Beyond Supply Chains: Investigating the Economic Impact of Logistics Performance

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Abstract - **This paper investigates the pivotal role of logistics performance in shaping economic growth in selected West African nations. Employing a rigorous fixed effects methodology over the period 2007–2022, the study unveils compelling insights. Logistics performance emerges as a critical driver of economic growth, emphasizing the need for infrastructure investments. Similarly, industrialization and trade openness have significant positive impacts on economic growth, endorsing pro-manufacturing and trade facilitation policies. Surprisingly, inflation exhibits no direct influence on growth, although prudent monetary management remains vital. These findings carry profound policy implications, advocating for holistic strategies to unlock West Africa's economic potential.**

Keywords - *Logistics performance, Economic growth, West Africa, Fixed Effects*

I. Introduction

In today's interconnected global economy, logistics effectiveness is key to economic growth and development. This is particularly crucial in the context of West Africa, a region facing grave challenges that significantly affect logistics. For instance, escalating incidents of terrorism, militant actions, and maritime piracy have affected trade in the region, with logistics operations witnessing substantial cost increases (Ogunyemi, 2022; Wang et al., 2022). Other key challenges impacting logistics activities in the region encompass poor road networks, a weak air transport infrastructure, and corruption (Shibuya et al., 2023). Despite these obstacles, the region has recently drawn interest from foreign investors because of its natural resources, youthful workforce, and recent advancements, including the inception of the African Continental Free Trade Agreement (AfCFTA).

Efforts to improve logistics performance in West Africa are especially important considering the region's commitment to initiatives including the AfCFTA, which aims to encourage intra-African trade (Chakamera & Pisa, 2021). Enhanced logistics not only lowers trade-related costs but also allows for a seamless transfer of goods and services across international boundaries, increasing regional cohesiveness, attracting investment, and the possibilities for long-term economic growth (Kuteyi & Winkler, 2022).

According to the World Bank's Logistics Performance Index (LPI), which measures the effectiveness of logistics operations, several West African countries rank lower, suggesting the need to improve on the various constituents of logistics operations (World Bank, 2023). Although some countries, such as Benin, have experienced improvements in their index scores, most of the countries continue to lag.

While it is clear that logistics efficiency is critical to trade and economic growth, its specific influence on the growth of West African economies has not garnered attention in the scholarly literature. Extant research focuses mostly on logistics and supply chain management from a corporate standpoint, frequently overlooking broader implications for the economy and regional trends (Yu et al., 2016; de Vass et al., 2021; Tukamuhabwa et al., 2023). In essence, there is a paucity of extensive study that examines how logistics performance influences economic growth in the milieu of West Africa. Understanding logistics performance and growth nexus will help in the formulation of policies and strategic investment choices that are essential to fully unlock the economic prospects of West African nations.

The research adds distinct value to the existing body of knowledge in various aspects. Firstly, this study augments the scant empirical studies on the influence of logistics performance on growth in Africa. The regional specificity of this adds depth to the literature. Secondly, unlike other studies (for example, Chakamera & Pisa, 2021) that examined the individual components of logistics performance on growth, our study employs the composite index of logistics performance, which provides a more holistic assessment of logistics performance. Furthermore, this study offers practical insights for firms that are either operating in or seeking to enter the West African market. Specifically, understanding the relationship between logistics and economic growth will assist firms in improving their supply chains and market strategies.

The remaining structure of the paper unfolds as follows: Section 2 delves into an exploration of existing literature, offering insights into the research landscape. Section 3, on the other hand, presents a comprehensive outline of the methodology utilized in this study. In Section 4, we present and dissect our research findings. Lastly, the concluding section summarises the paper, culminating in a set of thoughtful recommendations.

II. Literature and Hypotheses Development

This section delves into the empirical literature concerning the link between the variables of interest and economic growth. It also lays the groundwork by formulating the hypotheses that will guide this study.

Logistics performance and economic growth

Logistics performance appears an essential component that enhances the growth of an economy, particularly in countries that are still in the development stage (Khadim,yjhujnv Batool, Akbar, Poulova & Akbar, 2021). The role logistic performance play in facilitating goods transportation to the global market, can retards commerce through the imposition of more costs with regards to money and time (Munim & Schramm, 2018). Logistics performance demonstrate a reasonable relations with the growth of economies base on regional grounds (Munim & Schramm, 2018). Furthermore, logistics performance is noted to have significantly impacted economic growth (Tang & Abosedra, 2019). Many research investigations have looked into the relationship between growing economies and good logistics. For example, Coto-Millan et al. (2013) showed that a 1% upsurge in the LPI might possibly lead to an increase in the rate of global economic growth ranging from 1.1% to 3.4%. Khadim et al. (2021) found in a more recent study that logistics performance greatly moderates economic growth, particularly in emerging countries. According to the export-led growth (ELG) theory, exports can fuel economic growth (Alhakimi, 2018). The ELG hypothesis' application, however, is dependent on the quality of logistical performance, particularly in the Asian environment, according to recent studies. This is evident from the decisive role that logistics performance plays in economic growth in Asia when seen through the lens of the ELG hypothesis (Tang & Abosedra, 2019). Drawing from the above literature, it can be hypothesized that:

H_1: The effectiveness of logistics positively drives economic growth.

Industrialization and economic growth

Africa has demonstrated significant economic growth, aligning itself with global growth trends. Data from 1996 to 2010 highlights that Africa's growth rates outpaced those of South and Central America, Asia, and the world at large (Opoku & Yan, 2019). However, despite this growth, African countries still lag behind in terms of development, particularly in GDP per capita growth compared to many Asian nations. The recent economic upswing has instilled hope for alleviating poverty and underdevelopment, sparking a strong emphasis on strengthening Africa's industrial base to drive sustainable and inclusive growth (Zamfir, 2016). The initial documented strategy for industrialization in Africa was the Import Substitution Industrialization (ISI) during the post-independence era in the 1960s (Mendes et al., 2014; Segal, 2021; Jackson & Jabbie, 2021). Regrettably, due to various challenges, industrialization efforts in Africa have been largely ineffective, resulting in a process of deindustrialization within the region (Mendes et al., 2014; Wa Githinji & Adesida, 2011; Darkoh & Kinyanjui, 2015; Soludo, Ogbu & Chang, 2004). Presently, the growth in Africa is predominantly propelled by the service industry, significantly contributing to its GDP (Wa Githinji & Adesida, 2011). However, the growth rate in the industrial sector has not kept pace with the overall economic growth, showing a concern for the region's overall

development trajectory (Wa Githinji & Adesida, 2011). Interestingly, Africa has bypassed the conventional phase of industrialization, moving directly to the service phase from its historically agrarian background (Wa Githinji & Adesida, 2011). This deviation is considered detrimental to the development of the region, as it bypasses this golden opportunity for innovations revolving around technology and the demonstration of policy, and value addition to raw materials (Wa Githinji & Adesida, 2011). Industrialization is viewed as critical for processing and transforming raw materials, boosting employment, and fostering growth in both the agricultural and industrial sectors (Wa Githinji & Adesida, 2011; Darkoh & Kinyanjui, 2015). The industrial sector possesses the potential to absorb a large moderately skilled workforce, significantly enhancing productivity and playing a crucial role in economic growth and employment generation (Wa Githinji & Adesida, 2011; Darkoh & Kinyanjui, 2015). However, the industrial sector in Africa has historically lagged behind in employment generation compared to other regions (Wa Githinji & Adesida, 2011; Darkoh & Kinyanjui, 2015). Recognizing the pivotal role of industrialization in augmenting employment and achieving economic transformation, various African entities and governments have initiated policies aimed at promoting industrialization and stimulating economic growth (Wa Githinji & Adesida, 2011; Soludo, Ogbu & Chang, 2004). For instance, the Government of Ghana has introduced the policy of a district per factory to establish factories in each district, while Tanzania has embarked on a national development blueprint prioritizes 'Cultivating Industrialization to Drive Economic Transformation and Enhance Human Development.' (Wa Githinji & Adesida, 2011; Soludo, Ogbu & Chang, 2004). These initiatives aim to generate employment and drive greater industrialization for economic transformation within their respective countries. In summary, Africa's recent economic growth, though promising, highlights the imperative of industrialization to achieve sustainable development and bridge the development gap with other regions. A strategic focus on industrialization is crucial to augment employment opportunities, stimulate economic growth, and attain enduring economic transformation across the African continent.

H_2: Industrialization is expected to positively influence economic growth.

Trade openness and economic growth

A growing amount of economic research has recently begun exploring the complex relationship between commerce and the growth of economies. According to the hypothesis of trade-driven growth, trade significantly contributes to economic growth. The last three decades have witnessed considerable scholarly focus on the association between trade openness and economic growth, both in theoretical frameworks and practical economic studies. Nevertheless, a contentious debate persists regarding whether heightened trade openness genuinely acts as a catalyst for economic growth. Improved labor productivity, technological breakthroughs, higher levels of production, and increased employment are all strongly correlated with increased trade openness. It continues to play a crucial role in shaping and fostering economic growth as a result, a reality that is occasionally overlooked in academic discussions (Kugler, 1991; Jun et al., 2021; Khan et al., 2021; Giles & Williams, 2000). Fetahi-Vehapi et al. (2015) methodically examined the influence of trade openness on the GDP growth of countries in Southeastern Europe from 1996 to 2012. They came to the conclusion, using a GMM model, that these economies did not exhibit a robust correlation between trade openness and economic growth. They did, however, note that trade openness does stimulate economic growth in nations with significant gross fixed capital formation and higher baseline per capita income levels. The theory of comparative advantage posits that when a nation engages in trade with another, it will tend to manufacture goods in which it holds a relative advantage, producing these items in greater quantities while focusing on industries where it possesses more abundant resources. Consequently, this targeted sector experiences heightened production and exports, thus propelling global economic expansion.

A mounting body of empirical research has consistently revealed a positive correlation between trade openness and economic growth. Notable studies, including those by Das and Paul (2011), Marelli and Signorelli (2011), Nowbutsing (2014), and Zarra-Nezhad, Hosseinpour, and Arman (2014), underscore the favorable impact of trade on overall economic growth. Additionally, Dufrenot, Mignon, and Tsangarides (2010) carried out a study using the quantile regression method on the trade-growth linkage in 75 developing nations. According to their findings, compared to nations with high growth rates, those with low growth rates suffer a more pronounced impact of openness on economic growth. Kim, Lin, and Suen (2011) demonstrated that growth is improved with trade openness in high-income economies. As per the findings of Kim, Lin, and Suen (2012), trade plays a vital role in nurturing economic growth, especially in nations characterized by high income, low inflation, and a non-agrarian economic structure. Sakyi, Villaverde, and Maza (2015) contribute to this discourse by presenting compelling evidence that suggests a mutually beneficial causal relationship between trade and economic growth, a phenomenon they explore across a sample of 115 developing countries. Meanwhile, the research conducted by Were (2015) underscores the favorable and noteworthy impact of trade on economic growth, a trend observed in both developed and developing nations. Furthermore, an investigation into China's economic landscape by Hye, Wizarat, and Lau (2016) reveals a positive correlation between trade openness and both long-term and short-term growth, adding nuance to the global understanding of this relationship. Additionally, Yakubu and Bunyaminu's findings from 2021 imply that trade openness in West Africa greatly spurs economic growth.

From the above literature, the study hypothesizes that:

H₃: Trade openness has a positive effect on a country's economic growth.

Inflation and economic growth

Numerous macroeconomists are interested in and concerned with the kind of correlation that exist between economic growth and inflation (Ivory Research, 2019). Although research reveals that, to some extent, moderate inflation promotes economic growth, for the achievement of long-term economic growth, the government must use the proper fiscal monetary policy instruments and processes to keep inflation under control (Ahuja, 2016). The persistent increase in the cost of goods and services that are as a result of currency devaluation is referred to as inflation. The buying capability of people decreases as a result of inflation, particularly when incomes are not grown proportionately. As a result, the economy slows down. Because it devalues the currency, excessive inflation can also reduce the purchasing power of the assets and investments that investors and savers have a disastrous effect on retirement savings (Richmond, 2018). Due to its status as a macroeconomic indicator and a driver of economic growth, inflation is still a reason for concern in Africa (Ademola and Abdullahi, 2016). Any economy's growth and development are impacted by inflation; this aspect is mostly considered when assessing the extent of economic hardships in emerging nations. Therefore, nations are urged to keep producing more because doing so will assist in reducing the inflation on the economy. Economic growth refers to the rise in the worth of particular commodities and services generated over time in an economy. Typically, this has been expressed as a percentage of gross domestic product growth rate (Afshan and Sabeen, 2017). IMF (2012) quoted Khan (2005), the rates of growth are divided into groups of three: low, moderate, and high. High growth rate means a 4% or higher average yearly rise in GDP per person. According to this metric, strong growth rates can lead to a continuous growth of a yearly per capita personal consumption of 2.5–3% or more, producing solid basics against economic hardship. A GDP per capita increase of at least 2.5%, or a minimum yearly increase in personal consumption of 1.5%, is indicative of moderate growth. A low growth rate, on the other hand, denotes a gain of 2.5% or less in per capita income every year. A growth in an economy refers to an expansion in the volume of finished goods manufactured and sold within a nation's boundaries.

This is usually measured by a percentage growth rate in the real total domestic product (IMF, 2012). It's unclear exactly how inflation affects economic growth. The nature of these impacts has not been conclusively determined by prior researches at first-hand (Xiao, 2009). Mallik and Chowdhury (2001), however, showed a link connecting price increases and economic expansion. According to Mamo (2012), the factors' effects could be neutral, positive, or negative, adding complexity to prediction. To thoroughly examine how impactful price increment has been on the expansion of an economy between 1990 and 2003, Gillman and Harris (2010) used panel data from 13 transitional nations using a variety of equations spanning growth, money, demand, and inflation. In particular, their findings showed a clear link connecting the expansion of an economy to inflation, leading Gillman and Harris to recommend using fiscal policy in maintaining inflation targets and monetary policy in reducing the deficit budget. Using time series data from Tanzania for the years 1990–2011, Imoisi et al. (2017) assessed the impact of inflation on economic growth. The study offered proof for the claim that inflation constricts economic expansion. Additionally, this examination could not establish any co-integration that relates to price increase and the growth of an economy during this study period, showing a permanent association between the two. Correlation coefficients and co-integration approaches were used by Kasidi and Mwakanemela (2013) examine the relationship that exist between economic development and inflation in Tanzania from 1990 to 2011. Economic growth and Inflation showed a negative correlation in this study's findings, and there was no evidence of co-integration between these variables. The Dickey-Fuller (ADGF), Philip-Perron, and Error Correlation models were used by Osuala and Onyeike (2013) to investigate how inflation affected Nigeria's economic growth from 1970 and 2011. The results showed a statistically noteworthy link economic growth has with inflation. Hasanov (2010) used a yearly database to investigate the threshold effect of inflation covering through gross domestic product, the price of consumer index, and the total fixed capital creation for the years between 2001 and 2009. This research findings showed no straight line link economic growth has with inflation. Instead, a crucial inflation threshold of 13% was found, below which there is a deleterious impact on GDP and above which there is a beneficial benefit. Khan and Senhadji (2001) also looked at the threshold inflation level at 1% for industrialized nations and 11% for economically underdeveloped nations using nonlinear least squares on a dataset comprising 140 nations. Using the Augmented Dickey-Fuller and Granger Causality tests, Umaru and Zubairu (2012) investigated the impact of inflation on economic growth in Nigeria from 1970 to 2010. Their research found a deep correlation connecting economic growth to inflation, suggesting that encouraging soaring output and productivity could aid in this process. Bawa and Abdullahi (2012) investigated the threshold influence economic growth seems to have been experiencing from inflation in Nigeria employing time series data between1981 and 2009 quarterly. They calculated a crucial inflation threshold of 13% using Khan and Senhadji's (2001) threshold regression model. According to the study, the effect of inflation on economic growth is negligible. Ngoc (2020) employed Nonlinear Autoregressive Distributed Lag method for the assessment of the

skewed influence of inflation and money supply on economic growth in Vietnam from 1990 to 2017. Karahan and Colak (2020)
examined the connection of economic growth and inflation in Turkey from 2003 to 2017, Nonlinear Autoregressive Distributed Lag (NARDL) model was used. Their study revealed a contradictory link of economic growth and inflation. Using the Johansen cointegration test and the Error Correction model, Madurapperuma (2016) investigated how inflation affected Sri Lanka's economic expansion from 1988 to 2015. The analysis revealed a noteworthy, link price increases and economic expansion. In Sub-Saharan Africa, Yakubu (2021) discovered a negative relationship between inflation and economic growth.

H₄: We expect inflation to negatively impact economic growth.

III. Research Methodology

Data and Variables

The research utilized annual data from 11 nations in West Africa, spanning the period 2007 to 2022, sourced from the World Development Indicators provided by the World Bank. The selection of these countries was based on data availability for the variables of interest. The dependent variable in this study is economic growth (ECG), with the logistics performance index (LPI) serving as the primary explanatory factor. We also controlled for the impact of industrialization (IND), trade openness (TRO), and inflation (INF). To measure these variables, economic growth was assessed using GDP per capita (current US dollars), while LPI represents the logistics performance index. In line with the work of Musah and Yakubu (2022), we employed manufacturing value added (% of GDP) as an indicator for industrialization. Trade openness was determined by calculating the sum of imports and exports divided by GDP, and inflation was gauged using the consumer price index.

Model Specification

Our research adopts a panel approach. Panel data combines both cross-sectional and time-series information. This approach is particularly useful for studying changes within individual units (e.g., countries, firms, individuals) over time while considering their differences. We outline the general model as follows:

$$Y_{it} = \alpha + \beta'X_{it} + \varepsilon_{it} \qquad\qquad (1)$$

The model (equation 1) relates the dependent variable Y_{it} to a set of explanatory variables X_{it}, with α representing the intercept, β' indicating the coefficients for the explanatory variables, and ε_{it} connoting the error term.

To investigate the influence of logistics performance on economic growth while considering the impact of other variables, the model can be extended as follows:

$$lnECG_{it} = \alpha_0 + \beta_1 lnLP1_{it} + \beta_2 lnIND_{it} + \beta_3 lnTRO_{it} + \beta_4 lnINF_{it} + \varepsilon_{it} \qquad (2)$$

The variables are transformed into natural logarithms to lessen the impact of extreme values or outliers, making the data more normally distributed and resulting in reliable statistical inferences and regression estimates (Changyong et al., 2014; West, 2022).

Analytical Technique

The study employs a range of analytical techniques, including Ordinary Least Squares (OLS), Fixed Effects (FE), and Random Effects (RE), to analyze the data. The choice between these methods is determined by specific conditions assessed through the Hausman test and the Breusch-Pagan Lagrange Multiplier (LM) test. The Hausman test is used to decide between the Fixed Effects and Random Effects models in panel data analysis. If the null hypothesis of the Hausman test suggests that there is no systematic difference between the coefficients estimated in the FE and RE models (indicating that the RE model is consistent), then the RE model is preferred due to its greater efficiency. However, if the null hypothesis is rejected, indicating that the RE model is inconsistent, the FE model, which is consistent but less efficient, is the better choice. In this case, the Hausman test statistic is expected to be statistically significant at 5%.

IV. Results and Discussion

Descriptive Statistics

The descriptive statistics in Table 1 reveal insightful characteristics of the variables under examination in their non-logarithmic form. Economic growth (ECG) displays considerable variability, with a mean value of 1163.453, a minimum of 358.077, and a maximum of 3200.953, signifying a diverse economic landscape within the sampled West African countries. In contrast, the logistics performance index (LPI) demonstrates relatively lower variation, with a mean of 2.454, indicating a moderate average level of logistics performance across the

region. The variables related to industrialization (IND), trade openness (TRO), and inflation (INF) exhibit their unique features, with differing means and levels of dispersion. Notably, the skewness and kurtosis values indicate some departures from the normal distribution for several variables, suggesting potential non-linearities or outliers. The Jarque-Bera test results further highlight departures from normality, with low probabilities indicating significant deviations for ECG, TRO, and INF.

Table 1: Descriptive Statistics

	ECG	LPI	IND	TRO	INF
Mean	1163.453	2.454	9.479	58.661	5.874
Maximum	3200.953	3.080	18.616	115.037	31.256
Minimum	358.077	1.950	1.533	16.352	-3.233
Std. Dev.	641.076	0.253	3.819	16.876	6.264
Skewness	0.941	0.014	-0.077	0.475	1.135
Kurtosis	2.941	2.759	2.744	4.077	4.184
Jarque-Bera	26.017	0.430	0.637	14.705	47.801
Probability	0.000	0.806	0.727	0.001	0.000
Observations	176	176	171	171	175

Correlation Analysis

In Table 2, the correlation matrix, which illustrates the relationships between the variables, is presented. Variables with a correlation coefficient exceeding 0.80 are considered highly correlated and thus exhibit a multicollinearity problem. However, from the results, the highest correlation coefficient is 0.565, indicating that there are no significant multicollinearity concerns. This is further supported by the results of the Variance Inflation Factor (VIF) analysis. Variables with VIF values above 10 and tolerances below 0.10 are typically highly correlated (Gujarati, 2003; Yakubu, 2019). Based on these benchmarks, it can be concluded that the variables in this study do not suffer from multicollinearity issues.

Table 2: Correlation Analysis

	lnLPI	lnIND	lnTRO	lnINF
lnLPI	1.000			
lnIND	0.565	1.000		
lnTRO	-0.113	-0.096	1.000	
lnINF	-0.199	-0.218	0.026	1.000
VIF	1.041	1.323	1.314	1.035
Tolerance	0.961	0.756	0.761	0.966

Empirical Findings

The regression estimates are presented in Table 3. The Hausman test ($\chi2 = 10.035$, Prob.> $\chi2 = 0.040$) suggests that the fixed effects model is preferable to the random effects model. The high R-squared value (0.916) in the fixed effects estimation indicates that the model explains a substantial portion of the variance in economic growth. The results reveal that logistics performance has a significant positive influence on economic growth, underscoring the pivotal role played by efficient logistics systems in fostering economic development across the region. This finding conforms with the results of Coto-Millan et al. (2013) and Khadim et al. (2021). Essentially, it implies that when logistical processes, such as transportation, supply chain management, and infrastructure, are streamlined and made more efficient, West African countries are poised to experience notable progress in their economic landscapes.

Industrialization significantly induces economic growth, connoting that encouraging industrial development can be an effective strategy for fostering economic growth in the region. Governments might consider policies to promote industrial sectors and attract investments.

With a positive coefficient, trade openness as well plays a significant role in driving economic growth. This highlights the importance of trade liberalization and facilitating international trade as a means to boost economic development in West Africa.

The coefficient for inflation is positive but not statistically significant (0.004, p-value > 0.05). This implies that within this particular context, inflation may not exert a notably substantial direct influence on economic growth. However, policymakers should continue to monitor and manage inflation to maintain economic stability.

Table 3: Regression Results

Variables	Pooled OLS	Fixed Effects	Random Effects
lnLPI	1.959***	0.548***	0.589***
	(0.392)	(0.186)	(0.185)
lnIND	0.340***	0.230***	0.248***
	(0.072)	(0.081)	(0.076)
lnTOP	-0.214**	0.274***	0.267***
	(0.104)	(0.084)	(0.081)
INF	0.121***	0.004	0.008
	(0.027)	(0.016787)	(0.017)
C	2.252***	2.105***	2.073***
	(0.235)	(0.208)	(0.204)
R^2	0.452	0.916	0.150
Adj. R^2	0.436	0.907	0.127
Hausman test χ^2		10.035	
Prob.> χ^2		(0.040)	
Number of Countries	11	11	11

*** $p<0.01$, ** $p<0.05$ Standard errors in parentheses

V. Conclusion and Policy Recommendations

This study sheds light on the intricate interplay between logistics performance, industrialization, trade openness, inflation, and economic growth within the context of selected West African countries over the period from 2007 to 2022. Leveraging the fixed effects method, the research findings leave no room for ambiguity - logistics performance emerges as a linchpin in driving economic growth in the region. This result underscores the profound importance of prioritizing investments in logistics infrastructure and operations to streamline the movement of goods, reduce trade barriers, and bolster economic development in West Africa.

Furthermore, the study unequivocally affirms the positive influence of industrialization and trade openness on economic expansion. To harness these benefits fully, policymakers should be resolute in their commitment to promoting industrial sectors, encouraging innovation, and facilitating international trade. This multifaceted approach to economic development can stimulate diversification, foster innovation, and ultimately lead to robust and sustained economic growth.

In a somewhat unexpected twist, the study found no statistically significant influence of inflation on economic growth within the West African context. Nonetheless, central banks and monetary authorities must remain vigilant in their efforts to manage inflation effectively, as it indirectly supports economic growth by creating a stable economic environment conducive to investment and entrepreneurship.

To translate these findings into actionable strategies, the study offers a set of pertinent policy recommendations. Firstly, it underscores the imperative of enhancing logistics infrastructure, including transportation networks, supply chain management, and port facilities. Second, it highlights the need for governments to actively promote industrialization through incentives and support mechanisms. Third, the study advocates for policies that facilitate trade openness, including the reduction of trade barriers and simplification of customs procedures. Lastly, while inflation may not have a direct impact on economic growth within this study's context, it emphasizes the importance of maintaining effective inflation control to ensure economic stability.

Implementing the recommended policies poses significant challenges, including securing funding and coordinating large-scale infrastructure projects while ensuring political stability and good governance. Promoting industrialization faces resistance from traditional sectors and requires substantial resources, with corruption as a barrier. Facilitating trade openness involves navigating protectionist interests, complex politics, and harmonizing trade regulations. Maintaining effective inflation control must balance with growth goals and address political pressures. Overcoming these challenges necessitates strong governance, financial resources, stakeholder cooperation, and a commitment to political stability and anti-corruption efforts.

Future research could explore several key areas. First, an in-depth investigation into the specific factors that enhance or hinder logistics performance within West Africa is crucial. This includes a detailed analysis of infrastructure development, technology adoption, and policy effectiveness. Second, a comparative study between West African countries with varying levels of institutional development could provide valuable insights into the dynamic relationship between logistics and economic growth. Third, the environmental impact of logistics development in the region should be examined, particularly in the context of sustainable growth and resource

management. Fourth, understanding the role of digitalization and emerging technologies in optimizing logistics performance and facilitating economic growth is an essential area for exploration. Finally, research could delve into the potential impact of global economic shifts, such as the post-pandemic recovery and evolving trade dynamics, on logistics and economic growth in West Africa.

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Conflict of Interest Statement

There are no conflicts of interest to declare.

Authors' Contributions

Mubarik Abdul Mumin: Introduction, Literature Review, Conclusion, and Policy Recommendations. Ibrahim Nandom Yakubu: Methodology, Results, and Discussion.

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