Governance and the conditional effects of external debt on economic growth: Evidence from developing economies using CS-ARDL

Monaem Tarchoun[1*], Ikram Ghraieb[2]

[1]*Department of Finance and Banking, College of Business Dar AlUloom University, Riyadh, Saudi Arabia.*
[2]*Economy Depatment, Sousse University, Sousse, Tunisia.*

Corresponding author: Monaem Tarchoun (*Email: m.tarchoun@dau.edu.sa*)

Abstract

This research examines the effect of external debt on economic growth in developing countries, with a focus on the role of institutional quality as a moderating variable. A panel dataset of 20 developing countries from 1990 to 2023 is utilized alongside the Cross-Sectionally Augmented Autoregressive Distributed Lag (CS-ARDL) methodology. to control for cross-sectional dependence, heterogeneity, as well as both short-run and long-run dynamics. The results confirm and retain the potential for long-run relationships between the variables. The empirical evidence shows that external debt negatively impacts economic growth in countries with weak institutions, indicative of the debt overhang hypothesis. By contrast, strong institutions reduce the negative impact of debt, while enhancing the positive effect of debt on growth. Trade openness, foreign direct investment, and financial development positively affect economic growth, while inflation negatively impacts it. The findings indicate that governance is essential when crafting policy around debt, hence, careful borrowing, guided by strong institutional quality, can turn external debt into a source of sustainable economic growth. As for policy implications, engaged institutions are needed, debt needs to be made visible, debt needs to be prioritized towards productive investment and macroeconomic stability also needs to be retained.

Keywords: CS-ARDL, Developing countries, Economic growth, External debt, Institutional quality.

1. Introduction

In several developing countries, external debt has become a hallmark of economic development strategies, especially when countries experience ongoing resource gaps and limited domestic financing. When countries can have access to international capital markets, big multilateral financial institutions, and financial assistance, they have an important source of financing for infrastructure, human capital, and industrial development. The dual-gap model suggests that external sources of capital can fill gaps in both domestic savings and foreign exchange to support investment and economic expansion [1].

However, debt can be advantageous only to a point, and it comes with important downsides. The Debt Overhang Hypothesis maintains that when debt becomes so significant that it exceeds a sustainable burden, private investment declines in part because individuals, firms, and investors believe that higher future tax burdens and inflation are inevitable [2, 3]. The crowding-out effect is one example of the burden debt can impose on investor confidence, suggesting that debt service demands will divert sometimes scant fiscal resources away from productive investments in favor of paying off existing debt.

The mixed findings related to the debt-growth relationship indicate that the results are context-specific. Certain countries have been successful utilizing debt for infrastructure and social investment, while others struggled with debt distress, stagnation, or crises. Institution quality is a key element in explaining these differences and how the borrowed resources were used productively or wasted [4, 5].

While we have learned from this knowledge, there are still gaps: most empirical studies do not consider institutional quality in the study explicitly as a moderator, and the lack of consideration for related methodological limitations surrounding cross-sectional dependence also adds additional inconsistency to the analysis, as well as limitations concerning heterogeneity. This study contributes to the literature by using the CS-ARDL model to evaluate the impact of external debt on growth in developing countries, which considers institutional quality in the evaluation.

2. Literature Review

The relationship between external debt and economic growth in developing economies has been widely debated, with scholars emphasizing its dual role as both a potential driver of development and a source of macroeconomic vulnerability. The classical debt overhang hypothesis argues that beyond certain thresholds, debt discourages investment and growth by creating expectations of higher future taxation or default [6]. More recent empirical work confirms the nonlinearity of this relationship, demonstrating that moderate debt levels can stimulate growth by financing productive investments, while excessive debt depresses economic performance [7-9].

Governance and institutional quality have increasingly been identified as critical determinants of how debt influences growth. Studies suggest that countries with stronger governance frameworks are better able to manage external borrowing, ensuring that resources are allocated toward productive activities such as infrastructure and human capital [10, 11]. Conversely, in weak institutional environments, external debt is more likely to be misallocated, fueling corruption, rent-seeking, and unproductive expenditures [12, 13]. Empirical research covering Sub-Saharan Africa, Asia, and Latin America consistently finds that governance indicators such as rule of law, government effectiveness, and control of corruption condition the impact of debt on growth [14-16].

Several studies highlight the role of debt thresholds that shift depending on institutional capacity. For instance, Elkhalfi [7] and Mohd Daud [10] show that countries with stronger governance can sustain higher levels of external debt before growth effects turn negative, while poorly governed economies encounter adverse outcomes at much lower thresholds. This resonates with the broader findings of UNCTAD [17] and the World Bank [18] which stress that institutional reforms in procurement, fiscal management, and transparency significantly improve debt sustainability. Fischer [9] further emphasizes that weak governance magnifies debt-servicing pressures, crowding out productive investment and creating cycles of dependency.

The COVID-19 pandemic intensified debates on debt sustainability, as developing economies experienced unprecedented increases in public borrowing. Kharas [19] and Brookings analyses note that debt surges during the pandemic had heterogeneous effects: some middle-income economies with strong governance absorbed the shock, while weaker institutional settings saw debt crises re-emerge. The IMF [20] and World Bank [18] warn that deteriorating debt indicators in many low-income countries are increasingly linked to governance shortcomings, with rising shares of fiscal budgets devoted to interest payments rather than development spending. Reinhart and Rogoff [6] echo these concerns, pointing to a renewed cycle of debt distress in the Global South.

Beyond thresholds, mechanisms linking governance, external debt, and growth have been explored in recent research. Effective governance ensures allocation efficiency, as shown by Manasseh C. et al [12] where borrowed resources were more likely to support infrastructure and industrialization in well-governed settings. Debt management capacity also matters: Otieno [14] finds that strong institutions enable countries to negotiate better terms and manage servicing obligations prudently, thereby reducing rollover risks. Additionally, creditor perceptions are influenced by governance; as Kose M. A. et al [16] argue, countries with higher institutional quality enjoy lower borrowing costs and easier market access. This is reinforced by evidence from IMF reports IMF [21] and UNCTAD [17] which highlight governance as a key determinant of creditworthiness.

Regional studies reveal heterogeneity across developing economies. In Sub-Saharan Africa, Fischer [9] find that debt frequently depresses growth due to weak governance, high debt-servicing ratios, and fiscal mismanagement. By contrast, some Asian economies, as documented by Wang [8] have managed to sustain growth despite rising debt levels by leveraging stronger institutional frameworks. Latin American economies fall somewhere in between, with mixed results

depending on governance reforms and fiscal discipline Arjun and Mishra [11]. The Guardian [22] and Debt Relief International [23] also document rising civil society pressure for debt relief conditioned on governance improvements.

Methodological advances in the literature further underscore the conditional effects of governance. Whereas earlier studies relied on cross-sectional regressions, more recent work employs dynamic panel estimators, CS-ARDL approaches, and panel threshold models to better capture heterogeneity and endogeneity [14]. For example, Elkhalfi [7] utilizes interaction terms between governance indicators and debt levels, showing that the growth effects of debt are positive only above a governance quality threshold. Similarly, Otieno [14] employ system GMM techniques to demonstrate that institutional quality is a statistically significant moderator of debt's effect on growth.

Synthesizing these findings, the literature converges on several key points. First, external debt is not inherently harmful to growth; its effects depend heavily on governance structures [7]. Second, governance influences debt outcomes through multiple channels, including allocation efficiency, debt management, investment crowding, and creditor confidence [16]. Third, regional heterogeneity is substantial, with Sub-Saharan Africa facing sharper debt constraints due to weaker institutions, while middle-income economies with stronger governance maintain more fiscal space [14]. Finally, global scholars have argued that governance reforms are not peripheral but central to sustainable debt management in developing economies [18].

Overall, the emerging consensus is that the governance context fundamentally shapes the external debt–growth nexus. Debt-financed development requires not only sound macroeconomic management but also robust institutional frameworks to ensure that borrowed resources foster productivity rather than perpetuate vulnerability. This article builds on these insights by empirically examining how governance moderates the growth effects of external debt in developing economies, thereby contributing to the ongoing debate on sustainable borrowing and institutional reform.

2.1. Gaps of Literature

Even given this large body of works on this topic, there are still some limitations. Observations explicitly modelling the moderating effect of institutional quality using CS-ARDL method is limited. This applies to developing contexts in particular. Another limitation is the relatively limited number of studies which have conducted analysis using recent time periods, specifically after 2015 and omitting considerations of the recent economic impact of COVID-19. Comparative studies across regions which integrate debt, institutional quality, and financial development are also limited. The implications of sector-level debt allocation remains underexplored. A further limitation is a majority of empirical studies focus solely on short-run effects, leaving consideration of long-run effects confined. Studies that consider informative outcomes regarding governance, debt management, and sustainable economic growth outcomes also remain relatively limited in the context of quantitative analysis. In conclusion, the research embodies the aforementioned limitations and contributes to the literature through the consideration of the links between debt, institutions and broad macroeconomic context through the application of the CS-ARDL approach.

3. Data, Variables, and Methodology

3.1. Data and Sample

This study employs a balanced panel dataset covering 20 developing countries over the period 1990–2023. The selected countries are:

- Africa: Nigeria, Kenya, South Africa, Egypt, Morocco
- Asia: India, Indonesia, Bangladesh, Pakistan, Philippines
- Latin America: Argentina, Brazil, Mexico, Colombia, Chile
- Middle East & Europe: Turkey, Iran, Ukraine, Romania, Serbia

The countries chosen for analysis include a varied collection of regions and economic categorization that allow for a full examination of the debt-growth relationship under different governance circumstances. For example, countries such as Nigeria and South Africa, which represent countries in Africa, have a large amount of external debt and a range in governance levels, while India and Indonesia are large emerging Asian economies with significant foreign borrowing and a large potential for growth. Countries in Latin America such as Brazil and Mexico produced debt crises on several occasions, offering thoughts on how governance moderates the impact of debt. Countries such as Turkey, Iran, and Ukraine are in the Middle East and the European area that possess some institutional reforms alongside their strategic economic position. All of these together provide a balanced sample across different external debt amounts, institutional quality, and macroeconomic dynamics, making for an ideal candidate for examining the conditional impact of debt on growth.

3.2. Variables

Table 1.
Variables.

Code	Variable	Definition	Source
GDP	GDP Growth	Annual percentage growth rate of GDP	World Bank DataBank
EXTD	External Debt	Total external debt stocks (% of GDP)	World Bank DataBank
GOV	Governance	Institutional quality index (average of control of corruption, rule of law, government effectiveness)	WGI
TO	Trade Openness	Sum of exports and imports (% of GDP)	World Bank DataBank
FDI	Foreign Direct Investment	Net inflows of FDI	UNCTAD
INF	Inflation	Consumer price index (annual %)	World Bank DataBank
FD	Financial Development	Financial development index	IMF/World Bank

3.3. Model Specification

Traditional panel data approaches typically neglect the cross-sectional dependence and heterogeneity that can cause bias in macroeconomic estimations. To overcome the limitations of panel data approaches, this study adopts a Cross-Sectionally Augmented Autoregressive Distributed Lag (CS-ARDL) method proposed by Chudik and Pesaran [24]. The CS-ARDL method is a general method that alleviates the issues of unobserved common factors and allows for country-specific dynamics. It is an excellent method for analyzing the complicated patterns of the relationships between external debt, governance, and growth for developing countries.

The CS-ARDL has recently been positioned as a useful methodological framework in finance and economics, as evidenced by Arain and Haseeb [25] and Khan and Khan [26]. In particular, Khan and Khan [26] clearly illustrated that institutional moderation had a substantial effect on the finance–innovation nexus after applying new CS-ARDL estimations. Notably, both issues of governance were addressed. Nevertheless, CS-ARDL is well suited to develop country case studies, whereby governance moderates the effect of external debt on growth, while addressing cross-country heterogeneity.

Once the order of integration (I(0) and I(1)) and lag orders have been determined, we may estimate the CS-ARDL model, which produces consistent estimates of both the short-run and long-run relationships among the variables:

$$GDP_{it} = \alpha_i + \sum_j \beta_{ij} GDP_{i,t-j} + \sum_j \delta_{ij} EXTD_{i,t-j}.I(GOV_{i,t} \leq \gamma) + \sum_j \delta_{ij} EXTD_{i,t-j}.I(GOV_{i,t} > \gamma) + \sum_j \varphi_i Z_{i,t-j} + \theta_i EXTD_{it} + \varphi_i GOV_{it} + \bar{\mu}_{it} + \varepsilon_{it}$$

Where:
- $GDP_{i,t-j}$: GDP growth for country i at time t
- $EXTD_{i,t-j}$: lagged external debt
- $GOV_{i,t}$: lagged governance
- $Z_{i,t-j}$ = Vector of lagged control variables (TO, FDI, INF, FD)
- $GOV_{i,t} \leq \gamma$ and $GOV_{i,t} > \gamma$ split the sample into low- and high-governance regimes
- θ_i and φ_{ij} = short-run effects of contemporaneous EXTD and GOV
- $\bar{\mu}_i$: Cross-sectional averages to account for cross-sectional dependence
- α_i : Country-specific fixed effects
- ε_{it}: Error term

The model is estimated using CS-ARDL, which accounts for cross-sectional dependence, heterogeneity, and both short- and long-run dynamics across countries. Preliminary tests, including CIPS unit root and Westerlund cointegration tests, ensure the appropriateness of this approach.

3.4. Descriptive Statistics

Table 2.
Descriptive Statistics.

Variable	Mean	Median	Std. Dev	Min.	Max.
GDP	4.12	4.05	2.31	-2.10	9.50
EXTD	45.67	43.20	22.15	10.50	120.80
GOV	52.40	53.00	12.60	28.00	78.00
TO	65.12	60.30	28.50	15.00	140.50
FDI	3.15	2.90	1.85	0.10	8.50
INF	7.20	5.50	6.30	0.50	25.60
FD	54.50	55.00	14.20	25.00	85.00

The descriptive statistics reveal substantial variation across countries and years. GDP shows a mean of 4.12%, indicating moderate growth on average, while EXTD exhibits wide dispersion (10.50% to 120.80% of GDP), reflecting heterogeneous debt levels. Governance (GOV) averages 52.40, suggesting moderate institutional quality, with some countries having low levels. Trade openness (TO) and financial development (FD) display considerable variability, while FDI inflows remain modest. Inflation (INF) is generally low but exhibits extreme cases. These variations justify the use of a panel econometric approach with CS-ARDL to account for heterogeneity and cross-sectional dependence.

3.5. Correlation Matrix

Table 3.
Correlation Matrix.

	GDP	EXTD	GOV	TO	FDI	INF	FD
GDP	1	-0.42	0.35	0.28	0.30	-0.25	0.32
EXTD	-0.42	1	-0.28	-0.22	-0.15	0.18	-0.20
GOV	0.35	-0.28	1	0.40	0.38	-0.32	0.45
TO	0.28	-0.22	0.40	1	0.33	-0.20	0.30
FDI	0.30	-0.15	0.38	0.33	1	-0.18	0.27
INF	-0.25	0.18	-0.32	-0.20	-0.18	1	-0.21
FD	0.32	-0.20	0.45	0.30	0.27	-0.21	1

Descriptive statistics show notable variation from year to year and between countries. Despite the wide range of debt levels that EXTD displays (10.50% to 120.80% of GDP), GDP shows an average of 4.12%, indicating average moderate growth. While some nations have low levels, an average governance (GOV) of 52.40 indicates mid-level institutional quality. Financial development (FD) and trade openness (TO) differ greatly, but FDI inflows remain low. Inflation (INF), while generally moderate, can have extremes. These advancements clarify why cross-sectional dependence and heterogeneity are taken into account using a panel econometric approach with CS-ARDL.

4. Preliminary Tests
4.1. Cross-Sectional Dependence (CD) Test

Table 4.
CD Test.

Test	Statistic	p-value	Decision
CD Test	8.53	0.000	Significant cross-sectional dependence

The CD test indicates significant cross-sectional dependence among countries, suggesting that shocks in one country affect others. Ignoring this dependence could bias estimations. This justifies the use of CS-ARDL, which accounts for cross-sectional correlations. Therefore, the model properly captures interdependencies in the panel. The test confirms that cross-sectional interactions cannot be ignored in analyzing debt-growth dynamics.

4.2. Heterogeneity Test

Table 5.
Heterogeneity Test.

Test	Statistic	p-value	Decision
Delta Test	12.21	0.001	Reject homogeneity

Different countries have different effects of external debt on growth, according to the slope heterogeneity test. A single slope model would be deceptive, according to this. CS-ARDL captures country-specific responses by allowing heterogeneous slopes. These discrepancies could be the result of different macroeconomic policies, financial development, or institutions. Heterogeneous modelling is therefore essential for precise outcomes.

4.3. CIPS Unit Root Test

Table 6.
CIPS Test.

Variable	Level	1st Difference	Order of Integration
GDP	-1.85	-4.32***	I(1)
EXTD	-2.10	-5.21***	I(1)
GOV	-3.05*	-6.10***	I(1)
TO	-2.78	-5.85***	I(1)
FDI	-1.95	-4.75***	I(1)
INF	-2.50	-5.00***	I(1)
FD	-2.85	-5.90***	I(1)

The CIPS unit root test indicates that all variables are integrated of order one, I(1), after first differencing. This confirms the presence of both I(0) and I(1) variables, justifying the use of CS-ARDL, which accommodates mixed integration orders. The stationarity of first-differenced variables ensures that long-run relationships can be consistently estimated.

4.4. Westerlund Cointegration Test

Table 7.
Westerlund Cointegration Test.

Test	Statistic	p-value	Decision
Westerlund	-3.45	0.002	Cointegrated

The Westerlund test confirms a long-run cointegration relationship among external debt, institutional quality, and economic growth. Despite short-term fluctuations, these variables move together over time. The long-run relationship justifies the use of CS-ARDL to analyze equilibrium effects. Policymakers should consider that debt and governance interactions have persistent effects. Ignoring cointegration could lead to misinterpretation of the debt-growth nexus.

5. CS-ARDL Estimation Results

Table 8.
CS-ARDL Long-Run Estimates.

Variable	Coefficient	Std. Error	t-Statistic	p-value
EXTD	-0.120	0.045	-2.67	0.010
GOV	0.080	0.030	2.67	0.010
EXTD × GOV	0.030	0.012	2.50	0.015
TO	0.060	0.025	2.40	0.018
FDI	0.045	0.020	2.25	0.025
INF	-0.050	0.020	-2.50	0.014
FD	0.070	0.030	2.33	0.019

The long-run CS-ARDL estimates confirm that external debt has a persistent negative effect on GDP, while governance positively influences growth. The interaction term (EXTD × GOV) remains positive and significant, demonstrating that stronger governance reduces the negative impact of debt over the long term. Trade openness, FDI, and financial development maintain positive effects, whereas inflation continues to hinder growth. These findings highlight the importance of institutional quality in shaping the debt–growth nexus and confirm the robustness of the CS-ARDL approach for capturing long-run dynamics.

Table 9.
CS-ARDL Short-Run Estimates.

Variable	Coefficient	Std. Error	t-Statistic	p-value
EXTD	-0.025	0.010	-2.50	0.015
GOV	0.018	0.007	2.57	0.013
EXTD × GOV	0.005	0.002	2.50	0.015
TO	0.012	0.006	2.00	0.045
FDI	0.008	0.004	2.00	0.048
INF	-0.010	0.004	-2.50	0.014
FD	0.015	0.006	2.50	0.015
ECM(-1)	-0.45	0.08	-5.63	0.000

The short-run CS-ARDL results indicate that EXTD negatively affects GDP, consistent with the debt-overhang hypothesis. Governance (GOV) positively contributes to growth, and the interaction term (EXTD × GOV) is positive, suggesting that higher governance mitigates the adverse effects of external debt. Trade openness (TO), FDI, and financial development (FD) also positively influence growth, while inflation (INF) has a negative impact. The error correction term (ECM(-1)) is significant and negative, confirming that deviations from the long-run equilibrium are corrected at a speed of 45% per year.

6. Conclusion and Policy Recommendations

This study examined the impact of external debt on economic growth in developing countries, with a particular focus on the moderating role of institutional quality using the CS-ARDL methodology. The empirical results indicate that external debt negatively affects growth when institutional quality is weak, confirming the debt overhang hypothesis. Excessive debt places fiscal constraints on governments, discourages private investment, and diverts scarce resources from productive sectors, thereby undermining long-term development prospects. However, when institutions are strong—characterized by transparency, accountability, and effective governance—the negative effects of debt are significantly mitigated. This suggests that the impact of external borrowing is not inherently positive or negative but is contingent upon the quality of institutions and governance structures in place.

Trade openness and foreign direct investment emerge as important contributors to economic growth, indicating that integrating developing countries into the global economy can amplify the benefits of external debt. Similarly, financial development plays a crucial role by mobilizing domestic savings, facilitating efficient credit allocation, and supporting productive investment projects funded through external borrowing. Conversely, inflation negatively affects growth, highlighting the importance of maintaining macroeconomic stability to ensure that debt contributes positively to development outcomes. The CS-ARDL framework proves effective in capturing both short-run fluctuations and long-run relationships, reflecting the dynamic and heterogeneous nature of the debt-growth nexus across countries. These results underscore the necessity of considering both institutional quality and broader economic factors when evaluating the consequences of external debt.

From a policy perspective, developing countries should prioritize strengthening institutional frameworks, including improving governance, enhancing transparency, enforcing accountability, and implementing anti-corruption measures. Strong institutions are fundamental to ensuring that external debt is used efficiently and directed toward productive investments. Prudent debt management is equally important, with governments establishing debt sustainability frameworks that limit borrowing relative to fiscal capacity and prioritize financing for high-impact sectors such as infrastructure, energy, health, and education. Such investments yield higher economic returns and contribute to long-term growth.

Policies that promote trade openness and attract foreign direct investment can complement external borrowing by facilitating technology transfer, enhancing knowledge spillovers, and providing additional capital for development projects. Simultaneously, financial sector development is critical to ensure efficient allocation of resources and to support investment financed by debt. Maintaining macroeconomic stability through controlled inflation, fiscal discipline, and stable exchange rates is also essential to minimize risks associated with debt accumulation.

Moreover, an integrated approach is necessary, linking debt management strategies with policies in governance, trade, and financial development. Regular monitoring, transparent reporting, and independent evaluation of debt-funded projects help ensure accountability and reduce inefficiencies. By adopting these measures, developing countries can transform external debt from a potential burden into a catalyst for sustainable economic growth.

In conclusion, the study highlights that external debt can serve as a valuable tool for development if managed prudently and supported by strong institutions. Policymakers must implement coordinated strategies that combine institutional strengthening, sound debt management, macroeconomic stability, trade and investment facilitation, and financial sector development. By doing so, developing countries can harness external borrowing to achieve long-term economic growth, enhance productivity, and foster sustainable development outcomes.

References

[1]   H. Chenery and A. Strout, "Foreign assistance and economic development," *American Economic Review,* vol. 56, no. 4, pp. 679–733, 1996.
[2]   P. Krugman, "Financing vs. forgiving a debt overhang," *Journal of Development Economics,* vol. 29, no. 3, pp. 253-268, 1988.
[3]   J. D. Sachs, *The debt overhang of developing countries," in Debt, stabilization, and development*. Chicago: University of Chicago Press, 1989.
[4]   D. C. North, *Institutions, institutional change and economic performance*. Cambridge: Cambridge University Press, 1990.
[5]   D. Acemoglu, S. Johnson, and J. A. Robinson, "Institutions as a fundamental cause of long-run growth," *Handbook of Economic Growth,* vol. 1, pp. 385-472, 2005.
[6]   C. M. Reinhart and K. S. Rogoff, *This time is different: Eight centuries of financial folly*. Princeton: Princeton University Press, 2015.
[7]   M. Elkhalfi, "External debt and economic growth: The role of governance," *Journal of International Economics,* vol. 39, no. 2, pp. 145–162, 2024.
[8]   Y. Wang, "Debt sustainability in developing countries," *Economic Modelling,* vol. 97, pp. 1–14, 2021.
[9]   S. Fischer, "Debt overhang and economic performance," *World Development,* vol. 156, p. 105120, 2023.
[10]   S. N. Mohd Daud, "Institutional quality and debt-growth nexus," *Journal of Development Studies,* vol. 56, no. 6, pp. 1140–1159, 2020.

[11]   S. Arjun and R. Mishra, "Governance, debt and growth: A cross-country analysis," *International Journal of Economics,* vol. 78, no. 3, pp. 245–266, 2024.
[12]   Manasseh C. et al, "Debt, governance and economic growth," *African Journal of Economics,* vol. 12, no. 1, pp. 50–72, 2022.
[13]   T. Chien, "Institutional quality and debt sustainability," *Asian Economic Papers,* vol. 21, no. 1, pp. 33–58, 2022.
[14]   P. Otieno, "Governance and external debt management," *Journal of African Economies,* vol. 34, no. 1, pp. 77–98, 2025.
[15]   S. Kharusi, "Institutions, debt and growth," *Economic Research Journal,* vol. 22, no. 4, pp. 405–423, 2018.
[16]   Kose M. A. et al, "Governance and sovereign borrowing costs," *Review of Economics and Statistics,* vol. 102, no. 1, pp. 115–131, 2020.
[17]   UNCTAD, "Trade and development report," United Nations Conference on Trade and Development, 2025. https://unctad.org
[18]   World Bank, *Debt sustainability in developing economies*. Washington, DC: World Bank, 2022.
[19]   H. Kharas, *Debt in the COVID era*. Washington, D.C: Brookings Institution, 2020.
[20]   IMF, *Global debt report*. Washington, D.C: International Monetary Fund, 2025.
[21]   IMF, *Fiscal governance and debt*. Washington, D.C: International Monetary Fund, 2024.
[22]   The Guardian, *Debt relief campaigns and governance*. London: The Guardian, 2024.
[23]   Debt Relief International, *Annual report on debt and governance*. London: Debt Relief International, 2024.
[24]   A. Chudik and M. H. Pesaran, "Common correlated effects estimation of heterogeneous dynamic panel data models with weakly exogenous regressors," *Journal of Econometrics,* vol. 188, no. 2, pp. 393-420, 2015. https://doi.org/10.1016/j.jeconom.2015.03.001
[25]   G. Arain and M. Haseeb, "CS-ARDL in economic research," *Economic Analysis Journal,* vol. 45, no. 3, pp. 211–227, 2023.
[26]   A. Khan and S. Khan, "Institutional moderation and CS-ARDL: Evidence from finance–innovation nexus," *Journal of Financial Studies,* vol. 15, no. 2, pp. 101–121, 2022.