



The Dynamic Intricacies of External Debt and FDI Moderated by Rule of Law, Voice and Accountability Economic Growth Nexus in EAC Partner States: A Panel NARDL Analysis

Richard B. Laswai^{1 *}, Abdelhak Senadjki² and William Keng Soon Choo³

¹Faculty of Business and Finance, Universiti Tunku Abdul Rahman, 31900 Kampar, Perak, Malaysia

* laswai2014@lutar.my

²Faculty of Business and Finance, Universiti Tunku Abdul Rahman, 31900, Kampar, Perak, Malaysia

abdelhak@utar.edu.my

³Faculty of Business and Finance, Universiti Tunku Abdul Rahman, 31900 Kampar, Perak, Malaysia

chooks@utar.edu.my

Abstract. The dynamic intricacies of external debt and Foreign Direct Investment (FDI) moderated by rule of law, voice and accountability economic growth nexus is scant in the East African Community (EAC). Plenteous of empirical literatures result into ambiguous conclusions. The two foreign capital inflows entail a complex and multifaceted balancing mechanism. Empirical studies have generated contention in the literature that shows how the intricacies' interplay between external debt and FDI can have inconclusive results on economic growth. The interplays can negatively affect a nation's capacity to pursue FDI if existing and potential investors insinuate high debt burden associated with risks to economic growth, stability, macroeconomic disequilibrium and sustainability. However, other tenets underscore the positive and significant impact of external debt and foreign direct investment on fostering economic growth. The final perspectives insinuate the relationship between external debt and foreign direct investment may vary, exhibiting no clear relationship as it can be neutral, positive or non-linear against economic growth. This multifaceted landscape emphasises the intricate interactions of external debt-FDI-growth nexus, posing a challenging phenomenon that demands rigorous scholarly inquiry. This study will address the inconsistencies observed by using fresh panel data of six EAC economies from 1996 to 2023. The study will redirect the empirical literatures of foreign capital inflows and economic growth agendas. It will inspire further scientific attention dedicated to the critical assessment of the fundamental variables shaping the EAC growth framework. This research will delve on the Institutional Qualities

that moderate the sustained impact of FDI-external debt on growth relationship of economies using Nonlinear Auto Regressive Distributed Lag (NARDL). The PMG and MG methodologies for panel data analysis will be used in validating robustness tests.

Keywords: External Debt, FDI, Economic Growth, Rule of Law, Voice and Accountability.

1 Introduction

The multifarious interplay between external debt and Foreign Direct Investment (FDI), moderated by rule of law (ROL), voice and accountability (VAA), is a fundamental but an intricate component of growth of economy in the East African Community (EAC) member states (Fayissa & Nsiah, 2013; Ramzan et al., 2023; Slesman et al., 2015). Empirical and theoretical studies both concur on the reality that external debt and FDI influence the economic performance of EAC partner states, despite their impacts being nuanced and multidimensional (Ftiti et al., 2024). High foreign borrowing accumulation can crowd out private investments as government shift financial resources away from the corporate sector activities, resulting in high lending rates, decreased access to credit and deterring FDI inflows in the economy (Penzin et al., 2022; Turan & Yanikkaya, 2021).

External debt can induce essential foreign capital resources for expanding infrastructural development, training, energy, food as well as health services, resulting in productive economic growth, as noted by (Mejia, 2024; Ojeka et al., 2024; Oyadeyi et al., 2024). External debt borrowed for productive investment can attract FDI, as investors' confidence will increase and be interpreted as a positive signal for the government commitment to long-term prospects. This will attract more FDI that ultimately result in positive economic progress (Amoh et al., 2024; Fonchamnyo et al., 2021; Henry et al., 2022; Turan & Yanikkaya, 2021). Developing economies in EAC, however, are advised against haphazardly using external debt, as it can lead to debt overhang, a situation of high debt repayment burdens resulting in economic and financial unpredictability that can ultimately derail economic prosperity (Amoh et al., 2024; Dinga et al., 2024; Mejia, 2024).

Theoretical and empirical studies have shown that quality institutions have a significant influence on lessening external debt burden, and plays an important part in mitigating adverse effects of debt (Ramzan et al., 2023). Strong institutions of rule of law, voice and accountability can enhance the external debt-growth relationship, leading to positive economic growth outcomes (Aurangzaib & Farooq, 2022; Ciftci & Durusu-Ciftci, 2022). Specifically, the enforcement of contracts and property rights, along with holding debt management officers and government officials accountable in the administration of external debt, when associated with government effectiveness and control of corruption, will consistently result in positive economic growth, as noted by (Ciftci & Durusu-Ciftci, 2022; Ilorah & Ngwakwe, 2021; Nutassey et al., 2023).

FDI refers to the propagation of private capital from overseas investors, conveying financial resources, advancement of technology, managerial expertise and access to international foreign markets, as noted by (Patel et al., 2024). FDI can stir economic development by enhancing methods of production that results in job creation in EAC partner states, see (ADB, 2024; Epor et al., 2024). Improvement of the legal framework and citizen involvement with appropriate absorptive capacity in the domestic economy can amplify the influence of FDI towards growth (Ha et al., 2024; Ullah et al., 2022). According to Patel et al (2024), FDI will flow to economies with stronger rule of law, voice and accountability, while weak institutions can discourage FDI. Legal governance and civic engagement will reduce risks while increasing the likelihood of a favourable return on investment (ROI), and contribute to economic growth, as noted by (ADB, 2024; Patel et al., 2024). Improving voice, accountability and the legal framework, as noted by Kemoe and Lartey (2022) and Nutassey et al (2023) can help EAC partner states to expand and attract higher percentage of FDI, given proper absorptive capacity in the economy is maintained. This can contribute into enormous creation of capital for expansion of economic output (Ha et al., 2024; Ullah et al., 2022). To attract FDI in EAC bloc, effectiveness for the judiciary structure, integrity of property rights and contract enforcement mechanisms are necessary. Removal for bureaucracy in business registration, media freedom, rights to associate, civil freedoms and political participation in polls, absence of oppressive authoritarian regime that undermines civic space and impedes the exercise of citizen involvement are essential (Ozekhome, 2022; Ramesh & Vinayagathasan, 2023). FDI augmented with legal framework and civic engagement can influence debt dynamics in EAC bloc by positively modulating to economic growth and ultimately improve the ratio of sovereign debt to GDP (Asravor et al., 2023; Patel et al., 2024).

The dynamic interplays between external debt and FDI moderated by voice, accountability and rule of law to economic growth relationship entails a complex and multifaceted balancing mechanism. The results of empirical studies have generated contention in the literature that shows how the intricacies' interplay between external debt and FDI can have ambiguous results on GDP growth (Ftiti et al., 2024; Ojeka et al., 2024). This dynamic interplays embodying external debt can negatively affect a nation's capacity to pursue FDI if existing and potential investors insinuate high debt burden associated with risk to economic growth, stability, macroeconomic disequilibrium, exchange rate fluctuations and sustainability (Ayoub et al., 2024; Ciftci & Durusu-Ciftci, 2022; Ftiti et al., 2024; Turan & Yanıkkaya, 2021). Contrary to the negative results above, Asravor et al (2023); Aurangzaib and Farooq (2022); Joshua et al (2021); Onuoha (2024); Oyadeyi et al (2024); Roy and Paul (2023) have demonstrated a statistically significant influence of FDI with foreign debt to development of economies, while Rahman et al (2019) and Akalpler (2023) have found role of external debt in shaping growth of the economy to have no relationship, as it can be neutral, positive or non-linear. These multifaceted results make the evolving effect of external debt integrated with FDI towards growth of economic relationship a challenging phenomenon for a comprehensive scholarly inquiry (Ftiti et al., 2024). The intricacies arise from several definitions creeping on debt, such as external, public or domestic debt, as well as how debt is utilised, whether for productive investments or consumption.

Additionally, threshold effects, methodological differences, endogeneity issues, heterogeneous effects on the panel data, geographical location, time span, theories used and the variability within governance doctrines used (Fonchamnyo et al., 2021; Kemoe & Lartey, 2022; Lau et al., 2019; Manasseh et al., 2022; Xiao et al., 2023).

Referring to Mohsin et al (2021) as well as Manasseh et al (2022), external debt and FDI are considered as the fundamental capital inflows to supplement the revenue-expenditure gap, savings-investment gap and exchange gap in EAC partner states (Agyapong & Bedjabeng, 2020; Dawood et al., 2021). According to Agyapong and Bedjabeng (2020), the development literatures have long examined the relative importance of FDI integrated with external debt by showing how positive effects of FDI can moderate the unfavourable consequences from external debt to growth but these authors have ignored the institutional qualities channel (Ayenew, 2022b; Ayoub et al., 2024; Mose & Kipchirchir, 2024; Tile et al., 2024). Theoretically, citizen involvement in voicing their opinion with proper working justice system act as a synergistic catalyst in endorsing economic growth when augmented with external debt and FDI as revealed by (Bhujabal et al., 2024; Chowdhury et al., 2024; Patel et al., 2024; Ramzan et al., 2023).

However, there is no unanimity as to how voice, accountability and legal framework are interconnected and impact external debt-FDI growth relationship. This is because different sets of institutional qualities have been highlighted in the empirical literature, ranging from Political Regimes that include Civil Liberty, Political Rights, and Coup D'état from Freedom House Institutional Quality, as used by (Alika & Oladipo, 2022; Aloui et al., 2024). Institutional Qualities from International Country Risk Guide (ICRG) have been used by Aurangzaib and Farooq (2022); Aziz (2022); Chowdhury et al (2024), to Economic Freedom IQs (including tax), sourced from Fraser Institute, have been used by Aziz (2022); and Polity 2 indices, sourced from Polity IV and V dataset, as used by (Mejia, 2024; Nutassey et al., 2023; Yusuf et al., 2020). The current study departs from the above IQ domains by iterating individually the synergistic effect of voice, accountability and rule of law IQs using dataset of Worldwide Governance Indicators (WGI) with external debt and FDI to gauge its contribution towards growth of the economy in EAC bloc (Patel et al., 2024; World Bank, 2023b).

According to Patel et al (2024), this study chose voice, accountability and legal framework as the fundamental institutional qualities that substantially play roles in the FDI-external debt establishment in the EAC that may prove to be extremely risky when ineffective governance are engaged. This is because of the large amount involved in both FDI and external debt. According to Kinyondo et al (2021); Muganyi et al (2021); Patel et al (2024), if a policy reversal happens, lax implementation of property rights, nonvoice for repressive authoritarians, opaque administration, and political impunity of politicians that dampen accountability of executives; deleteriously deter FDI and exacerbate external debt sustainability in EAC.

According to Ayoub et al (2024) and Patel et al (2024), there exists a paucity in the academic literature that scrutinise the evolving intricacies of external debt and

FDI interacted by voice, accountability and rule of law in addressing economic growth relationship in a panel data set in EAC. This is because majority of recent studies emanated from single country specific issues in a time series data, not a panel data set, and without use of institutional qualities, including studies from (Asravor et al., 2023; Junejo et al., 2024; Kitole & Utouh, 2023; Mose & Kipchirchir, 2024; Onuoha, 2024; Oyadeyi et al., 2024; Roy & Paul, 2023). Studies that have used specifically the rule of law, voice and accountability on FDI-debt growth nexus are scant in EAC as studies by Alemu et al (2023) have been administered in East African Countries not in the East African Community partner states and used average principal component index of three indicators on their studies. Studies of Ramzan et al (2023) in Pakistan and Ramesh and Vinayagathan (2023) in Sri Lanka have used rule of law and other indexes of IQs in their analysis but dwelled in Asian region that considered to have better institutional quality improvement than in EAC partner states (Mehmood et al., 2023; Soko et al., 2023).

To address identified gaps above, the aspiration of this research seeks to examine the way through which Institutional Growth Theory interacts with external debt-FDI interplay towards growth within EAC partner states (Patel et al., 2024). The contribution of this paper is to scrutinise the augmentative influence of voice, accountability and legal framework in connection with external debt-FDI growth relationship separately as studies that have explored specifically the roles of voice, accountability and legal governance in EAC partner states are scant, (Alemu et al., 2023; Patel et al., 2024; Ramzan et al., 2023).

This study makes a significant contribution to the existing body of literature on the external debt-FDI-growth relationship by focusing on the asymmetric nonlinear impacts of this relationship, as this is an aspect that has been underexplored in prior research, specifically in EAC region (Adedokun et al., 2024; Amoh et al., 2024; Khanday et al., 2024; Nazamuddin et al., 2024). Plenteous of extant literatures have mostly presumed existence of linear relationship between FDI-external debt-growth by commanding linear prescriptions (Oyadeyi et al., 2024; Seraj et al., 2023; Zahra et al., 2023). Linear prescriptions do not explain any probable asymmetric effects between FDI-external debt and GDP growth. Given huge external debt accumulation, debt repayments associated with arrears of servicing debt challenge costs in EAC bloc, it is essential to scrutinise probable existence of asymmetric relationships in the real world environment (ADB, 2024; Amoh et al., 2024). This is because the cumulative impact of negative shocks of external debt to GDP is likely to differ from its positive shocks.

Second, studies that have emphasised the nonlinear auto regressive distributed lag (NARDL) technique in scrutinising the nonlinear impact of FDI with external debt, interacted with voice, accountability and rule of law in EAC partner states are scant, as Adedokun et al (2024); Amoh et al (2024); Guan et al (2024); Yusuf and Mohd (2023) have been done in Africa, sub-Saharan Africa and BRICS respectively.

Third, according to Amoh et al (2024), the framework of nonlinear ARDL incorporates asymmetric effects in accounting for external debt and FDI relationships, by taking nonlinearities and asymmetric impacts in the model specification equations (Shin

et al., 2014). It iterates with the IQs in the same equation, estimating the partial decomposition process into differential impacts of deviations in shocks stemming from FDI-external debt swings. This technique can scrutinise short and long-run analysis of macroeconomic variables to GDP growth, augmented with institutional qualities (Patel et al., 2024).

The implications of outcomes of this study will provide insights on the multifaceted channels over which voice, accountability and rule of law iterates in transmitting FDI-external debt in endorsing GDP growth. Policymakers in EAC governments and FDI investors keen to manage external debt and maximise on FDI will discern valuable insights.

The structure of this article is organised as follows: Part 1 presents a brief synopsis of the variables under consideration; theoretical and empirical review with formulation of hypotheses is discussed in part 2. Part 3 provides an overview of the data and methodology that will be used.

2 Review of Literature

2.1 Theoretical Literature Review

2.1.1 The Theory of Institutions

The Theory of Institutions, as used by Beyene (2024); Nutassey et al (2023); Patel et al (2024); Ramzan et al (2023) focuses on the institutional quality factors and raises the question of why economies with almost similar resource capabilities in the form of physical capital, financial capital, technological development and human capital fail to effectively use these resources to achieve optimal economic growth performance. The answer to this, according to Patel et al (2024) and Ahmed et al (2022) hinges on institutional governance factors of an economy that are integral to the created assets of economies, gaining importance relative to conventional natural assets: physical capital, financial capital, technology progress and human capital. According to Beyene (2024), the institutional quality factors are necessary to influence the traditional assets into positive economic growth.

It is noted by Acemoglu et al (2005) that although the traditional theoretical frameworks by Solow (1956) Growth Theory and Romer (1990) on Endogenous Growth Theory have been instrumental in analysing economic growth and uncovering its mechanisms, but for a considerable period, they were incompetent to deliver pragmatic core explanation of economic growth. Referring to Beyene (2024); Romer (1990); Solow (1956), the interplay between traditional capital accumulation and technology innovations are the foundations of growth in economy but they do not provide the fundamental reasoning of relative growth differentials among countries (Bhasin & Garg, 2020; Kemoe & Lartey, 2022). This has advocated the shift to incorporate institutional qualities as the pivotal factor in fostering growth of economic performance; moderating as

differentiator among nations, as revealed by (Bhasin & Garg, 2020). Any improvement in the institutional qualities in the dimension of rule of law, voice and accountability iterated with external debt and FDI can result in significant economic growth, as revealed by (Kemoe & Larthey, 2022; Patel et al., 2024; Ramzan et al., 2023). Robust institutions in the dimension legal governance, legal property entitlements, contract enforceability, public officials accountability to citizens creates a stable and focused government that entice FDI project investments using funds from external loans (Brou & Thiam, 2023; Chukwu et al., 2023; Ojeka et al., 2024). Borrowed funds are invested on productive projects, no illegal transfer of public funds to individuals, public officials voiced by the media and accountable on how external debt is expended, transparency and sealing of illegal channels resulting into less external debt will be required (Manasseh et al., 2022; Nutassey et al., 2023). If this is supported with FDI inflows, can result into growth of EAC economies.

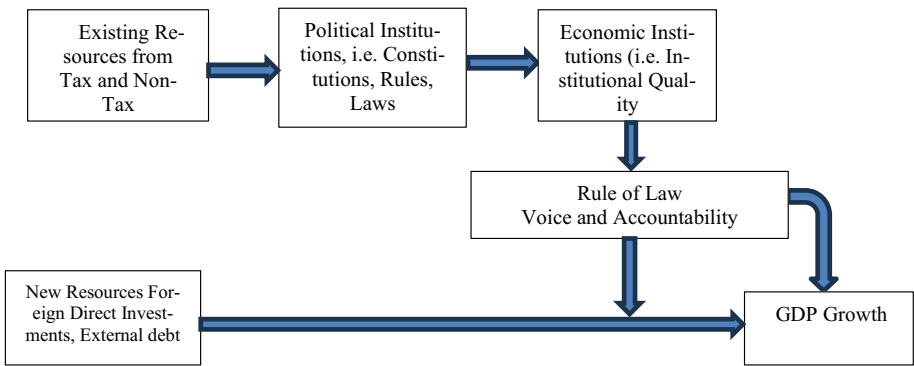


Fig. 1. A Theoretical Framework of External Debt, FDI, Institutions and Economic Growth

Source: Modified from Kemoe and Larthey (2022) and Raza et al (2021)

2.2 Empirical Analysis and Hypotheses Formulation

2.2.1 External Debt with Growth of Economy

Studies have generated inconclusive results in examining the association between external debt and growth of economy. Three distinct tenets emerged in the empirical literatures. Studies of Abotsi (2023); Amoh et al (2024); Dinga et al (2024); Mejia (2024); Nutassey et al (2023) have found a notable inverse interplay between external debt and economic expansion. These findings tend to differ with the second tenets from empirics by Joshua et al (2021); Musse et al (2024); Mutai et al (2024); Onuoha (2024); Oyadeyi et al (2024) that have reported a substantial direct association between external debt and growth of economy. A third domain are studies from Akalpler (2023); Jama (2021); Rahman et al (2019) that have reported external debt and economic growth do not

exhibit a consistent relationship, as the effect can be neutral, positive or take a non-linear form. Ayana et al (2023) investigates the effects of external debt in sub-Saharan Africa (SSA) from 2011 to 2021. The results revealed that external debt exhibits an adverse effect on economic growth both in the short-run and long-run. The effects are more pervasive in the long-run than in the short run. The author advised SSA economies to inject external debt on projects with dividend payouts, concurring with prior studies of (Dawood et al., 2021). An empirical study is done by Musse et al (2024) in East African Bloc, with no institutional qualities in the period 2013 to 2022. The findings from this study reveals that external debt stock promotes growth of economy in this region. This study iterates that when reasonable external debt is injected on productive activities with return on investment, the economy grows. This study corroborate with prior studies of Joshua et al (2020) that found similar conclusions. These results are contradicting with studies of Hassan and Meyer (2021) that finds external debt not transmitting to economic development in sub-Saharan Africa in the study duration of 1985 to 2019. The authors propose SSA to design alternate mechanism for raising capital away from external debt, to avoid debt overhang issue. Helmy (2022) conducted an empirical studies in Egypt investigating the impact of external debt to inflation, and found external debt deter economic prosperity by fuelling inflations. This means the country needs to reduce too much external debt, if it wants to develop as this will reduce inflations, paving a way to economic growth. This results are in tone with Mumuni and Abille (2023) who finds external debt worsen income inequality, leading to adverse impact on economic growth in selected African countries. Specifically, this study, hypothesized that:

***H₁*:** External debt has a deleterious impact on the economic growth of East African Community (EAC) partner states.

2.2.2 FDI and Economic Growth

Empirical research is reported by Epur et al (2024) on the nexus between foreign direct investment and economic growth in emerging economies. This research is executed in Brazil, Nigeria and Vietnam for the period 1990-2021 applying the Autoregressive Distributed Lag (ARDL) model. The results show that FDI and trade have a positive but insignificant effect on economic growth in all the three countries. The effect is insignificant due to repatriated profits by multinationals, as corroborated by (Ayenew, 2022a). The results also demonstrates the burden of external debt restricts long-term economic progress in these nations, as corroborated by (Dawood et al., 2021). Zardoub and Sboui (2023) examined the influence of FDI on GDP growth by means of a panel data methodology. It is executed in developing countries from 1990 to 2016. The findings indicate the empirical findings on the influence of FDI to growth lacks evidence. This relationship is negative but insignificant, similar to studies of Mutai et al (2024) who find FDI in the context of short-run, economic development being adversely affected by factors like adjustment costs, delays in technology transfer, and challenges arising from competition with local businesses. Studies by Ofori and Asongu (2024) in SSA investigates the repackaging of FDI for inclusive growth. The findings indicate

FDI hinders inclusive GDP per capita growth in SSA. This is due to the fact FDI induces macroeconomic instability, resulting in inflation and capital flight, see (Ayenew, 2022a; Fiti et al., 2024). An empirical study by Ayenew (2022a) who investigates the linkage between FDI and economic development in SSA from 1988 to 2019. The findings indicate, while FDI positively influences long-term impacts to growth and prosperity, but its short-term influence is not statistically verified. This occurs because determinants like fixed capital formation and financial liberalisation need time to develop, and their impacts manifest in the long term, corroborating similar findings of Joshua et al (2021) whose studies reveals in the long-run, FDI exerts a beneficial impact to GDP growth and prosperity. This study, therefore posits that:

H₂: The impact of foreign direct investment on economic growth in EAC partner states is both positive and significant.

2.3 FDI, External Debt, Institutional Quality and Economic Growth Nexus

2.3.1 Interaction Between External Debt, Rule of Law Economic Growth Nexus

Empirical studies by Ojeka et al (2024) in SSA from 1996 to 2021 finds rule of law exhibits significant moderating function in leveraging the adverse results of external debt to favourable results in promoting efficient debt utilisation and attract more FDI. Studies find economies with robust legal framework that compel property rights protection are more adept at managing external debt, lowering the likelihood of debt distress and excessive spending, as concurred by (Brou & Thiam, 2023). Rule of law also ensure transparency in the use of debt, (Ojeka et al., 2024). An empirical study by Ramzan et al (2023) on the influence of governance quality in the relationship between debt and economic growth is carried out from 1996-2020 using ARDL bound testing technique. The results of the study posit to a robust legal framework that supports the economic evolution of a country. This research recommends government must focus on maintaining law and order as a high priority. The outcomes of the combined effect of external debt with rule of law as IQ results in positive economic growth, which is statistically significant, and are consistent with studies by Ciftci and Durusu-Ciftci, (2022); Sachs (2019) who find similar results regarding the combined iteration of rule of law and external debt and its contribution to positive growth of GDP. Manasseh et al (2022) finds that legal framework and governance are important to foster transparency and effective policy implementation, which in turn improves the capability of the legal system to uphold law enforcement, justice and rules compliance within the country. The combined effect of external debt and rule of law results in positive economic growth, in line with studies by Wang et al (2021), which show that a robust rule of law can significantly channel external debt into positive economic growth by reducing borrowing costs and mitigating debt overhang. Abotsi (2023) finds that countries that abide by the rule of law accumulate more debts due to bad laws that the agents can take advantage and exploit the state. If good laws are not strictly enforced, agents will take advantage and exploit the state on bad policies like tax holidays, tax supervision, exemptions on export and imports, profit repatriation and contracts awarded to

unqualified persons, all of which will deprive the state revenue, resulting in more debt. Specifically, this study hypothesises that:

***H_{1a}*:** The rule of law moderates external debt, resulting in a positive and significant impact to economic growth in EAC partner states.

2.3.2 Interaction between External Debt, Voice and Accountability Economic Growth Nexus

Empirical studies by Manasseh et al (2022) in SSA shows how voice and accountability can turn a negative status of external debt into growth enhancing. The findings from this study shows the most substantial effect regarding the interplay between external debt, voice, accountability and GDP growth. Chowdhury et al (2024) scrutinised the role of institutional quality thresholds as key determinants in shaping the nexus between external debt and economic stability and finds voice and accountability, significantly turning around the negative results of external debt to positive status when there is improvement in the voice and accountability above the threshold levels. This study concurs with previous results of Ramzan et al (2023) that recommend economies to improve voice and accountability in order for external debt to serve as a stepping stone for economic growth. Ojeka et al (2024) finds effective voice and accountability bolster the positive relationship between external debt and FDI by advancing transparency, upholding accountability, and ensuring effective resource utilisation, as concurred by (Egbetunde & Akinlo, 2019). Borrowed funds are used efficiently in nations with established voice and accountability systems, fostering investment activities, that generate dividends and returns, as corroborated by (Iheanacho et al., 2023). Strong voice and accountability, in association with legal enforcement and corruption control minimise misappropriation of borrowed funds of the government, ultimately result into positive economic growth. Ramzan et al (2023) iterates voice and accountability individually and with external debt, finding that VAA shows positive signs and statistical significance, highlighting a favourable impact on growth of economy. Empirical studies by Kinyondo et al (2021) in African countries finds interplay between voice, accountability with growth of GDP is significant and exhibits a positive trend, concurring with similar results of (Egbetunde & Akinlo, 2019). Similarly, Nutassey et al (2023) finds that a democratic setting where media freedom enable citizen to access government activities, legislative agendas are discussed in parliament, citizens can elect their leaders, and the government remains answerable to citizens when making decisions on external debt, will always result in positive economic growth. We, therefore, hypothesise that:

***H_{1b}*:** Voice and accountability moderate external debt, resulting in a positive and significant impact to economic growth within EAC bloc.

2.3.3 Iteration of Rule of Law, FDI with Economic Growth

Patel et al (2024) examined the connection between institutional governance framework and FDI using NARDL. Empirical results from the research shows beneficial effect of a strong legal governance towards FDI for the duration of the study which is significant. This shows that by fostering a secure environment with enforceable contracts and preserving property rights of business, citizen rights and the legal governance, will encourage increase of FDI. This result corroborate with prior studies of (Abille & Mumuni, 2023; Kayani & Ganic, 2021; Paul & Jadhav, 2019). Empirical studies by Saha et al (2022) is done in lower-middle income countries using two step system GMM from 2002 to 2018. The empirical outcomes reveal elevated rule of law deters FDI flowing to lower-middle income countries (LMIC). The negative and significant results of rule of law implies that stringent enforcement of laws in LMIC discourages FDI inflows. When an investor injects investments in nations with robust rule of law, profits could be lowered due to extra costs associated with compliance, such as sector-specific taxes. Foreign direct investors desire liberalised emerging economies because regulations are not rigorously adhered to in these economies. These results are in tune with studies by Abotsi (2023) that find high rule of law exacerbate external debt. An empirical study by Kechagia and Metaxas (2022) is administered, studying FDI and Institutions. The result finds rule of law attracts FDI in BRIC while it does not attract FDI in the other emerging economies. Kayani and Ganic (2021) examined influence of institutional qualities to FDI flowing to China by empirical study between 2002 to 2019 using GMM. The result reveals rule of law in China has a positive and significant impact on attracting FDI. The study indicates implementation of the rules, regulations and laws are important factors in attracting more FDI. Bhasin and Garg (2020) findings indicate a prominent negative and significant interplay between FDI and the rule of law framework. This means FDI investors take advantage of weak laws, regulations, contracts and their enforcements in emerging economies and thus maximise their returns. Munjal et al (2022) and Ren and Yang (2020) find weak rule of law encourages FDI investors to exploit and capitalise on them, while a high quality rule of law deters FDI inflows as investors assume institutional differences between host country and investing country can intensify risks. Thus, this study, therefore, hypothesise that:

***H_{2a}*:** The rule of law augments foreign direct investment, resulting in a positive and significant impact on economic growth in EAC partner states.

2.3.4 Interplay Between FDI, Voice, Accountability and Economic Growth Nexus

Ojeka et al (2024) in the empirical studies on institutional quality as key augmenting variable in the nexus between debt and FDI in sub-Saharan Africa finds that voice and accountability can attract FDI in the region. This is because voice and accountability influence investor's belief in stability and risk evaluation. Thus, economies with resilient voice and accountability are viewed as more appealing to FDI attraction regions, as corroborated by (Kemoe & Lartey, 2022). Empirical studies by Patel et al (2024) that examined the interplay of institutional qualities and FDI in India using NARDL methodology finds voice and accountability as institutional quality that exhibited insignificant relationship to the amount of FDI flowing to the country. Empirical

studies by Munjal et al (2022) on analysing the differences between Indian and Chinese FDI inflows in Africa from 2008 to 2018 finds the influence of voice and accountability in Africa was significant for Indian FDI investors, while it remained irrelevant for Chinese investors who experiences the same in their country of one party. India being a member of Commonwealth country observes voice and accountability while Chinese quests for geopolitical supremacy (Munjal et al., 2022). Chen et al (2023) empirically researched on what motivates Chinese on the trade-off between poor institutions and rich infrastructural in attracting multinational corporations in the form of FDI in Asia. The study period is from 2003 to 2018 on 12 Southeast and East Asian countries. The findings reveal that voice and accountability functioned as obstacles to Chinese overseas foreign direct investment. Findings shows that the feeble the voice and accountability, the larger the Chinese outward foreign direct investment, boosting GDP growth in Asia. However, this reduction takes place in the short run, so economies are urged to improve their voice and accountability institutional quality. Saha et al (2022) research examining how institutional quality influences foreign direct investment inflows in lower-middle income countries (LMICs). The findings suggest that strong voice and accountability are associated with reduced FDI inflows in LMICs. Likewise, empirical studies by Emako et al (2023) analysing the drivers of FDI inflows into developing economies using Factor Analysis for 53 developing countries from 1996 to 2019, found that voice and accountability had a substantial adverse impact on FDI inflows into developing economies. This contradicts with studies of Lobanova et al (2021) that examine governance, civil engagements and political rights as factors influencing FDI inflows in 27 transitioning economies using system GMM analysis from 2002 to 2018. The findings reveal voice, accountability and control of corruption to be fundamental key factors propelling FDI in transitioning economies that positively and significantly result into economic growth. This is negated by studies of Raza et al (2021) who scrutinised the impact of institutional governance and state determinants on FDI in Asian economies from 2009 to 2019. Findings reveal voice with accountability exhibiting significant inverse relationship with FDI. Drawing on the literature, this study posits that:

H_{2b}: The interaction of FDI by voice and accountability results in a positive and significant impact to growth of GDP in EAC partner states.

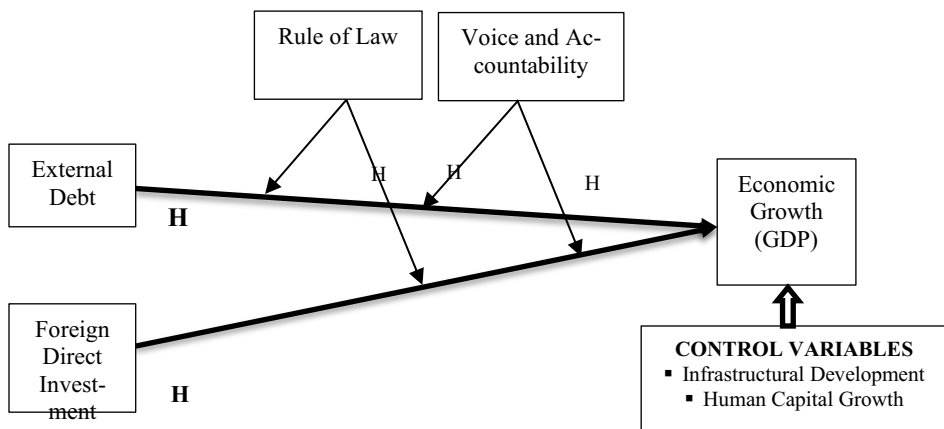


Fig. 2. Conceptual Framework

Source: Authors’ synthesis from literatures (2024)

Table 1. Summary of Hypotheses

Hypothesis	Descriptions
H ₁	External debt has a deleterious impact on the economic growth of East African Community (EAC) partner states.
H ₂	The impact of foreign direct investment on economic growth in EAC partner states is both positive and significant.
H _{1a}	The rule of law moderates external debt, resulting in a positive and significant impact to economic growth in EAC partner states.
H _{2a}	Foreign direct investment moderated by rule of law has positive and significant impact on economic growth in EAC partner states.
H _{1b}	External debt moderated by voice and accountability has a positive and significant impact on economic growth in East African Community (EAC) partner states.
H _{2b}	The interaction of FDI by voice and accountability results in a positive and significant impact to growth of GDP in EAC partner states.

3 Data, Variables and Model Specifications

3.1 Data

Secondary panel data on external debt, economic growth, infrastructural development, and human capital growth will be gathered using statistics from the World Development Indicators database WB (2023a), FDI will be gathered in database of United Nations Conference on Trade and Development-UNCTAD (2023), and Worldwide Governance Indicators (WGI), for rule of law, voice and accountability, as used by World Bank (2023b). Data is scrutinised for the period of 28 years (1996 – 2023) from six countries in EAC partner states of eight countries, giving total annual periods of 168 observations. Six out of the eight countries in the EAC are chosen, leaving Federal Republic of Somalia that become fully member on 04th March 2024. The Republic of South Sudan was not taken due to data unavailability, as noted by (EAC, 2024). The study choose timeframe from (1996-2023) based on the availability of data, which is fundamental for any secondary empirical study, as revealed by (Nyabakora, 2023; Yusuf & Mohd, 2021). The research starts from 1996 onwards as this is the year the first dataset of institutional qualities from the World Bank initially started to be used, as noted by (Bekana, 2023; Beyene, 2024; Kotlánová, 2024; Kunawotor et al., 2024).

3.2 Variables Description and Their Measurements

Variables are grouped into four domains: independent variables, dependent variable, moderating variables and control variables.

The dependent variable is represented by economic growth, calculated as the annual gross domestic product (GDP), as used by Chowdhury et al (2024) and Kechagia and Metax (2022). The results on the GDP can be positively or negatively depending on how successful the independent variables and control variables moderated with institutional quality iterates (Kemoe & Lartey, 2022; Manasseh et al., 2022).

The independent variables will comprise external debt and FDI as used by (Ayenew, 2022b; Su, & Nguyen, 2022; Zardoub & Sboui, 2023). The researcher chose external debt and FDI based on theoretical and empirical literatures due to their outstanding influences in steering the economic advancement of developing nations, and specifically EAC, (Ftiti et al (2024). External debt interaction with GDP, results are expected to have a negative relationship, as revealed by Dinga et al (2024) surmising to the debt overhang theory, that postulates excessive external debt crowds out private investment as corroborated by Saungweme et al (2023) while the augmentation of external debt with rule of law, voice and accountability are anticipated to result into positive economic growth as reported by (Ramzan et al., 2023; Sachs, 2019). FDI results are expected to have a positive sign with economic growth, as postulated by Solow's Growth Theory, and the Institutional Theory that insist on quality institutions rather than quantity of FDI, see Kemoe and Lartey (2022) that can result into positive growth of the economy (Patel et al., 2024). External debt and FDI variables have been used in plenteous of economic empirical literatures and this proposed study, indisputably, dwells into the same variables due to their outstanding roles in influencing economic growth (Ayenew, 2022b; Olaoye & Aderajo, 2020; Olaoye et al., 2020, 2022; Onafowora & Owoye, 2024).

The institutional quality used as moderating variables in this research paper are rule of law, voice and accountability (Brou & Thiam, 2023; Iheanacho et al., 2023; Ojeka et al., 2024; Patel et al., 2024). These two institutional qualities are normally measured on a scale that ranges from -2.5 (weak) to +2.5 (strong). Referring to Bhasin and Garg (2020), institutional qualities are expected to be fundamental factors that differentiate economic growth across the globe. According to Onafowora and Owoye (2024), developing countries in EAC are urged to improve their rule of law, voice and accountability so that the interactive effect with external debt and FDI can significantly result in positive economic growth (Kemoe & Lartey, 2022).

Two control variables are used in this study to explain economic growth in GDP as they are expected to shape the interaction between external debt and FDI augmented with institutional qualities in addressing macroeconomic stability in the model, as noted by (Lederman et al., 2021; Lyulyov et al., 2021; Siddik, 2023). The inclusion of control variables in any empirical research, as revealed by Saungweme and Odhiambo (2019) is alleged to produce a stable environment that can overcome variable omission bias, remove spurious regression results, increase the general validity and efficiency of the test statistics. The two control variables that will be used are Infrastructural Development (as physical capital formation) and Human Capital Development as controlling variables in GDP (Dinga et al., 2024; Mejia, 2024). The inclusion of infrastructural development and human capital growth is grounded in Solow's (1956) theory which

postulates that both variables are the fundamental inputs in the economic growth (Guo et al., 2023; Ofori & Asongu, 2024; Ojeka et al., 2024). Infrastructural development increases the role of total factor productivity (TFP) and the crowding-in-effect on domestic investment (Guo et al., 2023). The study expects infrastructural development to exhibit a positive correlation with GDP growth, as revealed by Ojeka et al (2024) and Human Capital Development is expected to positively contribute to economic growth (Mejia, 2024).

Table 2. below show the variables as used in this study, measurements and expected signs.

Table 2. Variables and their Measurements

Variable	Measurement	Source	Expected sign
Gross Domestic Product (GDP)	Growth rate per capital GDP (Annual percentage). Measured by countries' annual percentage growth rate.	WB (2023)	+/-
External Debt Stock	This is measured in foreign currency per local currency, in US\$	WB (2023)	+/-
Foreign Direct Investment (FDI)	Refers to direct investment in equity flows in the reporting economy, measured in currency, goods or services.	UNCTAD (2023)	+
Infrastructural Development or Capital Investment (CAIV)	Calculated as the ratio of gross fixed capital formation to GDP in percent.	WB (2023)	+
Human Capital Development	Is measured as secondary school enrolment as a percentage of gross domestic product.	WB (2023)	+
Rule of Law (ROL)	Measured on a scale that spans from -2.5 (indicating weakness) to +2.5 (indicating strength).	WGI (2023)	+
Voice and Accountability (VAA)	Measured on a scale that spans from -2.5 (indicating weakness) to +2.5 (indicating strength).	WGI (2023)	+

Source: Researcher's Compilation from Empirical Studies (2024).

3.3 The Panel NARDL Model

This study will employ the panel Nonlinear ARDL methodology as postulated by Shin et al (2014) that captures nonlinear relationships in a panel data set (Amoh et al (2024). Both external debt burden and FDI oscillations can depict a nonlinear

specifications that won't be suitable to use the linear ARDL in examining their relationships with economic growth (Khanday et al., 2024; Khanday & Tarique, 2023). The NARDL model can capture the structural disruptions stemming from economic and financial shocks in the panel dataset that depicts the intricacies of the real world scenarios from external debt and FDI (Patel et al., 2024). This study will examine the dynamic intricacies of external debt and FDI moderated by the rule of law, voice and accountability economic growth nexus in EAC by scrutinising the long-term impact.

3.4 Model Specifications

The model specifications will start from the panel ARDL technique then followed by NARDL. The study applies both models so as to make important comparison from their results (Amoh et al., 2024; Patel et al., 2024). The study will use Pooled Mean Group (PMG) approach, developed by Pesaran et al (1999) for symmetric ARDL and incorporate Pesaran and Smith's (1995) contributions through the Mean Group (MG) methodology for asymmetric panel will be used. PMG has the advantage of reducing sensitivity of outliers. According to Asteriou et al (2021), it can simultaneously correct any serial autocorrelation issues. The Hausman test will be executed to check if differences are observed between the Mean Group and Pooled Mean Group methodologies (Amoh et al., 2024). The Wald test restrictions will be used to detect presence of asymmetry in the relationship. It will also be used to capture short run and long-run asymmetries using the following hypotheses: The long-run asymmetry, the null hypothesis, $H_0: \beta_i^+ = \beta_i^-$ will be tested against the alternative hypothesis, $H_1: \beta_i^+ \neq \beta_i^-$. Regarding short-run asymmetry, the null hypothesis assumes $H_0: \rho_{ij}^+ = \rho_{ij}^-$ will be assessed against the alternative hypothesis of $H_1: \rho_{ij}^+ \neq \rho_{ij}^-$.

The standard model specification is primarily derived from the function developed by Cobb-Douglas (1928), and used by Ahmed (2023) as iterated below:

$$Y_{i,t} = Y_{i,t-1} + \beta X_{i,t} + \varepsilon_{i,t} \quad (1)$$

Where $Y_{i,t}$ is dependent variable that represents real GDP per capital, (a proxy for economic growth), $X_{i,t}$ is explanatory variables and the term $\varepsilon_{i,t}$ is the error term. By using the institutional qualities and other macroeconomic variables, eq. (1) above is converted as:

$$Y_{i,t} = \beta_0 + \beta_1 \ln Y_{i,t-1} + \beta_2 ED_{i,t} + \beta_3 FDI_{i,t} + \beta_4 CAIV_{i,t} + \beta_5 HC_{i,t} + \beta_6 IQ_{i,t} + \varepsilon_{i,t} \quad (2)$$

Where: ED abbreviate foreign (or external) debt, FDI means foreign direct investment, CAIV shows Capital Investment similar to infrastructural development, HC is Human Capital Development and IQ is Institutional Quality. Using institutional qualities, all the two independent variables will be iterated with Rule of Law (ROL) and Voice and Accountability (VAA) separately to measure the direct and combined effect ($\ln ED \times IQ_t$) of ROL and VAA on ED and FDI with economic growth in EAC region. Data transformation to logarithms of Y_t , ED, FDI, CAIV, HC with IQs is applied with the specification framework above to control issues of dispersion, multicollinearity and

heteroscedasticity within data (Lin et al., 2023; Naseem & Ji, 2021). The symmetric function of equation (2) above is presented as the baseline as shown below:

$$Y_{i,t} = \beta_0 + \beta_1 \ln Y_{i,t-1} + \beta_2 ED_{i,t} + \beta_3 FDI_{i,t} + \beta_4 CAIV_{i,t} + \beta_5 HC_{i,t} + \beta_6 ROL_{i,t} + \beta_7 VAA_{i,t} + \varepsilon_{i,t} \quad (3)$$

The natural log of the baseline equation (3) above can be re-written as follows:

$$\ln Y_{i,t} = \beta_0 + \beta_1 \ln Y_{i,t-1} + \beta_2 \ln ED_{i,t} + \beta_3 \ln FDI_{i,t} + \beta_4 \ln CAIV_{i,t} + \beta_5 \ln HC_{i,t} + \beta_6 \ln ROL_{i,t} + \beta_7 \ln VAA_{i,t} + \beta_8 \ln(\ln ED \times IQ_t) + \beta_9 \ln(\ln FDI \times IQ_t) + \varepsilon_{i,t} \quad (4)$$

Where t represents the timeframe, *i.e.* $t=28$ years in the duration of (1996-2023) and i is 6 countries in EAC, whereas IQ is the individual ROL and VAA institutional qualities, and $\varepsilon_{i,t}$ denotes the error term. Equation (4) above is restructured symmetrically and rewritten as follow:

$$\begin{aligned} \Delta \ln Y_{i,t} = & \beta_0 + \beta_1 \ln Y_{i,t-1} + \beta_{2i} \ln ED_{i,t-1} + \beta_{3i} \ln FDI_{i,t-1} + \beta_{4i} \ln CAIV_{i,t-1} + \\ & \beta_{5i} \ln HC_{i,t-1} + \beta_{6i} \ln ROL_{i,t-1} + \beta_{7i} \ln VAA_{i,t-1} + \beta_{8i} \ln(\ln ED \times IQ_t) + \beta_{9i} \ln(\ln FDI \times IQ_t) + \\ & \sum_{j=1}^{N1} \lambda_{ij} \Delta \ln Y_{i,t-1} + \sum_{j=1}^{N2} \gamma_{ij} \Delta \ln ED_{i,t-1} + \sum_{j=1}^{N3} \phi_{ij} \Delta \ln FDI_{i,t-1} + \\ & \sum_{j=1}^{N4} \rho_{ij} \Delta \ln CAIV_{i,t-1} + \sum_{j=1}^{N5} \vartheta_{ij} \Delta \ln HC_{i,t-1} + \sum_{j=1}^{N6} \varphi_{ij} \Delta \ln ROL_{i,t-1} + \\ & \sum_{j=1}^{N7} \delta_{ij} \Delta \ln VAA_{i,t-1} + \sum_{j=1}^{N8} \theta_{ij} \Delta \ln(ED \times IQ_t)_{i,t-1} + \sum_{j=1}^{N9} \Psi_{ij} \Delta \ln(FDI \times IQ_t)_{i,t-1} + \\ & \mu_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (5)$$

Where $\mu_{i,t}$ represents the effects specific to each country, while $\varepsilon_{i,t}$ indicates the term capturing errors. Assumptions are made for the long-run that, $\Delta \ln Y_{i,t-1} = 0$, $\Delta \ln ED_{i,t-1} = 0$, $\Delta \ln FDI_{i,t-1} = 0$, $\Delta \ln CAIV_{i,t-1} = 0$, and $\Delta \ln HC_{i,t-1} = 0$, then, the calculation of the long-term slope coefficient is performed as follows, for each cross-section: $-\frac{\beta_{2i}}{\beta_{1i}}, -\frac{\beta_{3i}}{\beta_{1i}}, -\frac{\beta_{4i}}{\beta_{1i}}, -\frac{\beta_{5i}}{\beta_{1i}}, -\frac{\beta_{6i}}{\beta_{1i}}, -\frac{\beta_{7i}}{\beta_{1i}}, -\frac{\beta_{8i}}{\beta_{1i}}$ and $-\frac{\beta_{9i}}{\beta_{1i}}$. Estimates of external debt

in the short-term, FDI , capital investment and human capital development are obtained from λ_{ij} , γ_{ij} , ϕ_{ij} , ρ_{ij} and ϑ_{ij} correspondingly. To compute the error correction term, equation (5) above is reorganised as shown below:

$$\begin{aligned} \Delta \ln Y_{i,t} = & \delta_i \theta_{i,t-1} + \sum_{j=1}^{N1} \lambda_{ij} \Delta \ln Y_{i,t-1} + \sum_{j=1}^{N2} \gamma_{ij} \Delta \ln ED_{i,t-1} + \\ & \sum_{j=1}^{N3} \phi_{ij} \Delta \ln FDI_{i,t-1} + \sum_{j=1}^{N4} \rho_{ij} \Delta \ln CAIV_{i,t-1} + \sum_{j=1}^{N5} \vartheta_{ij} \Delta \ln HC_{i,t-1} + \\ & \sum_{j=1}^{N6} \varphi_{ij} \Delta \ln ROL_{i,t-1} + \sum_{j=1}^{N7} \delta_{ij} \Delta \ln VAA_{i,t-1} + \sum_{j=1}^{N8} \theta_{ij} \Delta \ln(ED \times IQ_t) + \\ & \sum_{j=1}^{N9} \Psi_{ij} \Delta \ln(FDI \times IQ_t) + \mu_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (6)$$

Where $\theta_{i,t-1} = \ln Y_{i,t-1} - \varphi_{0i} - \varphi_{1i} \ln ED_{i,t-1} - \varphi_{2i} \ln FDI_{i,t-1} - \varphi_{3i} \ln CAIV_{i,t-1} - \varphi_{4i} \ln HC_{i,t-1} - \varphi_{5i} \ln ROL_{i,t-1} - \varphi_{6i} \ln VAA_{i,t-1} - \varphi_{7i} \ln(ED \times IQ_t) - \varphi_{8i} \ln(FDI \times IQ_t)$ this refers to the linear error correction term for each unit, and this term δ_i denotes the pace of correction of the error correction speed for each unit. $\varphi_{1i} = -\frac{\beta_{2i}}{\beta_{1i}}$, $\varphi_{2i} = -\frac{\beta_{3i}}{\beta_{1i}}$, $\varphi_{3i} = -\frac{\beta_{4i}}{\beta_{1i}}$, $\varphi_{8i} = -\frac{\beta_{9i}}{\beta_{1i}}$, represent the long run parameters. Khanday and Tarique (2023) emphasises that equations (5) and (6) above does not decompose the dynamic intricacies comprising external debt and FDI towards their differential impacts of

positive changes and negative shocks. The symmetric assumption of ARDL does not require such decomposition, thus leading to the NARDL asymmetric shocks as revealed by Patel et al (2024) in the panel data. The asymmetric panel NARDL test is derived from equation (5) and is shown in equation (7) that decompose external debt into positive, i.e. $(\ln ED_{it}^+)$ and negative shocks i.e. $(\ln ED_{it}^-)$ as shown below:

$$\begin{aligned} \Delta \ln Y_{i,t} = & \beta_0 + \beta_{1i} \ln Y_{i,t-1} + \beta_{2i}^+ \ln ED_{i,t-1}^+ + \beta_{3i}^- \ln ED_{i,t-1}^- + \beta_{4i} \ln FDI_{i,t-1} + \\ & \beta_{5i} \ln CAIV_{i,t-1} + \beta_{6i} \ln HC_{i,t-1} + \beta_{7i} \ln ROL_{i,t-1} + \beta_{8i} \ln VAA_{i,t-1} + \beta_{9i} \ln (ED \times IQ_t) + \\ & \beta_{10i} \ln (FDI \times IQ_t) + \sum_{j=1}^{N1} \lambda_{ij} \Delta \ln Y_{i,t-1} + \sum_{j=1}^{N2} (\gamma_{ij} \Delta^+ \ln ED_{i,t-1}^+ + \\ & \gamma_{ij} \Delta^- \ln ED_{i,t-1}^-) + \sum_{j=1}^{N3} \phi_{ij} \Delta \ln FDI_{i,t-1} + \sum_{j=1}^{N4} \rho_{ij} \Delta \ln CAIV_{i,t-1} + \\ & \sum_{j=1}^{N5} \vartheta_{ij} \Delta \ln HC_{i,t-1} + \sum_{j=1}^{N6} \phi_{ij} \Delta \ln ROL_{i,t-1} + \sum_{j=1}^{N7} \delta_{ij} \Delta \ln VAA_{i,t-1} + \\ & \sum_{j=1}^{N8} \theta_{ij} \Delta \ln (ED \times IQ_t)_{i,t-1} + \sum_{j=1}^{N9} \Psi_{ij} \Delta \ln (FDI \times IQ_t)_{i,t-1} + \mu_{i,t} + \varepsilon_{i,t} \end{aligned} \quad (7)$$

Referring to Amoh et al (2024), the computation of $-\frac{\beta_{2i}^+}{\beta_{1i}}$ and $-\frac{\beta_{3i}^-}{\beta_{1i}}$ denotes the long-term coefficients in this analysis referring to positive, i.e. $\ln ED^+$ as well as the negative, i.e. $\ln ED^-$. The formulation of positive changes, i.e. positive shocks and its corresponding negative impacts are expressed as:

$$\ln ED_t^+ = \sum_{k=1}^t \Delta \ln ED_{ik}^+ = \sum_{k=1}^t \max(\Delta \ln ED_{ik}, 0) \quad (8)$$

$$\ln ED_t^- = \sum_{k=1}^t \Delta \ln ED_{ik}^- = \sum_{k=1}^t \min(\Delta \ln ED_{ik}, 0) \quad (9)$$

3.5 Robustness Test

The robustness test will include Pesaran et al (1999) proposed Pooled Mean Group procedure for the symmetric ARDL and the Pesaran and Smith (1995) Mean Group estimator in testing asymmetric panel data to support the conclusions of the study findings. The benefits of employing the PMG dwells on the capability to moderate sensitivity of outliers and the simultaneous correction of serial autocorrelation issues (Astérou et al., 2021). Referring to Amoh et al (2024), in order to identify any discrepancies between the Mean Group and Pooled Mean Group, the Hausman test will be applied. To capture existence of long-run asymmetries, the study will employ Wald restriction test.

LIST OF REFERENCES

- Abille, A. B., & Mumuni, S. (2023). Tax incentives, ease of doing business and inflows of FDI in Africa: Does governance matter? *Cogent Economics & Finance*, 11(1), 2164555. <https://doi.org/10.1080/23322039.2022.2164555>
- Abotsi, A. K. (2023). Influence of governance indicators on public debt accumulation in Africa. *Journal of Economic and Administrative Sciences*. <https://doi.org/10.1108/JEAS-08-2023-0227>
- Acemoglu, D., Johnson, S., & Robinson, J. (2005). *Institutions as a Fundamental Cause of Long-Run Growth* (pp. 385–472) [Handbook of Economic Growth]. Elsevier. <https://econpapers.repec.org/bookchap/eee-grochp/1-06.htm>
- ADB. (2024). *AFRICAN ECONOMIC OUTLOOK 2024.pdf* (ADB, pp. 1–70) [Information Statistics]. https://www.afdb.org/sites/default/files/2024/06/06/aeo_2024_-_chapter_1.pdf
- Adedokun, A., Adeniyi, I. A., & Olaniyi, C. O. (2024). The asymmetric effect of fiscal deficits on macroeconomic stability in Nigeria: Evidence from nonlinear autoregressive distributed lag (NARDL). *International Trade, Politics and Development*. <https://doi.org/10.1108/ITPD-02-2024-0005>
- Agyapong, D., & Bedjabeng, K. A. (2020). External debt stock, foreign direct investment and financial development: Evidence from African economies. *Journal of Asian Business and Economic Studies*, 27(1), 81–98. <https://doi.org/10.1108/JABES-11-2018-0087>
- Ahmed, F., Kousar, S., Pervaiz, A., & Shabbir, A. (2022). Do institutional quality and financial development affect sustainable economic growth? Evidence from South Asian countries. *Borsa Istanbul Review*, 22(1), 189–196. <https://doi.org/10.1016/j.bir.2021.03.005>
- Ahmed, K. (2023). Pooled mean group estimation of an energy-globalization-emissions nexus: Evidence from the selected South- and South-East Asian countries. *Energy & Environment*, 0958305X2311717. <https://doi.org/10.1177/0958305X231171703>
- Akalpler, E. (2023). Triggering economic growth to ensure financial stability: Case study of Northern Cyprus. *Financial Innovation*, 9(1), 77. <https://doi.org/10.1186/s40854-023-00481-7>
- Alemu, T., Choramo, T. T., & Jeldu, A. (2023). External Debt, Institutional Quality and Economic Growth in East African Countries. *Journal of East-*

- West *Business*, 29(4), 375–401.
<https://doi.org/10.1080/10669868.2023.2248121>
- Alika S & Oladipo O S. (2022). Institutional Quality, Foreign Direct Investment and Economic Growth: Evidence from ECOWAS Member Countries. *Journal of Economics and Sustainable Development*, 13(22), 34–45.
<https://doi.org/10.7176/JESD/13-22-04>
- Aloui, Z., Hamdaoui, M., & Maktouf, S. (2024). Does governance matter to ensure significant effect of foreign direct investment on poverty reduction? Evidence from developing and emerging countries. *Transnational Corporations Review*, 16(2), 200058.
<https://doi.org/10.1016/j.tncr.2024.200058>
- Amoh, J. K., Abdul-Mumuni, A., & Amankwa Fosu, R. (2024). Revisiting the debt–growth nexus in sub-Saharan Africa: Fresh evidence from panel nonlinear ARDL approach. *International Journal of Emerging Markets*.
<https://doi.org/10.1108/IJOEM-04-2023-0598>
- Asravor, R., Kofi, Akosua Arthur, L., Acheampong, V., Lamptey, C., & Yeboah, M. (2023). Domestic debt sustainability and economic growth: Evidence from Ghana. *Research in Globalization*, 7, 100144.
<https://doi.org/10.1016/j.resglo.2023.100144>
- Asteriou, D., Pilbeam, K., & Pratiwi, C. E. (2021). Public debt and economic growth: Panel data evidence for Asian countries. *Journal of Economics and Finance*, 45(2), 270–287. <https://doi.org/10.1007/s12197-020-09515-7>
- Aurangzaib, & Farooq, F. (2022). How does institutional quality moderates the impact of public debt on economic growth? Startling evidence from OIC countries. *International Journal of Management Research and Emerging Sciences*, 12(3). <https://doi.org/10.56536/ijmres.v12i3.287>
- Ayana, D., Isubalew, Demissie, W. M., & Sore, A. G. (2023). Effect of external debt on economic growth in sub-Saharan Africa: System GMM estimation. *Cogent Economics & Finance*, 11(2), 2256197.
<https://doi.org/10.1080/23322039.2023.2256197>
- Ayenew, B. B. (2022a). The effect of foreign direct investment on the economic growth of Sub-Saharan African countries: An empirical approach. *Cogent Economics & Finance*, 10(1), 2038862.
<https://doi.org/10.1080/23322039.2022.2038862>
- Ayenew, B. B. (2022b). The impact of foreign financial inflows on the economic growth of sub-Saharan African countries: An empirical approach. *Cogent Economics & Finance*, 10(1), 2123888.
<https://doi.org/10.1080/23322039.2022.2123888>

- Ayoub, A., Wani, T. A., & Sultan, A. (2024). External debt crisis & socio-economic fallout: Evidence from the BRICS nations. *Elsevier*. <https://doi.org/10.1016/j.rspp.2024.100029>
- Aziz, O. G. (2022). FDI inflows and economic growth in Arab region: The Institutional channel. *International Journal of Finance & Economics*, 27(1), 1009–1024. <https://doi.org/10.1002/ijfe.2197>
- Bekana, D. M. (2023). Governance Quality and Financial Development in Africa. *World Development Sustainability*, 2(100044), 1–14. <https://doi.org/10.1016/j.wds.2023.100044>
- Beyene, A. B. (2024). Governance quality and economic growth in Sub-Saharan Africa: The dynamic panel model. *Journal of Economic and Administrative Sciences*, 40(2), 404–418. <https://doi.org/10.1108/JEAS-08-2021-0156>
- Bhasin, N., & Garg, S. (2020). Impact of Institutional Environment on Inward FDI: A Case of Select Emerging Market Economies. *Global Business Review*, 21(5), 1279–1301. <https://doi.org/10.1177/0972150919856989>
- Bhujabal, P., Sethi, N., & Padhan, P. C. (2024). Effect of institutional quality on FDI inflows in South Asian and Southeast Asian countries. *Heliyon*, 10(5), e27060. <https://doi.org/10.1016/j.heliyon.2024.e27060>
- Brou, K. J. C., & Thiam, M. (2023). External debt and capital flight in sub-Saharan Africa: The role of institutions. *Conomics Bulletin*, 43(4), 1642–1655.
- Chen, H., Gangopadhyay, P., Singh, B., & Chen, K. (2023). What motivates Chinese multinational firms to invest in Asia? Poor institutions versus rich infrastructures of a host country. *Technological Forecasting and Social Change*, 189, 122323. <https://doi.org/10.1016/j.techfore.2023.122323>
- Chowdhury, M. A. F., Prince, E. R., Shoyeb, M., & Abdullah, M. (2024). The threshold effect of institutional quality on sovereign debt and economic stability. *Journal of Policy Modeling*, 46(1), 39–59. <https://doi.org/10.1016/j.jpolmod.2023.12.001>
- Chukwu, N. O., Kur, K. K., & Nwugo, E. U. (2023). The role of institutional quality on external debt and sectoral growth nexus: Evidence from emerging economies. *Journal of Entrepreneurship, Management, Economics, and Business Administration*, 1(1), 20–33.
- Ciftci, C., & Durusu-Ciftci, D. (2022). Economic freedom, foreign direct investment, and economic growth: The role of sub-components of free. *THE JOURNAL OF INTERNATIONAL TRADE & ECONOMIC DEVELOPMENT*, 31(2), 233–254. <https://doi.org/10.1080/09638199.2021.1962392>

- Cobb C W & Douglas P H. (1928). A theory of production the American economic review.pdf. *The American Economic Review*, 18(1), 139–165.
- Dawood, M., Baidoo, S. T., & Shah, S. M. R. (2021). An empirical investigation into the determinants of external debt in Asian developing and transitioning economies. *Development Studies Research*, 8(1), 253–263. <https://doi.org/10.1080/21665095.2021.1976658>
- Dinga, G. D., Fonchamnyo, D. C., & Afumbom, N. S. (2024). A multidimensional appraisal of domestic investment, external debt and economic development nexus: Evidence from SSA. *Journal of Business and Socio-Economic Development*. <https://doi.org/10.1108/JBSED-12-2022-0130>
- EAC. (2024). *East African Community Priorities 2022-2026*. Informational. <https://www.eac.int/>
- Egbetunde, T., & Akinlo, A. E. (2019). Financial Globalization and Economic Growth in Sub-Saharan Africa: The Role of Institutional Quality. *ACTA UNIVERSITATIS DANUBIUS*, 15(4), 30–46.
- Emako, E., Nuru, S., & Menza, M. (2023). Determinants of foreign direct investments inflows into developing countries. *Transnational Corporations Review*, 15(1), 72–85. <https://doi.org/10.1016/j.tncr.2023.100006>
- Epor, S. O., Yua, H., & Terhemba lorember, P. (2024). Foreign direct investment and economic growth in developing countries: The role of international trade and foreign debt. *Modern Finance*, 2(1), 1–17. <https://doi.org/10.61351/mf.v2i1.87>
- Fayissa, B., & Nsiah, C. (2013). The Impact of Governance on Economic Growth in Africa. *The Journal of Developing Areas*, 47(1), 91–108. <https://doi.org/10.1353/jda.2013.0009>
- Fonchamnyo, D. C., Dinga, G. D., & Ngum, V. C. (2021). Revisiting the nexus between domestic investment, foreign direct investment and external debt in SSA countries: PMG-ARDL approach. *African Development Review*, 33(3), 479–491. <https://doi.org/10.1111/1467-8268.12593>
- Ftiti, Z., Ben Ameer, H., Louhichi, W., Anastasiou, D., & Awijen, H. (2024). Revisiting capital flow drivers: Regional dynamics, constraints, and geopolitical influences. *Journal of International Money and Finance*, 142, 103049. <https://doi.org/10.1016/j.jimonfin.2024.103049>
- Guan, L., Ali, Z., & Uktamov, K. F. (2024). Exploring the impact of social capital, institutional quality and political stability on environmental sustainability: New insights from NARDL-PMG. *Heliyon*, 10(2), e24650. <https://doi.org/10.1016/j.heliyon.2024.e24650>
- Guo, P., Hu, X., Zhao, S., & Li, M. (2023). The growth impact of infrastructure capital investment: The role of regional innovation capacity—

- evidence from China. *Economic Research-Ekonomska Istraživanja*, 36(2), 2142632. <https://doi.org/10.1080/1331677X.2022.2142632>
- Ha, T. C. V., Doan, T., Holmes, M. J., & Tran, T. Q. (2024). Does Institutional Quality Matter for Foreign Direct Investment and Human Development? *Evaluation Review*, 48(4), 610–635. <https://doi.org/10.1177/0193841X231195798>
- Hassan, A., & Meyer, D. (2021). Exploring the Channels of Transmission between External Debt and Economic Growth: Evidence from Sub-Saharan African Countries. *Economies*, 9(2), 50. <https://doi.org/10.3390/economies9020050>
- Helmy, H. E. (2022). The external debt-inflation nexus in Egypt. *Journal of Public Affairs*, 22(S1), e2802. <https://doi.org/10.1002/pa.2802>
- Henry, J. T., Ali, H., & Elijah Hope Tumba. (2022). External Debts, Debt Burden and Economic Growth Nexus: Empirical Evidence from Nigeria. *International Journal of Business, Management, Accounting and Sustainable Economy*, 1(2), 1–16. <https://doi.org/doi.org/10.6084/m9.figshare.20051096>
- Iheanacho, E., Okere, K. I., & Onoh, J. O. (2023). Nexus between financial integration, capital market development and economic performance: Does institutional structure matters? *Heliyon*, 9(1), e12827. <https://doi.org/10.1016/j.heliyon.2023.e12827>
- Ilorah, R., & Ngwakwe, C. C. (2021). Foreign Aid and Economic Development in Sub-Saharan Africa: The Mediating Role of Governance Effectiveness. *Managing Global Transitions*, 19(4), 307–326. <https://doi.org/10.26493/1854-6935.19.307-326>
- Jama, A. B. (2021). The Effect of External Debt on the Economic Growth in East Africa: ARDL Bound Testing Methodology. *Journal of Finance and Economics*, 9(6), 221–230. <https://doi.org/10.12691/jfe-9-6-3>
- Joshua, U., Adedoyin, F. F., & Sarkodie, S. A. (2020). Examining the external-factors-led growth hypothesis for the South African economy. *Heliyon*, 6(5), e04009. <https://doi.org/10.1016/j.heliyon.2020.e04009>
- Joshua, U., Babatunde, D., & Sarkodie, S. A. (2021). Sustaining Economic Growth in Sub-Saharan Africa: Do FDI Inflows and External Debt Count? *Journal of Risk and Financial Management*, 14(4), 146. <https://doi.org/10.3390/jrfm14040146>
- Junejo, S., Hamadou, I., & Haidari, A. (2024). From Debt Trap to Economic Prosperity: Solow Model Analysis of the Impact of External Debt on Indonesia's Growth. *Cognizance Journal of Multidisciplinary Studies*, 4(2), 28–39. <https://doi.org/10.47760/cognizance.2024.v04i02.003>

- Kayani, N. F., & Ganic, M. (2021). The Impact of Governance on Chinese Inward FDI: The Generalized Method of Moments Technique. *Humanities and Social Sciences Letters*, 9(2), 175–184. <https://doi.org/10.18488/journal.73.2021.92.175.184>
- Kechagia, P., & Metaxas, T. (2022). FDI and Institutions in BRIC and CIVETS Countries: An Empirical Investigation. *Economies*, 10(4), 77. <https://doi.org/10.3390/economies10040077>
- Kemoe & Lartey. (2022). Public debt, institutional quality and growth in sub-Saharan Africa: A threshold analysis. *INTERNATIONAL REVIEW OF APPLIED ECONOMICS*, 222–244. <https://doi.org/10.1080/02692171.2021.1957785>
- Khanday, I. N., & Tarique, Md. (2023). Does income inequality respond asymmetrically to financial development? Evidence from India using asymmetric cointegration and causality tests. *The Journal of Economic Asymmetries*, 28, e00341. <https://doi.org/10.1016/j.jeca.2023.e00341>
- Khanday, I. N., Tarique, Md., Wani, I. U., & Dar, M. H. (2024). Poverty and financial development: An asymmetric and nonlinear ARDL analysis for India. *Journal of Economic Studies*, 51(4), 764–782. <https://doi.org/10.1108/JES-03-2023-0129>
- Kinyondo, A., Pelizzo, R., & Byaro, M. (2021). “DELIVER AFRICA FROM DEBTS”: Good Governance Alone is not Enough to Save the Continent From Debt Onslaught. *World Affairs*, 184(3), 318–338. <https://doi.org/10.1177/00438200211025519>
- Kitole, F. A., & Utouh, H. M. L. (2023). Foreign direct investment and industrialization in Tanzania admixture time series forecast analysis 1960–2020. *Applied Economics Letters*, 1–8. <https://doi.org/10.1080/13504851.2023.2211324>
- Kotlánová, E. (2024). Institutional Environment, Corruption and Their Impact on Economic Growth. In D. Stavárek & M. Tvrdon (Eds.), *Modeling Economic Growth in Contemporary Czechia* (pp. 215–230). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-83753-840-920241014>
- Kunawotor, M., Ahiabor, G., & Yobo, E. (2024). Government size, institutional quality and economic welfare in Africa. *International Journal of Social Economics*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/IJSE-01-2024-0075>
- Lau, S. Y., Tan, A. L., & Liew, C. Y. (2019). The Asymmetric Link between Public Debt and Private Investment in Malaysia. *Malaysian Journal of*

- Economic Studies*, 56(2), 327–342. <https://doi.org/10.22452/MJES.vol56no2.8>
- Lederman, D., Pienknagura, S., & Rojas, D. (2021). Latent Trade Diversification and Its Relevance for Macroeconomic Stability. *The World Bank Economic Review*, 35(1), 58–91. <https://doi.org/10.1093/wber/lhz019>
- Lin, S., Razzaq, A., & Yi, K. (2023). Heterogenous influence of productive capacities pillars and natural resources on ecological sustainability in developing Belt and Road host countries. *Resources Policy*, 85, 103776. <https://doi.org/10.1016/j.resourpol.2023.103776>
- Lobanova, J., Lobanov, M., & Zvezdanović, M. (2021). Governance and civil and political rights as FDI determinants in transition countries. *Zbornik Radova Ekonomskog Fakulteta u Rijeci: Časopis Za Ekonomsku Teoriju i Praksu/Proceedings of Rijeka Faculty of Economics: Journal of Economics and Business*, 39(1), 59–86. <https://doi.org/10.18045/zbe-fri.2021.1.59>
- Lyulyov, O., Lyeonov, S., Tiutiunyk, I., & Podgórska, J. (2021). The impact of tax gap on macroeconomic stability: Assessment using panel VEC approach. *Journal of International Studies*, 14(1), 139–152. <https://doi.org/10.14254/2071-8330.2021/14-1/10>
- Manasseh, C. O., Abada, F. C., Okiche, E. L., Okanya, O., Nwakoby, I. C., Offu, P., Ogbuagu, A. R., Okafor, C. O., Obidike, P. C., & Nwonye, N. G. (2022). External debt and economic growth in Sub-Saharan Africa: Does governance matter? *PLOS ONE*, 17(3), e0264082. <https://doi.org/10.1371/journal.pone.0264082>
- Mehmood, W., Mohy Ul Din, S., Aman-Ullah, A., Khan, A. B., & Fareed, M. (2023). Institutional quality and economic growth: Evidence from South-Asian countries. *Journal of Public Affairs*, 23(1), e2824. <https://doi.org/10.1002/pa.2824>
- Mejia, S. A. (2024). The effects of debt dependence on economic growth in less-developed countries, 1990–2019. *Social Science Research*.
- Mohsin, M., Ullah, H., Iqbal, N., Iqbal, W., & Taghizadeh-Hesary, F. (2021). How external debt led to economic growth in South Asia: A policy perspective analysis from quantile regression. *Economic Analysis and Policy*, 72, 423–437. <https://doi.org/10.1016/j.eap.2021.09.012>
- Mose, N., & Kipchirchir, E. (2024). Foreign Direct Investment and Economic Growth in Kenya: A Comprehensive Analysis. *Asian Journal of Economics, Business and Accounting*, 24(2), 1–13. <https://doi.org/10.9734/ajeba/2024/v24i21215>

- Muganyi, T., Yan, L., & Sun, H. (2021). Green finance, fintech and environmental protection: Evidence from China. *Environmental Science and Eco-technology*, 7, 100107. <https://doi.org/10.1016/j.esse.2021.100107>
- Mumuni, S., & Abille, A. B. (2023). Do trade liberalization and external debt offset income inequality? New evidence from selected African countries. *Cogent Economics & Finance*, 11(2), 2241228. <https://doi.org/10.1080/23322039.2023.2241228>
- Munjal, S., Varma, S., & Bhatnagar, A. (2022). A comparative analysis of Indian and Chinese FDI into Africa: The role of governance and alliances. *Journal of Business Research*, 149, 1018–1033. <https://doi.org/10.1016/j.jbusres.2022.05.087>
- Musse, O. S. H., Sharofiddin, A., & Mohamed, M. A. (2024). The impact of external debt stock on economic growth: Ethical dilemmas and evidence from East African community bloc. *International Journal of Ethics and Systems*. <https://doi.org/10.1108/IJOES-06-2024-0178>
- Mutai, N. C., Cuong, N. M., Dervishaj, V., Kiarie, J. W., Misango, P., Ibeh, L., Popoola, O. M., & Lallmahamood, M. (2024). Examining the sustainability of African debt owed to China in the context of debt-trap diplomacy. *Scientific African*, 24, e02164. <https://doi.org/10.1016/j.sciaf.2024.e02164>
- Naseem, S., & Ji, T. G. (2021). A system-GMM approach to examine the renewable energy consumption, agriculture and economic growth's impact on CO2 emission in the SAARC region. *GeoJournal*, 86(5), 2021–2033. <https://doi.org/10.1007/s10708-019-10136-9>
- Nazamuddin, B. S., Wahyuni, S. S., Fakhruddin, F., & Fitriyani, F. (2024). The nexus between foreign exchange and external debt in Indonesia: Evidence from linear and nonlinear ARDL approaches. *Journal of the Asia Pacific Economy*, 29(2), 810–836. <https://doi.org/10.1080/13547860.2022.2054153>
- Nutassey, V. A., Nomlala, B. C., & Sibanda, M. (2023). Economic institutions, political institutions and public debt in Sub-Saharan Africa. *International Journal of Emerging Markets*. <https://doi.org/10.1108/IJOEM-03-2023-0490>
- Nyabakora, W. I. (2023). The Effect of Public Debt on Economic Growth in Tanzania. *International Journal of Academic Accounting Finance and Management Research*, 7(6), 10–18.
- Ofori, I. K., & Asongu, S. A. (2024). Repackaging FDI for inclusive growth: Nullifying effects and policy-relevant thresholds of governance. *Transnational Corporations Review*, 16(2), 200056. <https://doi.org/10.1016/j.tncr.2024.200056>

- Ojeka, O. J., Egbetunde, T., Okoduwa, G. O., Ojeyode, A. O., Jimoh, M., & Ogunbowale, G. O. (2024). Moderating effect of institutional quality on the influence of debt on investment in sub-Saharan Africa. *Future Business Journal*, 10(1), 76. <https://doi.org/10.1186/s43093-024-00362-0>
- Olaoye, O., & Aderajo, O. (2020). Institutions and economic growth in ECOWAS: An investigation into the hierarchy of institution hypothesis (HIH). *International Journal of Social Economics*, 47(9), 1081–1108. <https://doi.org/10.1108/IJSE-10-2019-0630>
- Olaoye, O. O., Eluwole, O. O., & Lakhani, F. (2022). Foreign capital inflows: A panacea to slow economic growth and infrastructure decay in Africa? *Journal of Economic and Administrative Sciences*, 38(3), 509–527. <https://doi.org/10.1108/JEAS-07-2020-0121>
- Olaoye, O. O., Orisadare, M., Okorie, U. U., & Abanikanda, E. (2020). Re-examining the government expenditure–growth nexus in ECOWAS countries. *Journal of Economic and Administrative Sciences*, 36(4), 277–301. <https://doi.org/10.1108/JEAS-12-2018-0140>
- Onafowora, O. A., & Owoye, O. (2024). Trade openness, governance quality, and economic growth in Latin America and the Caribbean. *International Economics*, 179, 100527. <https://doi.org/10.1016/j.inteco.2024.100527>
- Onuoha, N. E. (2024). Domestic debt, public spending and economic growth in Nigeria: A mediation analysis. *African Journal of Economic and Management Studies*. <https://doi.org/10.1108/AJEMS-10-2023-0400>
- Oyadeyi, O. O., Agboola, O. W., Okunade, S. O., & Osinubi, T. T. (2024). The debt-growth nexus and debt sustainability in Nigeria: Are there reasons to be concerned? *Journal of Policy Modeling*, 46(1), 129–152. <https://doi.org/10.1016/j.jpolmod.2023.11.004>
- Ozekhome, H. O. (2022). GOVERNMENT EFFECTIVENESS AND RULE OF LAW MATTER TO FOREIGN DIRECT INVESTMENT IN NIGERIA? *Romanian Journal of Economic Forecasting*, 25(1), 160–175.
- Patel, R., Mohapatra, D. R., & Yadav, S. K. (2024). Nexus between formal institutions and inward FDI in India: A nonlinear autoregressive distributive lag approach. *International Journal of Social Economics*. <https://doi.org/10.1108/IJSE-05-2023-0375>
- Paul, J., & Jadhav, P. (2019). Institutional determinants of foreign direct investment inflows: Evidence from emerging markets. *International Journal of Emerging Markets*, 15(2), 245–261. <https://doi.org/10.1108/IJOEM-11-2018-0590>
- Penzin, D. J., Salisu, A., & Akanegbu, B. N. (2022). A NOTE ON PUBLIC DEBT-PRIVATE INVESTMENT NEXUS IN EMERGING ECONOMIES. *Buletin*

- Ekonomi Moneter Dan Perbankan*, 25(1), 25–36.
<https://doi.org/10.21098/bemp.v25i1.1988>
- Pesaran, M. H., Shin, Y., & Smith, R. P. (1999). Pooled Mean Group Estimation of Dynamic Heterogeneous Panels. *Journal of the American Statistical Association*, 94(446), 621–634.
- Pesaran, M. H., & Smith, R. (1995). The role of theory in econometrics. *Journal of Econometrics*, 67(1), 61–79. [https://doi.org/10.1016/0304-4076\(94\)01627-C](https://doi.org/10.1016/0304-4076(94)01627-C)
- Rahman, N. H. A., Ismail, S., & Ridzuan, A. R. (2019). How does public debt affect economic growth? A systematic review. *Cogent Business & Management*, 6(1), 1701339.
<https://doi.org/10.1080/23311975.2019.1701339>
- Ramesh, R., & Vinayagathan, T. (2023). The Impact of Corruption, Rule of Law, Accountability, and Government Expenditure on Government Effectiveness: Evidence From Sri Lanka. *Journal of Asian and African Studies*, 002190962211469.
<https://doi.org/10.1177/00219096221146999>
- Ramzan, M., HongXing, Y., Abbas, Q., Fatima, S., & Hussain, R. Y. (2023). Role of institutional quality in debt-growth relationship in Pakistan: An econometric inquiry. *Heliyon*, 9(8), e18574.
<https://doi.org/10.1016/j.heliyon.2023.e18574>
- Raza, M. A. A., Yan, C., Abbas, H. S. M., & Ullah, A. (2021). Impact of institutional governance and state determinants on foreign direct investment in Asian economies. *Growth and Change*, 52(4), 2596–2613.
<https://doi.org/10.1111/grow.12541>
- Ren, X., & Yang, S. (2020). Empirical study on location choice of Chinese OFDI. *China Economic Review*, 61, 101428.
<https://doi.org/10.1016/j.chieco.2020.101428>
- Romer, P. M. (1990). Endogenous Technological Change. *Journal of Political Economy*, 98(5), S71–S102.
- Roy, S., & Paul, A. (2023). Role of Public Debt in Indian States in the Post-Reform Era. *South Asia Economic Journal*, 24(2), 180–215.
<https://doi.org/doi:10.1177/13915614231193997>
- Sachs, J. (2019). *The Rule Of Law And Economic Reform In Russia*. Routledge.
<https://doi.org/10.4324/9780429495878>
- Saha, S., Sadeikin, Md. N., & Saha, S. K. (2022). Effects of institutional quality on foreign direct investment inflow in lower-middle income countries. *Heliyon*, 8(10), e10828. <https://doi.org/10.1016/j.heliyon.2022.e10828>

- Saungweme, T., Maluleke, G., & Odhiambo, N. M. (2023). The impact of public debt on economic growth in Côte d'Ivoire: New evidence from linear and non-linear ARDL approaches. *Croatian Review of Economic, Business and Social Statistics*, 9(1), 61–77. <https://doi.org/10.2478/crebss-2023-0005>
- Saungweme, T., & Odhiambo, N. M. (2019). Government debt, government debt service and economic growth nexus in Zambia: A multivariate analysis. *Cogent Economics & Finance*, 7(1), 1622998. <https://doi.org/10.1080/23322039.2019.1622998>
- Seraj, M., Coskuner, C., & Alhassan, A. (2023). Role of institutions of exchange rate and economic growth in South Africa. *Journal of Economic and Administrative Sciences*. <https://doi.org/10.1108/JEAS-11-2021-0229>
- Shin, Y., Yu, B., & Greenwood-Nimmo, M. (2014). Modelling Asymmetric Cointegration and Dynamic Multipliers in a Nonlinear ARDL Framework. *Festschrift in Honor of Peter Schmidt, Springer*, 281–314. <http://dx.doi.org/10.2139/ssrn.1807745>
- Siddik, Md. N. A. (2023). Does macroeconomic stability promote economic growth? Some econometric evidence from SAARC countries. *Asian Journal of Economics and Banking*, 7(3), 358–379. <https://doi.org/10.1108/AJEB-05-2022-0052>
- Slesman, L., Baharumshah, A. Z., & Ra'ees, W. (2015). Institutional infrastructure and economic growth in member countries of the Organization of Islamic Cooperation (OIC). *Economic Modelling*, 51, 214–226. <https://doi.org/10.1016/j.econmod.2015.08.008>
- Soko, N. N., Kaitibie, S., & Ratna, N. N. (2023). Does institutional quality affect the impact of public agricultural spending on food security in Sub-Saharan Africa and Asia? *Global Food Security*, 36, 100668. <https://doi.org/10.1016/j.gfs.2022.100668>
- Solow, R. M. (1956). A Contribution to the Theory of Economic Growth. *The Quarterly Journal of Economics*, 70(1), 65. <https://doi.org/10.2307/1884513>
- Su, D. T., & Nguyen, C., Phuc. (2022). Foreign financial flows, human capital and economic growth in African developing countries. *International Journal of Finance & Economics*, 27(3), 3010–3031. <https://doi.org/10.1002/ijfe.2310>
- Tile, A., Utouh Harold M.L, & Sesabo Jenifer Kasanda. (2024). External Debts as Panacea to Economic Growth Challenges in Selected Eastern African countries: An Application of the Autoregressive Distributed Lag Model. *Science Mundi*, 4(1), 25–35.

- Turan, T., & Yanikkaya, H. (2021). External debt, growth and investment for developing countries: Some evidence for the debt overhang hypothesis. *Portuguese Economic Journal*, 20(3), 319–341. <https://doi.org/10.1007/s10258-020-00183-3>
- Ullah, S., Ali, K., & Ehsan, M. (2022). Foreign direct investment and economic growth nexus in the presence of domestic institutions: A regional comparative analysis. *Asia-Pacific Journal of Regional Science*, 6(2), 735–758. <https://doi.org/10.1007/s41685-022-00236-9>
- UNCTAD. (2023). *World Investment Report 2023: Investing in Sustainable Energy for All*. United Nations. <https://doi.org/10.18356/9789210027847>
- Wang, R. (2021). Does high external debt predict lower economic growth? Role of sovereign spreads and institutional quality. *Economic Modelling*, 103(105591). <https://doi.org/10.1016/j.econmod.2021.105591>
- World Bank. (2023a). *World Bank Open Data, free and access to global data* [Informational Statistics]. World Bank Open Data. <https://data.worldbank.org>
- World Bank. (2023b). *Worldwide Governance Indicators* [Text/HTML]. World Bank. <https://www.worldbank.org/en/publication/worldwide-governance-indicators>
- Xiao, J., Karavias, Y., Juodis, A., Sarafidis, V., & Ditzen, J. (2023). Improved tests for Granger noncausality in panel data. *The Stata Journal: Promoting Communications on Statistics and Stata*, 23(1), 230–242. <https://doi.org/10.1177/1536867X231162034>
- Yusuf, A., & Mohd, S. (2021). The impact of government debt on economic growth in Nigeria. *Cogent Economics & Finance*, 9(1), 1946249. <https://doi.org/10.1080/23322039.2021.1946249>
- Yusuf, A., & Mohd, S. (2023). Nonlinear effects of public debt on economic growth in Nigeria. *SN Business & Economics*, 3(4), 88. <https://doi.org/10.1007/s43546-023-00468-7>
- Yusuf, H. A., Shittu, W. O., Akanbi, S. B., Umar, H. M., & Abdulrahman, I. A. (2020). The role of foreign direct investment, financial development, democracy and political (in)stability on economic growth in West Africa. *International Trade, Politics and Development*, 4(1), 27–46. <https://doi.org/10.1108/ITPD-01-2020-0002>
- Zahra, A., Nasir, N., Rahman, S. U., & Idress, S. (2023). Impact of Exchange Rate, and Foreign Direct Investment on External Debt: Evidence from Pakistan Using ARDL Cointegration Approach. *iRASD Journal of Economics*, 5(1), 709–719. <https://doi.org/10.52131/joe.2023.0501.0110>

Zardoub, A., & Sboui, F. (2023). Impact of foreign direct investment, remittances and official development assistance on economic growth: Panel data approach. *PSU Research Review*, 7(2), 73–89. <https://doi.org/10.1108/PRR-04-2020-0012>

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

