This PDF is a selection from an out-of-print volume from the National Bureau of Economic Research

Volume Title: Labor Statistics Measurement Issues

Volume Author/Editor: John Haltiwanger, Marilyn E. Manser and Robert Topel, editors

Volume Publisher: University of Chicago Press

Volume ISBN: 0-226-31458-8

Volume URL: http://www.nber.org/books/halt98-1

Publication Date: January 1998

Chapter Title: Measuring Gross Worker and Job Flows

Chapter Author: Steven J. Davis, John Haltiwanger

Chapter URL: http://www.nber.org/chapters/c8358

Chapter pages in book: (p. 77 - 122)
3 Measuring Gross Worker and Job Flows

Steven J. Davis and John Haltiwanger

3.1 Introduction

Market economies exhibit high rates of worker flows from one job to another and between employment and joblessness. The myriad forces that drive these flows fall into two broad categories: one associated with events or circumstances that induce workers to reallocate themselves among a given set of jobs and establishments and a second associated with events that alter the distribution of available jobs among establishments.

The first category encompasses job-to-job movements for reasons of career advancement, family relocation, job satisfaction, and quality of the worker-job match. It also encompasses labor force entry and exit for reasons of health, schooling, child rearing, family relocation, and retirement. The second category encompasses the many forces that impinge on the spatial distribution of labor demand such as the growth and decline of markets, the restructuring of firms and industries, changing patterns of domestic and foreign competition, and local changes in costs and the business environment. These forces drive establishment-level job creation and destruction, which in turn cause workers to change employers and shuffle between employment and joblessness. In this way, the second category of forces gives rise to both job and worker flows.

Steven J. Davis is professor of economics at the University of Chicago Graduate School of Business. John Haltiwanger is professor of economics at the University of Maryland. Both authors are research associates of the National Bureau of Economic Research and the Center for Economic Studies of the U.S. Bureau of the Census. The views expressed in this paper are those of the authors and do not reflect the views of the Bureau of the Census. The authors thank Bruce Meyer for many helpful comments on a previous draft. Catherine Buffington, Andrew Figura, and Lucia Foster provided excellent research assistance. The authors gratefully acknowledge research support provided by the National Science Foundation.
Measuring Gross Worker and Job Flows


Yashiv, Eran. 1996. Explaining the flow of hiring: An asset pricing approach. Tel Aviv: Tel Aviv University, August.

**Comment**

Bruce D. Meyer

This chapter provides a nice summary of many dimensions of the recent research on worker and job flows. The authors are the central pioneers and popularizers of this area of research. The chapter will be a classic reference, particu-
larly for the five topics that the authors summarize: (1) reasons for studying worker and job flows, (2) concepts and definitions, (3) current data sources, (4) current knowledge, and (5) new data sources. The chapter clarifies many concepts and provides a wealth of facts. It also provides many insights about what future research could examine.

While I will comment on each of the five topics in order, my principal concern is that the concepts and definitions used throughout the chapter are partly driven by the characteristics of the data source with which the authors are most familiar, the Longitudinal Research Datafile (LRD). Their choices are quite natural in their context but may differ from ideal ones, and in other data sets different definitions will be more appropriate. This distinction should be kept in mind when reading the chapter.

In the first section of the chapter the list of reasons provided for why we should study worker and job flows will undoubtedly lengthen as research progresses. For example, several new areas of study would be possible with individual wage records that would be part of a proposed national wage records database. We have begun to see some of these types of analyses done for single states or groups of states. Such data would allow the examination of the costs of job displacement as has been done for Pennsylvania by Jacobson, LaLonde, and Sullivan (1993). They would also allow an examination of the returns to tenure and mobility (Topel and Ward 1992; Altonji and Shakotko 1987), the effects of job destruction on geographic and industry mobility of workers, and other issues.

The section on concepts and definitions is very useful because it defines and discusses various turnover and worker reallocation concepts. One of the main motivations for these concepts seems to be that decreases in employment at the establishment level are a good measure of jobs destroyed as a result of demand changes, while increases in employment at the establishment level are a good measure of jobs created as a result of demand changes. It should be clear that this relationship is only an approximation. Jobs can be created and destroyed within an establishment with constant employment. Technological change may involve a change in the composition of the workforce but not its size. In addition, declines in employment are due to factors besides demand changes, such as quits from small establishments or exits by groups of people from professional practices to establish their own practices. Last, some movements of workers between nearby establishments within a firm may have little to do with total employment or unemployment and should not be called job creation or destruction.

Many of the necessary complications in the concepts and definitions emphasized in the chapter come from the distinction between counting workers and counting jobs. This distinction leads to great effort by the authors to calculate the fraction of workers changing jobs who change jobs as a result of job creation or destruction. Emphasizing this number raises several concerns. First, this number is not nearly as interesting as its components, that is, what fraction of people who leave or lose their jobs do so because of job destruction and
what fraction of those who find new jobs get newly created jobs. When one
combines jobs lost and jobs gained, one is, in many situations, combining very
different things. Since jobs are often lost for different reasons than they are
gained, it is often better to analyze the two separately. Second, suppose 100
people separate from jobs: 50 lose jobs when plants shut down, while the other
50 quit. Also suppose that all workers find new jobs, one-half in new plants
and one-half in the jobs vacated by those that quit. The fraction of people who
change jobs as a result of job creation or destruction depends on which work-
ers take the jobs in the new plants. The fraction could be anywhere between .5
and 1.0 in this example. It is not intuitive that we should care about which
workers find jobs in which plants. We are better off knowing that one-half of
separations are due to job destruction and one-half of new hires are due to job
creation. This anomaly adds to my suspicion that the combined number is not
that important. Finally, we cannot measure the concept very well, as I discuss
below.

In the discussion of temporary separations, it is not clear to me that tempo-
rary layoffs between time \( t - 1 \) and \( t \) should be ignored. Most data examined
by the authors do not measure temporary layoffs. The authors deal with tempo-
rary changes by looking at the persistence of job creation and destruction, that
is, the extent to which employment does not return to its old level. This ap-
proach is only indirect, because in large part we care about flows of workers.
The time periods for persistence examined by the authors, one to three years,
may be short from the perspective of a firm, but if a decline in employment
lasts six months it may mean that workers must move on to new permanent
jobs at a different firms if they cannot be without jobs for six months. We care
about whether the same workers are able to return to their old jobs; this is a
more natural measure of permanence. Using matched data on firms and work-
ers, such as unemployment insurance data, one can directly examine if changes
in employment lead to permanent job loss for workers.

The authors emphasize changes between discrete times rather than flows
over an interval in their concepts and definitions. This choice misses many
separations, though it may focus attention on events (separations, employment
declines) that are more important, that is, those that are permanent and involve
greater losses in investment. However, if one is studying the costs of separa-
tions, such as hiring and training costs, one may prefer flow measures that
include all job separations rather than changes between discrete times.

The section on current sources of data is extremely useful, and I only have
a few comments. The authors are too kind when discussing the accuracy of the
CPS gross flow and length of employment and unemployment data. The au-
thors acknowledge large problems with measurement error and missing obser-
vations in the gross flow data and note that adjustment methods have been
proposed to correct these problems. While the methods that have been pro-
posed are clear improvements (Abowd and Zellner 1985; Poterba and Sum-
mers 1986; Fuller and Chua 1985), they are approximations, and the different
methods yield very different numbers. As for CPS spell measures, Poterba and
Summers (1984) find an enormous amount of measurement error in CPS unemployment spell lengths. On the other hand, concerning the discussion of unemployment insurance records, the evidence that we have on spurious federal employer identification number changes indicates that they are not a major problem. An upper bound on the extent of spurious changes is obtained in Anderson and Meyer (1994) by looking at the fraction of people who separate but do not have an SIC change or big employment change. This fraction is small.

The next section examines what we know about worker and job flows. This section is a wonderful summary and synthesis of the literature. My only comment is related to my qualms mentioned above about the emphasis given to measuring the fraction of worker reallocation due to job reallocation. We cannot measure this number with much precision, as the estimates provided here indicate that the fraction is between 35 and 56 percent. Even this calculation requires merging data with different industry coverage, timing, and definitions. The imprecision in measuring this concept makes me further doubt its utility. On the other hand, we can precisely measure the fraction of separations due to job destruction and the fraction of new hires due to job creation in matched firm and worker data such as unemployment insurance records.

The final section on new data sources is very instructive on the new research that could be done with existing administrative databases. This section is an exciting list of research areas that may expand in the future. I might also add that some questions might be answered by good personnel records and organization charts for a few firms. I would put in this category information on the importance of changes in the mix of jobs within establishments, the implications of temporary changes in employment of different durations for permanent worker separation from a firm, and the importance of movements of personnel between establishments within a given firm.

References