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Job flows, jobless recoveries, and the Great Moderation

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ABSTRACT

This paper explores a link between the decline in employment volatility and the onset of jobless recoveries observed since the mid-1980s using a time series of job flow estimates for manufacturing that covers the entire postwar period. I show that job creation and job destruction rates have fallen and become less cyclical. This has increased the importance of reallocative shocks relative to aggregate shocks in explaining their time-series fluctuations. Despite the increased importance of reallocation, it is a change in the responses of job flows to aggregate shocks, which are now larger and more persistent, that lead to the onset of jobless recoveries. The decline in the cyclicality of temporary layoffs and the rise in the use of employment services cannot account for these altered responses.

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1. Introduction

Starting in the mid-1980s, the volatility of aggregate economic activity declined considerably and remained low until the most recent recession. Most economists refer to this decline, first reported by Kim and Nelson (1999) and McConnell and Perez-Quiros (2000), as the "Great Moderation." A wealth of research has emerged on its sources (whether it is the result of good policies, or simply good luck) and its dynamics (whether the decline is a break in the time series or part of a long-run trend), among other things.[1] Within the labor market, the prevalence of “jobless recoveries,” defined as an employment recovery that lags the recovery of output following a recession, roughly coincides with the onset of the Great Moderation.[2] Despite the rise in aggregate volatility during the Great Recession, the labor market appeared to again exhibit a jobless recovery in its aftermath.

This paper examines whether there is a link between jobless recoveries and the Great Moderation. Specifically, I examine whether the Great Moderation affected the labor market with not only a decline in aggregate volatility but also a change in how employment responds to shocks. To do so, I use a long time series on job creation and job destruction rates within manufacturing that I create from multiple data sources. I then analyze the response of job flows to structural shocks

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[1] Notable studies in this literature include Blanchard and Simon (2001), Stock and Watson (2002), Ahmed et al. (2004), Ramey and Vine (2006), and Justiniano and Primiceri (2008).

[2] Researchers have put forth several hypotheses on the cause of jobless recoveries, but none fully capture the changes in the labor market over this period. See Groshen and Potter (2003), Schreft and Singh (2003), Aaronson et al. (2004), Koenders and Rogerson (2005), Bachmann (2012), and Berger (2015).

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prior to and during the Great Moderation using the empirical framework developed by Davis and Haltiwanger (1999). Their framework decomposes the movements of job creation and job destruction into those due to aggregate or allocative shocks.

My analysis uncovers two key results. First, consistent with the emerging literature on the decline in "business dynamism" within the U.S., I find that the magnitudes and volatility of job creation and job destruction have fallen over time.[3] The start of the decline, in the 1960s, predates the Great Moderation, but I still identify a structural break in their volatility during the mid-1980s. More importantly, I show that these declines coincide with a decline in the cyclicality of job flows and a rise in the relative importance of a reallocation process in accounting for the time-series behavior of job creation and job destruction. Specifically, job creation and job destruction rates become less correlated with output growth during the Great Moderation. They also switch from being negatively correlated to being positively correlated with each other. The rise in the relative importance of reallocation is consistent with recent research by Foerster et al. (2011) and Garin et al. (2016), which finds an increase in the importance of sectoral shocks, relative to aggregate shocks, since the 1980s. Garin et al. (2016) argue that the rise in the relative importance of reallocation shocks generates a sluggish employment response consistent with a rise of jobless recoveries.

Similar to Garin et al. (2016), I examine whether the changes in cyclicality and relative importance of reallocation shocks are related to the onset of jobless recoveries. I use a structural vector autoregression (SVAR) analysis developed by Davis and Haltiwanger (1999), which identifies shocks to job creation and job destruction rates as either "aggregate" or "allocative" in nature. Aggregate shocks affect the *level* of economic activity and cause job creation and job destruction to move in opposite directions, while allocative shocks affect the *distribution* of economic activity and cause job creation and job destruction to move in the same direction. I perform the SVAR analysis separately on the Great Moderation and pre-Great Moderation periods of the data. The analysis finds that the volatility of both aggregate and allocative shocks fell during the Great Moderation, but that the volatility of aggregate shocks fell by more, leading to a rise in the relative importance of allocative shocks during this period. Put another way, both the reduced-form behavior of job flows and the structurally-identified shocks suggest a rise in the relative importance of reallocative shocks.

Nevertheless, my second key finding is that, despite this rise in the relative importance of reallocative shocks, it is a change in the responses of job creation and job destruction to *aggregate shocks* that leads to employment growth patterns that resemble a jobless recovery. Compared to the earlier period, the responses to an aggregate shock during the Great Moderation are larger and more persistent. The larger initial responses are partially offset by the fact that aggregate shocks have become smaller. Moreover, the response of job creation to a negative aggregate shock does not exhibit a quick, strong recovery as it did prior to the Great Moderation. The net effect of these altered responses is an *employment growth* response that is significantly more sluggish. Prior to 1984, employment growth recovered from a negative aggregate shock after about four quarters and actually exhibited several quarters of above-trend growth before returning to its steady state. From 1984 forward, employment growth takes eight quarters to recover from a negative aggregate shock and there is no period of above-trend growth. In contrast, the responses of job creation and job destruction to an allocative shock are nearly identical across the early and later periods of the data. The absolute and relative volatility of allocative shocks change during the Great Moderation, but the responses of job flows to these shocks do not. These results hold regardless of the identifying assumptions of the SVAR, and they hold regardless of whether I include the Great Recession and its recovery period (through 2014) or end the later sample prior to the recession in 2006.

I explore one potential cause of jobless recoveries that appears to be prima facie consistent with my observed changes in job flow behavior. Specifically, I examine whether the movement away from temporary layoffs toward temporary help employment as an employment adjustment mechanism can account for the altered responses of job creation and job destruction to aggregate shocks. Since the mid-1980s, both the magnitude and cyclically of unemployment due to temporary layoffs has fallen considerably. The volatility of temporary layoffs relative to the volatility of job destruction has fallen by about two-thirds. By their nature, temporary layoffs should generate a less persistent response in job destruction and a strong recovery in job creation as those temporarily laid off are recalled by their employers. As temporary layoffs have become less cyclically relevant, temporary help employment (and the employment services industry more broadly) has become an increasingly important part of the labor market and its cyclical fluctuations. Recent research by Dey et al. (2012) shows that employment services workers have made up an increasing share of manufacturing. In the data, these employment services workers are not counted within manufacturing but within their own industry. Dey et al. (2012) show that including them within manufacturing has a significant impact on total manufacturing employment and measured labor productivity. Using the estimates from Dey et al. (2012) on the share of manufacturing employment made up by employment services workers, I show that their inclusion in the job flow estimates notably increases the cyclicality and volatility of manufacturing job flows as well.

I replicate the SVAR analysis using the job flow estimates that account for employment services workers within manufacturing to see whether their inclusion affects the results of my SVAR analysis. I find that, while the estimated structural shocks are somewhat more volatile, the responses of job flows to an aggregate shock are the same as before. Consequently, net employment growth exhibits an almost identical sluggish recovery from a negative aggregate shock, implying that the shift away from temporary layoffs and toward temporary help employment is likely not a cause of jobless recoveries.

[3] Recent research on business dynamism include Davis et al. (2010), Davis and Haltiwanger (2014), Decker et al. (2014), Pugsley and Şahin (2014), Karahan et al. (2015), and Gourio et al. (2016).