المجلة الدولية للأداء الاقتصادي
International journal of economic performance
ISSN: 2661-7161 EISSN:2716-9073
Publications are Open Access in this journal

Typologies of Trade Openness in Africa: A Principal Component and Cluster-Based Analysis

Nour el Houda SADI *	Dalila BENZIANE
nourelhouda.sadi@univ-bejaia.dz	dalila.benziane@univ-bejaia.dz
University of Bejaia, (Algeria)	University of Bejaia, (Algeria)

Submitted: 31/05/2025 Accepted:17/06/2025 Published: 30/06/2025

Abstract:

This study investigates the determinants and typologies of trade openness across 40 African economies, addressing persistent gaps in integration despite decades of neoliberal reforms. By employing Principal Component Analysis (PCA) and hierarchical clustering, the research analyzes how institutional quality, human capital, regional trade agreements, and tariff policies collectively shape trade openness and economic growth trajectories. The analysis reveals three distinct country clusters: liberal diversified economies (e.g., Mauritius, South Africa), transitional reforming states (e.g., Ghana, Kenya), and protectionist, commodity-dependent nations (e.g., Nigeria, Angola). Key findings highlight a positive association between trade openness and robust institutions, human capital, and participation in trade agreements, while high tariffs significantly hinder openness. The results underscore the necessity of complementary institutional and policy frameworks for effective trade liberalization. Strategic policy recommendations include investment in value-added sectors, strengthening regulatory institutions, phased tariff liberalization, and enhanced regional integration. The study advances the understanding of Africa's heterogeneous trade landscape and informs targeted development policies.

Keywords : Trade openness, Principal Component Analysis, institutional quality, tariff policy, African economies.

JEL Classification : F14, O55, F15

* Corresponding author

Introduction

Despite successive waves of globalization and decades of neoliberal reforms inspired by frameworks like the Washington Consensus (Williamson, 1989), African economies remain notably marginalized in global trade. Liberalization policies intended to enhance Africa's integration into international markets through openness, fiscal discipline, and market restructuring have not consistently delivered inclusive growth or equitable development outcomes. Understanding the specific reasons behind these persistent gaps is critical for shaping effective policies to harness trade as an engine for development.

The scholarly debate on trade liberalization encompasses two main theoretical perspectives: mercantilism and classical liberalism. Mercantilists, historically represented by theorists such as Mun (1664), Colbert (1663), and strategic trade theorists like Brander and Spencer (1983), advocate strategic state intervention and targeted protectionism to nurture competitive domestic industries. Conversely, classical liberals, drawing from Smith and Ricardo, argue that trade openness fosters allocative efficiency, innovation, and sustained economic growth, supported by empirical findings from Dollar and Kraay (2001) and Grier & Grier (2021).

However, the African context demonstrates significant deviations from these theoretical expectations. Empirical analyses highlight that mere trade liberalization without complementary institutional robustness, human capital development, and adequate infrastructure is insufficient to achieve sustainable growth (Rodrik, 2008; Bhagwati, 1995; Cramer et al., 2020; UNCTAD, 2017; IMF, 2023). Recent initiatives like the African Continental Free Trade Area (AfCFTA) have reinforced the necessity of addressing these structural constraints to ensure meaningful economic integration.

Despite extensive scholarly attention, there remains a lack of systematic, empirical analyses exploring how variations in institutional quality, geography, and human capital jointly affect the outcomes of trade openness across diverse African countries. Specifically, existing literature inadequately addresses the heterogeneous structural characteristics and their implications for trade policy effectiveness.

The central problem of this study is to identify and analyze the interactive effects of trade openness, institutional quality, geographical factors, and human capital development on the heterogeneous economic growth outcomes observed in African countries.

The hypothesis guiding this research is that variations in institutional quality, geography, and human capital significantly moderate the relationship between trade openness and economic growth, resulting in distinct growth trajectories across African countries.

This study aims to fill this research gap by employing Principal Component Analysis (PCA) to explore how trade openness, institutional quality, geography, and human capital interactively shape diverse economic growth trajectories in Africa. It further seeks to classify African countries into distinct typologies based on these factors, offering targeted policy recommendations tailored to optimize the benefits of trade liberalization within varied African contexts.

Methodology

Data and Variables

To empirically investigate the underlying determinants of foreign trade dynamics in African economies, this study utilizes a cross-sectional dataset encompassing all 54 African countries. The data collection is anchored in established theoretical frameworks and reinforced by empirical precedent, ensuring relevance, consistency, and analytical robustness. The primary methodological approach is Principal Component Analysis (PCA), a multivariate statistical technique employed to reduce the dimensionality of the dataset while preserving as much informational variance as possible. This technique allows the transformation of correlated variables into a smaller set of uncorrelated components—facilitating typological classification and clearer interpretation of trade-performance relationships.

Table 1. Summary of Variables Used in the Study

Variable	Unit	Definition	Source
GDP	Constant USD	Gross Domestic Product (2010 base)	World Bank
Agreements	Number	Total trade agreements in force	World Trade Organization
Openness	Index	(Exports + Imports) / GDP	Author's calculation from World Bank data
Tariffs	%	Simple average applied tariffs on goods	World Bank
Education	Index (0–1)	Human Capital Index	World Bank (Kraay, 2018 methodology)
Politics	Index (–2.5 to +2.5)	Political Stability Index	Worldwide Governance Indicators (2021)
Regulation	Index (–2.5 to +2.5)	Regulatory Quality Index	Worldwide Governance Indicators (2021)
Democracy	Categorical (1–3)	Type of political regime	IDEA – Global State of Democracy
Access to the Sea	Binary (0 or 1)	Coastal vs. landlocked geography	Derived from geospatial data (Google Maps)

Source: Author's elaboration.

The selection of explanatory variables was guided by both theoretical justification and data availability. The following indicators constitute the core analytical framework:

- Gross Domestic Product (GDP), measured in constant 2010 U.S. dollars, serves as a proxy for economic size and production capacity. It is a critical determinant of import demand and export potential, reflecting the scale of economic activity and capacity for trade integration.
- Trade Openness Index, the endogenous variable of interest, is calculated as the arithmetic mean of exports and imports as a percentage of GDP. A higher index indicates a greater level of trade integration and international exposure.
- Number of GATT/WTO Trade Agreements, reflecting the legal framework and policy commitment of each country to regional and multilateral trade integration in goods and services.
- Applied Tariff Rate, computed as a simple average across all product categories. Lower tariff rates typically indicate a more liberal trade regime, although the effect may be counterbalanced by non-tariff barriers or industrial policy instruments such as subsidies.
- Human Capital Index, developed by the World Bank, encapsulates the expected productivity of a newborn cohort based on health and educational outcomes. Scores range from 0 to 1, with higher values reflecting stronger future labor productivity.
- Institutional Quality, captured through two key dimensions from the Worldwide Governance Indicators:
    - *Regulatory Quality Index*, which measures the government's ability to formulate and implement sound policies.
    - *Political Stability Index*, indicating the likelihood of political turmoil or violence, with scores ranging from –2.5 (weak) to +2.5 (strong). Both variables are critical in determining investor confidence and trade performance.
- Democracy Index, a categorical variable coded as 1 (authoritarian), 2 (hybrid), and 3 (democratic), sourced from the IDEA Global State of Democracy dataset.
- Access to the Sea, a binary geographic dummy variable (1 = landlocked, 0 = coastal), used to capture the infrastructural and logistical advantages of maritime accessibility.

Model Specification

The empirical framework is operationalized through a set of four linear models that examine the multidimensional determinants of trade openness and its interaction with structural, institutional, and geographic factors. The PCA is not used here for

causal inference per se, but rather as a typological tool; however, the models guide the interpretation of component loadings and validate underlying correlations.

Let the dependent variable be TO_i, the trade openness index for country i. The general model structure is defined as:

$$TO_i = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \cdots + \beta_k X_{ki} + \epsilon_i$$

Where X_{ki} are explanatory variables defined above, and ϵ_i is a normally distributed error term.

$$TO_i = \alpha_1 + \beta_1 GDP_i + \beta_2 Tariffs_i + \epsilon_{1i}$$

This baseline model evaluates the direct relationship between trade openness, market size, and trade restrictiveness.

$$TO_i = \alpha_2 + \beta_1 Politics_i + \beta_2 Regulation_i + \beta_3 Democracy_i + \epsilon_{2i}$$

This specification tests the role of governance quality and regime type in shaping a country's trade profile.

$$TO_i = \alpha_3 + \beta_1 Education_i + \beta_2 AccessSea_i + \epsilon_{3i}$$

Here, the focus is on labor productivity potential and geographic location as enablers or inhibitors of trade integration.

$$TO_i = \alpha_4 + \beta_1 GDP_i + \beta_2 Tariffs_i + \beta_3 Education_i + \beta_4 Politics_i + \beta_5 Regulation_i + \beta_6 AccessSea_i + \epsilon_{4i}$$

This full model combines economic, institutional, and geographic variables to provide a holistic account of the drivers of trade openness across African economies.

Each equation serves as an analytical scaffold for interpreting the factorial dimensions extracted through PCA and for assessing the empirical coherence of country groupings. The validity of PCA results will be cross-referenced with the sign and magnitude of estimated coefficients from these specifications.

Results and Discussion

Results

Before interpreting the PCA results, the dataset's suitability for dimensionality reduction was confirmed through the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity, both validating the adequacy of the data for factor analysis.

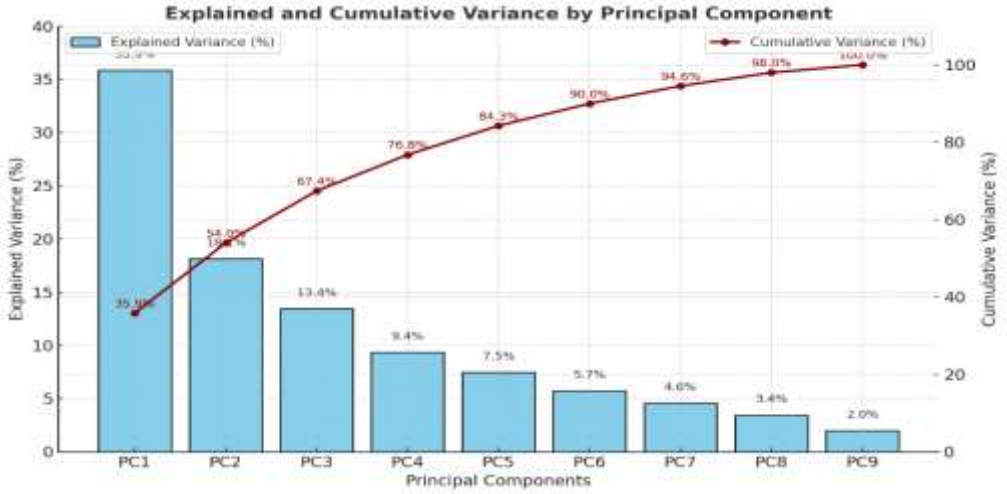
Table 2. Results of KMO and Bartlett's Test for Sampling Adequacy and Sphericity

Test	Result
KMO Sampling Adequacy	0.637
Bartlett's Chi-square (Approx.)	126.718
Degrees of Freedom (df)	36
Significance (p-value)	0.000

Source: Prepared by the author based on Python 3.13.3 outputs.

Table 2 provides the preliminary diagnostic tests for assessing the feasibility of Principal Component Analysis (PCA). The Kaiser-Meyer-Olkin (KMO) index stands at 0.637, which, while not excellent, falls within the acceptable threshold for factor analysis (typically > 0.6). Meanwhile, Bartlett's test of sphericity yields a statistically significant chi-square statistic ($\chi^2 = 126.718$, $p < 0.000$), leading to the rejection of the null hypothesis that the variables are uncorrelated. These results confirm that the correlation matrix is factorable, and the dataset is statistically appropriate for PCA.

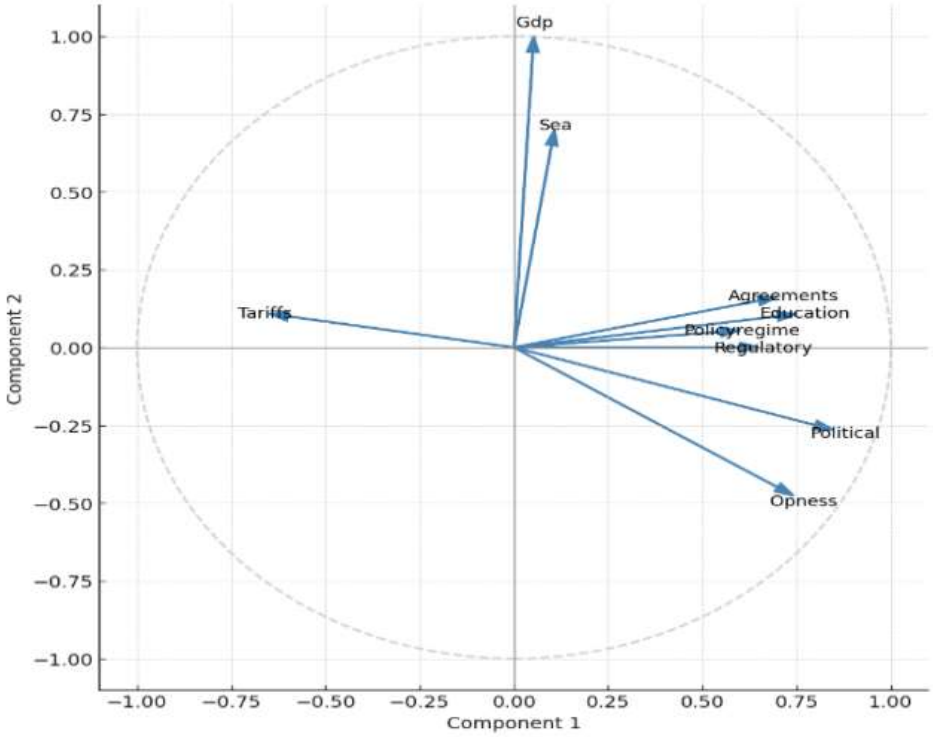
Figure 1. Explained and Cumulative Variance by Principal Component



Source: Python 3.13.3 outputs.

Figure 1 presents a dual-axis visualization of the eigenvalues obtained through PCA. The blue bars represent the variance explained by each individual component, while the red line traces the cumulative variance as more components are added. The first principal component explains 35.9% of the total variance, followed by the second (18.1%) and third (13.4%). Together, the first three components account for approximately 67.4% of the overall variability—highlighting a strong dimensional concentration. The elbow point in the graph after the third component marks a clear decline in explanatory power, suggesting that additional components offer diminishing returns. This validates the analytical decision to retain only the top two or three factors for meaningful interpretation and classification. The curve's flattening trajectory further confirms that the remaining components capture noise or marginal variance.

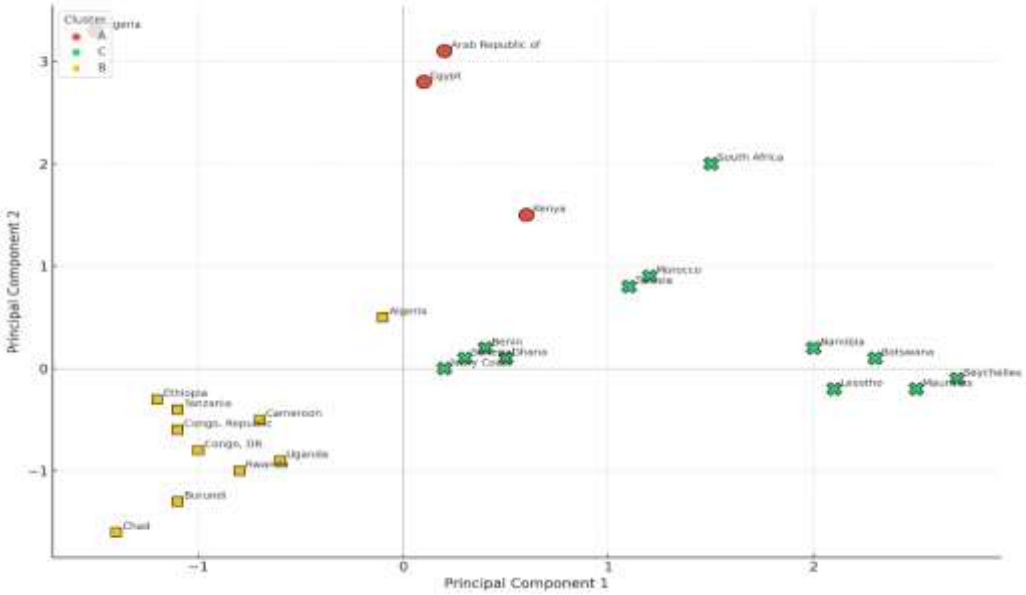
Figure 2. Correlation Circle of Variables on PC1 and PC2



Source: Python 3.13.3 outputs.

The correlation circle reveals two dominant latent dimensions structuring trade openness in Africa. Component 1 captures institutional and policy-related factors, with strong positive loadings from regulatory quality, education, democracy (policy regime), trade agreements, and openness itself. These variables cluster tightly, indicating they move together and likely form an integrated reform agenda. Tariffs lie on the opposite side, reinforcing their negative association with liberalization and institutional advancement. Component 2 is dominated by geographic and macroeconomic variables—GDP and sea access—reflecting size and locational advantages. These dimensions are orthogonal to institutional factors, suggesting distinct mechanisms. Political stability lies closer to PC1, showing moderate alignment with institutional quality. The weak projection of some variables near the center indicates limited explanatory power on these two axes. The diagram supports a dual typology: institutional reformers vs. geographically advantaged economies. The spatial divergence underscores the multidimensional nature of trade capacity among African countries.

Figure 3. PCA Projection of African Countries by Trade Openness Clusters

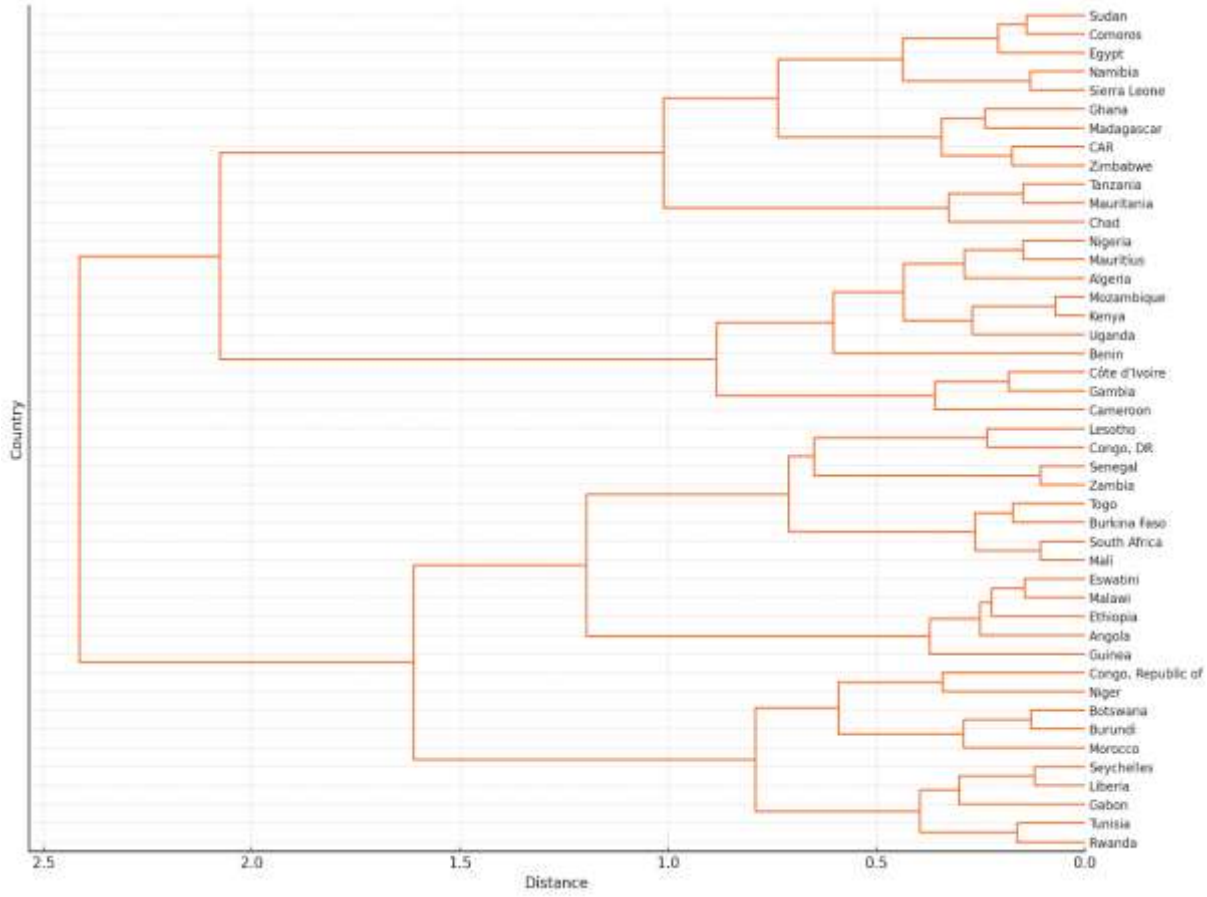


Source: Python 3.13.3 outputs.

The biplot projection along the first two principal components reveals a clear and interpretable clustering structure among African countries based on trade openness determinants. Cluster A, concentrated in the upper-left quadrant, includes countries such as Nigeria, Egypt, and Kenya, characterized by high political centrality or macroeconomic dominance but limited regulatory liberalization. These economies exhibit relatively high scores on the second principal component, likely reflecting geopolitical influence or market size, while remaining neutral or slightly negative on the first component—indicating moderate integration into global trade regimes. Their structural duality reflects a development model that relies more on political leverage and natural resources than on institutional competitiveness.

In contrast, Cluster C gathers countries like Mauritius, South Africa, Seychelles, Botswana, and Morocco, all positioned to the right of the PC1 axis, suggesting robust trade liberalization, regulatory quality, and macroeconomic openness. Their dispersion along PC2 indicates diverse geographic and structural contexts, yet all share favorable institutional profiles. Meanwhile, Cluster B, positioned in the lower-left quadrant, comprises structurally constrained economies such as Chad, Burundi, and the Democratic Republic of Congo, which are marked by low scores on both components, indicating weak institutional quality, limited openness, and geographic disadvantages. This typology illustrates the multifactorial nature of trade engagement in Africa and underscores the dual influence of institutional and structural variables in shaping trade trajectories.

Figure 4. Hierarchical Clustering Dendrogram of African Countries (Trade Typology)



Source: Python 3.13.3 outputs.

The hierarchical dendrogram provides a nuanced classification of African countries based on structural similarities in their trade openness profiles, institutional strength, and macroeconomic conditions. At lower linkage distances (left side of the diagram), we observe tightly clustered pairs such as Burundi–Chad, Tunisia–Rwanda, and South Africa–Mali, indicating high proximity in trade structure or policy orientation. These early-joining units reflect shared weaknesses or strengths, whether in market liberalization, institutional capacity, or geographic endowment. The broader agglomerations reveal regional and economic commonalities: for instance, Mauritius, Seychelles, Morocco, and Botswana coalesce into a single group, likely reflecting robust regulatory regimes, diversified economies, and advanced trade integration. Their cohesion underlines a "high-openness, high-capacity" archetype. On the opposite end, countries like Central African Republic, Niger, and Guinea remain isolated until high linkage thresholds, suggesting highly idiosyncratic or constrained profiles, characterized by either institutional fragility or structural inertia.

Mid-level clusters demonstrate mixed trajectories. For example, Kenya, Uganda, Ghana, and Côte d'Ivoire form a hybrid group, signaling intermediate trade performance underpinned by partial liberalization and developing institutional

frameworks. The inclusion of Egypt and Nigeria within larger, late-merging clusters points to their complex macroeconomic profiles—economically significant yet institutionally asymmetric and policy-volatile. The dendrogram thus reinforces the multidimensional nature of African trade openness: proximity in trade regimes does not strictly follow geographic lines, but rather reflects combinations of institutional readiness, openness metrics, and economic scale. This typology offers strategic insight for regional trade harmonization, revealing which countries can act as convergence leaders versus those needing foundational policy overhaul.

4.2. Discussion

The results of the principal component analysis (PCA) reveal that trade openness in African economies is shaped by multiple, structurally distinct dimensions. The first principal component captures a classical openness gradient, with strong positive loadings from trade-to-GDP ratios and international engagement, and strong negative loadings from tariff levels. This dimension reflects traditional trade liberalization patterns, where economies with low protection and high trade flows (e.g., Mauritius, South Africa) exhibit the highest scores (Wacziarg & Welch, 2008). In contrast, the second component is dominated by institutional indicators—such as rule of law, regulatory quality, and governance effectiveness—suggesting that institutional strength varies independently from trade volumes (Rodrik, Subramanian, & Trebbi, 2004). Countries may therefore be "open" in trade terms while suffering from weak institutional environments. This finding echoes previous research suggesting that openness can yield growth and governance benefits only when accompanied by solid institutional capacity (Busse & Gröning, 2008). A third latent dimension may reflect strategic policy orientation, distinguishing countries based on their participation in trade agreements or industrial policy alignment.

The PCA clusters generated from these components point to three broad typologies. The first includes liberal, open economies such as Mauritius, Botswana, and Morocco—countries characterized by low tariffs, active engagement in trade agreements, and moderately strong institutions (UNECA, 2020). The second cluster represents transitional states like Ghana, Kenya, and Senegal, with partial liberalization and mixed institutional performance. The third group consists of protectionist, often resource-dependent economies (e.g., Nigeria, Angola, Ethiopia), marked by high tariff rates, underdeveloped institutions, and trade structures heavily reliant on primary goods exports (Fofack, 2023). These groups confirm the multidimensional nature of openness: not all "open" countries are liberal in the same way, and not all "closed" countries suffer from identical constraints. The typological divergence uncovered aligns with critiques of one-size-fits-all liberalization approaches and supports the view that Africa's trade integration requires both differentiation and sequencing (Rodrik, 2006).

Institutional variables play a critical role in explaining trade openness outcomes. Strong institutions tend to facilitate more effective engagement with global trade systems, enhance regulatory transparency, and attract diversified foreign investment (Acemoglu & Robinson, 2012). Inversely, countries with institutional fragility are more prone to rent-seeking behavior and inefficient protectionist strategies (North, 1990). Similarly, high tariff regimes are clearly associated with low trade performance—confirming the empirical regularity that tariffs reduce the volume of trade and distort resource allocation (Yanikkaya, 2003). On the contrary, countries that have adopted regional or multilateral trade agreements, particularly those aligned with the African Continental Free Trade Area (AfCFTA), tend to score higher on openness, consistent with the projected 32% intra-African export growth by 2035 due to AfCFTA implementation (UNCTAD, 2021).

The persistence of colonial trade patterns—exporting raw materials and importing finished goods—remains a binding constraint on Africa's transformation. Many low-openness countries continue to rely on narrow commodity exports, leaving them vulnerable to external shocks and unable to leverage trade for inclusive development (Fofack, 2023). This context reinforces the importance of diversifying export baskets, improving logistics and trade infrastructure, and enhancing human capital. Equally important, it suggests that trade liberalization alone is insufficient without supportive domestic policies. Echoing Rodrik's (2006) caution, the gains from openness materialize only when trade reforms are integrated with broader developmental planning, including investment in education, institutions, and local industry.

The theoretical implications are twofold. On one hand, the evidence validates the liberal perspective that trade openness, under conducive conditions, can act as a catalyst for growth and structural transformation (Krueger, 1998). On the other, it supports neo-mercantilist views emphasizing strategic state intervention, industrial policy, and selective protectionism to ensure national development objectives are met (Okeke, 2016). The coexistence of both liberal and protectionist clusters among African economies suggests that a hybrid approach—combining market openness with policy space for industrial support—is more appropriate than a rigid adherence to either doctrine.

Conclusion

For centuries, the role of trade openness has remained at the heart of economic thought, generating persistent tensions between protectionist doctrines and liberal trade advocates. The present study reaffirms that the relationship between global trade participation and economic development is multifaceted, nuanced, and heavily context-dependent. While imports may pose competitive risks to local industries, they are also vectors of technological transfer, innovation diffusion, and access to essential

production inputs. Exports, heralded as engines of growth by the World Bank and others, necessarily rely on domestic productive capacity. In practice, however, no nation has implemented a purely autarkic or purely liberal trade model; instead, trade policy has consistently reflected a calibrated mix of openness and strategic protectionism—adjusted to temporal, geographic, and political conditions.

Our empirical investigation, based on Principal Component Analysis (PCA), sheds light on the specific factors shaping trade dynamics in African economies. The findings underscore a positive correlation between trade openness and structural enablers such as human capital, regulatory quality, and engagement in regional trade agreements. Conversely, a strong negative association was observed with high tariff rates, suggesting that protectionist strategies grounded in neo-mercantilism tend to inhibit growth. The analysis also revealed that relatively few African countries demonstrate a comprehensive trade integration profile; most remain characterized by institutional fragility and tariff-based barriers. Although many have endorsed regional frameworks like the AfCFTA, structural limitations—such as undiversified exports concentrated in primary agricultural and extractive sectors—continue to constrain their potential for complementary intra-African trade. These insights reaffirm the necessity for a multidimensional trade strategy in Africa—one that combines liberalization with targeted institutional strengthening, export diversification, and infrastructure development to convert trade into a genuine driver of inclusive growth.

In light of the findings, several policy recommendations are warranted:

- African economies must shift away from dependence on primary goods by investing in value-added sectors such as agro-processing, renewable energy, and digital services to build resilience and promote intra-African trade complementarities.
- Governments should prioritize the strengthening of regulatory institutions, legal frameworks, and contract enforcement mechanisms to foster a more conducive environment for trade and investment.
- Instead of abrupt tariff reductions, trade liberalization should be phased and strategically sequenced, ensuring domestic industries are sufficiently supported during transitional periods.
- Improving education systems, vocational training, and health outcomes will boost labor productivity and support the transition to more complex and trade-integrated economies.
- Regional integration should be accompanied by coordinated industrial policies, simplified customs procedures, and harmonized trade standards to ensure that agreements translate into tangible intra-African exchange.

References

- Abdelmalki, L., & Sandretto, R. (2017). *Le commerce international. Analyses, institutions et politiques des États*. De Boeck Supérieur.
- Acemoglu, D., & Robinson, J. A. (2010). *Why is Africa Poor?* Economic History of Developing Regions, 25(1), 21–50.
- Acemoglu, D., & Robinson, J. A. (2010). *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. Crown Business.
- Amsden, A. H. (1991). Diffusion of development: The late-industrializing model and Greater East Asia. *The American Economic Review*, 81(2), 282–286.
- Aron, J. (2000). Growth and institutions: A review of the evidence. *The World Bank Research Observer*, 15(1), 99–135.
- Azevêdo, R. (2014). *Les accords commerciaux régionaux "ne peuvent pas se substituer" au système commercial multilatéral*. WTO.
- Bagoulla, C., & Figueiredo De Oliveira, G. (2022). Ouverture commerciale, transformations structurelles et croissance économique en Afrique. *Région et développement*, 54.
- Balassa, B. (1978). The 'New Protectionism' and the international economy. *Journal of World Trade Law*, 12(5).
- Baldwin, R. E., & Krugman, P. (1988). Market access and competition: A simulation study of 16K random access memories. In R. C. Feenstra (Ed.), *Empirical Methods for International Trade* (pp. 171–197). MIT Press.
- Barro, R. J. (1996). Institutions and growth, an introductory essay. *Journal of Economic Growth*, 1(2), 145–148.
- Baudry, P. (2021). La politique économique allemande : Retour du mercantilisme à l'époque de la mondialisation ? *Revue française de science politique*, 71(2), 219–237.
- Ben Hammouda, H., Oulmane, N., & Sadni Jallab, M. (2010). À Washington : d'un consensus à l'autre. In *Crise... Naufrage des économistes ?* De Boeck Supérieur.
- Bhagwati, J. N. (1958). Immiserizing growth: A geometrical note. *Review of Economic Studies*, 25(2), 201–205.
- Bhagwati, J. N. (1995). *US trade policy: The infatuation with FTAs*. Columbia University.
- Bhagwati, J. (1998). The capital myth: The difference between trade in widgets and dollars. *Foreign Affairs*, 77.
- Boissieu, C., & Chesneau, D. (2020). *Le patriotisme économique a-t-il un sens ou la mondialisation en question?* Maxima.
- Brasseul, J. (1993). *Les nouveaux pays industrialisés*. Armand Colin.
- Brender, J. A., & Spencer, B. J. (1984). Tariff protection and imperfect competition. In H. Kierzkowski (Ed.), *Monopolistic Competition and International Trade* (pp. 194–207). Clarendon Press.
- Broad, R., & Cavanagh, J. (1999). The death of the Washington consensus? *World Policy Journal*, 16(3).
- Carey, H. C. (1865). *Principles of Social Science*. Lippincott.
- Child, J. (1690). *A New Discourse of Trade*.
- CNUCED. (2017). *Le commerce comme catalyseur de la mise en œuvre du Programme 2030*. Nations Unies.

- CNUCED. (2021). *Rapport sur le développement économique en Afrique 2021*. Nations Unies.
- Cohen, D. (1997). *Richesse du monde, pauvreté des nations* (2nd ed.). Flammarion.
- Colbert, J.-B. (1863). *Instruction aux maîtres des requêtes*. In P. Clément (Ed.), *Lettres, instructions et mémoires de Colbert* (Vol. II).
- Cramer, C., Sender, J., & Oqubay, A. (2020). *African Economic Development: Evidence, Theory, Policy*. Oxford University Press.
- Rodrik, D. (2008). *Nations et mondialisation* (C. Jaquet, Trans.). Éditions La Découverte.
- Delaite, M.-F., & Poirot, J. (2010). Patriotisme économique et développement durable. *Développement durable et territoires*, 1(3).
- Deyo, F. C. (1987). *The Political Economy of the New Asian Industrialism*. Cornell University Press.
- Dollar, D., & Kraay, A. (2001). Trade, growth, and poverty. *World Bank Policy Research Working Paper No. 632684*.
- Ekodo, R., & Ngomsi, A. (2017). Trade openness and growth: Empirical evidence from CEMAC. *Journal of Economics and Development Studies*, 5(3), 58–67.
- Fitoussi, J.-P., & Saraceno, F. (2013). European economic governance: The Berlin-Washington consensus. *Cambridge Journal of Economics*, 37(3), 479–496.
- Francis, P. R. (2004). Mettre fin à la pauvreté grâce au commerce. *Chronique de l'ONU*.
- Fontagné, L., & Guérin, J.-L. (1997). L'ouverture catalyseur de la croissance. *Économie internationale*, 71(3).
- Friedman, M., & Friedman, R. (1980). *Free to Choose*. Harcourt.
- Gautier, A. (1981). *Les pays ateliers d'extrême-Orient*. Bréal.
- Gern, J.-P. (1993). L'apport du commerce extérieur à la croissance. *Revue Tiers Monde*, 34(133).
- Graham, F. D. (1923). The theory of international values re-examined. *Quarterly Journal of Economics*, 38(1), 54–86.
- Grier, K. B., & Grier, R. M. (2021). The Washington consensus works: Causal effects of reform, 1970–2015. *Journal of Comparative Economics*, 49, 59–72.