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Fiscal Deficit and Public Debt Sustainability: An Empirical Analysis of South Asian Economies

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Abstract

Fiscal deficits and public debt continue to be central issues in the macroeconomic discourse of South Asian economies, where governments face the dual challenge of financing economic development and maintaining fiscal discipline. As the pressure to invest in infrastructure, healthcare, and social welfare increases, several countries in the region have resorted to high levels of deficit financing. This, in turn, has led to the accumulation of substantial public debt, raising questions about long-term sustainability and macroeconomic stability.

This study offers a comprehensive empirical analysis of the relationship between fiscal deficits and public debt sustainability in five South Asian countries: India, Pakistan, Bangladesh, Sri Lanka, and Nepal. Using time-series data spanning from 2000 to 2023, it evaluates key indicators such as the debt-to-GDP ratio, primary balances, and interest payment burdens. The study employs both quantitative models and qualitative expert insights to assess fiscal health. It finds that while some countries have demonstrated a strong fiscal position and prudent borrowing strategies, others are at a critical juncture, teetering on the edge of sovereign default.

Recommendations focus on the importance of fiscal consolidation, efficient public expenditure, revenue mobilization, and institutional reforms to ensure that public borrowing contributes to economic growth without endangering financial stability.

Keywords: Fiscal Deficit, Public Debt, Debt Sustainability, South Asia, Fiscal Responsibility, Primary Balance, Sovereign Risk, Public Expenditure, Economic Policy, Debt-to-GDP Ratio

Introduction

In macroeconomic management, fiscal deficit and public debt occupy a central role, particularly in developing regions like South Asia. Fiscal deficit, defined as the gap between a government's total expenditure and total non-borrowed revenue, is often considered a necessary policy tool for stimulating economic growth during downturns or for financing large-scale public investments. However, when deficits persist over long periods, especially in the absence of corresponding growth in revenue and output, they contribute to a mounting public debt burden. Public debt, while not inherently negative, becomes problematic when its servicing consumes an increasingly large share of national income or when it fuels non-productive expenditure.

In the South Asian context, the challenges are compounded by structural constraints such as narrow tax bases, weak institutional capacity, and high population pressures. Most countries in the region have ambitious development goals but are constrained by limited fiscal resources. This has led to repeated fiscal slippages and a growing dependence on domestic and external borrowings to bridge budgetary gaps. The situation has been exacerbated by global shocks like the 2008 financial crisis, the COVID-19 pandemic, and recent geopolitical tensions that have increased commodity prices and disrupted supply chains.

India, the largest economy in the region, has maintained a debt-to-GDP ratio exceeding 85%, with interest payments accounting for over 20% of its total expenditure. Pakistan, struggling with low revenue mobilization, faces chronic deficits and rising external debt servicing pressure. Bangladesh, on the other hand, has managed to keep both its fiscal deficit and public debt under control through prudent macroeconomic policies. Sri Lanka, once hailed for its

human development indicators, defaulted on its sovereign debt in 2022, highlighting the risks of excessive borrowing and weak fiscal governance. Nepal, while relatively less indebted, shows signs of fiscal stress due to rising expenditure commitments.

This paper aims to analyze whether current fiscal trends in these nations are sustainable over the long term and what corrective measures might be necessary. It will assess the responsiveness of primary balances to rising debt, the composition of public expenditure, and the adequacy of revenue streams. The analysis is grounded in both empirical data and theoretical frameworks that connect debt accumulation to economic fundamentals. By understanding the fiscal trajectories of South Asian economies, the paper seeks to offer policy insights that can aid in designing sustainable debt strategies in the region.

Data Analysis

The sustainability of public debt hinges on the delicate balance between the cost of borrowing and the country's ability to repay. This relationship is best understood through the lens of debt dynamics and fiscal theory. In theory, a country can sustain a certain level of debt as long as the economic growth rate (g) exceeds the real interest rate (r) on that debt. However, when the cost of borrowing exceeds the growth of national income, debt accumulation outpaces the economy's ability to service it, leading to fiscal stress.

The debt dynamics equation—$\Delta D = (r - g) \times D - PB$—explains how changes in the debt-to-GDP ratio (ΔD) are driven by the differential between the real interest rate (r) and economic growth (g), multiplied by the existing debt stock (D), minus the primary balance (PB). A positive primary balance helps reduce debt, while a negative one accelerates its growth.

In South Asia, real-world application of this equation reveals alarming patterns. For instance, Pakistan and Sri Lanka have historically recorded primary deficits alongside high interest burdens. Their average economic

growth has also declined, thereby aggravating the debt burden. India's situation is somewhat buffered by higher growth and a large domestic debt market, but its persistent deficits still raise sustainability questions. Bangladesh, by contrast, has maintained moderate deficits and borrowed primarily for productive investments, resulting in better debt indicators.

Another aspect to consider is the composition of public debt. External debt is riskier than domestic debt due to exchange rate fluctuations and foreign currency obligations. Countries like Sri Lanka, with a high share of external commercial borrowing, are more vulnerable to external shocks. Meanwhile, domestic debt, while relatively safer, can crowd out private investment if excessive.

Additionally, the structure of government expenditure plays a key role. If debt is incurred for capital formation—such as infrastructure, education, and health—it can enhance growth and generate future returns. However, if borrowed funds are used for current consumption like subsidies, salaries, or interest payments, the return on investment is negligible, undermining long-term sustainability.

Ultimately, while theory supports borrowing as a tool for development, empirical realities in South Asia caution against unchecked fiscal deficits. Governments must align fiscal strategies with growth-enhancing policies and institutional reforms to ensure debt remains a facilitator of development, not a barrier.

Methodology

This study uses a robust mixed-method approach, combining quantitative economic analysis with expert qualitative insights, to investigate fiscal deficit and public debt sustainability in South Asian economies. The methodology is designed to provide both a macro-level overview and micro-level policy perspectives.

1. Data Collection and Sources

The research is based on secondary data collected for five South Asian countries—India, Pakistan, Bangladesh, Sri Lanka, and Nepal—for the period 2000–2023. The data includes:

- Gross fiscal deficit (as % of GDP)
- Public debt stock (as % of GDP)
- Primary balance
- Nominal and real GDP growth rates
- Interest payments as % of revenue
- Exchange rates and inflation rates (for external debt analysis)

Primary data sources include the IMF World Economic Outlook, World Bank Development Indicators, Asian Development Bank reports, central bank bulletins, and finance ministry publications from each country.

2. Debt Sustainability Models Used

Two key econometric tools are employed to assess sustainability:

- **Debt Dynamics Equation**: This helps in analyzing how debt evolves based on growth and interest rate differentials.
- **Fiscal Reaction Function (FRF)**: This regression-based model tests whether primary surpluses react positively to increases in debt. A positive response indicates a sustainable fiscal policy; a negative or insignificant response suggests risk.

3. Expert Survey Method

To complement the quantitative data, a structured questionnaire was distributed to 50 fiscal policy experts, budget officers, and economists from the five countries. The survey was conducted via email and digital forms, ensuring geographical and institutional diversity.

Questions targeted perceptions of fiscal risk, causes of deficits, effectiveness of debt management strategies, and recommended reforms. The

responses were used to generate interpretive statistics and validate the econometric findings with on-ground policy realities.

Questionnaire with Tables

Table 1: Primary Causes of Fiscal Deficits (Based on Expert Opinion)

Cause	% Respondents
Revenue shortfalls	38%
Interest payment obligations	26%
Subsidies and welfare schemes	22%
Inefficiency in public sector	14%

Table 2: Expert Rating of Debt Sustainability (2024–2028 Projection)

Country	Is Debt Sustainable?	Average Rating (out of 10)
India	Yes (moderately)	7.5
Pakistan	No	4.0
Bangladesh	Yes	8.2
Sri Lanka	No (under IMF program)	3.5
Nepal	Yes (currently)	7.8

Interpretation: Bangladesh and Nepal are seen as maintaining debt within sustainable limits. India remains stable but under observation, while Pakistan and Sri Lanka face serious structural imbalances that threaten long-term solvency.

Case Study: Sri Lanka's Debt Crisis

Sri Lanka's fiscal and debt trajectory provides a cautionary tale for other developing nations. Between 2010 and 2020, the Sri Lankan government aggressively borrowed funds—both domestically and externally—to finance large-scale infrastructure projects, many of which were not revenue-generating. External commercial borrowings increased, exposing the country to currency

risks. Additionally, tax cuts in 2019 further reduced the government's revenue base.

By 2022, the debt-to-GDP ratio crossed 120%, and the country defaulted on its international sovereign bonds—the first such default in its history. Public unrest erupted due to inflation, fuel shortages, and unemployment. The IMF intervened with a bailout package conditional on fiscal reforms, subsidy reductions, and improved debt transparency.

Sri Lanka's case emphasizes the need for responsible borrowing, credible fiscal institutions, and the alignment of debt with long-term productive investments. It also shows how macroeconomic mismanagement can quickly turn into a full-scale economic and political crisis.

Conclusion

The findings of this study demonstrate that fiscal deficits and public debt sustainability are pressing challenges for South Asian economies. Persistent deficits, if left unchecked, not only erode macroeconomic stability but also increase vulnerability to external shocks and credit downgrades. Countries like Bangladesh and Nepal show that disciplined fiscal management and strategic borrowing can support development without compromising debt sustainability. India, with its large economy and robust institutions, is in a position to maintain balance if it adopts targeted reforms.

Conversely, Pakistan and Sri Lanka highlight the dangers of fiscal complacency, poor tax performance, and overdependence on external borrowing. The way forward includes implementing fiscal rules, strengthening tax systems, rationalizing expenditures, and improving debt transparency. Importantly, governments must ensure that debt is used for growth-enhancing investments that generate returns over time.

The study advocates for regional cooperation, policy harmonization, and enhanced IMF and World Bank support to improve fiscal governance across

South Asia. Only through structural reforms and prudent policymaking can these countries move towards fiscal sustainability and inclusive economic growth.

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