Labor Market Volatility and Macroeconomic Shocks

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Abstract

In this paper, the labor market volatility puzzle (Shimer, 2005) has been reinvestigated. In recent years researchers have provided numerous plausible explanations; however, they usually suffer from two major caveats. Firstly, most of these studies have focused only on the contribution of technology shocks. Secondly, less attention has been paid to the timevarying properties of the macroeconomy and the shocks over business cycles. In this paper, we address these two caveats. We first estimate a time-varying parameter VAR (TVP-VAR) with stochastic volatility. We include the time series of GDP growth, inflation, real interest rate and vacancy rate and we provide reduced-form evidence on the time pattern of their volatilities.

Abstract Our structural identification strategy builds on a medium-scale DSGE model enriched with a search-and-matching framework and a large set of shocks. We combine long-run restrictions and model-implied sign restrictions to identify four structural shocks. We document that the variances and the impulse response functions of our variables exhibit considerable time variation. In the short run, the lion share of the variance of job creation is explained by cost-push and demand shocks, thus challenging the conventional practice of addressing the Shimer's puzzle under the assumption that technology shocks are the main driver of fluctuations in hiring. However, the importance of non-technology shocks for long-term volatility has dramatically dropped from the mid-'80s onwards.

Keywords: Labor Market Volatility, Bayesian Estimation, Search and Matching, Structural Time Varying Parameters VAR, Stochastic Volatility, Long-Run Restrictions, Sign Restrictions, Technology Shocks.
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