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Harnessing Globalisation for Sustainable Development in ECOWAS Member States

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Abstract
This paper examines the multidimensional data connecting globalisation and sustainable development in the countries of ECOWAS over the period 2000-2021. It looks at the approach and role of foreign direct investment (FDI), remittances, digital globalisation, Trade Openness, and regional integration to development. Through panel data econometric methods- Fixed Effects, Random Effects, and dynamic System-GMM models- the researchers take endogeneity, persistence, and country heterogeneity into consideration. The results demonstrate that ECOWAS sustainability development is path-dependent, with historic performance having the maximum performance prediction power. Globalisation, remittances, and GDP per capita positively correlate with the static model. However, when perseverance is considered, the effects dwindle, showing that institutions and policy consistency are important. This paper emphasises the necessity of ECOWAS states to embrace intra- and inter-national measures to improve domestic capacities and regional integration and to develop long-term coordinated plans to ensure that global integration leads to sustainable and inclusive development. The results offer theoretical support to institutional and development theories and offer practical advice to policymakers in the region.

Keywords: Globalization, Sustainable Development, ECOWAS, Digital Globalization, Institutions, System-GMM

1. Introduction

Globalisation has become one of the characteristic features of modern times, which reshapes the production systems, trading relations, and governance forms. The increased movement of goods, capital, ideas and people across borders has changed the growth path in developed and developing economies. (Ruano-Borbalan, 2022) [1]. Supporters focus on the possibilities of globalisation to fuel the pace of industrialisation, technology transfer and knowledge diffusion (Shekhawat, Kumar, Kumar, & Sharma, 2025) [2]. In contrast, critics cite its propensity to increase the dependency rate, increase disparities and subject the weaker economies to gross external shocks. Globalisation is both an opportunity and a challenge to the Economic Community of West African States (ECOWAS) as it opens the way to integration in the global markets. Still, it also provides impetus to structural weaknesses of poverty, weak institutions and environmental pressures (Bassey, Etefia, & Ebong, 2024) [3].

Sustainable development, which has its foundation in the Brundtland Report (1987) and is driven by the United Nations Sustainable Development Goals (SDGs), is especially pressing to ECOWAS. More than 360 million people populate the region, and people struggle with poverty, high unemployment among young people, poor governance, and environmental risks, including desertification, flooding and climate-induced migration (Danfulani & Gülseven, 2024) [4]. The key policy concern is not whether ECOWAS should pursue its involvement in globalisation since it is already entrenched, but how the region can utilise globalisation to its advantage as a driver of inclusive and sustainable development and not revive dependency (Omo-Ogbebor & Sanusi, 2017) [5].

The academic discussion of globalisation and development is still unresolved. Stronger linkages with the global markets and modernisation theorists show that integration will bring convergence because, in addition to investment and productivity, integration also brings about convergence since it allows countries to become part of the global economy through phenomena like investment and productivity (Fagbemi, Issa, Ogunbanjo, Fagbemi, Popoola, & Omorinbola, 2024) [6]. In West Africa, these tensions are particularly sharp. Almost notwithstanding ample natural resources and significantly increased foreign capital inflows, the region is highly dependent on commodity exports, afflicted by unstable exogenous shocks. It has

disproportionately benefited from significantly realising globalisation's gains because of infrastructural shortages, extremely iterative technological absorption, and underdeveloped institutional quality (Signé & Johnson, 2021) [7].

Various gaps in the literature permit revisiting the topic of globalisation within the ECOWAS context. One is that trade openness and poverty have been studied extensively (Balogun, Tella, Adelowokan, Ogede, & Adegboyega, 2024) [8]. Still, despite their growing developmental importance, others, including foreign direct investment (FDI), digital globalisation (internet penetration, mobile connectivity, e-commerce), and remittances, have lacked systematic study. Second, institutional quality and governance are also underexplored factors, even though evidence indicates that corruption, poor rule of law and political instability mediate between globalisation outcomes. Third, globalisation, environmental issues such as the availability of green technology, and the likelihood of exhaustion of resources should be given more attention, considering the susceptibility of ECOWAS to climatic problems. Last but not least, the dimension of regional integrity, the degree to which ECOWAS has been able to coordinate collective strategies and pool sovereignty, has been wholly ignored, yet schizophrenic policies and low levels of intra-regional trade limit the bloc's capabilities to bargain through globalisation on its own terms (Ogbona, 2024) [9].

The current study tries to fill these gaps by evaluating the multidimensional linkage between globalisation and sustainable development in ECOWAS. In particular, it explores the interaction effect of FDI, digital globalisation, remittances, institutional quality, environmental sustainability and regional integrity in influencing development outcomes. Methodologically, it progresses further than the existing literature in using dynamic econometric techniques to measure heterogeneity, endogeneity, and direction of causality, i.e. System Generalised Methods of Moments (GMM) (Li, Ding, Hu, & Wan, 2021) [10].

The paper has a threefold contribution. To begin with, it widens the scope of analysis to the new variables of globalisation as they apply to something like ECOWAS. Second, it utilises rigorous econometric methods that come up with strong and sophisticated information relating to the impact of globalisation on development. Third, it provides policy-relevant insights relevant to ECOWAS on how the region can leverage globalisation as a strategic tool towards meeting SDGs and simultaneously reduce risks.

2. Literature Review

The causal role of globalisation on development operates through several possible channels: trade, capital, technology, ideas, and policy diffusion and is typically operationalised as a composite index, i.e. Konjunkturforschungsstelle (KOF) Globalisation Index that reflects both de jure- and de facto-dimensions of globalisation across economic, social and political causal domains (Ojaghlou & Tercan, 2024) [11]. This multidimensionality is relevant in determining which aspects of globalisation shift sustainability results in the developing states. Regarding methodology, the KOF index is clearly explained and often updated, allowing consistent analysis across countries on a panel and decompositions appropriate to ECOWAS heterogeneity (Hussain, 2022) [12].

Building on the broader conceptualisation of globalisation, FDI can give away technology, managerial expertise, and market access. However, FDI only provides benefits when there is domestic absorptive capacity, reasonable regulation, and networks with domestic firms (Rao, Ali, & Smith, 2024) [13]. More recent evidence at the continental level demonstrates a causal effect of FDI on a broader concept of sustainable development (Nguyễn & Phan, 2025) [14]. Such development is defined in non-GDP terms (Adjusted Net Savings; composite Sustainable Economic Growth index), emphasising effects beyond immediate impacts on output (Beltrami *et al*., 2024) [15]. However, these effects are non-homogeneous and path dependent on institutions and the sector mix. Firm-level and macro research further underline that diffusion of knowledge and innovation spillovers created with FDI are contingent on the quality of regulations, protection of property rights, and human capital (Beltrami *et al*., 2024) [15]. In the case of ECOWAS, such conditioning factors are disparate by member, which indicates a distributional payoff as opposed to a uniform one. Not only will modelling through endogeneity and interaction between FDI and governance/absorptive capacity be needed to estimate the direct effect of FDI on sustainability, but it will also be conditional on the strength and nature of the FDI regime (Singh & Kapuria, 2022) [16].

Alongside FDI, another dimension of globalisation that is increasingly important for ECOWAS countries is digital globalisation. African panels have connected digital connectivity through mobile, broadband, internet penetration, service-sector dynamism, productivity growth, and financial inclusion (Cariolle, 2021) [17]. More recent studies (2000-2020) have found ICT penetration to be integrated with a Sustainable Development Index, with mobile and broadband having positive long-run impacts on sustainability; in some specifications, there appears to be a two-way causality between ICT penetration and sustainability. Complementary evidence points to ICT infrastructure contributions to inclusive growth across African sub-regions, but adoption is still uneven (Jayaprakash & Radhakrishna Pillai, 2022) [18]. The portion of the African Continental Free Trade Area (AfCFTA) compatible digital trade frameworks and skills ecosystems is cited as a force multiplier in terms of regional policy design (Asafu-Adjaye *et al*., 2021) [19]. ECOWAS studies need to go beyond the “trade openness” to digital openness (usage, bandwidth, payments, e-commerce readiness), and cross-test heterogeneity using quantile or interaction models (Asafu-Adjaye *et al*., 2021) [19].

Beyond digital channels, West Africa outstrips others in terms of remittances to GDP globally, and there is also evidence that inflows increase financial depth (credit to the private sector, bank deposits) and can stabilise consumption, with potential implications of which are resilience and inclusive outcomes (Keho, 2024) [20]. Policy briefs focused on West Africa noted the high cost of means of transaction and poor access to money as factors undermining harnessing remittance as a source of investment and SDG-compatible purposes (Miao *et al*., 2022) [21]. New evidence also examines environmental transmission, concluding that the combined impact of remittances and institutional quality can influence environmental performance (Usman & Jahanger, 2021) [22]. Thus, there is potential to direct remittances to more sustainable technologies and efficient energy consumption through incentives and reforms in governance.

The potential of remittances is understated by treating them as consumption smoothing only; models need to be tested considering a complementarity between remittances and financial development and between remittances and governance quality (Usman & Jahanger, 2021) [22].

Critically, the thread throughout the African research findings in these channels is the role of institutions in determining the extent to which the channels of globalisation (FDI, ICT, trade, finance) provide broad-based and sustainable benefits. Challenging regulatory environments, the rule of law and policy credibility boost investment returns and create tighter local linkages, with fewer enclave effects. This determinant role is clear in the FDI and innovation literature and elsewhere in the case of digital finance, competition and consumer protection in ICT and remittances research (Otarinia, 2024). In the case of ECOWAS, the broad range of different outcomes among the countries is commonly referred to quite frequently based on the difference in governance quality. In this regard, empirical analyses emphasise the necessity of the interaction of institutional quality with FDI, ICT, and remittances to consider its moderating role. In contrast, governance instruments are also used to control the possible endogeneity issues (Otarinia, 2024).

In addition to governance, the environmental context presents more challenges. West Africa has experienced vulnerability to the heat extremes of climate, coastal risks, and rainfall variability, which threaten growth, health, and infrastructure. Intergovernmental Panel on Climate Change Sixth Assessment Report (IPCC AR6) compiles strong evidence on observed losses and damages in the sub-region and forecasts escalating risks without adaptation and mitigation (Adewumi & African Marine Environment Sustainability Initiative, 2022) [26]. In the case of globalisation, environmental ledger, trade, and capital flows may serve to hasten the spread of green technology or reinforce resource-intensive paths in the case of ineffective environmental protection. It is thus necessary to include environmental indicators (e.g., Adjusted Net Savings, SDG indices, emissions intensity, and deforestation) and development outcomes. ECOWAS analyses should incorporate climate-risk mitigation and determine whether digital/FDI channels are becoming greener than brown, conditional on policy (Opitz-Stapleton *et al*., 2021) [27].

Accompanying these environmental concerns, regional integration can potentially increase bargaining strength, lower the cost of trade and intensify value chains. However, the level of intra-ECOWAS trade is limited compared to its potential. Deeper integration coupled with political stability has been found to increase intra-African exports based on gravity strands and continent-wide evidence; cited constraints are non-tariff barriers, capability constraints due to infrastructure, and fragmentation in policy (Amighini *et al*., 2023) [28]. As analytical and policy reports (Afreximbank, World Bank, ISS African Futures) show, there is widespread diagnosis of incomplete diversification and underdeveloped regional value chains, with the trend overall being positive (Abor & Ofori-Sasu, 2024) [29]. In the case of ECOWAS, regional integrity, e.g., coherence of policies, dispute resolution, and infrastructure connectivity, is likely to mediate the globalisation sustainability relationship by controlling spillovers and resilience to exogenous shocks (Orji, Okafor, Obi, & Ukeje, 2022) [30].

The reviewed evidence underscores that Africa, particularly ECOWAS, benefits from channel-specific FDI, digital connectivity, and remittances, which have welfare-enhancing effects (Camara, 2022) [31]. However, they depend on the quality of institutions and the institutional quality of the regional integration environment. Environmental sustainability is a result and a limiting variable, and models that reflect the green spill-over against brown lock-in are needed. In the case of ECOWAS, the three gaps are very prominent: Not many studies co-model FDI, digital globalisation, remittances alongside institutional and regional-integration moderators against a sustainability (not merely GDP) measure. Likewise, cross-sectional impacts of ECOWAS within the income/institutional continuum have not been studied widely, mainly because this is suitable to be handled through panel quantile estimates. There is simultaneity (e.g. institutions FDI/ICT) and persistence in outcomes that should be addressed with System GMM, validity testing, and terms for an interaction effect (Wu *et al*., 2022) [32].

3. Methodology

3.1 Research Design

This paper uses a panel data econometric model of 15 ECOWAS member states between 2000 and 2021. The dependent variable will be sustainable development, which will be proxied as the SDG Index, and the robustness of the results will be checked through the Human Development Index (HDI). Explanatory variables are globalisation (measured by the KOF Globalisation Index), FDI inflows and remittances (World Bank, % of GDP). Other control variables are GDP per capita, exports, and imports relative to GDP. The latter is due to the longitudinal and cross-country character of data; therefore, panel econometric methods are used. Initially, estimates based on pooled ordinary least squares (OLS) regressions are presented where country heterogeneity in any estimate is not controlled, and fixed effects (FE) and random effects (RE) models are provided to estimate the country differences in any model estimate. The Hausman test establishes the method that gives more consistent estimates of FE or RE.

Given the possibility of endogeneity due to reverse causality of globalisation and sustainable development, panel instrumental variable (IV) and Generalised Method of Moments (GMM) estimations are suggested (Yu *et al*., 2024) [33]. As far as dynamic panel designs are concerned, these methods are appropriate and help offset simultaneous bias. Moreover, all interaction terms are to be included to reflect the moderating influences of institutional quality and sustainability of the environment (to be consolidated using supplementary datasets, including World Governance Indicators (WGI) and World Development Indicators (WDI). Lastly, the robustness of the results is checked by using tests on multicollinearity, heteroskedasticity, and serial correlation. With this methodological approach, a comprehensive analysis of the impact of globalisation, external financial flow, and integrating digital systems to the sustainable development trajectory of the ECOWAS countries can be carried out effectively, and this is done after controlling the structural macroeconomic factors.

3.2 Data Sources and Variables

The data is compiled based on highly viable sources, including the World Bank, World Development Indicators (WDI), Worldwide Governance Indicators (WGI),

UNCTADstat, and the Sustainable Development Solutions Network (SDSN). Table 1 shows the included variables.

Table 1: Data Variables

Category	Variable
Dependent Variable	Sustainable Development (SDG Index score)
Independent Variables	- Globalisation (KOF Index) - Foreign Direct Investment inflows (% of GDP) - Personal remittances received (% of GDP)
Moderating Variables	- Institutional quality (Rule of law, Control of corruption, Government effectiveness) - Environmental sustainability (CO_2 emissions per capita, Renewable energy consumption, Forest area) - Regional integration (Intra-ECOWAS trade share)
Control Variables	- GDP per capita - Population growth - Inflation (CPI) - Trade openness (Exports + Imports as % of GDP)

All data are harmonised into an annual country-level panel covering 15 ECOWAS member states from 2000 to 2021.

3.3 Model Specification

The baseline econometric model is expressed as Equation 1:

$$SD_{it} = \alpha + \beta_1 Globalization_{it} + \beta_2 FDI_{it} + \beta_3 Remittances_{it} + \beta_4 Digital_{it} + \gamma Controls_{it} + \delta Moderators_{it} + \mu_i + \lambda_t + \epsilon_t \quad (1)$$

Where:

- SD_{it} = Sustainable development proxy for country i at time t
- μ_i = country-specific effects
- λ_t = time-fixed effects
- ϵ_t = error term

This model will be estimated using Fixed Effects FE and Random Effects estimators, with the Hausman specification test used to specify which model to use. To compensate for the heteroskedasticity and serial correlation, we will use robust standard errors.

3.4 Moderation and Robustness Tests

The interaction terms will be included in the regression model to determine the moderating effect of the institution's quality, environmental sustainability, and regional integration. For example:

$$SD_{it} = \alpha + \beta_1 Globalization_{it} + \beta_2 Institutions_{it} + \beta_3 (Globalization_{it} \times Institutions_{it}) + \ldots \quad (2)$$

Robustness checks include:

- Alternative sustainability indices (HDI, CO 2 emissions),
- The use of lagged independent variables to overcome endogeneity,
- Resource-rich diminutive ECOWAS states vs. Sub-sample resource god non-resource poor ECOWAS states analysis.

3.5 Analytical Tools and Techniques

To study the relation between the ECOWAS and economic growth, the empirical analysis is based on economic traits of the member countries provided by the ECOWAS dataset (**2000-2021**). The study begins by defining descriptive statistics and correlation matrices to give an insightful diagnosis of the distribution and interrelationships of the key variables: sustainable development, globalisation, capital flows, institutional quality and environmental sustainability.

The longitudinal design of the data implies using panel-regression techniques. Estimators of both fixed and random effects are considered, and Hausman tests are used to determine the model to use. The System Generalized Method of Moments (System-GMM) is used to cover issues of endogeneity, such as reverse causality between sustainable development and globalization. This technique addresses unobserved heterogeneity, simultaneous bias, and dynamics of the persistence of development outcomes.

A quantile regression is used to capture heterogeneous effects in the range of the development of ECOWAS states. This enables us to determine whether the gains of globalisation and regionalisation have equal or different impacts on the relatively low-performing countries and high-performing countries insofar as sustainable outcomes of development are concerned. System-GMM was chosen due to the necessity of tackling the issues of simultaneity bias, possible measurement errors, and the dynamic character of development processes.

4. Findings

4.1 Descriptive Statistics

The descriptive statistics (as shown in Table 2) of the data set comprising countries in the ECOWAS region between 2000 and 2021 indicate the high heterogeneity in both sustainable development outcomes and the explanatory variables. SDG Index shows an overall score of 51.4, with a lowest of 38.6 and a highest of 65.9, showing that all countries have not recorded significant improvement, with significant gaps. This decentralisation implies an unequal development towards sustainability in the region**.** The KOF Globalisation index averages 46.1, with a spread of 29 to 62 points, which indicates the moderate extent of the ECOWAS countries' integration towards the global economy, and an observation of a disparity in the levels of openness. FDI inflows as a percentage of GDP are highly volatile: the average is 4.4, but the standard deviation is 9.9 and a peak of over 100 shows a tendency of particularly dependent economies concerning periodic FDI booms. In a similar pattern, the Personal Remittances have a substantial impact on financing development in the region averaging 4.7 percent of GDP. In some cases, it goes above 25 percent, which means that they are important factors in household welfare and consumption.

Control variables underscore the structural issues and the average GDP per capita **which** is USD 1,045 with a massive gap below USD 144 and above USD 4,381 in the lowest and high scale respectively, showing that income inequality still prevails within the block. The rate of growth continues to be significantly high standing at 2.6% though its trade performance depicts a consistent negative balance, with average imports taken up to 34.3 percent of GDP against exports of 22.9 percent of GDP. These statistics indicate that

although the world is now globally integrated, the ECOWAS states are still exposed to externalities and skewed economic development.

Table 2: Descriptive test

Variable	Mean	Std. Dev.	Min	Max
Year	-	6.41	2000	2023
SDG Index	51.40	5.40	38.60	65.90
HDI	0.45	0.11	0.00	0.67
KOF Globalization	46.05	6.57	29.00	62.00
FDI, net inflows (% of GDP)	4.40	9.94	-2.57	103.34
Remittances received (% of GDP)	4.73	4.45	0.03	27.16
GDP per capita	1044.73	814.25	143.70	4380.80
Exports of goods and services (% of GDP)	22.90	9.06	6.60	56.20
Imports of goods and services (% of GDP)	34.25	11.62	12.60	82.50

4.2 Correlation Analysis

The correlation matrix (as seen in Figure 1) can give information on the correlations between sustainable development on one side and the explanatory factors on the other (Pakkan *et al*., 2023) [34]. The SDG Index shows high positive associations with GDP per capita (r = 0.73), Globalisation (r = 0.70), and HDI (r = 0.72) scores, which means that increasing income, globalisation, and human capital are also directly linked with sustainability performance in ECOWAS. Comparison with FDI inflows, however, which are likely a larger component of the economy than foreign aid, paints a pretty different picture (r = -0.02), implying that although FDI is certainly more substantial in the aggregate than foreign aid, it has not always correlated with more global development.

Remittances correlate weakly and positively with the SDG Index (r = 0.34), which suggests that remittances improve household welfare but fail to have a substantial macro-level developmental impact. The trade variables are also significantly correlated, i.e., the exports are correlated with the sustainable development at 0.57. That of the imports at 0.46 indicates that the external trade is a key driver, though the sustained trade deficit threatens future sustainability.

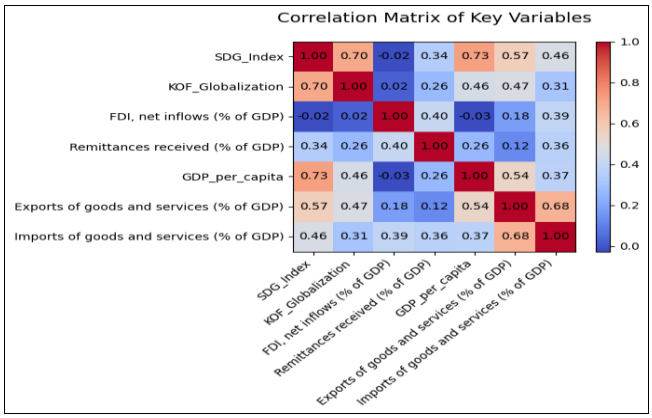

Fig 1: Correlation matrix

4.3 Panel Regression Analysis

The panel regression analysis examined the factors underlying sustainable development (proxied by the SDG Index) among ECOWAS countries, as seen in Table 3. Having obtained overall R^2 Values of 0.78 (FE) and 0.79 (RE), the Hausman specification test confirmed the Random Effects estimator as an appropriate specification.

Table 3: Fixed Effects and Random Effects

Statistic	FE (PanelOLS)	RE (Random Effects)
Dependent Variable	SDG_Index	SDG_Index
Estimator	PanelOLS	Random Effects
Covariance Estimator	Clustered	Unadjusted
R-squared	0.7576	0.7602
R-squared (Within)	0.7576	0.7573
R-squared (Between)	0.7915	0.8019
R-squared (Overall)	0.7800	0.7867
F-statistic	136.47	144.80

The values of the within R^2 Indicate that the country-specific differences are explained well, whereas the differences between the countries and the overall differences are not. R^2 The RE model indicates a marginally better explanation of the cross-country differences. The large F-statistics on both models indicate that the composite effect of explanatory variables is strong as predictors. Table 4 shows variable analysis.

4.3.1 Key Determinants of Sustainable Development

Globalisation (KOF Index):

Both significance and effect are consistently high in both FE ($\beta = 0.461$, $p < 0.01$) and RE ($\beta = 0.449$, $p < 0.01$). This implies that integration into the global economy can improve sustainable development outcomes among the ECOWAS states.

Remittances (% of GDP):

High and significant (FE: 0.300, $p < 0.01$; RE: 0.291, $p < 0.01$). This implies that remittances are an effective mechanism of welfare enhancement and participation in sustainable development.

GDP per capita:

Very strong and significant (FE: 0.0028, $p < 0.01$; RE: 0.0030, $p < 0.01$). Economic prosperity is directly related to better performance in the development of sustainability.

FDI inflows (% of GDP):

Negative, however, is statistically not significant in either model (FE = -0.065, RE = -0.063). This means that foreign direct investment has not consistently yielded benefits in sustainable development for ECOWAS.

Trade variables:

Exports (% of GDP): Exports are negative and weakly significant in RE (-0.063, $p < 0.05$), which implies that there is no direct relationship between high export-dependence and sustainable development.

Imports (% of GDP): Imports are not significant in RE (b = 0.048, $p > 0.05$), suggesting that exposure to imports could support development by giving it access to goods, technologies, and inputs.

Table 4: Variables Analysis

Variable	FE Coefficient	RE Coefficient	FE t-stat	RE t-stat
KOF Globalization	0.4610	0.4486	5.9900	11.767
FDI, net inflows (% of GDP)	-0.0651	-0.0630	-1.0451	-1.5839
Remittances received (% of GDP)	0.3004	0.2906	4.9613	5.9894
GDP per capita	0.0028	0.0030	4.9158	9.2102
Exports of goods and services (% of GDP)	-0.0671	-0.0626	-1.7718	-2.8304
Imports of goods and services (% of GDP)	0.0452	0.0480	1.5565	2.8190

4.4 Robustness Check: Dynamic Specification

In response to the query that there may be dynamic persistence of the past and omitted variable bias, the dynamic panel specification model adjusted the parameter estimation using the previous end mastery stage (SDGt -1) (Diegert, Masten, & Poirier, 2022) [35]. Regressions are fitted with the entity fixed effects and country-level clustered standard errors to control for serial correlation and heteroskedasticity.

Table 4: Dynamic Fixed Effects Regression Results

Variable	Coefficient	Std. Error	t-stat	p-value	95% CI (Lower)	95% CI (Upper)
Constant	0.0163	1.0465	0.0156	0.9876	-2.0448	2.0774
SDG_{t−1}	0.9786	0.0308	31.786	0.0000	0.9180	1.0393
KOF Globalization	0.0326	0.0238	1.3724	0.1712	-0.0142	0.0794
FDI (% of GDP)	0.0200	0.0248	0.8046	0.4218	-0.0289	0.0688
Remittances (% GDP)	-0.0077	0.0280	-0.2756	0.7831	-0.0629	0.0475
GDP per capita	0.000047	0.0001	0.3175	0.7511	-0.0002	0.0003
Exports (% GDP)	-0.0015	0.0141	-0.1080	0.9141	-0.0293	0.0262
Imports (% GDP)	0.0007	0.0041	0.1773	0.8594	-0.0074	0.0088

These results indicate a high level of persistence in sustainable development performance (0.979, $p < 0.01$), and the lagged coefficient of the SDG Index approaches unity. This implies that SDG performance in such nations is basis-derived, wherein the current results are far-flung and affected by past performance. Interestingly, the coefficients on KOF and all the other variables (remittances, trade, FDI and GDP per capita) become insignificant when the lagged SDG Index is added to the regression. This implies that when a strong dynamic inertia effect of SDG progress is captured, the effects of these other variables are absorbed by it.

5. Discussion

To begin with, the dynamic specification shows that the dependence of SDG Index on previous values in the series is extreme, L1_SDG is significant and very near to unity. This indicates that sustainable development performance has a rather path-dependent character; those countries whose SDG levels are higher in the previous years are more likely to maintain this advancement in the future. Such a finding aligns with theoretical expectations in institutional and development studies (North, 1990; Acemoglu & Robinson, 2012), according to which there is inertia and institutional lock-in. It is also consistent with the recent empirical findings (e.g., Sachs *et al*., 2022), suggesting that it will likely compound once the SDG performance is in a better region.

Building on this, whereas the globalisation (KOF Index) resulted in a statistically significant outcome in FE/RE static regressions, the results were insignificant in GMM and FE dynamic models. This implies that the effect of globalisation on SDG reproductions in the short run could be exaggerated when one fails to consider persistence and even endogeneity. The less pronounced importance in dynamic models suggests a more indirect impact of globalisation, via the long-run structural and institutional pathways, on sustainable development, as opposed to short-term fluctuations.

Similarly, Mixed and mostly insignificant effects associated with FDI and remittances were observed across models. This echoes with conflicting evidence in the literature: on the one hand, some findings seem to point to the growth-enhancing effect of FDI given acceptable conditions in the host country (Ndiaye, 2018) [39], on the other, there are indications of little or conditional impact in developing economies. The negligence above implies that neither the FDI inflow nor the receipt of remittances is a percentage of GDP that translates into SDG enforcement. This could indicate limitations on absorptive capacity, inefficiency in sectoral allocation or simply that these flows are intended to meet privately oriented consumption objectives, not system development purposes (Manga, Sarpe, & Ndiaye, 2023) [40].

Moreover, Trade variables (exporters and importers in percentages of GDP) are on repeated instances not significant. This implies that the standard metrics of trade openness do not necessarily represent a high level of trade integration, which would influence SDG outcomes. Structural issues, such as public policy, particularly in export diversification, technological transfer/ diffusion and environmental standards, are probably more decisive than trade volume (Danso, Emovwodo, & Saud, 2020) [37]. This result dovetails with the (limited) literature of beyond openness (Rodrik, 2018), which emphasises that the developmental gains of trade are as much about governance and industrial planning as about initial openness. Critically, there is no significant relationship between GDPs per capita and improvements in the SDG Index, once the persistence and institutional controls were considered. This means that SDG progress may not require higher income levels to be faster; however, they are merely correlated with SDG outcomes. This is echoed in the controversial dialogue of decoupling in the economics of sustainability, when economic growth is not just enough without structural modification of inclusiveness and sustainability.

When comparing the generally accepted estimating methods of FE/RE (static) and System-GMM/Dynamic FE, the criticality of persistence, endogeneity, and path dependence should be recognised in sustainable development research. Theoretically, the results support institutional and development theories (Abille & Meçik, 2022) [36], arguing that past development performance and institutional set-up profoundly influence present and future growth performance. Static models, by exaggerating the way immediate effects of globalisation and income operate, could give a distorted picture of the cause and effect of sustainable development (Sow & Diallo, 2022) [38]. These findings have a practical implication that policy interventions that rely only on short-term inflows, say FDI or remittances, are not enough to deliver sustainable development. Instead, institutional capacity must be continually invested in, through governance and structural reforms, to bring external resources to bear with global integration in terms of fundamentally contributing to long-term development. Further, dynamic modelling indicates that development builds on itself as time passes, requiring persistence and integration throughout policy implementation rather than episodic action.

Issues of special concern to ECOWAS countries are explicit. The national governments should concentrate on the reinforcement of domestic institutions, the boosting of

regional integration, and the development of absorptive ability in order to generate the highest possible rewards of globalisation. Policymakers must focus on policies to achieve resilience to external shocks, inclusive growth, and environmental sustainability. Integrated regulatory systems, unimpeded intra-regional trade, and green technology can be used to ensure that ECOWAS countries can take advantage of globalisation as a favourable trend and regulate structural weaknesses that may pose challenges to the realisation of SDGs within the purview of the region.

5.1 Limitations and Future Work

A drawback of this research is the quality and availability of data in ECOWAS countries, particularly, digital globalisation, remittances, and environmental values. Dynamic panel approaches (System-GMM) handle persistence and endogeneity but rely on enduring assumptions, and the analysis is carried out at the macro level so that there are no dynamics at the household or firm level. The study is also limited to only 15 ECOWAS countries between 2000 and 2021, which makes generalisation impossible. Future work may push further into the future beyond 2021 to include a shock like COVID-19 and climate change, incorporate industry- and micro-level as well as macro-level data, and consider intervening factors such as human capital and infrastructure. Spatial econometrics and scenario-based policy modelling would also reveal the existence of spillovers, integration premises and optimum sustainable development strategies in the area.

6. Conclusion

This paper shows that SDG development in ECOWAS is path-dependent, whereby today's outcomes are highly predictable by the SDG performance of the previous years. The positive associations found between globalisation, remittances, and GDP per capita in the static models are mostly eliminated, once the dynamic persistence of development is factored into the equation. This points to the importance of not only relying on external flows and global integration to bring about SDG progress. The results underscore the importance of good institutions, governance, and regional integration towards realising inclusive and sustainable development in the context of globalisation. The policy makers must concentrate on consolidating their national capabilities, enhancing the process of technology transfer and facilitating green investments so that globalisation becomes a medium of long-term sustainable and equitable growth instead of short-term benefits. Finally, the sustainable development path of ECOWAS is contingent on the ability to build domestic frameworks that allow harnessing the benefits of the global environment and reducing global structural weaknesses.

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8. Conflict of Interest

The authors declare no any conflict of interest.

9. Fundin

None.

10. Data Availability

The data can be made available upon reasonable request.

11. References

1. Ruano-Borbalan JC. Doctoral education from its medieval foundations to today's globalisation and standardisation. European Journal of Education. 2022; 57(3):367-380. Doi: https://doi.org/10.1111/ejed.12522
2. Shekhawat KK, Kumar N, Kumar P, Sharma V. Impact of renewable energy, financial globalisation, and technological innovation on environmental sustainability in BRICS. Discover Sustainability. 2025; 6(1):1-26. Doi: https://doi.org/10.1007/s43621-025-01486-1
3. Bassey M, Etefia V, Ebong V. Economic Community of West African States (ECOWAS) And Sub-Regional Integration in West Africa. European Journal of Political Science Studies. 2024; 7(2). Doi: http://dx.doi.org/10.46827/ejpss.v7i2.1772
4. Danfulani WA, Gülseven E. Economic Community of West African States (ECOWAS) Public-Private Partnership (PPP) Strategy for Development. Social Sciences. 2024; 13(10):531. Doi: https://doi.org/10.3390/socsci13100531
5. Omo-Ogbebor DO, Sanusi AH. Asymmetry of the ECOWAS integration process: Contribution of the regional hegemon and the small country. Vestnik RUDN. International Relations. 2017; 17(1):59-73. Doi: https://doi.org/10.22363/2313-0660-2017-17-1-59-73
6. Fagbemi AS, Issa AG, Ogunbanjo B, Fagbemi MM, Popoola BO, Omorinbola TO. Classical and Post-Colonial Approaches to Development: A Critico-Expository Assessment. Integral Research. 2024; 1(10):103-135. Doi: https://integralresearch.in/index.php/1/article/view/148
7. Signé L, Johnson C. Africa's mining potential: Trends, opportunities, challenges and strategies. Policy Paper. 2021; 21(10):2022-01. Doi: http://www.policycenter.ma/sites/default/files/2022-01/PP-10-21-Landry-Signe.pdf
8. Balogun MA, Tella SA, Adelowokan OA, Ogede JS, Adegboyega SB. Achieving sustainable development in ECOWAS countries: the impact of trade openness, poverty and human capital. Future Business Journal. 2024; 10(1):78. Doi: https://doi.org/10.1186/s43093-024-00367-9
9. Ogbona M. A discourse on the history, achievement and problems of ECOWAS. Kenneth Dike Journal of African Studies (KDJAS). 2024; 12(1):54-73. Doi: https://www.nigerianjournalsonline.com/index.php/KDJAS/article/view/5363
10. Li J, Ding H, Hu Y, Wan G. Dealing with dynamic endogeneity in international business research. Journal of International Business Studies. 2021; 52(3):339-362. Doi: https://doi.org/10.1057/s41267-020-00398-8
11. Ojaghlou M, Tercan C. Impact of liberalization and globalization on economic growth: Empirical evidence from Türkiye. Journal of International Studies. 2024; 17(1):35-51. Doi: https://doi.org/10.14254/2071-8330.2024/17-1/3
12. Hussain MR. Measuring the impact of globalization on countries using composite indexes. Cross-Cultural Management Journal. 2022; 24(2):121-142. Retrieved from: https://ideas.repec.org/a/cmj/journl/y2022i2p121-142.html
13. Rao A, Ali M, Smith JM. Foreign direct investment and domestic innovation: Roles of absorptive capacity,

quality of regulations and property rights. PLoS One. 2024; 19(3):e0298913. Doi: https://doi.org/10.1371/journal.pone.0298913
14. Nguyễn HV, Phan TT. Impact of economic growth, international trade, and FDI on sustainable development in developing countries. Environment, Development and Sustainability. 2025; 27(2):4017-4043. Doi: https://doi.org/10.1007/s10668-023-04060-9
15. Beltrami F, Schau EM, Sparber W, Prina MG, Golinucci N, Rocco MV. Reports on beyond-GDP analysis (FulFILL Project Deliverable D6.4). FULFILL Project, 2024. Doi: https://fulfill-sufficiency.eu/wp-content/uploads/2024/07/D6.4_Reports-on-beyond-GDP-analysis_FINAL.pd
16. Singh N, Kapuria C. The effect of sustainability on foreign direct investment inflows: Evidence from developing countries. Social Responsibility Journal. 2022; 18(4):681-703. Doi: https://doi.org/10.1108/SRJ-08-2019-0289
17. Cariolle J. International connectivity and the digital divide in Sub-Saharan Africa. Information Economics and Policy. 2021; 55:100901. Doi: https://doi.org/10.1016/j.infoecopol.2020.100901
18. Jayaprakash P, Radhakrishna Pillai R. The role of ICT for sustainable development: A cross-country analysis. The European Journal of Development Research. 2022; 34(1):225-247. Doi: https://doi.org/10.1057/s41287-021-00369-1
19. Asafu-Adjaye J, Boateng G, Keane J, Mendez-Parra M, Moraa M, Nwokediuko U, *et al*. The role of the African Continental Free Trade Area in promoting a resilient recovery in Africa (Policy brief), December 6, 2021. ODI / ACET. Doi: https://acetforafrica.org/research-and-analysis/reports-studies/reports/the-role-of-the-afcfta-in-promoting-a-resilient-recovery-in-africa/
20. Keho Y. Impact of remittances on domestic investment in West African countries: The mediating role of financial development. SN Business & Economics. 2024; 4(2):20. Doi: https://doi.org/10.1007/s43546-023-00621-2
21. Miao F, Hinostroza JE, Lee M, Isaacs S, Orr D, Senne F, *et al*. Guidelines for ICT in education policies and masterplans. UNESCO, 2022. https://unesdoc.unesco.org/ark:/48223/pf0000383818
22. Usman M, Jahanger A. Heterogeneous effects of remittances and institutional quality in reducing environmental deficit in the presence of EKC hypothesis: A global study with the application of panel quantile regression. Environmental Science and Pollution Research. 2021; 28(28):37292-37310. Doi: https://doi.org/10.1007/s11356-021-13216-x
23. Akinsanya AJ. Exploring the relationships between financial development, institutional structure, and economic growth in Sub-Saharan Africa (Master's thesis, University of Coimbra). Estudo Geral, 2024. https://estudogeral.uc.pt/retrieve/276268/Final%20Thesis%20Adedeji%20Akinsanya.pdf
24. Otarinia MA. The impact of E-commerce and foreign investment on economic growth in developing countries. Creative Economy and New Business Management Approaches, 2024, 18-59. Retrieved from: https://bmjournal.ir/index.php/bm/article/view/49
25. Otarinia MA. The impact of E-commerce and foreign investment on economic growth in developing countries. In Creative Economy and New Business Management Approaches, 2024, 18-59. Retrieved from https://bmjournal.ir/index.php/bm/article/view/49
26. Adewumi IJ, African Marine Environment Sustainability Initiative. Integration of ocean-based adaptation and mitigation actions into regional and national climate policies in Africa (Future Ecosystems for Africa, FEFA; University of the Witwatersrand), 2022, p. 157. Retrieved from https://afmesi.org/wp-content/uploads/2023/05/Ocean-Evidence-Base.pdf
27. Opitz-Stapleton S, Cramer L, Kaba F, Gichuki L, Borodyna O, Crane T, *et al*. Transboundary climate and adaptation risks in Africa: Perceptions from 2021. Overseas Development Institute, 2021. Retrieved from: https://odi.org/en/publications/transboundary-climate-and-adaptation-risks-in-africa-perceptions-from-2021/
28. Amighini A, Maurer A, Garnizova E, Hagemejer J, Stoll PT, Dietrich M, *et al*. Global value chains: Potential synergies between external trade policy and internal economic initiatives to address the strategic dependencies of the EU (Study for the European Parliament's Policy Department for External Policies). European Commission, 2023. Retrieved from: https://op.europa.eu/en/publication-detail/-/publication/5fcdb6dc-ceab-11ed-a05c-01aa75ed71a1/language-en
29. Abor JY, Ofori-Sasu D. The Future of Development Banks in Africa. In Perspectives on Development Banks in Africa: Case Studies and Emerging Practices at the National and Regional Level. Cham: Springer Nature Switzerland, 2024, 421-451. Doi: https://doi.org/10.1007/978-3-031-59511-0_19
30. Orji A, Okafor S, Obi K, Ukeje C. The effects of regional integration on economic growth in ECOWAS countries. Journal of International Economic Relations and Development Economics. 2022; 2(2):1-20. Retrieved from: https://www.theinterscholar.org/journals/index.php/jierade/article/view/153
31. Camara M. The impact of the shadow economy on economic growth and CO_2 emissions: Evidence from ECOWAS countries. Environmental Science and Pollution Research. 2022; 29(43):65739-65754. Doi: https://doi.org/10.1007/s11356-022-20360-5
32. Wu J, Abban OJ, Hongxing Y, Boadi AD, Ankomah-Asare ET. The nexus amid foreign direct investment, urbanization, and CO2 emissions: Evidence from energy grouping along the ECOWAS community. Environment, Development and Sustainability. 2022; 24(8):10183-10207. Doi: https://doi.org/10.1007/s10668-021-01860-9
33. Yu ZC, Enilolobo OS, Bassey RA, Adeeremi TA. Globalization, innovation and food security in Sub-Saharan Africa: A GMM approach. Applied Ecology & Environmental Research. 2024; 22(1):327-340. Doi: https://doi.org/10.15666/aeer/2201_327340
34. Pakkan S, Sudhakar C, Tripathi S, Rao M. A correlation study of sustainable development goal (SDG) interactions. Quality & Quantity. 2023; 57(2):1937-1956. Doi: https://doi.org/10.1007/s11135-022-01443-4
35. Diegert P, Masten MA, Poirier A. Assessing omitted variable bias when the controls are endogenous, 2022. arXiv preprint arXiv:2206.02303. https://arxiv.org/abs/2206.02303

36. Abille AB, Meçik O. Macroeconomic determinants of balance of payments performance in selected African countries. Research Square, 2022. Doi: https://doi.org/10.21203/rs.3.rs-1765900/v1
37. Danso S, Emovwodo S, Saud M. Effects of trade policies on external trade performances of ECOWAS. Economics & Trade Journal. 2020; 8(1):89-112. Doi: https://doi.org/10.1111/ecot.12303
38. Sow M, Diallo M. Economic Integration and Economic Growth in ECOWAS Nations. International Policy Briefs. 2022; 12(6):1-15. Available at: https://internationalpolicybrief.org/wp-content/uploads/2024/11/ARTICLE-6.pdf
39. Ndiaye A. Public Spending and Growth in the Countries of the Economic Community of West African States. Modern Economy. 2018; 9(11):1949-1975. Doi: https://doi.org/10.4236/me.2018.911122
40. Manga C, Sarpe DA, Ndiaye B. Analysis of industry drivers in ECOWAS. Risk in Contemporary Economy, 2023, 115-127. Doi: https://doi.org/10.35219/rce20670532154