DISCUSSION OF ROBERT E. HALL’S RESTAT LECTURE “EMPLOYMENT EFFICIENCY AND STICKY WAGES: EVIDENCE FROM FLOWS IN THE LABOR MARKET”

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I. Introduction

This paper is an important contribution to the emerging view that labor market rigidities amplify employment and output fluctuations by reducing firms’ incentives to create job vacancies when labor market conditions are slack. In it, Robert Hall makes three main points. First, in recent years, employment has fallen during recessions and remained low thereafter primarily because workers who wanted jobs had trouble finding them, not because unusually many employed workers lost their jobs. Second, the fact that separations do not rise substantially during recessions is strong evidence against theories of sticky wages in which the wage rigidity induces firms to end employment relationships even when there are still gains from trade. And third, the decline in the job-finding rate during recessions is evidence in favor of theories of sticky wages in which wage rigidities prevent firms from adjusting the wage of newly hired workers. Although I will quibble with some details of Hall’s thesis, the bottom line is that all three points are on target.

II. Job-Finding Rate and Separation Rate

This paper shreds two common misconceptions. The first is that search frictions per se help to explain why unemployment remains high after a recession. The belief is that, even after labor market conditions return to “normal,” the unemployment rate falls only slowly, because it takes a while for the newly unemployed workers to find a job. Hall’s figure 1 should put that confusion to rest. On a month-by-month basis, unemployment is at its stochastic equilibrium. This means that the unemployment rate is high after a recession either because the separation rate remains high or because the job-finding rate remains low.1

The second misconception is about the relative contributions of the job-finding and separation rates to unemployment fluctuations. In his 1995 paper entitled “Lost Jobs,” Hall wrote,

This paper . . . builds the analytical case that brief, sharp episodes of primary job loss are followed by long periods of slowly rebuilding employment relationships over the business cycle. Although the case is far from complete, I believe that these events in the labor market play an important part in the persistence of high unemployment and low output long after the initial shock that triggers a recession (p. 221).

This new paper should bury that belief. The procyclicality of the job-finding rate is much more important for explaining fluctuations in unemployment than is the countercyclicality of the separation rate.

Here I want to quibble with Hall’s measure of the separation rate, but only to argue that he overstates the contribution of separations to cyclical variation in unemployment. An obvious way to measure the separation rate is to look at the fraction of employed workers who become unemployed in a given month. This is essentially what Hall does in his figure 4. But there is a time aggregation bias in that calculation that comes from the way the CPS measures turnover. The CPS only records employment status on the monthly survey date. This means that if an employed worker loses her job, she has on average approximately half a month to land a new one before the CPS ever notices that she is unemployed. Ignoring this leads to two biases. First, one consistently understates the true separation rate by ignoring workers who immediately find a new job. More important for Hall’s thesis, a larger fraction of displaced workers will experience a recorded spell of unemployment when the job-finding rate is low, artificially raising the measured separation rate during such periods.

In a recent paper (Shimer, 2005), I propose a method of quantifying the magnitude of this time aggregation bias. The top panel of figure 1 shows my preferred measure of the separation probability, with the unemployment rate graphed for comparison. The separation probability—the probability that an employed worker loses her job at some point during the month—has been nearly acyclic during the last 20 years. But even during the earlier postwar period, the separation probability rarely increased by more than 30% during a contraction, and so cannot explain much of the large swings in the unemployment rate. In contrast, the bottom panel in figure 1 shows large, persistent procyclical movements in the job-finding probability that explain most of the fluctuations in the unemployment rate.

III. Inefficient Separations

Hall’s second contribution is to note that if rigid wages lead to inefficient separations, we should expect separations to move inversely with productivity. In Hall’s model, all

1 Pissarides (1986) makes a similar point using annual data for the Britain. He writes, “... the rates in and out of unemployment in Britain (and much more so in countries with higher turnover in the labour force, like the US) are sufficiently high that for given constant rates, the adjustment in the unemployment rate implicit in the stock-flow identity is completed within a year” (p. 505).
new matches have productivity \( z \), which then declines exponentially at rate \( \delta \). If firms pay a constant wage \( w \), matches are destroyed when productivity falls to the wage level, which occurs after \( L \) periods, defined by \( ze^{-\delta L} = w \). It follows that a decline in the productivity \( z \) reduces the maximum duration of employment relationships \( L \), with an elasticity of \( 1/\delta L \); in the calibrated version of Hall’s model, this is 4.

This point does not seem to depend on a deterministic decline in match productivity. Following Mortensen and Pissarides (1994), suppose that the output of a match is \( zx \), where \( z \) represents an aggregate productivity shock and \( x \) is idiosyncratic to the match. Matches are shocked according to a Poisson process with arrival rate \( \alpha \), at which time a new idiosyncratic component is drawn from the distribution \( G \). Still assuming that all jobs pay a common wage \( w \), one can prove that firms destroy employment relationships when the match-specific component of productivity falls below a threshold \( \bar{x} \) satisfying

\[
\frac{w}{z} = \bar{x} + \frac{\alpha}{r + \alpha} \int_{\bar{x}}^{\infty} [1 - G(x)] \, dx,
\]

so the separation rate is \( \alpha G(\bar{x}) \). A decrease in productivity \( z \) then raises the threshold \( \bar{x} \) which causes an initial burst of separations followed by a permanently higher separation rate. Similar results follow if the match-specific productivity component \( x \) follows a first-order Markov process. Of course, the magnitude of the response of separations to productivity depends on the details of the process for idiosyncratic shocks.

To summarize, a model with inefficient separations and constant wages results in counterfactual fluctuations in the separation rate. This leads Hall to “conclude that modern employment relationships are generally terminated in the joint interest of the worker and the employer.” Here he stretches the evidence too far. One can write down models in which separations are privately inefficient, for example due to two-sided asymmetric information (for example, Shimer & Wright, 2004). Despite this, wages move in response to aggregate shocks, so \( w \) is proportional to \( z \). In such an environment, the simple calculations above suggest that there is no reason to expect any particular correlation between the separation rate and labor market conditions. So, though I agree that recessions are not characterized by unusually many inefficient breakups of employment relationships, the acyclicity of separations does not inform us whether inefficient separations are merely a historical curiosity.

**IV. Sticky Wages**

This paper’s third point is that a model in which firms cannot adjust the wages of newly hired workers can generate plausible cyclical fluctuations in the job-finding rate and stability in the separation rate. This is correct.

But the question that this paper does not answer is why wages are so sticky. In Hall’s view, wages simply divide output between the worker and firm. The level of wages, or how they respond to shocks, comes from outside the model. My view of the labor market is somewhat different. Firms use wages as a means of recruiting and retaining workers. Wage contracts are designed to provide both workers and employers with incentives but are restricted by problems of asymmetric information and limited commitment. For example, a worker may not know the worker’s value of leisure, and either party can terminate the employment relationship at will.

In recent years, economists have developed a set of models that are ideal for studying these issues. In Burdett and Mortensen’s (1998) model of on-the-job search, firms that offer higher wages recruit more workers from competitors and lose workers less frequently. In Moen’s (1997) competitive search model, firms set their wage in an effort to attract job applicants. Shimer and Wright (2004) introduce asymmetric information into this framework, thereby pinning down the equilibrium employment contracts. In other words, the response of wages to shocks is determined entirely by microeconomic issues that are described within the model. The hope of this research agenda is that adding
realistic microeconomic features to macroeconomic models of the labor market will not only explain how wage contracts are determined and how they change over the business cycle, but also explain why, in reduced form, wages appear to be so sticky.

What difference does it make if future research can explain why wages are sticky rather than treating them as exogenously sticky? I will conclude with a short list of possibilities. The source of stickiness may help us to understand why the job-finding rate sometimes recovers quickly after a cyclical downturn and sometimes, notably after the last two recessions, recovers only slowly: Are wages stickier during some downturns than others? The source of stickiness may be important for evaluating the effects of policies such as reducing unemployment benefits or the minimum wage: Are wages sticky in response to policy changes, or only in response to productivity shocks? And the source of stickiness may determine whether the observed fluctuations in the job-finding rate are an efficient response to shocks, given the various frictions that are present in the economy: Are sticky wages optimal?

REFERENCES