

Measuring U.S. Labor Market Dynamics

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Understanding how labor markets evolve over time is fundamental to research in macroeconomics. Central to understanding labor market behavior is accurately measuring the dynamics of the labor market: the movement of individuals among employment, unemployment, and labor force nonparticipation. My dissertation develops methods for properly measuring labor market dynamics using large, nationally-representative data sets of the United States. These methods are used to study potential biases arising from time aggregation and from geographic mobility.

In my job market paper, “**Understanding Unemployment Dynamics: The Role of Time Aggregation,**” I use weekly data from the Survey of Income and Program Participation (SIPP) to estimate the role of time aggregation in measuring gross labor force flows. Time aggregation arises if labor force transitions occur at higher frequency than a month: the measured transition may combine multiple transitions into a single “aggregate” transition. I find that time aggregation is substantial: gross flows estimated from monthly data understate the true number of transitions by 15–24 percent. Time aggregation in both separations to unemployment and accessions from unemployment comoves positively with the business cycle. Contrary to Hall (2006) and Shimer (2007) I find that separation hazard rates calculated from the SIPP and the Current Population Survey (CPS) are strongly countercyclical and remain so after adjusting for time aggregation. In addition, the separation hazard rate contributes fully one-half of the cyclical variance of the steady-state unemployment rate after adjusting for time aggregation.

My job market paper builds on data and methods developed in two other papers, which comprise the second and third chapters of my dissertation. In the second paper, “**A Longitudinal Analysis of The Current Population Survey,**” I assess the implications of geographic mobility for the measurement of U.S. labor market dynamics using the Current Population Survey (CPS). Because the CPS does not follow individuals that move, estimates may be biased if the labor market behavior of movers differs systematically from that of nonmovers. I create a new database, the Longitudinal Population Database (LPD), that utilizes all longitudinal information in the CPS to form a panel data set. I use the LPD to identify persons who move and therewith estimate a bound on the bias from geographic mobility. The cyclical bias arising from geographic mobility is small. At business cycle frequencies, the difference between the separation hazard rate calculated from the entire CPS sample and from a subset that are known not to have moved never exceeds 4 percent. There is little effect of mobility on the job finding hazard rate. Thus, geographic mobility does not significantly affect CPS labor market dynamics.

In the final paper, “**Weekly Time Series of the U.S. Labor Market,**” I use data from another large, nationally representative household survey, the Survey of Income and Program Participation (SIPP), to create a new data set of U.S. labor market behavior at weekly frequency, including the number of direct employment-to-employment (EE) transitions. The paper documents difficulties encountered creating the weekly series and discusses the strengths and weaknesses of the SIPP data relative to the CPS. Overall the SIPP labor force stocks, gross flows, and cyclical dynamics compare favorably with those from the Current Population Survey (CPS). Abstracting from labor force participation, direct EE transitions account for one-half of all separations from employment. Although CPS-based estimates of EE flows are nearly twice as high, the CPS overstates EE flows because of time aggregation. Separations to a new job are strongly procyclical while separations to unemployment are strongly countercyclical. The combination yields a nearly acyclical total separation rate.