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# Public Sector Governance, Economic Stability and Mediating Role of Public Debt for World Economies

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## Abstract

Several economic theories conclude that the relationship between public sector governance and macroeconomic stability is direct, as better public sector governance improves economic stability or reduces macroeconomic instability. However, the literature provides us with positive, negative, and insignificant relationships between the two. Following this idea, our study aims to evaluate the mediating role of public debt in the governance-stability association. For estimation, we have used panel data from 102 developed and developing nations for the period 1996-2021 and employed a one-way random-effects estimator for the Seemingly Unrelated Regression system, as suggested by Biørn (2014). Our findings show that public sector governance effectively improves macroeconomic stability through the channel of public debt for developed economies; however, in the case of developing economies, the role of public debt is quite opposite, and the relationship is negative. So, it is concluded that public sector governance improves macroeconomic stability not only directly, but also indirectly through the channel of public sector debt.

**Keywords:** public debt, macroeconomic stability, public sector governance, indirect effect, SUR model

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## 1 Introduction

A key aspect of a country's economic well-being is macroeconomic stability. Macroeconomic stability is necessary to implement fiscal reforms, economic development plans, job creation, and inflation control. The contribution of fiscal spending to long-term economic growth is hotly debated, particularly when nations struggle to manage their fiscal requirements. Macroeconomic stability is considered an important factor in defining a country's economic competitiveness. Stable growth and economic stability are closely linked, as the former helps protect a country from external shocks. Macroeconomic stability is closely linked to economic growth. Financial and monetary support for the economy depends on macroeconomic stability. In modern macroeconomics, macroeconomic stability is a crucial focus. Macroeconomic stability helps protect against interest-rate and currency fluctuations in global markets. Uncontrolled inflation, massive debt burdens, and currency swings can disrupt GDP growth and lead to economic crises. Macroeconomic instability generally has negative effects and impedes economic progress. Fiscal policy promotes macroeconomic stability by limiting economic activity during prosperity and maintaining stable aggregate demand during a recession.

Public sector governance has a dual function in the context of macroeconomic stability: it prevents opportunistic behavior in resource allocation and counteracts problems such as power imbalances, lack of accountability and transparency, and high levels of corruption. Furthermore, by propagating the harmful macroeconomic effects of external shocks, it may slow the recovery of post-crisis macroeconomic stability. The inherent stabilizing effect of fiscal policy increases with a country's size. Public debt influences the relationship between public sector governance and economic stability. Although governments can produce money to monetize their obligations and eliminate the need to pay interest, debt is not the only way governments can finance their operations (Martin, 2009). Public debt refers to the country's total debt, which includes loans owed by local, state, and federal governments. This represents public spending financed through borrowing rather than revenue (Makau, 2008).

Public debt can strain public finances and increase the risk of fiscal instability, potentially undermining macroeconomic stability. However, if managed effectively, public debt can support macroeconomic stability by providing for government activities and enabling governments to respond to economic shocks. Public debt levels can influence public sector governance, which encompasses the efficiency, accountability, and transparency of government institutions and decision-making processes. Individuals and businesses may struggle to balance investment and consumption when burdened with high debt, making it harder for governments to absorb adverse shocks. Additionally, high debt levels can increase sensitivity to shocks and intensify and spread asset price and macroeconomic shocks globally.

High levels of public debt can strain public sector governance by increasing the need for effective debt management and reducing resources available for other government activities. This can give rise to challenges such as fiscal imbalances, low investment, and inflation, which may undermine macroeconomic stability. Indebted countries face governance challenges due to external interference by donor agencies and internal constraints on resource utilization. On the other hand, public sector governance encompasses institutions responsible for managing and directing the use of public resources and ensuring accountability.

A well-functioning public sector governance system can support the sustainable and responsible management of public debt. Transparency, accountability, and sound economic management are examples of good governance practices that can reduce the likelihood of corruption and poor management. Additionally, strong governance can ensure that public debt is used for productive investments that generate economic growth and reduce poverty, thereby contributing to debt sustainability in the long term. Conversely, poor governance and mismanagement can increase public debt, as governments may borrow to finance unproductive activities.

### 1.1 Problem Statement

Some scholars have focused extensively on the relationship between public debt, governance, and growth (Musa et al., 2023; Abbas et al., 2021), while many others have discussed the impact of public sector governance on public debt (Tarek and Ahmed, 2017; Assoum and Alisanto, 2023). Sutherland et al. (2012) and Leon et al. (2019) discussed how public debt affects macroeconomic stability, yet few have examined the mediating role of public debt in public governance and macroeconomic stability. This study aims to address this gap. Existing literature has not thoroughly examined the relationship between public sector governance and macroeconomic stability, including the indirect effects of public sector debt. Without considering this aspect, the linkages between public sector governance and macroeconomic stability are only partially understood. Therefore, our study contributes significantly by addressing this crucial gap, which previous research on governance-stability relationships has overlooked. Additionally, this research innovatively creates a public sector governance index using Principal Component Analysis (PCA), a statistical approach, rather than relying on subjective assessments as previous studies have done. Lastly, this study uses recent data and a larger sample, encompassing 102 countries (both developing and developed) between 1996 and 2021, providing a more robust empirical setting.

Our findings demonstrate that public sector governance positively affects macroeconomic stability, while also helping monitor and improve economic conditions. Regarding the mediating influence of public debt on the governance-stability relationship, the findings show that in developed countries, smaller governments significantly contribute to good governance within the correlation between public sector governance and macroeconomic stability. Conversely, larger governments and weaker institutions have a detrimental impact on developing countries. The disparity between developed and developing countries becomes evident when analyzing the mediating impact of public debt.

Our paper is organized as follows. Section 2 presents a summary of significant prior research and reviews the literature on the governance-stability link. Section 3 presents the data set and our proposed models. Our key findings are presented in Section 4. We wrap up our article and discuss the key policy implications in Section 5.

## 2 Literature Review

### 2.1 Theoretical Literature

Classical economists such as Smith (1776), Mill (1848), and Ricardo (1817) believed that public sector debt would negatively affect economic growth. According to Ricardian equivalence, an individual's or household's consumption is based on the present value of their after-tax lifetime income. The theory suggests that government spending, whether financed through taxes or borrowing, has an equal impact on the economy. Therefore, when the government lowers taxes to stimulate economic activity, people will save more money by investing in bonds. Therefore, Ricardo concluded that public debt has no effect on economic growth. In contrast, Keynesian theory holds that when the private sector treats public bonds as net assets, deficits suppress private spending, transaction demand, interest rates, and prices. This view also suggests that expansionary fiscal policy can amplify its effects, thereby promoting capital formation and accelerating economic growth.

Meade (1958) highlighted that the consequences of "deadweight debts" would be: (i) an increase in household income to preserve the Pigou effect; (ii) a boost in work and enterprise incentives; and (iii) potentially enabling a reduction in future income taxation owing to the budget's capacity to save interest payments. With multiple countries experiencing significant budgetary imbalances, the bankruptcy of Lehman Brothers in 2007, which triggered the global financial crisis, was accompanied by a government debt crisis. Greece was the epicenter of this phenomenon, later extending to Europe's periphery, including Portugal, Spain, Italy, and Ireland. While the primary macroeconomic concern laid the foundation for policymakers' and

economists' arguments, the root cause of the fundamental issue in policy and economic discussions remains unidentified. Despite numerous government efforts to address the issue, poor economic performance persists, and societal expenses have risen. The impact of public sector debt on economic growth remains a subject of theoretical debate. Keynesians believe that demand-side stimulation, new investment, and job creation contribute to economic growth and positively affect the spending multiplier. Classical and neoclassical theorists oppose the Keynesian view, arguing that while government debt can be beneficial in a crisis, it also raises interest rates and creates a shortage of private capital through crowding out, ultimately inhibiting economic growth. In contrast, proponents of New Keynesian theory argue that public debt helps countries generate capital and make significant investments, stimulating the demand side through a multiplier effect. Therefore, there is a large debate about the link between public sector debt and economic growth based on various theoretical perspectives of growth.

According to Tinbergen (1952, 1956), the free-market system cannot generate economic growth. Tinbergen's theory was influenced by the notion that structural issues such as incomplete information, monopolistic markets, and market rigidities in developing and underdeveloped nations would impede the free market mechanism from operating at its full capacity. Tinbergen highlights the role of government planning in efficiently allocating resources and equitably distributing the nation's income. Systematic institutional strategies are necessary for implementing planned reforms aimed at promoting economic growth and development (Mıhçı, 1996).

Barro (1974) argues that people save an appropriate amount of money in anticipation of any future burden resulting from public debt, which does not impede investment or economic growth. This theory is based on the permanent income hypothesis and the rational behavior of economic agents. The term "Ricardian equivalence" refers to this field of study, named after David Ricardo. Many studies have examined different views on the relationship between public debt and economic growth, mainly focusing on the theory of "Ricardian equivalence".

However, few studies support Barro's Ricardian equivalence theory. (Evens, 1988 & 1991). Conversely, other studies challenge the Ricardian equilibrium with a negative debt-growth relationship (Leiderman & Razin, 1988). Furthermore, several investigations have yielded contradictory findings (Haug, 1990). Although the topic requires more research, researchers have recently examined the relationship between debt and growth from different perspectives. Several studies have shown that high levels of government debt can have harmful long-term effects. Increased indebtedness exposes a country to sovereign risk and long-term interest payments (Kumar and Baldacci, 2010; Corsetti et al., 2013; Jacobs et al., 2019). Other studies examine how high government debt distorts the channel of tax increases (Barro, 1979; Dotsey, 1994). Inflation results from an increase in debt (Sargent and Wallace, 1981; Barro, 1995; and Cochrane, 2011). Elmendorf and Mankiw (1999) argue that monetarists believe financing debt through higher interest rates inhibits private investment. Ultimately, public debt can negatively affect economic growth.

However, Aizenman (2007) advocates that government investment in infrastructure should be reduced. Excessive public sector debt can limit the capability to pursue discretionary countercyclical policies, potentially increasing economic fluctuations and hindering development. When elevated debt levels impact the banking industry, leading to a monetary crisis and subsequent economic instability, the situation becomes severe (Burnside, 2003).

Diamond (1965), Saint-Paul (1992), and Aizenman et al. (2007) have found a negative relationship between government debt and economic growth. This relationship is mainly attributed to two factors: (i) the crowding-out effect of rising real interest rates in financial markets on private investment; (ii) public debt is viewed as an intergenerational burden, resulting in a reduction in the capital stock of future generations. Buchanan (1958) asks who pays the public debt and suggests that borrowing to finance public spending will ultimately

burden future generations, as the government may have to raise taxes to service the debt. Barro (1974) believes that fiscal stimulus is an ineffective way to stimulate the economy. This argument is based on Ricardian equivalence theory, which states that increases in debt-financed government spending are offset by increases in private saving in response to expected tax increases.

Public debt issuance is considered an important tool for financing public expenditure and stimulating aggregate demand. Classical and Keynesian models, however, consider this crucial to maintaining high levels of aggregate demand and steering the economy toward full employment (Sardoni, 2013). Furthermore, the concept of debt overhang holds that when future debt increases exceed a country's ability to repay, expected debt service costs will hinder domestic and foreign investment, ultimately hampering economic growth (Bal and Rath, 2014). According to the common view of the debt-growth relationship, public debt stimulates aggregate demand and promotes short-term growth.

**2.2 Empirical Literature**

To ensure macroeconomic stability, the government budget must be financed sustainably. The overarching objective of macroeconomic policy is to contribute to economic and social well-being equitably and sustainably. Maintaining macroeconomic stability is crucial for global development, yet improvements in monetary wealth and stability are not universal across all developing nations. Various scholars have characterized macroeconomic stability differently, leading to a lack of clear, concise, or consistent definitions.

Fiscal policy is important both conceptually and in practice for a nation's development. The literature has widely discussed various aspects of fiscal policy and its role in supporting macroeconomic stability. Sharp and Khan (1980) studied the effectiveness of automatic stabilizers in the United States. They found that automatic stabilizers play a crucial role in maintaining stable prices and production during different stages of economic expansion. The study emphasized the importance of distinguishing how automatic stabilizers influence prices and output during periods of expansion and contraction, respectively

Given that institutions serve as a tool for managing conflicts, Rodrik (2000) underlined the significance of institutional quality for smaller countries in mitigating the impact of shocks. Pryor's (2001) theory posits an inverse relationship between public size and laissez-faire, possibly stemming from citizens in larger states' inclination toward greater protection against potential abuses by larger businesses. As a result, smaller states are expected to exhibit lower levels of regulation. According to Streeten (1993), it is much easier to implement supervision in smaller states, and collective action issues can be resolved easily in these states. Ghura (1995) stated that the cost of public consumption negatively affects monetary growth. The analysis used aggregate data and cross-sectional records for 33 African nations. They concluded that high-income countries had high investment ratios, low inflation rates, and excessive export growth.

According to Mauro (1998), inefficient institutions and burdensome bureaucracies delay the expansion of new products and impede the transfer and implementation of new technology. Economic researchers have highlighted the link between country size and government interventionism. Goldsmith (1999) argues that activist governments can buffer the vulnerabilities of small states. This should therefore affect the ideal size of the welfare state, as contextual risks suggest (Eichner and Wagner, 2002). Fan et al. (2000) examined the lack of consensus in the debate over government spending and macroeconomic stability. Keynesians advocate increasing public expenditure during economic downturns and reducing it during periods of economic prosperity. The governance of the public sector affects macroeconomic stability both directly through institutional reforms and indirectly through investments in education, health, and infrastructure like roads, highways, and dams.

According to Fan and Rao (2003), the impact of various public expenditures on growth varied in 43 developing countries from 1980 to 1998. The study found that agricultural, cultural, and health spending are conducive to economic growth in Africa, while in Latin America, only health spending is significant to growth. Growth was enhanced by structural adjustment programs in Asia and Latin America. However, macroeconomic adjustments have no detrimental effect on total government spending. It is recommended that governments cut unproductive defense spending. The author (Neyapti, 2004) reaches the same conclusion, arguing that fiscal decentralization has statistically negative consequences for inflation, regardless of a country's high or low inflation rate. Keynesian economists, for example, often contend that social preferences for greater government and redistribution to address market imperfections, such as Wagner's rule that governments generate superior goods, are reflected in the size of government. In the 1990s, several nations, such as Sweden and Canada, drastically cut public spending without experiencing any noticeable repercussions (Schuknecht and Tanzi, 2005).

Montiel and Serven (2006) tested the implementation of macroeconomic reforms during the 1990s on the idea of developments, including macroeconomic guidelines and the proliferation of monetary crises. They play an important role in assessing the development and effectiveness of monetary, economic, and trade policies in the changing policy environment to improve growth and macroeconomic stability. Economists see slow growth and multiple crises as signs of flaws in the reform approach.

In his analysis, Thornton (2007) examines 19 countries between 1980 and 2000 and concludes that there is no statistically significant relationship between revenue decentralization and inflation. At the same time, the author focuses on revenue sharing among local governments to provide a more meaningful assessment of the relationship between fiscal decentralization and economic growth. Khalid et al. (2007) have proposed the response function and transmission mechanism of fiscal policy of Pakistan from 1965 to 2006. The study found that during the boom, pro-cyclical fiscal policy responds effectively to business-cycle changes. The study concludes that Pakistan's fiscal policy transmission mechanism is ineffective, while the country's contemporaneous reaction system is functional but unfocused.

Rothstein and Teorell (2008) have investigated the relationship between governance quality and economic growth. The authors examined the impact on economic growth using a comprehensive measure of government quality, including transparency, accountability, and the rule of law. The findings show that good governance is linked to economic growth, and government quality is an important determinant of economic performance. According to Ocampo (2008), "economic stability" encompasses good fiscal policies, price stability, a sustainable debt ratio, private sector balance sheets, a thriving community, and a functioning real economy. According to Mohanti and Zampoli (2009), government expenditure can promote balance and macroeconomic stability, depending on the spending pattern. On the one hand, it can bring stability by investing in development functions such as providing public goods and services, employment, and social security. On the other hand, public expenditure can destabilize the economy if financed by public debt. Public spending funded by money creation can lead to tax inflation (Miron, 2010).

Mehanna et al. (2010) studied the relationship between public governance efficiency and economic growth in the Middle East and North Africa (MENA) between 1996 and 2005. In the context of macroeconomic stability, public governance plays two roles: first, it can prevent opportunistic behavior when allocating resources; Second, in the context of government imbalances, lack of accountability and transparency and high levels of corruption accelerate the spread of negative macroeconomic effects caused by external shocks and slow down the restoration of macroeconomic stability after the crisis. etc. They also highlight the statistically significant, positive impact of several worldwide government indicators on growth, including voice and accountability, government effectiveness, and corruption control.

Kakar (2011) investigated how budgetary variables affected Pakistan's economic growth between 1980 and 2009. The findings showed that fiscal policy plays a critical role in promoting sustainable economic growth, though it is more effective in the long term than in the short term. Ismail and Hussain (2012) examined how government spending affected employment, inflation, and productivity in Pakistan's economy between 1971 and 2009. They discovered that shifts in economic activity have no bearing on current spending or development. Another important study by Audu (2012) on the Nigerian economy found that fiscal policy has a considerable effect on the economy from 1970-2010. Using the co-integration error correction mechanism, the study found a relationship between exports and GDP. Vasilyeva and Kasianenko (2013) showed that innovation is an important indicator of a progress of any nation and economic stability. Macroeconomic stability is discussed by Krasnyak et al. (2015), Lyulyov (2015). It is characterized by the sustainable development of all economic sectors (business sector, transport systems, renewable resources), etc.

Udoka & Anyingang (2015) reveal that public capital and recurrent expenditure lead to economic growth in Nigeria. However, later studies by Ojarikre et al. (2015) did not find a causal relationship between government capital and recurrent expenditure in Nigeria. Government spending and macroeconomic stability differ across countries. Cross-country analysis finds that spending on health and agriculture benefits African economic growth. In Asia, however, spending on education and agriculture can increase economic growth. In contrast, in Latin America, health spending drives economic growth. In Pakistan's economic system evaluation, a negative relationship is found between government spending and financial development. Researchers seek to provide information about the relationships between state and government size.

Furthermore, Bayar (2016) found a statistically significant, positive relationship between economic growth and Worldwide Government Indicators. According to the author, reducing corruption influences economic expansion. Simultaneously, the least impact is seen on attaining political stability in the nation, a crucial measure of the effectiveness of public governance. Keynes believed that higher public spending would increase output and aggregate demand (Corsetti et al., 2016). Therefore, boosting public spending during recessions can help boost the economy (Amuka et al., 2016). While Keynes advocates raising public spending through open budget policy (raising aggregate demand) during recessions, it promotes cutting back on spending when overemployment occurs, that is, when aggregate demand exceeds aggregate supply. The study explained that in periods of high consumption and income levels, public spending is increased. Because of the prevalent assumption that the government should have a limited function, government size was relatively small in the late nineteenth century. This situation changed during the two world wars and the creation of the welfare state, especially after 1960, which led to a sharp increase in government spending and taxation in industrialized countries.

According to Khalid (2017), stable macroeconomic conditions encourage healthy financial markets and infrastructure. Intermediaries efficiently transfer money between savers and investors, promoting economic expansion. Furthermore, a stable macroeconomic environment encourages globalization, integration, investment, and financial development, all of which can drive economic expansion. Chygryn et al. (2018) identify fiscal decentralization as the primary driver of social and economic progress. However, beyond conventional factors such as labor, capital, technological progress, and natural resources, the academic literature also considers the institutional environment of public governance a key factor for macroeconomic stability (Rodrik, 2014; Arif & Ahmed, 2017). Keynes suggests that monetary and fiscal policies be used by the government to meddle in the economy. According to Keynesian philosophy, fiscal policy, particularly public spending, is given greater weight than monetary policy in maintaining economic stability.

According to Bilan et al. (2019), social and political variables are related to macroeconomic stability in eleven European nations. Using Fishburn's technique, they examined the effect of public sector governance on macroeconomic stability, including the public sector governance stability index. The findings indicate that public sector governance stability can be assessed through the relationship between society and governance. Many researchers have extensively studied the direct relationship between public sector governance and macroeconomic stability. However, the indirect relationship between public sector governance and macroeconomic stability through public debt does not exist.

### 2.2.1 Public Sector Governance and Public Debt

According to political economics theory and research, an economy's ability to function depends in part on its level of positive indebtedness. Previous studies have two explanations for this positive effect: as argued by Barro (1979), the first is the countercyclical impact of public sector debt; the second is the role of public sector debt in the redistribution of wealth, as explained by Cukierman and Meltzer (1989) and Debotoli and Nunes (2008). Leff (1964) argued that corruption generally reduces bureaucracy and increases economic growth. Others agree, such as Wei (2000), Huntington (1968), Johnson (1975), and Nye (1967). Scully (1988) argues that higher rates of economic growth result from freer institutions, such as those governing personal and corporate freedoms.

The debt hypothesis, proposed by Persson and Svensson (1989) and Alesina and Tabellini (1990), states that countries seek different levels of public debt because of agreements and political decisions made under the same economic conditions. Several previous researchers considered corruption as one of the six characteristics of governance proposed by Kaufman. North (1990) defines institutions as social rules or artificial constraints that shape human interactions. Strong institutions can encourage greater investment, leading to stable long-term economic growth. Effective institutional controls can also monitor the types of activities that interest groups engage in when distortions and unproductive appropriation of resources occur. Furthermore, governments can implement effective institutions through laws that have direct or indirect effects on businesses, reducing uncertainty for economic decision-makers and providing incentives for creative and productive efforts. According to Shleifer and Vishny (1993), high levels of corruption divert credit resources from valuable initiatives such as health and education to potentially ineffective initiatives such as infrastructure and defense. They also noted that inefficient and dishonest public sector organizations tend to divert funds away from high-value investment areas such as health and education and into lower-performing areas such as defense and unnecessary infrastructure projects. Government spending is another cause for concern as it is linked to corruption in public finances. Mauro (1998) examined the various components of public spending and illustrated how corruption undermines spending on health and education. He said some public spending projects are more likely than others to attract illegal rents and bribes, thus fueling corruption in the public sector.

Parker (1999) stated that the foundation of excellent governance determines the caliber of regulations. By balancing responsibility, transparency, and consistency, a well-functioning regulatory framework enhances investor trust. Government spending, corporate laws, interest rates, minimum wage, and investment subsidies all play a significant role in shaping the investment climate by ensuring political stability and influencing investment decisions (Williams, 2002). Patillo et al. (2002) found that in countries with inadequate policies, the negative impact of debt on economic growth is more pronounced in highly indebted countries. When funds raised through national debt are used for wasteful spending by corrupt states, the national debt negatively affects the economy. In recent years, governance has emerged as a key area of study for determining its influence on economic growth (Grindle, 2004). Economic expansion is thought to require good governance (Kaufmann et al., 2005). Stable political systems and well-functioning institutions not only reduce output volatility, but also increase real GDP growth and reduce the likelihood of sovereign debt crises (Mehlum et al., 2006).

Furthermore, an effectively functioning regulatory framework is a key factor in economic success (Jalilian, 2007).

To estimate debt threshold levels, Cordella et al. (2010) examined the relationship between debt and growth, considering debt and political/institutional quality in a sample of developing countries. The study found that countries with strong policies and institutions experience debt overhang when the net present value of debt exceeds 20%-25% of GDP. However, beyond 70-80%, the debt becomes irrelevant. Countries with weak policies and institutions may have lower thresholds, but evidence of debt overhang is limited. Debt may not always work. Even efficient governments may struggle to meet citizens' needs by financing consumption through debt (Jalles, 2011). The study explained that governance quality, particularly anti-corruption and democracy, influences the relationship between external debt (borrowing opportunities/constraints) and economic growth for a sample of 72 developing countries between 1970 and 2005. Countries appear to exploit and manage debt better and have lower levels of corruption. Furthermore, in countries with lower levels of corruption, debt has both positive and negative effects on economic growth, as predicted by the nonlinear hypothesis. These institutions determine the amount of debt and how the funds are allocated. Corruption moderates the relationship between public debt and economic performance, while Pattilo et al. (2011) examined the quality of government policies. As mentioned earlier, corruption may affect public debt, public spending, and economic performance.

However, Presbitero (2012) found, through an analysis of some low- and middle-income countries from 1990 to 2007, that public debt negatively affects output growth until it reaches 90% of GDP. Furthermore, at this threshold, the impact of debt on growth is negligible. This non-linear effect can be attributed to country-specific characteristics, as debt overhang limits growth only in countries with effective macroeconomic policies and solid institutions. According to the International Monetary Fund, global government debt will reach 256% of GDP by 2020, with emerging markets accounting for 140%. Despite the increase in the debt-to-GDP ratio, empirical evidence on its impact is mixed. Countries with poor infrastructure tend to borrow excessively, wasting collateral resources and shifting them to less productive regions, where weak public governance raises financing costs. Kourtellos et al. (2013) show that the negative effects of debt are related to institutional imperfections. According to Lau et al. (2013), confusion in government policies due to corruption could be reduced. A growing number of recent studies have examined higher levels of public debt and supported the notion of a nonlinear relationship between public debt and economic growth (Reinhart and Rogoff 2010; Marchionne and Parekh 2015).

Dauda and Podivinsky (2014) examine whether debt promotes or hinders monetary growth in Malaysia and whether institutional qualities, such as the Political Rights, Civil Liberties and Monetary Freedoms index, determine this. Institutional quality is critical for the adequate allocation of debt towards high value-added sectors. Megersa and Cassimon (2015) studied 57 developing countries and argued that debt harms economic growth but can be controlled through effective public sector management. Furthermore, governance is critical to ensuring the rule of law and the provision of goods and services. Masuch et al. (2016) found that the negative impact of high initial debt (over 60%) can be mitigated by creating strong long-term growth institutions in European countries, but this impact is strong for changes in institutional quality indicators. Corruption ultimately undermines macroeconomic stability due to poor governance (Bosco, 2016).

Kim et al. (2017) examined a sample of seventy-seven advanced and developing nations, using corruption control as a measure of institutional quality. It was found that growth is typically hindered by rising debt in more corrupt countries but is more favorable in transparent ones. Borrowed funds can stimulate the economy's financial system if used effectively and in moderation. Shittu et al. (2018) found a bidirectional, negative causal relationship between external debt and economic growth. The study found a positive correlation between corruption

and economic growth and a one-way causal relationship between the variables. In a recent study, Ndoricimpa (2020) examines public debt thresholds for African countries using advanced panel smooth transitions regression methods. According to the analysis, no feasible public debt threshold can benefit growth, and debt undermines the economy. Several studies have shown that government debt is detrimental to long-term growth because it affects investment through repayment (Hammudeh et al., 2020; Dey and Tareque, 2020; and Kharusi and Ad, 2018).

Sharaf (2021) found that debt sustainability is one of the biggest challenges facing most countries and that economies tend to sustain fiscal deficits through cyclical government debt, which has little or no long-term impact on economic growth. According to Abbas et al. (2021), public sector debt has a negative impact on the economy with low levels of governance, while with strong governance, it has a favorable influence on economic growth. Yasar (2021) studied how external debt affects GDP growth in developing countries using the ARDL econometric model. According to the study, institutional rigidities, insufficient governance, and poor debt management all lead to fund leakage from public debt, making foreign debt detrimental to economic growth.

According to Mohsin et al. (2021), debt positively affects economic growth in developing countries during economic downturns by promoting capital formation and new investment. Many emerging economies rely on domestic and foreign borrowing to finance budget deficits. For various reasons, developing countries often struggle to manage public debt to stabilize the macroeconomic situation. According to Asteriou et al. (2021) and Shittu et al. (2018), some developing countries exhibit twin deficits, destabilizing fiscal and current account balances through short- and long-term borrowing from various sources. Good governance encourages developing countries to use public debt to promote economic growth by improving government efficiency, reducing corruption, and strengthening regulatory quality (Nguyen, 2021). Countries are encouraged to improve governance to benefit from public debt, strengthening the long-term relationship between debt and growth. According to the debt overhang hypothesis (Kharusi, 2018), public debt reduces GDP growth in Commonwealth-independent countries (Yasar, 2021) and negatively affects growth in low-income countries. In contrast, during global recessions, government debt in emerging markets stimulates capital formation and new investment, increases employment and aggregate demand, and improves economic growth. In Latin American countries, stable policies and government efficiency improve the debt-to-growth ratio (Azam, 2022), and other researchers have also confirmed that good governance drives the debt-to-growth ratio in developing countries. The World Bank coined the term good governance in 1989. Since then, it has been used across various disciplines. In recent years, governance quality has had a significant impact on economic growth. Many international organizations, including the Conference on Asia-Pacific Economic Cooperation, the World Bank, the United Nations, the Organization for Economic Co-operation and Development, and the International Monetary Fund, support this view. Numerous studies have examined the direct relationship between public sector governance and public debt, but the indirect relationship between public sector governance and macroeconomic stability via public debt remains largely unaddressed.

## 3 Methodology

### 3.1 Mediation Analysis

This study employs mediation analysis to examine how the independent variable, public sector governance, is associated with the dependent variable, macroeconomic stability, through public debt as a mediating variable. The goal of mediation analysis is to clarify the nature of the connection among the variables, rather than merely describing how they interact (Hayes & Preacher, 2014).

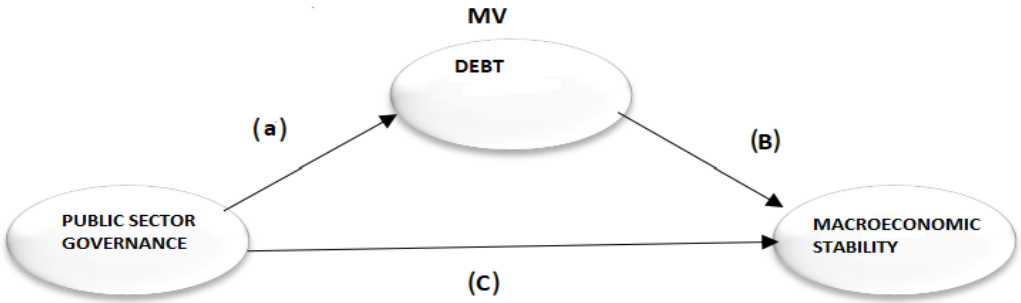



**Figure 3.1:** Causal Association Among Public Sector Governance, Public Debt and Macroeconomic Stability

Figure 3.1 illustrates how our independent variable, public sector governance (PG), influences the dependent variable, macroeconomic stability (MI), through a mediating variable, public debt. The diagram depicts the causal relationship among overall public sector governance, public debt, and macroeconomic stability. The impact of public sector governance on macroeconomic stability has been decomposed into two effects (direct and indirect). The direct impact of PG on MI is represented by "c," and the product "ab" shows the indirect effect via the mediating variable, i.e., public sector debt.

### 3.2 Empirical Models

This study aims to explore the relationships among public sector governance, public sector debt, public sector size, and macroeconomic stability in emerging and developed countries during a 25-year period, from 1996 to 2021. The following summarizes the empirical models applied in this study.

#### 3.2.1 Relationship between Public Sector Governance and Macroeconomic Stability

The following is a general model for studying the direct impact of public sector governance on macroeconomic stability.

$$MI_{it} = ß_0 + ß_1 PG_{it} + \beta_2' EMP + \beta_3' POP + \beta_4' FDI + \varepsilon_{it} \ldots\ldots\ldots\ldots \quad (3.1)$$

#### 3.2.2 Direct and Indirect Effects of Public Sector Governance in the Presence of Public Debt

In order to capture the direct as well as indirect effects of public sector governance (PG) upon macroeconomic stability (MI), as shown in Figure 1, we will employ our economic model as follows:

$$PD_{it} = \eta_0 + \eta_1 PG_{it} + \eta_2' EMP + \eta_3' POP + \eta_4' FDI + \mu_{1it} \quad \ldots\ldots\ldots\ldots\ldots \quad (3.2)$$

$$MI_{it} = \lambda_0 + \lambda_1 PG_{it} + \lambda_2 PD_{it} + \lambda_3' EMP + \lambda_4' POP + \lambda_5' FDI + \mu_{2it} \ldots\ldots\ldots\ldots \quad (3.3)$$

Where PD is public debt, PG represents public sector governance *and* , and the control variables include the employment rate, population growth, and foreign direct investment. Whereas $\mu_{1it}$ is the error term in equation (3.2). MI is the macroeconomic stability Index considered as a dependent variable. Whereas $\mu_{2it}$ is the error term in equation (3.3). By using equations (3.2) and (3.3), we have to compute the direct and indirect effects of PG on MI as shown below:

#### 3.2.3 Direct effect

$\frac{\partial MI}{\partial PG} = \lambda_1$ Using equation (3.3)

#### 3.2.4 Indirect Effect through the Channel of Government Debt

Indirect effect through the channel of PD through equations' 2 ' and ' 3 '

$$\Theta = \frac{\partial MI}{\partial PG} = \frac{\partial MI}{\partial PD} * \frac{\partial PD}{\partial PG} = \frac{\partial MI}{\partial PD} = \lambda_1(\eta_2) \quad (3.4)$$

The sign of the above-mentioned indirect effect can be influenced by the sign of $\lambda_1(\eta_2)$

Where: θ = Indirect effect, quantifying changes in public sector governance and altering macroeconomic stability through changes in public sector debt.

$\frac{\partial PD}{\partial PG}$= This model treats public debt (mediating variable) as a function of public sector governance (PG).

$\frac{\partial MI}{\partial PD}$= This model estimates macroeconomic stability (dependent variable) as a function of public debt (mediating variable).

**3.3 The Seemingly Uncorrelated Regression (SUR)**

The SUR model helps estimate both the direct and indirect effects of the independent variables on the dependent variable. Seemingly Unrelated Regression (SUR) is a statistical technique that allows the estimation of several equation systems concurrently. It is a type of multivariate regression in which each equation is a separate regression model, yet all equations share common variables. The term "seemingly unrelated" refers to the fact that the equations may appear independent, but the common variables enable a more comprehensive statistical analysis. SUR is useful for studying data when relationships between variables are complex and cannot be easily captured by a single regression equation. SUR is a multivariate regression technique that employs a parameter model. The OLS estimates are derived while disregarding any correlation among the error terms of the individual equations.

However, the SUR estimator can provide more efficient parameter estimates when the error terms are contemporaneously correlated. Seemingly Unrelated Regression (SUR) estimator was developed by Zellner (1962) for estimation of models $p > 1$ with the property of $E(e_{it}\, e_{jt}) \neq 0$ for various regressor matrices in each equation, e.g. ($x_i \neq x_j$). To simplify, all the equations are consolidated into a single equation, which is written as$y = x\text{ß} + \epsilon$, and$y = (y_1', y_2', \ldots . y_p')$ described as the dependent variables, x is a diagonal matrix whereas, $\text{ß} = (\text{ß}_1', \text{ß}_2', \ldots . \text{ß}_p')$ and$\epsilon = (\epsilon_1', \epsilon_2', \ldots . \epsilon_p')$ show the stacked error vector of equations. However, the SUR version allows non-zero covariance among the error terms.

$c(\epsilon_j\,, \epsilon_k)$= $\eth_{jk}\, I_n$

This covariance shows GLS's efficiency improvement over the LS estimator.

$v(y) = \Sigma \otimes \text{IN}$

A key assumption is that SUR estimates are unnecessary when the error terms across equations are uncorrelated. According to Zellner (1962), when contemporaneous correlation is evident, jointly estimated equation models like the SURE method are more effective than independent equation solution techniques. This is because independent equation solution methods, such as multiple regression models, are susceptible to simultaneous bias. The SURE model, also known as multivariate regression or the Zellner method, estimates the system's parameters and accounts for heteroscedasticity and contemporaneous correlation in the errors across equations.

$y_1 = \alpha_{11} + \alpha_{12}x_{12} + \alpha_{13}x_{13} + \cdots \alpha_{1k}x_1\; k_1 + e_1 \ldots\ldots\ldots\ldots$ (1)

$y_2 = \beta_{21} + \beta_{22}x_{12} + \beta_{23}x_{13} + \cdots \beta_{2k}x_2\; k_2 + e_2 \ldots\ldots\ldots\ldots$ (2)

$y_M = \Omega_{M1} + \Omega_{M2}x_{12} + \Omega_{M3}x_{M3} + \cdots \Omega_{Mk}x_M\; k_M + e_M \ldots\ldots$ (3)

The OLS equation-by-equation procedure is fully efficient when errors are uncorrelated across equations. However, as Zellner (1962) showed, equations are related, and joint estimation rather than equation-by-equation estimation yields more precise estimates of the regression coefficients when error terms are correlated across equations. SUR estimation is more appropriate than the OLS equation-by-equation procedure when residual correlations among

equations are high. SUR also uses multiple regressions to address multicollinearity among public sector governance, public sector debt, and economic stability.

### 3.4 Sample Period

The study has examined data from developing and developed nations. So, annual data for the years 1996- 2021 are considered to measure the link between public sector governance and macroeconomic stability directly and indirectly using mediation analysis. The dataset covers a 25-year span and includes 102 countries to examine the effect of public sector governance on macroeconomic stability in the presence of public debt.

### 3.5 Data Source

The data for this study were collected from multiple sources, including the World Bank, the International Monetary Fund, and the Worldwide Governance Indicators database. The countries were further categorized into low-income and high-income groups to ensure the reliability of the findings. We will use a quantitative approach, employing panel data analysis techniques. The variables that contribute to the macroeconomic stability index include inflation, GDP growth, fiscal balance, current account balance, and interest rate. The study employs the Seemingly Unrelated Regression Model (SUR) to capture the direct and indirect effects of public sector governance on macroeconomic stability and the integrated index of public governance efficiency, using worldwide government indicators to estimate public sector governance (Kaufmann et al., 1999; and Kaufmann et al., 2004). These were voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption. Principal component analysis will be used to construct the index.

### 3.6 Research Design

The variables incorporated in this study to test the hypotheses include public sector governance, public debt, and macroeconomic stability. This study, in particular, evaluates how public debt affects the relationship between public sector governance and macroeconomic stability. The next section verifies the mediating effect of public debt on the relationship between public sector governance and macroeconomic stability.

### 3.7 Measurement of Variables

These variables include (1) public sector governance, (2) public sector debt, (3) Macroeconomic stability, and (4) control variables.

#### 3.7.1 Measurement of Macroeconomic Stability Index

Research on the relationship between macroeconomic stability and public sector governance is scarce. Several authors define macroeconomic stability as the sustainable development of all economic sectors, including the corporate sector, the transportation system, and renewable resources. (Krasnyak et al., 2015). The index comprises variables such as GDP growth, inflation rate, unemployment rate, foreign debt, and budget deficit (Zaman and Drcelic, 2009). Principal component analysis will be used to construct the index. The index is constructed by combining several indicators of macroeconomic performance into a single measure. Herrera and Maldonado (2022) used variables such as inflation, nominal exchange rate depreciation, and fiscal balance to GDP to construct the index. Our study's index is based on five variables: inflation, GDP growth, fiscal balance, current account balance, and interest rate. These indicators are converted into principal components, a new set of uncorrelated variables that summarize the data's salient characteristics. The most important feature is summarized in the first principal component is used as MSI.

#### 3.7.2 Measurement of Worldwide Governance Indicators (WGI) Index

The Worldwide Governance Indicators were developed by Kaufmann, Kraay, and Zoido-Lobatón (1999) and Kaufmann, Kraay, and Mastruzzi (2004) as a standard for assessing the performance of political institutions. This index comprises six parameters: political stability,

voice and accountability, government efficacy, regulatory quality, rule of law, and corruption control. Depending on the methodology and goal of the index, different variables may be included in an integrated measure of public governance efficiency. Nonetheless, political stability, the rule of law, voice and accountability, government efficacy, lack of violence or terrorism, regulatory quality, and corruption control are common factore covered in these indexes.

### 3.7.3 Measurement Of Public Debt

There are several ways to measure the public debt. (a) External debt per cent of GDP; (b) public and publicly guaranteed external debt plus domestic public debt; (c) Public debt of central governments with respect to annual nominal GDP (Leon et al., 2019). This can be measured in several ways, including Gross Public Debt, Net Public Debt, debt-to-GDP ratio, Debt Service Ratio, Debt per capita, Debt Maturity Structures, and Public Debt in foreign currency. In this study, public debt is estimated by government debt as a percentage of GDP (Westphal and Rother, 2012).

## 3.8 Control Variables

This study includes the employment rate, foreign direct investment, and population growth rate to control for potential effects on public sector governance and macroeconomic stability. As foreign direct investment increases, it stimulates growth more than domestic investment. However, evidence is limited; Mansfield and Romeo (1980) and Haddad and Harrison (1993) suggest that foreign direct investment (FDI) accelerates economic growth in developing countries, specifically in Morocco. Additionally, Carkovic and Levine (2005) argue that FDI flows have no exogenous effect on growth in financially sophisticated (developed) economies. According to the "Malthusian" or "Orthodox" school of thought, rapid population growth is viewed as dangerous because it tends to outpace any response brought about by advances in technology and capital accumulation (Coale & Hoover, 1957; Ehrlich & Holdren, 1969). For the G-7 countries, Padalino and Vivarelli (1997) discovered a positive correlation between GDP and employment. They also estimated employment elasticities to calculate unemployment-rate growth. Regarding GDP, employment elasticities are positive and statistically significant for the entire sample of rich and developing nations. We infer that jobless growth is possible in these countries because the employment elasticity is much lower in emerging nations, ranging from 0.11 to 0.15, compared with 0.43 to 0.48 in developed nations. Haider et al. (2023).

## 3.9 Estimation Methods

The main estimation techniques are described in this section. This investigation used a panel dataset because it allows for the control of unobserved firm heterogeneity and offers greater flexibility, variety, efficiency, and effectiveness (Verbeek, 2008). For panel data analysis, one-way random effects and fixed effects are popular methods. An intercept term represents the disparities between cross-sectional units. Biorn (2004) proposed a new approach to deal with unbalanced panel data to estimate a one-way Seemingly Unrelated Regression system with random effects. Based on Hausman's (1978) selection criterion, RE is recommended over FE.

This helps reduce firm-level heterogeneity and avoid biased estimates. The SUR method, suggested by Arlond and Zellner (1962), estimates several interconnected relationships when the error terms are correlated. This correlation comes from different sources, such as economic fluctuations. SUR model is more suitable compared to other methods like OLS, for two main reasons; the first is to gain efficiency in estimation by combining two seemingly different equations, and the second is to impose or test restrictions (Moon & Perron, (2006). Therefore, we opt SUR model instead of OLS to estimate equations. To capture both the direct and indirect effects of public sector governance (PG) on macroeconomic stability (MI) through public sector size and public sector debt, we will employ our SUR model. SUR is beneficial because it minimizes standard errors and controls for cross-period correlation by estimating equations simultaneously (Cameron & Trivedi, 2009). Another benefit of this approach is identifying the

intermediary factors in the link between the dependent and independent variables. The SUR model mitigates multicollinearity among public sector governance, public size, public debt, and macroeconomic stability by estimating several regressions simultaneously.

## 4 Results and Discussion

### 4.1 Regression Analysis (Seemingly Unrelated Model)

#### 4.1.1 Public Sector Governance and Macroeconomic Stability for World Economies

We analyzed the effect of public sector governance on macroeconomic stability across world economies. We have dissected the effect of overall public sector governance on macroeconomic stability into direct and indirect effects. Table 4.1 presents the results of our econometric model, which incorporates both the direct and indirect effects of public governance on macroeconomic stability via public debt. To account for their impact on macroeconomic stability, we also included a few control variables: employment rate, population growth, and foreign direct investment. The results are presented in Table 4.1.

**Table 4.1:** Impact of Public Sector Governance on Macroeconomic Stability Through the Channel of Public Debt

| **Variables** | **MODEL** | |
|---|---|---|
| | **Public debt** | **Macroeconomic stability** |
| **Public Governance** | -30.74054 (0.000) *** | .0661043 (0.000) *** |
| **FDI** | | -0.00001 (0.888) |
| **Population Growth** | | .0000113 (0.995) |
| **Employment Rate** | | .0008621 (0.035) ** |
| **No. of Observations** | | 2652 |
| **No. of countries** | | 102 |

Note: P-value is presented in parentheses with coefficients. ***, ** and * shows level of significance at 1%, 5% and 10% respectively.

Empirical findings reveal a positive, direct, and highly significant association between public governance and macroeconomic stability. Specifically, a one-percentage-point increase in governance quality is associated with a 0.661-percentage-point increase in national stability. The indirect effect is negative, indicating that public debt substantially affects public sector governance and macroeconomic stability, with a decrease of 30.74054 percentage points. Prior studies find that governments in countries with higher levels of corruption tend to borrow more, as corruption is associated with increased public debt (Cooray et al., 2017; Benfratello et al., 2018). High public debt can place strain on public sector governance by increasing the need for effective debt management and reducing the resources available for other government activities. This may contribute to fiscal imbalances, low investment, and inflation, thereby undermining macroeconomic stability. A growing body of recent research supports a nonlinear, inverted U-shaped relationship between debt and growth, particularly at higher levels of public debt (Reinhart & Rogoff, 2010; Pattillo et al., 2011; Marchionne & Parekh, 2015; Ahlborn & Schweickert, 2018). Many emerging economies face unstable democracies, authoritarian regimes, and other challenges that contribute to poor governance. The control-variable results indicate that FDI has a negative effect, while population and the employment rate have positive effects on macroeconomic stability. The negative correlation between FDI inflows and macroeconomic stability is statistically insignificant. This may reflect declines in

domestic firms' production and employment following structural reforms, a phenomenon that could offset or even outweigh FDI's positive effects on growth in host economies.

### 4.1.2 Public Sector Governance and Macroeconomic Stability for Developing Economies

In the Seemingly Unrelated Regression model, we decompose the effect of overall public sector governance on macroeconomic stability into direct and indirect effects. Table 4.2 presents the results of our econometric model, which includes both the direct and indirect effects of public governance on macroeconomic stability, channeled through public debt. The table presents our broad model, incorporating results for both direct and indirect links between public sector governance and macroeconomic stability. We also include several control variables, such as population growth, employment rate, and FDI, to capture their effects on macroeconomic stability.

**Table 4.2:** Impact of Public Sector Governance on Macroeconomic Stability Through the Channel of Public Debt

| **Variables** | **MODEL** | |
|---|---|---|
| | **Public Debt** | **Macroeconomic stability** |
| **Public Governance** | -31.32497 (0.000) *** | .0510029 (0.000) *** |
| **FDI** | | 0.00001 (0.756) |
| **Population Growth** | | -.0020387 (0.352) |
| **Employment Rate** | | .0007344 (0.087)* |
| **No. of Observations** | | 2652 |
| **No. of countries** | | 102 |

Note: P-value is presented in parentheses with coefficients. ***, ** and * shows level of significance at 1%, 5% and 10% respectively

Empirical findings indicate a positive, direct, and highly significant relationship between public governance and macroeconomic stability. This suggests that for every 1-percentage-point increase in governance quality, macroeconomic stability rises by 0.510029 percentage points. The indirect effect is negative, indicating that public debt significantly affects public sector governance and macroeconomic stability by -31.32497 percentage points. One of these relationships is highly significant at the 1% level, as indicated by the p-value (0.000). Public debt can affect public sector governance and macroeconomic stability. It can put pressure on public finances and elevate the risk of fiscal instability, which can jeopardize macroeconomic stability. PG directly enhances macroeconomic stability, but in the presence of debt, it has a negative effect on debt; when debt levels are low, it slightly increases macroeconomic stability. Low productivity and growth indicate poor economic performance, reducing a nation's ability to repay its debt. Empirical studies show that as corruption increases with public debt, governments in more corrupt nations tend to borrow more (Cooray et al. 2017; Benfratello et al. 2018). Empirical research validates the negative effect of government debt. A growing body of research examines advanced stages of public debt and supports a non-linear, inverted U-shaped debt-growth relationship (Reinhart & Rogoff 2010; Pattillo et al., 2011; Marchionne & Parekh 2015; Ahlborn & Schweickert, 2018). Nations with fragile governments frequently borrow excessively, spend mortgage resources irresponsibly, transfer them to far less efficient sectors, and face higher borrowing costs due to poor public governance.

The economy may be more vulnerable to asset-price swings when debt is high. High debt levels can also expose the economy to asset-price fluctuations, exacerbating shocks and macroeconomic instability. Numerous nations with high debt ratios, including Greece and Sri Lanka, have experienced catastrophic economic downturns (Petrović & Nojković, 2021). Following the global financial crisis, many governments implemented rescue plans that

required financing the gaps. Public sector debt also increased significantly during this period to mitigate the impact of the COVID-19 outbreak by providing funding to the most vulnerable sectors, including healthcare and others. However, public sector debt in many emerging countries is difficult to control, and these debts make it difficult to achieve expected economic development (Yasar, 2021).

According to Asteriou et al. (2021) and Shittu et al. (2018), many developing countries' government budgets and current account balances are unstable because they accept short- and long-term borrowing from multiple sources, resulting in twin deficits. A high debt burden makes the country macroeconomically fragile. Recent studies have revealed that public debt has a detrimental impact on developing countries, attributed to ineffective policies, high levels of corruption, and poor debt fund management, resulting in low income, low savings, and a large tax burden. (Law et al., 2021). Many emerging nations face unstable democracies and other problems that lead to poor governance. Rent-seekers can swindle public funds through ineffective governance, according to Mauro (1998) and Cooray et al. (2017), whereas effective administration ensures their proper use. Kaufmann (2011) stated that poor administration opens the door for public servants to misuse public funds to further their political ambitions. In managing public funds, governance is crucial, and public debt is a delicate public fund that must be used carefully if it is to help the country's economy.

According to Cooray et al. (2017) and Nguyen & Luong (2021), effective governance boosts macroeconomic indices by allocating debt funds properly, whereas weak governance can lead to excessive public debt in transitional countries. This affects growth through high taxation, low savings, and interest payments. According to Presbitero (2008, 2012), public debt in low- and middle-income countries has a negative impact on output growth until it reaches 90% of GDP. Beyond this point, debt's effect on growth becomes negligible. The control variables included in our research, and the results shown in the table, suggest that employment and FDI have a favorable impact on macroeconomic stability, whereas population has a negative effect. The table shows that a 1-percentage-point increase in population reduces macroeconomic stability by .0020387 percentage points. Similarly, a one-percentage-point increase in employment results in a significant increase in macroeconomic stability of 0.0007344 percentage points, while FDI has no effect because of strict regulations, permissions, and low productivity in developing countries. Debt repayment is minimal; hence, public debt is burdensome.

### 4.1.3 Public Sector Governance and Macroeconomic Stability for Developed Economies

In the Seemingly Unrelated Model, we investigate the impact of overall public sector governance on macroeconomic stability through direct and indirect effects. The table presents the results of our econometric model, including the direct and indirect effects of public governance on macroeconomic stability via public debt. Table 4.3 presents our comprehensive model, including both direct and indirect effects of public sector governance on macroeconomic stability. Furthermore, we have introduced several control variables: Population growth, Employment rate, and FDI, to capture their effect on macroeconomic stability.

**Table 4.3:** Impact of Public Sector Governance on Macroeconomic Stability Through the Channel of Public Debt

| **Variables** | **MODEL** | |
|---|---|---|
| | **Public Debt** | **Macroeconomic stability** |

| | | |
|---|---|---|
| **Public Governance** | 0.00001 (0.752) | .1054245 (0.001) *** |
| **FDI** | | -0.00001 (0.559) |
| **Population Growth** | | -.0020134 (0.244) |
| **Employment Rate** | | .0002542 (0.634) |
| **No. of Observations** | | 2652 |
| **No. of countries** | | 102 |

Note: P-value is presented in parentheses with coefficients. ***, ** and * shows level of significance at 1%, 5% and 10% respectively.

Empirical findings indicate a positive, direct, and highly significant relationship between public governance and macroeconomic stability. This means that for every percentage point increase in governance quality, macroeconomic stability rises by .1054245 percentage points. In contrast to developing nations, the indirect effect is positive and statistically insignificant, with a value of 0.00001 (0.752), indicating that public debt does not affect public sector governance and macroeconomic stability. One of these relationships is highly significant at the 1% level, as indicated by the p-value (0.000). Public debt can affect public sector governance and macroeconomic stability. It is suggested that countries with lower levels of public debt, coupled with higher levels of transparency and accountability in their public sector, tend to experience greater macroeconomic stability.

Effective public sector governance can help manage public debt in a responsible and sustainable manner. Good governance practices, such as transparency, accountability, and sound economic management, can mitigate the risks of mismanagement and corruption that could lead to higher debt levels. Industrialized nations with strong institutions and stringent public sector regulations are more successful at boosting the economy through increased debt. Countries with strong institutional frameworks can borrow more without experiencing a slowdown in their economies. Good governance in developed countries can improve macroeconomic indicators by ensuring the efficient use of debt. Despite having larger governments and higher tax rates, Kleven (2014) examines the situation of Scandinavian nations that perform better economically due to higher-quality social institutions (such as trust, social capital, and ethnic homogeneity). The control variables we incorporated, along with the results shown in the table, suggest that employment and FDI have a favorable impact on macroeconomic stability, whereas population has a negative effect. The table indicates that a 1-percentage-point increase in population reduces macroeconomic stability by 0.0020134 percentage points. Likewise, if employment increases by 1 percentage point, it leads to a significant increase in macroeconomic stability of .0002542 percentage points. This study makes it clear that, in contrast to underdeveloped nations, industrialized nations use their accumulated public debt as productive capital. Unlike in the less developed world, public debt in developed nations therefore contributes to GDP growth.

## 5 Conclusion

This study examines the relationship between public sector governance and macroeconomic stability. Several economic theories conclude that the association between public sector governance and macroeconomic stability is direct, as better public sector governance improves economic stability or reduces macroeconomic instability. However, the literature reports positive, negative, and insignificant relationships between the two. Following this approach, our research seeks to assess the mediating effect of public debt in the governance-stability association. We used panel data from 102 developed and developing nations spanning 1996-2021 to estimate the SUR system using the one-way random-effects estimator proposed by Biørn (2014).

According to empirical findings, when public debt is treated as a mediator, public governance and macroeconomic stability show a positive, direct, and highly significant relationship in developing economies. This indicates that for every percentage point gain in governance quality, macroeconomic stability increases by 0.0510029 percentage points. Moreover, the indirect effect is negative, meaning public debt significantly affects the public sector governance and macroeconomic stability relationship by -31.32497 percentage points. To mitigate the adverse impact of public sector debt, better governance has the potential to counteract the negative effects of significant levels of public debt in developing nations on the governance-stability relationship.

In developed nations, both the direct relationship between macroeconomic stability and public sector governance is positive, and the indirect relationship is also positive via public debt. Empirical findings indicate a positive, direct, and highly significant link between public governance and macroeconomic stability. This means that for every 1 percentage point gain in governance quality, macroeconomic stability increases by 0.1054245 percentage points. In contrast to developing nations, the indirect effect is positive but statistically insignificant (0.00001, 0.752), indicating that public debt does not affect public sector governance and macroeconomic stability. This study makes it clear that, unlike underdeveloped nations, industrialized nations use their accumulated public debt as productive capital. Industrialized nations, characterized by robust institutions and strong public sector governance, strategically use public debt as productive capital, leveraging it to stimulate economic growth. Poorly controlled public debt can cause excessive inflation, reduce investment, and undermine economic growth, thereby jeopardizing macroeconomic equilibrium. Institutional quality plays an essential role in shaping the impact of public debt on economic stability, and countries with strong institutions and effective public-sector governance are more successful in boosting the economy through increased debt. In conclusion, industrialized countries with reliable institutions and strong public-sector regulations are more likely to stimulate the economy by increasing debt. Excessive debt makes it harder for individuals and businesses to manage investment and consumption, and it can also make it harder for governments to absorb unfavorable shocks. Moreover, elevated debt levels can increase shock sensitivity and intensify macroeconomic shocks across the globe.

In low-income countries, high external debt leads to crowding out and debt overhang. It is important to keep debt at a lower level in the medium to long run. It is recommended that governments borrow domestically rather than externally, as this supports economic stability. In developing economies, public sector management policy should be reviewed, and the size of the public sector and public debt should be kept at the minimum possible level, as developed economies exhibit comparatively manageable and constructive levels of public debt. In developed nations, increases in sovereign debt, often precipitated by global and financial crises, serve to discourage capital accumulation and lower economic growth. The government should play a vital role in striking the proper balance between the benefits and costs of debt accumulation through sound debt management and high debt transparency. This study analyzes secondary country-level macroeconomic and governance data. The submitted manuscript does not document ethical committee review or approval.

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**References**


Abbas, Q., Junqing, L., Ramzan, M., & Fatima, S. (2021). Role of governance in debt-growth relationship: Evidence from panel data estimations. *Sustainability, 13*(11), 1–19. https://doi.org/10.3390/su13115954

Aizenman, J., Kletzer, K., & Pinto, B. (2007). *Economic growth with constraints on tax revenues and public debt: Implications for fiscal policy and cross-country differences* (NBER Working Paper No. 12750). National Bureau of Economic Research. https://doi.org/10.3386/w12750

Aktan, C. C. (2009). Government reform in Turkey and policy recommendations. *International Journal of Economics and Finance Studies, 1*(2), 45–51.

Alesina, A., & Tabellini, G. (1990). A positive theory of fiscal deficits and government debt. *The Review of Economic Studies, 57*(3), 403–414. https://doi.org/10.2307/2298021

Amuka, J. I., Ezoke, M. O., & Asgowa, F. O. (2016). Government spending pattern and macroeconomic stability: A vector autoregressive model. *International Journal of Economics and Financial Issues, 6*(4), 1930–1936.

Arif, U., & Ahmad, E. (2017). Growth effects of fiscal decentralization: The role of macroeconomic stability and governance institutions. *FWU Journal of Social Sciences, 11*(1), 276–289.

Assoum, F., & Alinsato, A. S. (2023). Only under good governance does public debt improve national income: Evidence from dynamic panel threshold model for Sub-Saharan African countries. *Journal of Government and Economics, 10*, 1–9. https://doi.org/10.1016/j.jge.2023.100078

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*, 270–287. https://doi.org/10.1007/s12197-020-09515-7

Audu, N. P. (2012). The impact of fiscal policy on the Nigerian economy. *International Review of Social Sciences and Humanities, 4*(1), 142–150.

Azam, M. (2022). Governance and economic growth: Evidence from 14 Latin America and Caribbean countries. *Journal of the Knowledge Economy, 13*, 1470–1495. https://doi.org/10.1007/s13132-021-00781-2

Azam, M., & Emirullah, C. (2014). The role of governance in economic development: Evidence from some selected countries in Asia and the Pacific. *International Journal of Social Economics, 41*(12), 1265–1278. https://doi.org/10.1108/IJSE-11-2013-0262

Bal, D. P., & Rath, B. N. (2014). Public debt and economic growth in India: A reassessment. *Economic Analysis and Policy, 44*, 292–300. https://doi.org/10.1016/j.eap.2014.05.007

Barro, R. J. (1974). Are government bonds net wealth? *Journal of Political Economy, 82*, 1095–1117. https://doi.org/10.1086/260266

Barro, R. J. (1979). On the determination of the public debt. *Journal of Political Economy, 87*, 940–971. https://doi.org/10.1086/260807

Barro, R. J. (1995). *Inflation and economic growth* (NBER Working Paper No. 5326). National Bureau of Economic Research. https://doi.org/10.3386/w5326

Bayar, Y. (2016). Public governance and economic growth in the transitional economies of the European Union. *Transylvanian Review of Administrative Sciences, 12*(48), 5–18.

Bilan, Y., Raišienė, A. G., Vasilyeva, T., Lyulyov, O., & Pimonenko, T. (2019). Public governance efficiency and macroeconomic stability: Examining convergence of social and political determinants. *Public Policy and Administration, 18*(2), 241–255. https://doi.org/10.13165/VPA-19-18-2-05

Biørn, E. (2014). Estimating SUR system with random coefficients: The unbalanced panel data case. *Empirical Economics, 47*, 451–468. https://doi.org/10.1007/s00181-013-0753-y

Bosco, B. (2016). Old and new factors affecting corruption in Europe: Evidence from panel data. *Economic Analysis and Policy, 51*, 66–85. https://doi.org/10.1016/j.eap.2016.06.002

Carkovic, M., & Levine, R. (2005). Does foreign direct investment accelerate economic growth? In *Institute for International Economics Center for Global Development* (pp. 195–220).
Chygryn, O., Petrushenko, Y., Vysochyna, A., & Vorontsova, A. (2018). Assessment of fiscal decentralization influence on social and economic development. *Montenegrin Journal of Economics, 14*(4), 69–84. https://doi.org/10.14254/1800-5845/2018.14-4.5
Cooray, A., Dzhumashev, R., & Schneider, F. (2017). How does corruption affect public debt? An empirical analysis. *World Development, 90*, 115–127. https://doi.org/10.1016/j.worlddev.2016.08.020
Cordella, T., Ricci, L. A., & Ruiz-Arranz, M. (2010). Debt overhang or debt irrelevance? *IMF Staff Papers, 57*, 1–24. https://doi.org/10.1057/imfsp.2009.20
Corsetti, G., Dedola, L., Járocsi, M., Maćkowiak, B., & Schmidt, S. (2016). *Macroeconomic stabilization, monetary-fiscal interactions, and Europe's monetary union* (ADEMU Working Paper Series No. 58). European Central Bank. https://doi.org/10.2139/ssrn.2910881
Corsetti, G., Kuester, K., Meier, A., & Müller, G. J. (2013). Sovereign risk, fiscal policy, and macroeconomic stability. *The Economic Journal, 123*, F99–F132. https://doi.org/10.1111/ecoj.12013
Cukierman, A., & Meltzer, A. H. (1989). A political theory of government debt and deficits in a neo-Ricardian framework. *The American Economic Review, 79*(4), 713–732.
Dauda, S. N. M., & Podivinsky, J. M. (2014). Government debt and economic growth in Malaysia: The role of institutional quality. *Applied Economics Letters, 21*, 1179–1183. https://doi.org/10.1080/13504851.2014.916378
Debortoli, D., & Nunes, R. (2008). *Political disagreement, lack of commitment and the level of debt*(International Finance Discussion Paper No. 938). Board of Governors of the Federal Reserve System. https://doi.org/10.2139/ssrn.1292405
Dey, S. R., & Tareque, M. (2020). External debt and growth: Role of stable macroeconomic policies. *Journal of Economics and Financial Administration, 25*, 185–204. https://doi.org/10.1108/JEFAS-05-2019-0069
Diamond, P. A. (1965). National debt in a neoclassical growth model. *The American Economic Review, 55*(5), 1126–1150.
Dotsey, M. (1994). Some unpleasant supply side arithmetic. *Journal of Monetary Economics, 33*, 507–524. https://doi.org/10.1016/0304-3932(94)90041-8
Ehrlich, P. R., & Holdren, J. P. (1969). Population and panaceas: A technological perspective. *BioScience, 19*(12), 1065–1071. https://doi.org/10.2307/1294858
Eichner, T., & Wagener, A. (2002). *Increases in risk and the welfare state* (CESifo Working Paper Series No. 685). CESifo. https://doi.org/10.2139/ssrn.306521
Elmendorf, D. W., & Mankiw, N. G. (1999). Government debt. In *Handbook of macroeconomics* (Vol. 1, pp. 1615–1669). https://doi.org/10.1016/S1574-0048(99)10038-7
Evans, P. (1988). Are consumers Ricardian? Evidence for the United States. *Journal of Political Economy, 96*(5), 983–1004. https://doi.org/10.1086/261572
Evans, P. (1991). Is Ricardian equivalence a good approximation? *Economic Inquiry, 29*(4), 626–644. https://doi.org/10.1111/j.1465-7295.1991.tb00851.x
Fan, S., Hazell, P., & Thorat, S. K. (2000). Impact of public expenditure on poverty in rural India. *Economic and Political Weekly, 35*(40), 3581–3588.
Fan, S., & Rao, N. (2003). *Public spending in developing countries: Trends, determinants, and impact* (EPTD Discussion Paper No. 99). International Food Policy Research Institute.
Ghura, D. (1995). Macro policies, external forces, and economic growth in Sub-Saharan Africa. *Economic Development and Cultural Change, 43*(4), 759–778. https://doi.org/10.1086/452185
Goldsmith, A. A. (1999). Africa's overgrown state revisited: Bureaucracy and economic growth. *World Politics, 51*(4), 520–546. https://doi.org/10.1017/S0043887100009242
Grindle, M. (2004). Good enough governance: Poverty reduction and reform in developing countries. *Development Policy Review, 17*, 525–548. https://doi.org/10.1111/j.0952-1895.2004.00256.x

Haddad, M., & Harrison, A. (1993). Are there positive spillovers from direct foreign investment? Evidence from panel data for Morocco. *Journal of Development Economics, 42*(1), 51–74. https://doi.org/10.1016/0304-3878(93)90072-U

Hammudeh, S., Sohag, K., Husain, S., Husain, H., & Said, J. (2020). Non-linear relationship between economic growth and nuances of globalization with income stratification: Roles of financial development and governance. *Economic Systems, 44*(3), 1–17. https://doi.org/10.1016/j.ecosys.2020.100761

Haug, A. A. (1990). Ricardian equivalence, rational expectations, and the permanent income hypothesis. *Journal of Money, Credit and Banking, 22*, 305–326. https://doi.org/10.2307/1992562

Hayes, A. F., & Preacher, K. J. (2014). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology, 67*(3), 451–470. https://doi.org/10.1111/bmsp.12028

Herrera, J. C. A., & Maldonado, C. E. C. (2022). Macroeconomic stability: An international comparison with a panel VAR model. *Forum of Central Bank Investigators Central American Monetary Council, 16*(1), 1–43.

Huntington, S. P. (1968). *Political order in changing societies*. Yale University Press.

Ismail, M., & Hussain, F. (2012). Fiscal discretion and its impact on Pakistan economy. *The Pakistan Development Review, 51*(4), 339–362. https://doi.org/10.30541/v51i4IIpp.339-364

Jacobs, J., Ogawa, K., Sterken, E., & Tokutsu, I. (2019). Public debt, economic growth and the real interest rate: A panel VAR approach to EU and OECD countries. *Applied Economics, 52*, 1–18. https://doi.org/10.1080/00036846.2019.1673301

Jalilian, H., Kirkpatrick, C., & Parker, D. (2007). The impact of regulation on economic growth in developing countries: A cross-country analysis. *World Development, 35*, 87–103. https://doi.org/10.1016/j.worlddev.2006.09.005

Jalles, J. T. (2011). The impact of democracy and corruption on the debt-growth relationship in developing countries. *Journal of Economic Development, 36*(4), 41. https://doi.org/10.35866/caujed.2011.36.4.003

Johnson, O. E. (1975). An economic analysis of corrupt government, with special application to less developed countries. *Kyklos, 28*(1), 47–61. https://doi.org/10.1111/j.1467-6435.1975.tb01933.x

Kakar, Z. K. (2011). Impact of fiscal variables on economic development of Pakistan. *Romanian Journal of Fiscal Policy, 2*(2), 1–10.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2004). *Governance matters III: Governance indicators for 1996–2002* (World Bank Policy Research Working Paper No. 3106). World Bank. https://doi.org/10.1596/1813-9450-3106

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2005). *Governance matters IV: Governance indicators for 1996–2004* (World Bank Policy Research Working Paper No. 3630). World Bank. https://doi.org/10.1596/1813-9450-3630

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2011). The worldwide governance indicators: Methodology and analytical issues. *The Hague Journal on the Rule of Law, 3*, 220–246. https://doi.org/10.1017/S1876404511200046

Kaufmann, D., Kraay, A., & Zoido-Lobatón, P. (1999). *Governance matters* (World Bank Policy Research Working Paper No. 2196). World Bank.

Khalid, A. M. (2017). Combining macroeconomic stability and micro-based growth: The South East Asia/Asia Pacific experience. *The Lahore Journal of Economics, 22*, 135–152. https://doi.org/10.35536/lje.2017.v22.isp.a6

Khalid, M., Malik, W. S., & Sattar, A. (2007). The fiscal reaction function and the transmission mechanism for Pakistan. *The Pakistan Development Review, 46*(4), 435–447. https://doi.org/10.30541/v46i4IIpp.435-447

Kharusi, S. A., & Ada, M. S. (2018). External debt and economic growth: The case of emerging economy. *Journal of Economic Integration, 33*, 1141–1157. https://doi.org/10.11130/jei.2018.33.1.1141

Kim, E., Ha, Y., & Kim, S. (2017). Public debt, corruption and sustainable economic growth. *Sustainability, 9*(3), 1–30. https://doi.org/10.3390/su9030433

Kleven, H. J. (2014). How can Scandinavians tax so much? *Journal of Economic Perspectives, 28*(4), 77–98. https://doi.org/10.1257/jep.28.4.77

Kourtellos, A., Stengos, T., & Tan, C. M. (2013). The effect of public debt on growth in multiple regimes. *Journal of Macroeconomics, 38*, 35–43. https://doi.org/10.1016/j.jmacro.2013.08.023

Krasnyak, V., & Chygryn, O. (2015). Theoretical and applied aspects of the development of environmental investment in Ukraine. *Marketing and Management of Innovations, 3*, 226–234.

Kumar, M. M. S., & Baldacci, M. E. (2010). *Fiscal deficits, public debt, and sovereign bond yields*. International Monetary Fund. https://doi.org/10.5089/9781455202188.001

Leff, N. H. (1964). Economic development through bureaucratic corruption. *American Behavioral Scientist, 8*(3), 8–14. https://doi.org/10.1177/000276426400800303

Leiderman, L., & Blejer, M. I. (1988). Modeling and testing Ricardian equivalence: A survey. *Staff Papers, 35*(1), 1–35. https://doi.org/10.2307/3867275

Leon, J. M. G., Murillo, J. W. R., & Hernández, E. A. R. (2019). Public debt and stability in economic growth: Evidence for Latin America. *International Journal of Economics and Financial Issues, 9*(4), 137–147. https://doi.org/10.32479/ijefi.8167

Lyulyov, O., Chortok, Y., Pimonenko, T., & Borovik, O. (2015). Ecological and economic evaluation of the transport system functioning according to the territory sustainable development. *International Journal of Ecology and Development, 30*(3), 1–10.

Makau, J. K. (2008). *External public debt servicing and economic growth in Kenya: An empirical analysis* [Unpublished master's project, University of Nairobi].

Mansfield, E., & Romeo, A. (1980). Technology transfer to overseas subsidiaries by US-based firms. *The Quarterly Journal of Economics, 95*(4), 737–750. https://doi.org/10.2307/1885489

Marchionne, F., & Parekh, S. (2015). Growth, debt and inequality. *Economic Issues, 20*, 67–94. https://doi.org/10.2139/ssrn.2496659

Martin, F. M. (2009). A positive theory of government debt. *Review of Economic Dynamics, 12*(4), 608–631. https://doi.org/10.1016/j.red.2009.02.003

Masuch, K., Moshammer, E., & Pierluigi, B. (2016). *Institutions, public debt and growth in Europe*(ECB Working Paper No. 1963). European Central Bank. https://doi.org/10.2139/ssrn.2840639

Mauro, P. (1998). Corruption and the composition of government expenditure. *Journal of Public Economics, 69*(2), 263–279. https://doi.org/10.1016/S0047-2727(98)00025-5

Meade, J. E. (1958). Is the national debt a burden? *Oxford Economic Papers, 10*(2), 163–183. https://doi.org/10.1093/oxfordjournals.oep.a040800

Megersa, K., & Cassimon, D. (2015). Public debt, economic growth and public sector management in developing countries: Is there a link? *Public Administration and Development, 35*, 329–346. https://doi.org/10.1002/pad.1733

Mehanna, R., Yazbeck, Y., & Sarieddine, L. (2010). Governance and economic development in MENA countries: Does oil affect the presence of a virtuous circle? *Journal of Transnational Management, 15*(2), 117–150. https://doi.org/10.1080/15475778.2010.481250

Mehlum, H., Moene, K., & Torvik, R. (2006). Cursed by resources or institutions? *The World Economy, 29*, 1117–1131. https://doi.org/10.1111/j.1467-9701.2006.00808.x

Mihçi, H. (1996). Development: What does a term mean? *Economic Approach, 7*(23), 65–86. https://doi.org/10.5455/ey.10242

Mill, J. S. (1848). *Principles of political economy with some of their applications to social philosophy*. https://oll.libertyfund.org/titles/mill-principles-of-political-economy-ashley-ed

Miron, J. (2010). *The negative consequences of government expenditure* (Mercatus Center Discussion Paper, September 2010). George Mason University.

Mohanty, M., & Zampolli, F. (2009). Government size and macroeconomic stability. *BIS Quarterly Review*. https://www.bis.org/publ/qtrpdf/r_qt0912g.pdf

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

Montiel, P., & Servén, L. (2006). *Macroeconomic stability in developing countries: How much is enough?* (Policy Research Working Paper No. 3456). World Bank. https://doi.org/10.1596/16427

Ndoricimpa, A. (2020). Threshold effects of public debt on economic growth in Africa: New evidence. *Journal of Economic Development, 22*, 187–207. https://doi.org/10.1108/JED-01-2020-0001

Neyapti, B. (2004). Fiscal decentralization, central bank independence and inflation: A panel investigation. *Economics Letters, 82*(2), 227–230. https://doi.org/10.1016/j.econlet.2003.09.005

Nguyen, C. V., Giang, L. T., Tran, A. N., & Do, H. T. (2021). Do good governance and public administration improve economic growth and poverty reduction? The case of Vietnam. *International Public Management Journal, 24*, 131–161. https://doi.org/10.1080/10967494.2019.1592793

North, D. C. (1990). *Institutions, institutional change and economic performance*. Cambridge University Press. https://doi.org/10.1017/CBO9780511808678

Nye, J. (1967). Corruption and political development: A cost-benefit analysis. *American Political Science Review, 61*, 417–427. https://doi.org/10.2307/1953254

Ocampo, J. A. (2008). A broad view of macroeconomic stability. In N. Serra & J. E. Stiglitz (Eds.), *The Washington Consensus reconsidered: Towards a new global governance* (pp. 63–94). Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199534081.003.0006

Ojarikre, J. O., Ezie, O., & Torka, T. M. (2015). Public expenditure growth and inflation in Nigeria: The causality approaches. *SSRG International Journal of Economics and Management Studies, 2*(1), 26–31.

Padalino, S., & Vivarelli, M. (1997). The employment intensity of economic growth in the G-7 countries. *International Labour Review, 136*, 191–213.

Parker, I. (1999). Deconstruction and psychotherapy. In *Deconstructing psychotherapy*. https://doi.org/10.4135/9781446217962

Pattillo, C., Poirson, H., & Ricci, L. (2002). *External debt and growth* (IMF Working Paper No. 02/69). International Monetary Fund. https://doi.org/10.5089/9781451849073.001

Pattillo, C., Poirson, H., & Ricci, L. A. (2011). External debt and growth. *Review of Economics and Institutions, 2*, 1–30. https://doi.org/10.5202/rei.v2i3.45

Persson, T., & Svensson, L. E. (1989). Why a stubborn conservative would run a deficit: Policy with time-inconsistent preferences. *The Quarterly Journal of Economics, 104*, 325–345. https://doi.org/10.2307/2937850

Presbitero, A. F. (2008). The debt-growth nexus in poor countries: A reassessment. *Economics, 2*(1), 1–43. https://doi.org/10.5018/economics-ejournal.ja.2008-30

Presbitero, A. F. (2012). Total public debt and growth in developing countries. *The European Journal of Development Research, 24*, 606–626. https://doi.org/10.1057/ejdr.2011.62

Pryor, F. (2001). *Quantitative notes on the extent of governmental regulations in various OECD nations*. https://doi.org/10.2139/ssrn.255410

Reinhart, C. M., & Rogoff, K. S. (2010). Growth in a time of debt. *American Economic Review, 100*, 573–578. https://doi.org/10.1257/aer.100.2.573
Ricardo, D. P. (1817). On the principles of political economy and taxation. In *The works and correspondence of David Ricardo* (Vol. 1, p. 247). Cambridge University Press.
Rodrik, D. (2000). *Institutions for high-quality growth: What they are and how to acquire them*(NBER Working Paper No. 7540). National Bureau of Economic Research. https://doi.org/10.3386/w7540
Rodrik, D. (2014). The past, present, and future of economic growth. *Challenge, 57*(3), 5–39. https://doi.org/10.2753/0577-5132570301
Rothstein, B., & Teorell, J. (2008). The quality of government and the political underpinnings of economic growth. *World Development, 36*(11), 2099–2125.
Saint-Paul, G. (1992). Fiscal policy in an endogenous growth model. *The Quarterly Journal of Economics, 107*, 1243–1259. https://doi.org/10.2307/2118387
Sardoni, C. (2013). Wages and employment: A Keynesian model. In *New Keynesian economics/Post Keynesian alternatives* (pp. 106–117). Routledge.
Sargent, T. J., & Wallace, N. (1981). Some unpleasant monetarist arithmetic. *Federal Reserve Bank of Minneapolis Quarterly Review, 5*, 1–17. https://doi.org/10.21034/qr.531
Schuknecht, L., & Tanzi, V. (2005). *Reforming public spending: Great gain, little pain*. Politeia.
Scully, G. (1988). The institutional framework and economic development. *Journal of Political Economy, 96*(3), 652–662. https://doi.org/10.1086/261555
Sharaf, M. F. (2021). The asymmetric and threshold impact of external debt on economic growth: New evidence from Egypt. *Journal of Business and Socio-Economic Development, 2*, 1–18. https://doi.org/10.1108/JBSED-06-2021-0084
Sharp, A. M., & Khan, M. (1980). Automatic fiscal policy. *Nebraska Journal of Economics and Business, 19*(3), 5–20.
Shittu, W. O., Hassan, S., & Nawaz, M. A. (2018). The nexus between external debt, corruption and economic growth: Evidence from five SSA countries. *African Journal of Economic and Management Studies, 9*, 319–334. https://doi.org/10.1108/AJEMS-07-2017-0171
Shleifer, A., & Vishny, R. (1993). Corruption. *The Quarterly Journal of Economics, 108*(3), 599–617. https://doi.org/10.2307/2118402
Smith, A. (1776). *The wealth of nations*. The Modern Library.
Streeten, P. (1993). The special problems of small countries. *World Development, 21*(2), 197–202. https://doi.org/10.1016/0305-750X(93)90014-Z
Sutherland, D., & Hoeller, P. (2012). *Debt and macroeconomic stability: An overview of the literature and some empirics* (OECD Economics Department Working Paper No. 1006). Organisation for Economic Co-operation and Development. https://doi.org/10.2139/ssrn.2188941
Thornton, J. (2007). Fiscal decentralization and economic growth reconsidered. *Journal of Urban Economics, 61*(1), 64–70. https://doi.org/10.1016/j.jue.2006.06.001
Tinbergen, J. (1952). *On the theory of economic policy*. North Holland Publishing.
Tinbergen, J. (1956). *Economic policy: Principles and design*. https://hdl.handle.net/1765/16740
Udoka, C. O., & Anyingang, R. A. (2015). The effect of public expenditure on the growth and development of Nigeria economy (1980–2012). *International Review of Management and Business Research, 4*(3), 823–833.
Vasylieva, T. A., & Kasyanenko, V. O. (2013). Integral assessment of innovation potential of Ukraine's national economy: A scientific methodical approach and practical calculations. *Actual Problems of Economics, 144*(6), 50–59.
Wei, S. J. (2000). How taxing is corruption on international investors? *The Review of Economics and Statistics, 82*(1), 1–11. https://doi.org/10.1162/003465300558533
Williams, P. (2002). The competent boundary spanner. *Public Administration, 80*(1), 103–124. https://doi.org/10.1111/1467-9299.00296

Yasar, N. (2021). The causal relationship between foreign debt and economic growth: Evidence from Commonwealth Independent States. *Foreign Trade Review, 56*, 415–429. https://doi.org/10.1177/00157325211018329

Zaman, C., & Drcelic, B. (2009). *Macro-stabilization issues in the Serbian economy: Methodological evaluation*. Centre for Social and Economic Analyses. https://doi.org/10.2139/ssrn.1521660

Zellner, A. (1962). An efficient method of estimating seemingly unrelated regressions and tests for aggregation bias. *Journal of the American Statistical Association, 57*(298), 348–368. https://doi.org/10.1080/01621459.1962.10480664