

# Shocks, Frictions, and Inequality in US Business Cycles: Comment

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## Abstract

This comment points out data errors in Bayer, Born, and Luetticke (2024). These errors are common to much of the DSGE literature since 2007.

Bayer, Born, and Luetticke (2024) (henceforth BBL) make data errors that are common to DSGE models. This problem was first pointed out in Fair (2012) and expanded on in Fair (2020). Edge and Gürkaynak (2010) first pointed out the population problem. The problem began with the widely cited paper by Smets and Wouters (2007). The data errors in this paper have been continued in subsequent DSGE models. Fair (2020) cites nine papers through 2020. BBL is another example, as is an unpublished paper by Smets and Wouters (2024).

The problems in BBL are the following.<sup>1</sup> 1) Nominal consumption is divided by the GDP deflator to get real consumption rather than by the consumption deflator. 2) Nominal investment is also divided by the GDP deflator rather than the investment deflator. 3) GDP includes the whole economy but the hours worked variable excludes farm workers and government workers. 4) A number of the variables are divided by the civilian noninstitutional population, and the population variable has

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<sup>1</sup>This information is taken from the on line appendix to the paper.

not been adjusted for the fact that revisions take place each January and are not carried back.

The results in Fair (2020) show that there are large systematic differences between real consumption versus nominal consumption divided by the GDP deflator and between real investment versus nominal investment divided by the GDP deflator. Regarding hours worked, government workers are a non trivial fraction of total workers and fluctuate over time. Finally, the population variable (FRED variable CNP16OV is used) has spikes, up or down, each January. If you go on FRED and ask for monthly changes in this variable, the spikes are obvious. These changes dominate any other changes.

The fact that this problem has persisted for nearly two decades in a large literature is somewhat surprising. Historically macroeconomics has been an empirical discipline, and it is discouraging to see so little care taken with the data in the new macro. If the errors are corrected and it turns out to make little difference to the results, this would suggest that the models are mostly theoretical and not closely tied to the data. If correcting the errors does make a difference, many of the conclusions in the literature may have to be modified.

## References

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- [2] Edge, Rochelle M., and Refet S. Gürkaynak, 2010, “How Useful are Estimated DSGE Model Forecasts for Central Bankers?” *Brookings Papers on Economic Activity*, Fall, 209–259.
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- [4] Fair, Ray C., 2020, “Variable Mismeasurement in a Class of DSGE Models: Comment,” *Journal of Macroeconomics*, 1–4.

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