Discussion of *State Dependence in Labor Market Fluctuations: Evidence, Theory and Policy Implications* by C. Pizzinelli and F. Zanetti

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Highlights of the paper

- I really enjoyed reading the paper!
- It starts with a **novel empirical fact**: fluctuations in unemployment and job separation rate are much larger in periods of low productivity.
- It presents a DMP model with **endogenous job separation** and **on-the-job search** that embeds state dependence when solved using non-linear methods:
  - Neat and intuitive asymmetric transmission mechanism via the threshold of individual productivity that yields match efficiency (newly established vs continuing jobs).
  - The response of job separation is larger to contractionary shocks.
  - Fluctuations in the job separation rate are larger in periods of low aggregate productivity.
- **Policy Implication:** Augmenting the model with *wasteful* layoff taxes they get a surprising result: the **timing of labor market reforms** is crucial.
- Tax removal **in a low-productivity** state involves **higher short-run welfare gains**.

Comments: (I) Empirical Evidence

- Empirical motivation presents the following hypothesis:
- The existence of a **negative relationship** between the standard deviation of unemployment/job separation rate and the state of aggregate productivity.
- I have three comments/suggestions regarding the evidence you provide to support it:

1. Everything is more volatile when productivity is low. What if you do the same for states of expansion/contractions? Endogeneity?Endogeneity?
2. Do low productivity industries show higher variability in unemployment and job separation?Cross sectional evidence?
3. Labor market variables and productivity exhibit very long cycles and most of their variability appears at medium run frequencies.Medium run Frequencies?

Comments: (II) Asymmetric response to shocks in the data

- Your model introduces state dependence in labor market by generating **impulse responses** that are **different** across **contractionary** and **expansionary shocks**.
- Why don't you test this non-linearity in the data?
- A regime switching econometric model following [Auerbach and Gorodnichenko, 2012] and [Caggiano et al., 2014]?

Comments: (III) Minor points

- Are robustness results using Fernald measure of productivity statistically significant? I would report statistical significance of STD ratios in the tables.
- Sensitivity to different calibrations of the replacement ratio?
- Why using the same calibration of the productivity process as in [Hagedorn and Manovskii, 2008] while your sample goes up to 2014?

Conclusions

- Great paper.
- Highlights the importance of state dependence in labor market fluctuations over the business cycle.
- And its critical impact on the timing of labor market reforms.
- Challenge for future research: extend the model to allow for nominal rigidities and their interactions with the labor market.

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Caggiano, G., Castelnuovo, E., and Groshenny, N. (2014).
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Journal of Monetary Economics, 67(C):78–92.

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The Cyclical Behavior of Equilibrium Unemployment and Vacancies Revisited.
American Economic Review, 98(4):1692–1706.