Identifying the Labor Market Search and Matching Model: Some Insights from Structural Estimation∗

Thomas A. Lubik
Federal Reserve Bank of Richmond†
January 2009

Abstract

The search and matching model of the labor market has become the workhorse for analysing unemployment dynamics and the business cycle transmission mechanism. However, many quantitative studies of the search and matching framework argue that it is unable to replicate key labor market facts. These studies typically rely on a wide range of calibrated parameter values for which independent information is difficult to obtain. Moreover, these studies rarely assess whether the standard search and matching model provides a good fit for aggregate labor market variables. In this paper, I specify and estimate a simple version of the search and matching framework using likelihood-based methods. I first show that the fit of the structural model is comparable to an unrestricted VAR for typical specifications of the shock processes. I then show analytically that most of the structural labor market parameters are at best weakly identified. While there is sufficient information in aggregate labor market data on parameters associated with the matching process, the data are silent on bargaining parameters and the outside option of the worker. These results carry over to a richer model for which identification is assessed by a Monte Carlo study. The use of alternative data series and shock processes does not resolve this issue. This suggest that the discussion on how to calibrate these particular parameters is misplaced.

JEL Classification: C11, C32, E20, E24,
Keywords: Labor Market, Search and Matching, Bayesian Estimation

∗The views in this paper are those of the author and not necessarily those of the Federal Reserve Bank of Richmond, or the Federal Reserve System.
†Research Department, 701 E. Byrd St., Richmond, VA 23219, USA. Tel: +1 804 697 8246. Email: Thomas.Lubik@rich.frb.org.