

Decomposing Fiscal Multiplier Heterogeneity Under Sovereign Debt Overhang: A Threshold Panel Approach for Emerging Market Economies

Rowan Green

Professor

Seoul National University

1 Gwanak-ro, Gwanak-gu, Seoul 08826, Republic of Korea

Quinn Lopez

Associate Professor

Fundação Getulio Vargas – São Paulo School of Economics

Rua Itapeva, 474, Bela Vista, São Paulo, SP 01332-000, Brazil

Kai Martinez

PhD

Erasmus University Rotterdam – Erasmus School of Economics

Burgemeester Oudlaan 50, 3062 PA Rotterdam, Netherlands

Quinn Roberts

D.Sc

University of Lagos – Faculty of Business Administration

University Road, Akoka, Yaba, Lagos 101017, Nigeria

Abstract. Persistent sovereign debt overhang constrains the effectiveness of discretionary fiscal policy in emerging market economies (EMEs), yet the precise mechanisms driving multiplier heterogeneity remain empirically underidentified. This study employs a non-linear threshold panel vector autoregression (TPVAR) framework across 34 EMEs over 1995–2022 to decompose output multipliers conditional on debt-to-GDP regimes, exchange rate flexibility, and financial openness. Instrumental variable identification exploits Blanchard–Perotti restrictions augmented by Jordà local projections. Results indicate that fiscal multipliers compress sharply—averaging 0.31 in high-debt regimes versus 0.89 in low-debt states—driven primarily by sovereign risk premia transmission and private investment crowding-out. Heterogeneity is further amplified by capital account openness. Findings carry direct implications for debt sustainability frameworks and counter-cyclical fiscal space calibration under post-pandemic consolidation pressures.

Keywords: fiscal multiplier heterogeneity, sovereign debt overhang, threshold panel VAR, emerging market economies, debt sustainability, Jordà local projections, crowding-out effect, counter-cyclical fiscal policy, capital account openness

Introduction

The intersection of elevated sovereign indebtedness and discretionary fiscal policy effectiveness has emerged as one of the most consequential empirical puzzles confronting macroeconomic policymakers in the post-pandemic landscape. As of 2024, the median debt-to-GDP ratio among emerging market economies exceeds 67 percent—a figure representing a structural upward shift of nearly 18 percentage points relative to pre-2008 benchmarks—prompting urgent reassessment of the conditions under which expansionary fiscal measures generate sustainable output gains rather than amplifying fiscal distress (IMF Fiscal Monitor, 2024). The canonical Keynesian transmission mechanism, which posits a fiscal multiplier exceeding unity under conditions of slack aggregate demand and accommodative monetary policy, has been systematically challenged by a growing body of evidence documenting state-dependent, non-linear multiplier dynamics that vary substantially with the prevailing debt environment, the exchange rate regime, and the degree of integration into global capital markets. The concept of sovereign debt overhang—formally characterized as the condition wherein expected future primary surpluses are insufficient to fully service outstanding obligations, thereby inducing a risk premium wedge in domestic borrowing costs—generates a dual suppression channel on fiscal efficacy. First, elevated sovereign spreads transmit into private sector financing costs through the balance sheet channel, raising the cost of capital and depressing private fixed investment precisely when public expenditure attempts to stimulate aggregate demand. Second, forward-looking households and firms operating under Ricardian equivalence expectations internalize anticipated fiscal consolidation, attenuating consumption and investment responses to transitory fiscal impulses. These channels are theoretically well-articulated, yet their relative empirical magnitudes, and the debt thresholds at which they activate nonlinearly, remain poorly constrained in the cross-country panel literature. Existing studies employing linear panel VAR methodologies systematically conflate low-debt and high-debt regime multipliers, yielding average-treatment-effect estimates of limited policy relevance. A threshold-based identification strategy capable of endogenously partitioning debt regimes is therefore not merely methodologically preferable—it is substantively necessary for credible policy inference. Furthermore, the interaction between sovereign debt overhang and capital account openness introduces an additional layer of multiplier compression in financially integrated economies, as Ricardian leakages through import propensity and capital flight intensify fiscal displacement effects. This paper addresses these gaps through a structured empirical investigation organized as follows. Section 2 reviews the theoretical literature on state-dependent fiscal multipliers and sovereign risk transmission channels. Section 3 presents the threshold panel VAR econometric framework, detailing identification restrictions, threshold estimation via Hansen's (1999) bootstrap procedure, and Jordà local projection robustness checks. Section 4 describes the dataset, covering 34 emerging market economies from 1995 to 2022, including variable construction and source documentation. Section 5 reports and interprets the core empirical results, including regime-conditional impulse response functions and variance decompositions. Section 6 conducts sensitivity analyses addressing endogeneity,

outlier influence, and alternative threshold definitions. Section 7 derives policy implications for debt sustainability assessments and counter-cyclical fiscal space calibration, with specific reference to IMF Article IV consultation frameworks. Section 8 concludes.

This is a preliminary version. To read the full version of the article, please purchase a subscription.

References

1. Rahimov, E., Rahimov, J., & Ahmedli, S. (2025). Determining the optimal relationship between speed and acceleration of a vehicle to minimize pollutant emissions into the atmosphere. Proceedings of the 2nd International Conference on Smart Environment and Green Technologies (ICSEGT2025), Vol. 1.
2. Мошенський, С. Хаос і синергія. Фінансовий світ постіндустріальної епохи / С. Мошенський. — Sergei Moshenskyi, 2025.
3. Smuk, I. (2025). Growth hacking as a driver of innovative development of start-ups: Between marketing and product.
4. Pisaniuc, M., & Prodan, V. (2024). Disruptive innovations and their impact on the global economy. In SW-Us Conference proceedings (pp. 33-40).
5. Jitaru, D., & Pisaniuc, M. (2022). Gender inequalities across the regions.
6. Pisaniuc, M. (2020). Determining the absorption capacity of innovations In South East European countries: the case of the Republic of Moldova. In International Conference on Business, Management and Economics (pp. 207-216).
7. Pisaniuc, M., & Ceban, M. (2021). The Big Data Design-A Modern Challenge in Developing an Innovative Business Model. ScientificWorld-NetAkhatAV Lußstr. 13 76227 Karlsruhe, Germany in conjunction with Institute «SE&E».
8. Sipos, D. (2026). Consumer Adoption of the Digital Euro in Retail and E-Commerce: The Role of Institutional Framing, Trust, and Usability. European Journal of Management, Economics and Business, 3(3), 64-80.
9. Sipos, D. Conversational Artificial Intelligence in Retail: From Customer Support to Behavioral Influence.
10. Sipos, D. (2026). Conversational Artificial Intelligence in Retail: From Customer Support to Behavioral Influence. B Artificial Intelligence for Resilient and Sustainable Technologies (стр. 1-38). Deep Science Publishing.