Comment

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The main theme of Robert Hall's paper is that cyclical fluctuations in unemployment are driven almost entirely by fluctuations in the job-finding rate, as opposed to fluctuations in the separation rate from employment, and that we do not yet have a satisfactory theory for why the job-finding rate is so variable. Hall's review of recent attempts to build a theory of fluctuations in job-finding rates is interesting and valuable, and I won't say anything more about it. This comment deals mainly with Hall's analysis of the empirical evidence on fluctuations in the separation rate.

As Hall points out, his reading of the data runs counter to what many economists had previously believed. Darby, Haltiwanger, and Plant (1986) asked whether cyclical fluctuations in the stock of unemployed workers are caused mainly by fluctuations in the inflow or by fluctuations in the outflow. They concluded, "The main proximate determinant of changes in the unemployment rate is variations in the level and distribution of inflows into unemployment." Blanchard and Diamond (1990) analyzed fluctuations in employment and reached a similar conclusion: "The amplitude of fluctuations in the flow out of employment is larger than that of the flow into employment. . . . Reduced employment in recessions results more from high rates of job destruction than low rates of job creation." Davis, Haltiwanger, and Schuh (1996) concurred: "[U]nemployment inflows and employment outflows account for most of the cyclical variation in employment and unemployment. During recessions, unemployment inflows and employment outflows rise dramatically. Unemployment outflows and employment inflows also rise during recessions, but by less than their counterparts and not until later in a recession."

More recently, however, Shimer (2005b) argued, as Hall does, that this view is wrong: "Throughout the time period [1948 to 2004], the

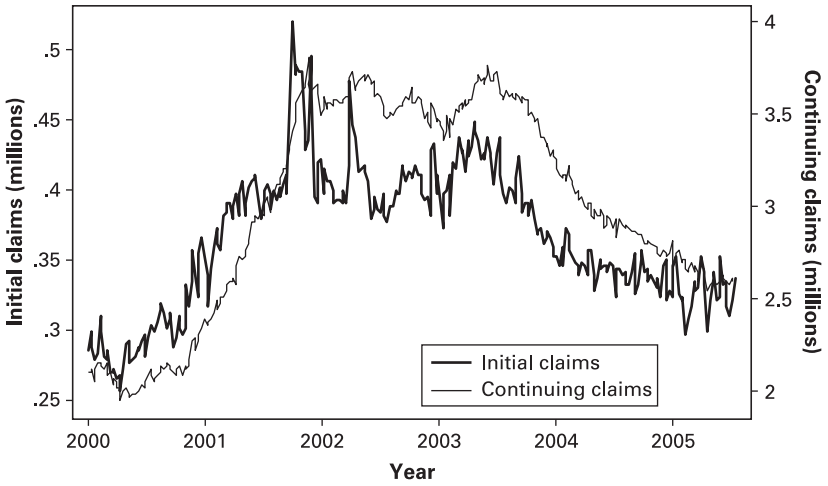

Figure 2.23
Weekly UI Claims, Seasonally Adjusted

job finding probability is strongly procyclical, while the separation probability was weakly countercyclical until the mid 1980s and more recently has been acyclic through two downturns in the labor market. These findings sharply contradict the conventional wisdom that fluctuations in the separation probability (or in job destruction) are the key to understanding the business cycle."

To help put this argument in perspective, it is useful to consider two unemployment indicators for the most recent recession. The first is weekly claims for unemployment insurance (UI), shown in figure 2.23. The second, shown in figure 2.24, is the Job Openings and Labor Turnover Survey (JOLTS) series on total separations (the numerator of the separation rate in Hall's figure 2.1). Initial UI claims almost doubled at the start of the recession, confirming the conventional view. Separations also rose but not by very much, confirming Hall's view.

As we know (largely from reading Hall's papers), data on labor market flows are complicated, and it is easy to get confused.[1] Workers who file initial UI claims have just been separated from their jobs. So how can there be a dramatic rise in initial UI claims without much movement in the separation rate?

Separations are workers who leave the payroll. As Hall points out, there is no implication that these workers becomes unemployed (and in fact most of them don't). Hall argues that the sharp increase in the

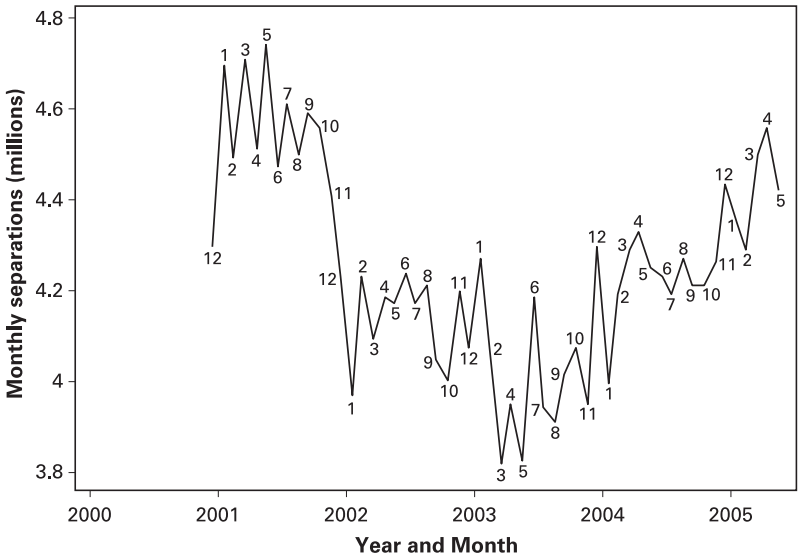

Figure 2.24
Total Separations (JOLTS)

number of separated workers who become unemployed at the start of a recession is largely offset by a decrease in the number of workers who move from one job to another.[2]

But why should we be concerned with the separation rate rather than the transition rate from employment to unemployment (the EU rate)? After all, the rate at which workers change jobs doesn't (directly) contribute to unemployment fluctuations (or to employment fluctuations). Hall suggests that a decrease in the job changing rate indicates that the job-finding probability has fallen. Suppose the separation rate is constant. Some workers who are separated immediately find new jobs. Others are unemployed for a while. If the job-finding probability falls, more of the separated workers will be unemployed. It will seem that an increase in the inflow to unemployment is responsible for the rise in unemployment (and it is indeed a proximate cause). But it is not that people are being dumped out of jobs at an unusual rate.

This is a nice theory, but it is not clear that it has anything to do with the facts. If the theory is right, one might expect to see a drop in the job-finding probability at the very beginning of a recession, followed by an increase in the EU rate. The recent UI data are shown in figure 2.25. The exit rate from the pool of UI claimants seems like a reasonable

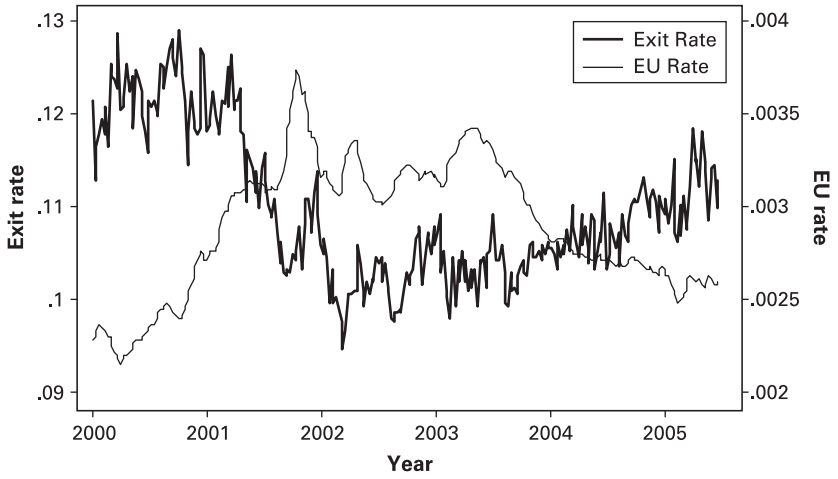

Figure 2.25
UI Extry and Exit Rates, 7-Week Moving Averages

indicator of the job-finding probability because the number of exits due to benefit exhaustion is small, and it seems unlikely that many people leave the labor force while they are still eligible for benefits. By this measure, the job-finding probability clearly fell in the recession (from about 12 percent to about 10 percent, per week). But this drop did not precede the rise in the E → U rate (initial claims as a proportion of covered employment). Instead, the E → U rate started to rise some months before the UI exit rate started to fall at the start of the recession.

Hall describes the evidence for an acyclical separation rate as reasonably compelling but not strong.[3] The main problem with this evidence arises because the Job Openings and Labor Turnover Survey did not begin until December 2000 (several months after the most recent recession began, according to figure 2.23). What about the evidence on the job-finding rate? This is presented in figure 2.9, and summarized by saying, "The job-finding rate is highly cyclical—it plunges in every recession." The job-finding rate is the number of workers hired in a month divided by the number of people looking for jobs. Figure 2.26 shows these two series separately, using Hall's data (the series in Hall's figure 2.9 is the ratio of the two series in figure 2.26). Since data on hires are not available before the start of the JOLTS series, Hall predicts the number of hires from observed employment growth, using the JOLTS data to estimate the coefficients in the prediction formula. Since

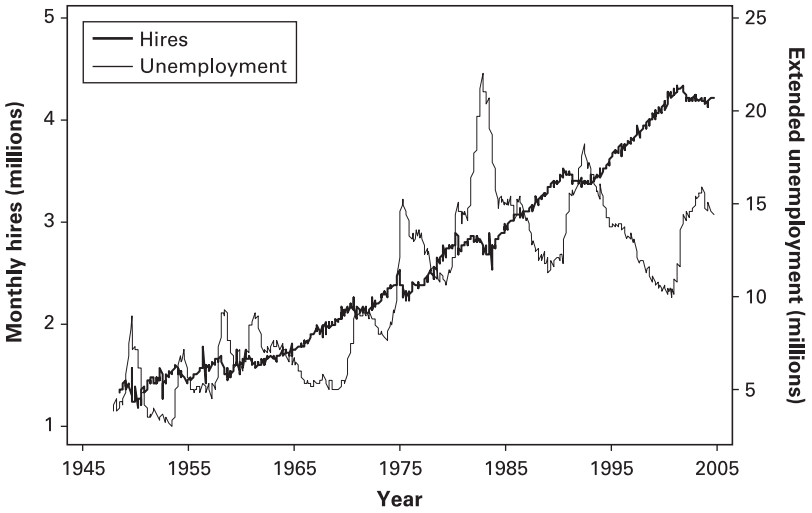

Figure 2.26
Hires and Extended Unemployment

data on the number of people looking for jobs are not available either, Hall uses the number of unemployed people, expanded to include the (predicted) number of discouraged workers and "marginally attached" workers.

It is clear from figure 2.26 why Hall's estimated job-finding rate plunges in every recession: it is essentially a trend divided by the unemployment rate. As Hall emphasizes, one cannot understand unemployment fluctuations without understanding why the number of workers hired each month changes very little in response to big changes in the number of people unemployed. This is a quantitative issue, first raised by Shimer (2005a). The Mortensen-Pissarides model does predict a decrease in the job-finding rate in response to a reduction in productivity, but for plausible parameter values, the magnitude of the response is tiny relative to the variations seen in the data.

In summary, Hall's analysis of the separation rate raises an interesting question about why the flow of workers changing jobs decreases in a recession, while the flow leaving jobs and becoming unemployed increases. Unless one believes that this is driven by changes in the job-finding probability, there is nothing in the paper that overturns the conventional wisdom about the proximate causes of unemployment volatility. But Hall makes a persuasive case that a full understanding

of unemployment fluctuations requires a better theory of fluctuations in the job-finding probability.

Endnotes

1. In the standard model of worker flows, there are three states (employed, unemployed, and out of the labor market), with six flows between these states. Taking the flows as a fraction of the stocks in either the source state or the destination state yields twelve rates of flow (for example, the entry rate to unemployment is the number of newly unemployed workers, as a proportion of the unemployment stock.). Both the job-finding rate and the separation rate are mongrels, which are not included in this set of twelve rates of flow. The job-finding rate is the flow into employment, as a proportion of the stock of people looking for work. The separation rate is the flow of people leaving employers' payrolls, as a proportion of the employment stock. And even if we knew all of these rates, we would still not have enough information to determine the rates of job destruction and job creation.

2. Shimer (2005b) defines the separation probability as the probability that a worker who is employed now will not be employed next period. So when Shimer says that the separation probability is acyclical, and Hall says that the separation rate is acyclical, they are contradicting each other. This makes it even easier to get confused.

3. Oracles are known for making statements like this.

References

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Discusion

Many participants tried to reconcile previous theories of labor markets with Robert Hall's new view of labor markets during a recession.

Daron Acemoglu wondered why the old literature on job flows shows convincingly that quit rates fall and layoff rates rise during recessions, yet Hall's analysis using the Job Openings and Labor Turnover Survey (JOLTS) data suggests that, in the 2001 recession, the magnitude of these changes was very small.

Mark Gertler noted that the evidence in Hall's paper and Steve Davis's comment indicates that for the last two recessions, variation in the hiring rate is responsible for most of the action in unemployment. Yet for the recessions of the 1970s and 1980s, layoffs were more important. Gertler posed the question: what will happen in the future? If the United States returns to recessions with big contractions in manufacturing, will layoffs once again become the more important determinant of unemployment? Bob Hall replied that *quantitatively*, it is correct that layoffs played a larger role in the earlier recessions. But *qualitatively*, separations cannot be numerically important. The observed amount of employment decline that occurred in the earlier recessions puts a bound on separations. Figure 2.2, which displays an approximation of separation rates for years before the JOLTS data is available, Hall reiterated that, even assuming that all employment decline is separations, they can generate only 30 or 40 basis points a month.

Andrew Levin agreed with Gertler that the recent recessions look different from past recessions and attributed the difference to different kinds of shocks. He provided a comparison between the 1981–1982 recession and the 2001 recession. The 1981–1982 recession was perhaps caused by a large shift in monetary policy that raised real interest rates. Vector autoregression (VAR) analysis done by Levin and colleagues shows that, as a result, auto sales and housing construction took big

hits. In contrast, during the most recent recession, monetary policy was easing as much as possible, bringing down real interest rates and causing auto sales and construction to remain strong. So it should not be surprising, Levin concluded, that the recent recessions look different from the earlier recessions. Hall cautioned, however, that this notion that "every recession has its own personality" turns out to be completely false in the labor market. All postwar recessions look remarkably alike in terms of employment changes (for example, a 14 percent decline in employment in durables, a 5 percent decline in construction, a 2 percent increase in government).

Other comments were related to modeling strategies in light of this new view of labor markets. Valery Ramey suggested that a reasonable model should make separations endogenous. Hall agreed with this in principle but cautioned that if separations become the driving force of recessions, then you lose the tremendous decline in recruiting effort (vacancies, help-wanted advertising) that is actually seen in the data. To get realistic fluctuations in this recruiting effort, there cannot be too many bargains available to firms in the form of recently separated workers. Although methodologically endogenous separation is desirable, in terms of matching the data, it may be problematic.

Andrew Levin pushed the notion of endogenous separations further by suggesting that models that endogenize separation might also endogenize the components of separation: quits and layoffs. During a recession, even if the separation rate is constant, fewer people may be quitting if they know it is more difficult to find a job, and more people may be involuntarily laid off. Levin suggested that a model that includes these two components may be a fruitful path for future labor market research. Hall enthusiastically agreed with this, noting that the traditional work by Diamond, Mortensen, and Pissarides focuses on an efficient separation between worker and firm. How this split comes about (whether a separation is a quit or a layoff is not always clear) questions how the mechanism that governs the efficient employment relationship actually works.

And finally, an observation was made that the distinguishing feature of labor markets in the United States is the churning process. According to the JOLTS data, about one-third of all workers separate. So perhaps all of this discussion about the cyclical variation in unemployment is second order.