An Analysis of Small Business and Jobs

by

Brian Headd Office of Advocacy



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Small and large firms have differing roles in the labor market. Relatively new data now allow us to better dissect the labor market with respect to job flows (hires, fires, retires, and job hoppers) and firm size and even in some instances firm age. Understanding who creates and destroys jobs is paramount as we seek a solution for our loss of over 7 million net jobs from December 2007 to December 2009.¹

While small and large firms provide roughly equivalent shares of jobs, the major part of job generation and destruction takes place in the small firm sector, and small firms provide the greater share of net new jobs. In some ways this role as a major creator and destroyer of jobs is a result of being the major creator and destroyer of businesses in general. The term for this in small business research circles which was popularized by Joseph Schumpeter (1942) is "creative destruction."

David Birch (1979) discovered that the end result of small businesses' creative destruction was a net increase in employment. This finding was the seed for the small business employment discussion that continues to the present day. And even more important than the ensuing debate about Birch's findings was the motivation to gather new kinds of data to better analyze Birch's findings.² This has led us to two decades of a data evolution with respect to small business employment flows.³

The following is a primer for understanding some basic facts about small businesses' role in employment and the data that are available to form opinions and develop hypotheses. The paper is broken into sections discussing the static view of the labor market, the dynamic view, current events, and concluding remarks. The static view illustrates small and large firm shares of the job market; these are essentially snapshots in time. The dynamic view tracks how firms got from point A to point B, and what happened to jobs along the way. For instance, the static view shows the amount of jobs in small firms while the dynamic view shows job growth, job decline, and net job change in small and large firms.

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¹ The author would like to acknowledge the invaluable editing assistance of the Office of Advocacy's Rebecca Krafft and input from the Bureau of Labor Statistics' Jim Spletzer and the Small Business Administration's Subash Iyer in shaping this paper.

² See Davis, Haltiwanger, and Schuh (1993) for an early example.

³ Covering the topics presented in this paper would not have been possible without the groundbreaking efforts of U.S. Census Bureau and Bureau of Labor Statistics managers, programmers, and economists. Economists involved in creating new data sets include but are not limited to: Zoltan Acs, Catherine Armington, Rick Boden, Rick Clayton, Stephen Davis, John Haltiwanger, Ron Jarmin, Julia Lane, Javier Miranda, Alfred Nucci, Jim Spletzer, and Dave Talon.

The Static Picture: How Many Workers Do Small Businesses Employ?

The private sector consists of small businesses and large businesses. And the government often defines small as firms with fewer than 500 employees.⁴ Using this definition, one-half of the private sector is populated by small businesses and the other half by large businesses. Or, put another way, in 2006, 60 million people were employed by smalls, and 60 million by large.⁵

Small firms' employment share of the private sector (along with the economy's average firm size) is a reflection of economies of scale; these are largely affected by the economy as a whole, technology, consumer preferences, the fortunes of various industries, financing, and myriad other factors. The share is not necessarily a commentary on whether small business is a good or bad thing, or on its importance or lack thereof. Instead, this overall employment share is in some ways an indicator of an economy's industry mix. A few hundred years ago when farming was king, the small firm share of employment was high. This shrank as we entered the Industrial Revolution (think manufacturing and heavy industry), and it expanded as service industries increased (think cleaning services and pet care). However, over the past few decades the share of small firm employment in certain industries has been undergoing a reversal: for example, small firms' employment share has decreased in retail trade while it has increased in manufacturing. The data support the media stories of big box stores and mini-mills proliferating (Figure 1).

The share of employment in small firms has been relatively stable over the past few decades.⁶ It has fluctuated slightly in response to economic conditions, declining slightly when the economy is doing well and increasing when the economy struggles. This tracks with the slight decline in the small business share of employment during the late 1990s and the leveling off in the 2000s.

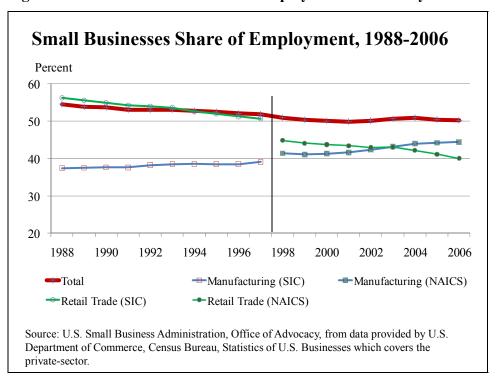
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⁴ For industry size definitions for government purposes, see U.S. Small Business Administration, 2010.

⁵ Statistics of U.S. Businesses (SUSB). Small firms also account for about half of private-sector output (Kobe, 2007).

⁶ These figures do not include the self-employed (primary occupation and whose tax status is unincorporated). Including this group would increase the small firms' share of the workforce a few percentage points.

Figure 1 The small business share of employment is relatively stable.



Small businesses' share of private-sector employment is a constant shuffle of employer-employee matches. Some employees may even consider the size of the firm in their decision to accept an employment offer or to jump ship. But even though economists may think in terms of individuals choosing to work for small or large firms, it's more likely that workers choose an occupation and then a job that an employer offers. Some occupations are in greater supply in small firms than large firms. For instance, someone choosing to be a dental hygienist would tend to work for a small firm as most dental firms are small, and most flight attendants would tend to work for large firms. But employees of both small and large firms can move on to other firms for better opportunities, so they would not necessarily have a "small firm" or "large firm" career. Essentially if the grass is greener, workers will walk and employers will poach, leveling the playing field across firm sizes.⁷

⁷ The Census Bureau's Longitudinal Employer-Household Dynamics data series, which can follow employees throughout their careers, may eventually provide more insight into individual career progressions by firm size. Brown, Haltiwanger, and Lane (2006) show what can be gleaned from this database by focusing on the impact of volatility on career paths and firms for five industries.

Small firms do not necessarily create "inferior jobs" as they have shares of part-time employees similar to those of large firms. About 21 percent of small firm workers were part-time in 2008, compared with 18 percent of large firm workers. Small firms' slightly higher share of part-time workers is not surprising; consider a firm that wants to increase employment by 25 percent; a firm with two employees would add one worker half-time, whereas a firm with 500 workers would add 125 workers full-time to achieve the same increase.

Small firms also tend to fill niches in the labor market that are underserved (often have high rates of unemployment, for example). Small firms employ higher shares of Hispanics than large firms (65.9 percent of Hispanics work for firms with fewer than 500 employees). And compared with large firms, small firms also employ higher shares of individuals with low educational attainment—a high school degree or less (63.2 percent); high school-aged workers (63.8 percent); individuals 65 or older (64.6 percent); disabled workers (59.4 percent); and rural workers (64.3 percent). ¹⁰

While small firms' average pay tends to be lower than that of larger firms, the demographic profile of the small firm work force needs to be taken into account when comparing wages. For example, about one-third of the difference between small- and large-firm earnings per employee disappears when the comparison is limited to workers who are full-time and have at least a college degree.¹¹

Small firms' share of workers, or workers by race or age, does not change much over time or changes slowly, but this relative calm tends to conceal some interesting job flows. The dynamics behind the snapshots conceal the job creation and destruction process, as some small firms grow into large firms and some large firms shrink into small ones.

⁸ From unpublished U.S. Census Bureau, Current Population Survey March Supplement microdata for 2008 wage and salary workers.

⁹ Current Population Survey.

¹⁰ See *The Small Business Economy, 2010*, Table A.14 (U.S. Small Business Administration, Office of Advocacy, forthcoming).

¹¹ Current Population Survey. For a more detailed discussion of wages by firm size, see Brown et al. (1990).

The Dynamic Picture: How Many Jobs Do Small Businesses Create (and Destroy)?

Firm Age. Underpinning any discussion of job flows—i.e., losses and gains—are two related topics: business flows and business life cycles. For example, entry is a pure job creator and exit is a pure job destroyer, while a business's life stage plays a big role in its number of employees.

Almost all businesses start small. The U.S. Census Bureau's Statistics of U.S. Businesses (SUSB) shows that over the last 20 years, about 95 percent of new employer firms started with fewer than 20 employees. Along with start-ups come closures. Firms with fewer than 20 employees also account for 95 percent of closures. This illustrates that business turnover is the domain of small businesses.

Establishment turnover follows similar patterns.¹² Small establishment turnover (entry and exit) is a reasonably good proxy for small firm turnover, as the bulk of establishment entry and exit (about 85 percent according to SUSB) occurs in small firms.

The fact that most firms start small is not surprising, as the resources needed to launch larger operations are tough to come by at the outset of the venture. What does seem surprising, however, is that few start-ups grow by more than a few employees (Headd and Kirchhoff, 2009). So while 95 percent of employers started with fewer than 20 employees, about 90 percent of employers had fewer than 20 employees in 2006, according to SUSB.

Most small firms start small, stay small, and close just a few years after opening. This typical life cycle is often used as evidence that small firms do not have a significant impact on employment. However, the Census Bureau's Business Dynamics Statistics (BDS) show that firms created 70.5 million jobs in their first year of existence between 1977 and 2000; 57 million jobs remained by the time those firms reached their fifth birthday. Job losses from firm deaths exceeded job gains from business expansion during these firms' first five years of life, and this pattern continued for the first

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¹² Small establishments are business locations which may or may not be owned by small firms. A firm is an aggregation of all establishments owned by a parent company.

20 years of life (see Figure 2).¹³ In short, the employment effect of a cohort of businesses is greater at birth than in any subsequent year. This is a very strong basis for the claim that opening a business has greater consequences for job creation than expanding a business does. The criticism that new businesses close quickly is also weak; about half of new firms survive five years or more.¹⁴ And as an additional argument for the value of new firms, almost all fast-growing firms started small, as did most large firms.

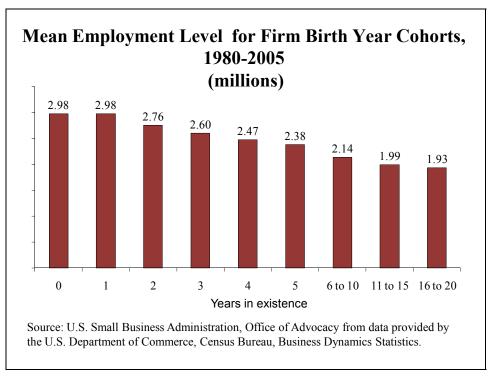


Figure 2. Startups are the job creators.

Using a different type of analysis—defining firms by just their entry, growth/decline, and exit rather than tracking them over their lives—yields differing results. The job flows that underlie net employment changes are job gains from openings and expansions and job losses from closings and contractions. The bulk of job flows takes place in existing firms' expansions and contractions (Table 1). In addition, the bulk of the job flows are in small firms. Although job turnover can be an emotional roller coaster for individuals, small firm job flows are a boon to the economy; this

¹³ This point is illustrated in the work of Shane (2009) and Stangler and Litan (2009).

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¹⁴ See the Office of Advocacy's FAQ, http://www.sba.gov/advo/stats/sbfaq.pdf.

churning represents the economy's constant evolution from outmoded processes and industries to more productive ones, or "creative destruction."

Table 1: Job Flows in Establishments by Employment Size of Firm, 1993-2008 (millions of jobs)

Size of Firm	Net Change -	Job Gains from:		Job Losses from:	
		Openings	Expansions	Closings	Contractions
Total	20.7	105.2	398.3	97.7	385.1
Less than 20	4.6	54.8	104.5	51.8	102.9
20-499	8.7	11.5	150.6	12.6	140.8
500+	7.5	1.0	93.9	1.3	86.0

Note: The totals include establishments for which firm size was not available.

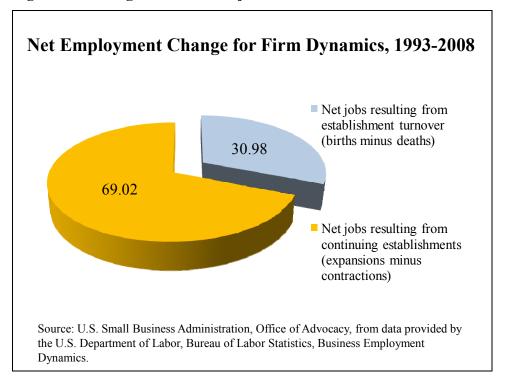
Source: U.S. Department of Labor, Bureau of Labor Statistics, Business Employment

Dynamics.

Like job flows, the net jobs from continuing firms (firms that existed before and survived the period of analysis) overwhelm new and closing firms' employment impact. Quarterly data from the Bureau of Labor Statistics' Business Employment Dynamics (BED) show that continuing establishments accounted for 69 percent of the net new jobs from 1993 to mid-2008, and the other 31 percent reflected net new jobs from establishment births minus those lost in deaths (Figure 3). Other data sources ascribe an even greater impact to them: using annual data, SUSB shows continuing firms accounting for 90 percent of the net new jobs over the past few decades, and firm births minus deaths accounting for the remaining 10 percent. ¹⁵

¹⁵ This is a good example of differing definitions producing differing results, as the BED data are quarterly and based on establishments, while the SUSB data are annual and based on firms.

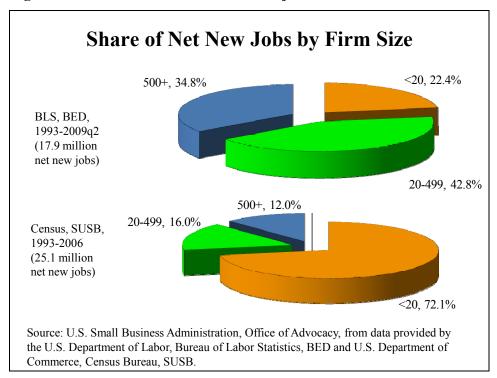
Figure 3. Existing businesses are job creators.



Firm Size. Much of the preceding discussion of job creation focuses on firm age. But while firm size is closely related to firm age; focusing on one or the other answers different questions.

The two principal official firm size employment creation/destruction data sources differ somewhat, and as with many economic figures, they vary from year to year. BED figures show that a net 1.5 million jobs were lost in 2008, 64 percent of which were from small firms. Over the past 15 years, small businesses have accounted for about 65 percent of the private-sector net job creation according to BED figures. (SUSB figures show small businesses accounting for about 90 percent of net new jobs through 2006.) The figures from both data sources are depicted in Figure 4. In non-downturn periods, BED data show small firms accounting for around 60 percent of net new jobs, and the SUSB data attribute around 75 percent to them.

Figure 4. Small businesses are the main job creator.



The difference in these answers arises from the way each source defines "small business," which data (and associated methodology) are used, and the time period analyzed (Okolie, 2004). The Office of Advocacy uses the generally accepted small business definition of a firm with fewer than 500 employees. However, Advocacy has provided partial funding for SUSB to create subset firm sizes allowing users to examine other categories of small businesses and understand the nuances of different firm size classes.

While everyone clamors for the most recent data, this is usually not the most in-depth. The Bureau of Labor Statistics produces BED with only a six- to nine-month lag, so this would be the data source of choice for recent data. But BED has little industry or geographic coverage. If data are needed for geographic areas or industries, SUSB fills this void, but at a cost of a two- to three-year lag.

BED and SUSB differ on a few fronts. BED is quarterly and SUSB is annual, so BED tracks a firm over shorter time intervals (providing greater detail to study time series).

The other difference between the two sources is their method of firm size classification. SUSB uses the start period in classifying firm size for each individual firm and measures the difference in employment for each firm based on their end period employment minus their start period employment; this is often referred to as "start year sizing." BED uses a firm's start period size and classifies all employment changes at that size class until the firm changes into another size classification, even if this occurs during the period of analysis. BLS refers to this as "dynamic sizing." Note that one data source does not produce correct data and the other wrong data, they merely answer questions based on their different methodology. The BED method responds to the issue of "regression to the mean" or the tendency for a firm to revert to its relatively steady-state size after a shock of growth or decline. However, one could view the SUSB methodology of counting all of a growth or decline for a firm based on the start size as more appropriate. It is interesting to note that only a handful of firms cross the size threshold of 500 employees in any given year, and fewer still in a quarter; but these firms can have a discernible impact on net job creation figures for small firms, as BED and SUSB figures differ. Firms cross the 20-employee threshold in much greater numbers, so job statistics for the 20-499 employee size class differ substantially between the BED and SUSB figures. It is up to the user to recognize whether the methodology differences produce results that differ and which methodology matches the question they are trying to answer. Using BED data is a more conservative approach in evaluating small business job creation contributions and results in a smaller share of net new jobs from small firms.

Size of Change. The firm age and firm size findings can lead one to ask the question of whether a relatively few fast growers or gazelles may be driving the results. Definitions of "fast growing firms" or David Birch's "gazelles" may differ, but most agree that these companies are relatively rare and old. By one recent account, they represent 2-3 percent of all employer firms and are on average 25 years old (Birch, 1979; Acs et al., 2008).

The creation of new data from the Bureau of Labor Statistics has made a new type of analysis possible; this school of analysis focuses on relatively small or large employment swings, or more specifically, the size of quarterly employment change from establishments (Konigsberg, et al., 2009). This approach helps identify which establishments are the more significant contributor to

net new jobs: the large number of business locations that add or subtract a small number of employees or the small number of business locations that add or subtract a large number. By the numbers, about 50,000 establishments add 20 or more employees in a quarter; about 50,000 lose 20 or more employees; about 1.3 million to 1.5 million add 1 to 4 employees, and about 1.3 million to 1.5 million lose 1 to 4 employees.

Our labor market is getting big things from big swings. Establishments with quarterly employment swings of 20 or more employees have consistently been the net employment driver over time. From 1992 to the beginning of 2009, establishments with employment changes of 20 or more accounted for 57 percent of the net employment change. Businesses with small employment changes (1-4) accounted for 14 percent of total employment change (see Figure 5).

Figure 6 shows quarterly employment changes by size of change; the peaks and valleys of the establishments with big swings (those that lost or added 20 jobs or more) dominate the employment picture in good times and bad.

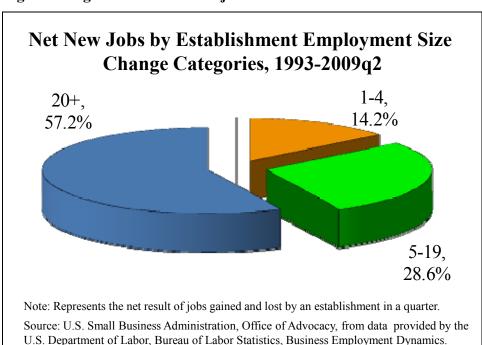
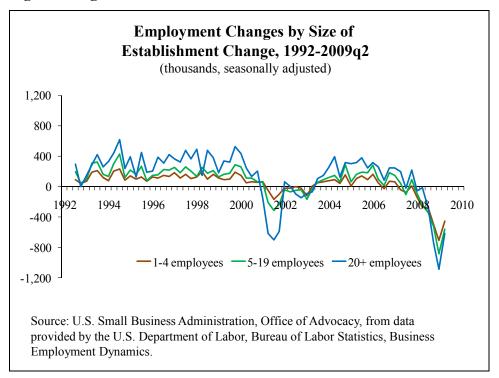


Figure 5. Big movers on net are job creators.

Figure 6. Big movers are more volatile.

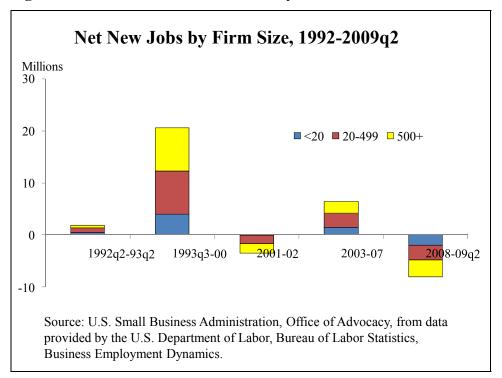


Current Events: Small Firm Job Creation and Today's Economy

With the labor market struggling in recent years, small businesses are a logical group to look to for job recovery as they have such a large role in net job creation. The following section shows how differing sub-sectors of small business have reacted in previous downturns in the area of job creation and loss, and how they are currently faring.

In the current downturn, firms with fewer than 20 employees were hit hard early, as their string of employment losses dates back to the second quarter of 2007. However, firms with 20 to 499 employees have taken their beating more recently. BED shows that firms with fewer than 20 employees accounted for 24 percent of the net job loss from 2008 to the second quarter of 2009; firms with 20 to 499 accounted for 36 percent; and firms with more than 500 employees accounted for 40 percent (see Figure 7).

Figure 7. Job creation around business cycles can differ.



In the 2001 downturn, larger small firms had more than their share of net employment losses. In that economic slowdown, firms with 20 to 499 employees experienced 43 percent of the net employment loss; firms with fewer than 20 employees accounted for 7 percent; and firms with 500 or more employees, 50 percent. As the economy began to accelerate in 2002, firms with fewer than 20 employees created net new jobs while firms with 500 or more employees continued to shed jobs, as did firms with 20-499 employees, but to a lesser extent.

The period after the 1991 downturn saw firms with 20-499 employees lead the employment expansion while large firms were slower to get traction in net employment gains. The share of employment gains coming from firms with 20-499 employees was 56.2 percent from the second quarter of 1992 to the first quarter of 1993.

Prior to the release of the 2009 figures on net job destruction by firm size, it seemed that the current downturn resembled the 1991 period more than 2001. This seemed apt, since the 1991 period and current troubles are steeped in credit market woes, while the 2001 downturn was very much related

to asset market drops. But a review of the 2009 data makes the current downturn seem like a combination of the 1991 and the 2001 downturns, rather than one or the other.

Two new developments in the recent decade have also had important consequences for the labor market: the declining size of establishment start-ups and the declining turnover in the labor market. Over the past decade, the mean start-up size of *establishments* has been declining (see Figure 8). The trend for the mean start-up of *firms* has been more mixed. Whatever the cause of the decline in start-up establishment size during and following the 2001 downturn, it is a worry; it seems to show a reduced degree of churning or creative destruction, and perhaps a decreased appetite for entrepreneurial risk-taking.

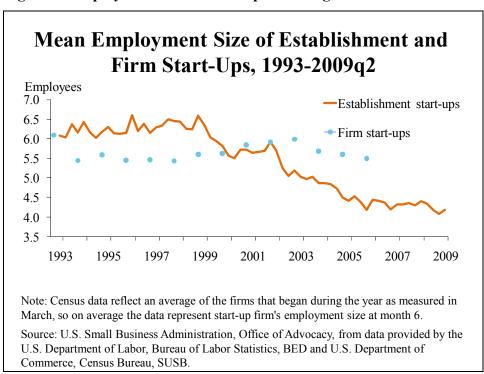


Figure 8. Employment size of start-ups is falling.

The second trend concerns job turnover. Overall, employment turnover at the firm level has fallen over the past seven years as measured in BLS's Job Openings and Labor Turnover Survey (or

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¹⁶ These are not necessarily inconsistent trends, as firms are measured on an annual basis and might be starting smaller and then growing in the first few months; data on quarterly establishment births would not capture growth in the months following the quarter in which a business opened.

JOLTS) and BED. BED shows the rate of new establishment start-ups being way down over the last couple of years, while JOLTS shows the rate of companies with new hires also at a low in recent years. (One caveat: JOLTS is a relatively new survey, having started at the end of 2000).

According to JOLTS the monthly private separation rate (total separations as a share of total private employment) was in the upper 4 percent range in 2001; it hovered around 4 percent for most of 2008 and fell to the high-3 percent range for the mid- to late part of 2009. The job hires rate (total hires as a share of total private employment) declined from 4.7 percent in January 2001 to 4.2 percent by December, and from 4.0 percent in January 2008 to 3.6 percent in November 2009. So overall, job turnover is lower in the current period than it was in 2001, but the components of turnover differ, and this period is seeing a marked decline in hiring (see Figure 9).

The share of jobs that were from establishments gaining employment dropped from 8 percent in the first quarter of 2000 to the high-6 percent range in 2007, and then down to 5.2 percent in the first quarter of 2009, a low for the 17-year period that the BED data cover (Figure 10). Employment from establishment openings also was at the period low in the fourth quarter of 2008, 0.7 percent, which was almost half the peak reached in the 1990s (1.2 percent). The share of jobs from establishments losing employment was in the mid-7 percent range in the early 1990s, and excluding the 8.1 percent peak in the third quarter of 2001, it fell to the mid-6 percent range in the early 2000s. Reflecting the recent weak labor market, the figure has risen to 7.7 percent for the first quarter of 2009.

When we consider these results in the context of our current downturn, it appears that the media story of a few big firms' layoffs driving employment losses is more myth than fact. The lack of firm expansions is as much a factor in net employment losses as firm employment contractions. Unfortunately, the contribution of expansions to employment levels for the first quarter of 2009 was at a 17-year low and well below 2001 rates, while contractions were at the peak reached in 2001.

Figure 9. Sluggish hiring more a factor in employment decline than job losses.

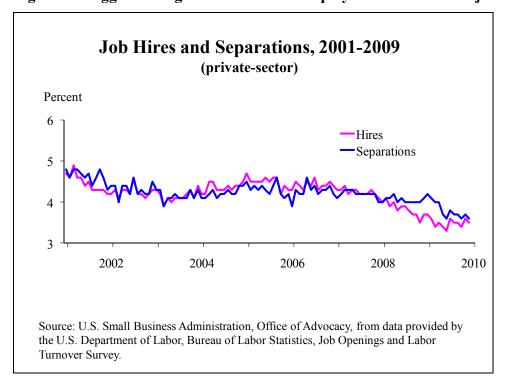
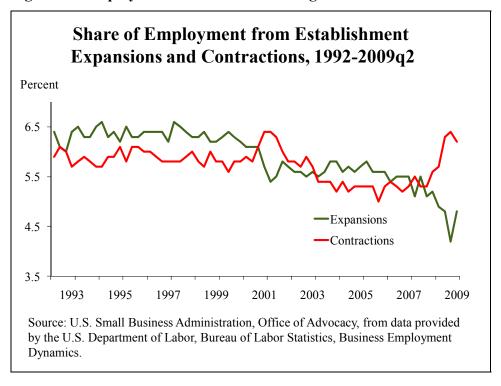


Figure 10. Employment turnover is declining.



Concluding Remarks: The Information Age and Data Breakthroughs

Relatively new public data sources on aggregate business dynamics provide a world of facts that rival the statistics available to fantasy sports league enthusiasts. The new data are creating a new view of the dynamics of the labor market. One could argue that start-ups are incredibly valuable to the labor market in the long term, and continuing firms tend to overwhelm current employment trends (or even vice versa) but in actuality, the results shown in this report indicate that findings often depend upon how the analysis is framed (or what data methodology is used). It is the business locations or establishments with large employment fluctuations that not only dominate net employment results but tend to move around the most in response to the economy. Unfortunately from 2008 to mid-2009, establishments with employment swings of 20 or more employees on net lost 2.8 million jobs.

Whatever the mechanism our economy uses to heal the job market, big gains are possible in a relatively short time frame. When unemployment rates peaked in previous downturns (above 7.5 percent in 1958, 1975, 1982, and 1992), within 12 months, they had declined by 2.4 percent (1958), 1.6 percent (1975), 2.3 percent (1982), and 0.8 percent (1992). It is possible that such a reversal has begun in the current downturn as the unemployment rate dropped from 10.1 percent in October 2009 to 9.7 percent in January 2010.

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