January 2017

The Ups and Downs of Small Business Employment

Big Data on Payroll Growth and Volatility

Executive Summary

JPMorgan Chase & Co.
INSTITUTE

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Small businesses, defined as businesses with fewer than 500 employees, play a critical role in the US economy. They provide work for nearly half (48 percent) of all employees in the US and are credited with creating 52 percent of net job growth. Small businesses also account for a significant share of personal income, given their average annual payroll of $45,000 per employee. Despite its importance, relatively little is known about the underlying dynamics of employment growth and volatility at the individual small business level. In particular, publicly available aggregate data provide an incomplete view of the ways in which employment in the sector shapes the financial well-being of small business owners and their employees.

As part of a broader research agenda on the small business sector, the JPMorgan Chase Institute constructed a sample of over 45,000 small business customers that had electronic payroll outflows for each of the nine non-holiday months of 2015. These individual small business payroll outflows provide an important lens on the contributions of small business sector employment to the US economy. Many public data sources that speak to the contribution of employment from the small business sector only provide data on job counts often measured only once per year. While payroll outflows are driven in part by job counts, they also provide a more granular and high-frequency view of employment and wages. Our unique dataset provides a granular view of payroll growth and volatility and their impact on employment at the individual business level.

Data

We created a sample of 45,260 small businesses who hold Chase Business Banking deposit accounts and meet our criteria for small, core metropolitan employer businesses. We then used their combined 65 million transactions to produce a view of daily cash inflows, payroll and other cash outflows, and end-of-day balances over the nine non-holiday months from February 2015 to October 2015.

Small businesses

- Hold Chase Business Banking accounts
- < $20m End-of-day combined balances do not exceed $20 million each day
- Do not identify with more than a single address and/or a single industry

Core metropolitan employer businesses

We define core businesses as those businesses that have financial activity that indicates they are not seasonal businesses, hobby businesses, small office/home office businesses (SOHOs), micro businesses, etc.

- $500+ For at least five of nine months, at least $500 in outflows and 10 transactions
- 1+ At least one inflow and outflow in each month
- $ At least one and fewer than 500 employees in each payroll period
- Are located in Metropolitan Areas where Chase has a representative footprint

Selected key industries

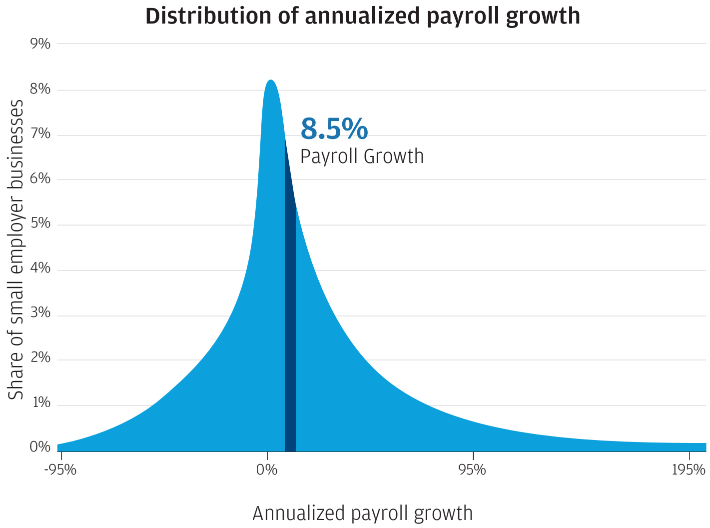
The businesses we study are part of 12 selected key industries that comprise key elements of the small business sector:

- Construction
- Personal Services
- Health Care Services
- Real Estate
- High-Tech Manufacturing
- Repair & Maintenance
- High-Tech Services
- Restaurants
- Metal & Machinery
- Retail
- Other Professional Services
- Wholesalers

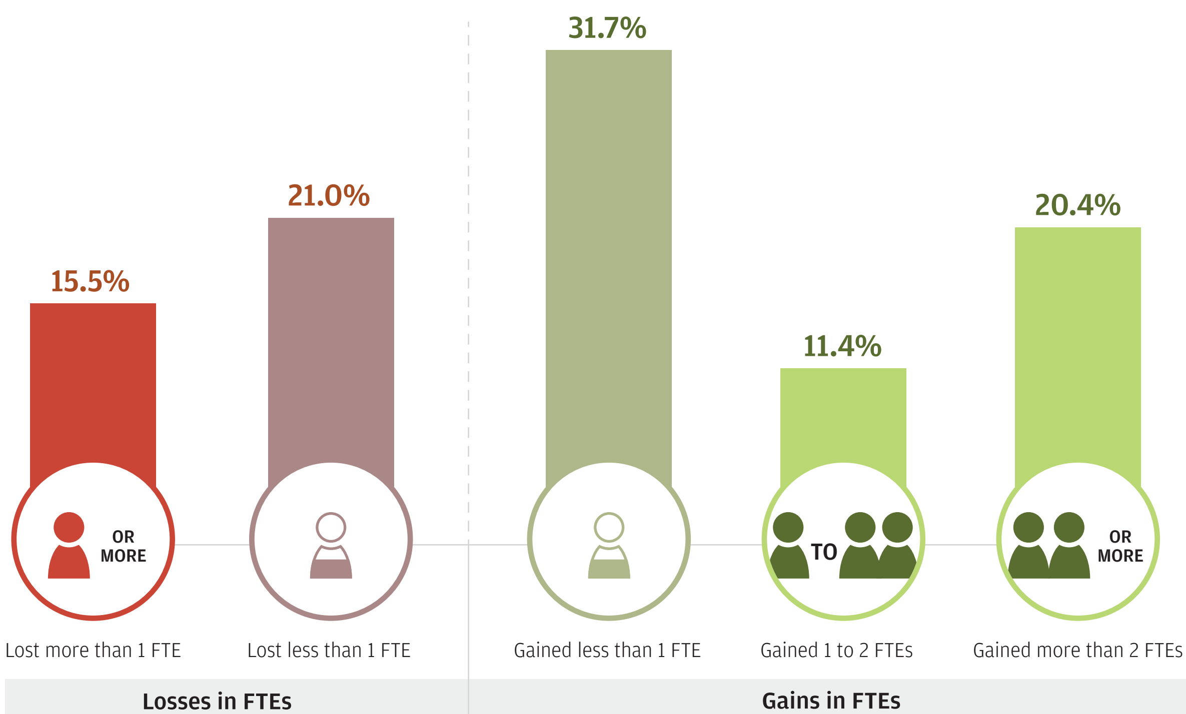
Together, these 12 industries capture 73 percent of for-profit employer small firms and 65 percent of for-profit small business employment.

Finding One

Payroll for most small employer businesses grew by less than the equivalent of one full-time employee in a calendar year, with median annualized payroll growth of 8.5 percent.



Monthly payroll payments from the median small employer business in our sample grew at an annualized rate of 8.5 percent per year. This growth rate corresponded to the addition of less than one full-time equivalent (FTE). Moreover, 36.5 percent of these firms experienced declining payroll outflows, consistent with the loss of at least a partial FTE. In contrast, 31.8 percent of small businesses experienced growth in payroll outflows consistent with the addition of one or more FTEs.



Note: We calculated annual full-time equivalent (FTE) wages for a firm by dividing the total annual payroll for its 6-digit NAICS industry by the total number of employees in that industry. We identify FTE changes by comparing annualized payroll growth to this annual FTE wage measure. Annual payroll and employee data are from the US Census Statistics of US Businesses.

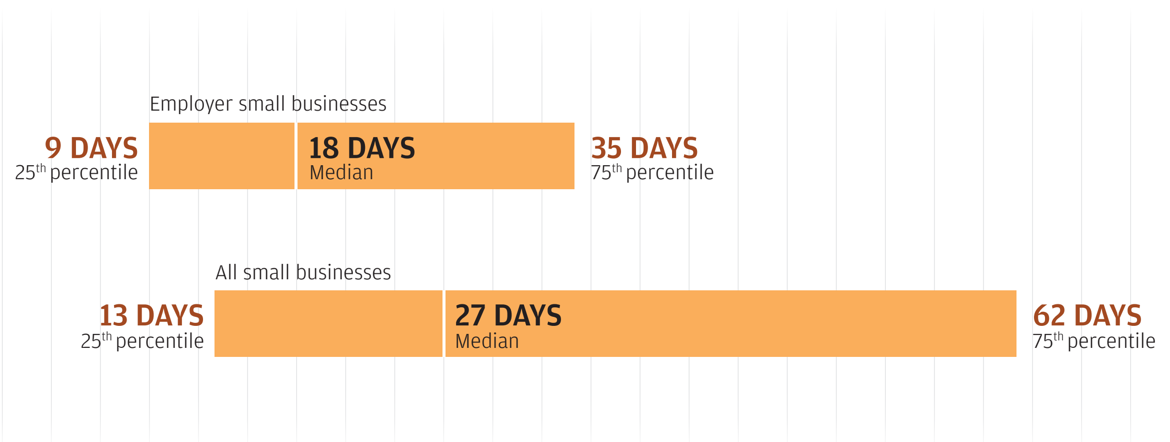
Finding Two

Payroll expenses were a material outflow for employer small businesses, which held fewer cash buffer days than nonemployer small businesses.

The typical employer small business had payroll outflows of $18,700, or 18 percent of all outflows.

Large payroll outflows can pose significant challenges to small businesses with limited liquidity. We found that across employers and nonemployers, the typical small business only carried 27 cash buffer days. Moreover, the typical employer small business had only 18 cash buffer days, significantly fewer than 27. The size and volatility of payroll expenses may put substantial stress on the relatively limited cash reserves of these employer small businesses.

Cash buffer days are the number of days of cash outflows a business could pay out of its cash balance if its inflows were to stop. We estimate cash buffer days for a business by computing the ratio of its average daily cash balances to its average daily cash outflows.

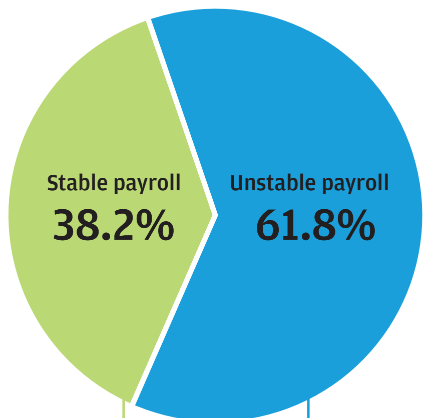


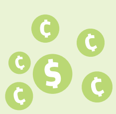
Finding Three

Most small employer businesses experienced unstable payroll and employment volatility including job gains and losses and other spikes and dips in payroll.

61.8% of small employer businesses experienced unstable sustained gains and/or losses, spikes, dips, or spikes and dips.

Share of employer small businesses





Small changes

Businesses with small changes only experience payroll changes that are less than hiring or firing one employee.

Sustained gains and/or losses

Businesses with sustained gains appear to be steadily hiring new employees and growing their workforce. Those with sustained losses appear to be losing employees and shrinking their workforce.

Spikes and/or dips

Businesses with spikes or dips have at least one instance of a large change in payroll that is quickly reversed. These businesses can also experience small changes and sustained gains and losses.

Finding Four

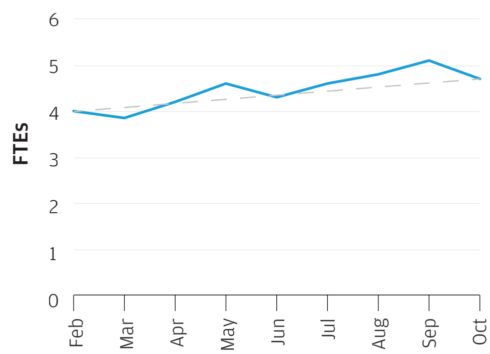
The typical small employer business experienced substantial volatility in payroll outflows, and volatility was highest for younger small employer businesses.

While small business payroll grew by less than the equivalent of one FTE over the course of a year, growth was rarely smooth.

LOW VOLATILITY

Small changes

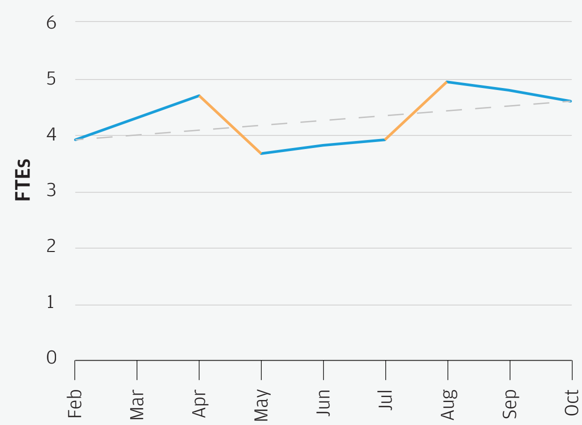
25 percent of small businesses experienced payroll changes no more volatile than the small changes pattern.

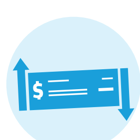


TYPICAL VOLATILITY

Gains and losses

Most small businesses experienced payroll changes similar to the gains and losses pattern.

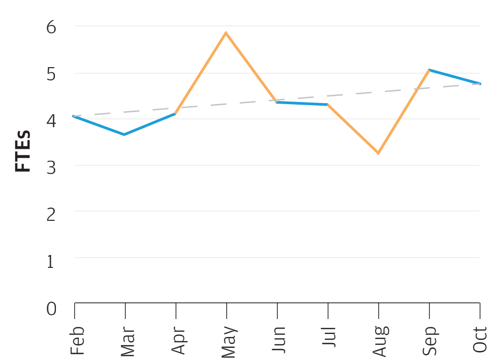




HIGH VOLATILITY

Spikes and dips

25 percent of small businesses experienced payroll changes at least as volatile as the spikes and dips pattern.



Small change (<1 FTE)   Large change (1+ FTE)

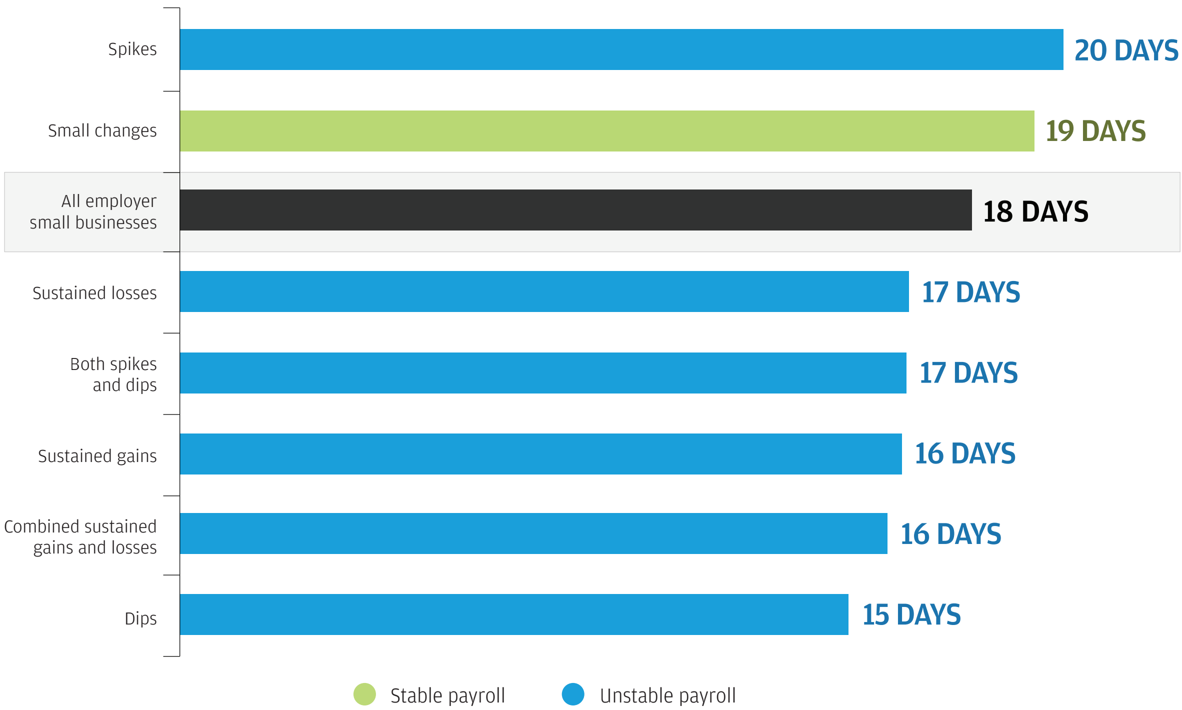
Finding Five

Small employer businesses with more volatile payroll patterns tended to have fewer cash buffer days.

The median small employer business with dips, combined sustained gains and losses, and sustained gains had the fewest cash buffer days.

- Small employer businesses with spikes were one exception to this rule, which may reflect businesses that pay bonuses or commissions with growing revenues

Median cash buffer days by payroll volatility type



Conclusion

The findings in this report are relevant for policy makers, advocates, and private-sector partners alike. These findings suggest that those who seek to help small businesses should focus not only on new business creation but specifically on minimizing payroll volatility, which can benefit both small business owners and employees. Moreover, they shed light on trade-offs inherent in policies that improve wages of small business employees but impose costs on small business owners.