

RESEARCH WORKING PAPER SERIES

**ENTREPRENEURSHIP IN ECONOMIC CRISES: A LOOK AT FOUR
RECESSION PERIODS BETWEEN 1978 AND 2018 IN THE UNITED STATES**

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ABSTRACT

The effects of the COVID-19 pandemic are being closely watched, and what happens to employer businesses during and after this downturn is an important part of the recovery. A look at four recession periods in the United States between 1978 and 2018 may offer some insight into the trajectory of entrepreneurship during and after economic crises. This paper highlights important patterns between employer startups (less than 1 year old) and employer firms 1 year or older, as well as between younger employer firms (0-5 years) and older employer firms (6 years and older) between 1978 and 2018.

Keywords: entrepreneurship, recession, startups, job creation, job destruction, COVID-19

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INTRODUCTION

The effects of the COVID-19 pandemic are being closely monitored, and what happens to employer businesses during and after this downturn is an important part of the recovery. Research shows that employer startups have accounted for substantial net new job creation (Haltiwanger et al, 2013). There have also been notable declines in the share of new businesses that become employers within eight quarters (Desai et al, 2020), average job creation by startups in their first year (Fairlie and Desai, 2020), and the relative job creation contribution of young businesses (Decker et al, 2014). It is difficult to predict the magnitude of the impact and likely recovery trajectories among entrepreneurs and potential entrepreneurs, as well as their businesses across different sectors, industries, and regional economies.

A look at four recession periods in the United States between 1978 and 2018 may offer some insight into the trajectory of entrepreneurship during and after economic crises. The four recession periods are: 2007-2009, 2001, 1990-1991, and the “double-dip” recession of the early 1980s.¹ This paper highlights important patterns between employer startups (less than 1 year old) and employer firms 1 year or older, as well as between younger employer firms (0-5 years) and older employer firms (6 years and older) between 1978 and 2018.

Data analyzed in this paper come from the Business Dynamics Statistics (BDS) of the U.S. Bureau of the Census. BDS covers employer firms in the United States from 1978 to 2018, and examines firm counts, firm age, job destruction, job creation, and net job creation. Employer startups (employer firms in their first year) can be distinguished from older firms, and data on young firms (ages 0 to 5) is available beginning in 1982.

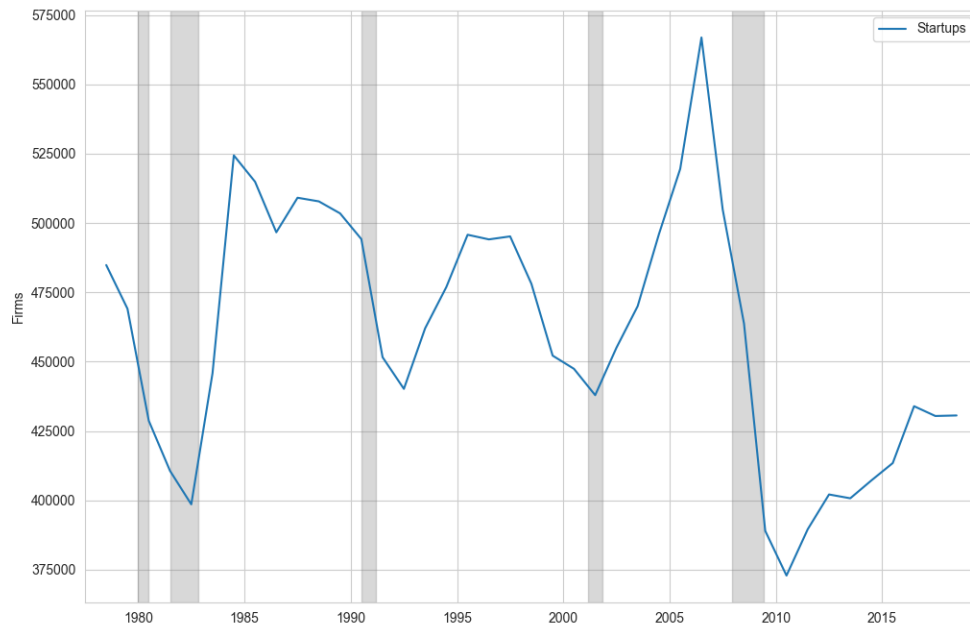
Highlights

- The number of older employer firms has been increasing over time; whereas, there is no discernible upward trend in the number of startups or younger employer firms. The number of firms of all ages tends to fluctuate with the business cycle. This is especially true of the Great Recession, when the number of new and older firms both dropped precipitously.
- Startup job creation appears uncorrelated with economic downturns. During recessionary years, job creation by startups remains stable (Kane, 2010). By comparison, for both younger and older firms, net job creation is procyclical.² The fall in job creation and rise in job destruction associated with the Great Recession was especially pronounced.
- Of note is what happens following the recession periods, including the Great Recession. For the most part, the number of firms and net job creation bounced back to at least prior recession levels with the important exception of the number of startups and younger firms.

EMPLOYER STARTUPS VS. EMPLOYER FIRMS 1 YEAR AND OLDER

Figure 1 shows the trend in the number of employer startups for the period between 1978 and 2018.³ The number of startups appears to be procyclical, declining during (or immediately before) a recession and bouncing back in the intervening years.

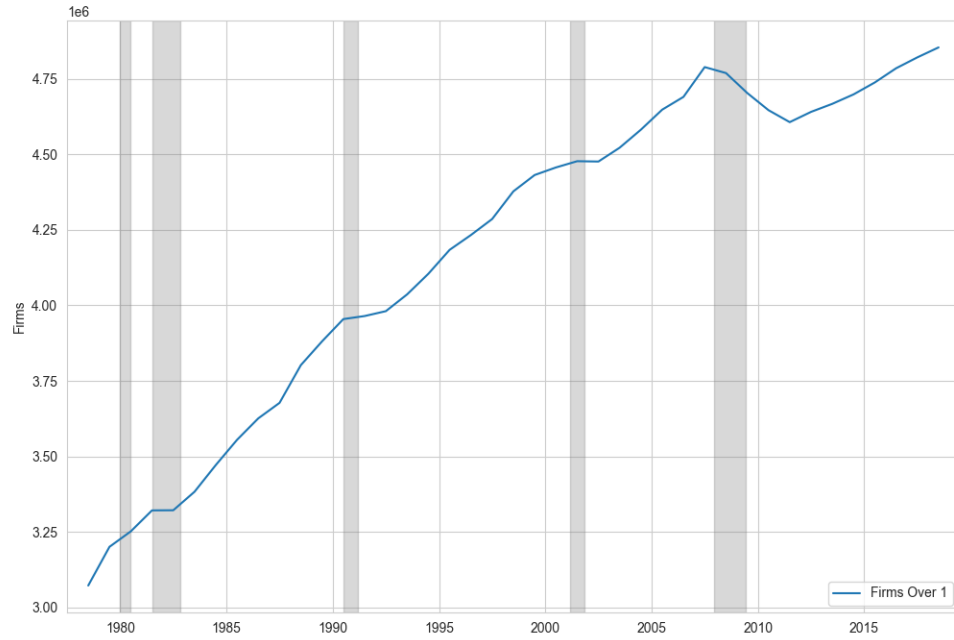
Figure 1 Employer startups over time, U.S. (1978-2018)



The number of employer firms 1 year or older also seems to be correlated with the business cycle. This is shown graphically in Figure 2.



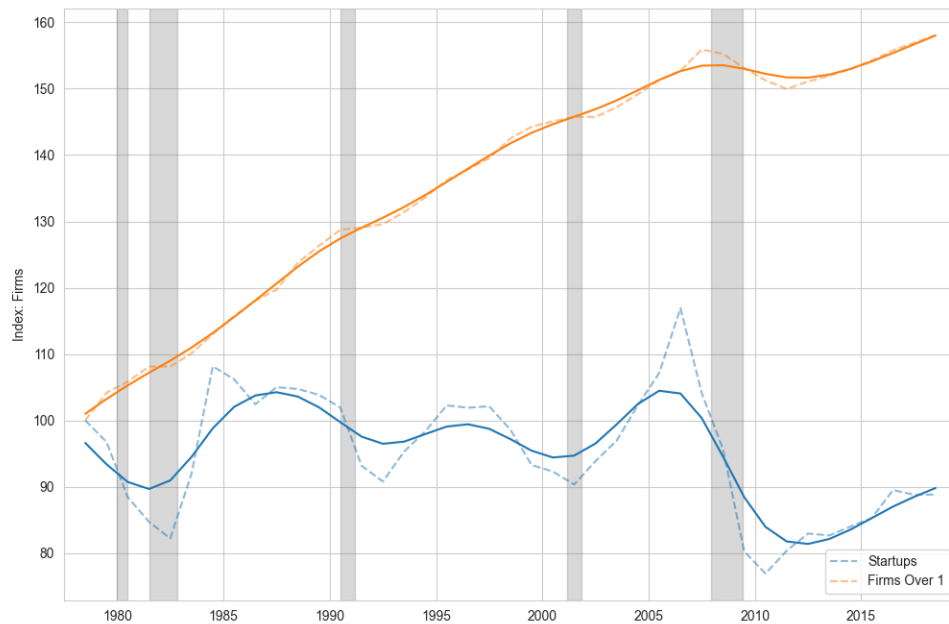
Figure 2 Employer firms 1 year or older, over time, U.S. (1978-2018)



Indexed counts⁴ for employer startups and employer firms 1 year or older are shown in Figure 3 for the period 1978-2018.⁵



Figure 3 Indexed firm count for startups vs. firms 1 year and older, U.S. (1978-2018)



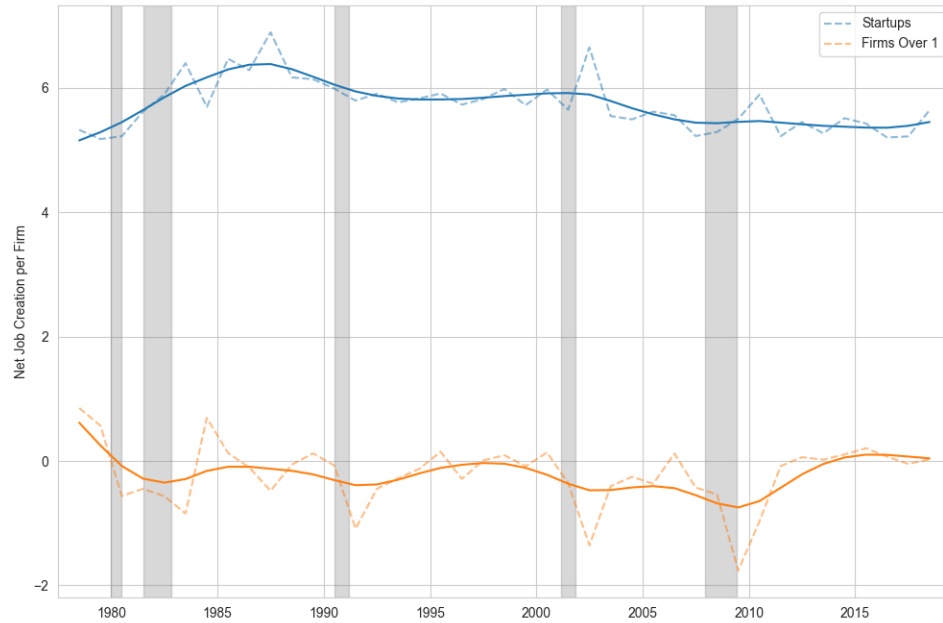
Note: Dotted lines indicate actual values; solid lines are values that have been smoothed with an HP filter.

In Figures 1 and 3, there does not appear to be an underlying upward trend in the number of startups during this time interval.⁶ In contrast, the number of employer firms above 1 year is upward trending, slightly outpacing population growth. Population-adjusted employer firms above 1 year were 13.80 per 1,000 people in 1978, compared with 14.84 in 2018.⁷ And, while Figure 3 shows that employer firms above 1 year declined somewhat during the Great Recession, this was small (in proportion to the total) relative to that of employer startups. The number of firms 1 year and older also did not decline substantially during the earlier recessions.

Net job creation (the difference between job creation and job destruction) per firm for employer startups and firms above 1 year between 1978 and 2018 is shown in Figure 4. There is a substantial difference in the level of net jobs between the two categories of firms. In addition, there appears to be no relationship between startup net job creation per firm (i.e., job creation, since job destruction, by definition, is zero for startups⁸) and the business cycle.⁹ In contrast, for employer firms above 1 year, there is a fall in net jobs during economic downturns.



Figure 4 Net job creation per firm for employer startups vs. firms above 1 year, U.S. (1978-2018)

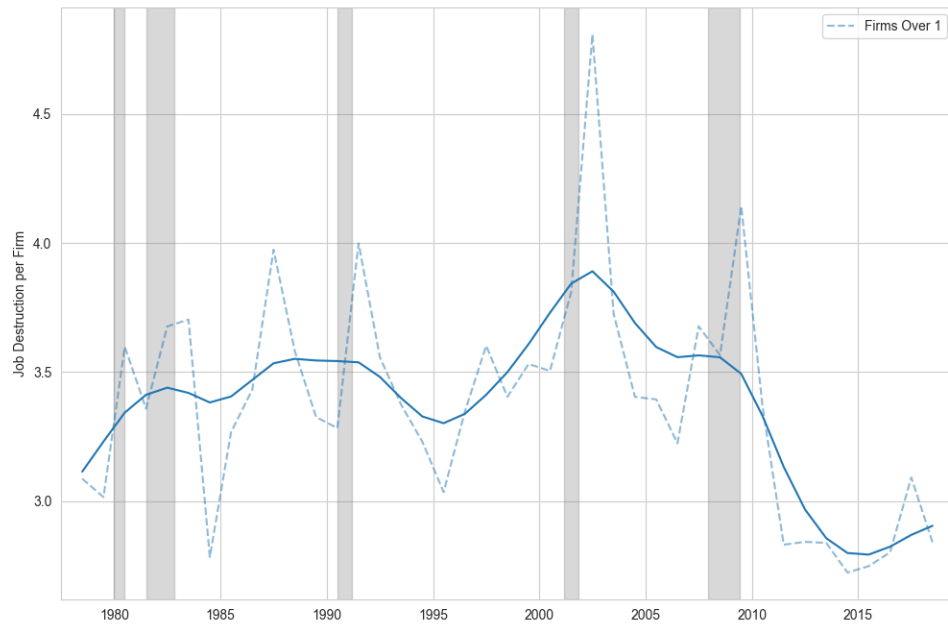


Note: Dotted lines indicate actual values; solid lines are values that have been smoothed with an HP filter.

In Figures 5 and 6, net job creation per firm for employer firms above 1 year is separated into its two components. Job creation and job destruction have tended to respond in opposite ways during economic downturns – the former decreasing and the latter increasing.⁸

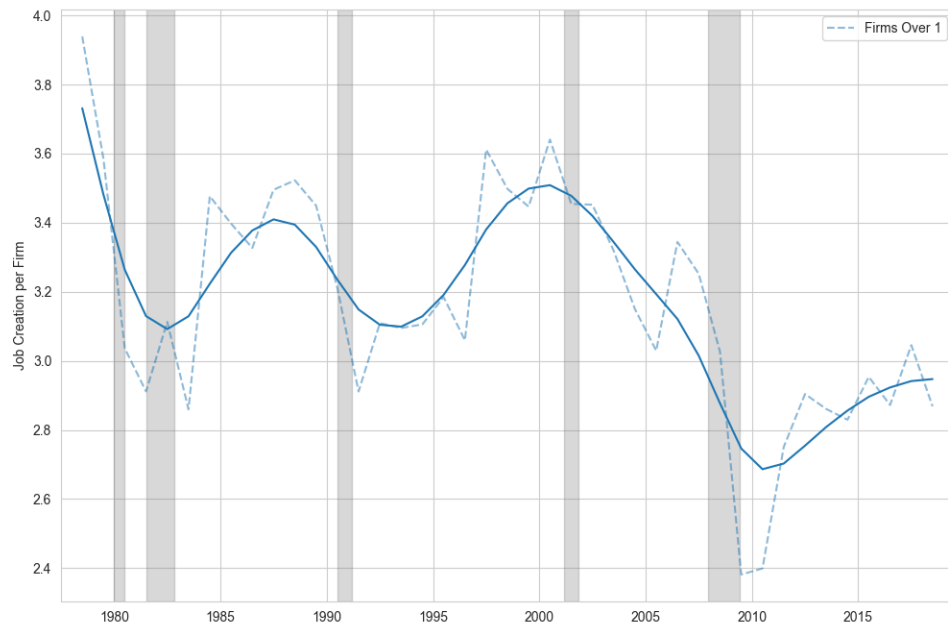


Figure 5 Job destruction per firm for firms above 1 year, U.S. (1978-2018)



Note: Dotted lines indicate actual values; solid lines are values that have been smoothed with an HP filter.

Figure 6 Job creation per firm for firms above 1 year, U.S. (1978-2018)



Note: Dotted lines indicate actual values; solid lines are values that have been smoothed with an HP filter.

YOUNGER VS. OLDER EMPLOYER FIRMS

This section compares younger firms (those 5 years of age and younger, including startups) and older firms (ages 6 and up) between 1982-2018. The patterns for younger and older employer firms (Figures 7-12) look largely the same across the various parts of the business cycle as those mentioned previously in Figures 1-6, with a few exceptions.

First, the magnitudes differ between startups and young employer firms in terms of both the count of firms (compare Figure 1 with Figure 7) and the three jobs-related measures (e.g., Figure 4 vs. Figure 10). Second, and more substantially, net job creation (Figure 10) among younger firms, unlike startups, mirrors that of older firms in terms of pattern. Third, job destruction is defined for younger firms, whereas, it is not for startups. Thus, the components of net job creation are plotted for both younger and older firms in Figures 11 and 12.



Figure 7 Younger firms (age 0 to 5) over time, U.S. (1982-2018)

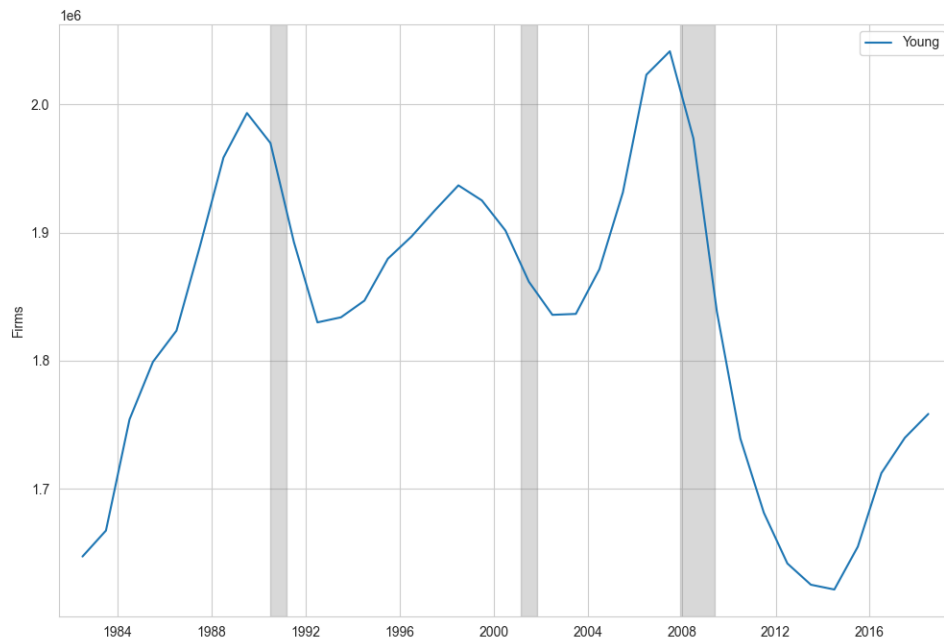




Figure 8 Older firms aged 6+ over time, U.S. (1982-2018)

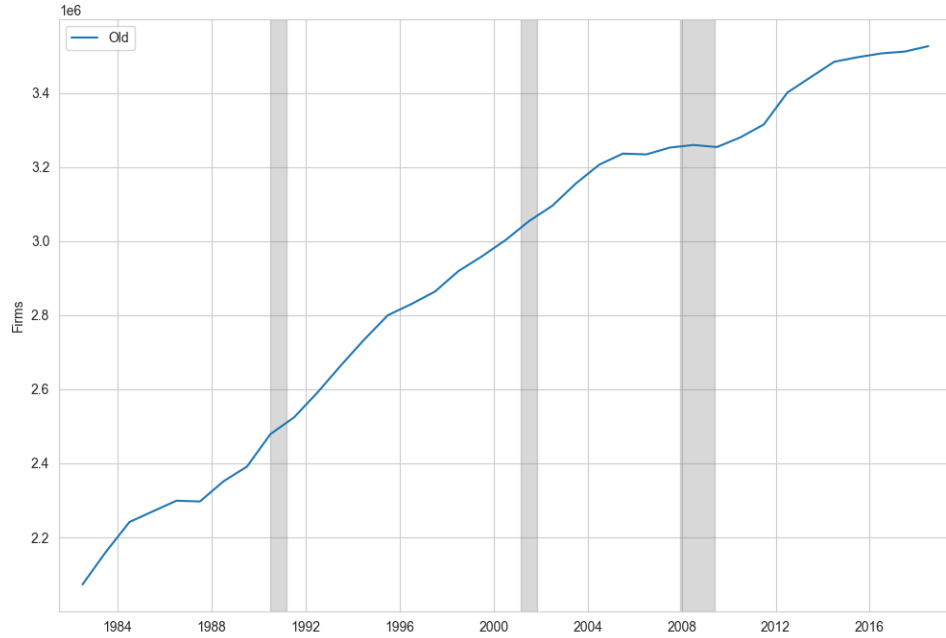
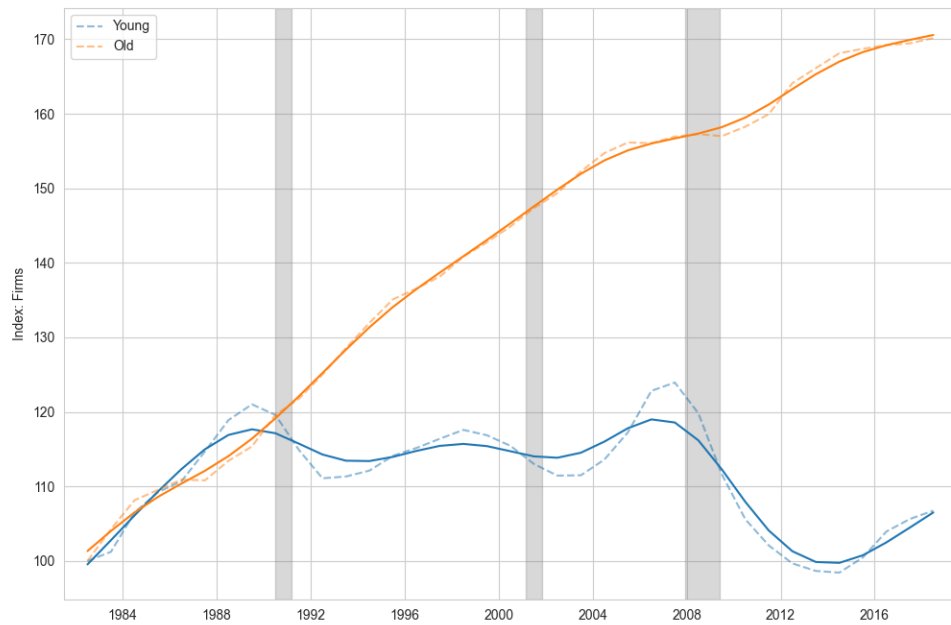


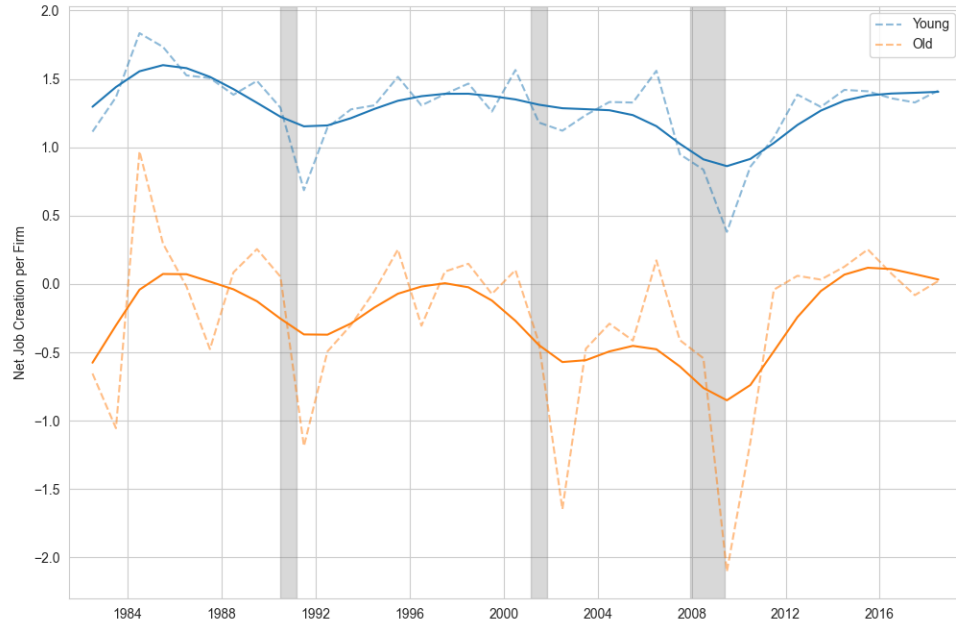
Figure 9 Indexed firm count for younger vs. older firms, U.S. (1982-2018)



Note: Dotted lines indicate actual values; solid lines are values that have been smoothed with an HP filter.

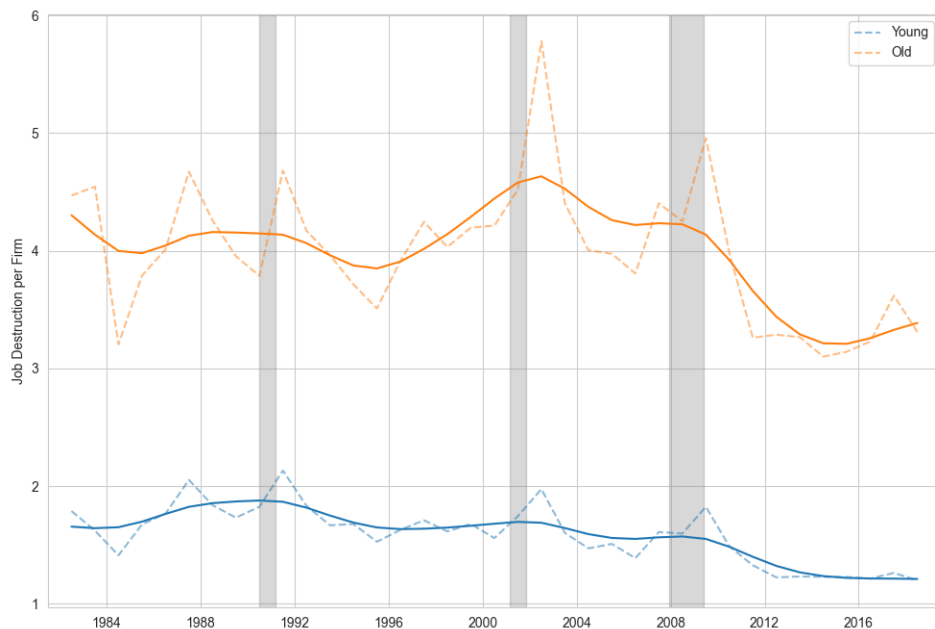


Figure 10 Net job creation per firm for younger vs. older firms, U.S. (1982-2018)



Note: Dotted lines indicate actual values; solid lines are values that have been smoothed with an HP filter.

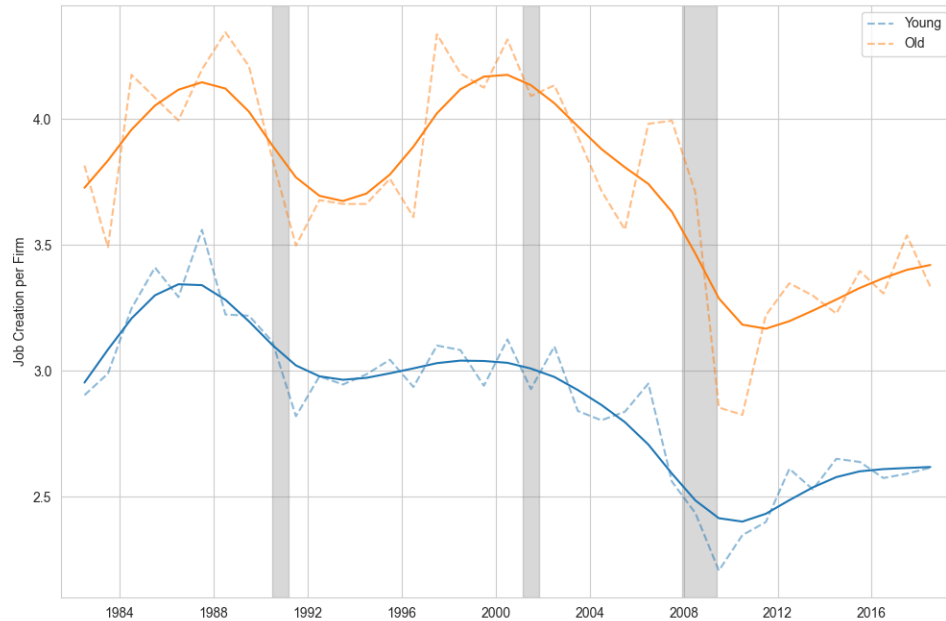
Figure 11 Job destruction per firm for younger vs. older firms, U.S. (1982-2018)



Note: Dotted lines indicate actual values; solid lines are values that have been smoothed with an HP filter.



Figure 12 Job creation per firm for younger vs. older firms, U.S. (1982-2018)



Note: Dotted lines indicate actual values; solid lines are values that have been smoothed with an HP filter.

ABOUT THE DATA

The data was taken from the BDS REST API (<https://api.census.gov/data/timeseries/bds.html>). Employer startups are defined by BDS as firms in their first year. Data from the underlying sources was pulled on February 22, 2021. Recession periods are specified by the National Bureau of Economic Research (See <https://www.nber.org/cycles.html>).

REFERENCES

- Decker, R., Halitwanger, J., Jarmin, R. and Miranda, J. 2014. The role of entrepreneurship in US job creation and economic dynamism, *Journal of Economic Perspectives*.
- Desai, S., Howe, T. and Murray, H. 2020. 2018 New employer business report: National and state trends, Ewing Marion Kauffman Foundation: Kansas City.
- Fairlie, R. and Desai, S. 2020. 2019 Early-stage entrepreneurship in the United States, Kauffman Indicators of Entrepreneurship, Ewing Marion Kauffman Foundation: Kansas City.

- Fort, T., Haltiwanger, J., Jarmin, R and Miranda, J. June 2013. “How Firms Respond to Business Cycles: The Role of Firm Age and Firm Size.” NBER Working Paper No. 19134.
- Haltiwanger, J., Jarmin, R. and Miranda, J. March 2011. Historically large decline in job creation from startup and existing firms in the 2008-2009 recession. Business Dynamics Statistics Briefing, Ewing Marion Kauffman Foundation: Kansas City.
- Haltiwanger, J., Jarmin, R. and Miranda, J. 2013. Who creates jobs? Small versus large versus young, *Review of Economics and Statistics*.
- Kane, T. 2010. The importance of startups in job creation and job destruction, Ewing Marion Kauffman Foundation: Kansas City.
- Sedlacek, P. and Sterk, V. 2017. The growth potential of startups over the business cycle, *American Economic Review*, 107(10): 3182-3210.



¹ Throughout, note that the “double-dip” recession of the early 1980s is referred to as one recession “period” instead of two recessions.

² Conceptually, job destruction is based on existing jobs from the previous year. Since startups have no such jobs, job destruction is zero.

³ In related work, Fort et. al (2011) find evidence of firm-age-related differences in the effects of business cycles on net employment growth.

⁴ “Indexing” here refers to removing the initial levels (i.e., firm count in 1978) of a data series in order to isolate how it changes over time. One consequence is greater ease of visual comparability of two series of data – in this case, *startups* and *firms above 1 year*.

⁵ Not having data prior to 1978 means it is not possible to resolve whether the decline in the early 1980s truly marked a point of departure from prior levels, or if the pre-1980 period coincidentally had abnormally high firm formations. It is noteworthy that 1978 falls in the middle of an economic boom period.

⁶ The trend in number of startups can be thought of as *the typical level* after accounting for noise, seasonal, and other cyclical factors. An estimate of the trend is not displayed in either of these figures. This is not to be confused with the smoothed data series displayed in Figure 3 (and many of the other subsequent plots) which is a technique used to remove the noise and preserve the signal of a time series.

⁷ Authors’ calculations using this data from BDS as well as population estimates, also from the Census Bureau (see <https://www.census.gov/programs-surveys/popest.html>).

⁸ Nevertheless, for individual firms, Sedlacek and Sterk (2017) find that *when* during the business cycle a firm begins seems to matter in terms of firm employment growth, finding that firms born in cohorts with weak job creation upon entry tend to remain persistently smaller on average.

⁹ Refer to Haltiwanger et al. (2011) for an overview of the large decline in job creation from startups in the 2008-2009 recession.