Discussion: "Fiscal Policy, Welfare and the Zero Lower Bound" by F. Bilbiie, T. Monacelli and R. Perotti

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Context

Making optimal monetary policy at the ZLB harder

But potentially high government spending multipliers

Main channel: inflationary government spending lowers real interest rate hence discouraging saving and reducing 'debt overhang' (Fisherian effect); Eggertsson, Krugman (2011), Christiano et al (2011)

Strong case for increased government spending?

Contributions

Two main contributions:

1) The paper shows that this type of government spending policy is likely to be welfare-detrimental, even / especially at the ZLB

2) The paper argues that governments have a better set of instruments to act if the economy is at the ZLB - debt+transfers

Framework

- Two simple 2-period models
  1) with perfect competition in a money-less economy to develop intuition
  2) with monopolistic competition in a cashless economy with "money"

- 2 types of agents: savers and borrowers (constrained by a debt limit)

- No capital, production technology linear in labor

- Government can impose (lump-sum) taxes / make transfers and issue debt; government spending is pure waste

How does the economy end up at the ZLB?

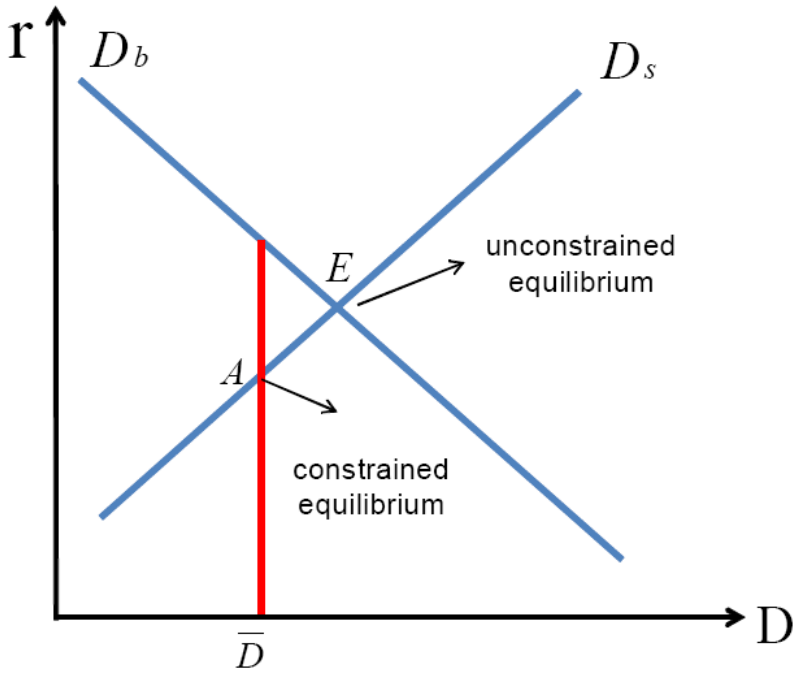
Period 1: $Y_1 = N_1$

Period 2: $Y_2 = \epsilon N_2$ and $\epsilon < 1$ anticipated productivity shock

Then likely:

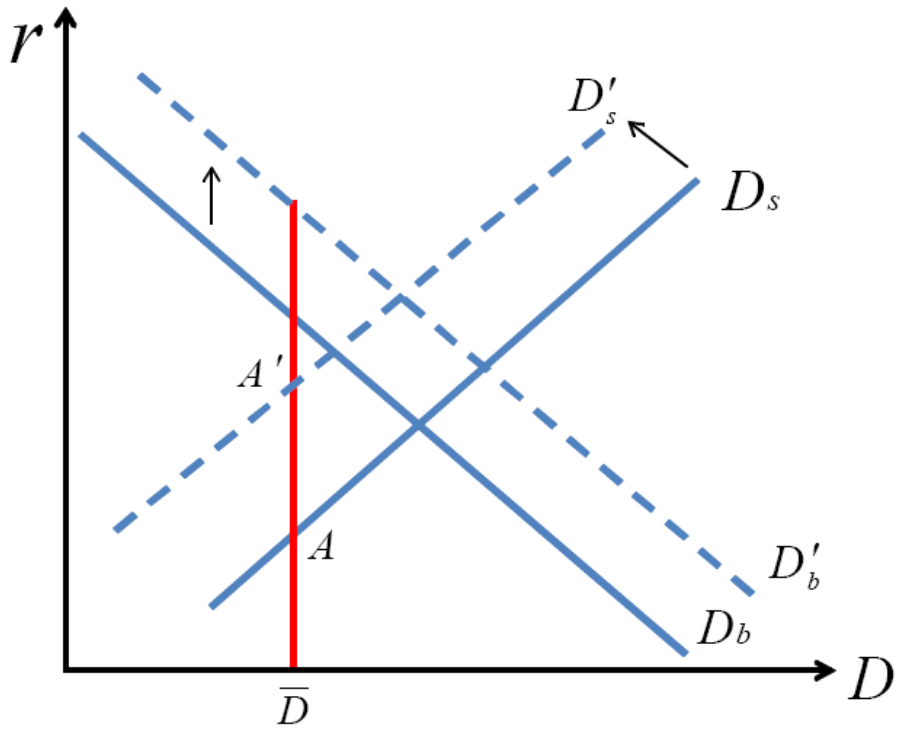
$$1 + r^n = (\beta^s)^{-1} \frac{u'\left(C_s^1\right)}{u'\left(C_s^2\right)} < 1$$

The scene



Source: F. Bilbiie, T. Monacelli and R. Perotti (2012)

An increase in govt. spending (financed by taxes)



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Natural rate increases

Can a govt. spending increase do any good? No!

- Similar results whether we are at the ZLB or not
- Increase in spending hits borrowers:
  - Wealth effect
  - Potentially higher real rate $\Longrightarrow$ higher debt burden
  - What follows, borrowers' 1st period consumption has to fall...
- Likely to hit savers (wealth effect vs. potentially higher interest rate)

Is an increase in govt. debt useful? Yes!

- Government increases transfers (lowers lump-sum taxes) to *both* types of agents in period 1
- Financed by an increase in govt. debt $T_s + T_b = B_{tot}$
- Only savers will buy bonds (borrowers would rather borrow even more)
- In period 2 savers are reimbursed, by getting $B_{tot}(1 + r)$
- The operation is Pareto-improving:
  - Borrowers's welfare improves because they can now increase period 1's consumption despite debt limit
  - Savers' welfare is not damaged (no negative wealth effect) and may actually improve (if the real rate increases)

Another look at the results

Temporary increase in transfers better than 'stimulus': no big surprise - don't throw resources through the window...

But is government spending policy really so bad?

In this economy with fixed prices:

- An increase in spending will push up (or at best leave unaffected) the interest rate
- And the borrowers' consumption will always fall

Presumably, Krugman would not argue for stimulus in this world?

- The story people have in mind is that of declining real interest rates due to expected inflation
- Which in turn helps boost (at least) borrowers' consumption

Perhaps this model is slightly too simple?

Model with money and costly price adjustment

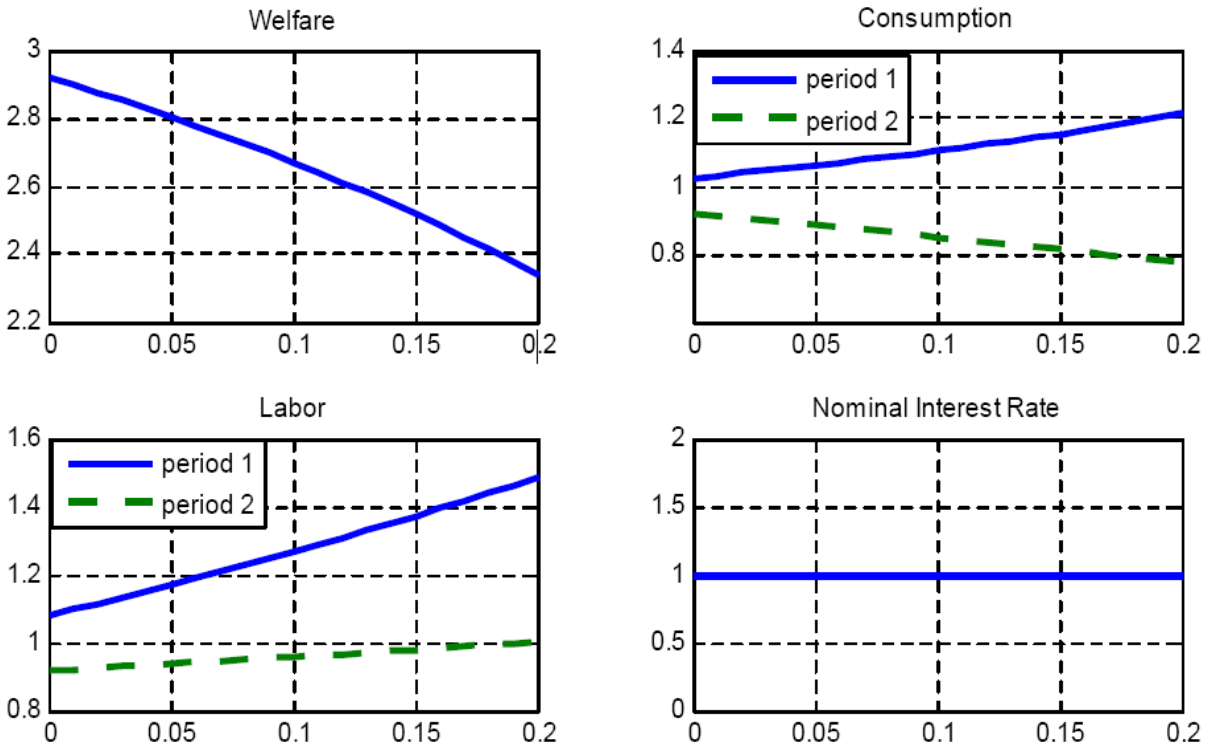
- An increase in government spending will now lead to a higher marginal cost in period 2, thus rising (expected) inflation
- Lack of capital and any other state variable - we need spending to increase in the 2nd period as well
- Now it really matters if we are at the ZLB or not:
  - if $i = 0$ and $\pi \nearrow$, the real interest rate must fall
  - not true if $i > 0$ since then the Taylor rule will kick in
  - unless central bank is passive - another story (Leeper et al., 2011)

Representative agent model

- 1st period consumption increases
  - Substitution effect (lower real rate) $>$ income effect (higher tax)

- But welfare falls...
  - Lower 2nd period consumption (income effect)
  - Much higher disutility of labor

Representative agent: effects of increased govt. spending



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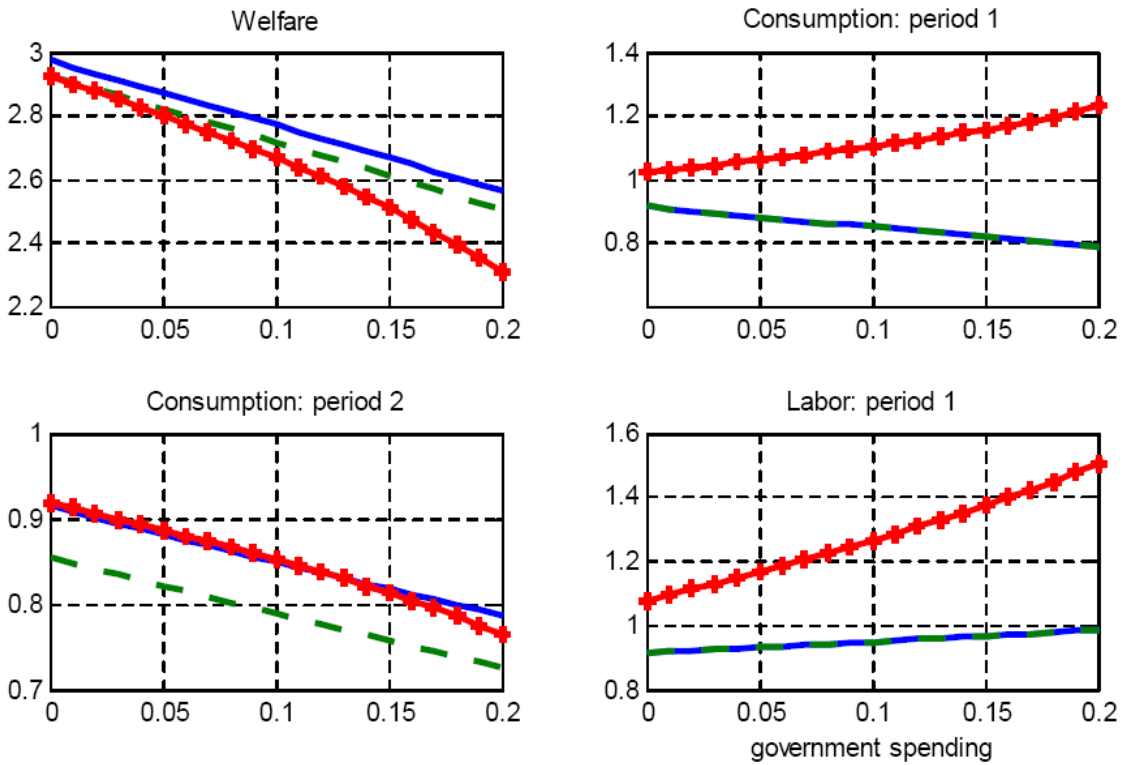
Representative agent model - flexible prices vs. ZBL

Can we at least say that an increase in wasteful govt. spending is less detrimental at the ZBL than in a flexible price regime?

- The opposite is true
- What happens?
  - With flexible prices real interest rate does not go down after the spending shock
  - So, there is no substitution effect, only negative wealth effect
  - Households react optimally by slightly decreasing their 1st period consumption
  - And, crucially, increasing their 1st period labor supply only a little (so that their labor disutility increases only slightly)
- Striking result

Representative agents model - flexible prices vs. ZBL



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Savers-borrowers model: government spending

No more surprises. At the ZLB:

- When the policy is to increase govt. spending
  - 1st period borrowers' consumption increases due to higher labor income and presumably (not stressed by the authors) lower debt burden due to positive inflation
  - Savers' 1st period consumption decreases; but the total 1st period consumption is higher
  - However, as before, welfare falls: again, disutility of labor

Savers-borrowers model: government debt

- When the policy is to increase transfers financed by debt
  - Welfare of borrowers improves (as in the simple model, due to intertemporal substitution of consumption)
  - Now also savers are better off: this time real interest rate slightly rises (due to a small fall in inflation)

This is really about it.

Government debt + transfers policy

- Great paper!
- But perhaps not so surprising in what concerns the ranking of policies
  - A policy that does not require throwing resources to the bin is much more likely to be high in such a ranking
- The implementability of the transfer policy could of course be questioned
  - But great point showing that we don't need to target constrained households; uniform transfers + increase in debt work as well

Government spending

Assume that for whatever reason (possibly of the political-economy sort) your preferred policy is not feasible. Would you, on the basis of your result, be confident enough to argue against using some kind of fiscal stimulus?

- Most obvious caveat: perhaps government consumption is not completely useless?

- What about true "involuntary" unemployment?
  - Your results derive from taking into account disutility of labor; but presumably, the disutility of being unemployed is sizeable
  - There are externalities linked to unemployment (like skills deterioration)

Government spending

- Assume govt. wastes a certain fixed amount of goods every period, but has access to a storage technology
  - Could it be socially optimal to increase the amount of goods bought in the first period, taking advantage of the fact that the marginal cost in this period is lower?

- More generally, timing issues seem to be important (e.g. front-loading vs. back-loading, see Werning, 2011)
  - But then more than 2 periods are needed in the model?

- Finally, in your specific framework, are your results concerning govt. spending general, or there may be parameter ranges / utility functional forms etc. for which they do not hold?
  - What about capital?