THEORETICAL FOUNDATION AND DYNAMICS OF PUBLIC DEBT IN SELECTED COUNTRIES

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ABSTRACT
This paper discusses the importance of effective public debt management for fiscal sustainability, economic stability, and growth. It examines different types of public debt and lessons learned from countries with high debt burdens. The paper provides a comparative analysis of public debt levels across countries and discusses debt sustainability analysis, highlighting the impact of public debt on economic growth. Various public debt management strategies are discussed, with a focus on emerging trends. The research emphasizes the need for sustainable financing, particularly through green and social bonds, and the integration of advanced technologies. The paper also emphasizes the development of local currency bond markets and enhanced risk management practices to reduce dependency on foreign debt and mitigate market risks. The paper concludes that, although scholars have exhaustively reviewed public debt in various countries around the world, the dynamics of public debt are still evolving. The study recommended promoting sustainable financing for improving public debt management practices among others.
Keywords: Public Debt Management, Fiscal Sustainability, Economic Stability, Debt Sustainability Analysis.
JEL code: H63, H75, H77

1. INTRODUCTION

Public debt has undergone dramatic growth throughout history. Various eras recognize distinct public debt levels and composition reflecting changes in fiscal handling and fiscal arrangements. Recent developments indicate that public indebtedness varies significantly across advanced countries, emerging market economies, and low-income states across the globe (Isomitdinov et al., 2024). For instance, gross government debt in Cyprus equals 132.2% of GDP, in Japan stands at 229.7% of GDP, the UK is indebted by an equivalent of 105.3% of GDP, and the U.S. has a reported 105.5% of debt as a proportion of the national output in 2020 (OECD, 2021). Conversely, emerging markets recorded an average debt-to-GDP ratio amounting to about 49.9%, and investment in them can be described as striking (Smirnov, 2021). Developing economies have experienced average debt-to-GDP ratios of 35.9% in 2018, having posted a 12-percentage decrease in four years (Smirnov, 2021). Furthermore, fiscal restrictions play an important part in determining the size of public indebtedness within an economy; thus, the scope of the study seeks to ascertain fiscal deficits and their impact on national economies and the financial system as a whole. Although the establishment of an empirical and positive correlation between economic development and public debt incurred is not easy, a thorough examination of these conditions is necessary to better understand the mechanics of the relationship between public debt and economic performance. Broadly, it is agreed that theoretical and practical developments sparked interest in public debt and its effects on social and economic organizations. Hence, the practice of increasing public debt may reveal the desire to delay imposing fiscal pressure on particular economic agents, even when cash is reimbursed upon maturity (Okonkwo et al., 2024). Further, scholars provide mixed findings on the socio-economic and developmental impact of rising public indebtedness, and the capacity to seek alternative funding should domestic financing become scarce (Abada et al., 2021a). Moreover, society bequeaths debt to future generations; thus, bigger public debt makes future generations worse off. Lastly, as an important feature of national economies affecting long-term stability, conditions for generating additional knowledge based on the evolution of public debt have been fulfilled (Okonkwo & Akamike, 2024).

A solid theoretical foundation informs fiscal responsibility and sustainable debt practices, emphasizing the importance of maintaining manageable debt levels to avoid future tax burdens and potential default risks (Okonkwo, 2018). This understanding promotes disciplined borrowing and efficient use of public funds, ensuring that debt levels remain within sustainable limits.

Historical and theoretical insights into public debt help in anticipating and managing debt crises, identifying warning signs, and implementing preventive measures. For example, understanding the risks of foreign-denominated debt can guide countries to pursue prudent borrowing practices and avoid over-reliance on external financing (Okonkwo et al., 2024).

Governments that demonstrate an understanding of public debt theories can build public confidence and credibility, reducing borrowing costs and improving the government's ability to finance its activities. Theoretical foundations also highlight the implications of public debt on future generations, promoting intergenerational equity by striking a balance between current fiscal needs and the welfare of future citizens (Ndoricimpa, 2020; Okonkwo & Akamike, 2024).

In an interconnected global economy, the theoretical understanding of public debt informs international economic relations and cooperation, guiding international negotiations, debt relief efforts, and collaborative fiscal policies that enhance global economic stability.

Theoretical foundations provide a common language and framework for academic and policy discourse on public debt, facilitating rigorous analysis, debate, and the development of innovative solutions to fiscal challenges (Barnett et al., 2022). By engaging with these theories, economists and policymakers can contribute to advancing knowledge and formulating effective public debt strategies.

This study aims to explore the theoretical foundations of public debt, analyze factors influencing debt accumulation, compare public debt dynamics across countries, assess the impact of public debt on economic growth and stability, evaluate the sustainability of public debt levels in selected countries, and investigate the effectiveness of debt management strategies.

2. LITERATURE REVIEW

2.1 Conceptual Issues

Finance obligations in governmental bodies involve accumulating monetary dues. The trend towards safe-haven assets in bond markets provides insight into public indebtedness behaviors. Understanding public indebtedness requires recognizing patterns and economic trends driving debt decisions (Gubareva & Borges, 2013). Drawing from domestic configurations and capital movements can enhance understanding of fiscal liabilities and economic growth.

Types of Public Debt

Public debt is categorized by maturity, source, form, and purpose. Short-term debt matures in less than a year, while medium-term debt matures between one and ten years (Okonkwo et al., 2020). Long-term debt matures over ten years and is used for long-term projects like infrastructure development. Domestic debt is borrowed from local banks, financial institutions, or citizens, while external debt is borrowed from foreign lenders (Arellano et al., 2016). Marketable debt can be traded in financial markets, while non-marketable debt cannot. Currency denomination affects public debt, with domestic currency debt reducing exchange rate risk but subject to inflation risk. Instrument types include bonds, T-bills, notes, CDs, and commercial paper (Abada et al., 2021b; Aybarç, 2019).

2.2 Theoretical Frameworks

Keynesian Economics Perspective

Keynesian economics focuses on public debt as a tool for economic stabilization and growth. Keynes emphasized controlling the debt market's psychology to manipulate interest rates and ensure full employment is achieved through long-term government debt (Phelps, 2022; Toporowski, 2022). Public debt's impact on wealth and income distribution is multidimensional, with some causing wealth inequality and others leading to long-term growth and decreased income disparity (Chatzouz, 2020). The overlapping generations model suggests public debt can impair future generations' well-being, even under imperfect employment equilibrium conditions. The role of public debt in wealth and income distribution is complex (Borissov & Kalk, 2020).

Monetarist Theory on Public Debt

The monetarist hypothesis suggests that excessive public debt negatively impacts economic performance, leading to increased interest rates, budget imbalances, and stifling growth (Ehikioya, & Omankhanlen, 2021). It highlights the strong correlation between public debt and GDP in many nations. The monetarist theory advocates for regulating public debt levels through constant monetary expansion to promote economic stability (Mareček & Machová, 2017). Inflation negatively impacts the public sector, leading to increased public expenditures and budget deficits. Combining interest-rate pegs with active fiscal policies can ensure stability. Thus, solid monetary policy and controlled inflation are crucial for effectively managing public debt levels and promoting economic well-being (Vladušić & Ristić, 2015).

Ricardian Equivalence Hypothesis

The Ricardian Equivalence Hypothesis suggests that government spending doesn't change individual consumption patterns (Di Laurea & Ricciuti, 2003). Studies have examined its validity under various economic conditions, including liquidity restrictions and income uncertainties. However, exceptions exist. Countries like Bangladesh show connections between financial reforms and personal spending decisions, revealing the varying relevance of Ricardian Equivalence across different economic landscapes (Chowdhury, 2001).

3. DYNAMICS OF PUBLIC DEBT

The relationship between public debt and economic growth is complex and multifaceted. Public debt can finance essential government investments that stimulate growth, but excessive debt can hinder economic performance (Ndoricimpa, 2020). Positive impacts include financing public investment, improving productivity, and fostering a conducive environment for private sector activity. Debt-financed investments in education and healthcare can improve human capital, leading to a skilled and healthier workforce (Matthew & Mordecai, 2016). However, excessive debt can lead to interest rate increases, taxation and debt servicing costs, inflationary pressures, reduced fiscal space, debt overhang, macroeconomic instability, and currency depreciation (Kekere, 2021). To optimize the impact of public debt on economic growth, policymakers should consider sustainable borrowing practices, fiscal responsibility and reforms, transparent debt management, growth-enhancing policies, and crisis preparedness (Bashir, 2019). Balancing the benefits of borrowing with the need for fiscal responsibility is crucial for sustainable economic development (Spilioti & Vamvoukas, 2015).

Debt Sustainability and Economic Growth

Debt sustainability and economic growth are interconnected, with sustainable debt levels supporting growth and excessive debt hindering it (Ashogbon et al., 2023). Factors influencing debt sustainability include debt-to-GDP ratio, debt composition, economic growth, interest rates, fiscal balance, and institutional and policy framework. Sustainable debt levels can support economic growth by financing investments in infrastructure, education, healthcare, and other public goods (Barnett et al., 2022). Countercyclical policies can stabilize the economy through fiscal stimulus during economic downturns, while public investments stimulate private sector investments. However, excessive public debt can lead to higher interest rates, reduced spending, macroeconomic instability, and debt overhang. Strategies for balancing debt sustainability and economic growth include prudent borrowing, fiscal consolidation, economic reforms, debt management, building fiscal buffers, and strengthening institutions.

Debt Issuance and Repayment

Public debt management is crucial for fiscal stability and economic growth. It involves strategic decisions around debt issuance and repayment, minimizing costs and risks. Key strategies include government bonds, Treasury Bills, inflation-linked bonds, and foreign currency bonds (Oloto et al., 2019). Market access can be achieved through domestic and international market development. Debt repayment strategies include sinking funds, buybacks, exchanges, refinancing, rolling over debt, prepayment, early redemption, and call options (Samsu et al., 2016). Risk management includes interest rate, exchange rate, credit and liquidity, operational risk, and transparency. Successful debt management involves careful planning, execution, diversification, access to domestic and international markets, and sound repayment strategies (Greiner & Fincke, 2015).

Debt Restructuring and Refinancing

Debt restructuring and refinancing are crucial strategies in public debt management to improve debt sustainability, manage liquidity, and address financial crises (Elgonemy, 2002). Debt restructuring involves altering existing debt terms to achieve a more manageable debt profile, such as extending maturities, reducing interest rates, or reducing principal amounts owed. It involves assessment, negotiation with creditors, implementation, and support from international institutions like the IMF and World Bank. Successful debt refinancing examples include Mexico's refinanced debt with IMF support and Brady Bonds, and the Philippines' debt exchange to lengthen maturities and reduce servicing pressures (Zablah & Murphy, 2015). Both strategies require careful planning, transparent negotiations, and sound financial management to ensure long-term fiscal stability and economic growth.

Debt Sustainability Analysis

Debt Sustainability Analysis (DSA) is a crucial tool used by governments, international organizations, and financial institutions to assess a country's ability to maintain its debt levels without facing repayment difficulties (Guzman & Heymann, 2015). It involves analyzing debt indicators like debt-to-GDP ratio, debt service-to-revenue ratio, interest payments-to-revenue ratio, gross financing needs, economic growth projections, fiscal policy measures, interest rates, primary balance, debt structure, and macroeconomic assumptions. DSA is used by the IMF, World Bank, EU, U.S. Treasury, and CBO, as well as emerging markets like Brazil and South Africa. It helps policymakers make informed decisions about debt levels, ensuring fiscal health and economic stability (Darvas & Hüttl, 2014).

Comparison of Public Debt Levels Across Countries

Public debt levels vary significantly across countries, influenced by historical, economic, and policy factors. Japan has the highest debt-to-GDP ratio of approximately 260%, with high debt primarily domestically held and low interest rates due to a strong domestic investor base and central bank policies (Reisen, 1994; Corsetti & Roubini, 1991). The US has a debt-to-GDP ratio of around 130%, with a mix of domestic and foreign holdings. Greece has high debt levels resulting from the financial crisis and subsequent bailouts, but austerity measures and economic reforms have provided some stability. Italy has persistent high debt levels due to slow economic growth, political instability, high reliance on domestic savers, and structural economic challenges. Germany has a debt-to-GDP ratio of about 65%, with strong fiscal discipline, budget surpluses, robust economic performance, and conservative fiscal policies. The United Kingdom has a debt-to-GDP ratio of approximately 100%, with increased borrowing due to economic measures during and post-Brexit. Canada maintains a manageable debt level with a strong commitment to fiscal responsibility. Australia has relatively low debt levels, while China has a debt-to-GDP ratio of around 70%.

Case Studies of Selected Countries

This paper examines public debt management trends in selected countries across different politico-economic zones using real-time data. It focuses on revenue and expenditure management, fiscal policy, and the economic and political context. The research aims to provide insights into long-term explanations and econometric trends in public debt reduction.

Case Studies on Successful Public Debt Management: Public debt management is a complex process that requires fiscal discipline, comprehensive reforms, effective governance, and strategic economic policies. Case studies from Canada, New Zealand, Sweden, and Germany show the importance of these strategies in managing public debt effectively. Canada implemented spending cuts, tax reforms, and institutional reforms to reduce expenditures and improve budgetary processes (de Mendonça & Machado, 2013). New Zealand faced high public debt and fiscal deficits, while Sweden stabilized the banking sector and reformed its pension system. Germany post-World War II faced enormous public debt and economic reconstruction, using the Marshall Plan and market-oriented reforms (Bandiera, 2008).

Lessons Learned from Countries with High Debt Burdens: Countries with high debt burdens can learn valuable lessons on managing public debt effectively. Key lessons include fiscal discipline, structural reforms, effective debt management, and strong institutions (Saungweme & Odhiambo, 2018). Greece's debt crisis highlighted the consequences of persistent fiscal deficits and excessive borrowing, while Argentina's repeated debt crises highlighted the importance of structural reforms and economic diversification. Japan has managed to avoid a debt crisis due to effective debt management practices and transparency. Institutional strength and governance are crucial for maintaining fiscal stability and borrowing.

Germany successfully rebuilt its economy and managed its debt through prudent fiscal policies and credibility (Spilioti & Vamvoukas, 2015).

4. EMERGING TRENDS IN PUBLIC DEBT MANAGEMENT

Emerging trends in public debt management are focusing on sustainability, risk management, and innovation. Key trends include sustainable financing and green bonds, digitalization and technology integration, local currency bond markets, risk management enhancements, integrated debt management frameworks, social bonds, SDG-linked bonds, public-private partnerships (PPPs), resilience and crisis preparedness, innovative financing structures (Borissov & Kalk, 2020). Green bonds finance environmentally sustainable projects, while digitalization and technology integration improve efficiency, transparency, and market access. Local currency bond markets are prioritized in emerging economies to reduce dependency on foreign currency debt and mitigate exchange rate risks. Integrated debt management frameworks are being adopted to support economic stability and growth objectives. Social bonds and bonds linked to the United Nations Sustainable Development Goals (SDGs) are also growing, appealing to investors with social impact (Toporowski, 2022).

5. CONCLUSION

The study has established that, although scholars have exhaustively reviewed public debt in various countries around the world, the dynamics of public debt are still evolving. This fact underscores the role of public debt, and a better understanding of it provides a theoretical foundation to better manage and use public debt to develop an economy. This essay finds that public debt relating to the economic growth of each selected country has several factors, such as endogenous and exogenous factors. It also finds that the results on the relationship between public debt and economic growth differ from country to country.

Policy Recommendations

Governments should promote sustainable financing through green and social bonds and use blockchain technology for public debt management. Develop local currency bond markets, invest in infrastructure, foster domestic investor base, and expand derivatives. Integrate financial and debt policies, maintain macroeconomic stability, strengthen international debt market engagement, and address inequalities.

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