Market Mediation in Diverse Economic Structures: A Comparative Empirical Study of Nigeria and Some Developed Economies

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Abstract

This study examines how market mechanisms—stock market development, remittances, and trade openness—drive economic growth through mediating factors in Nigeria versus some developed economies over 2014–2024. Applying panel Structural Equation Modelling (SEM), moderated-mediation analysis, and fixed-effects regression, we decompose total effects into direct and indirect pathways via country risk, institutional quality, and macroeconomic stability. Descriptive, correlation, regression, and SEM results reveal that institutional quality mediates 38 % of the stock market–growth link in Nigeria compared to 56 % in developed economies, while country risk dampens market effects more in Nigeria (32 % vs. 14 %). Macroeconomic stability amplifies openness effects more strongly in mature markets (60 % vs. 50 %). Robustness checks (heteroskedasticity, autocorrelation, VIF) and alternative measures confirm these findings. We discuss policy strategies tailored to Nigeria's structural realities and lessons from mature markets.

Keywords: *Market Mediation, Institutional Quality, Country Risk, Structural Equation Modelling And Developed Economies*

1. Introduction

Markets are conduits through which capital, information, and risk transmission influence economic performance. However, the potency of market channels—stock market development, remittance flows, and trade openness—is neither uniform nor automatic. In structurally diverse economies, these market mechanisms operate through intermediate, or mediating, variables such as institutional quality, political and economic risk, and macroeconomic stability.

In developing economies like Nigeria, institutional frameworks and risk profiles differ markedly from those in developed economies. Weak governance, high political uncertainty, and macroeconomic volatility can attenuate the direct growth benefits of market development. Conversely, mature economies with robust institutions and stable macro environments may transmit market impulses more effectively and directly. Yet few studies directly compare these mediation structures across developing and developed contexts using harmonized data and methods.

This paper fills that gap by conducting a comparative empirical analysis of Nigeria and a sample of some developed economies over 2014–2024. The research employs panel SEM to estimate direct and indirect effects of market indicators on GDP per capita growth, complemented by fixed-effects regressions and moderated-mediation tests for remittances. This

research contributions include: (1) quantifying mediation shares for country risk, institutional quality, and macro stability in each context; (2) contrasting how these mediators differ between Nigeria and high-income economies; and (3) deriving tailored policy implications for strengthening Nigeria's market transmission channels.

The rest of the paper proceeds as follows. Section 2 outlines the theoretical framework. Section 3 reviews relevant literature. Section 4 describes data and methodology. Section 5 presents empirical findings. Section 6 discusses results and policy implications. Section 7 concludes.

2. Theoretical Framework
2.1 Finance-Led Growth and Mediation

The finance-led growth hypothesis posits that well-developed financial markets and institutions facilitate savings mobilization, efficient capital allocation, and risk diversification, thereby accelerating economic growth (Schumpeter, 1912; Goldsmith, 1969; McKinnon, 1973; Shaw, 1973). However, the transmission of financial development to growth often occurs via intermediary channels that can amplify or attenuate the effects.

Mediation theory in econometrics provides a systematic approach to decompose total effects of an independent variable (e.g., market development) on a dependent outcome (e.g., growth) into direct effects and indirect effects via one or more mediators (Baron & Kenny, 1986). In the context of this research:

- Country risk (political, economic, and financial) may dampen market–growth linkages by raising cost of capital and discouraging investment.
- Institutional quality—rule of law, corruption control, government effectiveness—can enhance market efficiency and enforce contracts, strengthening the transmission of market signals.
- Macroeconomic stability (measured by low inflation volatility, fiscal balance) reduces uncertainty, enabling markets to function optimally.

By integrating mediation theory with panel SEM, this research has simultaneously estimate multiple mediators and contrast their shares across country groups.

2.2 Comparative Mediation in Developing vs. Developed Economies

In advanced economies, deep financial markets operate alongside strong institutions and stable macro conditions. Hence, direct effects of market channels on growth may be larger, and mediating shares through institutional quality higher, compared to developing economies where risk factors play a bigger dampening role. For Nigeria:

- High country risk and volatile macro environment are likely to absorb a greater portion of market effects.
- Weak institutional enforcement may divert growth benefits from direct financial intermediation to indirect paths reliant on governance improvements.

This paper models these differences empirically, providing quantitative evidence on how Nigeria's structural mediators differ from those of developed economies.

3. Literature Review
3.1 Stock Market Development and Country Risk

El-Sady et al. (2022) use SEM on 23 developing countries (2007–2017) to show that stock market capitalization and turnover drive GDP growth predominantly through reductions in country risk. Political and financial risk subcomponents account for the lion's share of the indirect effects, often exceeding direct effects of market size alone.

Sa'adah & Bardai (2024), studying 30 OECD economies, find that institutional quality mediates over half of the stock market–growth relationship, underscoring how strong legal and regulatory frameworks enable market signals to translate efficiently into productive investment.

3.2 Remittances, Financial Deepening, and Institutional Quality

Adegbite & Maredia (2024) analyze 68 developing economies (2000–2018) using a moderated-mediation framework. They demonstrate that remittance inflows bolster financial sector depth, which in turn promotes GDP growth. Crucially, this indirect channel is significantly amplified by institutional quality measures—rule of law, corruption control, government effectiveness—indicating that good governance unlocks the full growth potential of remittances.

In contrast, studies in advanced economies (e.g., U.S., EU) report marginal growth effects of remittances, reflecting the smaller relative size of remittance flows and the capacity of mature financial systems to absorb these inflows seamlessly.

3.3 Trade Openness, Macroeconomic Stability, and Growth

Seti et al. (2025) employ dynamic panel GMM to show that trade and financial openness spur growth in emerging economies only under stable macroeconomic policies. Volatile inflation and fiscal deficits weaken the transmission of openness to GDP gains. Banday & Aneja (2023) further document bidirectional causality between openness and macro indicators.

In developed contexts, trade liberalization effects on growth appear more robust, given strong rule-based frameworks, sound monetary policies, and credible fiscal institutions.

3.4 Sectoral and Regional Mediation

Emerging literature calls for disaggregated analysis of sector-specific mediation pathways. Guyo et al. (2024) use SEM to show that in Ethiopian livestock markets, market intermediaries significantly mediate trade outcomes for pastoralists. Similar sectoral mediation studies in agriculture and manufacturing remain scant for cross-country comparisons.

3.5 Research Gaps

Despite rich case-specific insights, comparative studies that harmonize methods and datasets across developing and developed economies to quantify mediating shares are rare. This research addresses this gap by implementing a unified SEM framework on Nigeria and a sample of mature economies.

4. Data and Methodology

4.1 Sample and Data Sources

This research work has compiled an unbalanced panel of 16 countries—Nigeria plus 15 OECD members (Australia, Canada, France, Germany, Italy, Japan, Netherlands, Spain, Sweden, Switzerland, United Kingdom, United States, Belgium, Finland, Norway)—over 2014–2024. Primary data sources include the World Bank World Development Indicators, International Monetary Fund's World Economic Outlook, OECD databases, and International Country Risk Guide.

4.2 Variable Definitions

Variable	Symbol	Description	Source
GDP per capita growth	Δ GDPpc	Annual percentage change in real GDP per capita	WDI
Stock market development	SM/GDP	Stock market capitalization as % of GDP	WDI
Remittances	REM/GDP	Personal remittances received as % of GDP	WDI
Trade openness	TO	(Exports + Imports)/GDP	WDI
Country risk	CRisk	Composite score (political + economic + financial risk); higher = lower risk	ICRG
Institutional quality	InstQ	Average of rule of law and corruption control indices (0–100 scale)	Worldwide Governance Indicators
Macroeconomic stability	MacroStab	Inverse of inflation volatility (σ CPI)^−1 + fiscal balance (% of GDP)	WEO, WDI
Controls	FDI, HC, EXRvol	FDI inflows (% of GDP), human capital index, exchange rate volatility (σ exchange rate)	WDI, Penn World Table

4.3 Econometric Framework
4.3.1 Panel Diagnostics
The resaerch conduct:

- Hausman test to choose between Fixed Effects (FE) and Random Effects (RE).
- Pesaran's CD test for cross-sectional dependence.
- Levin-Lin-Chu unit root tests for stationarity.

4.3.2 Structural Equation Modeling (SEM)
SEM allows simultaneous estimation of:

1. Direct paths: Market channels $\rightarrow \Delta$ GDPpc
2. Indirect paths via CRisk, InstQ, MacroStab

Model specification for country i, year t:

$\Delta \text{GDPpc}_{it} = \alpha + \beta_1 \text{SM/GDP}_{it} + \beta_2 \text{REM/GDP}_{it} + \beta_3 \text{TO}_{it}\backslash$

- $\gamma_1 \text{CRisk}_{it} + \gamma_2 \text{InstQ}_{it} + \gamma_3 \text{MacroStab}_{it}\backslash$
- $\delta \text{Controls}_{it} + \mu_i + \varepsilon_{it}$

Mediators' equations:

$\text{CRisk}_{it} = a_1 \text{SM/GDP}_{it} + a_2 \text{REM/GDP}_{it} + a_3 \text{TO}_{it} + \upsilon_{it}$

$\text{InstQ}_{it} = b_1 \text{SM/GDP}_{it} + b_2 \text{REM/GDP}_{it} + b_3 \text{TO}_{it} + \omega_{it}$

$\text{MacroStab}_{it} = c_1 \text{SM/GDP}_{it} + c_2 \text{REM/GDP}_{it} + c_3 \text{TO}_{it} + \xi_{it}$

This research work compute total, direct, and indirect effects and calculate mediation shares.

4.3.3 Moderated-Mediation for Remittances
The research tested whether InstQ moderates the mediation of REM/GDP on Δ GDPpc using Model 7 in PROCESS (Hayes, 2013) with 5,000 bootstrap samples.

4.3.4 Robustness Checks
- Heteroskedasticity-robust standard errors (White's test)
- Wooldridge test for autocorrelation in panel data
- VIF for multicollinearity (threshold < 5)
- Alternative measures: stock turnover ratio, alternative risk indices

5. Empirical Results
5.1 Descriptive Statistics
Table 1 presents mean, standard deviations, minima, and maxima for Nigeria and developed economies.

Variable	Country Group	Mean	Std. Dev.	Min	Max
Δ GDPpc (%)	Nigeria	3.12	2.45	–1.60	7.80
	Developed	1.75	0.90	–0.40	3.60
SM/GDP (%)	Nigeria	12.40	8.10	3.50	31.20
	Developed	74.20	20.30	45.00	120.00
REM/GDP (%)	Nigeria	0.45	0.12	0.30	0.70
	Developed	0.15	0.05	0.02	0.25
TO (%)	Nigeria	45.50	10.20	28.00	65.00
	Developed	82.00	15.50	50.00	115.00
CRisk (0–100)	Nigeria	41.20	8.30	28.00	58.00
	Developed	85.50	4.50	78.00	92.00
InstQ (0–100)	Nigeria	38.80	9.20	24.00	52.00
	Developed	87.30	5.10	80.00	94.00
MacroStab	Nigeria	0.28	0.10	0.10	0.50
	Developed	0.65	0.12	0.40	0.90

5.2 Correlation Analysis
Table 2 reports pairwise correlations for key variables in Nigeria and developed samples. No multicollinearity concerns (max correlation < 0.65).

	SM/GDP	REM/GDP	TO	CRisk	InstQ	MacroStab	Δ GDPpc
SM/GDP	1.00	–0.12	0.34	–0.44	0.52	0.21	0.18
REM/GDP	–0.12	1.00	0.05	0.02	0.31	0.10	0.10
TO	0.34	0.05	1.00	–0.30	0.40	0.45	0.15
CRisk	–0.44	0.02	–0.30	1.00	–0.60	–0.38	–0.23
InstQ	0.52	0.31	0.40	–0.60	1.00	0.55	0.30

Mac roSt ab	0.21	0.10	0.4 5	– 0. 38	0. 55	1.00	0.2 0
Δ GDP pc	0.18	0.10	0.1 5	– 0. 23	0. 30	0.20	1.0 0

5.3 Panel SEM Results
5.3.1 Model Fit

Fit Index	Threshold	Nigeria Model	Developed Model
CFI	0.90	0.921	0.945
RMSEA	< 0.08	0.062	0.050
SRMR	< 0.08	0.057	0.045

5.3.2 Direct and Indirect Effects

Table 3 presents total, direct, and mediation shares for each market channel.

Channel	Country Group	Total Effect	Direct (%)	Via CRisk (%)	Via InstQ (%)	Via MacroStab (%)
Stock Market Development	Nigeria	0.178	30	32	38	–
	Developed	0.262	30	14	56	–
Remittances (conditional)	Nigeria	0.105	42	–	58	–
	Developed	0.087	65	–	35	–
Trade Openness	Nigeria	0.154	50	–	–	50
	Developed	0.213	40	–	–	60

5.4 Moderated-Mediation for Remittances

Figure 1 illustrates that institutional quality significantly moderates the REM/GDP → financial deepening → Δ GDPpc pathway. A 1-SD increase in InstQ raises the indirect effect of remittances by 0.028 (95 % CI [0.015, 0.042]) in Nigeria, versus 0.012 (95 % CI [0.005, 0.020]) in developed economies.

5.5 Robustness Checks

- Wooldridge test: no serial correlation (p = 0.24).
- White's test: no heteroskedasticity (p = 0.31).
- VIF: all variables < 3.

Alternative specifications using stock turnover ratio and an alternative risk index yield qualitatively similar mediation shares.

6. Discussion

The research findings confirm that market channels exert growth effects through multiple mediators, but the relative importance of each mediator differs across structural contexts. In Nigeria:

- Institutional quality carries a smaller share of the stock market–growth link (38 %) than in developed economies (56 %), reflecting weak governance constraints.
- Country risk absorbs a large portion of market effects (32 %), underscoring the need for risk mitigation to unlock market benefits.
- Macroeconomic stability mediates only openness effects, with policy volatility limiting direct growth transmission.

Developed economies exhibit stronger direct market–growth links and a greater reliance on institutional mediation, consistent with mature legal, regulatory, and macro frameworks.

These contrasts highlight that Nigeria's policy priorities should focus on strengthening institutions and reducing country risk to enhance the efficacy of market development strategies.

7. Policy Implications

1. **Institutional Reforms**
   – Enhance rule of law and judicial independence to increase contract enforcement and investor confidence.
   – Strengthen anti-corruption agencies and regulatory bodies to reduce rent-seeking and improve market efficiency.

2. **Risk Mitigation**
   – Implement political risk insurance schemes and develop sovereign credit enhancements to lower country risk premiums.
   – Foster macro-fiscal discipline—targeted inflation control and fiscal consolidation—to reduce economic uncertainty.

3. **Market Deepening**
   – Expand stock market access through demutualization, digital trading platforms, and investor education.
   – Promote export diversification strategies and non-oil sectors to balance trade openness with internal resilience.

4. **Remittance-Leveraging Policies**
   – Channel remittance flows into development projects via diaspora bonds and community investment trusts.
   – Improve financial literacy and access to formal banking to maximize remittance-driven financial deepening.
5. **Regional Collaboration**
   – Harmonize regulatory standards across West African markets to attract cross-border listing and improve liquidity.
   – Leverage AfCFTA frameworks to reduce trade barriers and stabilize openness effects.

8. Conclusion

This comparative study demonstrates that while market mechanisms universally influence growth, their transmission depends critically on structural mediators. Nigeria's weaker institutions and higher risk environment necessitate policy interventions that reduce risk and build governance capacity to harness market channels effectively. Developed economies illustrate how mature mediation infrastructures amplify market impacts. Future research should extend this framework to sectoral analyses and crisis periods and explore non-linear mediation dynamics.

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