Optimizing Public Sector Resource Allocation through Dynamic Stochastic General Equilibrium Models: A Paradigm Shift for Emerging Economies

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Abstract. This study investigates the efficacy of Dynamic Stochastic General Equilibrium (DSGE) models in optimizing resource allocation within the public sector of emerging economies. Employing a quantitative approach, we calibrate DSGE models using data from various transitional markets. Our findings reveal substantial improvements in fiscal policy design, ultimately enhancing economic stability and growth. The research highlights potential pathways for policymakers to implement more efficient resource distribution strategies.

Keywords: Dynamic Stochastic General Equilibrium (DSGE) models, public sector resource allocation, emerging economies, fiscal policy, economic stability, macroeconomic policy, economic forecasting, transitional markets, policy formulation

Introduction

The optimal allocation of resources within the public sector has long been a critical issue for emerging economies, particularly as they strive to improve economic growth and stability in an increasingly globalized market. This challenge has been compounded in recent years by heightened economic volatility and evolving fiscal landscapes between 2024 and 2026. One promising avenue for addressing these issues is the integration of Dynamic Stochastic General Equilibrium (DSGE) models, which have emerged as powerful tools for economic forecasting and policy analysis. DSGE models are particularly advantageous as they offer a comprehensive framework for assessing macroeconomic policy impacts, economic fluctuations, and the interactions between various economic agents. Despite their potential, the application of these models in the public sector resource

allocation remains underexplored, especially within the context of emerging markets characterized by unique fiscal and economic dynamics. This paper begins by exploring the theoretical foundations of DSGE models and their relevance to public sector economics. Following this, we undertake an empirical analysis using case studies from select emerging economies to demonstrate the practical application of DSGE models in optimizing resource allocation. The results section provides a detailed account of the model calibration and validation process, while the discussion emphasizes the implications of these findings for policy formulation and implementation. Finally, the conclusion synthesizes the research outcomes, recommending strategies for leveraging DSGE models to enhance fiscal policy-making.

References

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