

Discussion of
“Fiscal Policy in an Incomplete Markets Economy”

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Objective of the Paper

- Analysis of long-run effects of fiscal policy (taxation, government spending, government debt) on macroeconomic aggregates in heterogeneous agent model with idiosyncratic and aggregate risk as well as incomplete markets.
- Key innovation: government debt and physical capital are assets with different risk characteristics.
- Key mechanism: changes in fiscal policy induces households to substitute between the two sources of wealth accumulation.

Model: Key Elements

- Standard heterogenous agent GE model with idiosyncratic and aggregate risk and incomplete markets.
- Either infinite horizon (similar to Krusell and Smith, MD 1997) or life cycle (similar to Storesletten, Telmer & Yaron, RED 2007).
- Two non-redundant assets: risk-free government debt and risky private capital.

Exercises

Model	$\Delta\tau_l, \Delta G$	$\Delta\tau_k, \Delta G$	$\Delta B, \Delta G$	$\Delta\tau_l, \Delta B$	$\Delta\tau_k, \Delta B$
Aiyagari (94)	X	X	X		
KS (97)	X	X	X		
STY (07)	X	X	X	X	X

Main Comments

- Focus on one set of experiments.
 - Tax exercises with G adjusting are not very convincing (since G plays no role in the model).
 - Study the (long run) impact of government debt, *given* government spending (as in Aiyagari & McGrattan, JME 1998).
 - Isolate importance of the new mechanism.

Representative Agent-Complete Markets Model, Lump-Sum Taxes

- Capital stock unaffected by increase in B in the long run

$$\rho = r = f'(K) - \delta$$

- If G is held fixed, C unaffected as well. Representative Household owns the higher government debt.
- Higher tax bill to pay $r\Delta B$ exactly offset by interest payments from the government. Government debt does not matter.

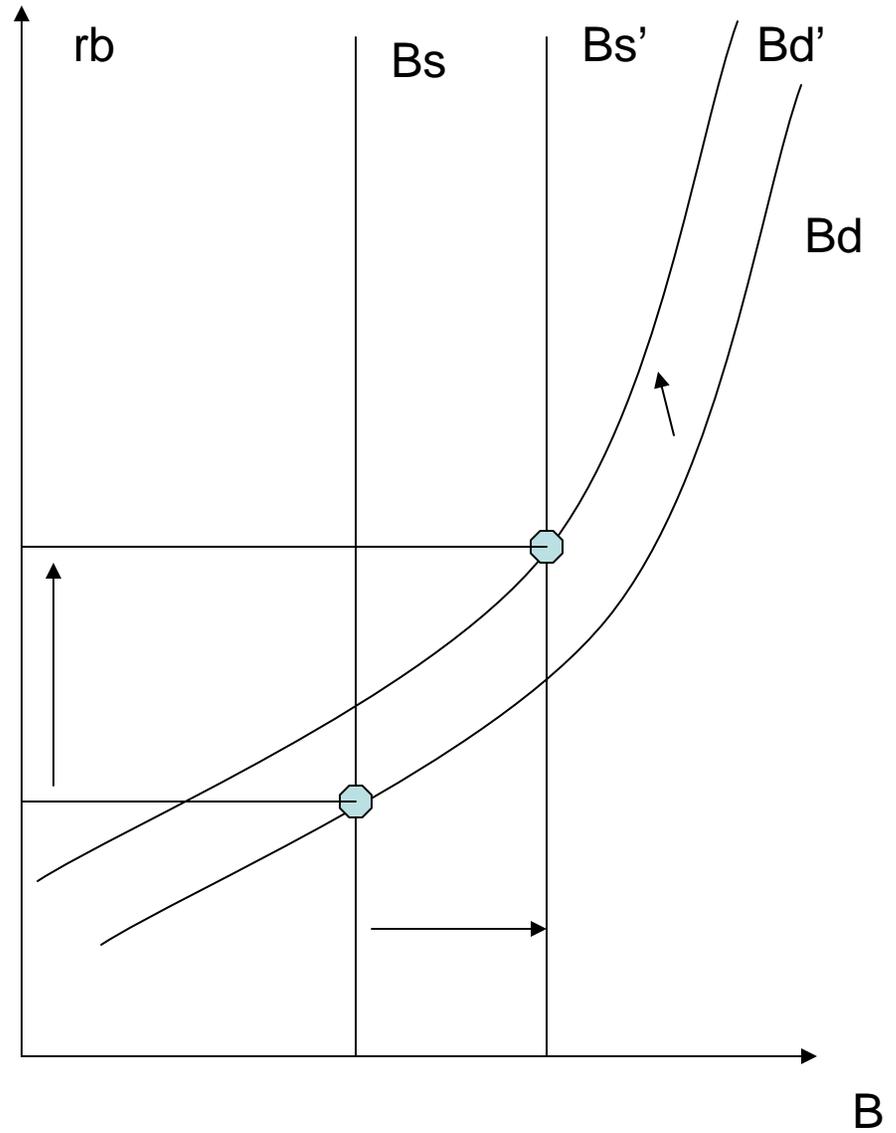
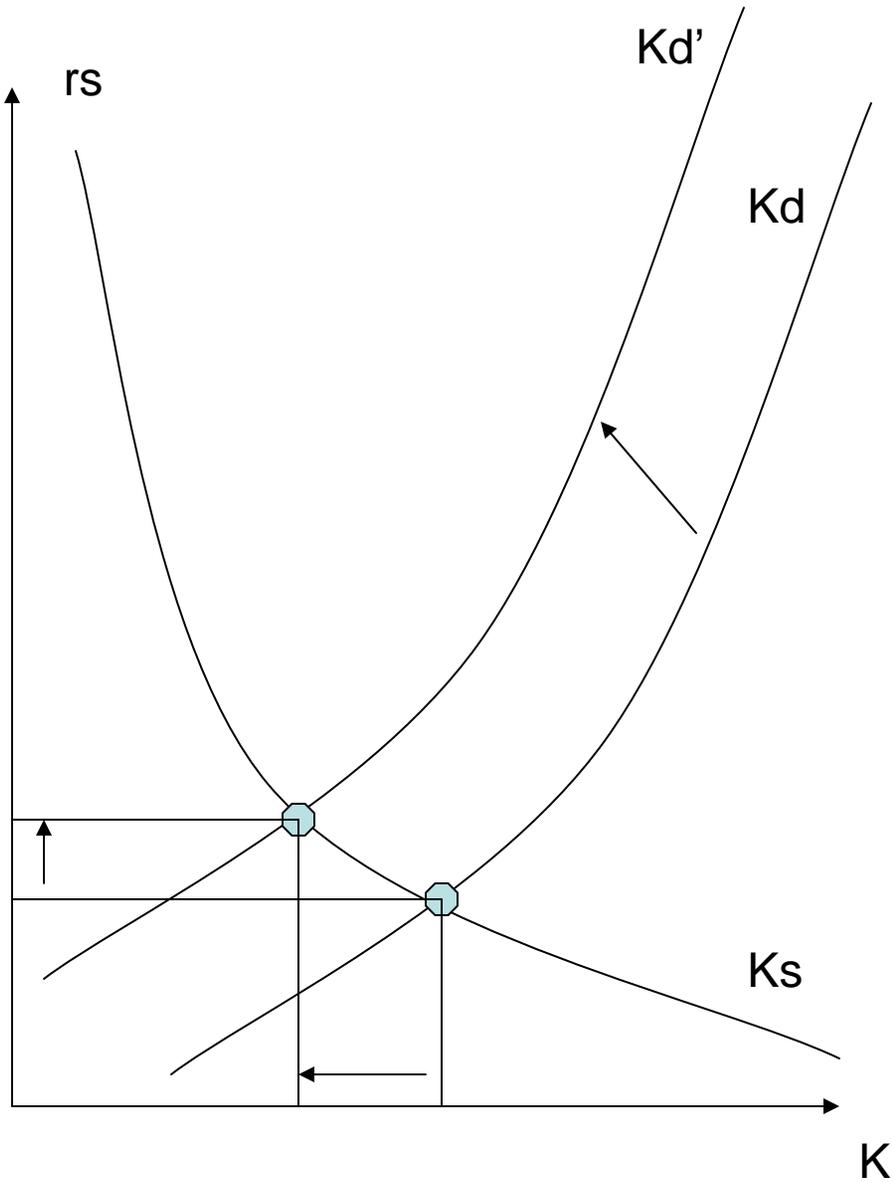
Interpretation

- Logic extends to representative agent model with aggregate risk and K, B being imperfect substitutes.
- Aiyagari & McGrattan (JME 1998) show that idiosyncratic risk and incomplete markets alone provide a theory of government debt. B crowds out K , but provides extra assets for precautionary saving. Optimal B is $2/3$ of Y .
- This paper quantifies size of crowding-out when K, B are imperfect substitutes.

Interpretation

- Increase in τ_l leads to (large) increase in B in long run (from government budget constraint). Relative supply of K, B changes. Quantitatively crucial effect.
- Lump-sum taxes are like negative bond positions (uncontingent coupon payments).
- Increase in τ_l increases these negative positions. Households respond by shifting demand towards B , away from K in financial markets. In addition negative effect on demand of both B, K from $\tau_l \uparrow$.

The Effects of an Increase in Lump-Sum Taxes



Interpretation

- K declines, $r_k, r_b \uparrow, r_k - r_b \downarrow$.
- Magnitude: a 10% increase in B reduces K by 1%, increases r_k by 10 bp, r_b by 18bp.
- In comparison: Aiyagari & McGrattan find changes of similar magnitude (as far as I can tell) for similar changes in government debt. So is meaningful portfolio choice really key for the question?
- Increase in τ_k with similar changes in B (expectedly) leads to much larger crowding-out effect.

Interpretation

- For same $\Delta\tau_l$ adjustment of G rather than B reduces effects on K, r_k, r_b by an order of magnitude.
- Now asset substitution effect key since the overwhelming supply effect from ΔB absent.
- Without asset substitution effect virtually no crowding out. With it modest impact on K, r_b, r_k .

The Effects of an Increase in Lump-Sum Taxes, G Adjusts

