



## Exploring labor market trends through JOLTS firm-size data

By Charlotte Oslund

The Bureau of Labor Statistics' [Job Openings and Labor Turnover Survey](#) (JOLTS) program provides data about job openings, hires, and separations in the United States. Studying these numbers yields insights into where the business cycle and labor market might be headed. This article identifies key trends at the total private-sector level and then uses new experimental estimates grouped by firm size to examine the trends more closely and gain additional insights.

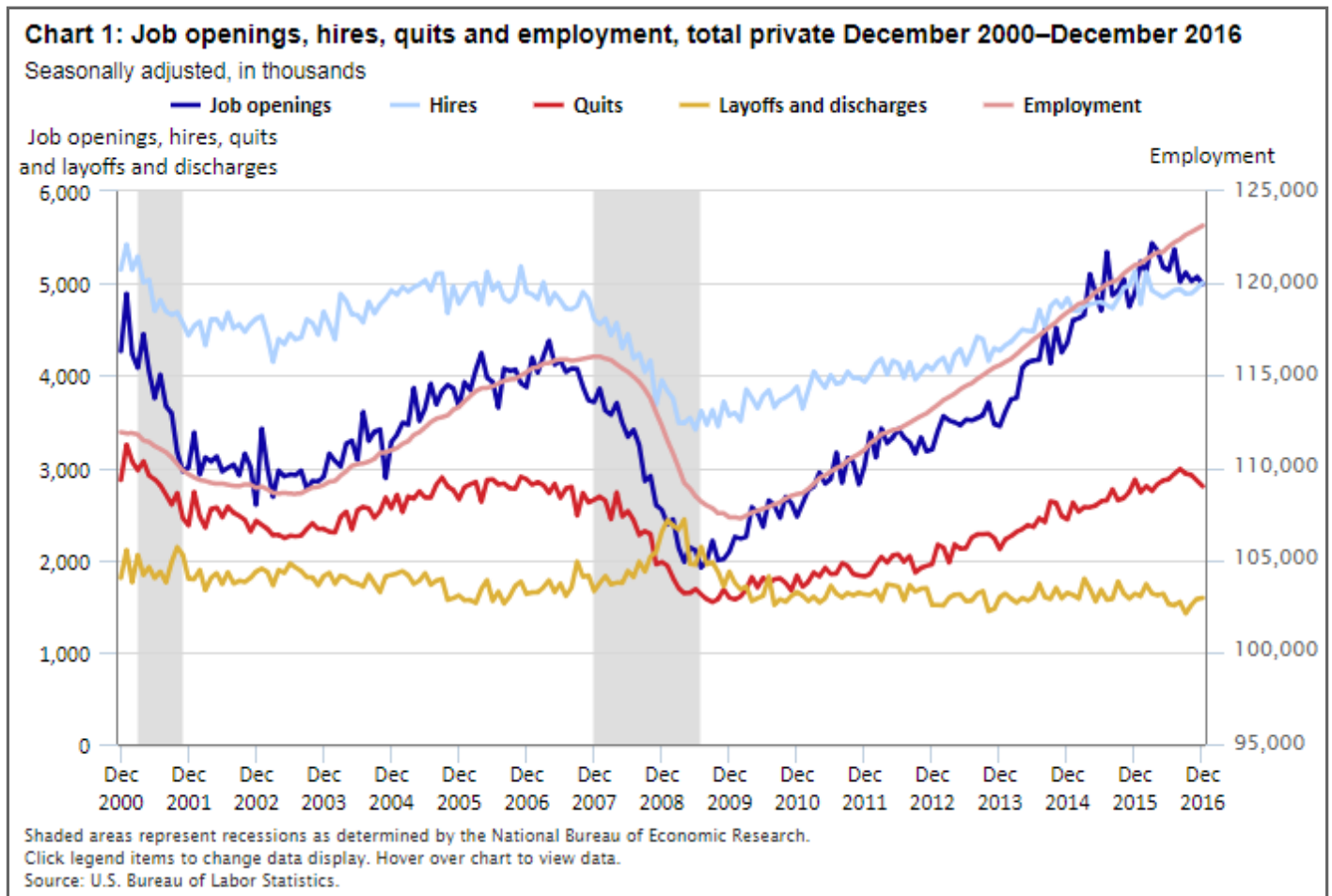
# Trends at the total private level

Chart 1 provides JOLTS data along with employment figures from the [Current Employment Statistics](#) program. Many interesting trends are apparent at the total private level. For example, we can see that going into the Great Recession of 2007–09, job openings, hires, and quits began to decline well before the start of the recession.

We also see that for most of the months since December 2000, when JOLTS began publishing, hires have outnumbered job openings. However, the series converged in mid-2014, and by January 2016, job openings surpassed hires. Since JOLTS measures hires throughout the entire reference month but counts job openings only on the last business day of the month, it is noteworthy when job openings outnumber hires.

In addition, it appears that firms held off on increasing layoffs until well into the recession, and quickly reduced layoffs as soon as possible: Layoffs and discharges did not start to rise in earnest until nearly a year into the recession, then peaked before the end of the recession, and returned to pre-recession levels within a few months after the end of the recession.

Another trend that is apparent at the total private level is that quits (voluntary separations) outnumber layoffs and discharges (involuntary separations) for most of the JOLTS series. Only during the Great Recession and for several months in its aftermath did layoffs and discharges outnumber quits.



## Exploration of trends using firm size data

The total private data series exhibit some interesting trends in the labor market over the business cycle, but what can we observe when the data are broken out by size of firm? A *firm* is a worksite or a collection of related worksites referred to as establishments that operate in one industry or in multiple industries. The JOLTS program grouped sampled establishments by parent firm using the federal employer identification number (EIN) and published the new experimental firm size series in September 2017. The series includes the period December 2000 (the beginning of the JOLTS published series) through December 2016 and represents the U.S. private sector.<sup>1</sup>

At the total private level, we saw that job openings, hires, and quits all served as signals going into the 2007–09 recession. But when broken out by firm size, we see differences. Using rates rather than levels allows easier comparison across data elements and across size classes.

The job openings rate turned downward in all firm sizes before the beginning of the recession, but at different times. The job openings rate at large firms (chart 2) reached its highest point in November 2005 and then began to trend downward, 2 years before the official start of the recession. The job openings rate at medium firms (chart 3) turned much later—April 2007—and at small firms (chart 4) later yet in September 2007. Therefore, it is the largest firms that first signaled the upcoming recession through declining job openings.

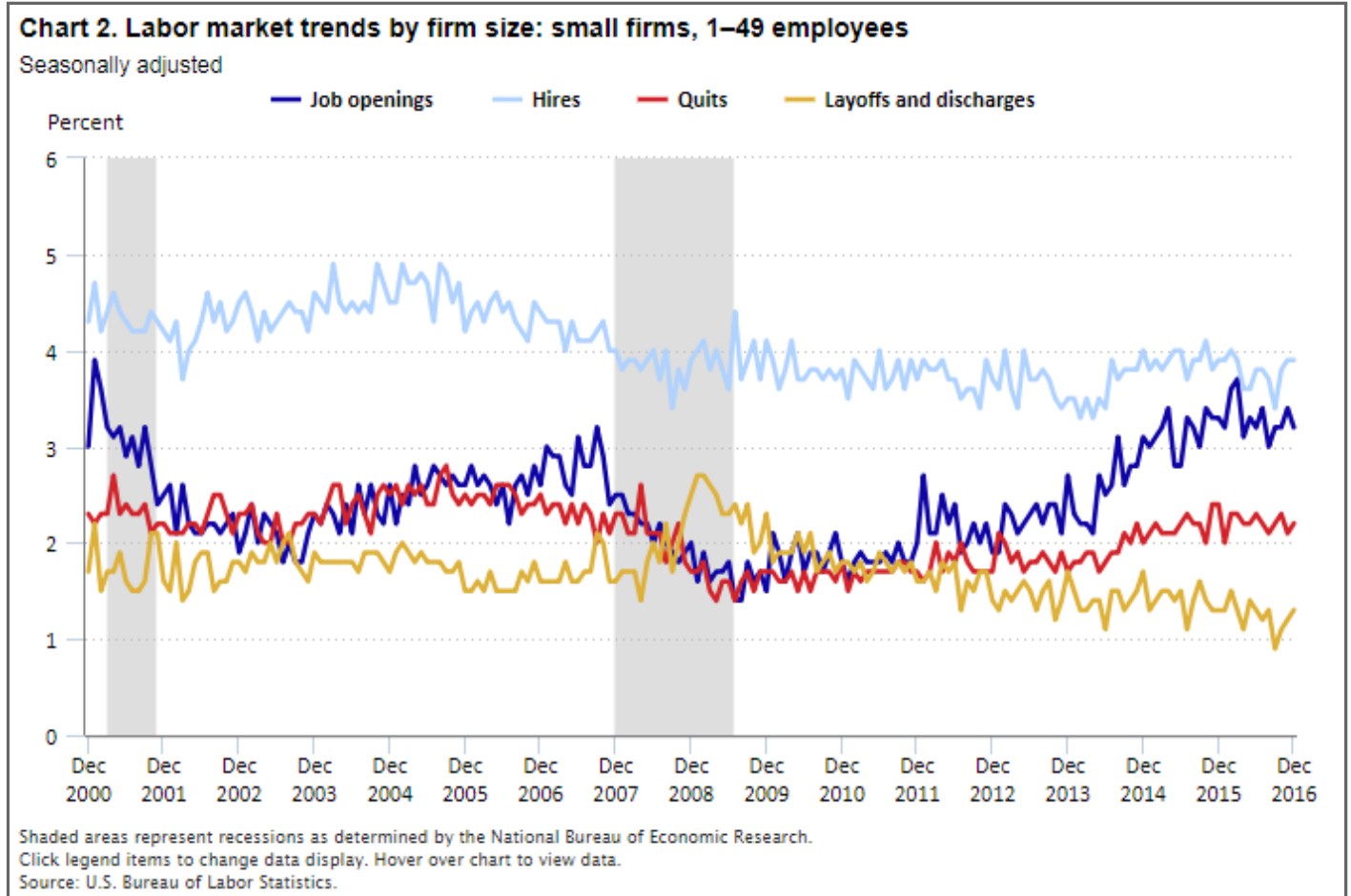
Hires and quits trend similarly in each of the firm sizes. They have both served as signals for firms of all sizes, declining before the official onset of the recession, but the timing differed between the small and medium firms and their larger counterparts. The hires rates at small and medium firms reached their pre-recession high in September 2005—over 2 years before the start of the recession—then began to trend downward. The hires rate at large firms began a downward trend in December 2006, 1 year before the start of the recession. The quits trends are similar to the hires trends. The quits rate began to decline in 2005 at small and medium firms, and began to decline at large firms later, in April 2007. Therefore, in a reversal from job openings, the early warning of the upcoming recession with regard to hires and quits was from small and medium firms.

At the total private level, job openings outnumbered hires starting in 2015. The firm-size data show that this change was driven by the largest firms where the job openings rate surpassed the hires rate in 2015. At the small and medium firms, the job openings rate and hires rate are further apart with higher job openings, although the gap diminished in 2015 for medium firms and in 2016 for small firms. Therefore, the size data show that it is the largest firms that primarily account for the phenomenon of job openings outnumbering hires at the total private level.

The layoffs and discharges data at the total private level showed that firms resort to layoffs only during the worst of economic times and quickly reduce layoffs as soon as they can. The firm size data show some differences in timing. The small and medium firms waited to increase layoffs until the economy was well into the recession—May and September 2008, respectively. The largest firms, though, increased layoffs as soon as the recession began. Through the firm size data, we see that the smaller firms waited as long as possible before resorting to layoffs, but the largest firms turned to laying off workers more quickly.

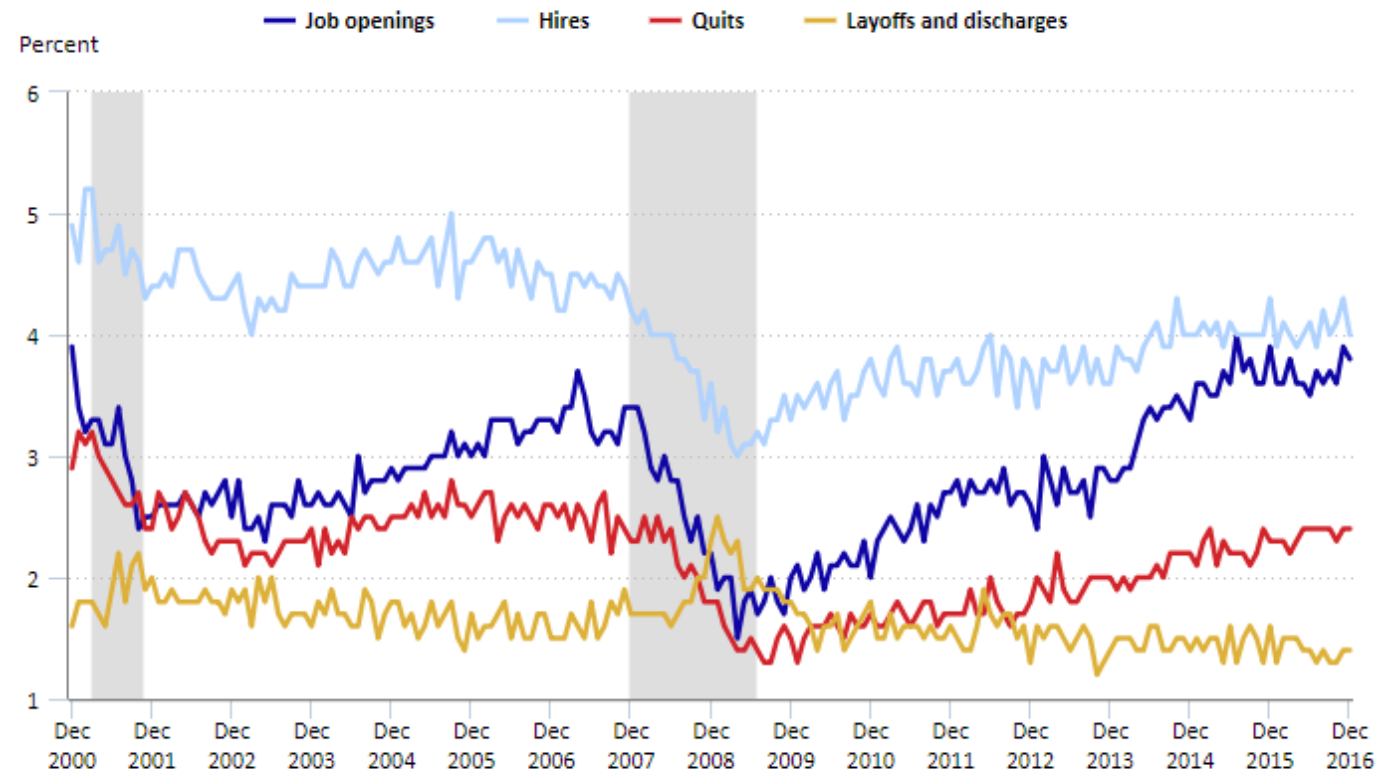
Another trend visible at the total private level was quits outnumbering layoffs and discharges for all months except during the deepest part of the Great Recession. The firm size data show that in the small and medium firms, the quits rates were higher than the layoffs and discharges rates until the fourth quarter of 2008 when they reversed. In both small and medium firms, it wasn't until 2012 that the quits rate again rose above the layoffs and discharges

rate. In the large firms, we see that layoffs and discharges never fully outpaced quits. For a brief period, February through October 2009, the rates were essentially equal; quits never really fell behind. Therefore, when we see at the total private level that layoffs and discharges pulled ahead of quits during the Great Recession, it was at the small and medium firms where the reversal occurred.



**Chart 3. Labor market trends by firm size: medium firms, 50–499 employees**

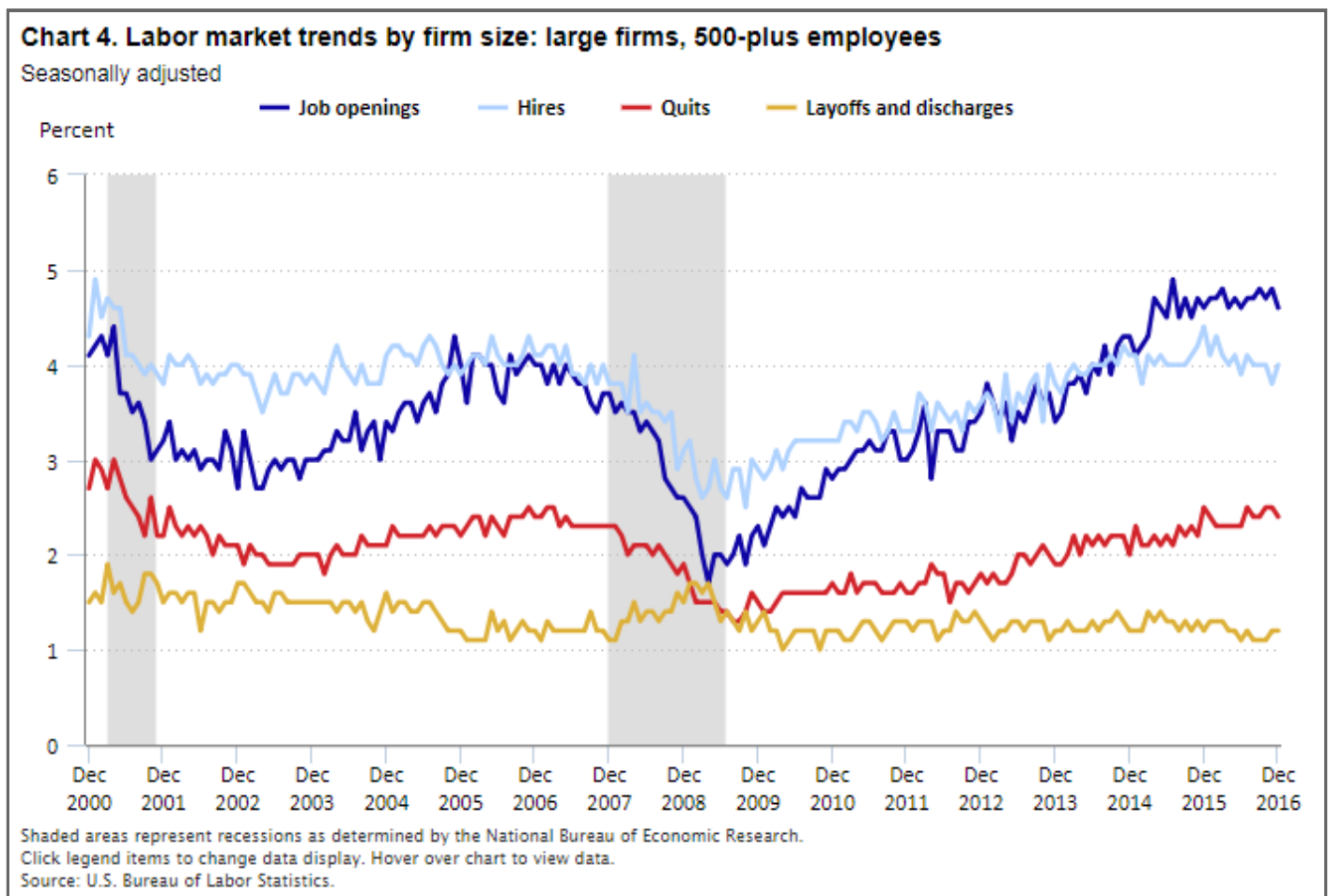
Seasonally adjusted



Shaded areas represent recessions as determined by the National Bureau of Economic Research.

Click legend items to change data display. Hover over chart to view data.

Source: U.S. Bureau of Labor Statistics.



## Conclusion

Although trends in the labor market and business cycle are visible at the total private level, breaking out the data by firm size allows more specific patterns to emerge. One insight is that firms of each size class have different movements across the business cycle although small and medium firms have some similarities. For signals of an upcoming downturn in the business cycle, the keys are hires and quits at the small and medium firms, and job openings at the largest firms. Another insight is that it is the largest firms at which job openings outnumber the hires. The firm size data also revealed that the largest firms increased layoffs sooner than small and medium firms during the recession. The data also showed that it was at the small and medium firms where layoffs and discharges outnumbered quits during the recession, whereas in the largest firms the series merely converged.

The JOLTS program invites your comments on the experimental firm size data. Please visit our website at <https://www.bls.gov/jlt/>, call us at (202) 691-5870, or email us at [JoltsInfo@bls.gov](mailto:JoltsInfo@bls.gov).

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## NOTES

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<sup>1</sup> The JOLTS program is actively soliciting feedback on the new firm-size data, seeking comments on the methodology and the estimates. See [https://www.bls.gov/jlt/jlt\\_firmsize\\_methodology.htm](https://www.bls.gov/jlt/jlt_firmsize_methodology.htm). Here's a way for readers to contact JOLTS: <https://www.bls.gov/jlt/contact.htm>.

## SUGGESTED CITATION

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Charlotte Oslund, "Exploring labor market trends through JOLTS firm-size data," *Beyond the Numbers: Employment and Unemployment*, vol. 7, no. 13 (U.S. Bureau of Labor Statistics, August 2018), <https://www.bls.gov/opub/btn/volume-7/exploring-labor-market-trends-through-jolts-firm-size-data.htm>