

# The Size of Fiscal Multipliers and the Stance of Monetary Policy in Developing Economies

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# Data

- Quarterly data for **21 emerging economies** spanning 2000-2015. We also have data for 20 developed economies to contrast results.
- **Indicators:** real GDP, real government consumption, real effective exchange rate, Real monetary policy rate, Real Money Balances (M2).
- **Sources:** OECD, Eurostat, IMF, Central Banks
- We compute **annual log-differences** to correct for non-stationarity and seasonality.



# Econometric Methodology

- We use a SVAR methodology to appropriately **identify** both fiscal and monetary policy shocks.
- Identification assumption for fiscal policy: changes in **government consumption** take at least one quarter to respond to the macro environment.
- Identification assumption for monetary policy: use a control variable for **money demand** since it can react quickly to the macro environment.



# Econometric Methodology

- This identification is performed using the **Cholesky** decomposition.
- We include the following **ordering** : Government consumption, monetary policy rate, GDP, real money balances and REER.
- Panel VAR **system**:

$$Y_{it} = A_1 Y_{it-1} + A_2 Y_{it-2} + u_i + e_{it}$$
$$i = 1, \dots, N \quad t = 1, \dots, T$$



# Econometric Methodology

- Counterfactual simulations are computed by shutting down the **monetary policy reaction**. All other transmission channels are allowed.
- Formula for **fiscal multipliers**:

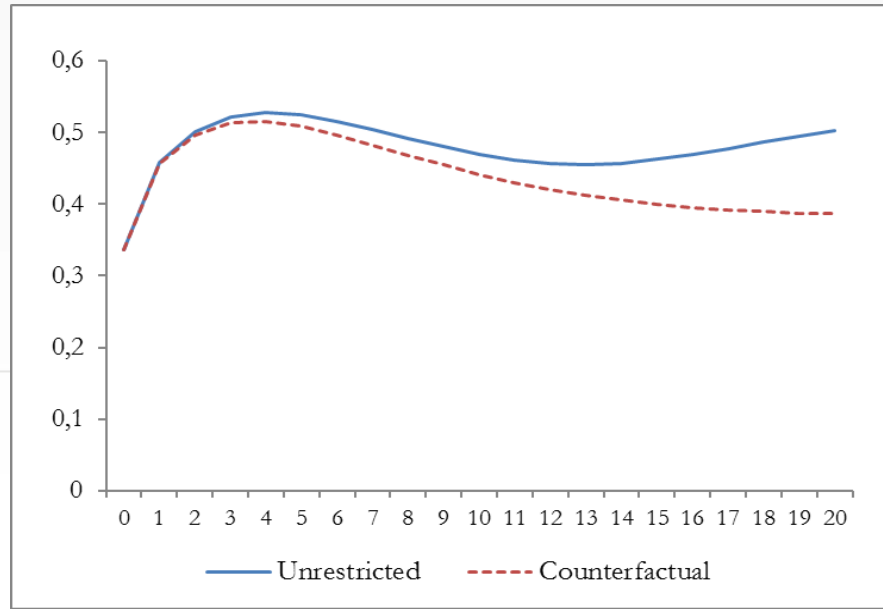
$$fm(T) = \frac{\sum_{t=0}^T (1+r)^{-t} \Delta y_t}{\sum_{t=0}^T (1+r)^{-t} \Delta g_t}$$

- Impact ( $T=0$ ) and long-run ( $T=20$ ) multipliers
- **Counterfactual** multipliers are computed with the counterfactual GDP response.

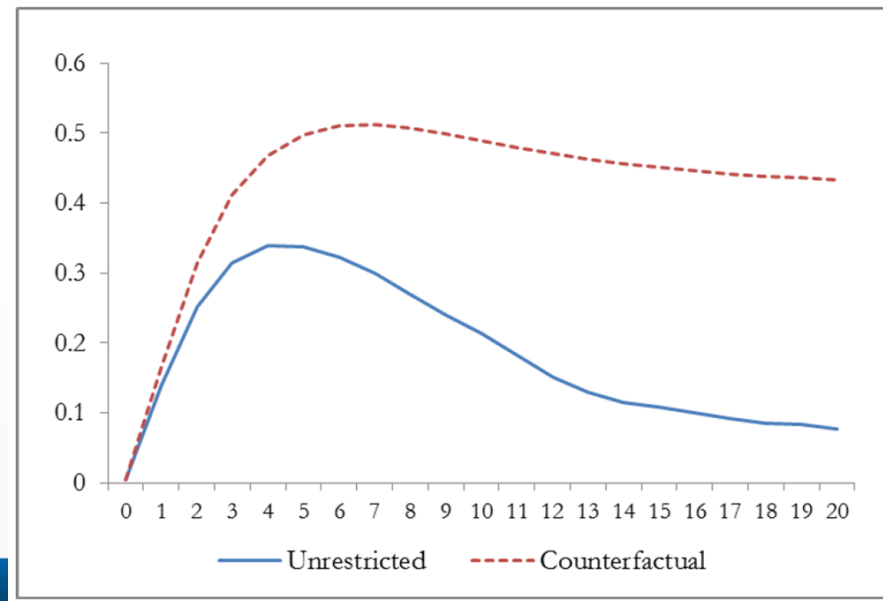


# Cumulative Multipliers – Fixed versus flexible

Fixed ER

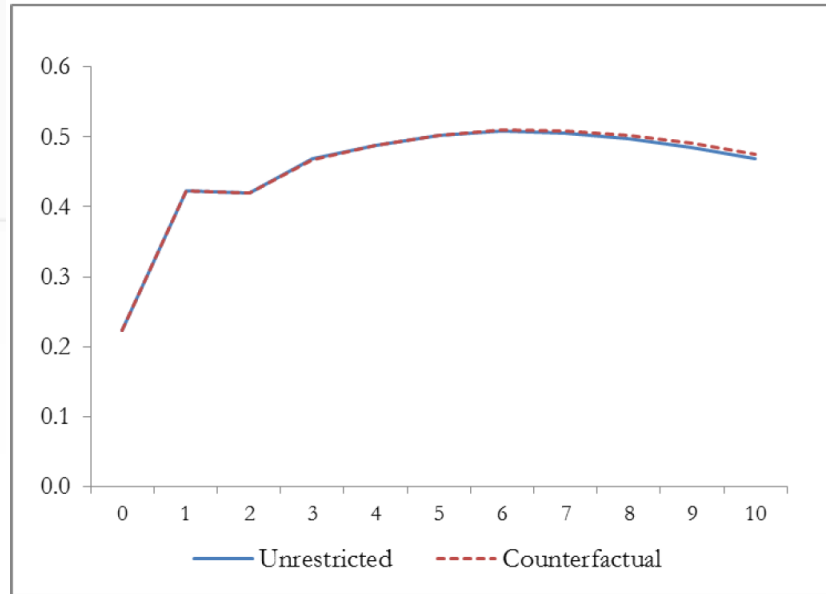


Flexible ER

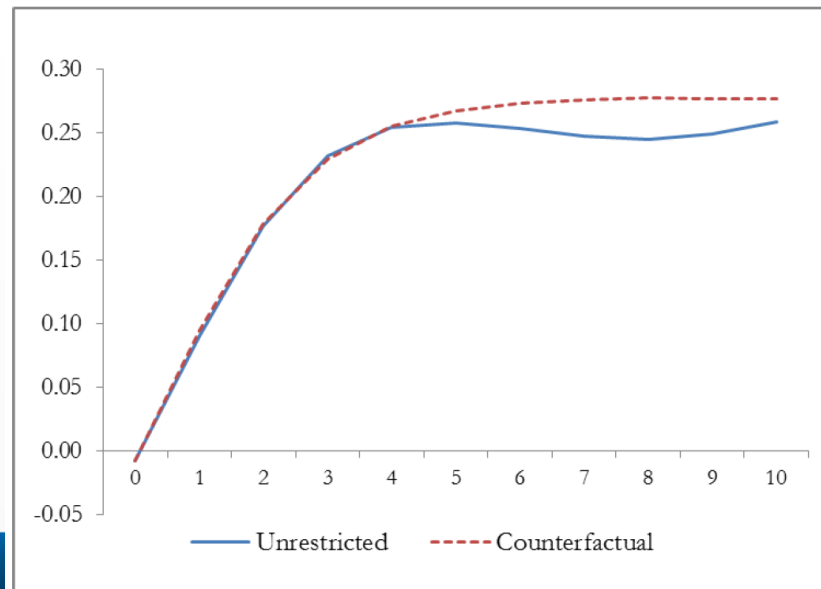


# Cumulative Multipliers- Recession versus Boom

Boom

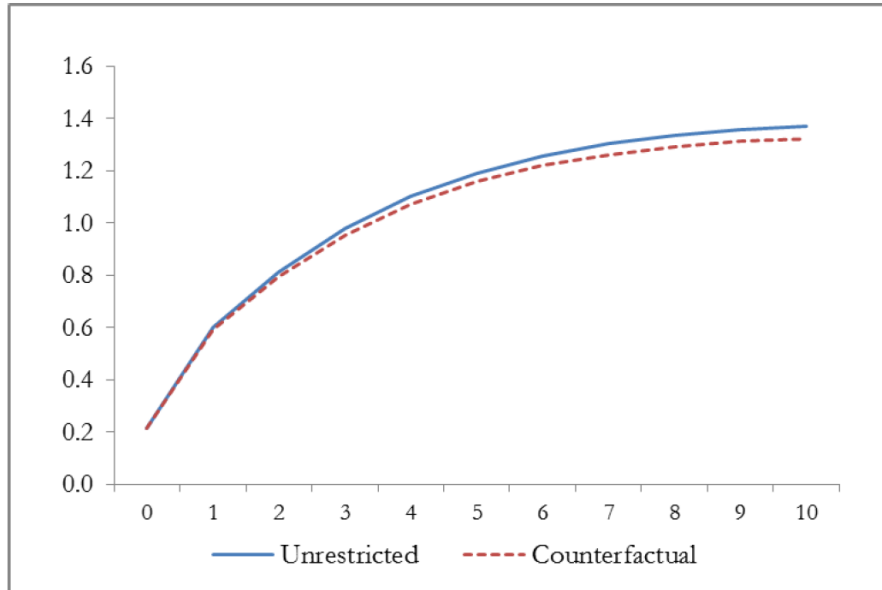


Recession

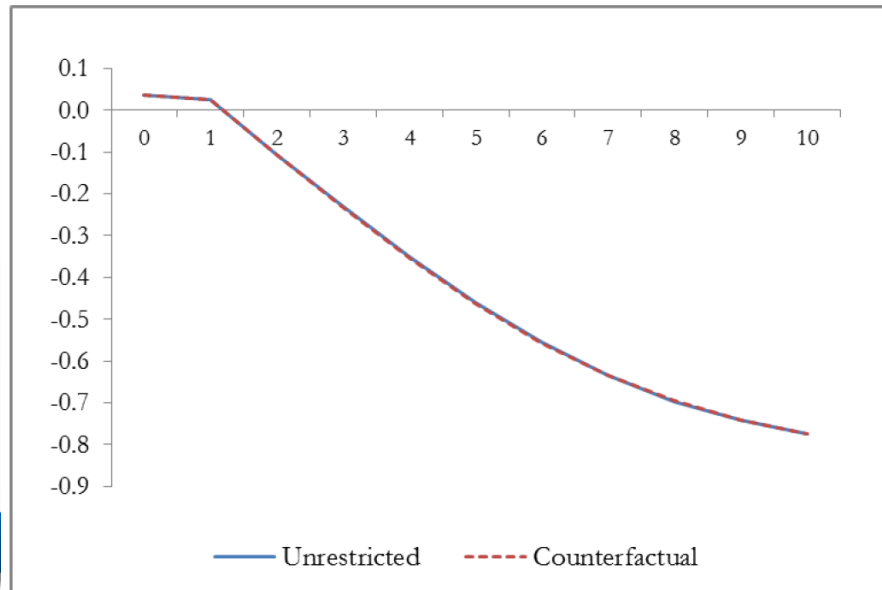


# Cumulative Multipliers - Expansive versus contractive monetary policy

Expansive MP



Contractive MP





# Statistical significance of fiscal multipliers

Panel Subset	Impact	5 <sup>th</sup> quarter	Medium Term (10 <sup>th</sup> quarter)	Long Term (20 <sup>th</sup> quarter)	# of observat
Developed	0.83**	2.22**	2.80**	3.05**	1180
Developing	0.18**	0.44	0.35	0.28	1218
Developing – Fixed	0.34**	0.52	0.47	0.50	643
Developing – Flex.	0.00	0.34	0.21	0.08	605
Developing – Boom	0.22**	0.50	0.47	NA	328
Developing – Reces	-0.01	0.26	0.26	NA	445
Developing – MP. Expansive	0.22**	1.19**	1.37**	NA	369
Developing – MP. Contractive	0.04	-0.46	-0.78	NA	371



# Concluding Comments

- Fiscal multipliers in emerging economies (EE) are positive but **much lower** than in developed economies.
- In EE, fiscal multipliers are higher during episodes of **monetary expansions**, they get close to 1.
- Enhancing **fiscal-monetary policy** coordination in EE with flexible regime, would increase the economic effects of fiscal policy.
- In contrast to developed economies, the size of fiscal multipliers during **recession** is not very different to the size during **booms**.

