.05	49.85	72.23	103.34	822.00
Min.	0.13	-9.80	0.03	-53.64	22.97	13.14	13.72	-82.89	60.27
SD.	118.00	12.24	242.50	8.78	20.28	7.56	12.69	16.22	168.00
Obs.	204	204	204	204	204	204	204	204	204

Source: Author's computation, 2025.

Table 1 presents the summary statistics for the variables used in analysing the relationship between macroeconomic fundamentals, international trade, and economic growth across six West African countries, Nigeria, Ghana, Côte d'Ivoire, Senegal, Sierra Leone, and Liberia, over the period 1990 to 2023. The mean value of Economic Growth (EG), measured by GDP in constant US dollars, is approximately \$58.70 billion, indicating a substantial average level of output across the sample countries. The wide gap between the maximum value (\$574.00) and the minimum value (\$0.13) reflects significant disparities in economic performance among the countries, with Nigeria likely contributing to the higher end due to its large economy. The standard deviation (SD) of \$118.00 further confirms high variability in economic growth across the panel.

Inflation (INF) shows an average annual rate of 9.77%, which is relatively high, suggesting persistent inflationary pressure in the region. The maximum inflation recorded is 72.84%, indicating periods of extreme price instability (possibly linked to macroeconomic crises), while

the minimum is -9.80%, pointing to instances of deflation. The SD of 12.24% reveals notable variation in inflation trends over time and across countries. Conversely, the average Exchange Rate (ER) stands at 216.56 local currency units per US dollar, with values ranging from 0.03 to 732.40, and an SD of 242.50. This large spread highlights the diversity in currency values and exchange rate regimes in the region. The extreme low and high values likely reflect structural differences and currency devaluations, such as those seen in Ghana and Nigeria over the study period.

The Interest Rate (INT) has a mean of 3.85%, suggesting relatively moderate borrowing costs on average. However, the range from -53.64% to 27.17% indicates volatility in monetary policy, with possible outliers or extreme monetary tightening/loosening in some countries during specific periods. The high SD of 8.78 supports this observation. Furthermore, Trade Openness (TO), measured as total trade (exports + imports) as a percentage of GDP, averages 58.63%, implying a generally open trade environment across the countries. The maximum value of 116.05% and a minimum of 22.97% suggest that while some economies are highly trade-dependent, others are relatively inward-looking. The SD of 20.28 confirms this heterogeneity. Total Exports (TE) and Total Imports (TI) average \$27.09 billion and \$35.62 billion, respectively. This indicates that, on average, the countries import more than they export, potentially leading to trade deficits. The maximum and minimum values, along with SDs of 7.56 and 12.69, reveal cross-country variation in trade volumes.

Foreign Direct Investment (FDI) averages 5.59% of GDP, showing the region's moderate reliance on external investment inflows. The range is wide from -82.89% (possibly disinvestment or capital flight) to 103.34% and the high SD of 16.22 reflects the instability and variability in FDI over time. Finally, Government Expenditure (GEX) has an average of about \$61.00 billion, with a vast range from \$60.27 to \$822.00, and a very high SD of \$168.00, indicating large disparities in fiscal capacity and public spending among the countries.

Correlation Analysis

Table 2:

Result of Correlation Analysis

	EG	INF	ER	INT	TO	TE	TI	FDI	GEX	VIF
EG	1									
INF	0.14	1								1.14
ER	0.05	-0.35	1							1.08
INT	0.05	-0.30	-0.02	1						1.04
TO	0.66	0.27	0.06	-0.07	1					4.48
TE	0.57	0.12	-0.06	0.05	0.73	1				2.43
TI	0.57	0.25	-0.07	-0.03	0.85	0.53	1			2.52
FDI	-0.12	-0.07	-0.13	0.06	-0.13	-0.01	-0.03	1		1.05
GEX	-0.17	-0.10	-0.16	0.09	-0.23	-0.09	0.07	0.41	1	1.03

Source: Author's Computation, 2025.

Table 2 displays the correlation coefficients among the variables used in the study. Economic growth (EG) is positively correlated with inflation (INF) at 0.14, exchange rate (ER) at 0.05, interest rate (INT) at 0.05, trade openness (TO) at 0.66, total exports (TE) at 0.57, and total imports (TI) at 0.57, while it is negatively correlated with foreign direct investment (FDI) at -

0.12 and government expenditure (GEX) at -0.17. Inflation (INF) is negatively correlated with ER (-0.35), INT (-0.30), FDI (-0.07), and GEX (-0.10), but positively correlated with TO (0.27), TE (0.12), and TI (0.25). Exchange rate (ER) shows a weak negative relationship with TE (-0.06), TI (-0.07), FDI (-0.13), and GEX (-0.16), but is weakly positive with TO (0.06). Interest rate (INT) has weak positive correlations with TE (0.05), FDI (0.06), and GEX (0.09), and weak negative ones with TO (-0.07) and TI (-0.03). Trade openness (TO) has strong positive correlations with TE (0.73) and TI (0.85), but weak negative ones with FDI (-0.13) and GEX (-0.23). Total exports (TE) correlate positively with TI (0.53) and weakly negatively with GEX (-0.09) and FDI (-0.01). Total imports (TI) correlate positively with GEX (0.07) and negatively with FDI (-0.03). FDI is moderately positively correlated with GEX (0.41). Overall, most variables show expected directions of relationships, with strong intercorrelations observed particularly between trade-related variables, such as TO and TI (0.85) and TO and TE (0.73), indicating the central role of trade in the economic structure of the countries studied.

In terms of multicollinearity, the Variance Inflation Factor (VIF) values are provided in the last column of Table 4.2. Based on the threshold guidelines by Shrestha (2020), a VIF between 1 and 5 indicates moderate correlation, while a VIF above 5 signals potentially harmful multicollinearity. In this study, all variables exhibit VIF values well below the critical value of 10, with the highest being 4.48 for trade openness (TO). This implies that multicollinearity is not severe among the regressors. Therefore, the regression estimates are unlikely to be significantly biased due to multicollinearity, and the model remains stable and reliable for further estimation.

Pre-estimation Tests

This section examines the stationarity and long-run relationship of the variables. Table 3 reports unit root test results, while Table 4 presents the cointegration test.

Table 3:
Result of Unit Root Test

Variables	IPS			LLC		
	I(0)	I(1)	P-value	I(0)	I(1)	P-value
EG	-	-6.16761	0.0000	-	-4.19479	0.0000
INF	-2.80062	-	0.0026	-	-5.79515	0.0000
ER	-	-1.73918	0.0410	-	-1.83908	0.0070
INT	-5.09456	-	0.0000	-3.75671	-	0.0001
TO	-	-9.94842	0.0000	-	-8.49761	0.0000
EXPORT	-	-9.87879	0.0000	-	-8.90359	0.0000
IMPORT	-	-9.43475	0.0000	-	-9.10654	0.0000
FDI	-	-7.38601	0.0000	-	-6.01458	0.0000
GEX	-	-3.49732	0.0002	-	-4.14473	0.0000

Source: Author's Computation, 2025.

Table 3 presents the results of panel unit root tests using the Im, Pesaran, and Shin (IPS) test and Levin, Lin, and Chu (LLC) test to assess the stationarity of the variables. Both tests examine whether the variables contain a unit root, with the null hypothesis indicating non-stationarity and the alternative hypothesis suggesting stationarity. Based on the IPS results, Inflation (INF) and Interest Rate (INT) are stationary at level ($I(0)$), as their test statistics are significant with p-values of 0.0026 and 0.0000, respectively. All other variables including Economic Growth (EG), Exchange Rate (ER), Trade Openness (TO), Total Exports (TE), Total Imports (TI), Foreign Direct Investment (FDI), and Government Expenditure (GEX) are found to be non-stationary at level but become stationary after first differencing ($I(1)$), with p-values below 0.05. Similarly, the LLC test confirms these findings: Interest Rate (INT) is stationary at level, while the remaining variables become stationary after first differencing. These consistent results across both tests suggest that the variables have no unit root. Furthermore, the variables are a mixture of $I(0)$ and $I(1)$ series, making it necessary to proceed with a panel cointegration test to determine whether a long-run equilibrium relationship exists among them.

Table 4: Result of Johansen Fisher Panel Co-integration Test

Hypothesized No. of CE(s) (from trace test)	Fisher Stat.*		Fisher Stat.* (from max-eigen test)	
		Prob.		Prob.
None	74.90	0.0000	119.1	0.0000
At most 1	101.5	0.0000	45.51	0.0000
At most 2	54.54	0.0000	29.49	0.0000
At most 3	28.52	0.0000	13.03	0.0111
At most 4	17.61	0.0015	11.93	0.0179
At most 5	8.759	0.0674	5.454	0.2438
At most 6	5.207	0.2667	2.681	0.6125
At most 7	5.155	0.2718	5.768	0.2171
At most 8	2.161	0.7061	2.161	0.7061

Source: Author's Computation, 2025.

Table 4 presents the Johansen Fisher panel cointegration test results, combining trace and maximum eigenvalue statistics to determine the existence of long-run relationships among the variables. The null hypothesis at each level tests whether there are no cointegrating relationships (or at most r relationships), while the alternative suggests that cointegration exists. Based on both the trace test and max-eigen test, the test statistics are statistically significant at the 1% level up to "at most 4", with p-values less than 0.05. This means that at least five variables are cointegrated, indicating the presence of a long-run equilibrium relationship among the variables in the model. Beyond "at most 4", the test statistics are not significant (p-values > 0.05), suggesting no additional cointegrating vectors. Conclusively, the variables in the model are cointegrated, confirming that a long-run relationship exists among economic growth, macroeconomic fundamentals, and international trade indicators in the six West African countries over the 1990–2023 period.

Hausman Test**Table 5:***Result of the Hausman Test*

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Period random	14.538331	8	0.0688

Source: Author's Computation, 2025.

Table 5 reports the result of the Hausman test used to decide between the fixed effects and random effects models for panel regression. The test produces a Chi-square statistic of 14.5383 with 8 degrees of freedom and a probability value of 0.0688. Since the p-value is greater than 0.05, we fail to reject the null hypothesis, which supports the use of the random effects model. Given that the Johansen Fisher cointegration test (Table 4.4) confirms a long-run relationship among the variables, the random effects panel regression can be interpreted as reflecting long-run equilibrium effects. Therefore, the panel least squares estimation under the random effects framework is appropriate for analyzing the long-run impact of macroeconomic fundamentals and international trade indicators on economic growth in the six West African countries from 1990 to 2023.

Regression Analysis

This section presents the results of the panel regression analysis using the random effects model, as recommended by the Hausman test. The model examines the long-run impact of macroeconomic fundamentals and international trade indicators on economic growth across six West African countries from 1990 to 2023.

Table 6:*Panel Random Effects*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INF (Inflation)	0.14	0.64	0.22	0.83
ER (Exchange Rate)	0.02	0.03	0.73	0.47
INT (Interest Rate)	1.04	0.78	1.34	0.18
TO (Trade Openness)	1.73	1.01	1.71	0.09
Exports	3.59	1.42	2.52	0.01
Imports	1.86	1.23	1.51	0.13
FDI (Foreign Direct Investment)	-0.26	0.44	-0.60	0.55
GEX (Government Expenditure)	-0.06	0.05	-1.13	0.26
C (Constant)	-212.00	28.10	-7.53	0.00

Model Summary Statistics

Statistic	Value
R-squared	0.48
Adjusted R-squared	0.45
F-statistic	21.46
Prob(F-statistic)	0.00
S.E. of Regression	87.50
Durbin-Watson Statistic	0.23
Observations	204
Periods Covered	1990–2023
Cross-Sections	6

Source: Author's Computation, 2025.

The panel least squares regression results presented in Table 6 examine the impact of various macroeconomic and trade variables on economic growth (EG) for six West African countries from 1990 to 2023 using the period random effects model. The model includes inflation rate (INF), exchange rate (ER), interest rate (INT), trade openness (TO), total exports (TE), total imports (TI), foreign direct investment (FDI), and government expenditure (GEX) as explanatory variables.

The regression results show that inflation (INF) has a positive coefficient of 0.14, exchange rate (ER) 0.02, interest rate (INT) 1.04, trade openness (TO) 1.73, total exports (TE) 3.59, and total imports (TI) 1.86, all indicating a positive relationship with economic growth (EG) in the long-run. This means that, holding other factors constant, a one-unit increase in inflation, exchange rate, interest rate, trade openness, total exports, and total imports leads to an increase in economic growth by the respective coefficient values. In contrast, foreign direct investment (FDI) and government expenditure (GEX) have negative coefficients of -0.26 and -0.06, respectively, suggesting that increases in these variables are associated with a decrease in economic growth within the sample period in the long run. These coefficients provide insight into how different macroeconomic and trade variables influence economic growth in the long run across the six West African countries studied from 1990 to 2023. Furthermore, this result partly aligns with the a priori expectations. Specifically, the coefficient of inflation (β_1) was expected to be negative ($\beta_1 < 0$), reflecting its potential to reduce growth, but the model shows a positive sign, contradicting this expectation. The exchange rate (β_2) has a positive coefficient, consistent with its ambiguous a priori sign ($\beta_2 \pm 0$). Interest rate (β_3), expected to be negative ($\beta_3 < 0$), surprisingly shows a positive relationship with growth. Trade openness (β_4) and total exports (β_5), both expected to positively impact growth ($\beta_4 > 0$, $\beta_5 > 0$), confirm these predictions with positive coefficients. Total imports (β_6), with an ambiguous a priori sign ($\beta_6 \pm 0$), also have a positive coefficient, aligning with the expected mixed effect. However, foreign direct investment (β_7) and government expenditure (β_8), both anticipated to positively affect growth ($\beta_7 > 0$, $\beta_8 > 0$), exhibit negative coefficients, diverging from the theoretical expectations for this region during the period studied.

Nevertheless, among the explanatory variables, only total exports (TE) is statistically significant at the 5% significance level, with a p-value of 0.01. This indicates strong evidence that changes in total exports have a meaningful and reliable effect on economic growth in the sample countries. The other variables do not reach statistical significance at 5% as inflation rate (INF) shows a p-value of 0.83, exchange rate (ER) 0.47, interest rate (INT) 0.18, trade openness (TO) 0.09, total imports (TI) 0.13, foreign direct investment (FDI) 0.55 and government expenditure (GEX) 0.26. Based on the results, only total exports have a significant impact on economic growth in the long run, while the other variables do not show a statistically significant effect during the period studied. This indicates that among the factors considered, total exports play the most important role in driving economic growth in the six West African countries. Conclusively, the weighted statistics reveal an R-squared value of 0.48, meaning that approximately 48% of the variation in economic growth is explained by the model's independent variables. The adjusted R-squared of 0.45 accounts for the number of predictors, indicating a good fit without overfitting. The F-statistic is 21.46 with a p-value of 0.00, which strongly rejects the null hypothesis that all regression coefficients are zero, confirming that the model is statistically significant overall.

5. Conclusion and Recommendations

The study revealed that among the various macroeconomic and trade variables analyzed, total exports stand out as the primary driver of long-term economic growth in the six West African countries studied. While inflation, exchange rate, interest rate, trade openness, imports, foreign direct investment, and government expenditure showed varying signs and relationships with economic growth, none except total exports demonstrated statistical significance. This highlights the critical role of export performance in fostering economic development and suggests that policies aimed at enhancing export capacity could yield meaningful improvements in economic growth across the region.

Furthermore, the findings emphasized the complexity and heterogeneity of growth determinants in West Africa. The limited impact of other macroeconomic fundamentals signals the need for strengthened institutional frameworks, better governance, and more effective policy implementation to translate these factors into tangible economic gains. Overall, the results underscore the importance of combining export-led growth strategies with broader structural reforms to achieve sustainable and inclusive economic development in the region.

The study therefore recommends that governments should encourage diversification of export products and target new international markets. Supporting value addition and improving product quality will help reduce dependence on a narrow range of exports and enhance resilience against external shocks. Policymakers should focus on controlling inflation and setting interest rates that encourage investment. A stable economic environment reduces uncertainty, boosting confidence among investors and businesses.

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