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Post-COVID Fiscal Stimulus: Assessing the Multiplier Effects in Developing Nations

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ABSTRACT

The economic fallout of the COVID-19 pandemic compelled governments across the globe to implement large-scale fiscal stimulus packages. For developing countries, the challenge was twofold: addressing the immediate economic distress while managing already constrained fiscal positions. This paper analyzes the fiscal multipliers associated with various types of stimulus spending—consumption support, capital expenditure, and health sector investments—in selected developing economies. Using panel data from 2019 to 2021 across countries in Asia, Africa, and Latin America, the study estimates short-term and medium-term output effects of government spending. The findings highlight the differential impact of stimulus components and provide insights for designing fiscally sustainable and growth-enhancing recovery strategies in the aftermath of the pandemic.

Keywords:

Fiscal Stimulus, Developing Economies, COVID-19 Recovery, Fiscal Multipliers, Public Expenditure, Economic Growth

INTRODUCTION

The COVID-19 pandemic caused an abrupt halt in economic activity, leading to a sharp contraction in global GDP. In response, governments implemented aggressive fiscal measures aimed at stabilizing incomes, preserving employment, and supporting critical sectors. While advanced economies deployed vast stimulus packages without immediate concerns for debt sustainability, developing nations faced severe trade-offs. Their stimulus programs were often modest in size and scope, yet critical for averting deeper recessions and social unrest.

This paper investigates the efficacy of these fiscal interventions in developing countries, focusing on the concept of fiscal multipliers—the ratio of change in output resulting from changes in government expenditure. Understanding fiscal multipliers in the post-COVID context is essential for prioritizing expenditures and ensuring maximum return on limited public resources. The study particularly emphasizes variations across spending categories and country-specific characteristics such as openness, debt levels, and governance quality.

Objectives:

1. To estimate the fiscal multipliers of various components of COVID-related stimulus spending in selected developing economies.
2. To compare the short-term (within one year) and medium-term (two to three years) output effects of government interventions.
3. To analyze how institutional and macroeconomic factors influence the effectiveness of fiscal stimulus.
4. To suggest guidelines for designing future stimulus packages with a focus on sustainability and growth.

REVIEW OF LITERATURE:

Fiscal multipliers have long been a subject of empirical and theoretical investigation, especially during economic downturns. The literature on fiscal multipliers suggests that their size depends significantly on macroeconomic conditions, the type of government spending, and the structural features of the economy **(Ramey, 2011).**

In developed economies, studies such as **Auerbach and Gorodnichenko (2012)** have shown that fiscal multipliers tend to be larger during recessions than expansions. However, in developing countries, the evidence remains mixed due to diverse economic structures, high informality, limited fiscal space, and weaker institutions. **Kraay (2012)** examined government spending in low-income countries and estimated relatively small multipliers, often less than one, especially for current expenditures. **Ilzetzki, Mendoza, and Végh (2013)** demonstrated that fiscal multipliers are smaller in economies that are more open, have flexible exchange rates, and high public debt—characteristics common in many developing nations.

The IMF (2020) reported that during the COVID-19 pandemic, countries with higher health and education expenditures experienced more resilient economic recoveries. It also noted that public investment in infrastructure had higher multipliers compared to transfer payments or subsidies, especially when accompanied by good governance and efficient implementation.

Batini et al. (2014) further highlighted that the effectiveness of stimulus also hinges on the credibility and transparency of fiscal policy. If households and investors believe the stimulus will be rolled back prematurely or lead to unsustainable debt, the multiplier effect may be muted.

These findings collectively suggest that while fiscal stimulus can be effective in boosting growth, its impact varies widely based on economic context and policy design. This paper seeks to fill the empirical gap in post-COVID developing country contexts by quantifying these multipliers and identifying the variables that shape them.

Methodology:

The paper uses a panel dataset comprising 20 developing countries across Asia, Africa, and Latin America for the period 2019–2021. The countries were selected based on data availability and diversity in fiscal responses to the COVID-19 crisis.

Data Sources:

- IMF Fiscal Monitor (2020–2021)
- World Bank World Development Indicators (WDI)
- National budget documents and stimulus announcements
- UNDP COVID-19 Country Response Trackers

MODEL SPECIFICATION

The fiscal multiplier is calculated using a panel fixed effects regression model. The baseline regression equation is:

$$Y_{it} = \alpha + \beta * Stimulus_{it} + \gamma * X_{it} + \mu_i + \lambda_t + \varepsilon_{it}$$

Where:

- Y_{it} is the real GDP growth rate of country i in year t.
- $Stimulus_{it}$ represents the size and type of government expenditure (as % of GDP).

- X_{it} is a vector of control variables including inflation, interest rate, debt-to-GDP ratio, openness index, and governance scores.
- μ_i and λ_t are country and time fixed effects.
- ε_{it} is the error term.

Categorization of Spending:

- **Consumption Support**: Cash transfers, food subsidies, unemployment benefits.
- **Capital Investment**: Infrastructure projects, transport, green recovery initiatives.
- **Health Sector Expenditure**: Vaccine procurement, hospital infrastructure, public health campaigns.

Estimation Strategy:

- Estimate short-term multipliers (t+1 effect) and medium-term multipliers (t+2 and t+3 effects).
- Use lagged variables and instrumental variables to address potential endogeneity.
- Conduct robustness checks with different regional subsets and by excluding outlier nations.

Limitations:

- Measurement errors due to discrepancies in national reporting.
- Difficulty in isolating stimulus effects from monetary policy or external shocks.
- Short time frame limits long-run multiplier estimation.

This methodology allows for the assessment of both the magnitude and composition of fiscal multipliers in a post-pandemic context, offering actionable insights for policy design.

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