20 EKAUFFMAN 16 INDEX mainstreet entrepreneurship

STATE TRENDS

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About the Kauffman Index of

- Survival Rate

Main Street Entrepreneurship **Executive Summary**

The Kauffman Index of Main Street Entrepreneurship is a comprehensive indicator of small business activity in the United States, integrating high-quality sources of timely information into one composite indicator. The Index captures business activity in all industries and is based on both a nationally representative sample size of roughly 900,000 responses each year and on the universe of all employer businesses in the United States on a dataset covering approximately five million businesses. The focus here is on business owners based on a location, survival rates of firms, and established small businesses—employer firms five years old and older and with fewer than fifty employees. As such, we examine both the business owners and the businesses they own.

Main Street entrepreneurship is an important aspect of the U.S. economy and society. Established small businesses make up almost 68 percent of all employer firms in the United States¹ and are a source of local economic activity.

This report represents trends in Main Street entrepreneurship activity of the past two decades for all fifty states of the United States. Two separate reports look at these same trends in the forty largest metros in the country and at the national level. Some Main Street Entrepreneurship Index components, when available, also are reported by demographic groups.

The Main Street Entrepreneurship Index—an indicator of the number of established small businesses, the survival rate of companies, and the number of business owners in a location—experienced an increase in the 2016 Index, reaching a level higher than that preceding the Great Recession, as shown in Figure 1 on page 5. The increase was driven by an increase in business survival rates, an indicator of how likely a new firm is to take root and become established in a community. The Survival Rate of American businesses is the main driver of the recent improvements in Main Street Entrepreneurship in the United States, and has reached a three-decade high of 48.7 percent—meaning that almost half of new businesses make it to their fifth year of operation. Survival rates declined dramatically during the Great Recession, falling for five years in a row and reaching a low of 42.9 percent in 2011. Survival rates have increased every year since then and, in 2014, reached a level

1. Authors' calculations from U.S. Census Bureau Business Dynamics Statistics data.

higher than that preceding the recession. Each of these trends is covered in the *Kauffman Index of Main Street Entrepreneurship* | *National Trends* report.

Looking at metro-level indicators, Main Street entrepreneurship activity was particularly high among metros in the Northeast, Midwest, and certain metros on the West Coast. The highest-performing cities were, in order, Pittsburgh, Boston, Portland, San Francisco, and Washington, D.C. An analysis of metropolitan-level Main Street business activity can be found in the Kauffman Index of Main Street Entrepreneurship | Metropolitan Area and City Trends report.

Throughout this report, to facilitate comparison across peer groups of states, we focus our analysis looking at states in two different groups: the twenty-five largest states by population and the twenty-five smallest states by population.

Key findings for Main Street entrepreneurship activity at the state level include:

Main Street Entrepreneurship and Rankings

 Main Street entrepreneurship activity was higher in forty-seven of the fifty U.S. states in 2016. The exceptions were the states of Alaska, Delaware, and Louisiana

- Among the twenty-five larger states, the five states with the highest Main Street entrepreneurship activity were Minnesota, Wisconsin, Massachusetts, Colorado, and Pennsylvania.
- Among the twenty-five smaller states, the five states with the highest Main Street entrepreneurship activity were South Dakota, Vermont, Montana, North Dakota, and Maine.

Rate of Business Owners

• Looking inside the components of the Main Street Entrepreneurship Index, the Rate of Business Owners varies widely across states. Among the larger states, it goes from a low of about thirty-nine business owners for every 1,000 adults (Alabama) to a high of eighty-six business owners for every 1,000 adults (Colorado). Among the smaller states, it goes from a low of about forty-one business owners for every 1,000 adults (West Virginia) to a high of 102 business owners for every 1,000 adults (Montana).

Survival Rate

• Survival—the second component of the Index—also has high variation across states. Among the larger states, it goes from 44.1 percent of firms surviving through their first five years of operation in Arizona to a survival rate of 53.3 percent of firms in Pennsylvania. Among the smaller states, it goes from

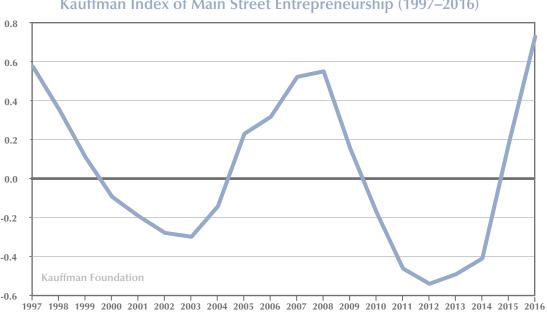


Figure 1
Kauffman Index of Main Street Entrepreneurship (1997–2016)

SOURCE: Authors' calculations using the CPS and BDS. For an interactive version, please see: www.kauffmanindex.org.

43.4 percent of firms surviving through their first five years of operation in Nevada to a survival rate of 58.1 percent of firms in North Dakota.

Established Small Business Density

Established Small Business Density—another component of the Index—also has high variation across states. Among the larger-population states, it goes from 612 established small businesses per 1.000 firms in Arizona to 706 established small businesses per 1.000 firms in Ohio. Amona the smaller-population states, it goes from 544 established small businesses per 1.000 firms in Nevada to 707 established small businesses per 1,000 firms in Vermont.

Select Demographic Trends for States on **Main Street Entrepreneurship**

Below are select demographic trends at the state level for the latest year, calculated on a three-year moving average and including only states with at least 1,000 survey responses per sub-demographic group per state.

Historic demographic trends on the following demographics, as well as on immigration, race, and education for each of the fifty states in this study are available in the profiles in the Appendix.

Female Business Owners

- Among the larger states, the five locations with the highest Rate of Business Owners for females were, in this order, Colorado, Minnesota, California, Wisconsin, and Washington.
- Among the smaller states, the five locations with the highest Rate of Business Owners for females were, in this order, Montana, Vermont, Wyoming, South Dakota, and Oregon.

Younger Business Owners— Ages Twenty to Thirty-Four

- Among the larger states, the five locations with the highest Rate of Business Owners for younger adults were, in this order, Colorado, Florida, Minnesota, Wisconsin, and Texas.
- Among the smaller states, the five locations with the highest Rate of Business Owners for younger adults were, in this order, South Dakota, North Dakota, Montana, Wyoming, and Iowa.

Older Business Owners— Ages Fifty-Five to Sixty-Four

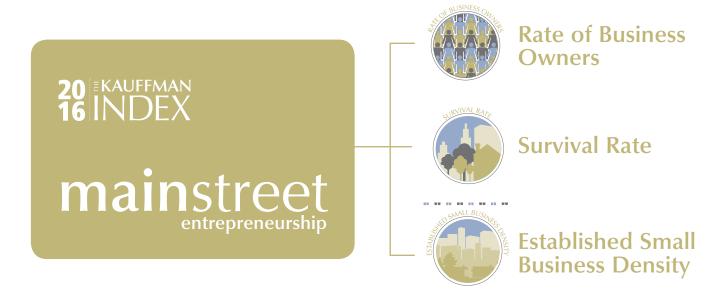
Among the larger states, the five locations with the highest Rate of Business Owners for older adults

- were, in this order, Colorado, Minnesota, California, Wisconsin, and Massachusetts.
- Among the larger states, the five locations with the highest Rate of Business Owners for older adults were, in this order, South Dakota, North Dakota, Vermont, Montana, and Maine.

Understanding Main Street Entrepreneurship— A Look at the Indicators

The United States has a great tradition of both big and small business. In this report, we focus on small businesses and, specifically, on measures of what we call "Main Street" entrepreneurship. The Kauffman Index of Main Street Entrepreneurship presents an index measure of small business activity in the United States—across national, state, and metropolitan-area levels. The Index captures business activity along three dimensions. First, it captures the Rate of Business Owners in the economy the annual percentage of adults owning businesses, on average. Second, it estimates the Survival Rate, a measure of the percentage of businesses that become established and are still in operation five years after founding. Third, it captures Established Small Business Density, the ratio of established small employer businesses to the number of employer firms in the economy. The combination of these three distinct and important dimensions provides a view of small business activity in the country, across national, state, and metropolitan-area levels. These businesses make up a large share of firms in the nation, with established small businesses representing almost 68 percent of all employer firms in the United States, according to the Census's Business Dynamics Statistics.

The Main Street Entrepreneurship Index captures all types of small business activity and is based on nationally representative sample sizes of more than 900,000 observations each year and on administrative data covering the universe of employer business entities approximately five million businesses. The separate components of the Index also provide evidence on potentially different trends in small business activity trends we analyze based on the Rate of Business Owners from household surveys, and Survival Rate and Established Small Business Density measures from business-level data. The Main Street Entrepreneurship Index improves over other possible measures of business activity because of its timeliness, exclusion of "casual" businesses, and inclusion of all types of business activity, regardless of industry.



The Components of the Kauffman Index of Main Street Entrepreneurship

The Kauffman Index of Main Street Entrepreneurship provides a broad index measure of small business activity in the United States, looking at both businesses and business owners.

On the business side, the Index tracks locally established small business with employees. This means employer businesses five years old or older—so that we are not looking at startups and young businesses—with fewer than fifty employees.

On the firm owner side, we track local business owners—incorporated or unincorporated, with or without employees.

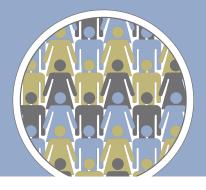
The Main Street Entrepreneurship Index is an equally weighted index of three normalized measures of business activity. The three component measures of the Main Street Index are:

- The Rate of Business Owners in the economy, calculated as the percentage of adults owning businesses as their main jobs.
- ii. The **Survival Rate** of firms, calculated as the percentage of firms that remain in operation throughout their first five years. For instance, the 2015 cohort consists of the percentage of firms that started five years ago (in 2010) and are still in business in 2015.
- lii. The **Established Small Business Density**, measured as the number of established small employer businesses normalized by the total number of firms.

Before presenting trends in the Main Street Entrepreneurship Index, we briefly discuss each component measure (see Methodology and Framework for more details).

First, the Rate of Business Owners captures the percentage of the adult population that owns a business. The Rate of Business Owners as measured here captures all business owners, including those who

Rate of Business Owners



own incorporated or unincorporated businesses, and those who are employers or non-employers. The Rate of Business Owners is calculated from data from the Current Population Survey (CPS), a monthly survey conducted by the U.S. Bureau of the Census and the Bureau of Labor Statistics. Although the Rate of Business Owners also captures owners of large firms, it is overwhelmingly represented by owners of small businesses.

The second component, the Survival Rate of firms, estimates the percentage of firms in a given year that started operating five years ago and are still in business. The calculation method we use is based on Reedy and Litan (2011). The underlying data comes from the U.S. Census Business Dynamics Statistics (BDS) and is taken from the universe of businesses with payroll tax records

in the United States, as recorded by the Internal Revenue Service—a dataset that covers approximately five million businesses.

The third component measure of the Main Street Entrepreneurship Index is a measure of the ratio of established small employer businesses to the total number of firms. These established small employer businesses generally are larger than established non-employer businesses are. The data for this indicator also come from the U.S. Census Business Dynamics Statistics. With established small businesses representing a large share of all businesses, they are an important group for economic activity in the "Main Street" economy.

In this report, we present national estimates of the Main Street Entrepreneurship Index first. We then

Survival Rate



Established Small Business Density



- A ratio of the number of established small businesses by total business population.
- Established small businesses are defined as employer firms over the age
 of five employing at least one, but less than fifty, employees.
- Measures the number of established small businesses normalized by the business population of an area.
- Data based on the U.S. Census Business Dynamics Statistics
- What the number means:
 - For example, the 2016 Index of Established Small Business Density for the United States was 676.1. That means that, for every 1,000 U.S. firms, there were 676 employer businesses five years of age or older, employing fewer than fifty employees.

present trends in each of the three component measures of the Index. The first component measure, the Rate of Business Owners, provides information that allows for a presentation of trends by demographic groups.

We understand "Main Street" is a concept that can take different forms, from industry-based perspectives, to size-based, to location-based. We recognize there are other approaches to the idea and welcome further explorations on indicators of Main Street entrepreneurship.

A Big-Tent Approach to Entrepreneurship

The Kauffman Index of Entrepreneurship—the umbrella under which all Kauffman Index reports reside—attempts to view the complex phenomenon of entrepreneurship from many angles, each adding insight into the people and businesses that contribute to America's overall entrepreneurial dynamism.

Entrepreneurship is not a monolithic phenomenon, and it includes many moving parts. Creating new businesses is a different economic activity from running small businesses, which, in turn, is different from growing businesses. The Kauffman Index attempts to measure

concretely these different aspects of entrepreneurship—Startup Activity, Main Street Entrepreneurship, and Growth. The Kauffman Index of Startup Activity focuses on the beginnings of entrepreneurship—specifically, new business creation, market opportunity, and startup density. The Kauffman Index of Main Street Entrepreneurship focuses on local business ownership, survival rates, and the prevalence of local small businesses. The Kauffman Index of Growth Entrepreneurship focuses on growing companies. Together, these three indices present a more holistic view of entrepreneurship in America.

Each of the indices that make up the Kauffman Index is constructed to give a spectrum of entrepreneurship measures from an industry-agnostic perspective. Table A summarizes the approach we use across the reports.

While at first pass, one might expect certain patterns that appear in the Startup Activity Index to be tied to patterns that appear in future years of the Main Street and Growth Entrepreneurship Indices, we have taken steps to mitigate direct relationships. Different locations will have different performances on each of the indices, and high (or low) levels of activity in any given index does not necessarily cause or imply high (or low) levels of activity in the others.

Each of the indices that make up the Kauffman Index is constructed to give a spectrum of entrepreneurship measures from an industry-agnostic perspective.

Table A
Summary of Components Used Across Reports

Startup Activity	Main Street E	Entrepreneurship	Growth Entrepreneurship		
Rate of New Entrepreneurs The percentage of adults transitioning into entrepreneurship at a given point in time	S RUSINESS OF THE STATE OF THE	Rate of Business Owners The total number of business owners in a location at a given point in time	of STARTUP CROUZE	Rate of Startup Growth The average growth of a cohort of new startups in their first five years	
Opportunity Share of New Entrepreneurs The percentage of new entrepreneurs driven primarily by "opportunity" vs. "necessity"	NEWIVAL RATE	Survival Rate of Firms The percentage of firms in operation throughout their first five years	STATE OF SCALETING	Share of Scaleups The number of businesses that started small and grew to employ at least fifty people by their tenth year of operation as a percentage of all businesses ten years and younger	
Startup Density The number of new employer businesses, normalized by population	SATALL BUSINESS STATES	Established Small Business Density The number of businesses five years old and older with less than fifty employees, normalized by population	HICH COMPANY DEVSITY	High-Growth Company Density The number of fast- growing companies with at least \$2 million dollars in annual revenue, normalized by business population	

State Trends in Main Street Entrepreneurship

The Kauffman Index of Main Street Entrepreneurship calculates a broad index measure of small and local business activity across all fifty U.S. states.

The Index takes the dual approach of tracking business owners and small business entities. On the owner side, the Index measures Rate of Business Owners—the percentage of the adult population owning a business, with or without employees, by location. On the business entity side, the Index tracks the Survival Rate of firms—the estimated percentage of firms that make it through their fifth year of operation; and the Established Small Business Density—the number of employer firms five years old or older with fewer than fifty employees for every 1,000 firms of a location.

As shown on the Main Street Entrepreneurship numbers in the National Trends report, the 2016 Index shows an increase in Main Street activity, continuing the positive trend since 2013. The increase was driven by an increase in business survival rates, an indicator of how likely a new firm is to take root and become established in a community. For the first time, the Index has exceeded its pre-recession level, as shown in Figure 1 on page 5.

The vast majority of states followed a similar positive trajectory in the 2016 Index, with forty-seven of them experiencing an increase in Main Street entrepreneurship activity. The exception to this was the states of Alaska, Delaware, and Louisiana.

Throughout this report, to facilitate comparison across peer groups of states, we focus our analysis looking at states in two groups: the twenty-five largest states by population and the twenty-five smallest states by population. As such, the twenty-five smallest states have a median population of 1.8 million people, with resident population ranging from more than 500,000 residents to fewer than 4.5 million residents. The twenty-five largest states have a median population of 6.9 million people, with resident population ranging from more than 4.5 million residents to fewer than 38 million residents.

While the states are grouped by population, they tend to share an additional similarity: larger states are overwhelmingly urban, while smaller states less so. Among the twenty-five largest states, twenty-four have 65 percent or more urban population, and sixteen are among the United States' twenty-five most urban states. On the other hand, among the twenty-five smallest states, populations tend to be more dispersed, with twelve of them having fewer than 65 percent urban population and just nine of

them among the twenty-five U.S. states with the highest share of urban population.

While most states experienced an increase in Main Street entrepreneurship activity, changes in state rankings—which measure relative yearly performance across states, as opposed to performance relative to a state's own Main Street entrepreneurship rates in the previous year—largely were stable. We present those changes in Table 1.

Main Street Entrepreneurship— Trends in Larger States

Among the twenty-five larger states, the five states with the highest rate of Main Street Entrepreneurship were Minnesota, Wisconsin, Massachusetts, Colorado, and Pennsylvania.

Moreover, nine larger states had increases in rank in 2016.

States with Increases in Ranks Among Twenty-Five Larger States by Population					
State	Rank 2016	Rank 2015	Change		
South Carolina	20	24	4		
Washington	16	20	4		
Colorado	4	7	3		
Florida	19	21	2		
Maryland	6	8	2		
New Jersey	15	17	2		
Indiana	11	12	1		
Virginia	12	13	1		
Wisconsin	2	3	1		

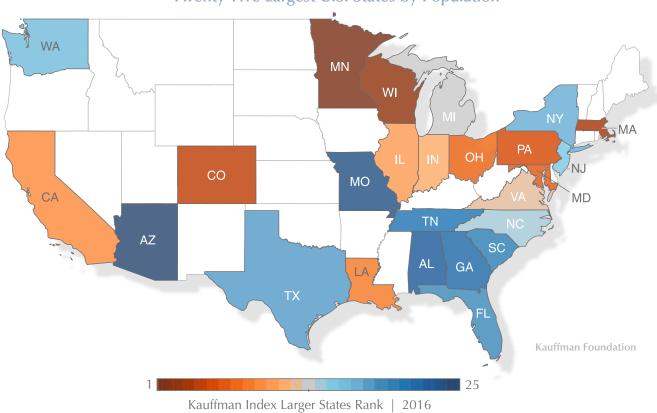
Eight larger states had decreases in rank in 2016.

States with Decreases in Ranks Among Twenty-Five Larger States by Population					
State	Rank 2016	Rank 2015	Change		
Missouri	24	19	-5		
Louisiana	8	4	-4		
Tennessee	21	18	-3		
Texas	18	15	-3		
Michigan	13	11	-2		
Massachusetts 3 2 -1					
New York 17 16 -1					
Ohio	7	6	-1		

TABLE 1
Larger States Rankings—Kauffman Index of Main Street Entrepreneurship
Twenty-Five Largest U.S. States by Population

Rank 2016	Index 2016	State	Rank 2015	Change in Rank	Rate of Business Owners	Established Small Business Density	Survival Rate of Firms
1	2.21	Minnesota	1	0	7.75%	687.2	50.76%
2	1.72	Wisconsin	3	1	6.46%	704.3	50.77%
3	1.48	Massachusetts	2	-1	5.54%	684.7	53.22%
4	1.43	Colorado	7	3	8.56%	630.4	47.93%
5	1.42	Pennsylvania	5	0	4.97%	705.3	53.26%
6	1.22	Maryland	8	2	5.69%	668.7	52.47%
7	1.17	Ohio	6	-1	5.15%	706.5	51.45%
8	0.96	Louisiana	4	-4	5.95%	673.3	50.13%
9	0.77	California	9	0	6.99%	644.5	48.05%
10	0.70	Illinois	10	0	5.49%	672.7	50.14%
11	0.68	Indiana	12	1	5.00%	686.4	50.53%
12	0.63	Virginia	13	1	5.23%	659.9	51.25%
13	0.61	Michigan	11	-2	4.90%	694.9	49.97%
14	0.42	North Carolina	14	0	5.53%	660.8	49.28%
15	0.37	New Jersey	17	2	5.52%	670.3	48.51%
16	0.33	Washington	20	4	5.58%	651.8	49.24%
17	0.32	New York	16	-1	5.54%	645.3	49.68%
18	0.08	Texas	15	-3	5.91%	616.6	49.13%
19	0.02	Florida	21	2	7.14%	613.4	45.67%
20	-0.17	South Carolina	24	4	4.83%	658.7	48.32%
21	-0.38	Tennessee	18	-3	5.16%	655.9	46.51%
22	-0.39	Georgia	22	0	5.70%	632.5	46.40%
23	-0.41	Alabama	23	0	3.89%	679.0	48.48%
24	-0.42	Missouri	19	-5	6.24%	641.0	44.26%
25	-0.92	Arizona	25	0	6.01%	611.8	44.06%

Figure 2
2016 Rank for the Kauffman Index of Main Street Entrepreneurship
Twenty-Five Largest U.S. States by Population



Main Street Entrepreneurship— Trends in Smaller States

For the twenty-five smallest states in the country, South Dakota, Vermont, Montana, North Dakota, and Maine led the pack in the Main Street Entrepreneurship Index. These states had especially high levels of all three indicators.

States with Increases in Ranks Among Twenty-Five Smaller States by Population						
State	2016 Rank	2015 Rank	Change			
Connecticut	9	12	3			
West Virginia	20	23	3			
Maine	5	7	2			
New Mexico	17	19	2			
Montana 3 4 1						
Rhode Island 16 17 1						
Vermont	2	3	1			

Looking at changes in the last year, seven of the smaller states experienced increases in rank for 2016, while eleven saw no changes, and seven experienced declines.

The seven smaller states experiencing increases in rank in 2016 are shown in the table at left.

The seven smaller states experiencing decreases in rank in 2016 are shown in the table below.

States with Decreases in Ranks Among Twenty-Five Smaller States by Population							
State	2016 Rank	2015 Rank	Change				
Arkansas	21	20	-1				
Kansas	12	11	-1				
Delaware 23 21 -2							
Nebraska	7	5	-2				
North Dakota 4 2 -2							
Wyoming 11 9 -2							
Alaska	19	16	-3				

TABLE 2
Smaller States Rankings—Kauffman Index of Main Street Entrepreneurship
Twenty-Five Smallest U.S. States by Population

Rank 2016	Index 2016	State	Rank 2015	Change in Rank	Rate of Business Owners	Established Small Business Density	Survival Rate of Firms
1	3.97	South Dakota	1	0	10.15%	681.8	53.47%
2	3.82	Vermont	3	1	9.72%	707.1	52.41%
3	3.77	Montana	4	1	10.22%	689.8	51.81%
4	3.50	North Dakota	2	-2	9.06%	612.1	58.15%
5	3.02	Maine	7	2	8.65%	700.0	51.66%
6	2.74	Iowa	6	0	7.66%	702.7	52.77%
7	2.66	Nebraska	5	-2	7.12%	682.8	55.03%
8	2.05	New Hampshire	8	0	7.41%	682.6	51.13%
9	1.77	Connecticut	12	3	6.55%	694.9	51.35%
10	1.74	Oregon	10	0	7.63%	659.1	50.37%
11	1.68	Wyoming	9	-2	8.06%	653.9	49.19%
12	1.51	Kansas	11	-1	6.69%	680.3	50.53%
13	1.19	Oklahoma	13	0	6.72%	658.5	50.09%
14	1.06	Hawaii	14	0	5.84%	685.4	50.26%
15	0.93	Idaho	15	0	7.47%	651.1	47.16%
16	0.63	Rhode Island	17	1	5.64%	686.7	48.51%
17	0.50	New Mexico	19	2	5.75%	660.9	49.07%
18	0.29	Mississippi	18	0	5.05%	678.8	48.90%
19	0.23	Alaska	16	-3	5.69%	664.5	47.68%
20	-0.02	West Virginia	23	3	4.07%	706.8	48.32%
21	-0.17	Arkansas	20	-1	4.91%	670.0	47.44%
22	-0.40	Kentucky	22	0	4.37%	657.7	48.48%
23	-0.50	Delaware	21	-2	5.05%	608.2	49.03%
24	-0.81	Utah	24	0	5.97%	599.1	45.49%
25	-2.45	Nevada	25	0	4.86%	544.3	43.41%

Figure 3
2016 Rank for the Kauffman Index of Main Street Entrepreneurship
Twenty-Five Smallest U.S. States by Population

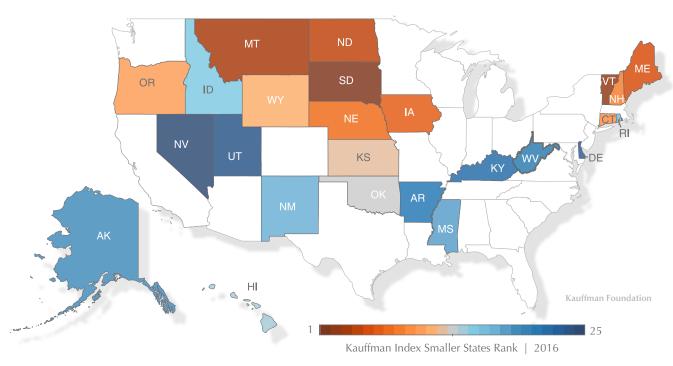


TABLE 3
Combined All States List—Kauffman Index of Main Street Entrepreneurship

Index 2016	State	Rate of Business Owners	Established Small Business Density	Survival Rate of Firms
-0.41	Alabama	3.89%	679.0	48.48%
0.23	Alaska	5.69%	664.5	47.68%
-0.92	Arizona	6.01%	611.8	44.06%
-0.17	Arkansas	4.91%	670.0	47.44%
0.77	California	6.99%	644.5	48.05%
1.43	Colorado	8.56%	630.4	47.93%
1.77	Connecticut	6.55%	694.9	51.35%
-0.50	Delaware	5.05%	608.2	49.03%
0.02	Florida	7.14%	613.4	45.67%
-0.39	Georgia	5.70%	632.5	46.40%
1.06	Hawaii	5.84%	685.4	50.26%
0.93	Idaho	7.47%	651.1	47.16%
0.70	Illinois	5.49%	672.7	50.14%
0.68	Indiana	5.00%	686.4	50.53%
2.74	lowa	7.66%	702.7	52.77%
1.51	Kansas	6.69%	680.3	50.53%
-0.40	Kentucky	4.37%	657.7	48.48%
0.96	Louisiana	5.95%	673.3	50.13%
3.02	Maine	8.65%	700.0	51.66%
1.22	Maryland	5.69%	668.7	52.47%
1.48	Massachusetts	5.54%	684.7	53.22%
0.61	Michigan	4.90%	694.9	49.97%
2.21	Minnesota	7.75%	687.2	50.76%
0.29	Mississippi	5.05%	678.8	48.90%
-0.42	Missouri	6.24%	641.0	44.26%
3.77	Montana	10.22%	689.8	51.81%
2.66	Nebraska	7.12%	682.8	55.03%
-2.45	Nevada	4.86%	544.3	43.41%
2.05	New Hampshire	7.41%	682.6	51.13%
0.37	New Jersey	5.52%	670.3	48.51%
0.50	New Mexico	5.75%	660.9	49.07%
0.32	New York	5.54%	645.3	49.68%
0.42	North Carolina	5.53%	660.8	49.28%
3.50	North Dakota	9.06%	612.1	58.15%
1.17	Ohio	5.15%	706.5	51.45%
1.19	Oklahoma	6.72%	658.5	50.09%
1.74	Oregon	7.63%	659.1	50.37%
1.42	Pennsylvania	4.97%	705.3	53.26%
0.63	Rhode Island	5.64%	686.7	48.51%
-0.17	South Carolina	4.83%	658.7	48.32%
3.97	South Dakota	10.15%	681.8	53.47%
-0.38	Tennessee	5.16%	655.9	46.51%
0.08	Texas	5.91%	616.6	49.13%
-0.81	Utah	5.97%	599.1	45.49%
3.82	Vermont	9.72%	707.1	52.41%
0.63	Virginia	5.23%	659.9	51.25%
0.33	Washington	5.58%	651.8	49.24%
-0.02	West Virginia	4.07%	706.8	48.32%
1.72	Wisconsin	6.46%	704.3	50.77%
		0.70 /0	7 0 713	50.111/0

In the following sections, we discuss state-level trends for each component of the Main Street Entrepreneurship Index: 1) Rate of Business Owners, 2) Survival Rate, and 3) Established Small Business Density.



The rate of Business Owners component of the Kauffman Index measures the percentage of the adult population that owns a business in a location. It captures all business owners, including those who own incorporated or unincorporated businesses, and those with or without employees. The data source for this measure is the Bureau of Labor Statistics and U.S. Census Bureau's

Current Population Survey. We calculate this measure on a three-year moving average for states, from 1998 to 2015—the latest year with data available.

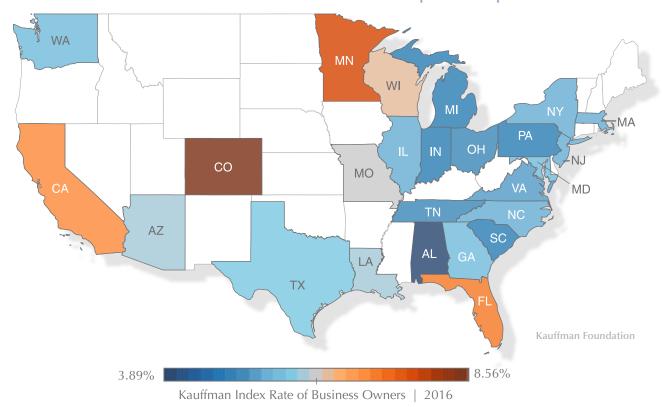
The Rate of Business Owners varies across states, at a higher range for smaller states than for larger states.

Rate of Business Owners— Trends in Larger States

Among the twenty-five largest states, the Rate of Business Owners ranged from 3.9 percent (in Alabama) to 8.6 percent (in Colorado) for the 2016 Index. A Rate of Business Owners of 3.9 means that, out of every 1,000 adults, approximately thirty-nine are business owners.

Of the twenty-five largest states in the country, Colorado, Minnesota, Florida, California, and Wisconsin fared particularly well on this component of the Kauffman Index of Main Street Entrepreneurship.





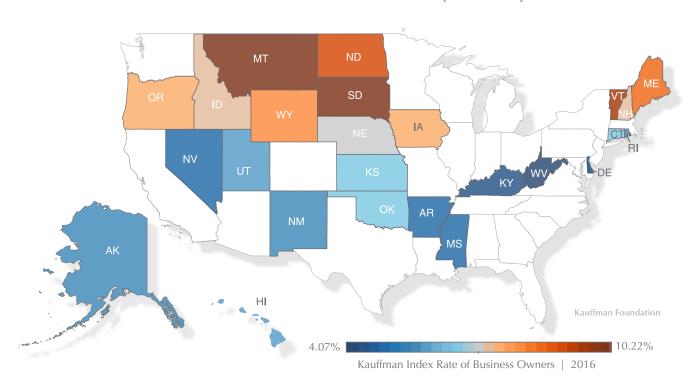
Rate of Business Owners— Trends in Smaller States

Among the twenty-five smallest states, the Rate of Business Owners ranged from 4.1 percent (in West Virginia) to 10.2 percent (in Montana) for the 2016 Index.

Of the twenty-five smallest states in the country, Montana, South Dakota, Vermont, North Dakota, and Maine fared particularly well on this component of the Kauffman Index of Main Street Entrepreneurship.



Figure 5
2016 Rate of Business Owners for Twenty-Five Smallest U.S. States by Population
Kauffman Index of Main Street Entrepreneurship





The Survival Rate component of the Kauffman Index of Main Street Entrepreneurship estimates the percentage of new firms that are still active after five years of operation. This is a yearly measure calculated from the U.S. Census Bureau's Business Dynamics Statistics.

We present this indicator from 1982 to 2014, the latest year for which the data were available at the time of data collection for this report.

The Survival Rate as measured on the Kauffman Index gives us an indicator of how likely a new firm is to take root and become established in a community. This indicator is based on previous work by the Kauffman Foundation, examining business survival by cohort over time (Reedy and Litan 2011).

Like the other components, the survival rates of firms also vary across states.

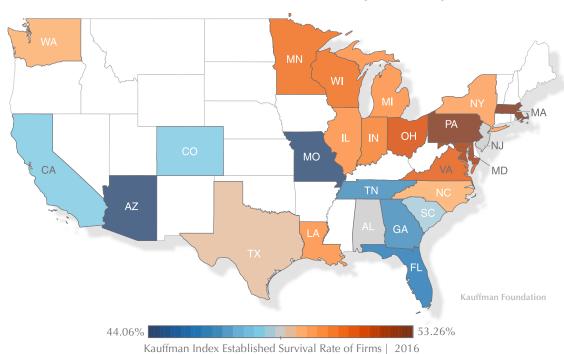
Survival Rate of Firms— Trends in Larger States

Among the twenty-five largest states, survival rates in 2014 ranged from 44.1 percent of firms in Arizona that started operating in 2009 surviving through their first five years of operation, to 53.3 percent of such firms in Pennsylvania.

Compared to the national survival rate of 48.7 percent, fifteen of the largest states had higher survival rates.

Also, of the twenty-five largest states in the country, Pennsylvania, Massachusetts, Maryland, Ohio, and Virginia had the highest survival rates of firms.

Figure 6
2016 Survival Rate of Firms for Twenty-Five Largest U.S. States by Population
Kauffman Index of Main Street Entrepreneurship



Survival Rate of Firms— Trends in Smaller States

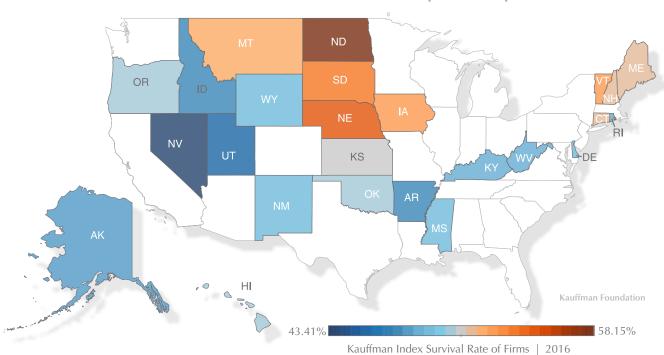
Among the twenty-five smallest states, survival rates in 2014 ranged from 43.4 percent of firms in Nevada that started operating in 2009 surviving through their first five years of operation, to 58.1 percent such firms in North Dakota.

Compared to the national survival rate of 48.7 percent, seventeen of the smallest states had higher survival rates.

Moreover, of the twenty-five smallest states in the country, North Dakota, Nebraska, South Dakota, Iowa, and Vermont had the highest survival rates of firms.



Figure 7
2016 Survival Rate of Firms for Twenty-Five Smallest U.S. States by Population Kauffman Index of Main Street Entrepreneurship





Established Small Business Density is the ratio of the number of established small employer businesses (five years of age or older with fewer than fifty employees) divided by the total employer business population (in 1,000s). This is a yearly measure calculated from the U.S. Census Bureau's Business Dynamics Statistics.

We present this indicator going back from 1981 to 2012, the latest year for which the data are available. This measure differs from the Rate of Business Owners in two key ways: 1) the Rate of Business Owners is a measure based on individuals—the business owners themselves. As such, it tracks individuals who own businesses rather than tracking the business entity. 2) It is a very broad measure of business ownership, including all business owners, regardless of how many people their businesses employ, if any, and it includes self-employed individuals with no employees. Small Business Density only includes businesses

employing at least one, but less than fifty, persons—thus being a slightly more mature measure of Main Street entrepreneurship activity. Both researchers and entrepreneurs have suggested density as a key indicator of vibrancy in entrepreneurial ecosystems in the context of startups and young firms (Stangler and Bell-Masterson 2015 and Feld 2012). Here, we use the density concept as a measure in the context of small businesses.

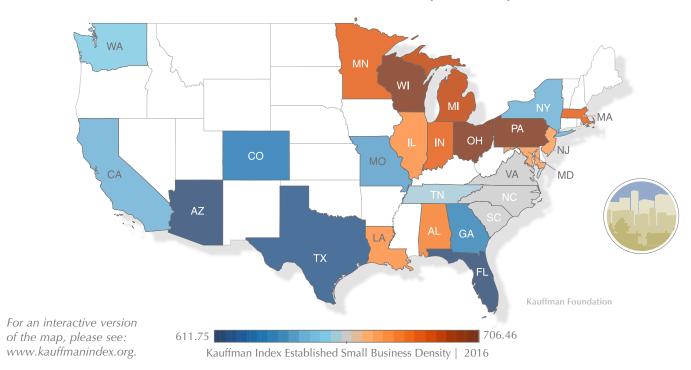
The Established Small Business Density has a high variation across states, and this range of variation of density is higher for the smaller states group.

Established Small Business Density— Trends in Larger States

Among the twenty-five largest states, the Established Small Business Density ranged from 611.8 established small businesses per 1,000 firms in Arizona to 706.5 established small businesses per 1,000 firms in Minnesota.

Compared to the U.S. Established Small Business Density of 676.1 established small businesses per 1,000 firms, eight of the largest states had higher density levels.

Figure 8
2016 Established Small Business Density for Twenty-Five Largest U.S. States by Population
Kauffman Index of Main Street Entrepreneurship



Established Small Business Density— Trends in Smaller States

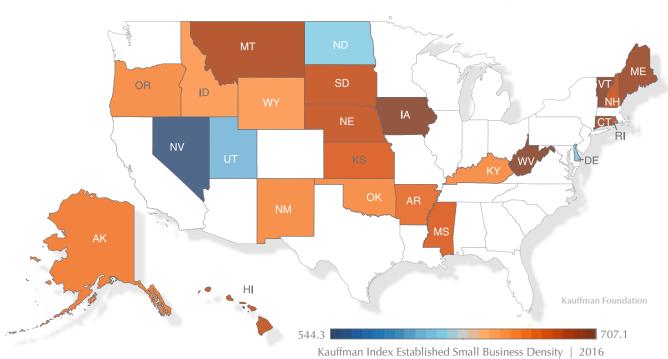
Among the twenty-five smallest states, the Established Small Business Density ranged from 544.3 established small businesses per 1,000 firms in Nevada to

707.1 established small businesses per 1,000 firms in Vermont.

Compared to the U.S. Established Small Business Density of 676.1 established small businesses per 1,000 firms, thirteen of the smallest states had higher density levels.



Figure 9
2016 Established Small Business Density for Twenty-Five Smallest U.S. States by Population Kauffman Index of Main Street Entrepreneurship



Appendix 1:

LARGER STATE RANKINGS

STATE RANKINGS, STATE PROFILES ORDERED BY RANK, AND BUSINESS OWNER DEMOGRAPHICS

TABLE 1
Larger States Rankings—Kauffman Index of Main Street Entrepreneurship
Twenty-Five Largest U.S. States by Population

Rank 2016	Index 2016	State	Rank 2015	Change in Rank	Rate of Business Owners	Established Small Business Density	Survival Rate of Firms
1	2.21	Minnesota	1	0	7.75%	687.2	50.76%
2	1.72	Wisconsin	3	1	6.46%	704.3	50.77%
3	1.48	Massachusetts	2	-1	5.54%	684.7	53.22%
4	1.43	Colorado	7	3	8.56%	630.4	47.93%
5	1.42	Pennsylvania	5	0	4.97%	705.3	53.26%
6	1.22	Maryland	8	2	5.69%	668.7	52.47%
7	1.17	Ohio	6	-1	5.15%	706.5	51.45%
8	0.96	Louisiana	4	-4	5.95%	673.3	50.13%
9	0.77	California	9	0	6.99%	644.5	48.05%
10	0.70	Illinois	10	0	5.49%	672.7	50.14%
11	0.68	Indiana	12	1	5.00%	686.4	50.53%
12	0.63	Virginia	13	1	5.23%	659.9	51.25%
13	0.61	Michigan	11	-2	4.90%	694.9	49.97%
14	0.42	North Carolina	14	0	5.53%	660.8	49.28%
15	0.37	New Jersey	17	2	5.52%	670.3	48.51%
16	0.33	Washington	20	4	5.58%	651.8	49.24%
17	0.32	New York	16	-1	5.54%	645.3	49.68%
18	0.08	Texas	15	-3	5.91%	616.6	49.13%
19	0.02	Florida	21	2	7.14%	613.4	45.67%
20	-0.17	South Carolina	24	4	4.83%	658.7	48.32%
21	-0.38	Tennessee	18	-3	5.16%	655.9	46.51%
22	-0.39	Georgia	22	0	5.70%	632.5	46.40%
23	-0.41	Alabama	23	0	3.89%	679.0	48.48%
24	-0.42	Missouri	19	-5	6.24%	641.0	44.26%
25	-0.92	Arizona	25	0	6.01%	611.8	44.06%

Main Street Rank Larger States

2016 2015



2% 0%

2000

2003



2012

2015

Minnesota

State Profile

Rate of Business Owners

2016	2015		
Component	Component		
7.75%	7.17%		

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners 16% 14%

Established Small **Business Density**

2016	2015
Component	Component
687.2	688.0

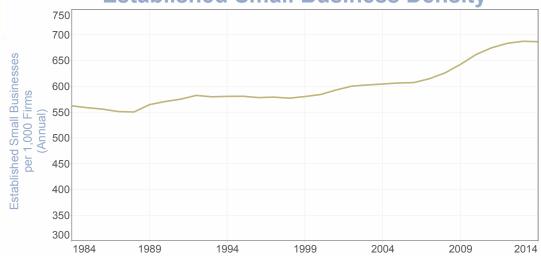
Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

2006

2009



Survival Rate

2016	2015
Component	Component
50.76%	49.13%

Percentage of firms that remained in operation through their first five years.



Source: Author calculations from BDS



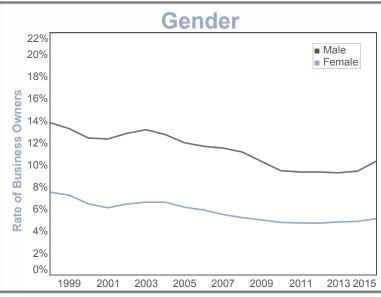


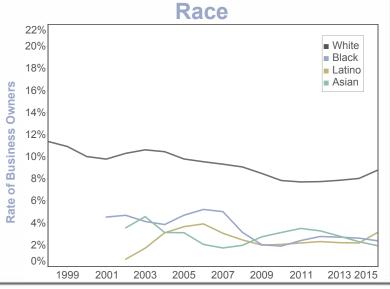
Minnesota

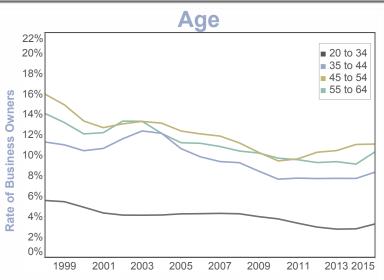
Business Owner Demographics

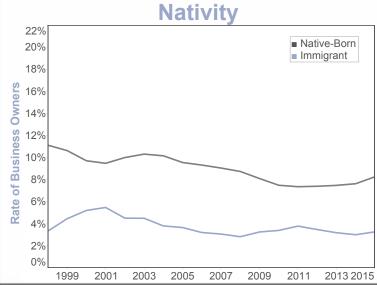
Rate of Business Owners by Demographic Group

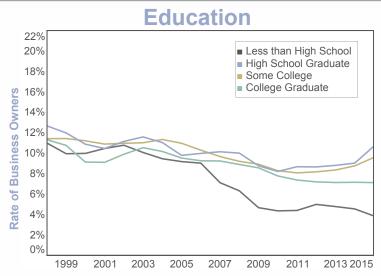
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Main Street Rank Larger States

2016 2015





Wisconsin

State Profile

Rate of Business Owners

2016	2015
Component	Component
6.46%	6.42%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Established Small **Business Density**

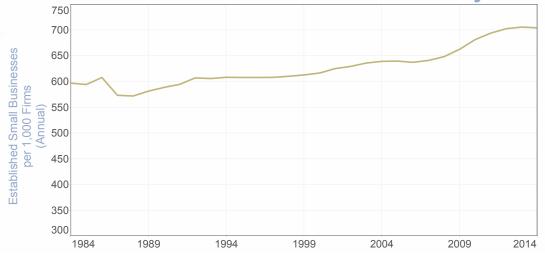
2016	2015
Component	Component
704.3	705.9

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
50.77%	49.19%

Percentage of firms that remained in operation through their first five years.



Source: Author calculations from BDS



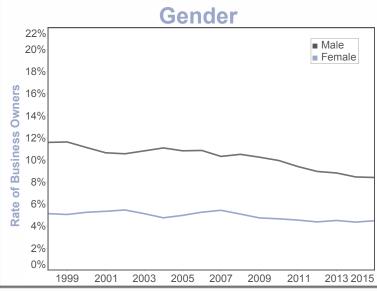


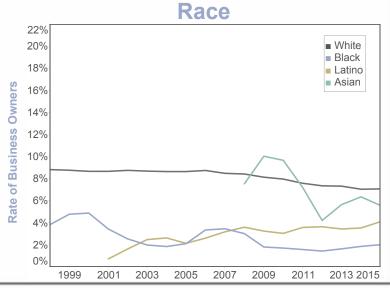
Wisconsin

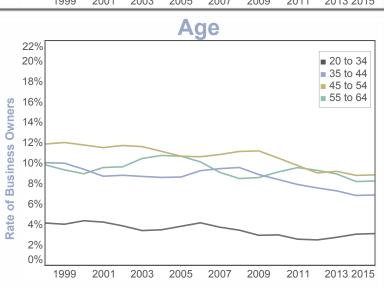
Business Owner Demographics

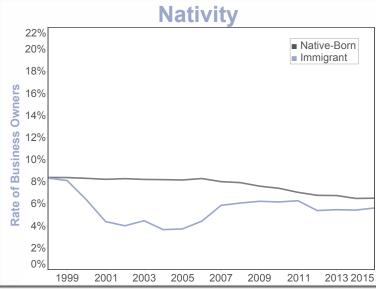
Rate of Business Owners by Demographic Group

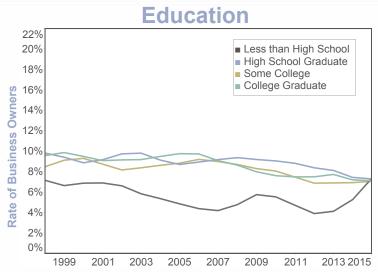
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Main Street Rank Larger States

2016	2015
3	2





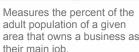
Massachusetts

State Profile

Rate of Business **Owners**

2016	2015
Component	Component
5.54%	6.17%

adult population of a given area that owns a business as their main job.



Source: Author calculations from CPS. Yearly measure.

Established Small **Business Density**

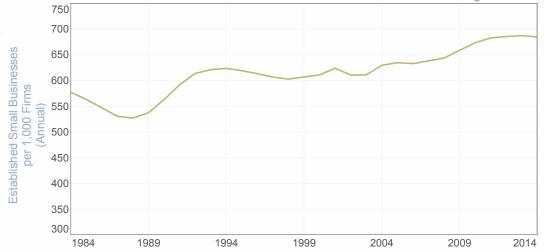
2016	2015
Component	Component
684.7	687.3

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
53.22%	51.37%

Percentage of firms that remained in operation through their first five years.

65% 60% 5-year Survival Rate of Firms 55% 45% 40% 35% 30% 25% 20%

2004

2009

2014

1994

Survival Rate

Source: Author calculations from BDS

1984

1989



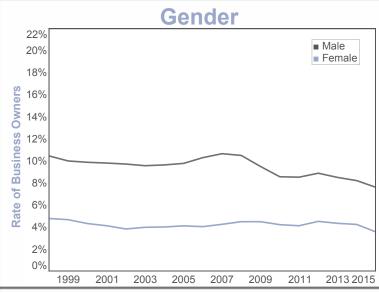


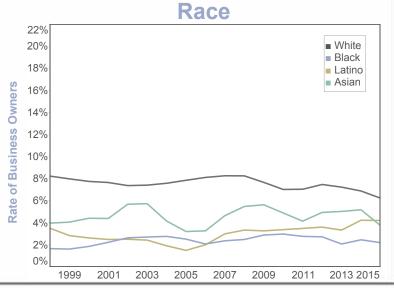
Massachusetts

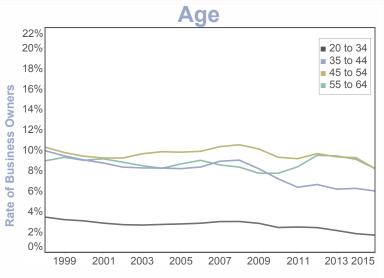
Business Owner Demographics

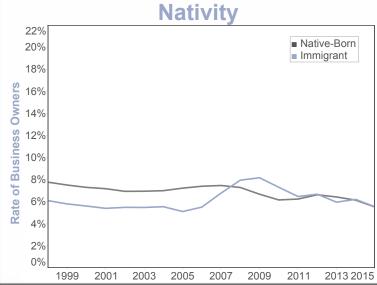
Rate of Business Owners by Demographic Group

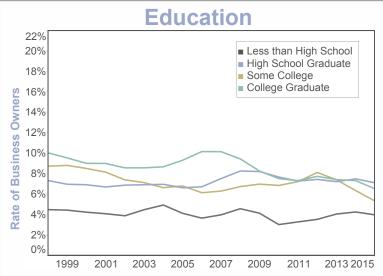
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Main Street Rank Larger States

2016 2015 4





Colorado

State Profile

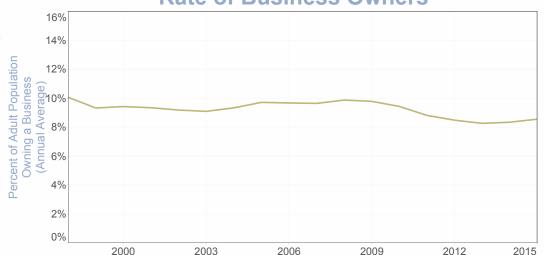
Rate of Business Owners

2016	2015
Component	Component
8.56%	8.35%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners



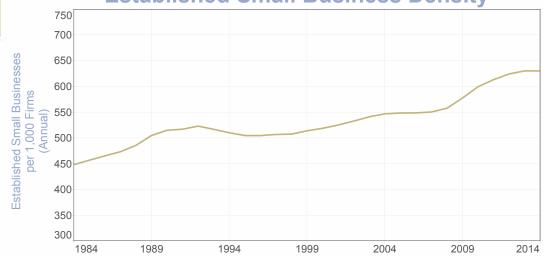
Established Small **Business Density**

2016	2015
Component	Component
630.4	630.6

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

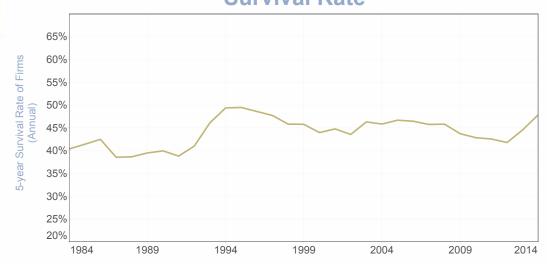


Survival Rate

2016	2015
Component	Component
47.93%	44.60%

Percentage of firms that remained in operation through their first five years.

Survival Rate



Source: Author calculations from BDS



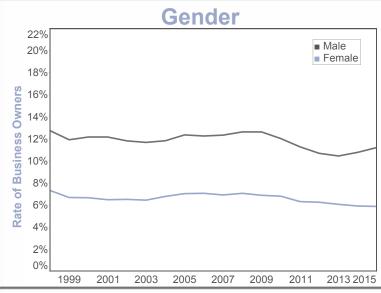


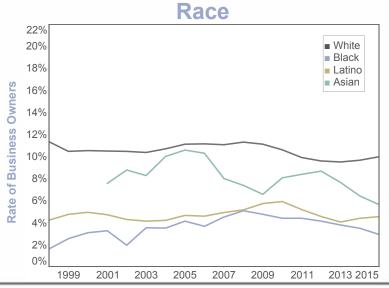
Colorado

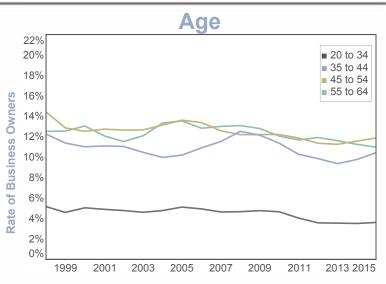
Business Owner Demographics

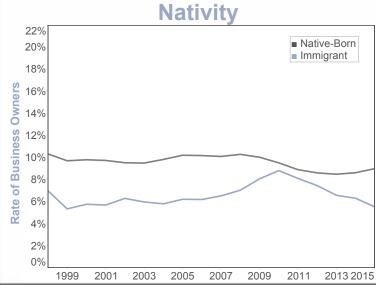
Rate of Business Owners by Demographic Group

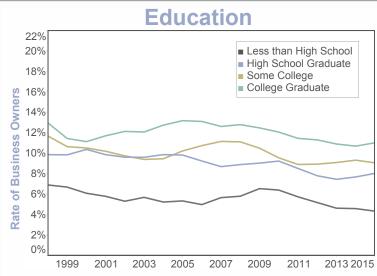
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Main Street Rank Larger States

2016 2015





Pennsylvania

State Profile

Rate of Business Owners

2016	2015
Component	Component
4.97%	5.00%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Established Small **Business Density**

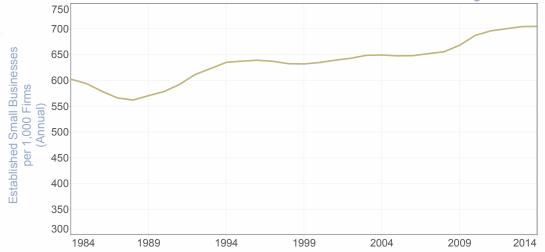
2016	2015
Component	Component
705.3	704.8

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

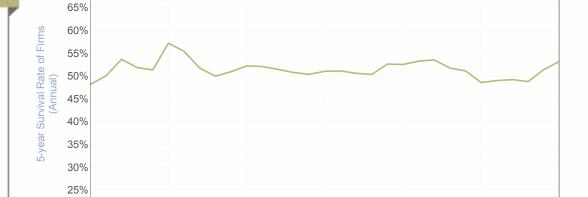
Established Small Business Density



Survival Rate

2016	2015
Component	Component
53.26%	51.44%

Percentage of firms that remained in operation through their first five years.



2004

2009

2014

1994

Survival Rate

Source: Author calculations from BDS

20%

1984

1989



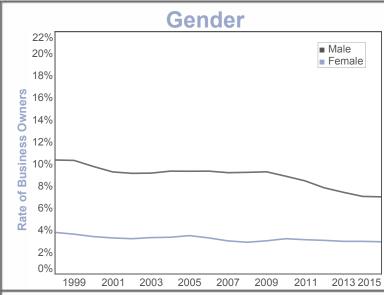


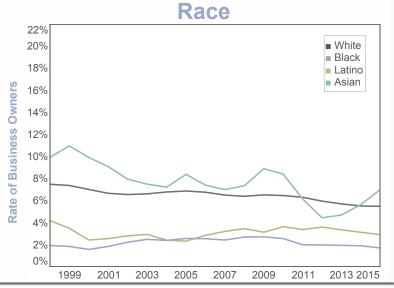
Pennsylvania

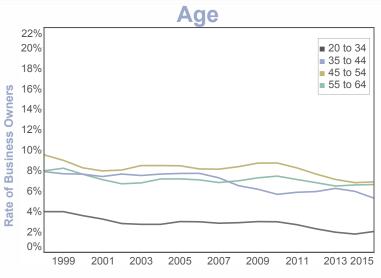
Business Owner Demographics

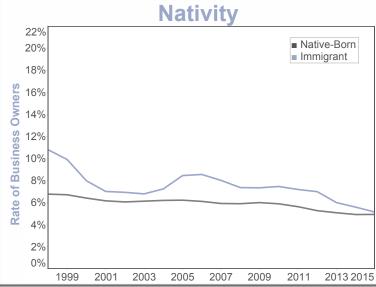
Rate of Business Owners by Demographic Group

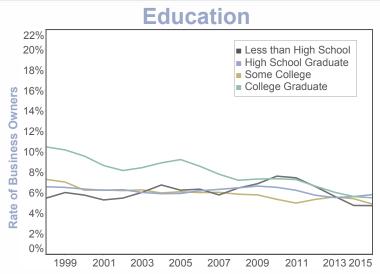
The Rate of Business Owners is the percent of the adult population owning a business as their main job, calculated using a three-year moving average. We are able to calculate this rate for select demographic groups, including gender, race, nativity, age, and education. The Rate of Business Owners is calculated using the Current Population Survey.











Main Street Rank Larger States

2016 2015 6 8





Maryland

State Profile

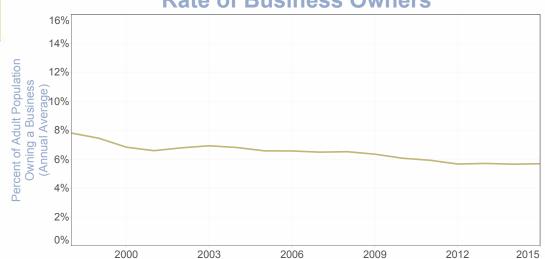
Rate of Business Owners

2016	2015
Component	Component
5.69%	5.66%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners



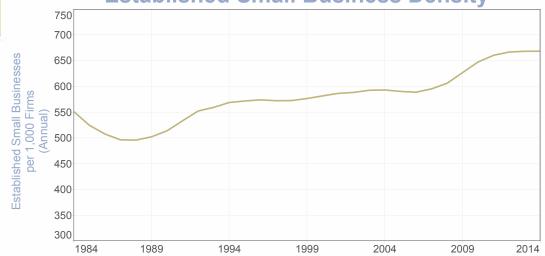
Established Small **Business Density**

2016	2015
Component	Component
668.7	668.5

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

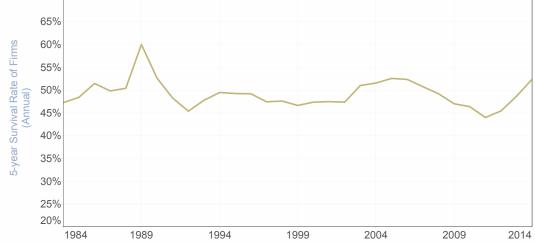


Survival Rate

2016	2015
Component	Component
52.47%	48.74%

Percentage of firms that remained in operation through their first five years.





Source: Author calculations from BDS

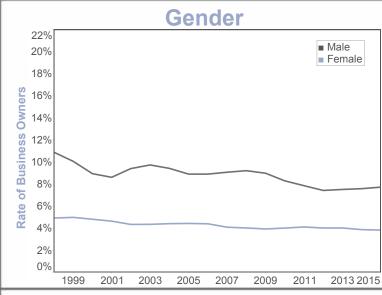


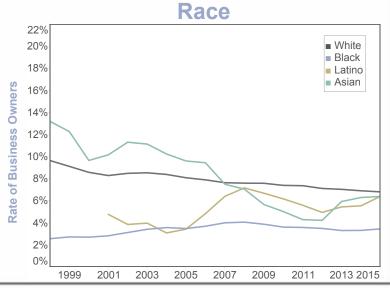


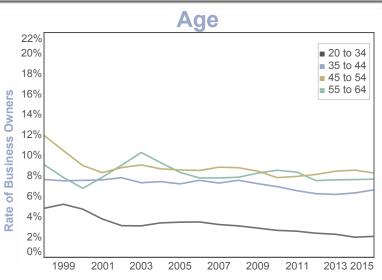
Maryland

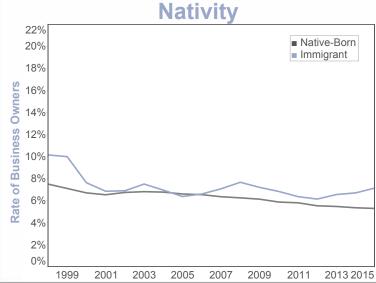
Business Owner Demographics

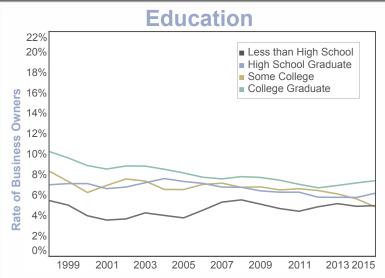
Rate of Business Owners by Demographic Group











2016 2015 6





Ohio

State Profile

Rate of Business Owners

2016	2015
Component	Componen
5.15%	5.20%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small **Business Density**

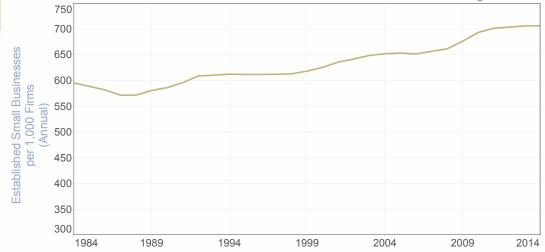
2016	2015
Component	Component
706.5	706.0

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
51.45%	49.00%

Percentage of firms that remained in operation through their first five years.

65% 60% 5-year Survival Rate of Firms 55% 50% 45% 40% 35% 30%

1999

2004

2009

2014

1994

Survival Rate

Source: Author calculations from BDS

25% 20%

1984

1989

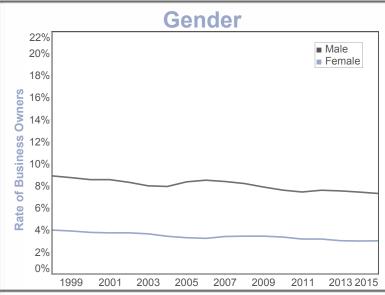


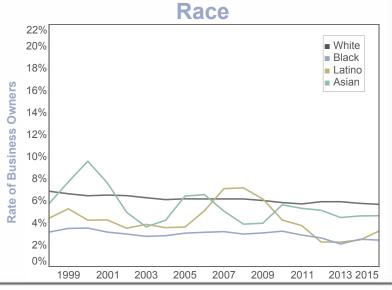


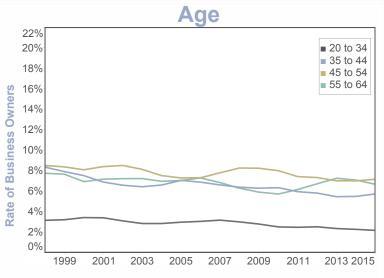
Ohio

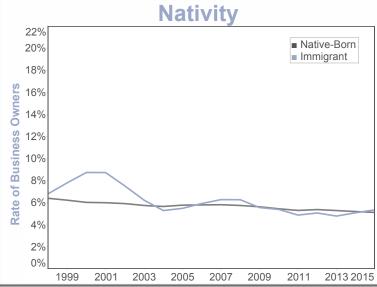
Business Owner Demographics

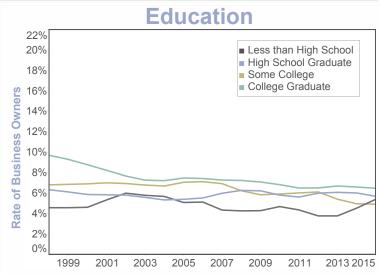
Rate of Business Owners by Demographic Group











2016 2015 8 4





Louisiana

State Profile

Rate of Business Owners

2016	2015
Component	Component
5.95%	6.25%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Established Small Business Density

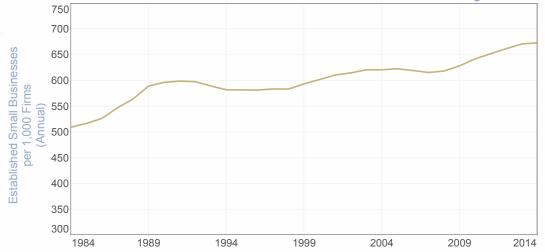
2016	2015
Component	Component
673.3	671.1

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
50.13%	50.61%

Percentage of firms that remained in operation through their first five years.

Source: Author calculations from BDS

Survival Rate



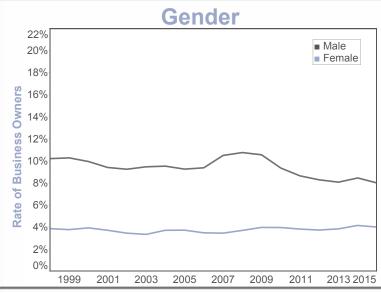


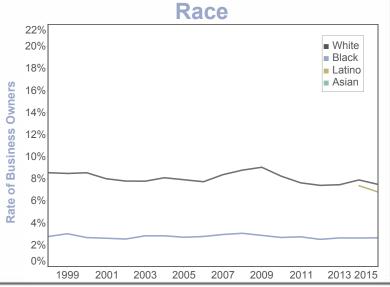


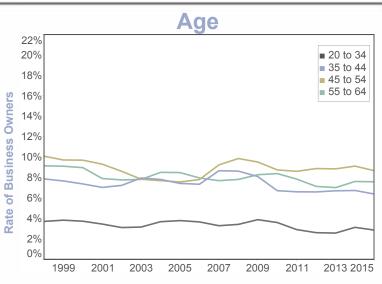
Louisiana

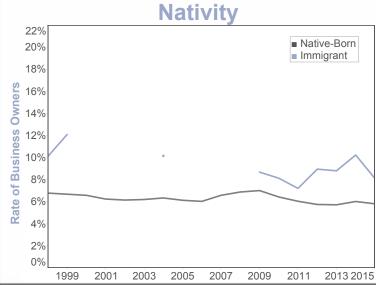
Business Owner Demographics

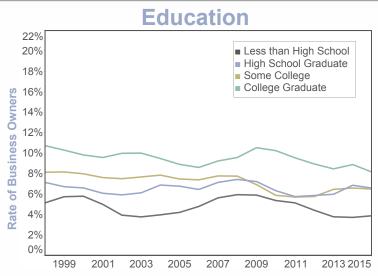
Rate of Business Owners by Demographic Group











2016 2015 9 9





California

State Profile

Rate of Business Owners

2016	2015
Component	Componen
6.99%	6.97%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small Business Density

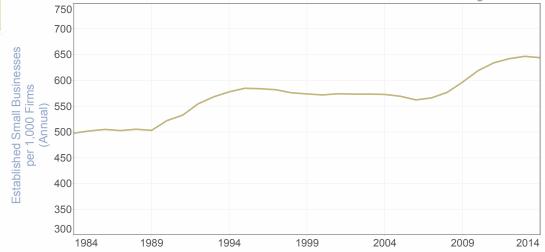
2016	2015
Component	Component
644.5	647.1

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density

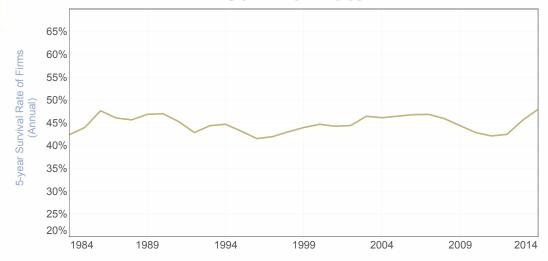


Survival Rate

2016	2015
Component	Component
48.05%	45.63%

Percentage of firms that remained in operation through their first five years.

Survival Rate



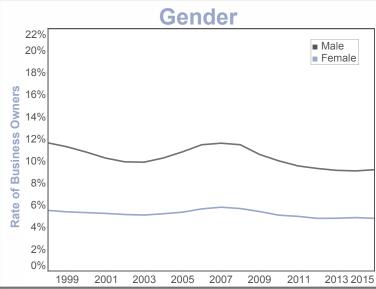


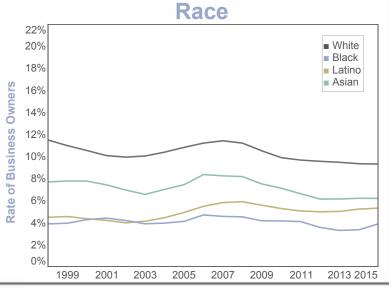


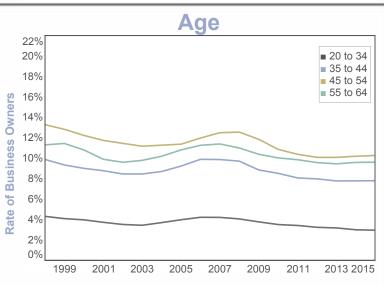
California

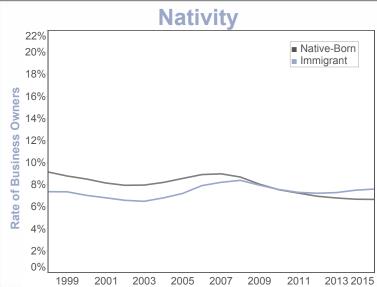
Business Owner Demographics

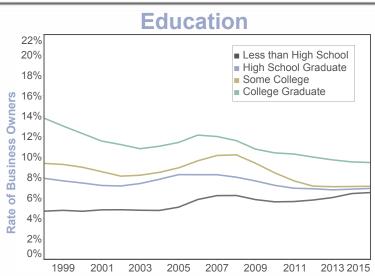
Rate of Business Owners by Demographic Group











2016 2015 10 10





Illinois

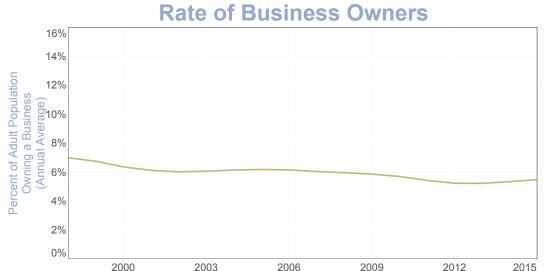
State Profile

Rate of Business Owners

2016	2015
Component	Component
5.49%	5.35%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



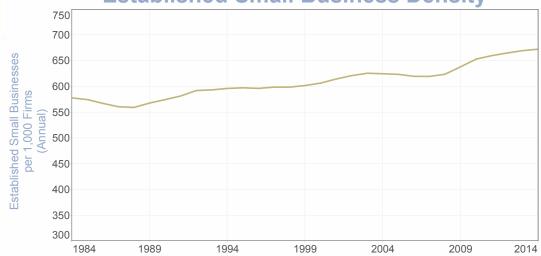
Established Small **Business Density**

2016	2015
Component	Component
672.7	669.9

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

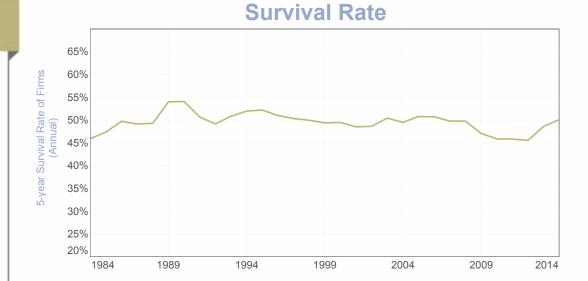
Established Small Business Density



Survival Rate

2016	2015
Component	Component
50.14%	48.67%

Percentage of firms that remained in operation through their first five years.



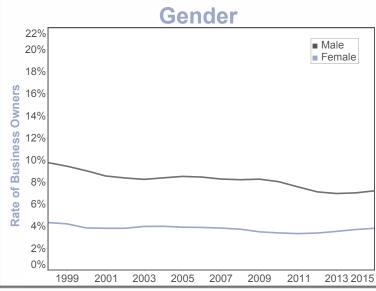


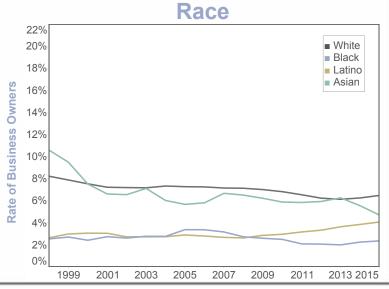


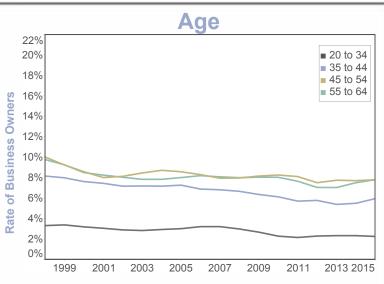
Illinois

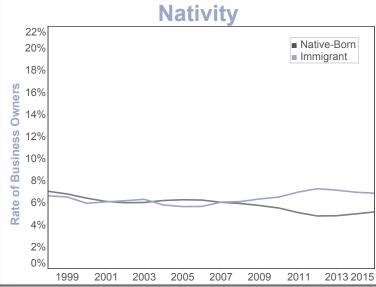
Business Owner Demographics

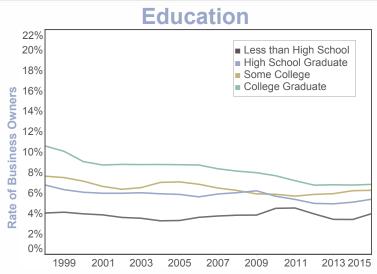
Rate of Business Owners by Demographic Group











2016 2015





Indiana

State Profile

Rate of Business Owners

2016	2015
Component	Component
5.00%	4.83%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Established Small **Business Density**

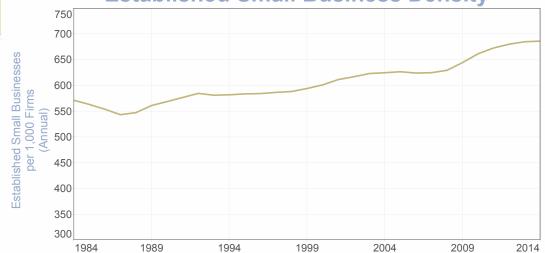
2016	2015
Component	Component
686.4	685.2

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

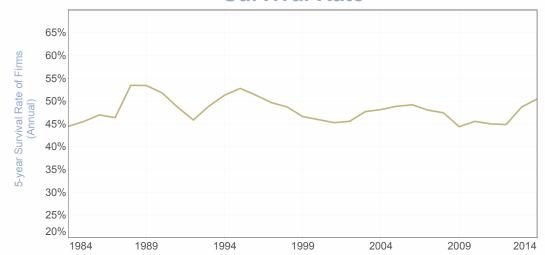
2016	2015
Component	Component
50.53%	48.74%

Percentage of firms that remained in operation through

their first five years.

Source: Author calculations from BDS

Survival Rate



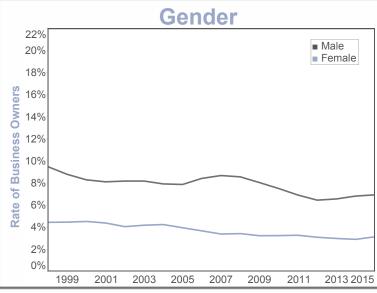


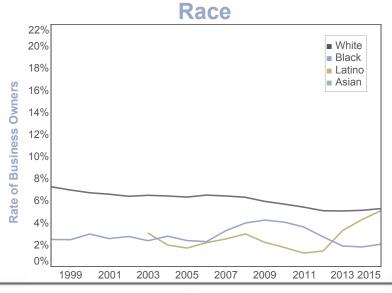


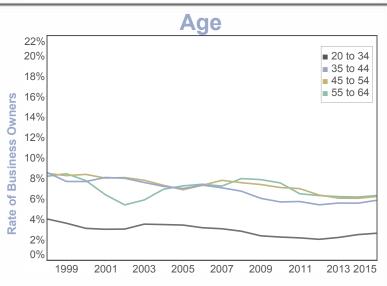
Indiana

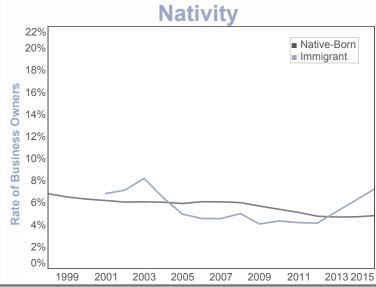
Business Owner Demographics

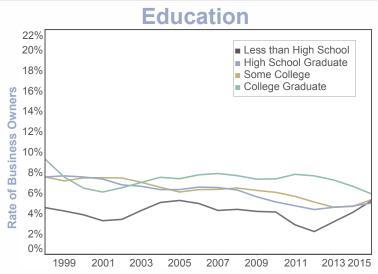
Rate of Business Owners by Demographic Group











2016 2015 13





Virginia

State Profile

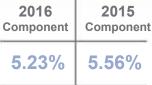
Rate of Business

2016	2015
Component	Componen
5.23%	5.56%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Owners



Established Small

Business Density

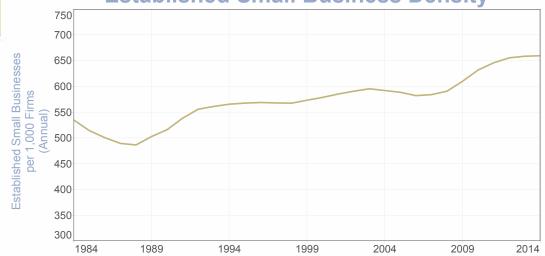
2016 2015 Component Component 659.9 658.9

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

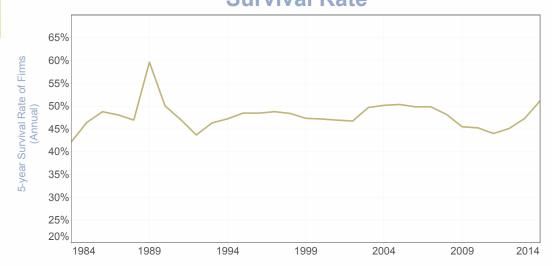
2016	2015
Component	Component
51.25%	47.33%

Percentage of firms that remained in operation through

their first five years.

Source: Author calculations from BDS

Survival Rate



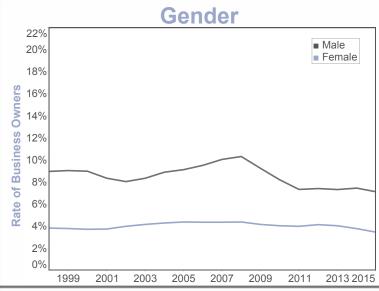


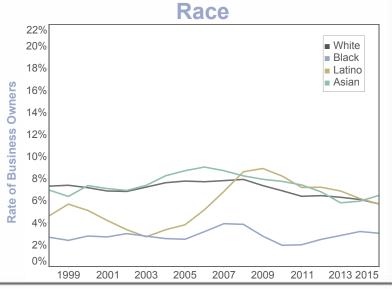


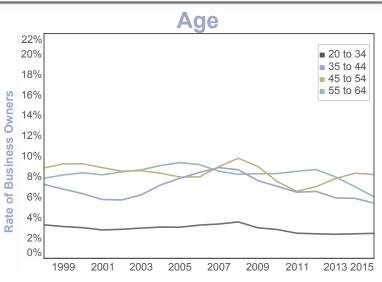
Virginia

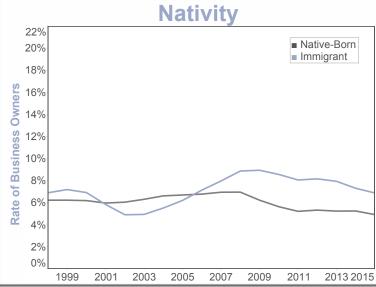
Business Owner Demographics

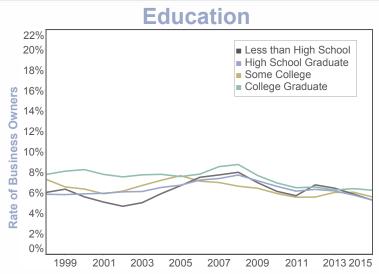
Rate of Business Owners by Demographic Group











2016 2015 13





Michigan

State Profile

Rate of Business Owners

2016	2015
Component	Component
4.90%	5.11%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small **Business Density**

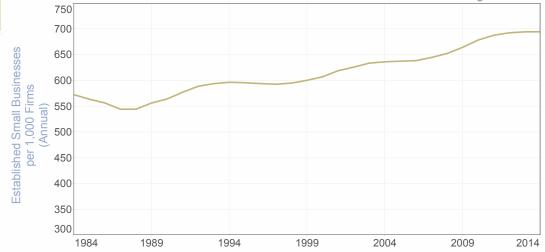
2016	2015
Component	Component
694.9	694.6

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

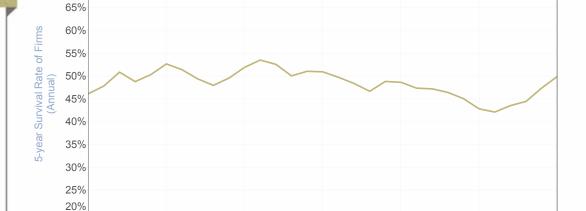
Established Small Business Density



Survival Rate

2016	2015
Component	Component
49.97%	47.42%

Percentage of firms that remained in operation through their first five years.



1999

2004

2009

2014

1994

Survival Rate

Source: Author calculations from BDS

1984

1989

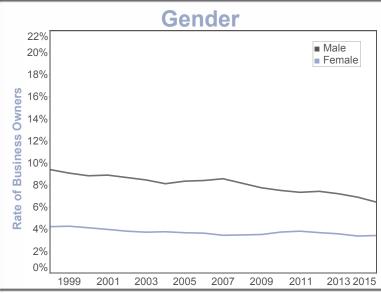


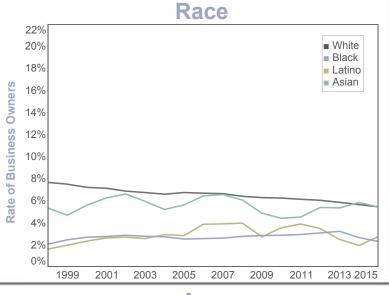


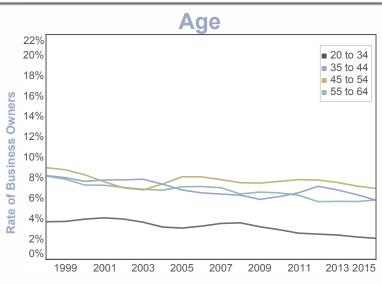
Michigan

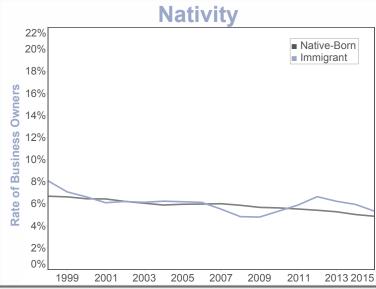
Business Owner Demographics

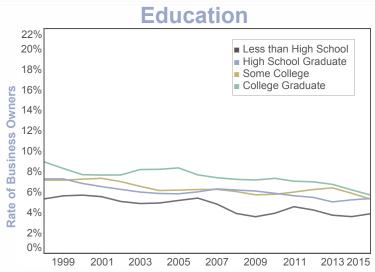
Rate of Business Owners by Demographic Group











2016 2015 14 14





North Carolina

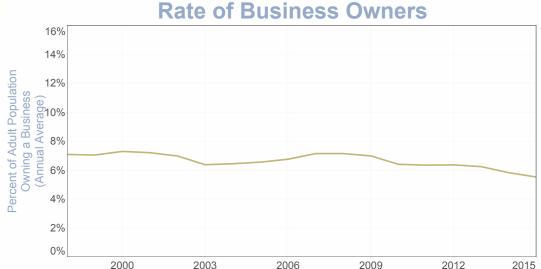
State Profile

Rate of Business Owners

2016	2015
Component	Component
5.53%	5.83%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



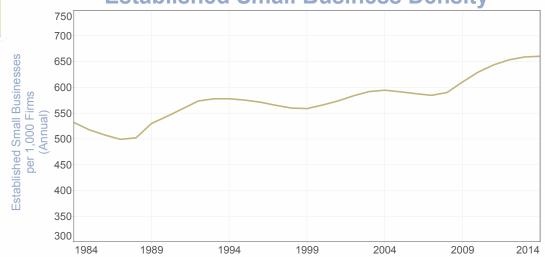
Established Small Business Density

2016	2015
Component	Component
660.8	659.5

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density



Survival Rate

2016	2015
Component	Component
49.28%	45.46%

Percentage of firms that remained in operation through their first five years.

Survival Rate



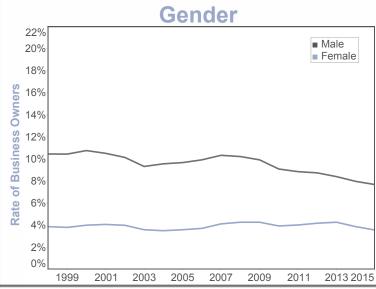


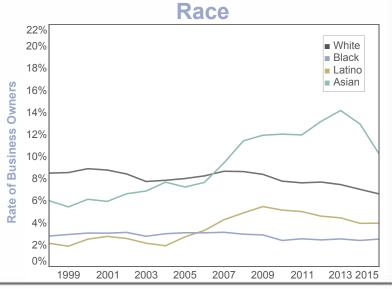


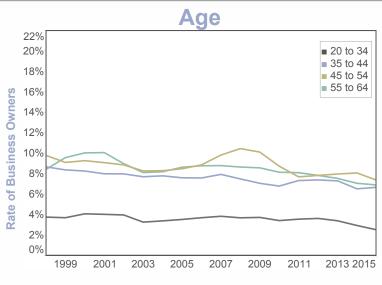
North Carolina

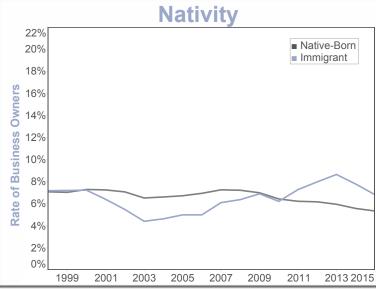
Business Owner Demographics

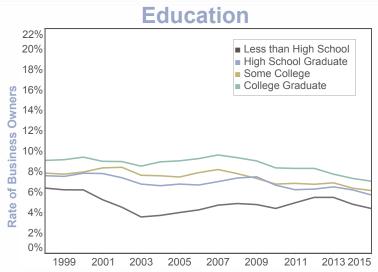
Rate of Business Owners by Demographic Group











2016 2015





New Jersey

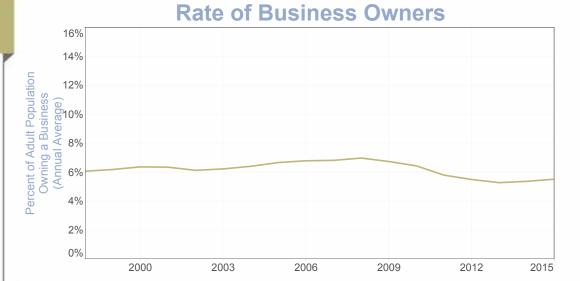
State Profile

Rate of Business Owners

2016	2015
Component	Component
5.52%	5.37%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



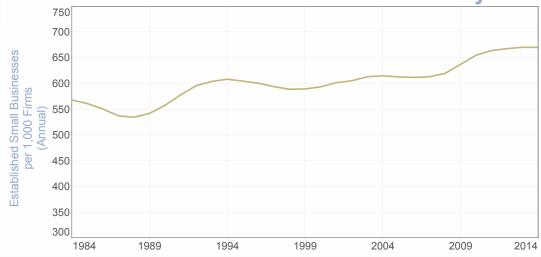
Established Small **Business Density**

2016	2015
Component	Component
670.3	670.6

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density



Survival Rate

2016	2015
Component	Component
48.51%	45.35%

Percentage of firms that remained in operation through their first five years.



Survival Rate

Source: Author calculations from BDS

65%

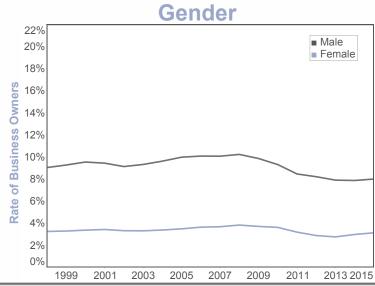


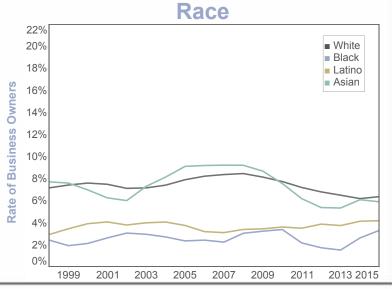


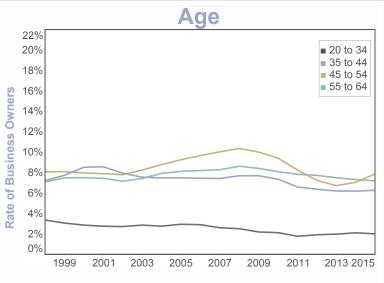
New Jersey

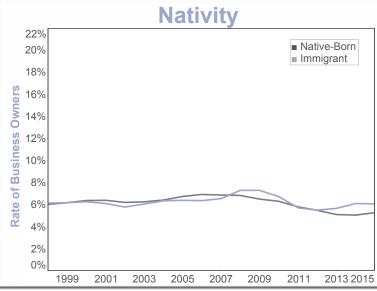
Business Owner Demographics

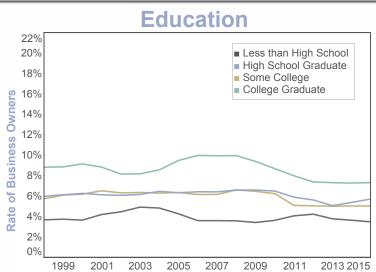
Rate of Business Owners by Demographic Group











2016 2015 20 16





Washington

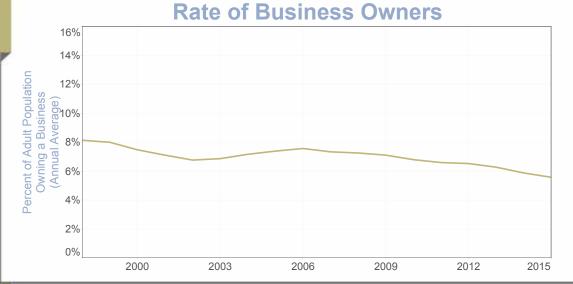
State Profile

Rate of Business Owners

2016	2015
Component	Component
5.58%	5.88%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



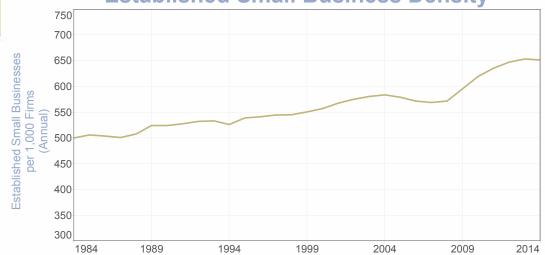
Established Small **Business Density**

2016	2015
Component	Component
651.8	653.6

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density



Survival Rate

2016	2015
Component	Component
49.24%	43.49%

Percentage of firms that remained in operation through their first five years.



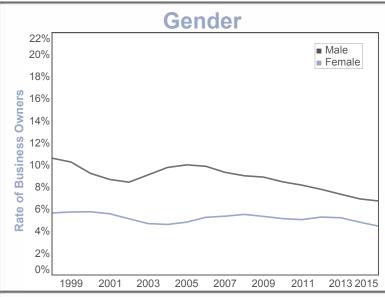


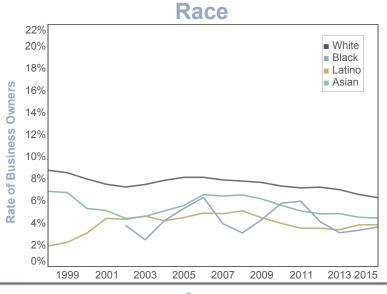


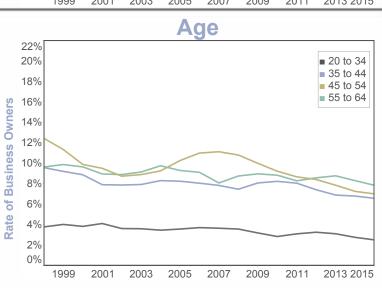
Washington

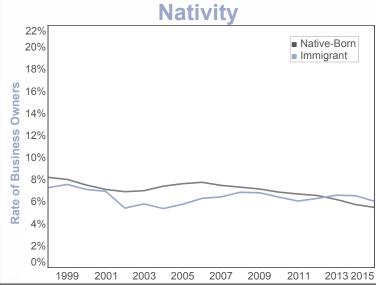
Business Owner Demographics

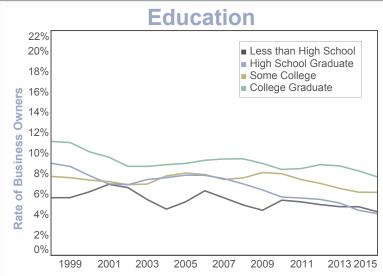
Rate of Business Owners by Demographic Group











2016 2015 16





New York

State Profile

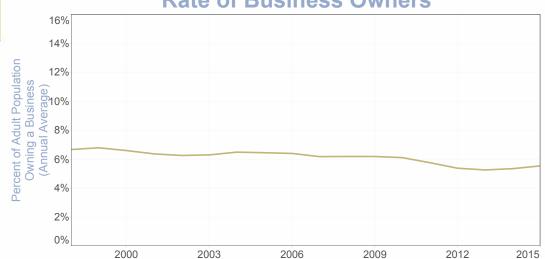
Rate of Business Owners

2016	2015
Component	Component
5.54%	5.35%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners



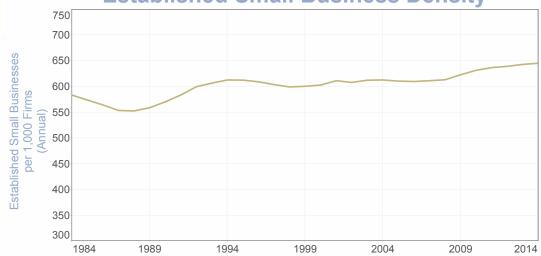
Established Small **Business Density**

2016	2015
Component	Component
645.3	643.1

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

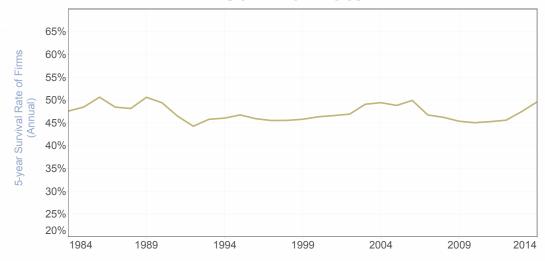


Survival Rate

2016	2015
Component	Component
49.68%	47.52%

Percentage of firms that remained in operation through their first five years.

Survival Rate



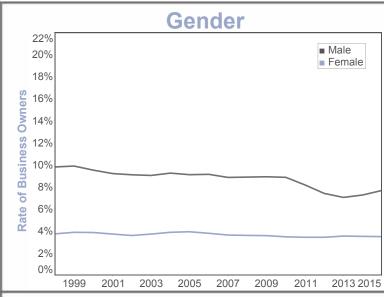


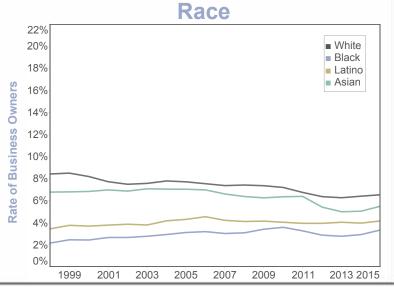


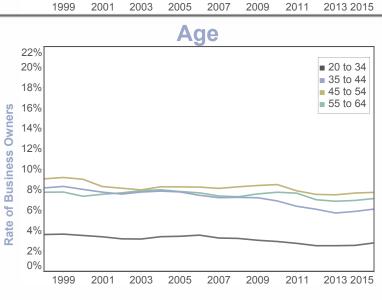
New York

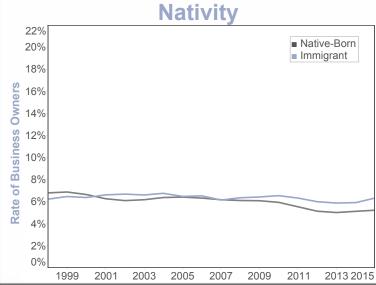
Business Owner Demographics

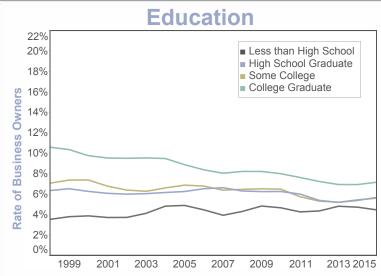
Rate of Business Owners by Demographic Group











2016 2015 18





Texas

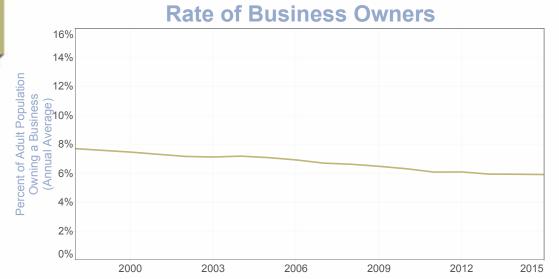
State Profile

Rate of Business Owners

2016	2015
Component	Component
5.91%	5.93%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



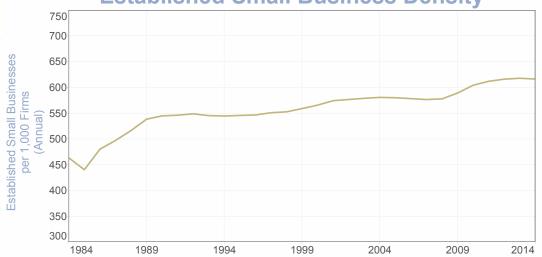
Established Small **Business Density**

2016	2015
Component	Component
616.6	618.1

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

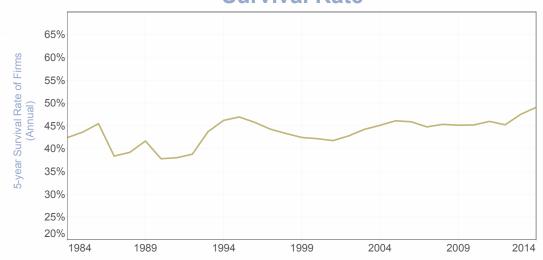


Survival Rate

2016	2015
Component	Component
49.13%	47.56%

Percentage of firms that remained in operation through their first five years.





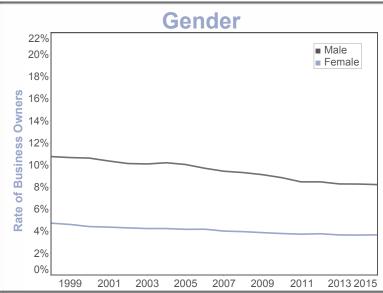


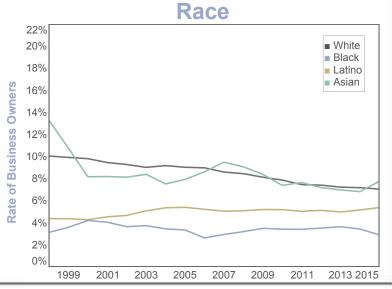


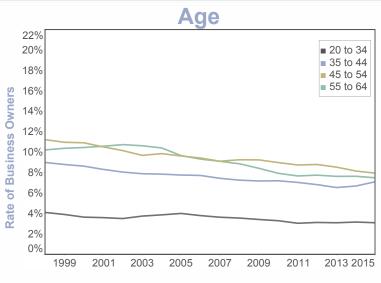
Texas

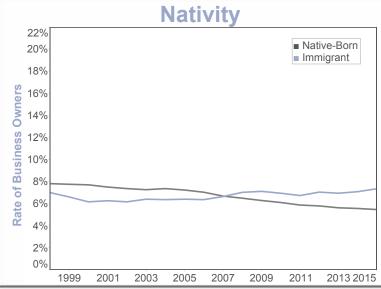
Business Owner Demographics

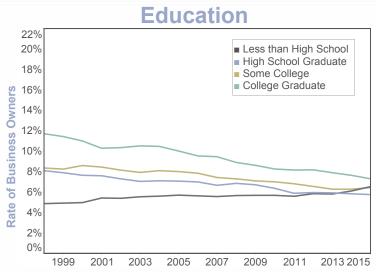
Rate of Business Owners by Demographic Group











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Florida

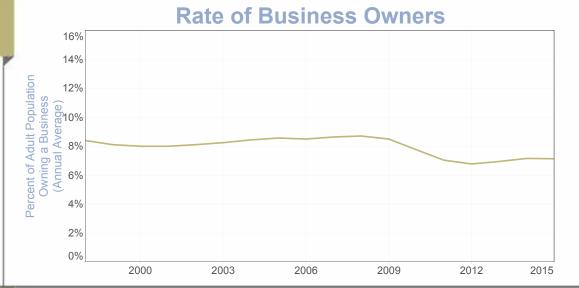
State Profile

Rate of Business Owners

2016	2015
Component	Component
7.14%	7.16%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



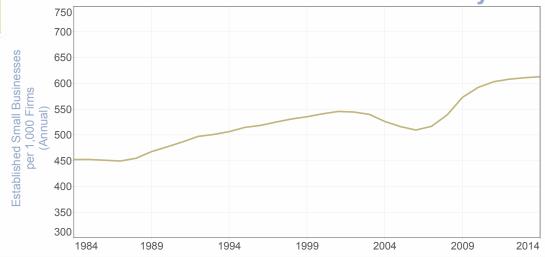
Established Small **Business Density**

2016	2015
Component	Component
613.4	611.4

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density



Survival Rate

2016	2015
Component	Component
45.67%	42.01%

Percentage of firms that remained in operation through their first five years.

Survival Rate



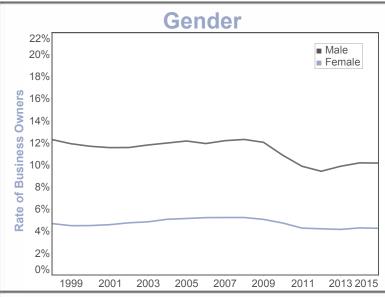


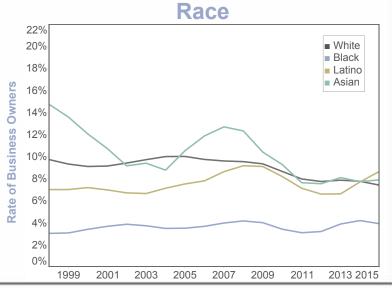


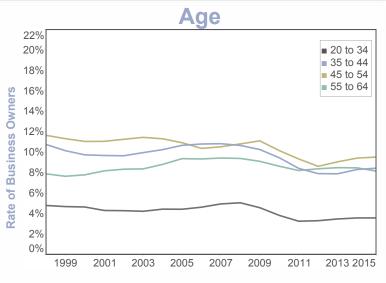
Florida

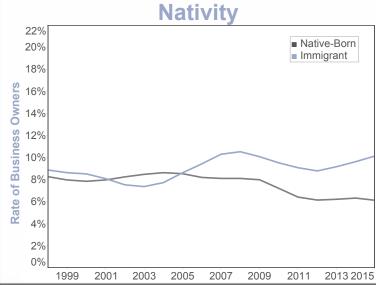
Business Owner Demographics

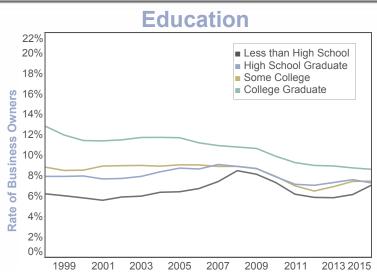
Rate of Business Owners by Demographic Group











2016 2015 20 24





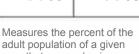
South Carolina

State Profile

2016	2015
Component	Component
4.83%	4.59%

adult population of a given area that owns a business as their main job.

Rate of Business Owners



Source: Author calculations from CPS. Yearly measure.

Established Small Business Density

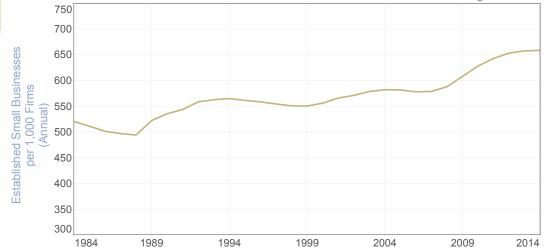
2016	2015
Component	Component
658.7	657.7

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
48.32%	44.61%

Percentage of firms that remained in operation through

their first five years.

Source: Author calculations from BDS

Survival Rate



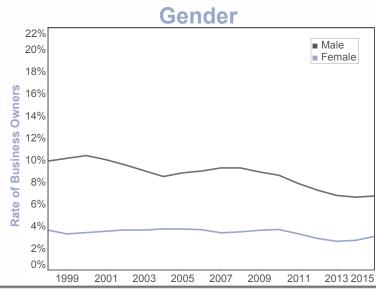


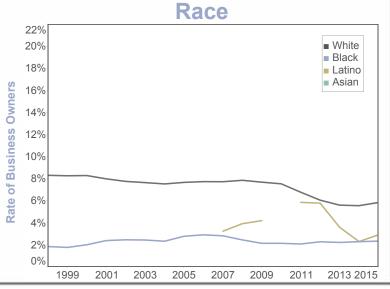


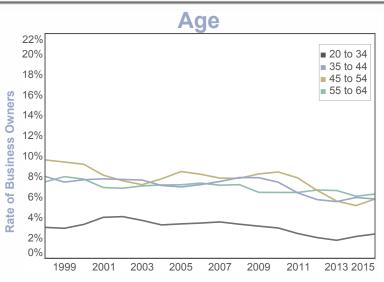
South Carolina

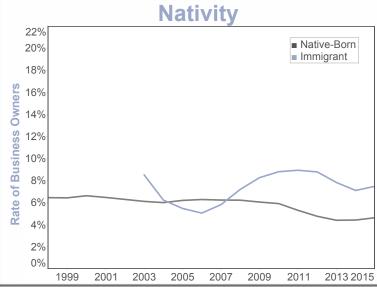
Business Owner Demographics

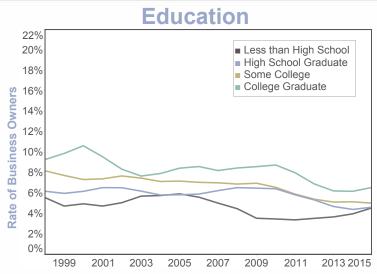
Rate of Business Owners by Demographic Group











2016 2015 18





Tennessee

State Profile

Rate of Business Owners

2016	2015
Component	Component
5.16%	5.44%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small

Business Density

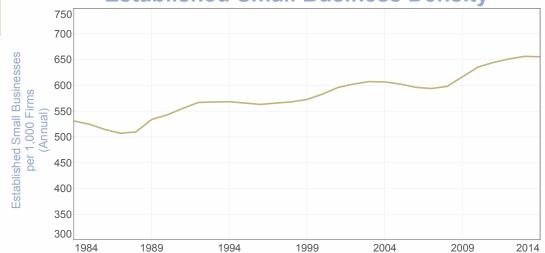
2016	2015
Component	Component
655.9	656.8

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density

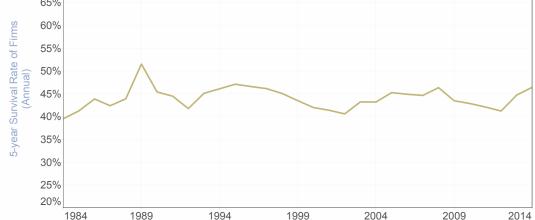


Survival Rate

2016	2015
Component	Component
46.51%	44.77%

Percentage of firms that remained in operation through their first five years.





Survival Rate

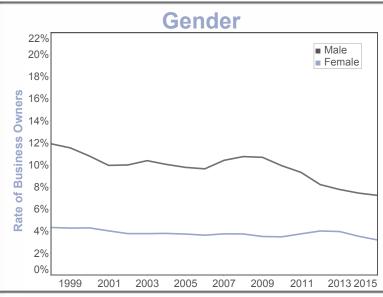


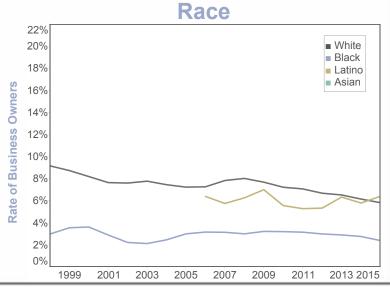


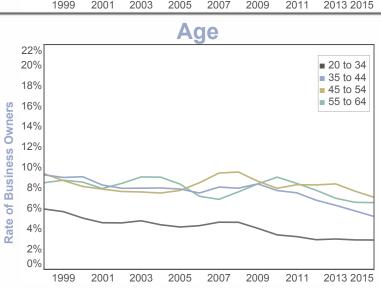
Tennessee

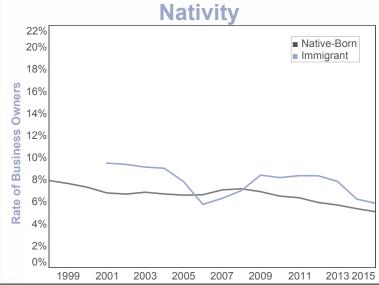
Business Owner Demographics

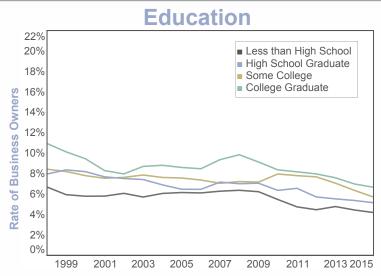
Rate of Business Owners by Demographic Group











2016 2015





Georgia

State Profile

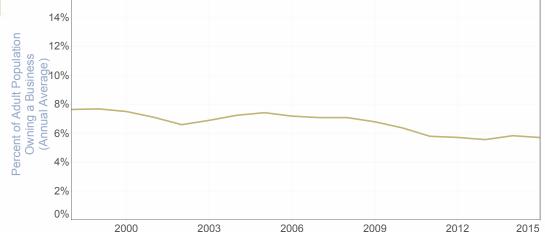
Rate of Business Owners

2016	2015
Component	Component
5.70%	5.83%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners 16% 14%



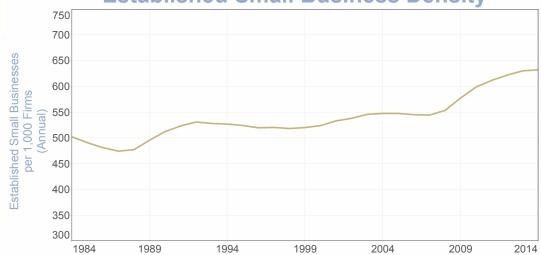
Established Small **Business Density**

2016	2015
Component	Component
632.5	630.6

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

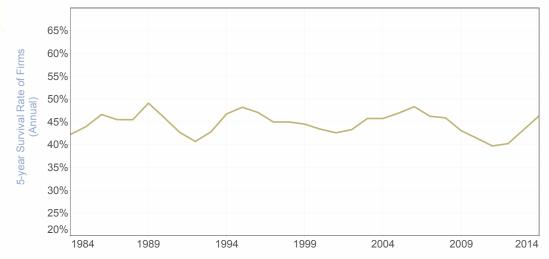


Survival Rate

2016	2015
Component	Component
46.40%	43.34%

Percentage of firms that remained in operation through their first five years.

Survival Rate



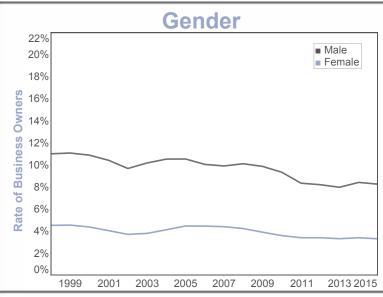


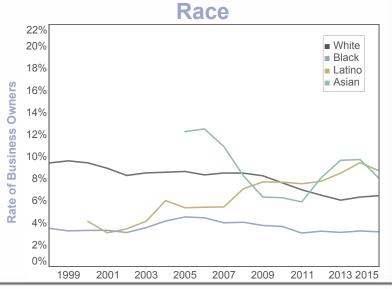


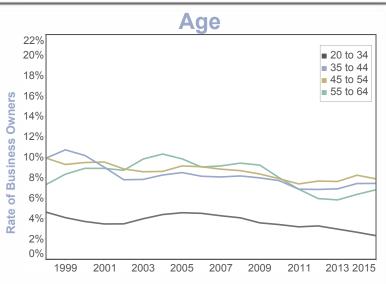
Georgia

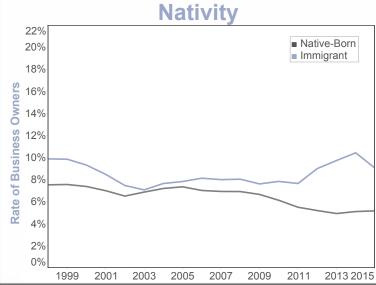
Business Owner Demographics

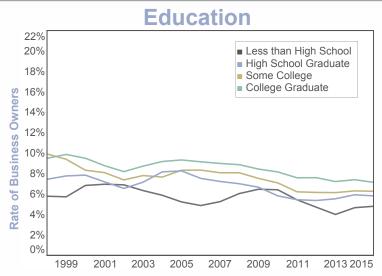
Rate of Business Owners by Demographic Group











2016 2015 23





Alabama

State Profile

Rate of Business Owners

2016	2015
Component	Component
3.89%	4.03%

adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small

Business Density

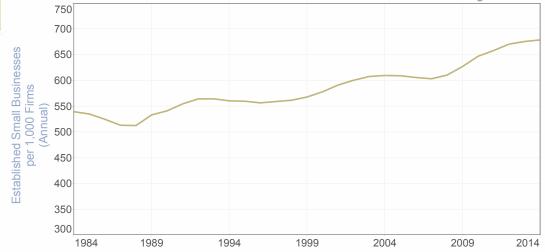
2016	2015
Component	Component
679.0	676.0

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density

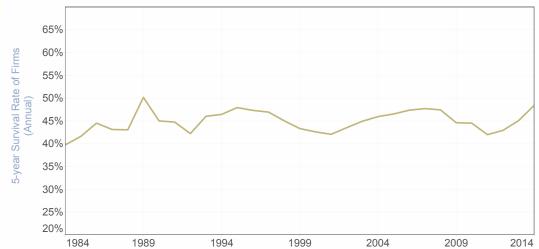


Survival Rate

2016	2015
Component	Component
48.48%	45.11%

Percentage of firms that remained in operation through their first five years.

Survival Rate



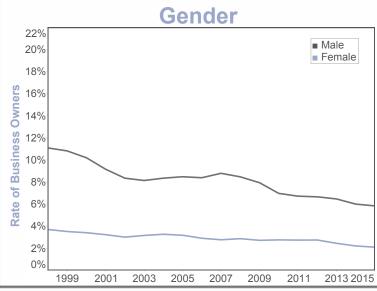


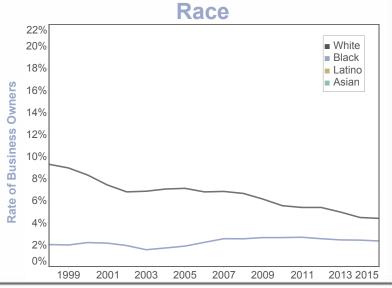


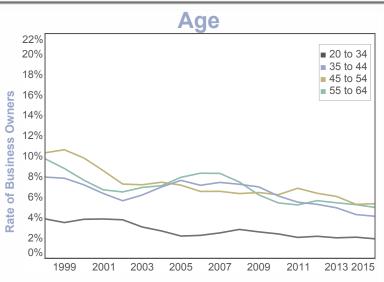
Alabama

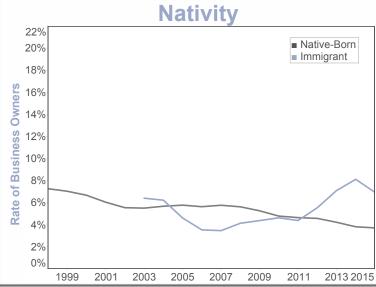
Business Owner Demographics

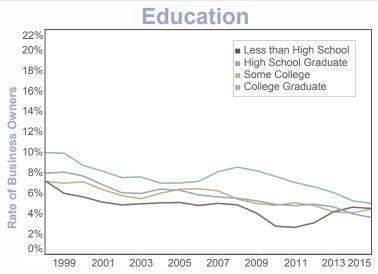
Rate of Business Owners by Demographic Group











2016 2015 24 19





Missouri

State Profile

Rate of Business Owners

2016	2015
Component	Component
6.24%	6.12%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small **Business Density**

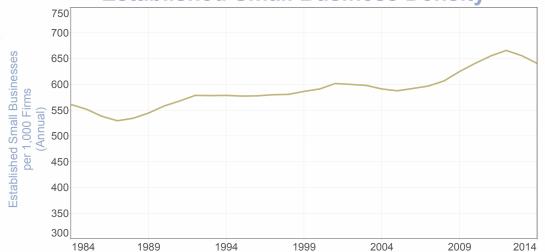
2016	2015
Component	Component
641.0	656.1

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
44.26%	42.90%

Percentage of firms that remained in operation through

their first five years.

Source: Author calculations from BDS

Survival Rate



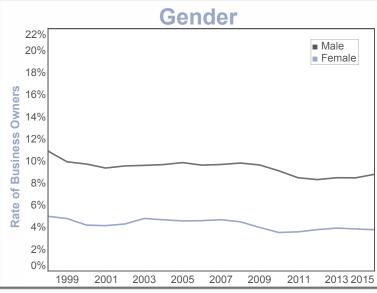


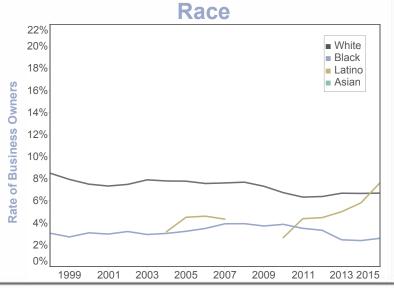


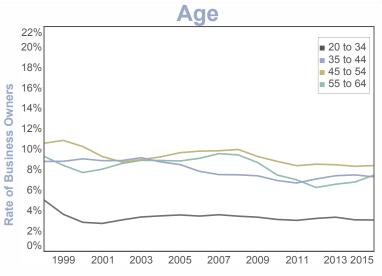
Missouri

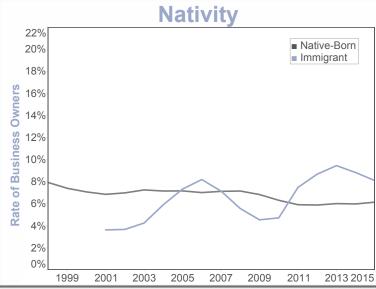
Business Owner Demographics

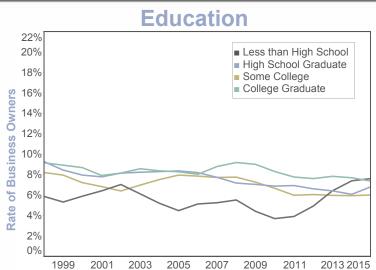
Rate of Business Owners by Demographic Group











Main Street Rank Larger States

2016 201525 25





Arizona

State Profile

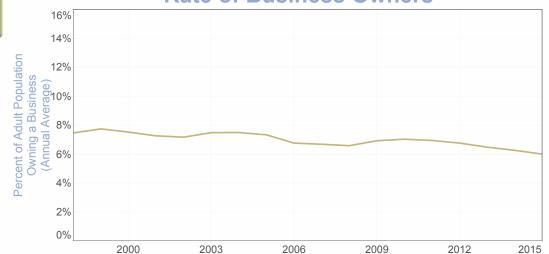
Rate of Business Owners

2016	2015
Component	Component
6.01%	6.27%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners



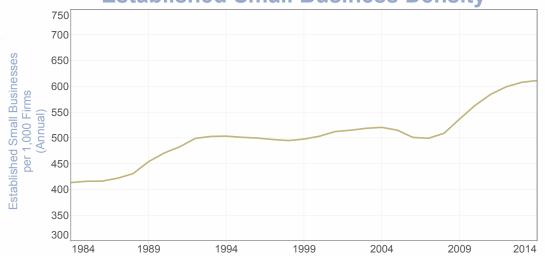
Established Small Business Density

2016	2015
Component	Component
611.8	608.4

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS.

Established Small Business Density

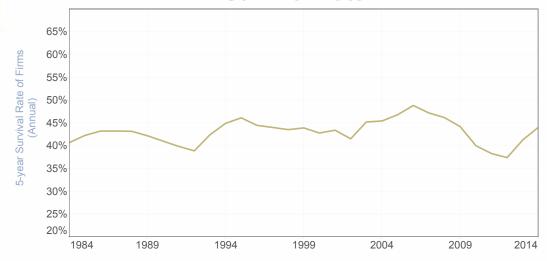


Survival Rate

2016	2015	
Component	Component	
44.06%	41.28%	

Percentage of firms that remained in operation through their first five years.

Survival Rate



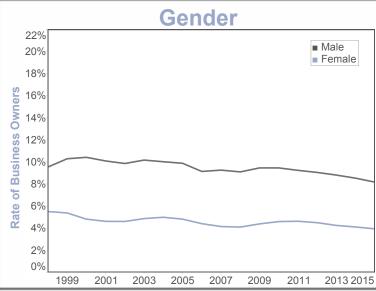


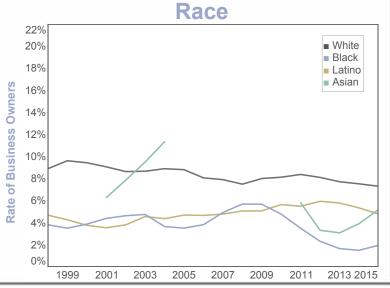


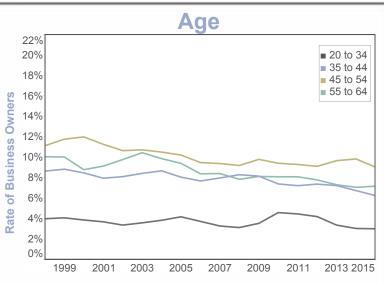
Arizona

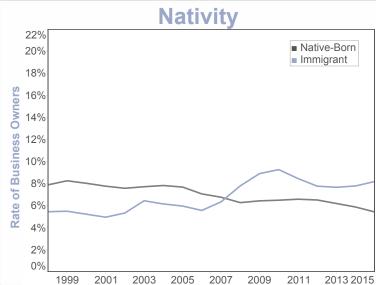
Business Owner Demographics

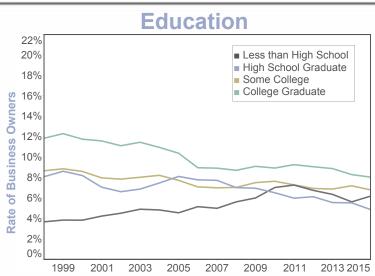
Rate of Business Owners by Demographic Group











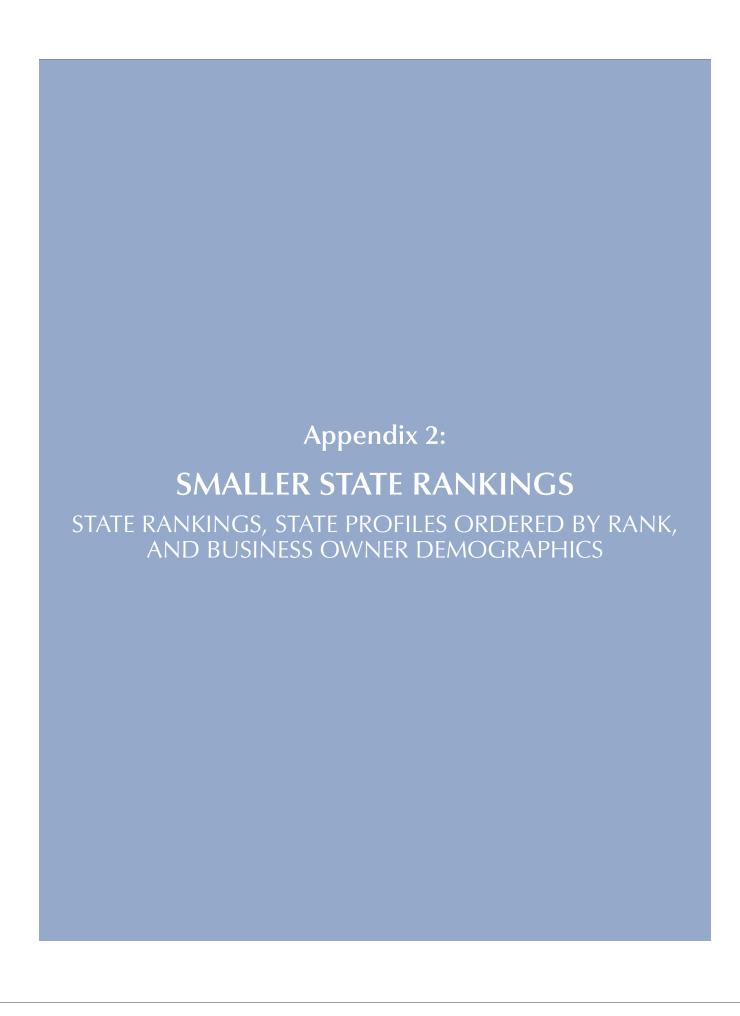


TABLE 2
Smaller States Rankings—Kauffman Index of Main Street Entrepreneurship
Twenty-Five Smallest U.S. States by Population

Rank 2016	Index 2016	State	Rank 2015	Change in Rank	Rate of Business Owners	Established Small Business Density	Survival Rate of Firms
1	3.97	South Dakota	1	0	10.15%	681.8	53.47%
2	3.82	Vermont	3	1	9.72%	707.1	52.41%
3	3.77	Montana	4	1	10.22%	689.8	51.81%
4	3.50	North Dakota	2	-2	9.06%	612.1	58.15%
5	3.02	Maine	7	2	8.65%	700.0	51.66%
6	2.74	lowa	6	0	7.66%	702.7	52.77%
7	2.66	Nebraska	5	-2	7.12%	682.8	55.03%
8	2.05	New Hampshire	8	0	7.41%	682.6	51.13%
9	1.77	Connecticut	12	3	6.55%	694.9	51.35%
10	1.74	Oregon	10	0	7.63%	659.1	50.37%
11	1.68	Wyoming	9	-2	8.06%	653.9	49.19%
12	1.51	Kansas	11	-1	6.69%	680.3	50.53%
13	1.19	Oklahoma	13	0	6.72%	658.5	50.09%
14	1.06	Hawaii	14	0	5.84%	685.4	50.26%
15	0.93	Idaho	15	0	7.47%	651.1	47.16%
16	0.63	Rhode Island	17	1	5.64%	686.7	48.51%
17	0.50	New Mexico	19	2	5.75%	660.9	49.07%
18	0.29	Mississippi	18	0	5.05%	678.8	48.90%
19	0.23	Alaska	16	-3	5.69%	664.5	47.68%
20	-0.02	West Virginia	23	3	4.07%	706.8	48.32%
21	-0.17	Arkansas	20	-1	4.91%	670.0	47.44%
22	-0.40	Kentucky	22	0	4.37%	657.7	48.48%
23	-0.50	Delaware	21	-2	5.05%	608.2	49.03%
24	-0.81	Utah	24	0	5.97%	599.1	45.49%
25	-2.45	Nevada	25	0	4.86%	544.3	43.41%

For an interactive version of the rankings, please see: www.kauffmanindex.org.

2016 2015



2% 0%

2000

2003



2012

2015

South Dakota

State Profile

Rate of Business Owners

2016	2015
Component	Component
10.15%	10.47%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners 16% 14%

Established Small Business Density

2016	2015
Component	Component
681.8	677.5

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

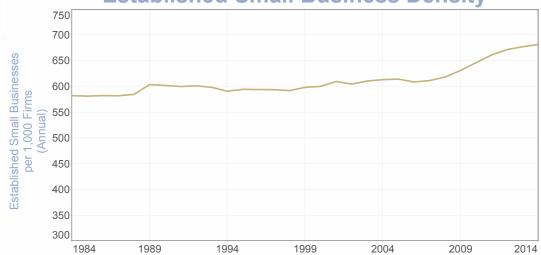
2006

2009

2004

2009

2014



Survival Rate

2016	2015	
Component	Component	
53.47%	52.78%	

Percentage of firms that remained in operation through their first five years.

65% 60% 5-year Survival Rate of Firms 55% 50% 45% 40% 35% 30% 25% 20%

1994

Survival Rate

Source: Author calculations from BDS

1984

1989

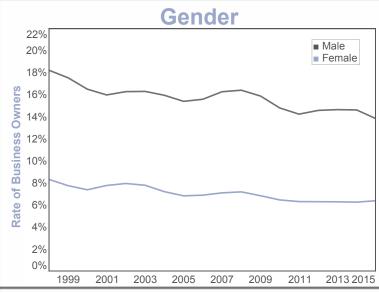


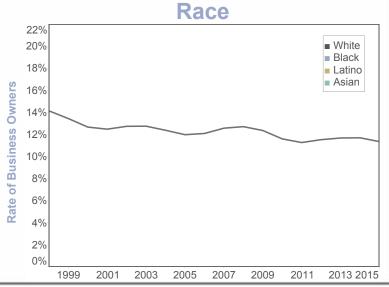


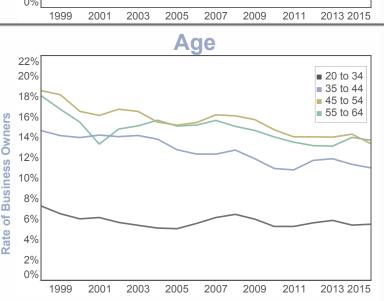
South Dakota

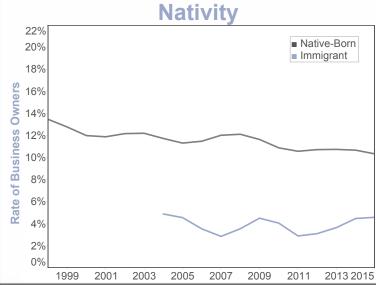
Business Owner Demographics

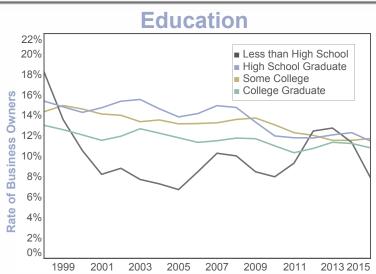
Rate of Business Owners by Demographic Group











2016 2015 2 3



2000

2003



2012

2015

Vermont

State Profile

Rate of Business Owners

2016	2015
Component	Component
9.72%	9.97%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners 16% 14% 12% 8% 8% 6% 2% 0%

2006

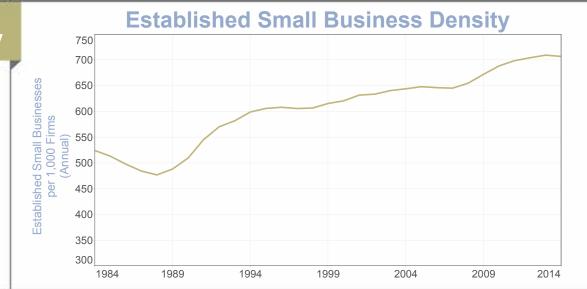
2009

Established Small Business Density

2016	2015
Component	Component
707.1	709.6

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

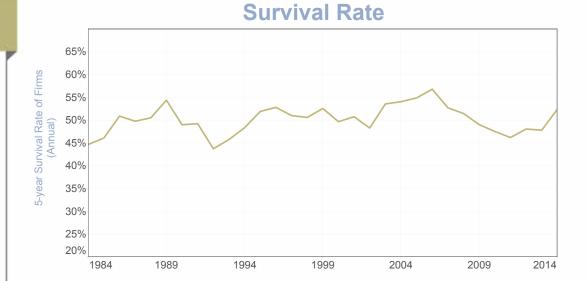
Source: Author calculations from BDS.



Survival Rate

2016	2015	
Component	Component	
52.41%	47.82%	

Percentage of firms that remained in operation through their first five years.



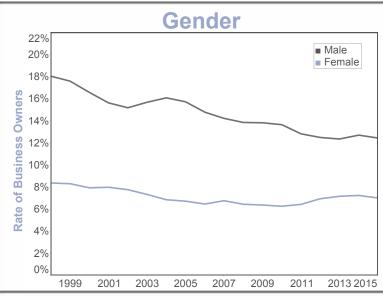


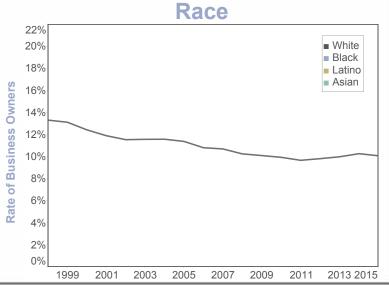


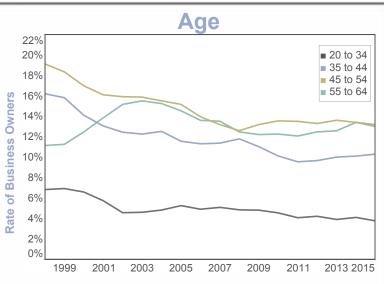
Vermont

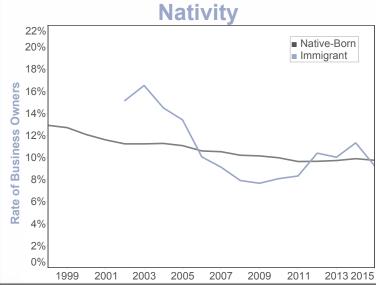
Business Owner Demographics

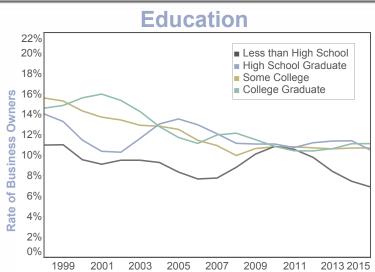
Rate of Business Owners by Demographic Group











2016 2015





Montana

State Profile

Rate of Business Owners

2016	2015	
Component	Component	
10.22%	10.13%	

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small **Business Density**

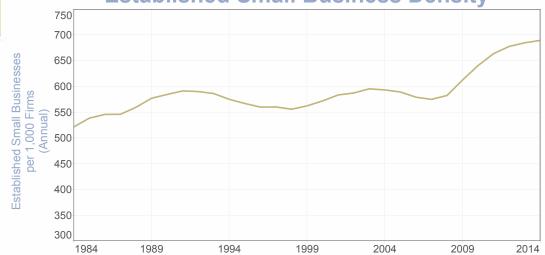
2016	2015
Component	Component
689.8	685.1

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
51.81%	46.54%

Percentage of firms that remained in operation through their first five years.

Survival Rate 65%



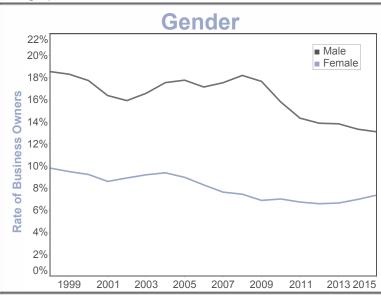


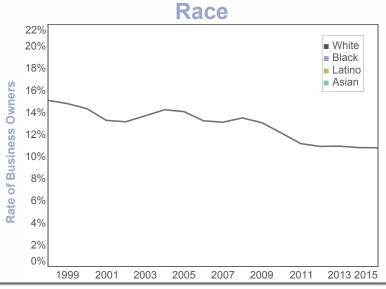


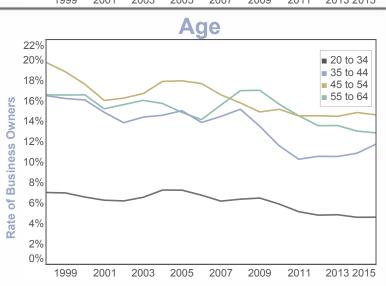
Montana

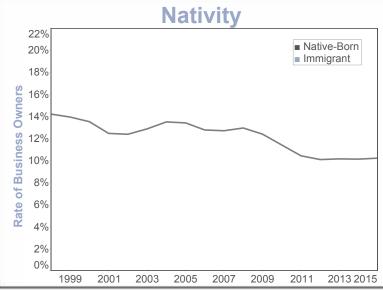
Business Owner Demographics

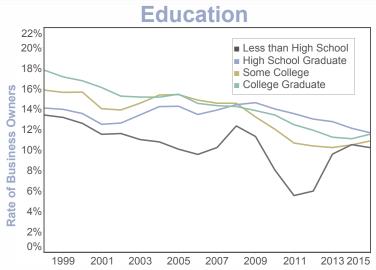
Rate of Business Owners by Demographic Group











2016 2015 4



2% 0%

2000

2003



2012

2015

North Dakota

State Profile

Rate of Business Owners

2016	2015
Component	Component
9.06%	9.63%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners 16% 14%

Established Small Business Density

2016	2015
Component	Component
612.1	621.4

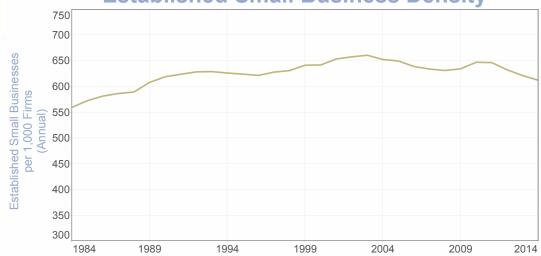
Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

2006

2009

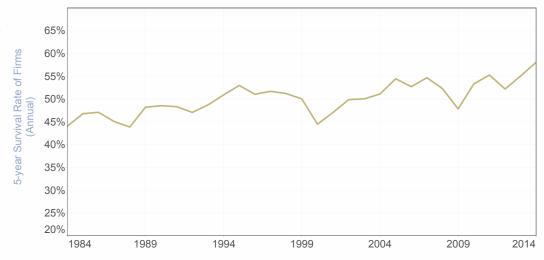


Survival Rate

2016	2015
Component	Component
58.15%	55.12%

Percentage of firms that remained in operation through their first five years.

Survival Rate



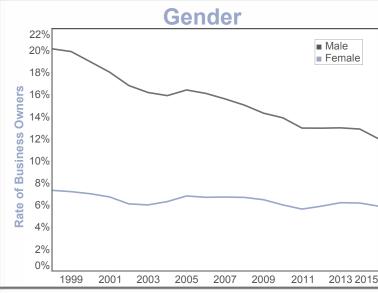


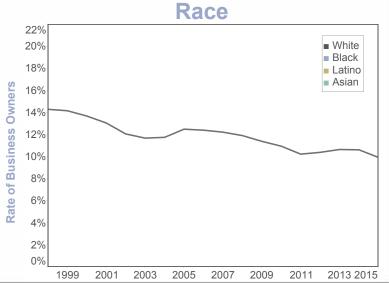


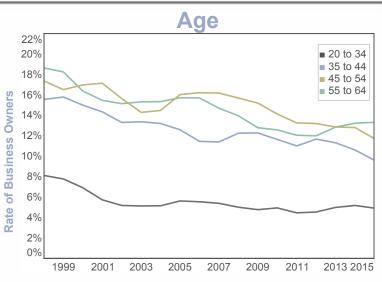
North Dakota

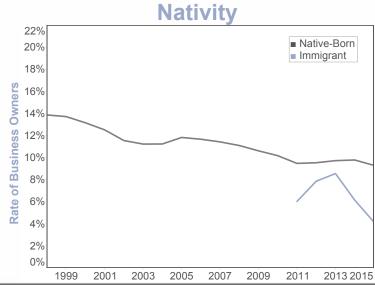
Business Owner Demographics

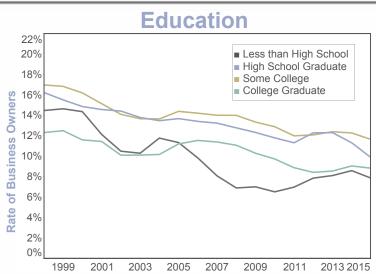
Rate of Business Owners by Demographic Group











2016 2015





Maine

State Profile

Rate of Business Owners

2016	2015
Component	Component
8.65%	8.27%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners 16% 14% Percent of Adult Population Owning a Business (Annual Average) 8,8 % 7,8 % 8,9 % 8,4 % 2% 0% 2000 2003 2006 2009 2012 2015

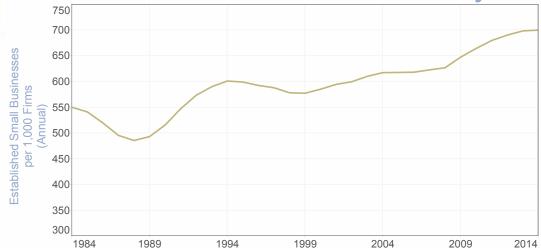
Established Small Business Density

2016	2015
Component	Component
700.0	698.4

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

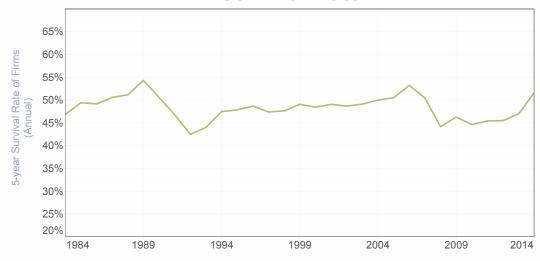


Survival Rate

2016	2015
Component	Component
51.66%	47.02%

Percentage of firms that remained in operation through their first five years.

Survival Rate



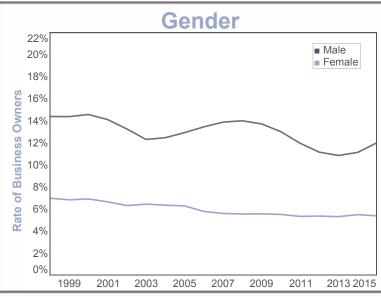


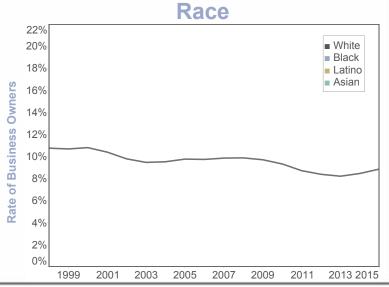


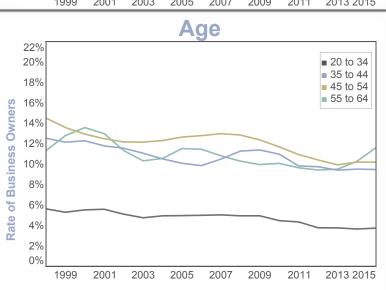
Maine

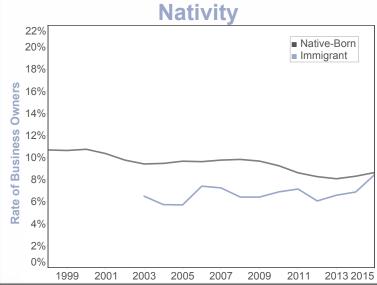
Business Owner Demographics

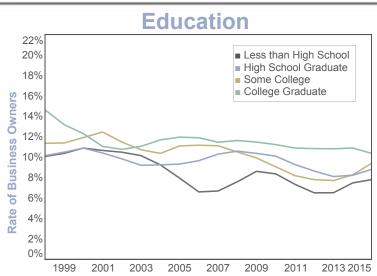
Rate of Business Owners by Demographic Group











2016 2015 6 6





lowa

State Profile

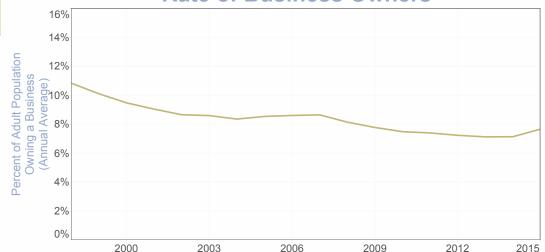
Rate of Business Owners

2016	2015
Component	Component
7.66%	7.14%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners 16%



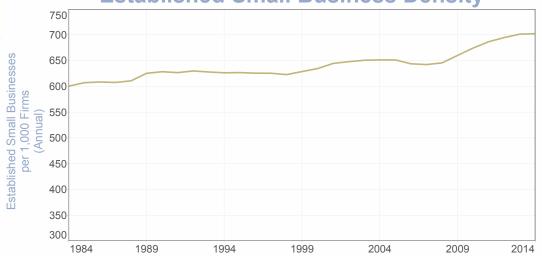
Established Small **Business Density**

2016	2015
Component	Component
702.7	701.9

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density



Survival Rate

2016	2015
Component	Component
52.77%	50.82%

Percentage of firms that remained in operation through their first five years.

65% 60% 5-year Survival Rate of Firms 55% 50% 45% 40% 35% 30% 25%

2004

2009

2014

1994

Survival Rate

Source: Author calculations from BDS

20%

1984

1989

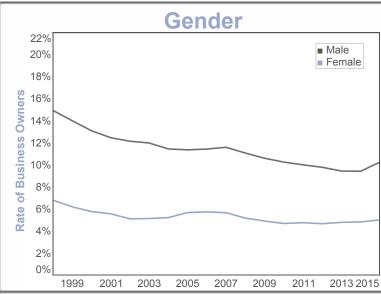


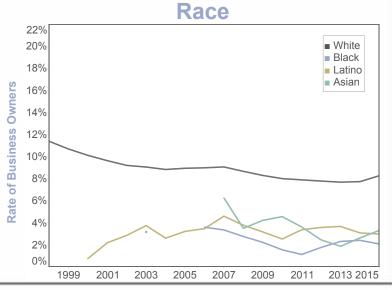


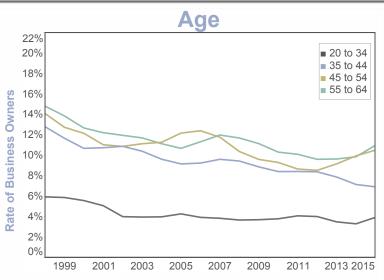
lowa

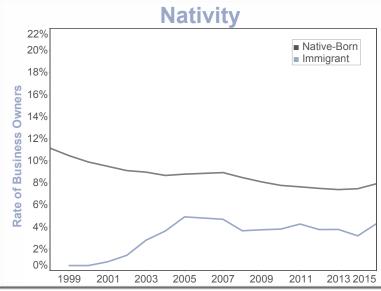
Business Owner Demographics

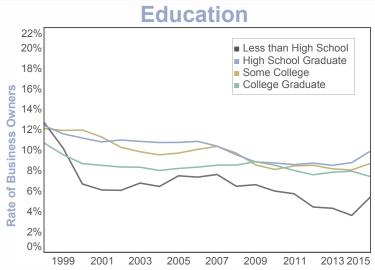
Rate of Business Owners by Demographic Group











2016 2015





Nebraska

State Profile

Rate of Business Owners

2016	2015
Component	Component
7.12%	7.93%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small Business Density

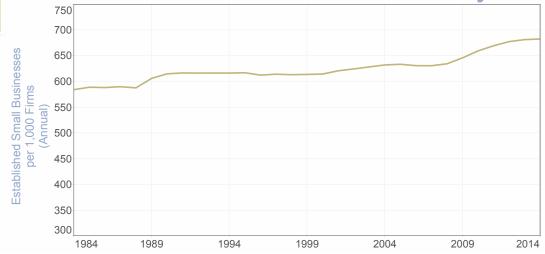
2016	2015
Component	Component
682.8	681.5

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
55.03%	52.73%

Percentage of firms that remained in operation through their first five years.



1994

1989

Source: Author calculations from BDS

2004

2009

2014

Survival Rate

20%

1984

65% 60%

55%

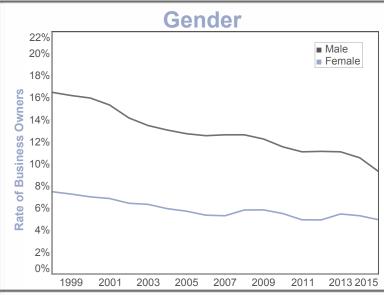


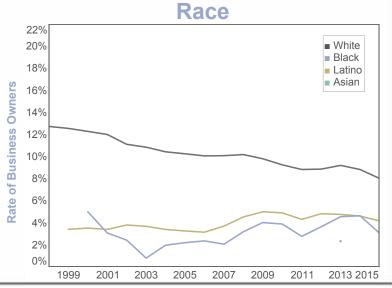


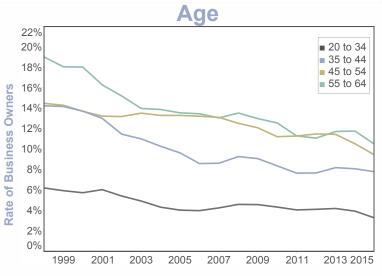
Nebraska

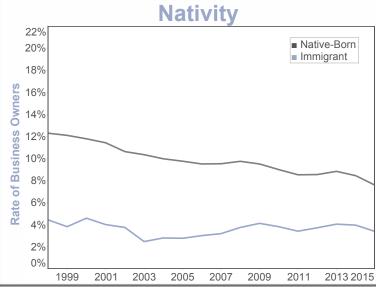
Business Owner Demographics

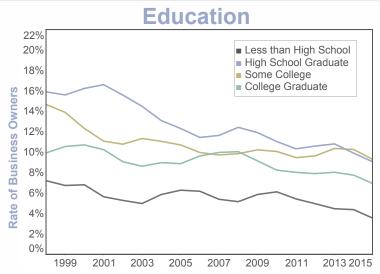
Rate of Business Owners by Demographic Group











2016 2015 8 8





New Hampshire

State Profile

Rate of Business Owners

2016	2015
Component	Component
7.41%	7.69%

adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Measures the percent of the

Established Small **Business Density**

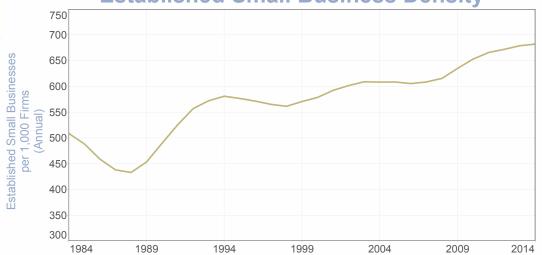
2016	2015
Component	Component
682.6	679.3

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
51.13%	48.16%

Percentage of firms that remained in operation through

their first five years.

Source: Author calculations from BDS

Survival Rate



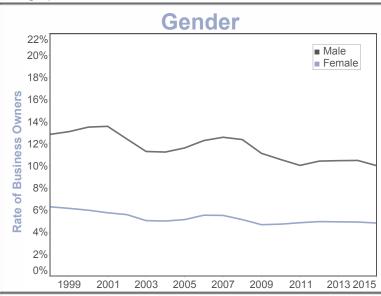


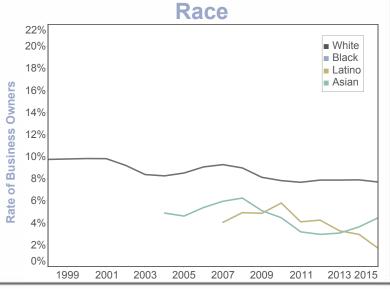


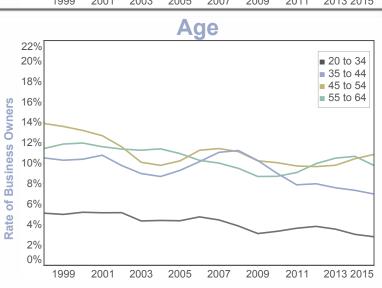
New Hampshire

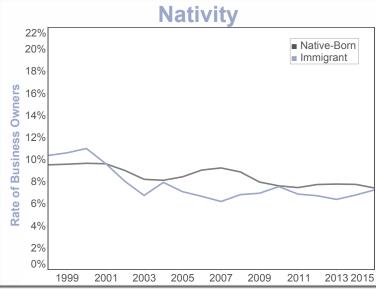
Business Owner Demographics

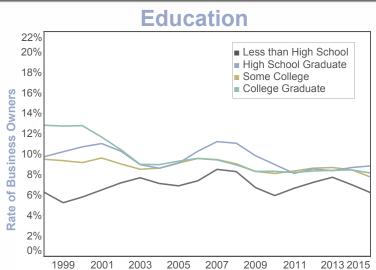
Rate of Business Owners by Demographic Group











2016 2015 9





Connecticut

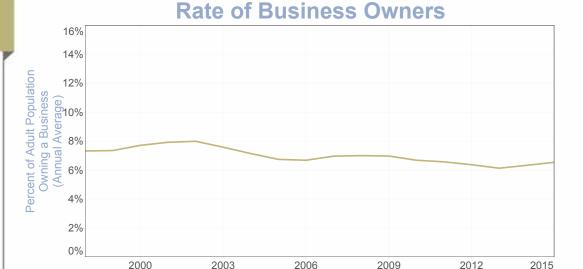
State Profile

Rate of Business Owners

2016	2015
Component	Component
6.55%	6.34%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



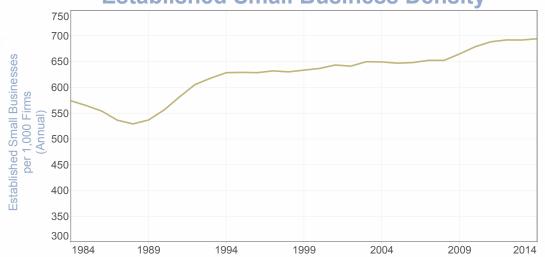
Established Small **Business Density**

2016	2015
Component	Component
694.9	692.3

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

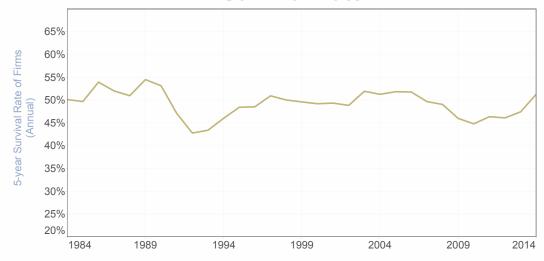


Survival Rate

2016	2015
Component	Component
51.35%	47.47%

Percentage of firms that remained in operation through their first five years.

Survival Rate



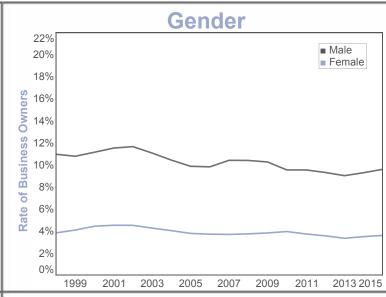


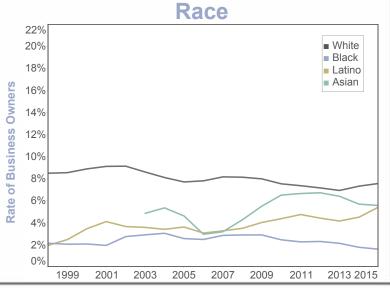


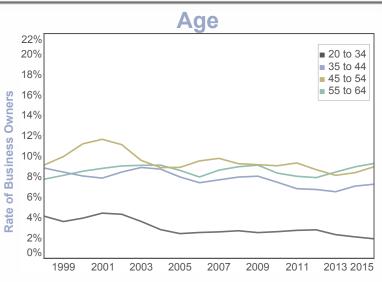
Connecticut

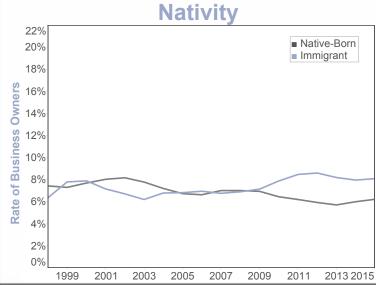
Business Owner Demographics

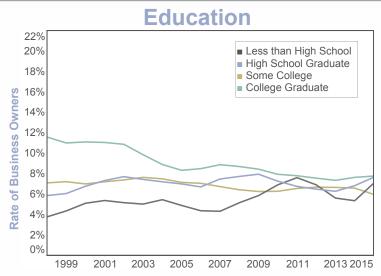
Rate of Business Owners by Demographic Group











2016 2015 10 10





Oregon

State Profile

Rate of Business Owners

2016	2015
Component	Componen
7.63%	7.84%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small Business Density

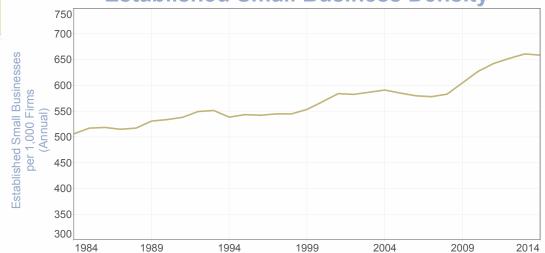
2016	2015
Component	Component
659.1	661.4

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
50.37%	46.75%

Percentage of firms that remained in operation through their first five years.



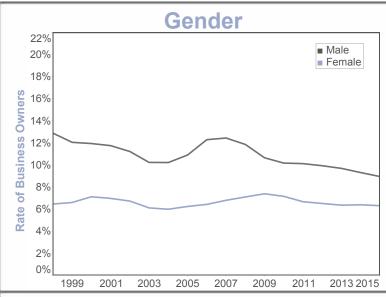


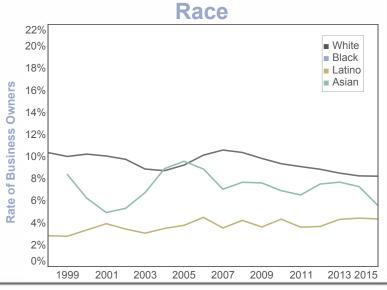


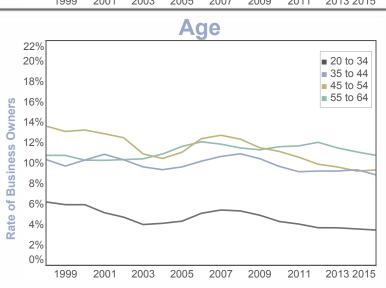
Oregon

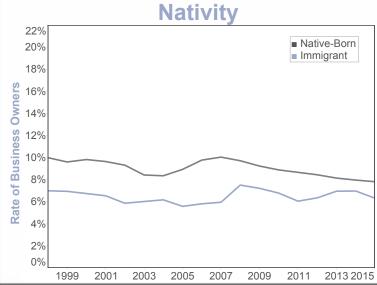
Business Owner Demographics

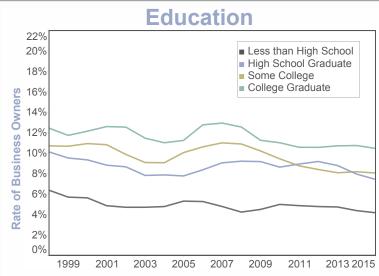
Rate of Business Owners by Demographic Group











2016 2015 9



2000



2012

2015

Wyoming

State Profile

Rate of Business Owners

2016	2015
Component	Component
8.06%	7.71%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners 16% 14%

2003

2% 0%

Established Small Business Density

2016	2015
Component	Component
653.9	653.1

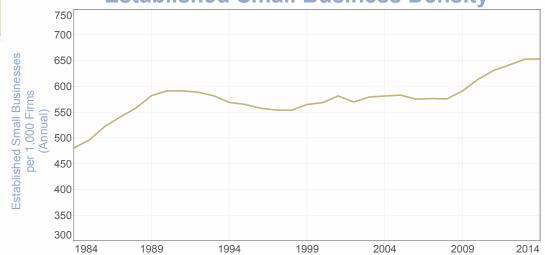
Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

2006

2009

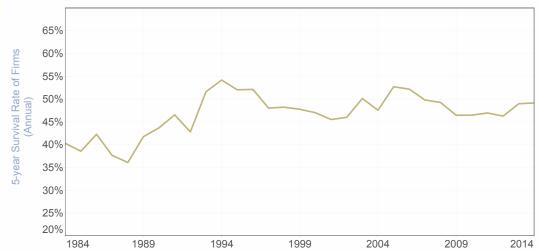


Survival Rate

2016	2015
Component	Component
49.19%	49.01%

Percentage of firms that remained in operation through their first five years.

Survival Rate



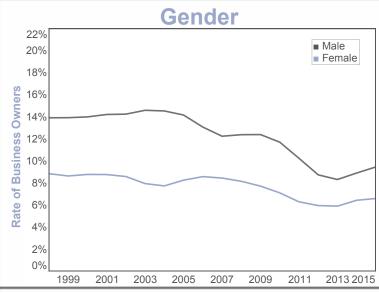


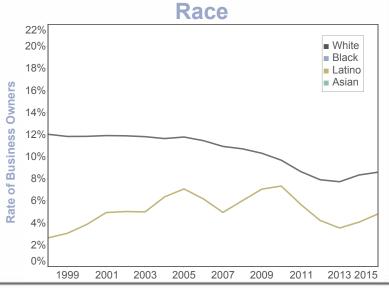


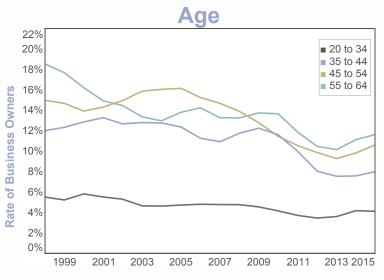
Wyoming

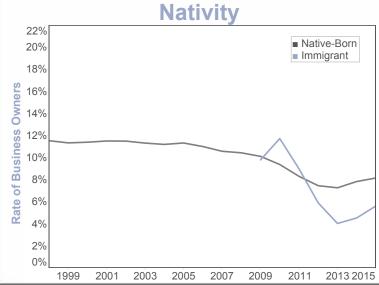
Business Owner Demographics

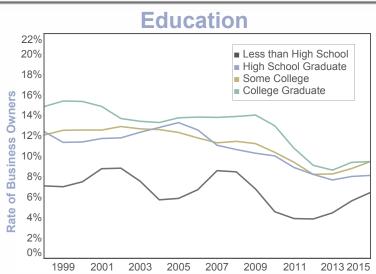
Rate of Business Owners by Demographic Group











2016 2015





Kansas

State Profile

Rate of Business Owners

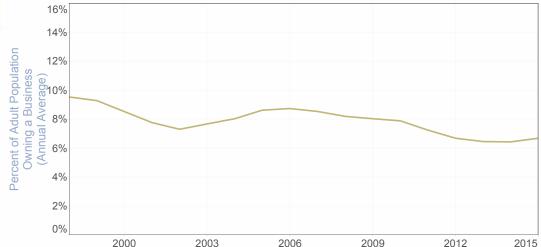
2016	2015
Component	Component
6.69%	6.44%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Rate of Business Owners 16%



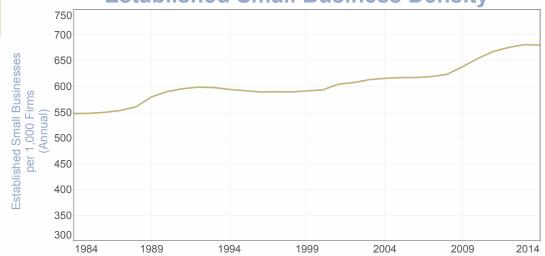
Established Small **Business Density**

2016	2015
Component	Component
680.3	681.5

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density



Survival Rate

2016	2015
Component	Component
50.53%	48.26%

Percentage of firms that remained in operation through their first five years.

Survival Rate



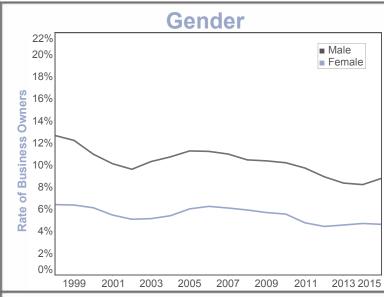


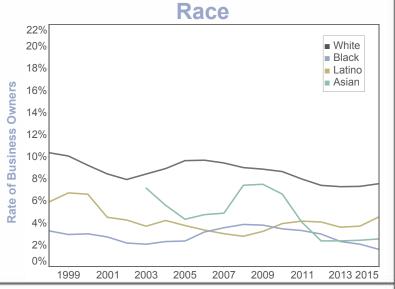


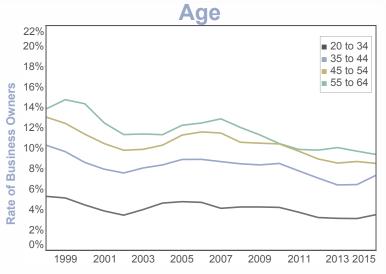
Kansas

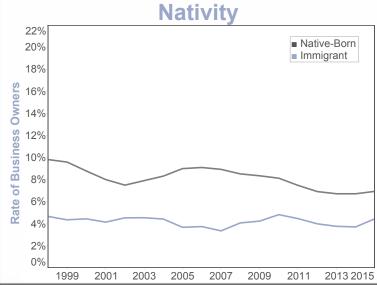
Business Owner Demographics

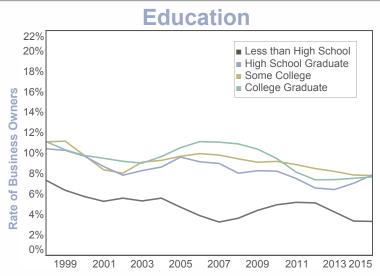
Rate of Business Owners by Demographic Group











2016 2015 13 13





Oklahoma

State Profile

Rate of Business Owners

2016	2015
Component	Component
6.72%	6.54%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Established Small Business Density

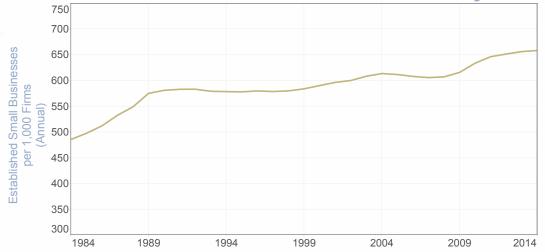
2016	2015
Component	Component
658.5	656.2

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density

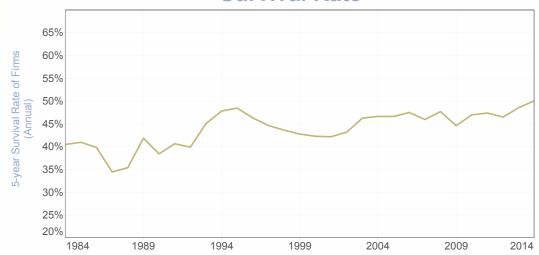


Survival Rate

2016	2015
Component	Component
50.09%	48.59%

Percentage of firms that remained in operation through their first five years.

Survival Rate



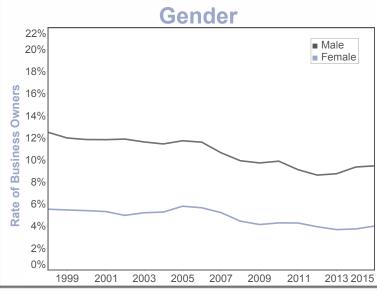


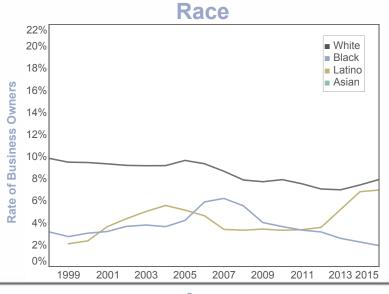


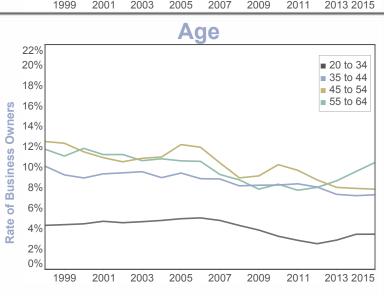
Oklahoma

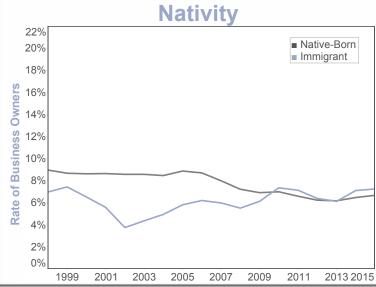
Business Owner Demographics

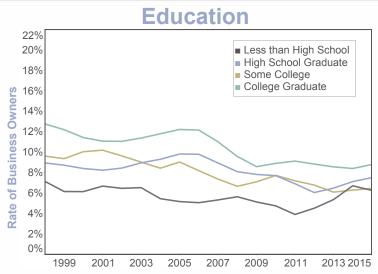
Rate of Business Owners by Demographic Group











2016 2015 14 14



16%

0%

2000



2012

2015

Hawaii

State Profile

Rate of Business Owners

Rate of Business Owners

2016	2015
Component	Component
5.84%	6.00%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



2003

Established Small **Business Density**

2016	2015
Component	Component
685.4	686.0

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

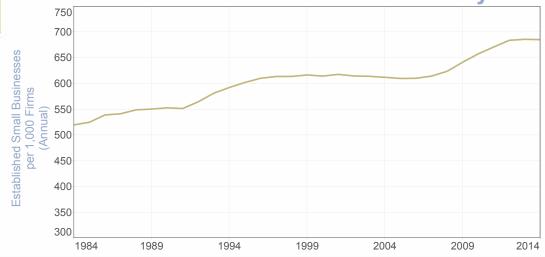
2006

2009

2004

2009

2014



Survival Rate

2016	2015
Component	Component
50.26%	47.97%

Percentage of firms that remained in operation through their first five years.

65% 60% 5-year Survival Rate of Firms 55% 50% 45% 40% 35% 30% 25%

1994

Survival Rate

Source: Author calculations from BDS

20%

1984

1989

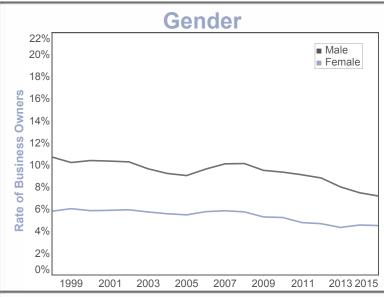


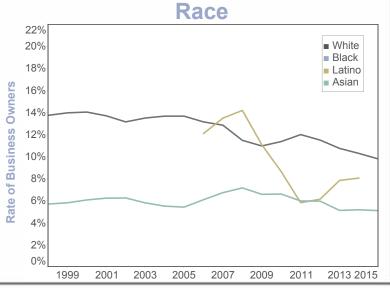


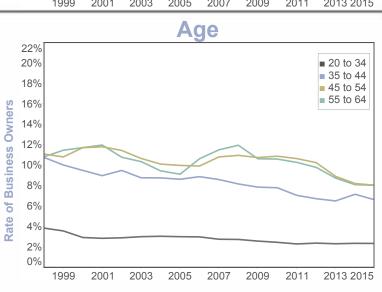
Hawaii

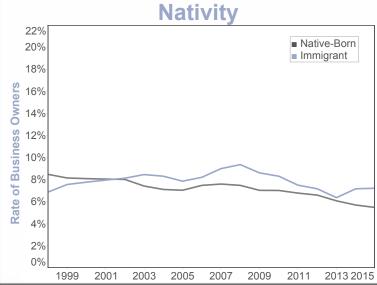
Business Owner Demographics

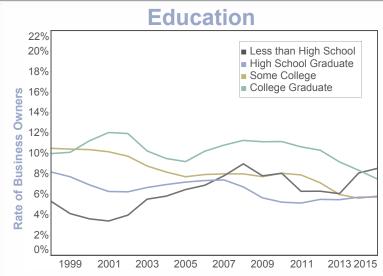
Rate of Business Owners by Demographic Group











2015 2016 15





Idaho

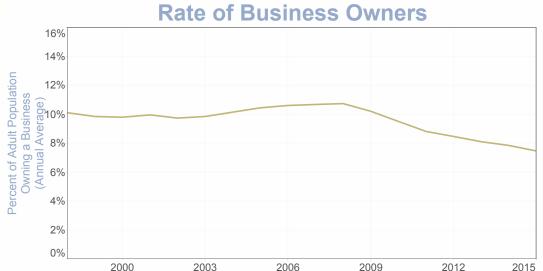
State Profile

Rate of Business Owners

2016	2015
Component	Component
7.47%	7.85%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



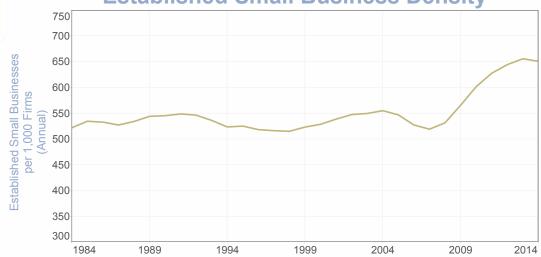
Established Small Business Density

2016	2015
Component	Component
651.1	655.9

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density



Survival Rate

2016	2015
Component	Component
47.16%	43.74%

Percentage of firms that remained in operation through their first five years.

Survival Rate



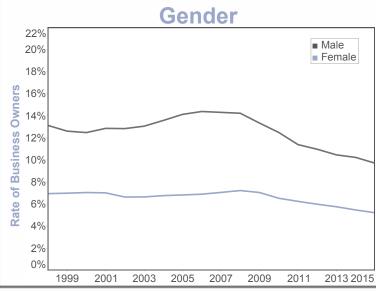


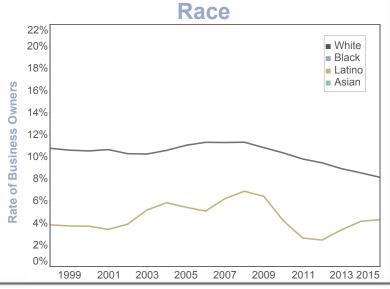


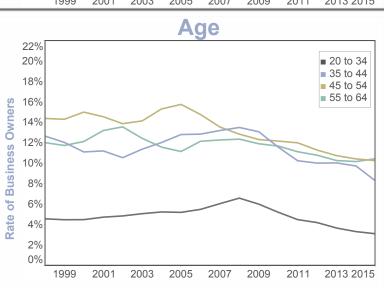
Idaho

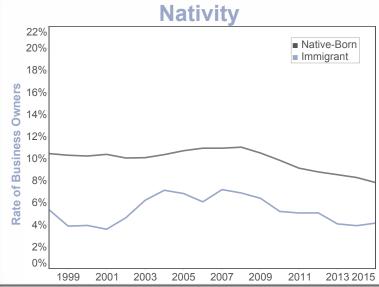
Business Owner Demographics

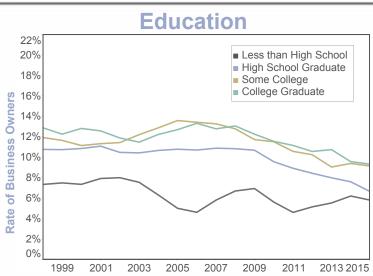
Rate of Business Owners by Demographic Group











2016 2015 16





Rhode Island

State Profile

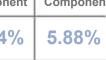
Rate of Business

2016	2015
Component	Component
5.64%	5.88%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Owners



Established Small **Business Density**

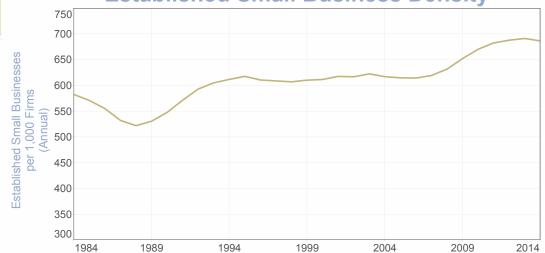
2016	2015
Component	Component
686.7	691.5

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density

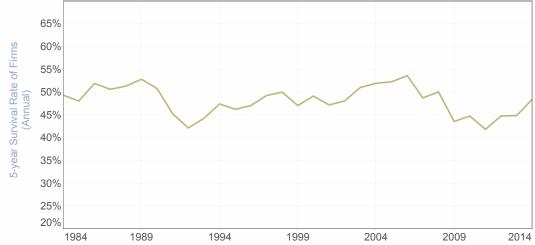


Survival Rate

2016	2015
Component	Component
48.51%	44.88%

Percentage of firms that remained in operation through their first five years.

Survival Rate 65%



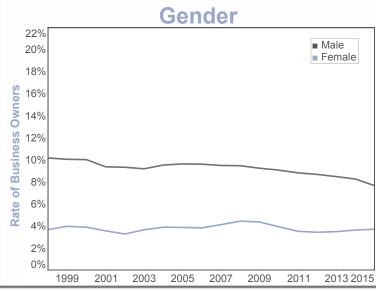


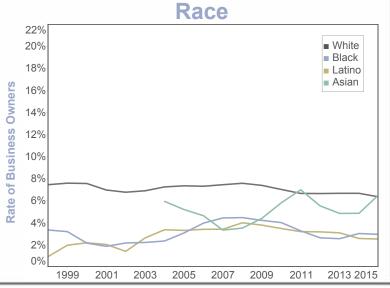


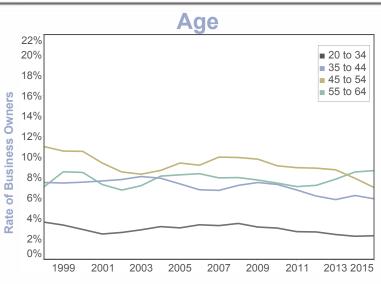
Rhode Island

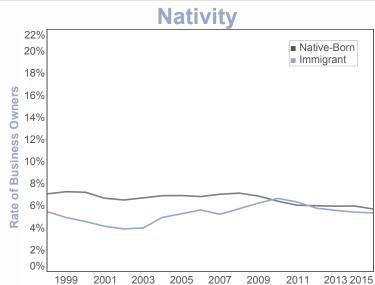
Business Owner Demographics

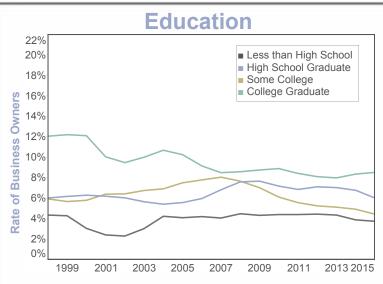
Rate of Business Owners by Demographic Group











2016 2015 19





New Mexico

State Profile

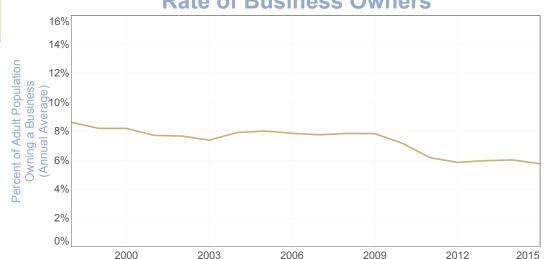
Rate of Business Owners

2016	2015
Component	Component
5.75%	6.02%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners



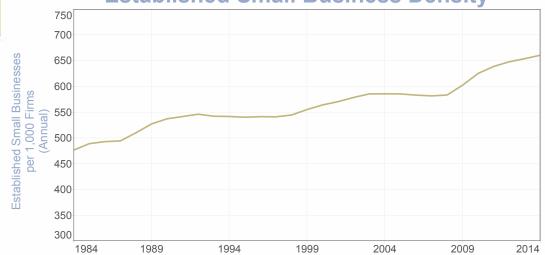
Established Small Business Density

2016	2015
Component	Component
660.9	654.2

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

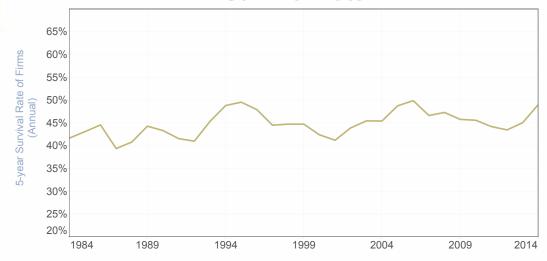


Survival Rate

2016	2015
Component	Component
49.07%	45.08%

Percentage of firms that remained in operation through their first five years.

Survival Rate



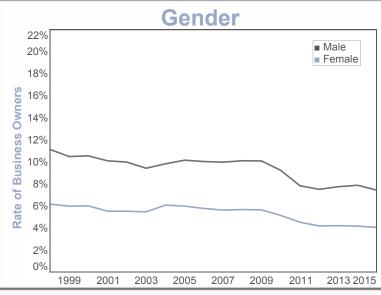


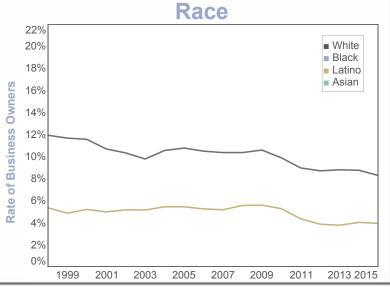


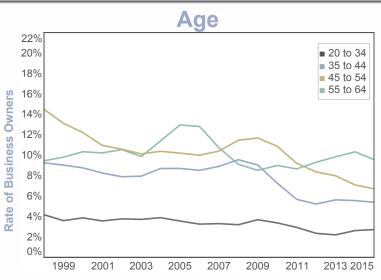
New Mexico

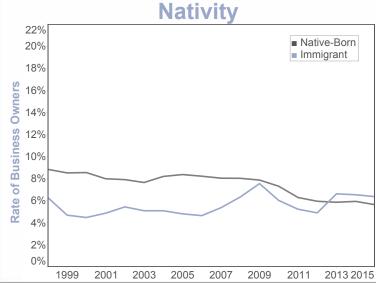
Business Owner Demographics

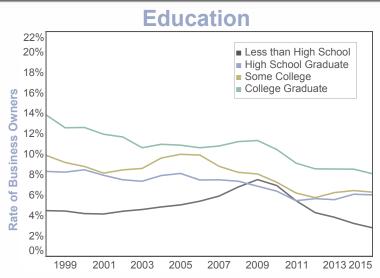
Rate of Business Owners by Demographic Group











2016 2015 18 18



2000

2003



2012

2015

Mississippi

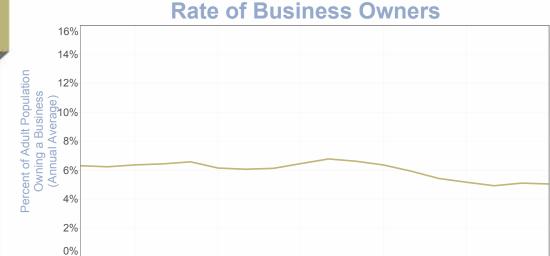
State Profile

Rate of Business Owners

2016	2015
Component	Component
5.05%	5.11%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small Business Density

2016	2015
Component	Component
678.8	677.1

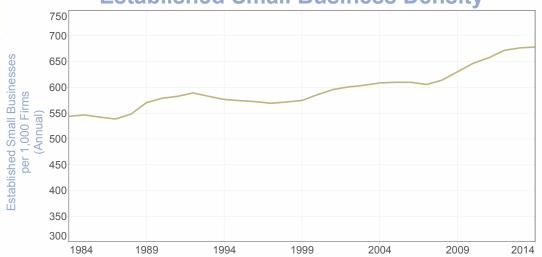
Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

2006

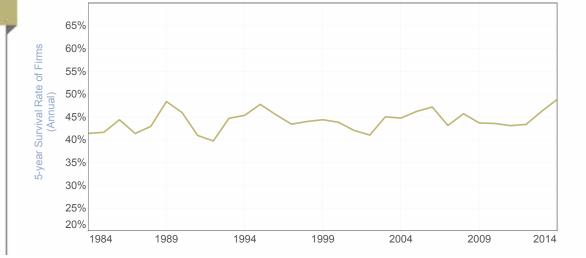
2009



Survival Rate

2016	2015
Component	Component
48.90%	46.27%

Percentage of firms that remained in operation through their first five years.



Survival Rate

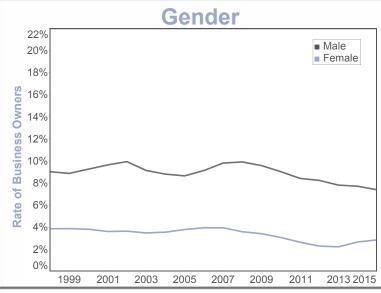


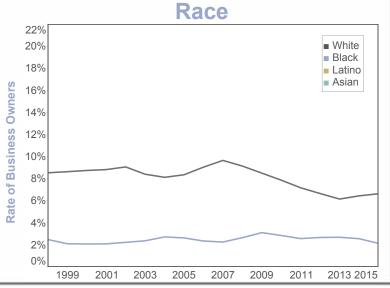


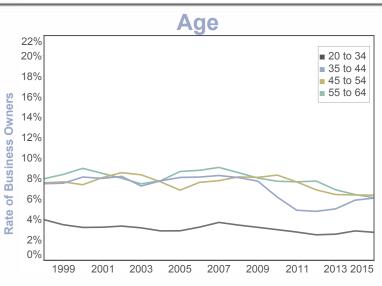
Mississippi

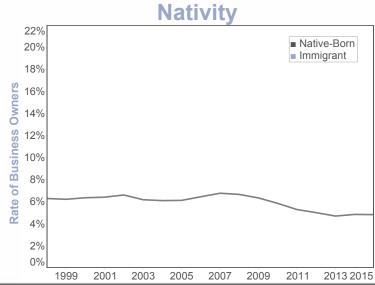
Business Owner Demographics

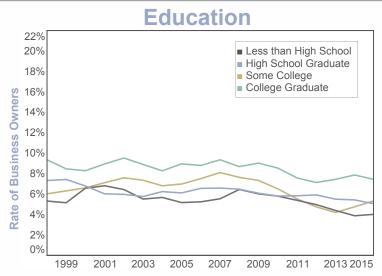
Rate of Business Owners by Demographic Group











2015 2016 19 16





Alaska

State Profile

Rate of Business

2016	2015
Component	Componen
5.69%	6.20%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Owners



Established Small Business Density

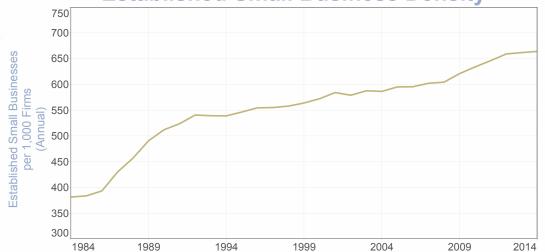
2016	2015
Component	Component
664.5	662.1

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
47.68%	46.74%

Percentage of firms that remained in operation through their first five years.

60% 5-year Survival Rate of Firms 55% 50% 45% 40% 35% 30% 25% 20%

2004

2009

2014

1994

Survival Rate

Source: Author calculations from BDS

1984

1989

65%

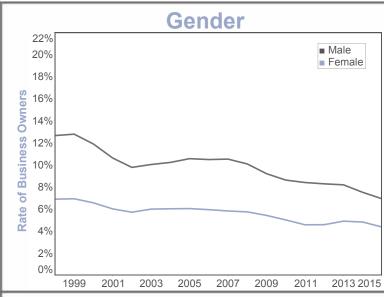


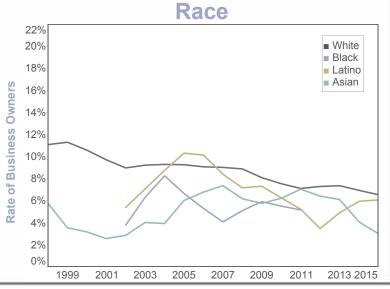


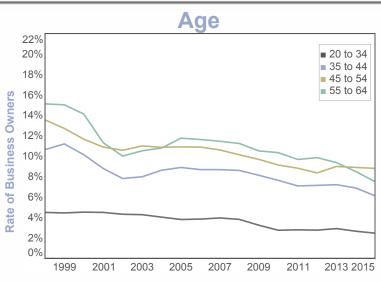
Alaska

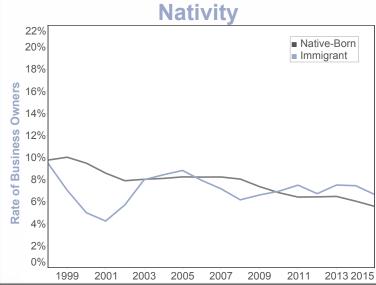
Business Owner Demographics

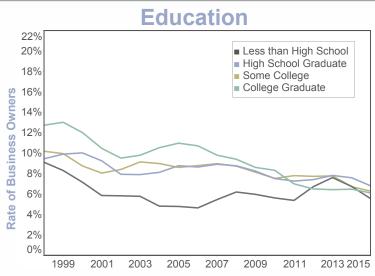
Rate of Business Owners by Demographic Group











2016 2015 20





West Virginia

State Profile

Rate of Business

2016	2015
Component	Component
4.07%	3.94%

adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Owners

Measures the percent of the

Established Small **Business Density**

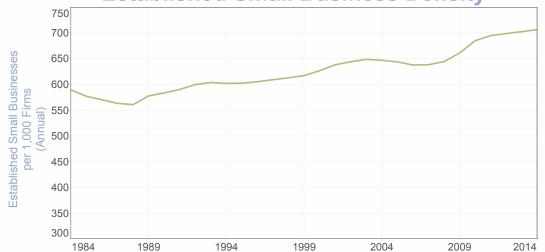
2016	2015
Component	Component
706.8	702.9

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

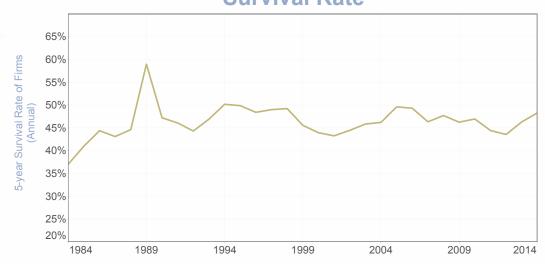
2016	2015
Component	Component
48.32%	46.34%

Percentage of firms that remained in operation through

their first five years.

Source: Author calculations from BDS

Survival Rate



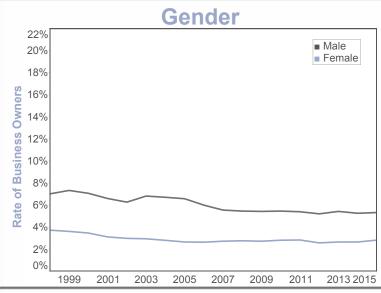


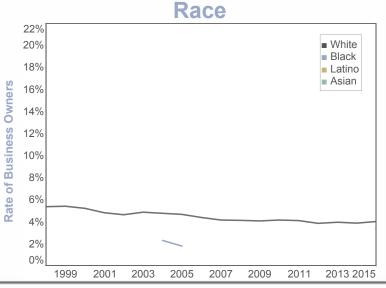


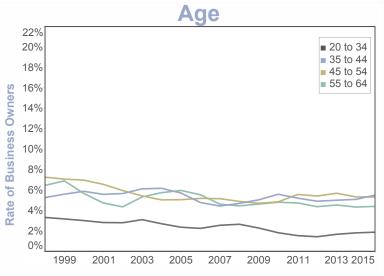
West Virginia

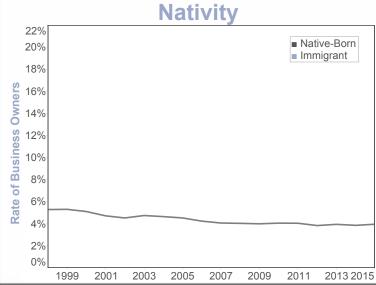
Business Owner Demographics

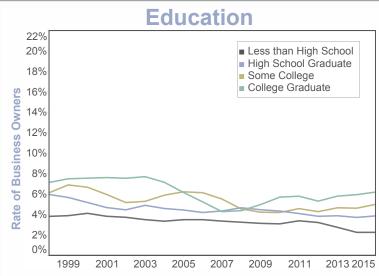
Rate of Business Owners by Demographic Group











2016 2015 20





Arkansas

State Profile

Rate of Business Owners

2016	2015
Component	Component
4.91%	4.86%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Established Small **Business Density**

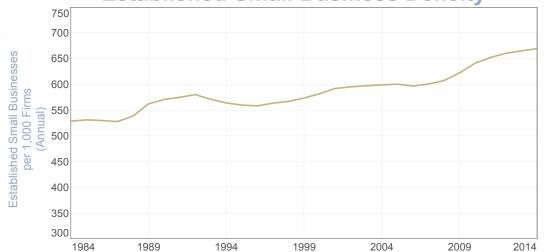
2016	2015
Component	Component
670.0	665.6

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density

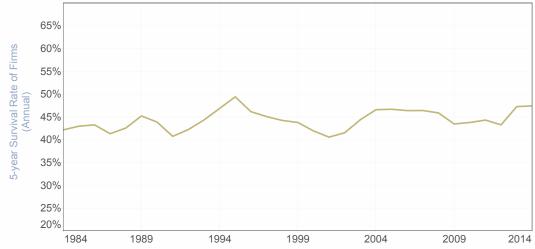


Survival Rate

2016	2015
Component	Component
47.44%	47.29%

Percentage of firms that remained in operation through their first five years.

Survival Rate



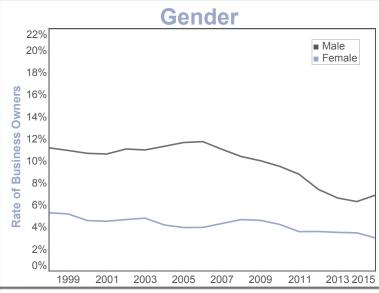


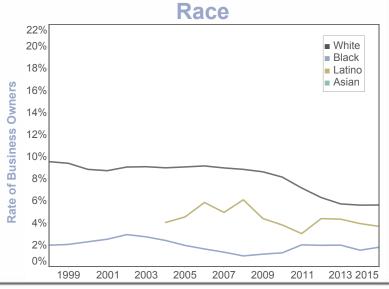


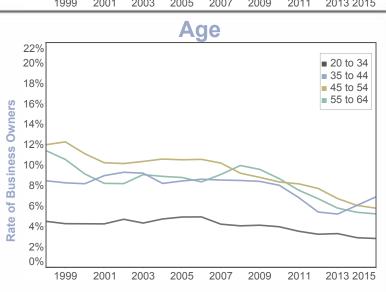
Arkansas

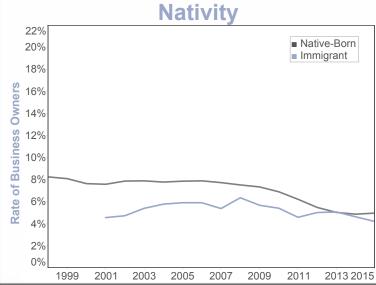
Business Owner Demographics

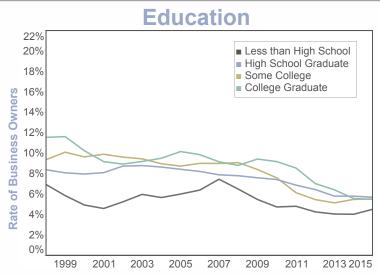
Rate of Business Owners by Demographic Group











2016 2015





Kentucky

State Profile

Rate of Business **Owners**

2016	2015
Component	Component
4.37%	4.42%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Established Small Business Density

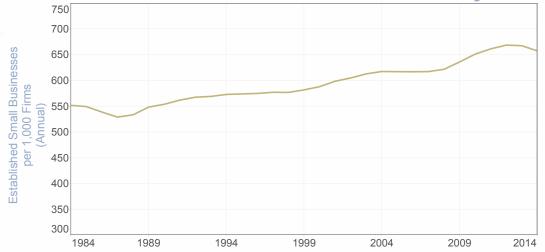
2016	2015
Component	Component
657.7	667.7

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
48.48%	47.64%

Percentage of firms that remained in operation through their first five years.

65% 60% 5-year Survival Rate of Firms 55% 50% 45% 40% 35% 30%

2004

2009

2014

1994

Survival Rate

Source: Author calculations from BDS

25% 20%

1984

1989

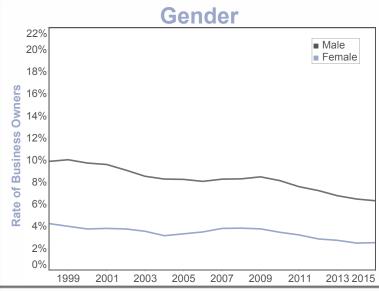


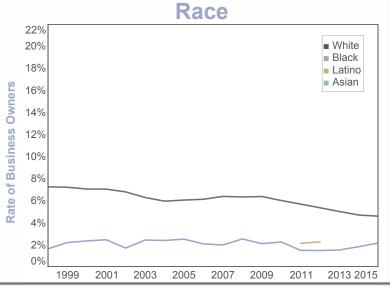


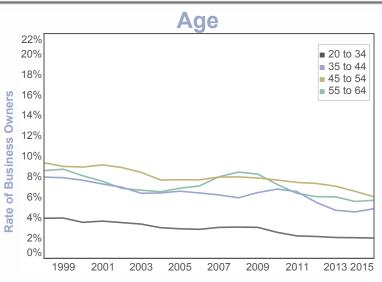
Kentucky

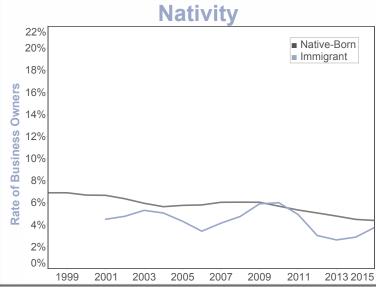
Business Owner Demographics

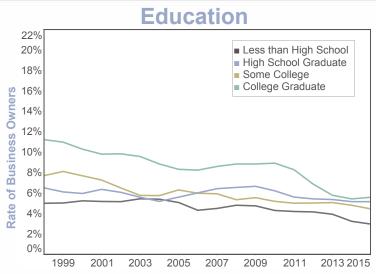
Rate of Business Owners by Demographic Group











2016 2015





Delaware

State Profile

Rate of Business Owners

2016	2015
Component	Component
5.05%	5.22%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.



Established Small **Business Density**

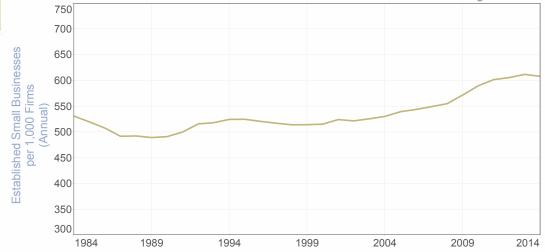
2016	2015
Component	Component
608.2	612.0

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Rate of Business Owners 16% 14% 2% 0% 2000 2003 2006 2009 2012 2015

Established Small Business Density



Survival Rate

2016	2015
Component	Component
49.03%	49.32%

Percentage of firms that remained in operation through their first five years.



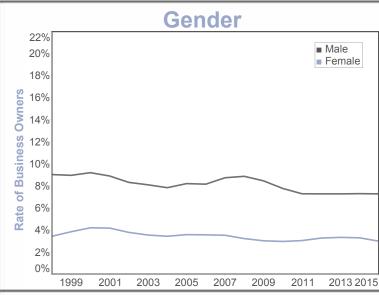


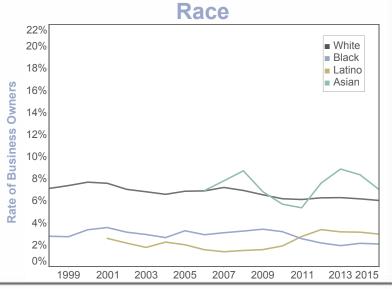


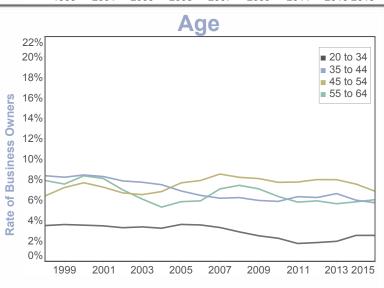
Delaware

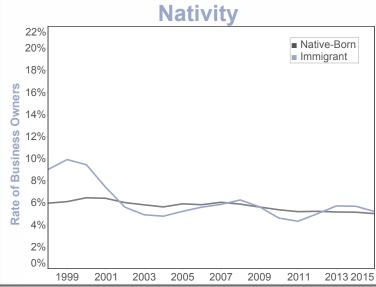
Business Owner Demographics

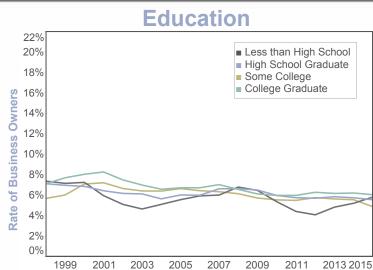
Rate of Business Owners by Demographic Group











2016 2015 24 24





Utah

State Profile

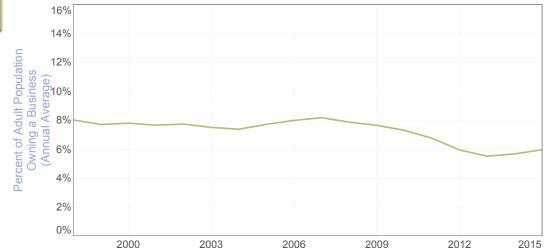
Rate of Business Owners

2016	2015
Component	Component
5.97%	5.68%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners 16%



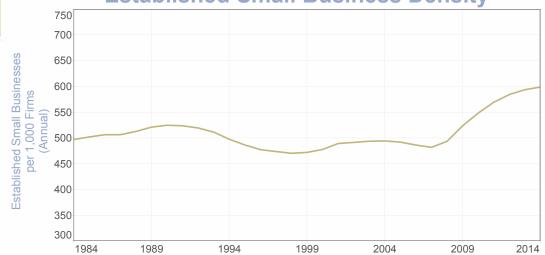
Established Small **Business Density**

2016	2015
Component	Component
599.1	593.9

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

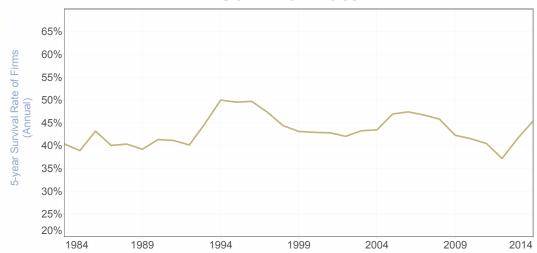


Survival Rate

2016	2015
Component	Component
45.49%	41.64%

Percentage of firms that remained in operation through their first five years.

Survival Rate



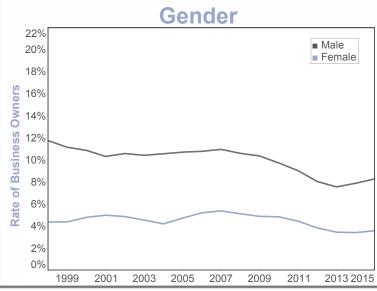


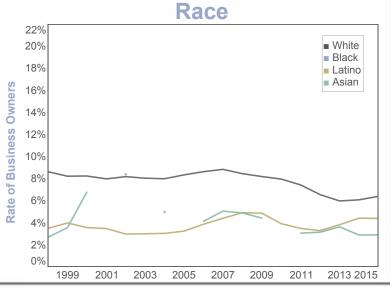


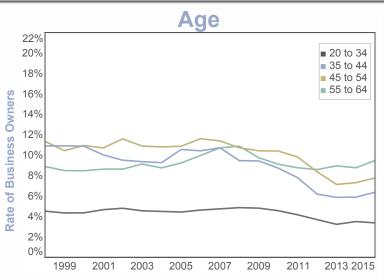
Utah

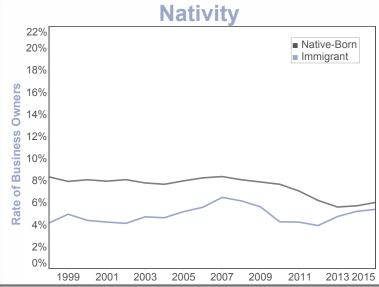
Business Owner Demographics

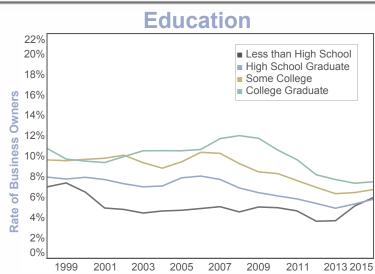
Rate of Business Owners by Demographic Group











2016 2015





Nevada

State Profile

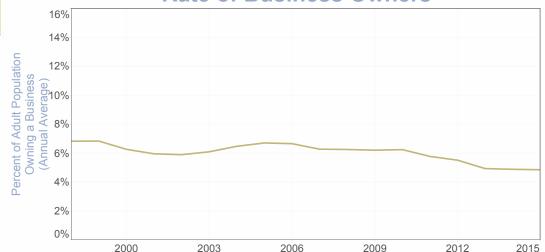
Rate of Business Owners

2016	2015
Component	Component
4.86%	4.89%

Measures the percent of the adult population of a given area that owns a business as their main job.

Source: Author calculations from CPS. Yearly measure.

Rate of Business Owners



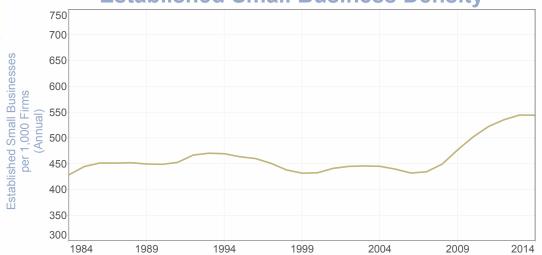
Established Small **Business Density**

2016	2015
Component	Component
544.3	544.8

Number of established small businesses per 1,000 firms. Established small businesses are defined as businesses over the age of five employing at least one, but less than fifty, employees.

Source: Author calculations from BDS

Established Small Business Density

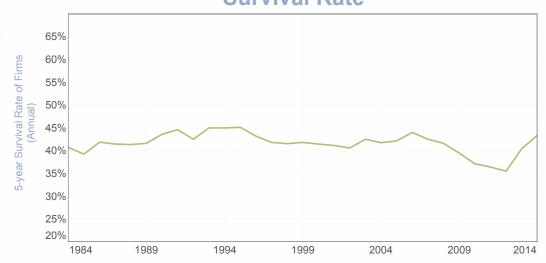


Survival Rate

2016	2015
Component	Component
43.41%	40.47%

Percentage of firms that remained in operation through their first five years.

Survival Rate



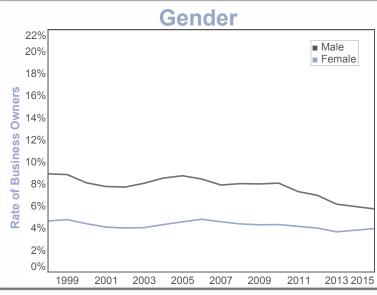


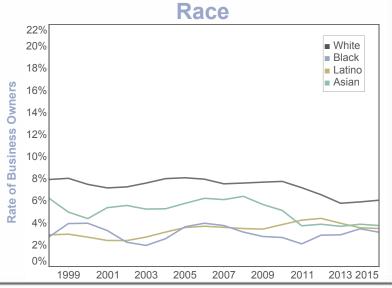


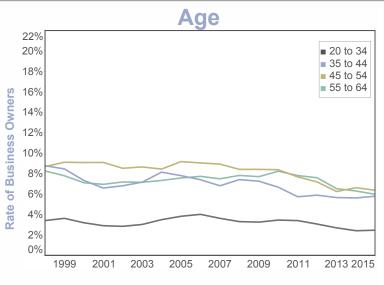
Nevada

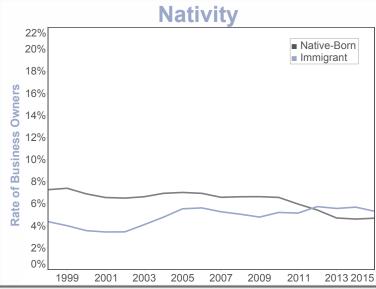
Business Owner Demographics

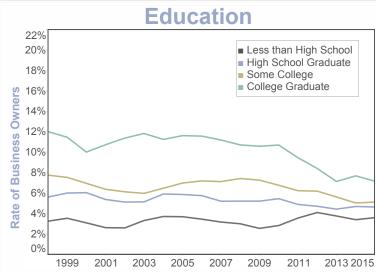
Rate of Business Owners by Demographic Group













mainstreet



Rate of Business **Owners**



Survival Rate



Established Small Business Density

Methodology and **Framework**

In this part of the report, we discuss the methodology and framework for the Kauffman Index of Main Street Entrepreneurship across all geographic levels: national, state, and metropolitan area.

Definitions of Main Street Entrepreneurship *Index Components*

The Kauffman Index of Main Street Entrepreneurship is calculated based on three components: the Rate of Business Owners, the Survival Rate of firms, and the Established Small Business Density. In this section, we provide detailed definitions of each one of these components.



Component A: Rate of Business Owners

Component A of the Kauffman Index of Main Street Entrepreneurship comes from the Current Population Survey (CPS)

and is calculated by author Rob Fairlie. The CPS microdata capture all business owners, including those who own incorporated or unincorporated businesses and those

who are employers or non-employers. To create the Rate of Business Owners, all individuals who own businesses as their main jobs are identified as business owners. Additionally, only business owners who report owning businesses as their main jobs with fifteen or more usual hours worked in the survey month are counted.² Using these criteria, the Rate of Business Owners is defined as the percent of the adult, working-age (ages twenty to sixty-four) population that owns a business.

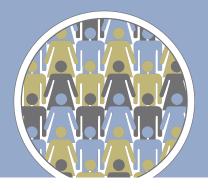
The main job is defined as the one with the most hours worked. Individuals who own side businesses will, therefore, not be counted if they are working more hours on a wage/salary job. The requirement that business owners work fifteen or more hours per week in the survey month is imposed to rule out part-time business owners and very small business activities. It may, therefore, result in an understatement of the percent of individuals owning any type of business. But, the goal here is to capture business ownership activities with at least some work effort (i.e., roughly two or more days per week).

The Rate of Business Owners is a parallel measure to the Rate of New Entrepreneurs (formerly the Kauffman Index of Entrepreneurial Activity, Fairlie 2014), which is a component measure of the related report, Kauffman Index of Startup Activity (Fairlie et al. 2015).3 The Rate of New Entrepreneurs captures business creation (or the flow

^{2.} The U.S. Bureau of Labor Statistics reports total numbers for unincorporated and incorporated self-employed workers from the CPS, but does not impose any hours-worked restrictions or report breakouts by demographic group or geographical area (see http://www.bls.gov/news.release/empsit.t09.htm).

^{3.} See Fairlie 2014 and www.kauffmanindex.org for previous reports.

Rate of Business Owners



- Broad measure of business ownership.
- Measures the percentage of the U.S. adult population that owns a business as their main job.
- Includes entrepreneurs with incorporated or unincorporated businesses, with or without employees.
- Data based on the Current Population Survey jointly produced by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics.
- What the number means:
 - For example, the United States Rate of Business Owners was 6.02 percent in the 2016 Index. This means that six out of every 100 adults own businesses in the United States.

into business ownership). The Rate of Business Owners captures current business ownership (or the stock of business ownership). Other than this major difference in measurement, many definitions and restrictions are similar.

The CPS sample was designed to produce national and state estimates of the unemployment rate and additional labor force characteristics of the civilian, non-institutional population ages sixteen and older. The total national sample size is drawn to ensure a high level of precision for the monthly national unemployment rate. For each of the fifty states, the sample also is designed to guarantee precise estimates of average annual unemployment rates, resulting in varying sample rates by state (Polivka 2000). Sampling weights provided by the CPS, which also adjust for non-response and post-stratification raking, are used for all national and state-level estimates. The CPS also can be used to calculate

metropolitan-area estimates, but only for the largest metropolitan areas in the United States. For example, the Bureau of Labor Statistics reports annual labor-force participation and unemployment rates for the largest fifty-four metropolitan statistical areas.⁴ We focus on the forty largest metropolitan statistical areas in our analysis and calculate moving averages when needed to ensure adequate precision in all reported estimates.



Component B: Survival Rate

The Survival Rate of firms component of the Kauffman Index of Main Street Entrepreneurship uses U.S. Census Bureau data from the Business Dynamics Statistics.

It estimates the percentage of firms that survive beyond their first five years of operation. The calculation method we use is based on Reedy and Litan (2011).

Survival Rate



- Proxy of the rate at which new firms survive their first five years and thus become established.
- The percentage of firms that remain in operation over their first five years.
- Data based on the U.S. Census Business Dynamics Statistics.
- What the number means:
 - For example, the 2014 Survival Rate of firms for the United States was 48.7 percent. That means that, in 2014, for every 100 firms that started operating in 2009 in the United States, an estimated forty-nine employer businesses survived through their first five years of operation.

 $^{4.} See \ http://www.bls.gov/opub/gp/pdf/gp13_27.pdf \ for \ Bureau \ of \ Labor \ Statistics \ use \ of \ the \ CPS \ at \ the \ metropolitan-area \ level.$

Established Small Business Density



Component C: Established Small Business Density

The Established Small Business Density component of the Kauffman Index of Main Street Entrepreneurship uses U.S. Census Bureau data from the Business Dynamics Statistics. It measures the number of established small employer firms normalized by the population of a given area. We define established small businesses here as employer firms that are at least five years of age and employ less than fifty employees, and we divide the number of established small businesses in a region by every 1,000 firms in the area to arrive at the Established Small Business Density measure.

Small businesses are defined as firms with fewer than fifty employees based on the European Commission's definition of small businesses.⁵ The U.S. Small Business Association (SBA) uses various definitions of small businesses, varying by industry, but generally defines small businesses as those with fewer than 500 employees.⁶ Firms with fewer than 500 employees represent 99.8 percent of all firms in the United States, so this definition, while helpful, is not used here, allowing for a narrower definition and more nuanced look at the varying trends among states and metropolitan areas.

The choice for established firms was made so that the Main Street Entrepreneurship Index did not measure startups and young firms.

Our definition here is loosely based on the entrepreneurship density measure suggested by our Kauffman Foundation colleagues Stangler and Bell-Masterson (2015) in their "Measuring an Entrepreneurial Ecosystem" paper. The measure used in their study is based on young firms instead of established small firms.

Calculating the Main Street Entrepreneurship Index

The Kauffman Index of Main Street Entrepreneurship provides a broad index measure of small business activity in the United States. It is an equally weighted index of three normalized measures of business activity. The three component measures of the Main Street Entrepreneurship Index are: i) the Rate of Business Owners among the U.S. adult population, ii) the Survival Rate of firms, and iii) the Established Small Business Density (established small employer businesses, normalized by population).

Each of these measures is normalized by subtracting the mean and dividing by the standard deviation for that measure (i.e., creating a z-score for each variable).⁷ This creates a comparable scale for including the three measures in the Main Street Entrepreneurship Index. We use national annual estimates from 1996 to the latest year available (2015) to calculate the mean and standard deviations for each of the CPS-based components.

Similarly, we use national annual numbers from 1995 to the latest year available (2014) to calculate the mean

^{5.} The definition comes from the European Union recommendation 2003/261 found at http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32003H0361&locale=en. 6. https://www.sba.gov/content/summary-size-standards-industry-sector.

^{7.} This is one of the normalization methods recommended by the Organisation for Economic Co-operation and Development (OECD) and the Joint Research Centre from the European Commission in the Handbook on Construction Composite Indicators (2008).

and standard deviation for the BDS-based component of the Index. The same normalization method is used for all three geographical levels—national, state, and metropolitan area—for comparability and consistency over time.

The components we use for the national-level Main Street Entrepreneurship Index are all annual numbers. The Rate of Business Owners covers years from 1996 to the latest year available (2015). The Survival Rate and the Established Small Business Density covers years from 1995 to the latest year available (2014) at the time we started assembling the data for this report.

The Rate of Business Owners component of the state-level Main Street Entrepreneurship Index is calculated on three-year moving averages with the same yearly coverage as the national-level numbers. The reason we do three-year moving averages on the sample-based CPS measures is to reduce sampling issues. Because these are three-year moving averages with annual estimates starting in 1996, the first year for which three-year moving averages are available is 1998. The Established Small Business Density component of the Index is presented yearly, from 1995 to the latest year available (2014) at the time we started assembling the data.

For the metropolitan-area level Main Street Entrepreneurship Index, we present the Rate of Business Owners component on a three-year moving average from 2008 to the latest year available (2015). Because these are three-year moving averages, annual estimates are first calculated in 2008. The Survival Rate and the Established Small Business Density components of the Index are presented yearly, from 1995 to the latest year available (2014) at the time we started assembling the data.

We recognize "Main Street" entrepreneurship is a broad concept with many potential interpretations. We also understand there are other approaches to the concept and welcome conversations on the topic as we further explore indicators of Main Street entrepreneurship.

Data Sources and Component Measures

Data Sources

In this section, we discuss the underlying data sources used to calculate each component of the Main Street Entrepreneurship Index.

Rate of Business Owners

To calculate the Rate of Business Owners, the underlying dataset used is the basic monthly files of the Current Population Survey. These surveys, conducted monthly by the U.S. Census Bureau and the Bureau of Labor Statistics, represent the entire U.S. population and contain observations for more than 130,000 people each month. Combining the monthly files creates a sample size of roughly 900,000 adults ages twenty to sixty-four each year.

Survival Rate and Established Small Business Density

We use a firm-level dataset to calculate both the Survival Rate and the Established Small Business Density.

For the firm-level dataset, we use the U.S. Census Business Dynamics Statistics, which is constructed using administrative payroll tax records from the Internal Revenue Service (IRS). The BDS data present, among other things, numbers of firms tabulated by employment size, by firm age, and by geography (national, state, and metropolitan area).

For calculating the Survival Rate of firms, we use the BDS data to calculate the percentage of firms that started operating five years ago and are still in operation.

For calculating the Established Small Business Density, we make use of that data to calculate the number of employer firms five years of age and older with fewer than fifty employees by different geographical levels. We then normalize this number by the total number of firms in the area to arrive at the Established Small Business Density of an area.

Standard Errors and Confidence Intervals

Rate of Business Owners

The analysis of the Rate of Business Owners by state includes confidence intervals that indicate confidence bands of approximately 0.007 around the Rate of Business Owners. While larger states have smaller confidence bands of 0.003 to 0.005, the smallest states have larger confidence bands of approximately 0.009 to 0.011.8 Oversampling in the CPS ensures that these small states have sample sizes of at least roughly 10,000 observations per year and, therefore, provides a minimum level of precision.

^{8.} For more discussion on issues related to calculating standard errors on estimates from the CPS, see Fairlie (2014).

Survival Rate and Established Small Business Density

Because the BDS is based on administrative data covering the universe of employer businesses, sampling concerns like standard errors and confidence intervals are irrelevant. Nonetheless, nonsampling errors still could occur. These could be caused, for example, by data entry issues with the IRS payroll tax records or by businesses submitting incorrect employment data to the IRS. However, these are probably randomly distributed and are unlikely to cause significant biases in the data.9 Please see Jarmin and Miranda (2002) for a complete discussion of potential complications on the dataset caused by changes in the administrative data on which the BDS is based.

Advantages Over Other Possible Measures of Main Street **Entrepreneurship Activity**

The Kauffman Index of Main Street Entrepreneurship has several advantages over other possible measures of Main Street entrepreneurship activity based on household or business-level data. We chose to use two distinct datasets: one based on individuals (CPS) and the other based on businesses (BDS). This allows us to study both business owners and the businesses they own. These datasets have complementary strengths that make this Index a robust measure of Main Street entrepreneurship activity.

Rate of Business Owners

The Rate of Business Owners component of the Index is based on the CPS, and this dataset provides three prominent advantages as a timely and broad measure of small business ownership activity. First, the CPS data are available only a couple of months after the end of the year, whereas even relatively timely data, such as the American Community Survey (ACS), take more than a year to be released. Second, this component of the Main Street Entrepreneurship Index includes all types of business activities (employers, non-employers, unincorporated and incorporated businesses), but does not include smallscale side business activities, such as consulting gigs and casual businesses (because only the main job activity is recorded, and the individual must devote fifteen or more

hours a week to working in the business). Third, the CPS data include detailed information on demographic characteristics of the owner, whereas most businesslevel datasets contain no information on the owner (e.g., employer and non-employer data).

Survival Rate and Established Small Business Density

The Survival Rate and the Established Small Business Density components of the Main Street Entrepreneurship Index, based on the BDS, present four main advantages compared to other business-level datasets. First, the BDS is based on administrative data covering the overall employer business population. As such, it has no potential sampling issues. Second, it has detailed coverage across all levels of geography, including metropolitan areas. Third, it provides firm-level data, rather than just establishment-level data. Fourth, it provides detailed employment-level and age breakdowns of firms, allowing us to clearly identify established small firms (over the age of five with fewer than fifty employees).

A dataset that is similar to the BDS data we use is the Business Employment Dynamics (BED) product from the Bureau of Labor Statistics. We chose not to use it for this report because of two distinct advantages we see the BDS having over the BED. First, the BDS tracks firm-level data, as opposed to the establishment-level data tracked by the BED. Second, the BDS has data available at the metropolitan level, while the BED does not.

Because the BED tracks establishments rather than firms, the BDS numbers are different than the BED numbers. Nonetheless, the trends on the two datasets move largely in tandem, and usually point in the same direction.

^{9.} Based on "Reliability of the Data" section of the Business Dynamics Overview page. http://www.census.gov/ces/dataproducts/bds/overview.html#reliability.

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NOTES



This is the 2016 Main Street Entrepreneurship release version of the Kauffman Index. For past Kauffman Index releases, please see www.kauffmanindex.org.



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