



Center for  
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**On the**  
**Wisconsin**  
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University of Wisconsin- Madison

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***CROWE Policy Brief:***

**Business Formation in Wisconsin  
During and After the Great Recession**

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**Abstract**

New businesses are an increasingly important component of growth in output, employment, and productivity. We analyze new data from the U.S. Census Bureau to gain insight on business formations in Wisconsin before, during, and after the Great Recession of 2007-2009. Since the start of the recession, new business formations in Wisconsin have fallen by about 30%, and have remained at a low level. Business formation also fell nationally, but by a smaller magnitude. Moreover, applications for new businesses have recovered somewhat nationwide over the last few years, while in Wisconsin they have remained flat. We also show that the duration between application and formation of a business increased over the past decade both nationally and in Wisconsin, increasing by roughly one month (or 40%) in the state. While we focus on outcomes rather than policy, our results suggest that reforms of incentive, financing, and regulatory policies to aid and simplify new business formation may help improve the economy in Wisconsin.

### Introduction

The formation of new businesses and the dynamism that they bring are crucial determinants of economic activity. Recent economic research has found that the births of new firms contribute substantially to both gross and net job creation, and thus are key to employment dynamics. In addition, economic shocks affecting the number of new firms have significant effects that persist for many years on real GDP, productivity, and population. There is also evidence that the number of new firms dropped significantly during the Great Recession. In this article, we exploit new data from the U.S. Census Bureau to gain insight on business formations in Wisconsin before, during, and after the Great Recession of 2007-2009. We find that the Great Recession had a significantly negative effect on business formations in Wisconsin, and this negative effect was larger for Wisconsin than for most other states. Equally important, there is no sign of recovery yet: business formations remain near their post-recession low ten years after the start of the Great Recession.

We focus here on documenting the recent dynamics of business formation, leaving aside questions of causation. However, our results suggest that a change in policy focus may be warranted. Policies that reduce the cost of financing for young firms, and lighten government regulations which make it more difficult to start or operate businesses should help boost business formations in Wisconsin. The state has a number of incentive programs for new and existing businesses, from the Manufacturing and Agriculture Credit to credits for investment, business development, and venture capital, to the use of tax incremental finance and loan and grant programs administered by the WEDC.<sup>1</sup> Simply looking at the comparative trends does not allow us to gauge the effect of these policies, as new business formations may have been even lower in their absence. However our results do suggest that these programs have not been sufficient to produce growth in new business formation. In future work we will examine factors affecting business formation, and analyze current policy and options for reform in more detail.

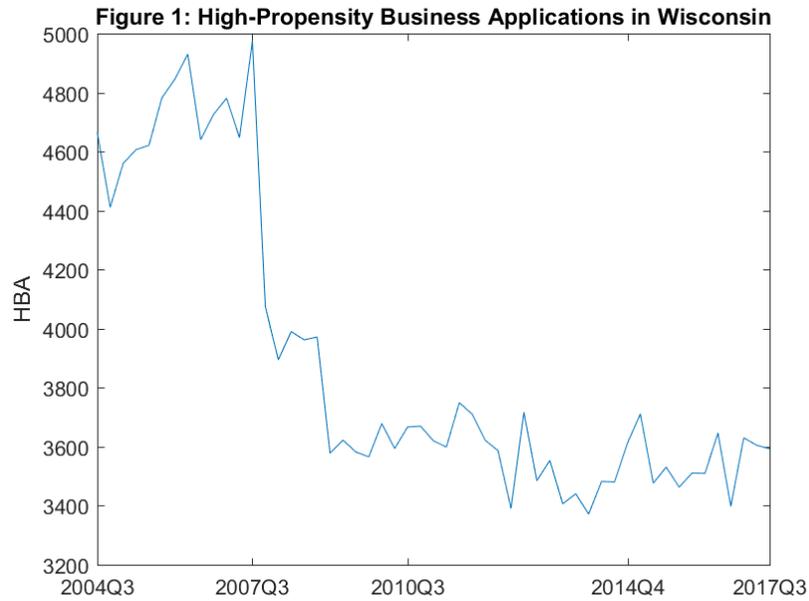
### Trends in Business Formation in Wisconsin

In early February, the U.S. Census Bureau released a new data product named the Business Formation Statistics (BFS). Based on applications for Employer Identification Numbers (EINs) made through IRS Form SS-4, the BFS reports statistics on business applications and business formations for each state in each quarter starting from the third quarter of 2004. Using the characteristics of applications revealed on the IRS Form SS-4, the BFS identifies applications that are associated with a high rate of business formation and have a high propensity of turning into businesses with payroll. High-propensity business applications (HBA) include applications: (a) for a corporate entity, (b) that indicate they are hiring employees, purchasing a business or

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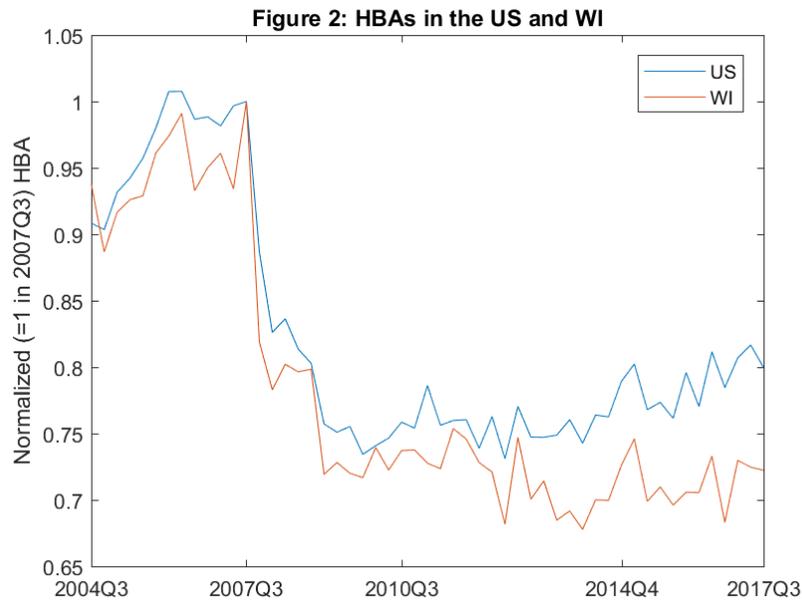
<sup>1</sup> See for example: <https://www.revenue.wi.gov/Pages/Businesses/Incentives.aspx>, [https://accel.wisconsinpublicservice.com/business/economic/incentives\\_local.aspx](https://accel.wisconsinpublicservice.com/business/economic/incentives_local.aspx) and [https://wedc.org/programs/?fwp\\_programsresources\\_category=program-grow](https://wedc.org/programs/?fwp_programsresources_category=program-grow)

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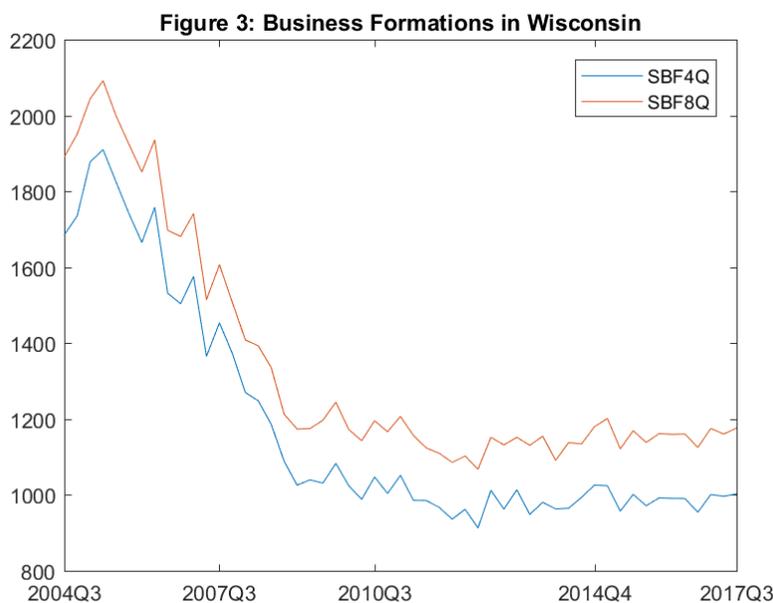
changing organizational type, (c) that provide a first wages-paid date (planned wages); or (d) that are in industries like manufacturing, retail stores, health care, or restaurants/food service.

Figure 1 shows the time path for HBAs in Wisconsin. Before the Great Recession, there were about 4400-5000 HBAs in each quarter. From 2007Q3 to 2009Q1, the number of HBAs dropped sharply from around 5000 to around 3600. Since then, the number of HBAs has been fluctuating around 3500.



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Figure 2 compares the time path of HBAs in Wisconsin with that of the U.S. For both Wisconsin and the U.S., we normalize the number of applications in the third quarter of 2007 to be 1. Roughly speaking, the two paths are similar to each other. However, it seems that Wisconsin experienced a slightly larger decline in HBAs during the Great Recession. More importantly, while the U.S. data shows some recovery in HBAs beginning around 2014, there is little recovery in HBAs in Wisconsin. While HBAs nationally have increased by about 10% from their lows in 2010, in Wisconsin they have remained roughly constant at their 2010 lows over the entire recovery.



The BFS provides two series of business formations as indicated by the first instance of payroll tax liabilities for the corresponding business applications. The first (second) series provides the number of employer businesses that are formed within four (eight) quarters from the quarter of application. Figure 3 plots the two series for Wisconsin. Because the horizontal axis is based on the quarter of application, both series are forward-looking. For example, the first point on SBF4Q (SBF8Q) shows that, among applications submitted in 2004Q3, around 1700 (1900) turned into a business with payroll within 4 (8) quarters. For most recent applications, the data on business formations are not yet available, and the values plotted on Figure 3 are projections. In particular, for SBF4Q (SBF8Q), the values before 2014 (2013) are actual data and the values since 2015 (2014) are projections.

Partly because of the forward-looking nature of the figure, the number of business formations started to decline before the Great Recession. The decline didn't stop until around 2012Q3. Since then, SBF4Q remains around 1000 and SBF8Q remains slightly below 1200. Similar to HBAs, there is no sign of recovery for business formations in Wisconsin.

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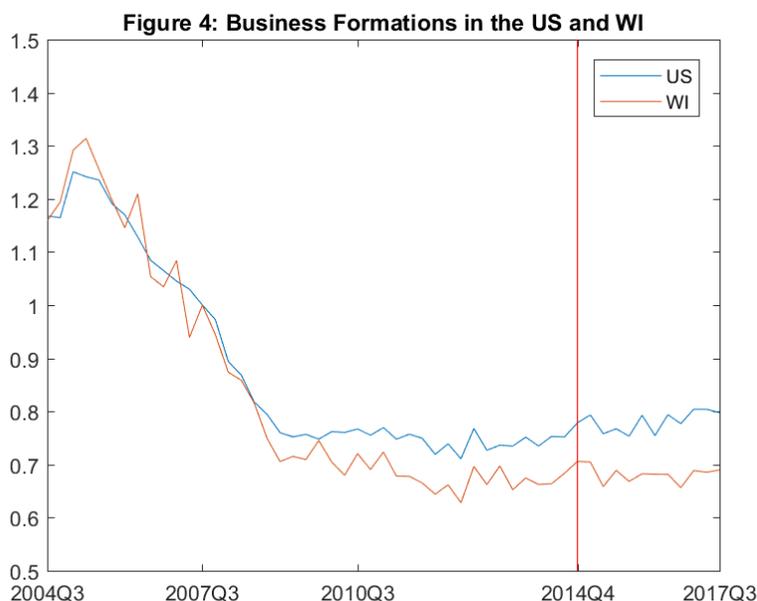


Figure 4 compares the time path of business formations in Wisconsin with that of the U.S. We use SBF4Q, and normalize the value in the third quarter of 2007 to be 1. As is the case for HBAs, the Great Recession had a slightly larger effect on business formations in Wisconsin. Additionally, the subsequent decline in business formations until around 2012 is also larger in Wisconsin, resulting in a larger gap than in the immediate effect of the Great Recession. While HBAs saw some rebound nationally in recent years, business formations have remained roughly constant with perhaps only a slight increase. However as with HBAs, business formations have remained flat in Wisconsin at post-recession lows.

### The Duration between Application and Formation of a Business

In addition to the volume of applications, the time lag between when the application and the actual startup of the business can provide important information both on the state of the economy and the ease of starting a business. For applications that have turned into a business with payroll, the BFS reports the duration (number of quarters) between application and business formation.

Figure 5 plots the average duration for applications that turned into a business within four quarters from the quarter of application. Before the (end of the) Great Recession, conditional on turning into a business within four quarters from the quarter of application, it took about 11 weeks (0.85 quarter) between a business application and the first payroll in Wisconsin. For the U.S., it took about 12 weeks (0.95 quarter). Since the Great Recession, this duration has been rising in both the U.S. and Wisconsin. The rise is more dramatic in Wisconsin, resulting in a smaller gap between the U.S. and Wisconsin. The gap vanished completely in 2014Q4, the last quarter of available data, when the duration reached 1.2 quarters in both the U.S. and Wisconsin. Overall, the average duration increased by about 1 month (0.35 quarter) from 2004Q3 to 2014Q4. Whether due to difficulty in finding financing, increased regulatory requirements, or

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simply difficulty securing a location, equipment, and a workforce, the time it takes to start a new business has increased substantially in the US and especially in Wisconsin over the past decade.

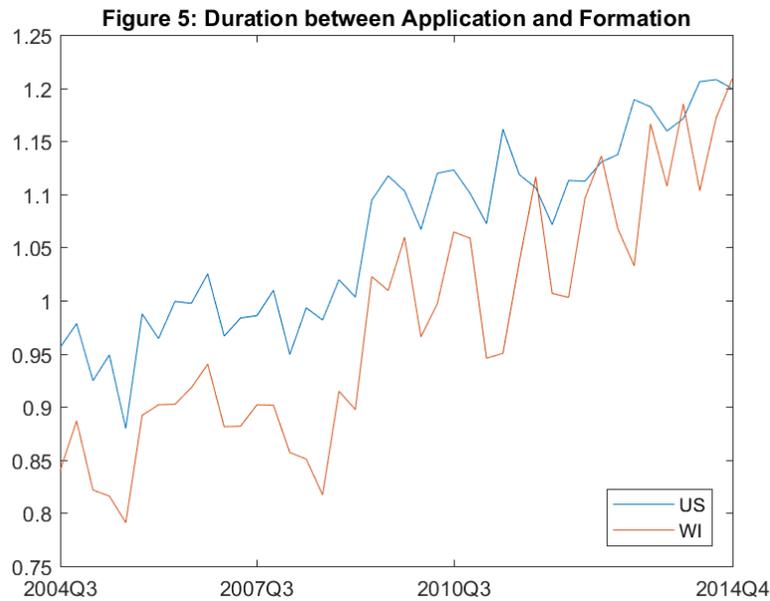
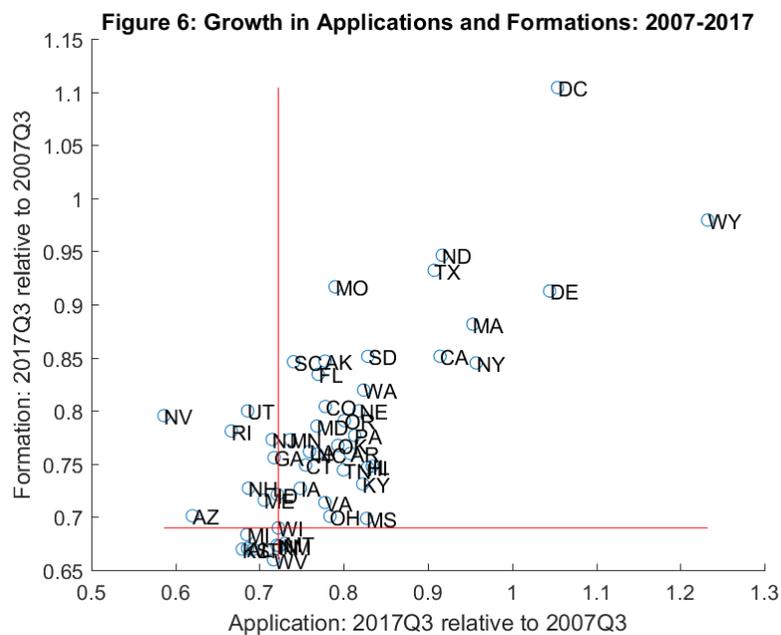


Figure 6 plots the growth of business applications (HBAs) and the (projected) growth of business formations (SBF4Q) from 2007Q3 to 2017Q3 in each state. Wisconsin experienced a 30% decline in both business applications and (projected) business formations, and it stands at the bottom of both distributions. There are only a handful of states with a slower growth in both business applications and business formations than Wisconsin in the last ten years.





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regulations should also help. There was substantial growth in federal regulations after the Great Recession, which has only abated and been partly reversed over the past year. While the state of Wisconsin has lessened some regulations, particularly environmental, a further reduction particularly in regulations affecting new firms may be called for. In general policies to aid and simplify the formation and establishment of new businesses could help both to spur new business formations and reduce delay between application and formation.