Comments on: Fiscal multipliers, public debt anchor andgovernment credibility in a behavioural macroeconomic model

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The nature of the model

- This paper takes the view that agents have cognitive limitations
- Preventing them from having rational expectations
  - The latter just requires too much cognitive capacities,
  - that only God-like creatures posses
- Since agents do not understand the complexity of the world
- they experiment with simple rules (heuristics)
- and they find out *ex post which* rules work and which rules do not work well
- Key is that they are willing to switch to the rule that performs best

- They learn by trial and error
- We get a different notion of rational behaviour:
  - In a world where agents do not understand the complexity of the world it is not rational to optimize using al available information as standard models assume
  - Rather is it rational to try different heuristics to find out which one performs better
- This is approach taken in this paper
- It provides for a rich macroeconomic dynamics
- that generates business cycles endogenously based on sentiments of optimism and pessimism
- without having to rely on exogenous shocks to explain these movements

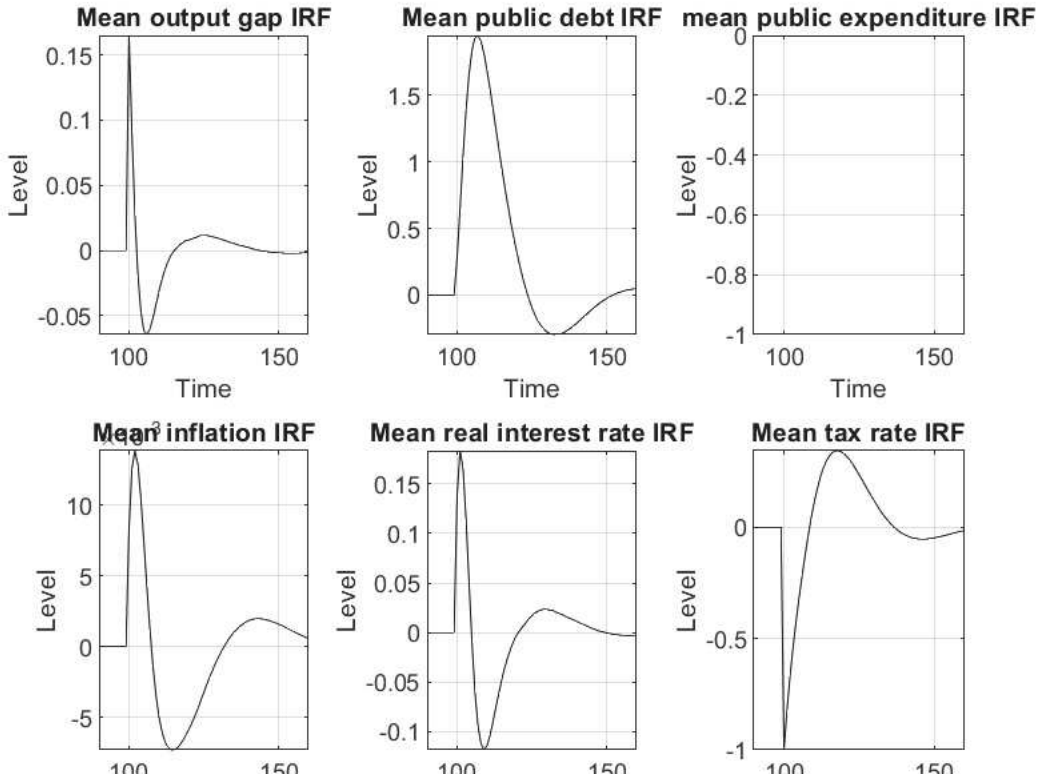
What I liked in this paper

- Nice part here is to introduce the idea of credibility about sustainability of debt.
- In a similar way as with inflation credibility.
  - Agents who trust that debt is sustainable will expect debt to decline after a shock that has increased the debt.
  - Agents who do not trust will continue to expect an increase in the debt after a positive shock.
- This is similar to how inflation credibility of central banks is defined.
  - Agents who trust the central bank will expect inflation to go back to the target after some shock
  - Agents who do not trust CB will expect inflation to increase further after some shock

- This allows the authors to derive interesting conclusions about how trust affect the multiplier
- And how optimism and pessimism affects these multipliers

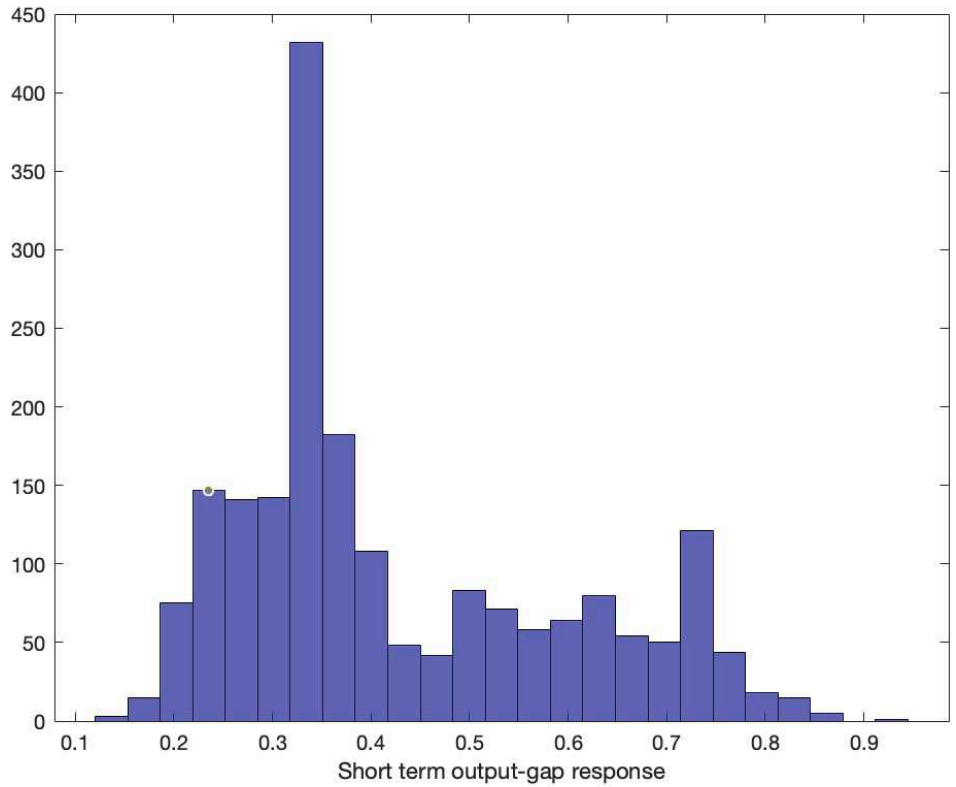
1. Comments on the use of impulse responses

- It would be good to have some idea of the distribution of the impulse responses produced in this paper.

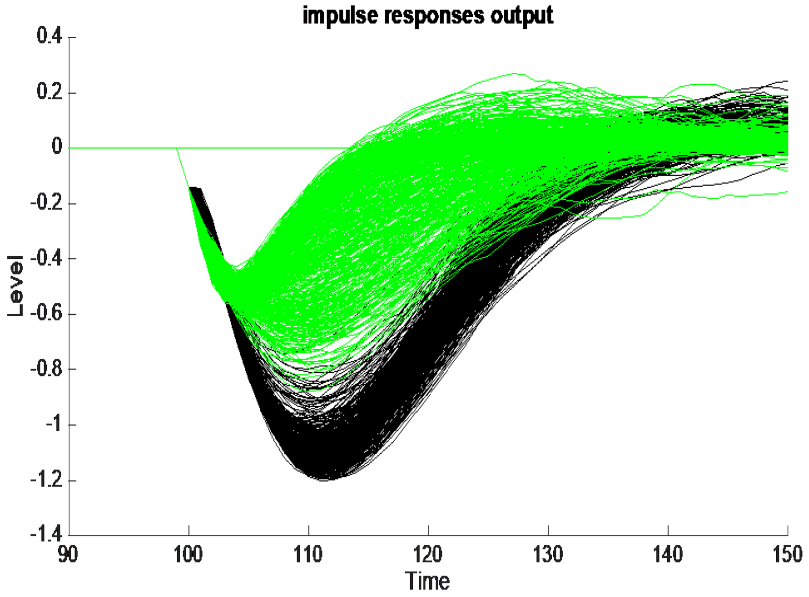


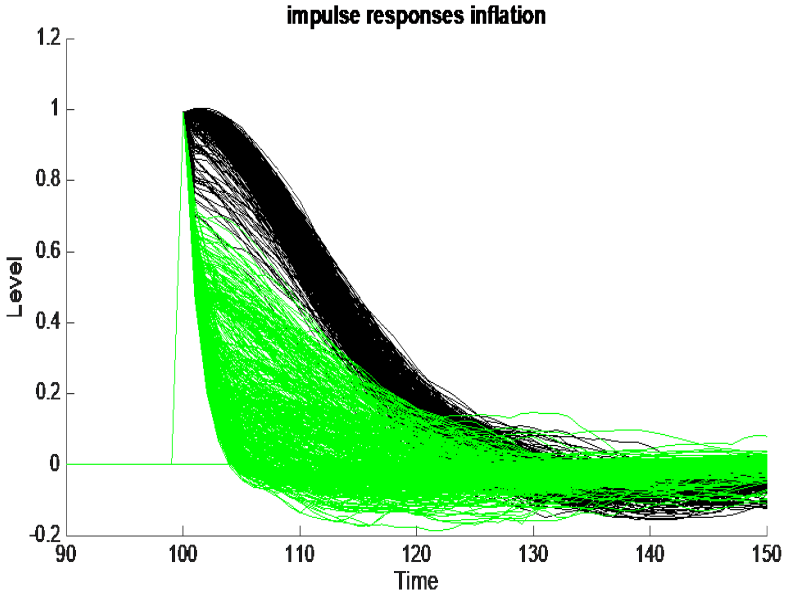
- My experience is that this distribution is not Gaussian. As a result, the mean may not be very informative.
- In the research I did with Yuemei Ji we found that in behavioural models the distribution of the impulse response can be bi-modal, with a "good" adjustment path and a "bad" adjustment path.
- Figure 3 seems to suggest that there is some bimodal structure.

Figure 3: State dependency of the fiscal multiplier

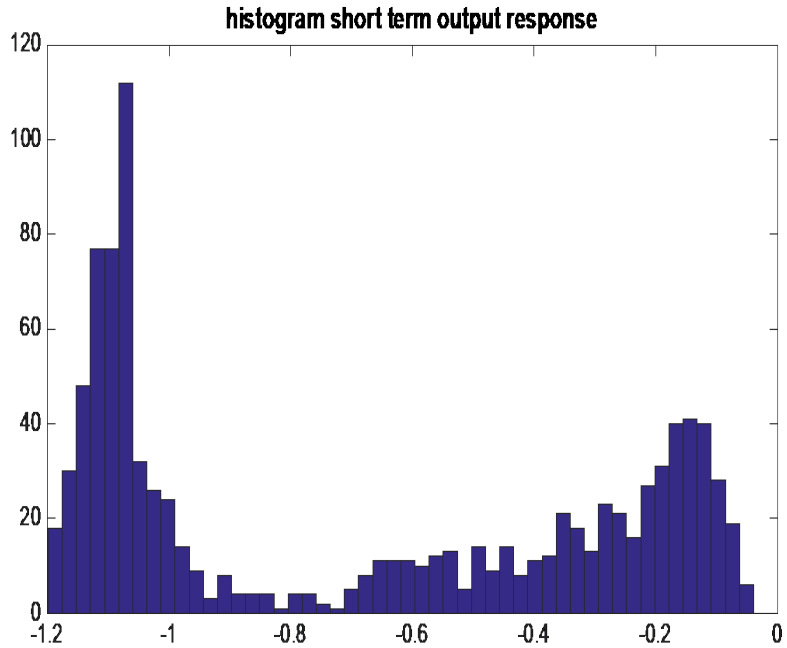


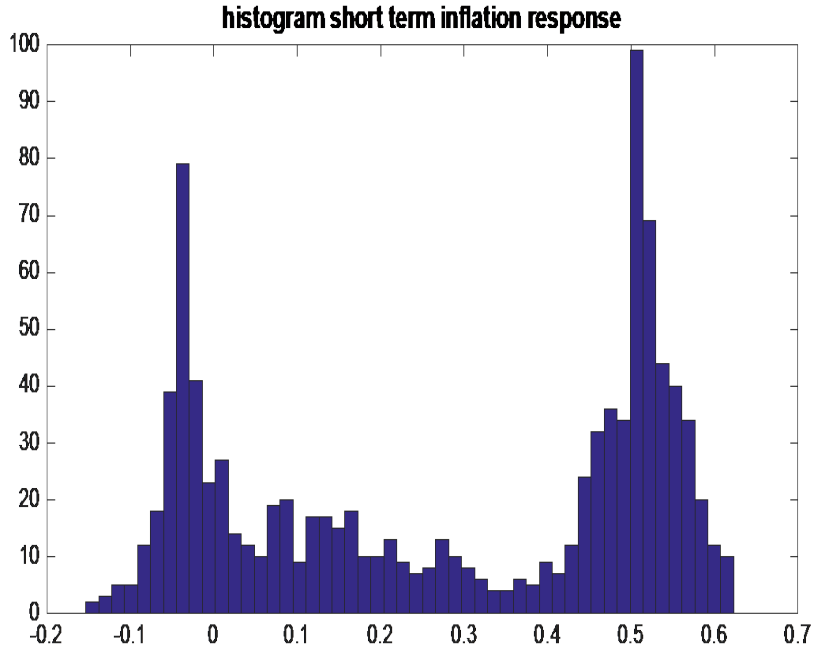
Impulse responses: Large supply shock



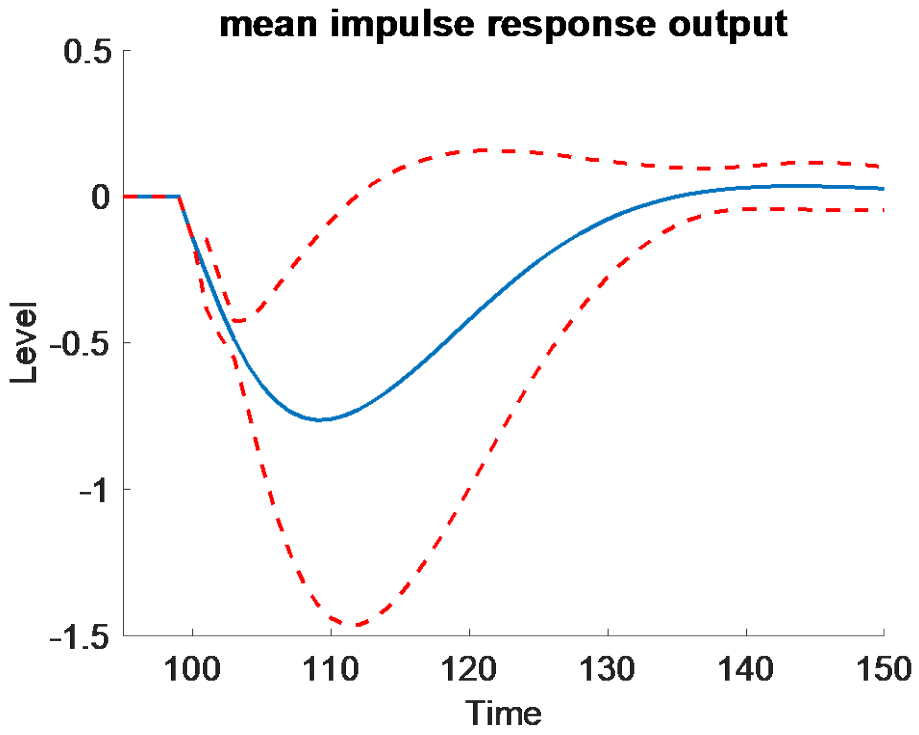


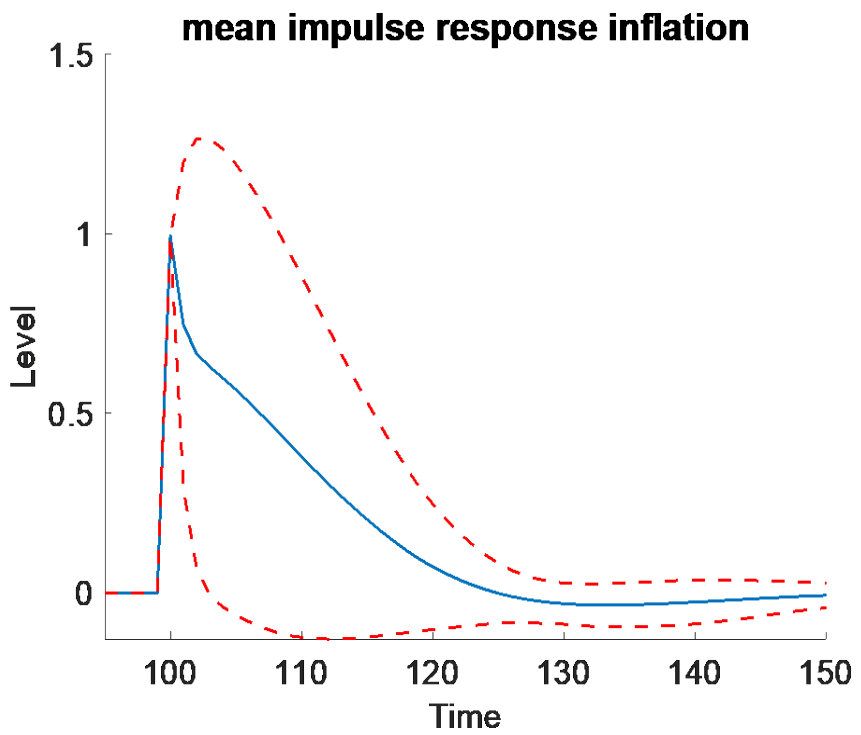
Frequency distribution of impulse responses (12 periods after shock)





Mean and standard deviations uninformative





Mean and standard deviations are not useful concepts when distributions are non-Gaussian

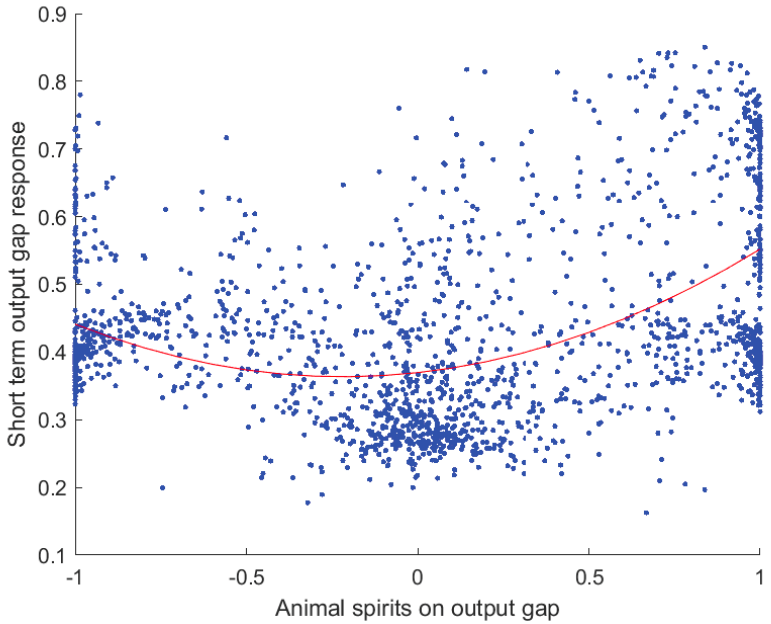
- Mean and the standard deviations are not only uninformative,
- but even misleading about the true underlying distribution
  - previous figure gives impression of existence of central tendency, the mean, that is representative of impulse responses.
  - There are almost no observations close to the mean as the impulse responses are clustered away from the mean.
- In addition, the representation of this figure gives the wrong impression that, as one moves away from the mean, observations become less likely.
  - In fact the opposite is true.

- The main business of macroeconomists is to produce conditional forecasts
  - i.e. producing mean effects of some shock and a band of uncertainty around the mean.
  - This could be a policy shock, a demand and supply shock, and many others.
- Macroeconomists ask “what if“ questions when they compute impulse responses.
- In a non-Gaussian world these conditional forecasts cannot be trusted

- This leads to the idea that when making conditional forecasts one has to think in terms of scenarios.
- There are good scenarios and bad scenarios.
- We can, however, make more precise forecasts if we know the initial conditions when the shock occurred
- My suggestion to the authors is to analyze the importance of initial conditions when the shocks occur

2. Great uncertainty about results

Figure 4: Fiscal multipliers and animal spirits on output-gap: the case of a one standard deviation increase in public expenditure



- I think this asymmetry in the result is interesting.
- But the authors may want to warn that there is considerable uncertainty about this result as is made clear by Figure 4.
- The noise around the red line is very high.

3. Suggestions for further research

- Interaction between credibility of government and central bank
  - How does the debt credibility affect the inflation credibility of central bank and vice versa.
  - If debt credibility is low can central bank have strong inflation credibility?