Comments on "On Debt and Unions" by Broner, Martin and Ventura

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Overall assessment

- Timely and relevant paper
- Novel theoretical results on interaction between crowding out of government expenditures, firm financial constraints and externalities in EMU

  My discussion:
- Theory: main features of models and comments on role of financial constraints
- Empirically motivated question on public expenditure crowding out of private investment

Main features of the model

Two models:

1. Saving and production are exogenous:
   - governments allocate private saving between public expenditures and private investment
   - crowding out by construction
   - externality in MU: over-spending (crowding out of foreign investment)
2. Saving and production are endogenous
   - ZLB (lower bound on real interest rate) means potentially demand determined
   - public expenditures reduces output gap

Monetary union of I countries: not about money but about financial integration with equalized real returns

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Main equation of model (1)

- Public spending optimal choice: *marginal gain* − *marginal cost* = 0

$$
\begin{aligned}
\frac{\partial W_i}{\partial g_i} &= \gamma_i v'(g_i) - \lambda f'(\omega_U - g_U) - \frac{1-\lambda}{I} f'(\omega_U - g_U) \\
&\quad - \frac{\lambda}{I} f''(\omega_U - g_U)(\omega_i - g_i - \omega_U + g_U) = 0
\end{aligned}
$$

- If $I > 1$ then i marginal cost (crowding out) of extra spending $<$ marginal cost of lost investment $(f'(\omega_U - g_U))$
- Externality more severe with more financial constraints (lower λ)
- Perceived marginal cost (too low) is Union wide interest rate: $R_U = \lambda f'(\omega_U - g_U)$

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Comments on model 1

- Argument that MC of increase public expenditures not fully internalized in monetary union more general in any model with crowding out of investment through interest rate
- Overspending externality should be larger for smaller countries
- MU = financial integration but no change in financial constraint λ
- Intuitive result: creditor countries benefit from higher union-wide interest rate should have more incentive to increase public spending (Germany?)
- No default risk here but δ_i (access to international financial markets) different must reflect heterogenous default risk

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Comments on model 2

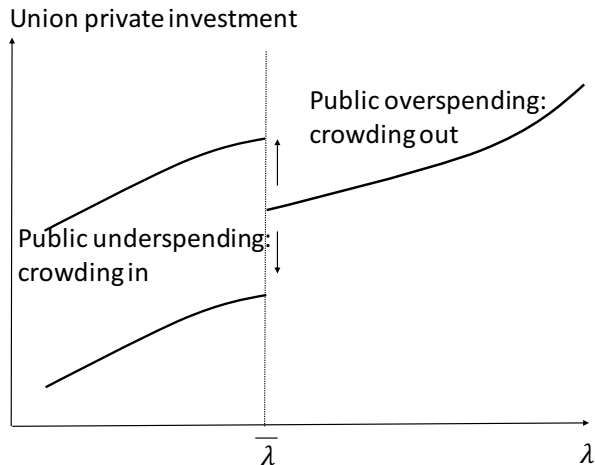Model with ZLB and potential useful extra public spending

- Potentially most interesting (still incomplete)
- Two regimes that both generate low private investment
  1. low financial constraints ($\lambda > \bar{\lambda}$): overspending with crowding out (model 1)
  2. high financial constraints ($\lambda < \bar{\lambda}$): underspending with crowding in and ZLB

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What happens to private investment?

Comments on model 2

- Euro crisis: λ falls in some but not in all countries
- Case of counterproductive rules: two externalities of opposite sign
  - International externality: financial integration leads to overspending
  - Domestic externality: zero lower bound leads to underspending
- Doom loop means financial constraints on governments come at same time as financial constraints on firms investment: how do financial constraints and government borrowing constraints interact?

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# Empirical question: Short term crowding-out or crowding-in ?

- Little empirical validation of crowding out of investment due to rise in interest rate
- Guajardo, Leigh, and Pescatori (2014): 1 percent GDP fiscal consolidation $\Rightarrow$ -1.5 percent fall in investment
- Romer and Romer (2010): "Conventional interest rate effects are not key"
- Points to positive externality of public expenditures with or without ZLB

Romer and Romer (2010): impact of a tax increase

Panel A. GDP, consumption, investment
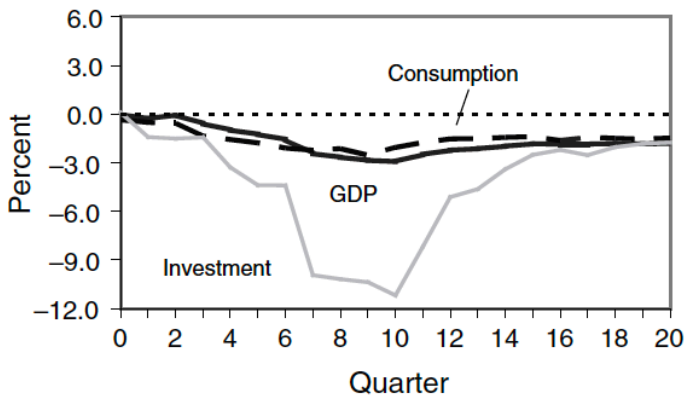
Alesina, Favero and Giavazzi (2019): impact of austerity
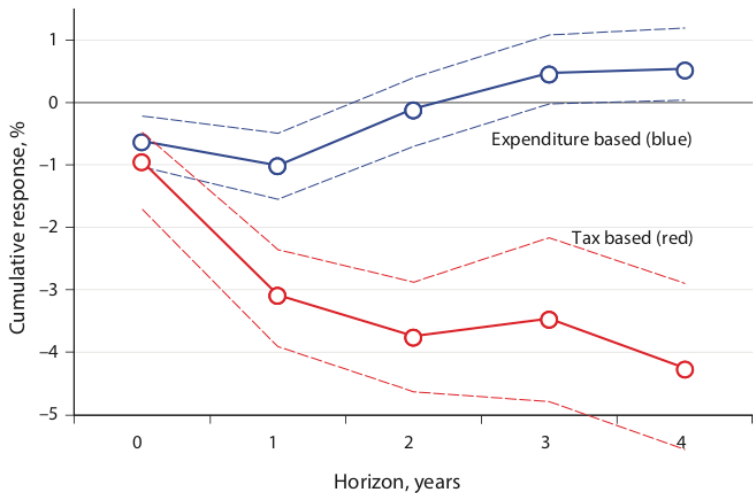
ST and LT nature of fiscal externality in EZ

- ST: positive because investment demand driven
- LT: issue of debt accumulation
- Gourinchas, Martin and Messer (2019): what distinguishes eurozone from financially integrated zone is collateral damage that a debt/redenomination crisis imposes on others
- The no-bailout rule is not credible: expected bailout generates overborrowing because risk shifting