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Tsu-ting Tim Lin

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Working Capital Requirement and the Unemployment Volatility Puzzle

Tsu-ting Tim Lin[a]

[a]Department of Economics, Gettysburg College, 300 N Washington Street, Box 391, Gettysburg, PA 17325.

Abstract

Shimer (2005) argues that a search and matching model of the labor market in which wage is determined by Nash bargaining cannot generate the observed volatility in unemployment and vacancy in response to reasonable labor productivity shocks. This paper examines how incorporating monopolistically competitive firms with a working capital requirement (in which firms borrow funds to pay their wage bills) improves the ability of the search models to match the empirical fluctuations in unemployment and vacancy without resorting to an alternative wage setting mechanism. The monetary authority follows an interest rate rule in the model. A positive labor productivity shock lowers the real marginal cost of production and lowers inflation. In response to the fall in price level, the monetary authority reduces the nominal interest rate. A lower interest rate reduces the cost of financing and partially offsets the increase in labor cost from a higher productivity. A reduced labor cost implies the firms retain a greater portion of the gain from a productivity shock, which gives them a greater incentive to create vacancies. Simulations show that a working capital requirement does indeed improve the ability of the search models to generate fluctuations in key labor market variables to better match the U.S. data. (*JEL* E24, E32, J63, J64)

Keywords: Unemployment volatility puzzle; search and matching; working capital requirement

Email address: tlin@gettysburg.edu (Tsu-ting Tim Lin)