

# How big (small?) are fiscal multipliers?

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  - **Actual outcome: fall of 1.5 percent**



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  - Little attention to composition of government spending

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  - High-debt versus low debt
  - Government consumption versus public investment

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- *Data carefully vetted to ensure quality and that data was collected at quarterly frequency*



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- Multivariate
- Identifying assumption (Blanchard and Perotti (2002)): government consumption can only respond with a one period lag

- What is the impact on GDP of a \$1 increase in government expenditure?

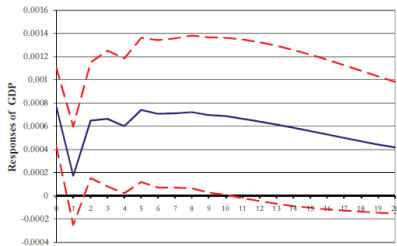
$$\text{Impact Multiplier} = \frac{\Delta GDP_0}{\Delta G_0}$$

$$\text{Cumulative Multiplier} = \frac{\sum_0^T \Delta GDP_t}{\sum_0^T \Delta G_t}$$

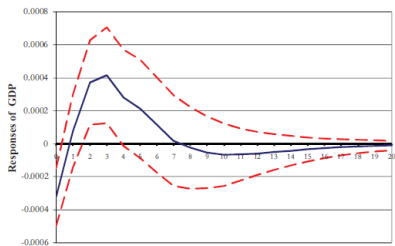
- Long-run multiplier defined as the cumulative multiplier once both impulse responses have died down.

# Output response to a 1% shock to government spending

## High income

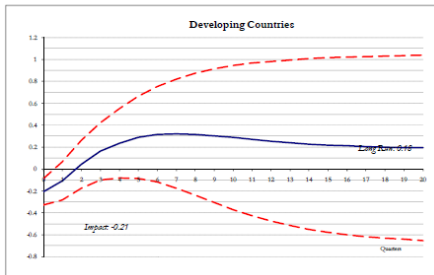
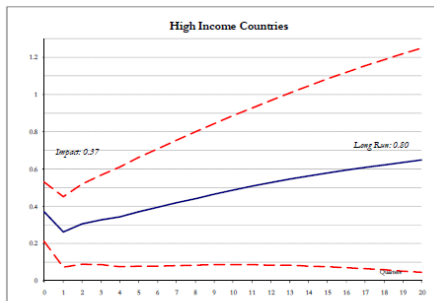


## Developing countries

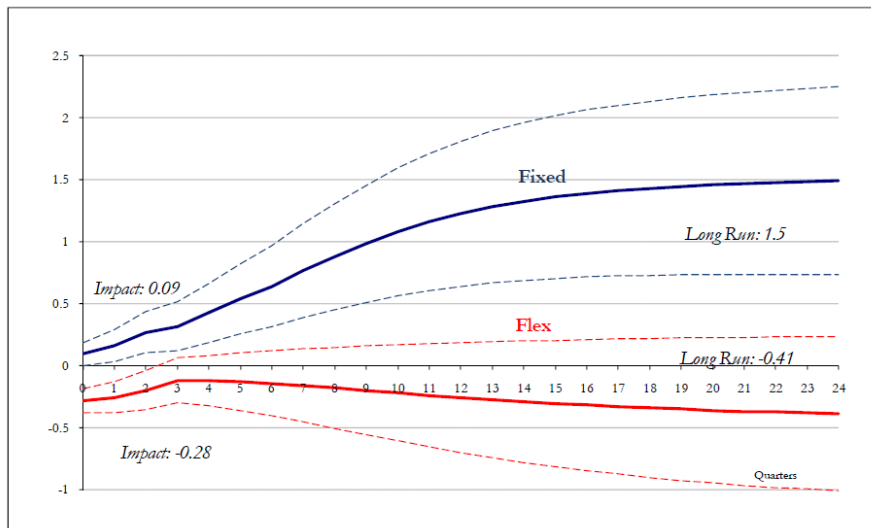




# Fiscal multipliers: High income versus developing countries

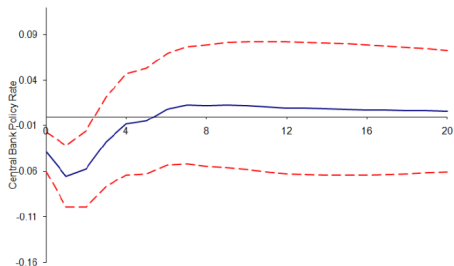


# Fiscal multipliers: Fixed (predetermined) versus flexible

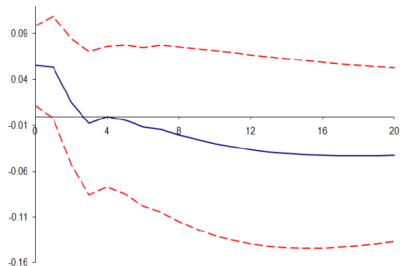


# Monetary policy response under fixed versus flexible

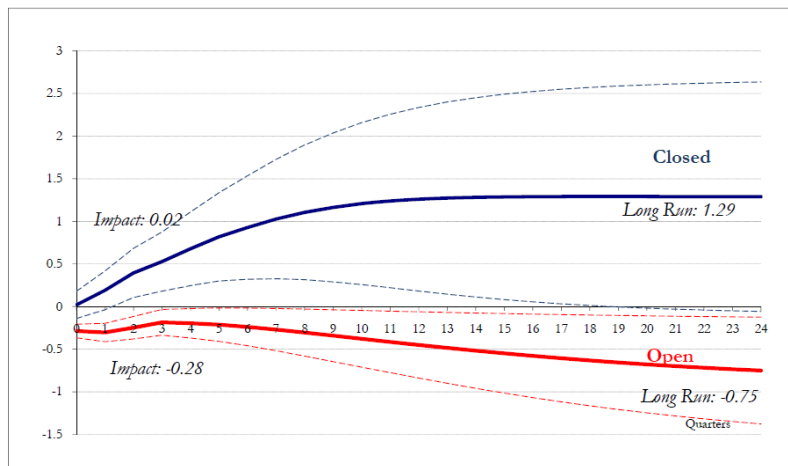
## Fixed



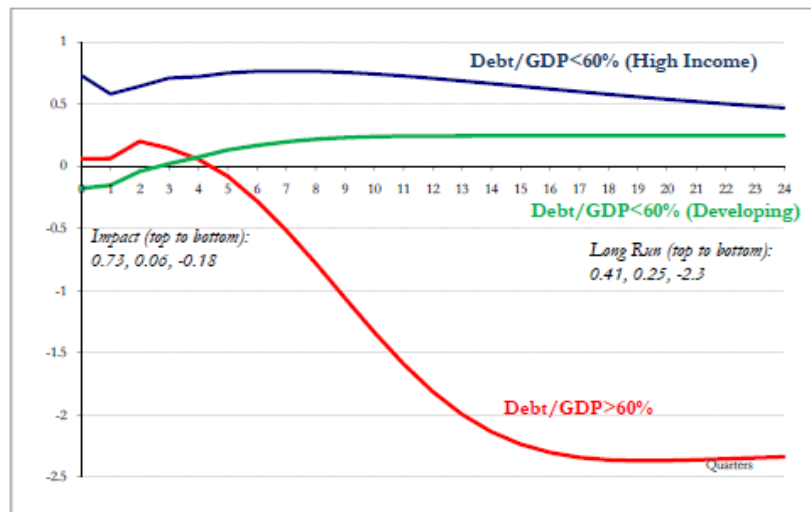
## Flex



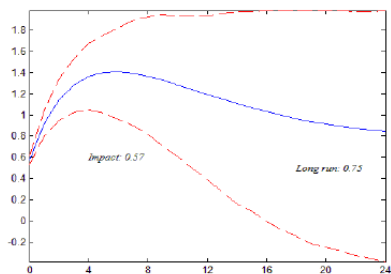
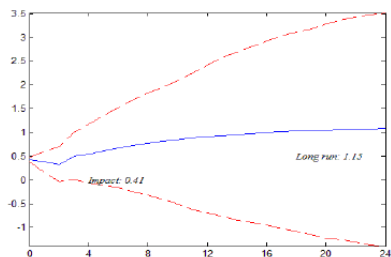
# Fiscal multipliers: Open versus closed economies



# Fiscal multipliers: High versus low debt

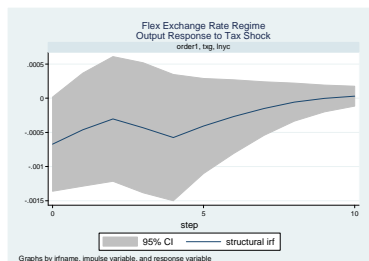
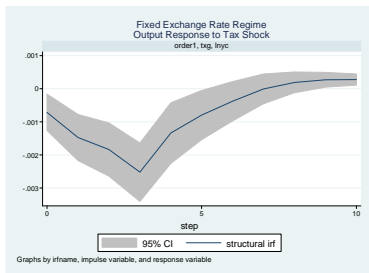


# Fiscal multipliers: Public investment



# Output effect of tax rates

(work in progress with G. Vuletin and D. Riera-Crichton)



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- Composition of government spending matters
- As emerging markets move to greater exchange rate flexibility, countercyclical fiscal policy may become less relevant
- But, insofar as “fear of floating” exists, avoid procyclical fiscal policies commonly observed in developing countries