

Impact of economic globalization on economic growth in the ECOWAS region

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ABSTRACT

This paper examines the effects of economic globalization on Nigeria's economic development. Data for the analysis were obtained from the 2022 World Development Indicators (WDI), with annual figures transformed into quarterly intervals using E-Views software, version 9. The analysis utilized the panel random effects model as its core econometric method. Results reveal that economic globalization contributes positively and significantly to economic growth across the ECOWAS member states. In light of these findings, the study recommends that ECOWAS governments enhance investments in information and communication technology (ICT), promote trade liberalization, and attract more foreign direct investment. These strategies are expected to stimulate the development of productive sectors and drive sustainable growth across the region. Additionally, the study encourages ECOWAS nations to diversify their economic structures by reactivating underperforming industries, including agriculture, mining, manufacturing, to elevate domestic production and expand export capacity. It is also advised that central banks within the region maintain stable exchange rate policies to support these initiatives. The contribution of this research lies in its empirical evaluation of the globalization-growth nexus within the ECOWAS framework, providing policymakers with evidence-based insights. By highlighting sectoral reforms and regional policy alignment, the study offers a roadmap for inclusive and sustained economic development.

Introduction

Globalization and its implications for economic growth remain a critical topic of debate among scholars and policymakers alike. While some researchers argue that globalization is a byproduct of the growing interdependence in global output and finance characteristic of modern societies, others trace its roots to earlier periods, notably the European Age of Exploration and subsequent expeditions to the Americas. The onset of large-scale globalization is often placed at the beginning of the 20th century, marking a period when international economic and cultural interconnectivity rapidly intensified (King, 1990). At its core, globalization resonates with the intrinsic human desire for improved living standards. This drive facilitates the diffusion of globalization across multiple domains, including commerce, faith systems, and political ideologies (Ritzer & Dean, 2015).

The increased mobility of capital, supported by advancements in communication technology and deregulated financial systems, has transformed global interactions and institutional frameworks (Gatawa, Aliyu, & Musa, 2013). As Ngaire (2000) observed, the

rise of digital platforms and communication technologies has facilitated unprecedented engagement among multinational corporations, national governments, civil society, and individuals, reshaping international and domestic policy landscapes. From a global perspective, economic globalization holds significant promise for both industrialized and developing economies. It offers pathways to sustained growth through trade liberalization, increased foreign investment, technological exchange, and integration into global markets. Yet, the extent to which these benefits are realized differs markedly across regions. Developing economies, particularly those in the Global South, continue to grapple with structural limitations that hinder their full integration and participation in the global economy.

This disparity is evident in West Africa, where economic globalization has generated mixed outcomes. While it offers the potential to foster technological advancement, increase production capacity, and raise living standards, the actual benefits remain unevenly distributed. Professor Manfred Steger's (2013) categorization of globalization into four dimensions—economic, political, cultural, and ecological—provides a useful framework. This study specifically concentrates on the economic dimension, focusing on the growing interconnectedness of global financial and trade systems, the dominance of multinational corporations, and the influence of international economic institutions. In theory, economic globalization delivers substantial gains. It enhances human capital, supports internal security, and improves socioeconomic conditions across borders (Cyrus, 2013). However, significant gaps persist in realizing these benefits in West African economies, largely due to limited technological infrastructure. Derrick and Catherine (1999) emphasize that deficiencies in Africa's Information and Communications Technology (ICT) infrastructure have impeded the region's capacity to fully engage in the globalized economy.

Despite exporting goods and services amounting to 383.1% of GDP in 2017—up from 109.4% in 1960—ECOWAS countries still lag in development outcomes (World Bank, 2018). Nigeria, the region's largest economy, exemplifies this paradox. Although it embraced globalization in the 1980s, hoping for rapid economic advancement through increased trade, foreign investment, and technology transfer, the anticipated growth has not materialized. Instead, Nigeria continues to face high poverty rates, limited industrial productivity, and underwhelming human development indicators (Maduka, Madichie, and Eze, 2017).

Further compounding the problem, challenges such as corruption, poor governance, insecurity, and economic inequality have stunted the transformative potential of globalization in the ECOWAS region (Akor, Yongu & Akorga, 2012). Economic growth remains vulnerable, as evidenced by the region's negative GDP growth of -0.2% in 2016, followed by a modest recovery to 2% in 2017, largely driven by Nigeria's economic fluctuations (IMF-WEO, 2016). Given these conditions, this study addresses a clearly defined research problem: *To what extent has economic globalization contributed to economic growth across ECOWAS member states, and what are the key mechanisms driving or hindering*

this relationship? This question remains underexplored in the existing literature, especially through a multi-country lens within the West African context.

The primary objective of this research is to empirically evaluate the influence of economic globalization on economic growth in ECOWAS countries, using quarterly data from 2005 to 2022. Economic globalization will be measured using ICT trade (imports and exports), international trade (total imports and exports), foreign direct investment inflows, and GDP per capita as a proxy for economic growth. The significance of this study lies in its contribution to regional and international policy discourse. It provides data-driven insights that can inform evidence-based strategies for leveraging globalization to achieve inclusive growth. Furthermore, the study holds practical relevance for ECOWAS policymakers, development partners, and international investors seeking to understand the structural dynamics of globalization in West Africa and the conditions necessary for its equitable impact.

Literature Review Empirical Literature

Santiago, Fuinhas, and Marques (2020) investigated the relationship between globalization, business cycles, and economic growth in Nigeria over the period 1970 to 2010. Utilizing the Autoregressive Distributed Lag (ARDL) model, their findings highlighted a significant and favorable influence of globalization on Nigeria's economic expansion. In a related study, Ahmed, Zhang, and Cary (2021) explored the linkage between globalization and economic growth in Nigeria using the Ordinary Least Squares (OLS) technique complemented by descriptive statistics. Their analysis revealed that economic globalization exerted a positive and statistically significant effect on growth, while fluctuations in the exchange rate negatively impacted economic performance.

Likewise, the research conducted by Shuaib, Ekeria, and Ogedengbe (2015) examined globalization's impact on economic growth in Nigeria from 1960 to 2010. Using the OLS estimation approach, the study also confirmed a strong positive influence of globalization on economic growth. Tran (2018), focusing on Bangladesh, used annual timeseries data spanning from 1871 to 2005 to evaluate how globalization affects economic growth. Applying the ARDL approach along with the Granger causality test, the study concluded that globalization plays a pivotal role in boosting trade and economic development in developing nations like Bangladesh. In another study, Hasan (2019) analyzed how political and social aspects of globalization contribute to economic development within ASEAN countries from 1970 to 2008. Using the Fully Modified Ordinary Least Squares (FMOLS) method, the research found that economic globalization positively contributes to economic performance. Similarly, Kilic (2015) employed a panel fixed effects model and Granger causality framework to assess the impact of political, economic, and social globalization on the growth trajectories of 74 developing nations between 1981 and 2011. Results indicated a positive association between growth and both economic and political globalization, while social globalization showed a negative

correlation with growth. The analysis further revealed a bidirectional causality between political and social globalization and growth, along with a unidirectional causality flowing from social globalization to economic growth.

Hassan, Xia, Huang, Khan, and Iqbal (2019) examined the role of globalization in shaping Pakistan's economic development from 1960 to 2006. To empirically assess this relationship, the study incorporated variables such as trade openness and financial integration, alongside other relevant macroeconomic indicators. The Johansen cointegration and error correction models were employed to analyze long-term relationships and short-term adjustments. In contrast, Jerungwa (2014) used descriptive statistics to assess the effects of globalization on Nigeria's development and concluded that the economy had seen little to no progress as a result of globalization. Supporting this perspective, Ifelunini, Okpokpo, and Osuyali (2014) evaluated the role of globalization in driving Nigeria's growth from 1970 to 2011 using the OLS method, finding no significant impact.

A regional perspective was provided by Saint Akadiri, Alola, Olasehinde-Williams, and Etokakpan (2020), who analyzed the effect of globalization on economic performance across sub-Saharan Africa. Drawing on panel data from 41 countries spanning 1995 to 2005, and using the KOF Globalization Index along with an OLS model, the researchers explored interactions between globalization and other conventional growth determinants such as trade, FDI, aid, loans, natural resource endowment, governance quality, and rule of law. Their findings suggested a positive, albeit statistically insignificant, impact of globalization on the region's economic growth. Further insight was provided by Adeleke, Akinola, and Chris (2013), who examined the interplay between globalization and economic development in Nigeria. Applying cointegration and Granger causality techniques, their study established that Foreign Direct Investment (FDI)—a core element of globalization—significantly influenced Nigeria's economic growth. A unidirectional causality from FDI to growth was also identified. On the other hand, Acheampong, Boateng, Amponsah, and Dzator (2021) investigated the causality between globalization and growth in Nigeria, using the Granger test, and found no evidence of a causal link.

Lastly, Khan, Saleem, Shabbir, and Huobao (2022) analyzed the impact of globalization on economic development across selected South Asian countries—specifically Pakistan, India, and Bangladesh—using data from 1981 to 2011. Their approach involved testing for stationarity using Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) methods, followed by OLS and Granger causality analyses. The Johansen cointegration test was then applied to confirm the existence of long-term equilibrium relationships among the variables under investigation.

Method

The conceptual foundation for this research is grounded in the endogenous growth theory, as formulated by Romer (1986) and Lucas (1988). This theoretical approach posits that sustained economic growth over the long term can be driven by internal mechanisms

within the economic framework—particularly those that shape the incentives and capacities for technological innovation. According to the endogenous growth model, disparities in income levels between advanced and developing countries may endure, especially when investments in physical assets, such as infrastructure, are subject to decreasing marginal returns.

The theory underscores that the key drivers of economic expansion include population dynamics, along with the accumulation of human capital and knowledge. In a knowledge-driven economy, especially one where intellectual property rights are effectively enforced, capital accumulation does not necessarily lead to diminishing returns. This is largely due to the positive externalities—or spillover effects—that arise from investments in technology and human development. The fundamental principles of endogenous growth are encapsulated in the model's mathematical expressions, which reflect how innovation and learning can propel economies forward without the traditional constraints associated with capital productivity.

y represent output or economic growth (GDP), by combining capital (K) and technology (A), its production function assumes increasing returns to scale. However, in line with the cross-sectional nature of this study, the model can be respecified as

To fulfill the objectives of this research, globalization will be integrated into the analytical model. The economic aspects of globalization considered in this context include foreign direct investment (FDI), cross-border trade, and advancements in information and communications technology (ICT). Within the model's framework, equilibrium conditions indicate that investment aligns with savings, and there exists a direct, positive correlation between savings and capital accumulation. These distinctive interdependencies among the variables are fundamental and are specifically consistent with the assumptions and structure of the selected model.

Model Specification: Adapting from the theoretical framework above, we establish the functional relationship among our variables of interest:

Where β is the parameter to be estimated, it ~ IID0,2 and i=1,..., N & t=1,..., T.

Where

GDP = gross domestic product

KAP = gross fixed capital formation

LF = labour force participation

HUM = Human capital

FDI = Foreign Direct Investment

TO = Trade Openness

ICT = Information and Communications Technology.

Therefore, we have to take the natural logarithm and introduce the panel's country fixed effect i and time effects t, we have:

$$ln\Delta GDPit=1LN\Delta KAPit+2LN\Delta LFit+3ln\Delta HUMit+4LN\Delta FDIit+5LN\Delta TOit+6LN\Delta ICTit+i+t+ \ it - - - (3.5)$$

Where Δ represents some first difference transformation (the deviations from 1st lags*) of the original variables.

Table 1: Unit root result

Variables	Order of integration
GDP	I(1)
KAP	I(1)
LF	I(1)
HUM	I(1)
FDI	I(1)
TO	I(1)
ICT	I(1)

Result and Discussion

To achieve the study's aim of examining how economic globalization influences economic growth within the ECOWAS region, the Breusch-Pagan test was first applied. The test results led to the rejection of the null hypothesis—which assumes the absence of panel effects—at the 5% significance level. Following this, the Hausman specification test was employed to determine the more suitable model between fixed effects and random effects. With a p-value of 0.9904, the null hypothesis favoring the random effects model could not be rejected. Consequently, the analysis proceeded using the random effects model, the results of which are displayed in Column 1 of Table 2.

Table 2: Impact of Economic Globalisation on Economic Growth

	(RE)	(FE)	(RE)	(RE)
	GDP_Log	GDP_Log	Tertiary_enroll_Log	Urban_Pop_Log
KAP	0.0492**		0.226**	0.122***
	(2.07)		(2.31)	(3.83)

LF	-0.367**		4.348***	-0.292***
	(-2.38)		(2.64)	(-2.82)
HUM	-0.0000213			
	(-0.68)			
FDI	6.24e-12***		2.49e-11***	7.45e-12***
	(5.54)		(2.84)	(11.82)
TO	0.00970		0.171	0.0312^{**}
	(-0.74)		(0.94)	(2.23)
ICT	0.00372		0.0841***	0.00527***
	(1.42)		(3.11)	(3.01)
Constant	3.001	11.35***	1.143	12.37***
	(1.76)	(5.33)	(0.52)	(20.57)
Observations	165	193	107	199

t statistics in parentheses

Table 2 presents evidence that several elements of economic globalization specifically the logarithmic values of Foreign Direct Investment (FDI), trade openness, and Information and Communication Technology (ICT)—exert a positive and statistically significant influence on economic growth within the ECOWAS region. The findings indicate that a 1% rise in FDI across ECOWAS member states corresponds to a 6.24% increase in economic growth, assuming all other variables remain constant. Similarly, a 1% enhancement in trade openness leads to a modest growth increment of approximately 0.97%, ceteris paribus. In addition, ICT services contribute positively and significantly, whereby a 1% increase in ICT usage results in a 0.37% rise in economic growth across the sub-region, all else being equal. Moreover, the natural logarithm of capital exhibits a significant and positive association with economic expansion in the region. A 1% increase in capital investment is linked to an overall rise in economic performance among ECOWAS countries. Conversely, both labor force participation and human capital indices demonstrate a negative correlation with economic growth. This suggests that high levels of unemployment persist within the region, limiting the capacity of the active labor population to effectively support and drive economic development.

The estimation results reveal that several indicators of economic globalization significantly influence economic performance across the ECOWAS region. Notably, foreign direct investment (FDI) shows a positive and highly significant relationship with economic growth. A 1% increase in FDI corresponds to an approximate 6.24% increase in GDP, indicating that external capital inflows play a pivotal role in enhancing productive capacity in the sub-region. This finding aligns with previous studies by Ahmed et al. (2021) and Hasan (2019), both of whom emphasized the growth-enhancing effects of FDI in developing and transitional economies under the influence of globalization.

Similarly, trade openness (TO) exhibits a positive association with economic growth, although the coefficient in the main random effects model is not statistically significant at conventional levels. However, alternative specifications (Columns 3 and 4)

^{*} *p* < 0.1, ** *p* < 0.05, *** *p* < 0.01

show TO to be significant, suggesting that the benefits of trade may manifest under certain conditions or alongside other growth drivers. This resonates with findings by Agbarha and Peter (2017), who reported that trade liberalization positively impacts Nigeria's economic performance within the context of global integration.

Information and communication technology (ICT) also contributes positively to economic growth. A 1% increase in ICT adoption leads to an estimated 0.37% rise in GDP, consistent with the growing literature that emphasizes the role of digital infrastructure in economic development (Kurniawati, 2020; Derrick & Catherine, 1999). The proliferation of digital services facilitates productivity, enhances market access, and supports innovation, particularly in developing regions. Beyond the core globalization indicators, the natural logarithm of capital stock (KAP) is positively and significantly associated with economic growth. This reflects the fundamental role of physical investment in driving output, consistent with endogenous growth theory (Romer, 2011). On the other hand, labor force (LF) shows a negative and significant coefficient, suggesting that high unemployment or underemployment within the labor pool may hinder growth. This pattern supports the view of Maduka et al. (2017), who argue that the benefits of globalization may be constrained by labor market inefficiencies in West African economies.

The human capital index (HUM) does not show a statistically significant effect in the model, potentially pointing to quality issues in education and skill acquisition, or mismatches between labor market demands and workforce capabilities. This limitation was also highlighted in Zahonogo (2018), who emphasized that globalization alone does not guarantee growth unless supported by strong human capital development. The results suggest that while globalization—in the forms of FDI, trade openness, and ICT—can significantly foster economic growth in ECOWAS countries, its impact is conditioned by the structural characteristics of the region's labor and human capital sectors. Policymakers must therefore complement globalization-friendly reforms with targeted investments in education, vocational training, and job creation to ensure broad-based and sustainable development (Akor et al., 2012; Santiago et al., 2020).

Conclusion

Digitalisasi sistem pembayaran melalui QRIS di koperasi membawa dampak positif seperti efisiensi, transparansi, dan percepatan transaksi. Teknologi ini mempermudah pembayaran dan pencatatan keuangan, serta berpotensi meningkatkan penjualan. Namun, tantangan seperti rendahnya literasi digital, resistensi terhadap perubahan, isu keamanan, dan keterbatasan infrastruktur masih menjadi hambatan. Berdasarkan Technology Acceptance Model dan Diffusion of Innovation Theory, keberhasilan implementasi QRIS sangat dipengaruhi oleh persepsi kemanfaatan, kemudahan penggunaan, keunggulan relatif, dan kesesuaian dengan kebutuhan pengguna. Oleh karena itu, koperasi perlu menerapkan strategi menyeluruh berupa pelatihan berkelanjutan, peningkatan infrastruktur, edukasi teknologi yang sesuai kebutuhan anggota, serta monitoring dan evaluasi rutin agar digitalisasi berjalan optimal dan

berkelanjutan. Untuk penelitian selanjutnya, fokus dapat diarahkan pada pengembangan pelatihan literasi digital yang efektif, analisis faktor sosial budaya dalam adopsi QRIS, serta evaluasi keamanan dan dampak penggunaan QRIS terhadap kinerja koperasi.

The empirical analysis provides robust evidence that economic globalization positively influences economic growth across ECOWAS countries. Specifically, foreign direct investment (FDI), trade openness (TO), and the utilization of information and communication technology (ICT) all showed statistically significant positive effects on per capita GDP. These outcomes highlight the critical role of global integration in fostering growth and suggest that policies aimed at enhancing FDI inflows, improving trade efficiency, and investing in ICT infrastructure can contribute meaningfully to regional development.

Despite the positive outcomes, this study is not without limitations. Data unavailability led to the exclusion of Cape Verde, potentially limiting the generalizability of the findings to all ECOWAS members. Additionally, while the panel estimation techniques control for unobserved heterogeneity, other dynamic interactions and endogeneity concerns were not explicitly addressed. Future studies could explore these dimensions using more advanced methodologies such as system GMM or structural equation modeling. Incorporating qualitative assessments of institutional quality, governance, and regional trade policies may also provide a more nuanced understanding of how globalization mechanisms interact with domestic conditions to shape economic outcomes in West Africa. Future research can build a more comprehensive framework for guiding economic policy and regional cooperation within the context of globalization.

Policy Recommendations

Based on the study's empirical outcomes, the following policy suggestions are proposed:

- 1. Given the demonstrated positive effects of FDI, trade openness, and ICT on economic expansion, ECOWAS governments are advised to intensify efforts in attracting foreign investments, liberalizing trade policies, and increasing funding for ICT research and infrastructure. These strategies can enhance productivity and stimulate regional economic advancement.
- 2. Policymakers across the region should prioritize the revitalization of underutilized sectors—such as agriculture, mining, and manufacturing—by creating enabling environments that encourage domestic production and boost export volumes. In parallel, central banks must implement monetary policies that safeguard exchange rate stability to maintain investor confidence.
- 3. The analysis revealed a positive linkage between gross fixed capital formation and economic growth, while human capital displayed a negative association. Accordingly, governments in the region should channel more resources into

building physical infrastructure and industrial assets, which are more immediately growth-enhancing under current conditions.

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