

2016 THE KAUFFMAN
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mainstreet entrepreneurship

NATIONAL TRENDS

Robert W. Fairlie
Arnobio Morelix

Inara Tareque
Joshua Russell

E.J. Reedy

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Robert W. Fairlie | Arnobio Morelix | Inara Tareque | Joshua Russell | E.J. Reedy

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About the Kauffman Index of Entrepreneurship Series

The Kauffman Index of Entrepreneurship series is an umbrella of annual reports that measure U.S. entrepreneurship across national, state, and metro levels. Rather than focusing on inputs, the Kauffman Index focuses primarily on entrepreneurial outputs—the actual results of entrepreneurial activity, such as new companies, business density, and growth rates. The Kauffman Index series consists of three in-depth studies—Startup Activity, Main Street Entrepreneurship, and Growth Entrepreneurship.

The Kauffman Index of Startup Activity is an early indicator of the beginnings of entrepreneurship in the United States, focusing on new business creation, market opportunity, and startup density. The Kauffman Index of Main Street Entrepreneurship measures business ownership, survival rates, and density of established, local small businesses. The Kauffman Index of Growth Entrepreneurship focuses on the growth of entrepreneurial businesses, as measured by growth in both revenue and employment.

In this release, we present the Kauffman Index of Main Street Entrepreneurship, a comprehensive indicator of local, small business activity in the United States. The Main Street Entrepreneurship Index integrates several high-quality sources of timely entrepreneurship information into one composite indicator, relying on three components to measure Main Street entrepreneurship:

- Rate of Business Owners
- Survival Rate
- Established Small Business Density

The Kauffman Index of Entrepreneurship series represents extensive research and attempts to present a balanced perspective on how to measure entrepreneurship. However, because we recognize that entrepreneurship is a complex phenomenon, we expect to further revise and enhance the Index in the coming years.

The specific indicators from each report help tell America's entrepreneurship story. National, state, and local leaders can access all the reports, along with the data relevant to their locales, at www.kauffmanindex.org.

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 location, survival rates of firms, and established small businesses—employer firms older than five years 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 presents trends in Main Street entrepreneurship over the past two decades for the United States. Two separate reports look at these same trends in all fifty states and the forty largest U.S. metropolitan areas. 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 higher than that preceding the recession.

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

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.

National Trends in Main Street Entrepreneurship

Main Street Entrepreneurship

- The Main Street Entrepreneurship Index rose in 2016—reaching levels higher than those preceding the Great Recession.

Rate of Business Owners

- Looking inside the components of the Main Street Entrepreneurship Index, the Rate of Business Owners in the United States is basically unchanged in the past year at sixty out of 1,000 adults.

Survival Rates

- The five-year survival rates of U.S. businesses—the percentage of new companies that make it into their fifth year of operation—has increased from 45.9 percent to 48.7 percent in the latest year. This is

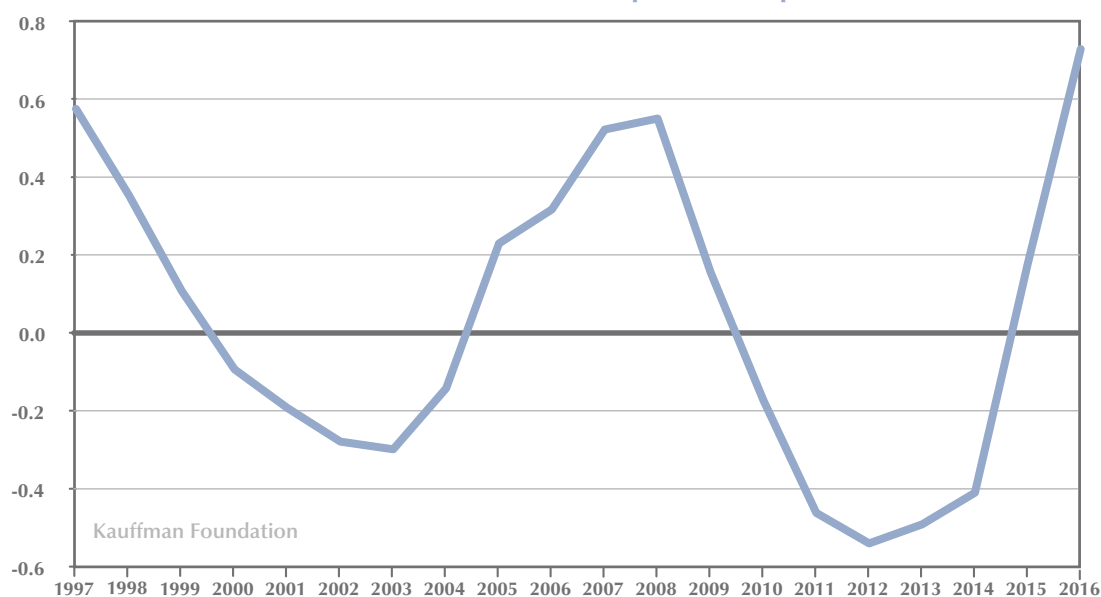
a three-decade high in established survival rates, and it is by far the biggest driver on this year's increase in the Main Street Entrepreneurship Index.

Established Small Business Density

- Established Small Business Density—another component of the Index—changed very little in the United States in the latest year, going from 676.5 established small businesses per 1,000 businesses to 676.1.
- When we look into the size of these established small businesses, we see another relevant insight. When compared to 1996, established small businesses are smaller than they used to be. The smallest small businesses—companies with one to four employees—make up 53.1 percent of all established small businesses, up from 49.5 percent in 1996.

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.

As a population, immigrants are 22.5 percent more likely than native-born citizens to own businesses in 2015.
This dynamic has changed over the last two decades.

National Trends in Main Street Entrepreneurship Demographics

Gender of Business Owners— Male and Female Business Owners

- Most business owners were male in 2015, with male business owners making up 67.0 percent of all business owners. The share of male business owners has been remarkably consistent over the past two decades.
- Males are more likely than females to be business owners, though the Rate of Business Owners for men has fallen from 11.0 percent in 1996 to 8.3 percent in 2015. The Rate of Business Owners for females also has fallen during this time, from 4.8 percent in 1996 to 3.9 percent in 2015.

Ethnicity of Business Owners

- Business owners in the United States are becoming increasingly ethnically diverse, with 28.3 percent of business owners being comprised of African American, Latino, Asian, and other non-white business owners in 2015. Most of this rise has been in Asian and Latino business owners, who now account for 6.2 percent and 14.0 percent of business owners in 2015, up from 3.8 percent and 5.6 percent, respectively, in 1996.

Nativity of Business Owners— Immigrant and Native Business Owners

- Immigrant business owners now account for 20.6 percent of all business owners in the United States, up from just 10.9 percent in 1996. The share of business owners who are immigrants has been on

an upward trend since 1996, although it appears to have plateaued over the past few years.

- As a population, immigrants are 22.5 percent more likely than native-born citizens to own businesses in 2015. This dynamic has changed over the last two decades. In 1996, immigrants were 9.6 percent less likely to be business owners than native-born adults were, and were almost as likely to own businesses in 2005.

Age of Business Owners

- Adults ages forty-five to fifty-four make up the largest share of business owners, representing 30.8 percent, while adults ages fifty-five to sixty-four make up another 28.5 percent of all business owners. Young business owners (ages twenty to thirty-four) have been on the decline, down from 21.1 percent of all business owners in 1996 to 15.8 percent of business owners in 2015.
- Even though the Rate of Business Owners among adults ages fifty-five to sixty-four has been on the decline, the aging of the U.S. population has increased their share of all business owners from 15.8 percent in 1996 to 28.5 percent in 2015.

Educational Background of Business Owners

- Business owners in the United States continue to come from many different educational backgrounds. However, since 1996, the share of business owners who were college graduates has increased from 34.0 percent to 38.7 percent. This makes college graduates the biggest educational category of business owners in the United States.

Business owners in the United States are becoming increasingly ethnically diverse, with 28.3 percent of business owners being comprised of African American, Latino, Asian, and other non-white business owners in 2015.

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Rate of Business Owners



Survival Rate



Established Small Business Density

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.

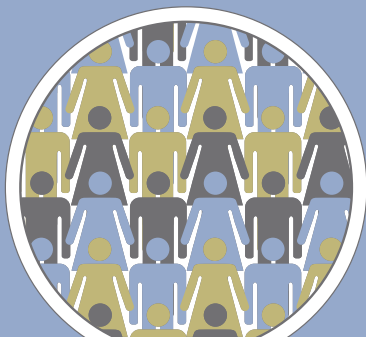
The Components of the Kauffman Index of Main Street Entrepreneurship

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 businesses 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.

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.

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:

- i. 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.
- iii. 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 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

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.

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.

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 come from the U.S. Census Business Dynamics Statistics (BDS) and are 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 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

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






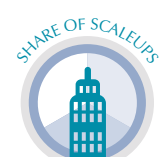



companies. Together, these three indices present a more holistic view of entrepreneurship in America.

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.

Table A
Summary of Components Used Across Reports

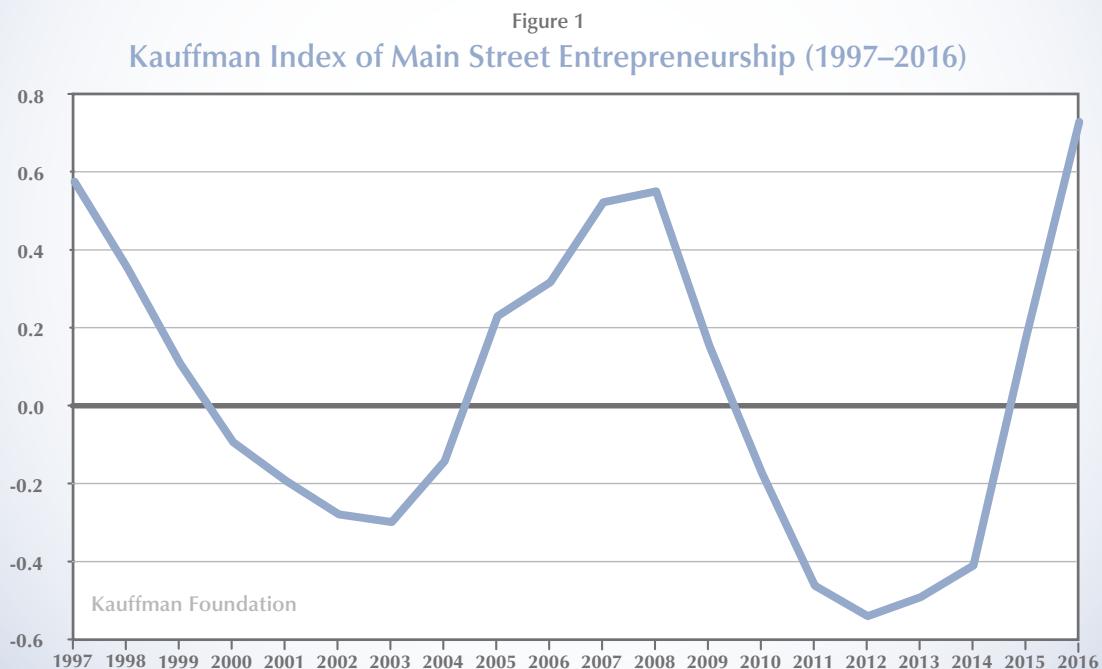
Startup Activity	Main Street Entrepreneurship	Growth Entrepreneurship
 <p>Rate of New Entrepreneurs The percentage of adults transitioning into entrepreneurship at a given point in time</p>	 <p>Rate of Business Owners The total number of business owners in a location at a given point in time</p>	 <p>Rate of Startup Growth The average growth of a cohort of new startups in their first five years</p>
 <p>Opportunity Share of New Entrepreneurs The percentage of new entrepreneurs driven primarily by “opportunity” vs. “necessity”</p>	 <p>Survival Rate of Firms The percentage of firms in operation throughout their first five years</p>	 <p>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</p>
 <p>Startup Density The number of new employer businesses, normalized by population</p>	 <p>Established Small Business Density The number of businesses five years old and older with less than fifty employees, normalized by population</p>	 <p>High-Growth Company Density The number of fast-growing companies with at least \$2 million dollars in annual revenue, normalized by business population</p>

National Trends in Main Street Entrepreneurship Activity

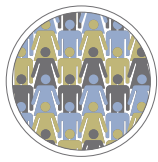
The Kauffman Index of Main Street Entrepreneurship calculates an index measure of small business activity across the years. Figure 1 (below) and Table 1 (in the Appendix) present results. Since the '90s, the Main Street Entrepreneurship Index generally has followed the business cycle. The Index was high in the late 1990s and rose during the expansionary period prior to the Great Recession.

The Main Street Entrepreneurship Index—an indicator of the number of established small businesses, the five-year survival rates of businesses, and the number of business owners in a location—rose in 2016 for the second year in a row, finally surpassing the peak that preceded the Great Recession. The recent years' increase was primarily driven by a sharp uptick in the five-year survival rates of businesses. This increase points to more flourishing local and small entrepreneurship activity. We next discuss trends in each of the three component measures of the Main Street Entrepreneurship Index.

The Main Street Entrepreneurship Index rose in 2016 for the second year in a row, finally surpassing the peak that preceded the Great Recession.



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



National Trends in the Rate of Business Owners

This section discusses trends in the Rate of Business Owners. The Rate of Business Owners measures the percentage of the adult population that owns a business. It captures all business owners, including those who own incorporated or unincorporated businesses and those who are employers or non-employers. Figure 1A (below) and Table 1 (in the Appendix) present results. In 2015, an

average of 6.0 percent of the adult population owned a business. This business ownership rate translates into more than eleven million adults owning businesses. In 2015, the Rate of Business Owners did not change from the past few years. Since 2011, it has remained at roughly 6 percent. The current level of business ownership, however, is lower than in the previous decades. Over the reported time period, the Rate of Business Owners declined in the late 1990s, rose slightly in the early 2000s, and then declined again in the late 2000s. The Rate of Business Owners was 7.3 percent in 2007, before declining steadily until hitting a plateau at roughly 6 percent starting in 2010.

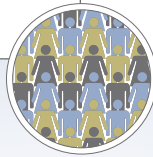
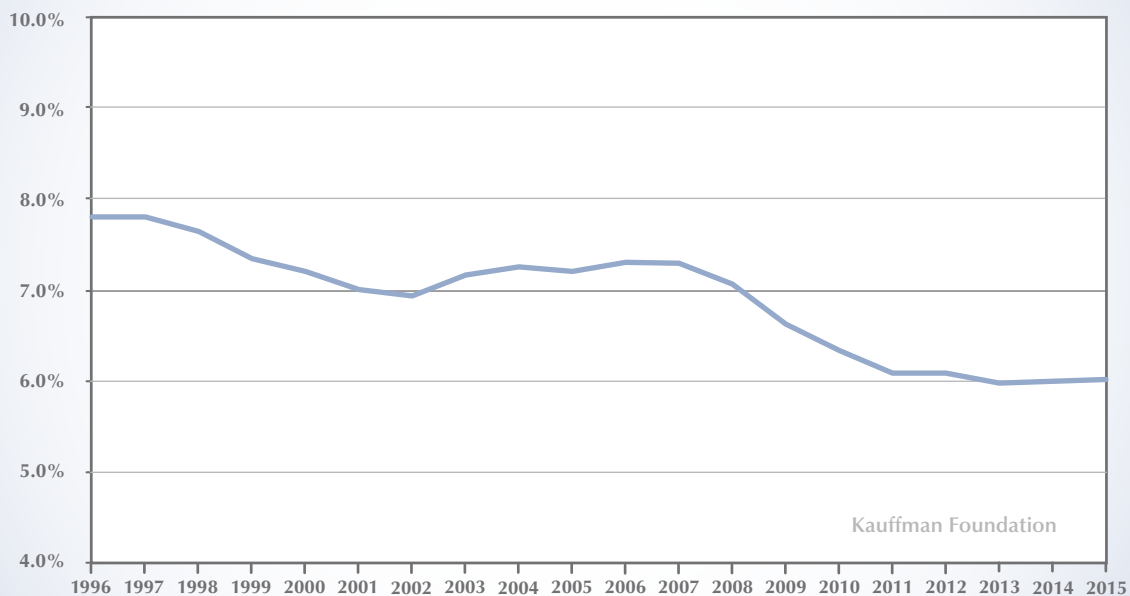


Figure 1A
Rate of Business Owners (1996–2015)



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

Rate of Business Owners by Demographic Groups

The detailed demographic information available in the CPS and large sample sizes allows for the estimation of separate Rate of Business Owners by gender, race, immigrant status, age, and level of education. This represents an advantage of the individual-level CPS data because large, nationally representative business-level datasets typically provide either no, or very limited, demographic information on the owner.

For men, the Rate of Business Owners remained essentially unchanged at 8.2 percent in 2014 and 2015. Table 2, in the Appendix, and Figure 2, below, report results. The pattern over time was very similar to that for the total population, including the recent plateau and earlier decline from 2007. For women, there also was little change in the Rate of Business Owners from 2014 to 2015. The Rate of Business Owners among women is 3.9 percent. Overall, men are substantially more likely to own businesses than are women, which holds in all reported years.

Figure 2
Rate of Business Owners by Gender (1996–2015)

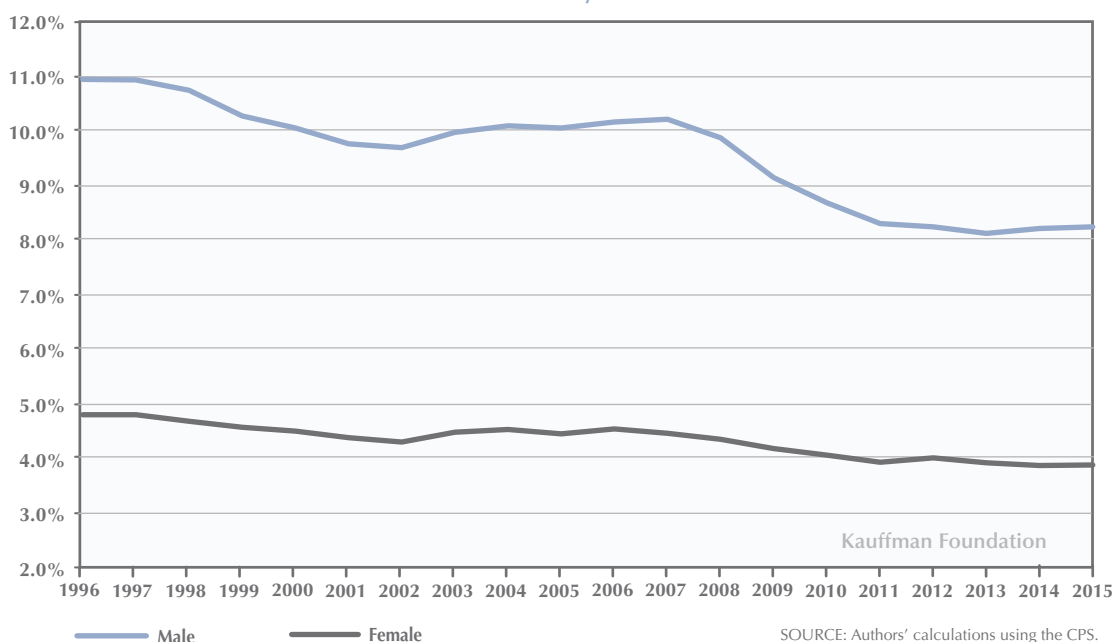
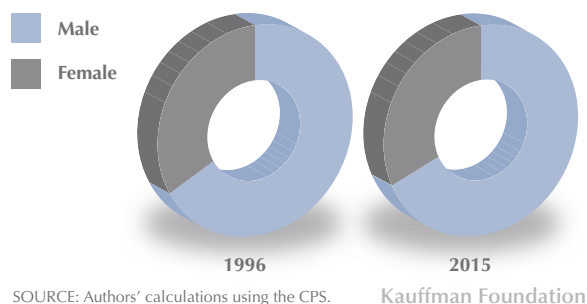


Figure 2A
Changes in the Composition of Business Owners by Gender (1996, 2015)



Gender	1996	2015
Male	68.46%	66.98%
Female	31.54%	33.02%

Figure 3
Rate of Business Owners by Race (1996–2015)

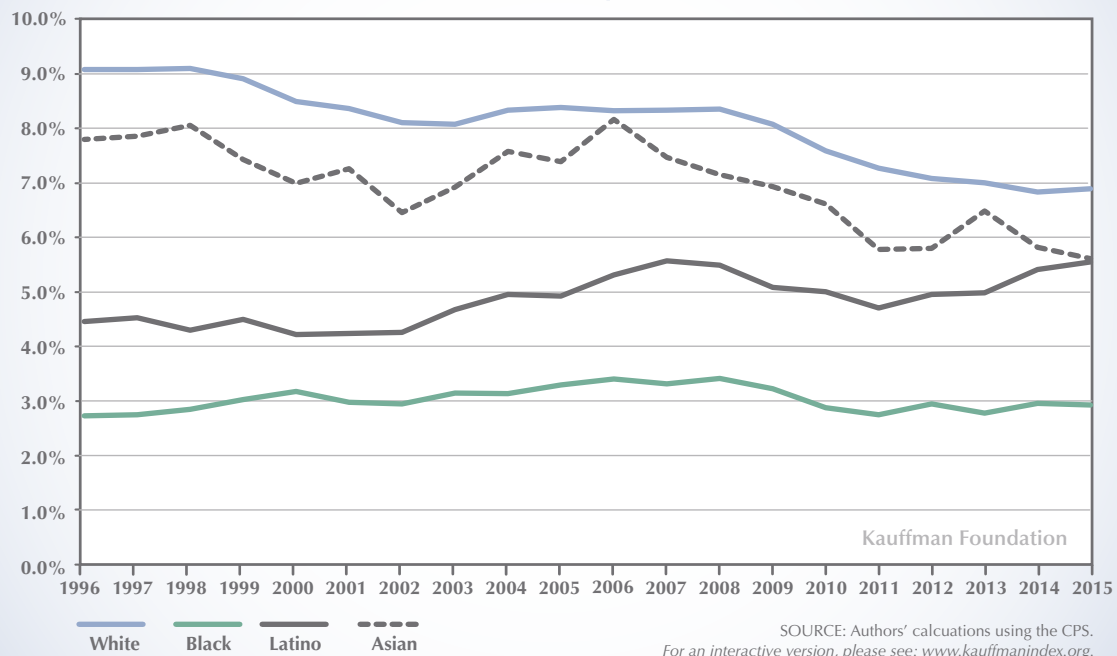
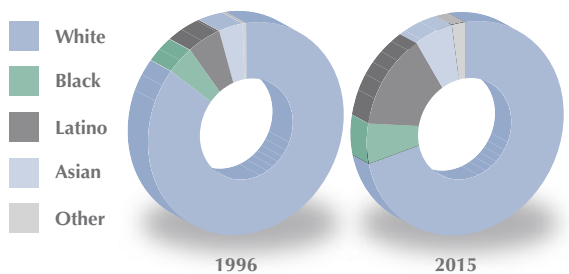


Figure 3A
Changes in the Composition of Business Owners by Race (1996, 2015)



Race	1996	2015
White	86.00%	71.67%
Black	4.16%	6.22%
Latino	5.55%	13.99%
Asian	3.81%	6.16%
Other	0.50%	1.96%

SOURCE: Authors' calculations using the CPS.

Racial and ethnic groups experienced somewhat different patterns in the Rate of Business Owners between 2014 and 2015. Table 3 (in the Appendix) and Figure 3 (above) report estimates of Rate of Business Owners by race and ethnicity. Latinos experienced a small increase in rate of business ownership in 2015, whereas Whites and Blacks experienced no change and Asians experienced a small decline. The Rate of Business Owners is highest among Whites and lowest among African Americans.

Reflecting the longer-term trends showing rising Latino rates of business ownership and a growing Latino share of the total U.S. population, the Latino share of all business owners rose from 5.6 percent in 1996 to 14 percent in 2015. Figure 3A reports estimates of the share of all business owners by race from 1996 to 2015. The Asian and African American shares of business owners also rose substantially from 1996 to 2015. The White share of business owners declined substantially over the past nineteen years.

The Rate of Business Owners among immigrants basically did not change in 2015. Table 4 (in the Appendix) and Figure 4 (below) report estimates of Rate of Business Owners by nativity. The 7.1 percent Rate of Business Owners among immigrants is higher than that for the 5.8 percent of the native-born. A growing immigrant

population and rising relative Rate of Business Owners contributed to a rising share of business owners that are immigrant. Figure 4A reports estimates of the share of business owners by nativity. Immigrant entrepreneurs represent 20.6 percent of all business owners in 2015, which is up substantially from 10.9 percent in 1996.

Figure 4
Rate of Business Owners by Nativity (1996–2015)

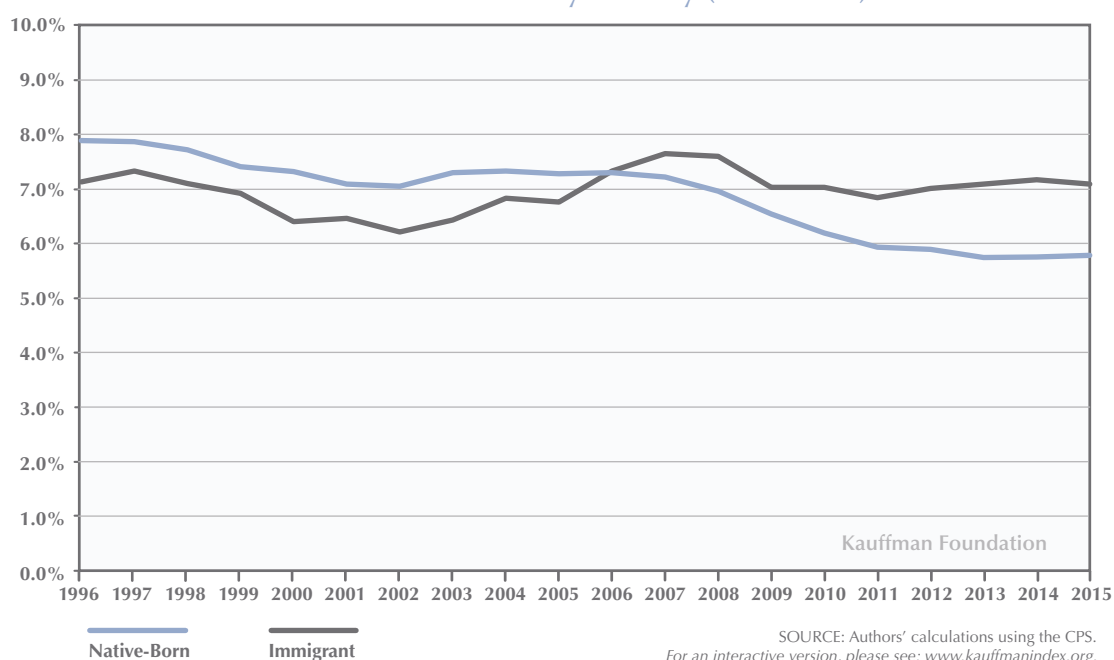
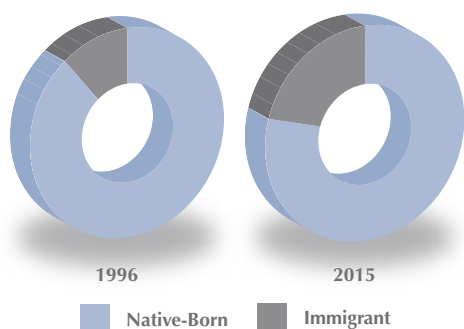


Figure 4A
Changes in the Composition of Business Owners by Nativity (1996, 2015)



Nativity	1996	2015
Native-Born	89.14%	79.35%
Immigrant	10.85%	20.65%

SOURCE: Authors' calculations using the CPS.

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Figure 5
Rate of Business Owners by Age (1996–2015)

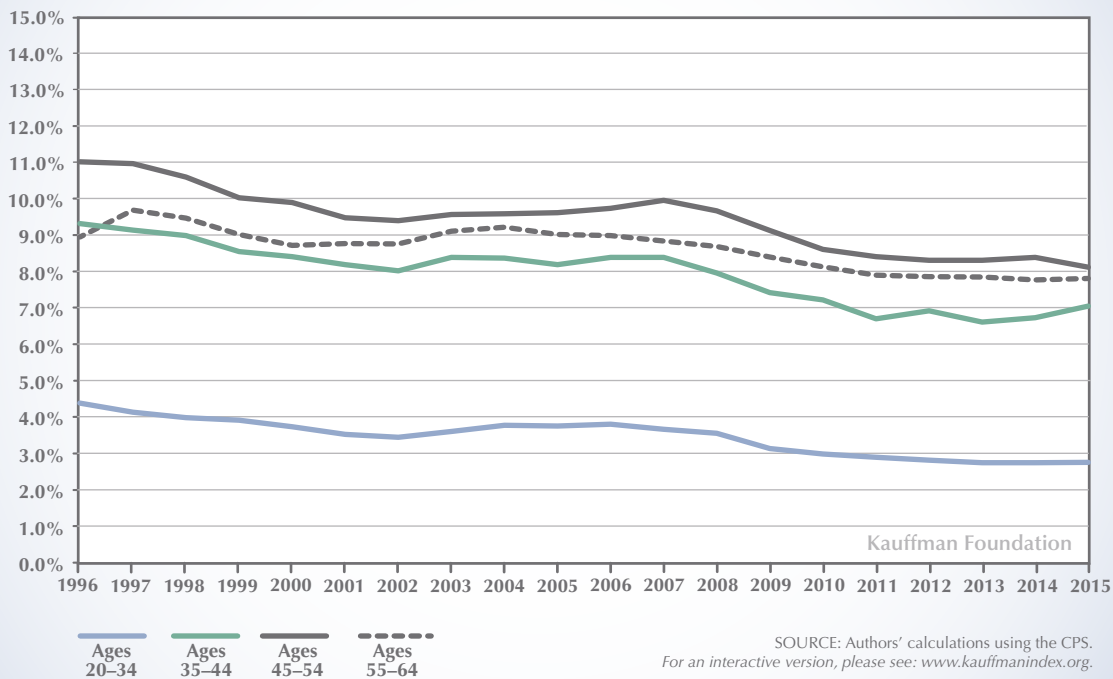
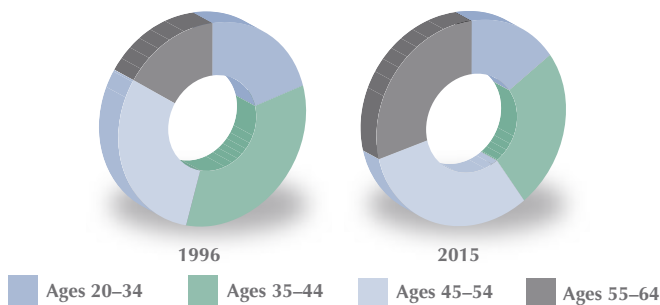


Figure 5A
Changes in the Composition of Business Owners by Age (1996, 2015)



Age	1996	2015
Ages 20–34	21.09%	15.79%
Ages 35–44	33.57%	24.93%
Ages 45–54	29.57%	30.81%
Ages 55–64	15.77%	28.47%

SOURCE: Authors' calculations using the CPS.

Kauffman Foundation

Table 5 (in the Appendix) and Figure 5 (above) report estimates of the Rate of Business Owners by age group. Adults ages thirty-five to forty-four experienced an increase in their rate of business ownership in 2015, while adults ages forty-five to fifty-four experienced a small decrease. Other age groups experienced essentially no change in the Rate of Business Owners in 2015. The

Rate of Business Owners is lowest among the youngest group. Figure 5A reports estimates of the share of business owners by age group. An aging population has led to a rising share of business owners in the age fifty-five to sixty-four group. This group represented 15.8 percent of business owners in 1996, but in 2015 represents 28.5 percent of all business owners.

In 2015, the Rate of Business Owners went up slightly for adults with less than a high-school graduation, while going down slightly for college graduates. It did not notably change in 2015 for the other major educational groups. Table 6 (in the Appendix) and Figure 6 (below)

report estimates by education level. The Rate of Business Owners is highest among college graduates and lowest among high-school dropouts. Among college graduates, 7.4 percent own businesses. Among high-school dropouts, 5.7 percent own businesses.

Figure 6
Rate of Business Owners by Education (1996–2015)

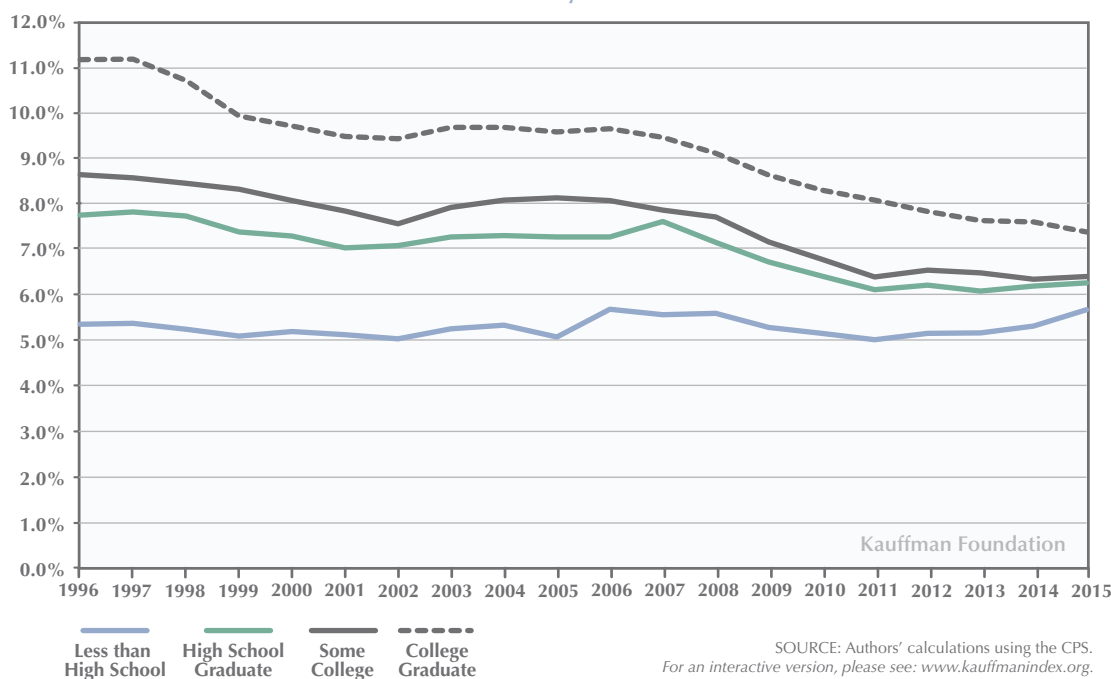
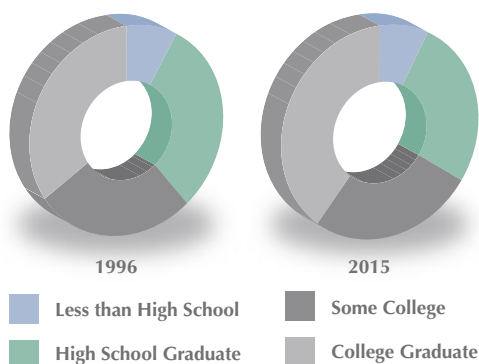


Figure 6A
Changes in the Composition of Business Owners by Education (1996, 2015)



Education	1996	2015
Less than High School	8.76%	8.73%
High School Graduate	30.42%	26.05%
Some College	26.81%	26.51%
College Graduate	34.01%	38.71%

SOURCE: Authors' calculations using the CPS. Kauffman Foundation



National Trends in Survival Rate

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 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 in the Kauffman Index gives us an indicator of how likely a new firm is to

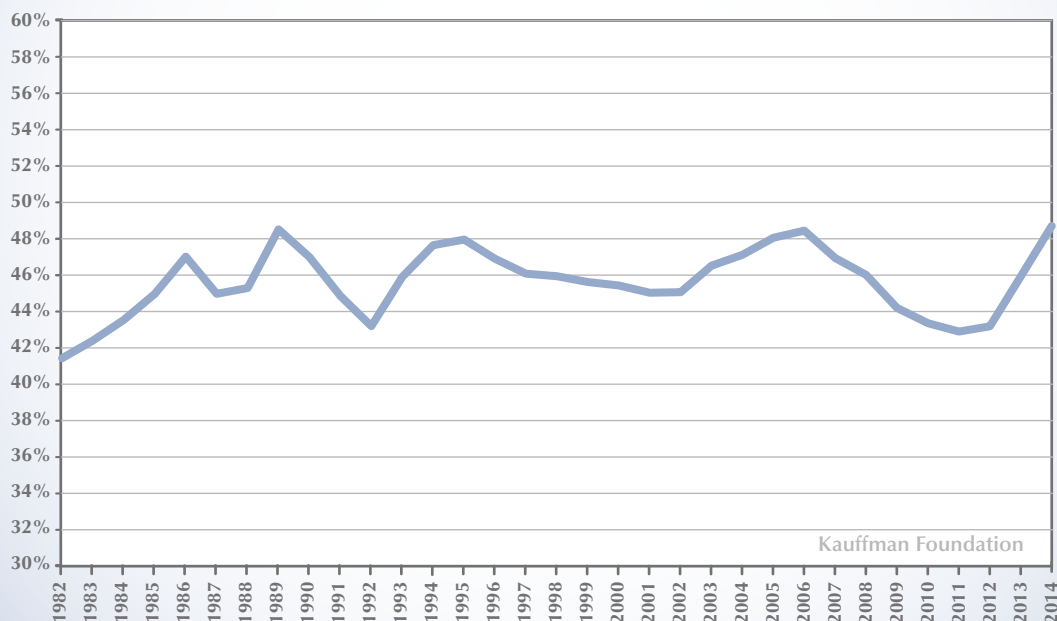
take root and become established in a community. This indicator is based on previous work by the Kauffman Foundation examining business survival by cohort over time (Reedy and Litan 2011).

The Survival Rate of businesses is the main driver of the recent improvements in Main Street Entrepreneurship, 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 higher than that preceding the recession.



The Survival Rate of businesses is the main driver of the recent improvements in Main Street Entrepreneurship and has reached a three-decade high of 48.7 percent.

Figure 1B
Firm Survival Rate (1982–2014)



Source: Authors' calculations using BDS data. For an interactive version, please see: www.kauffmanindex.org.



National Trends in Established Small Business Density

Focusing on Established Small Business Density, Figure 1C reports results for trends in established small employer businesses. 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 Business Dynamics Statistics.

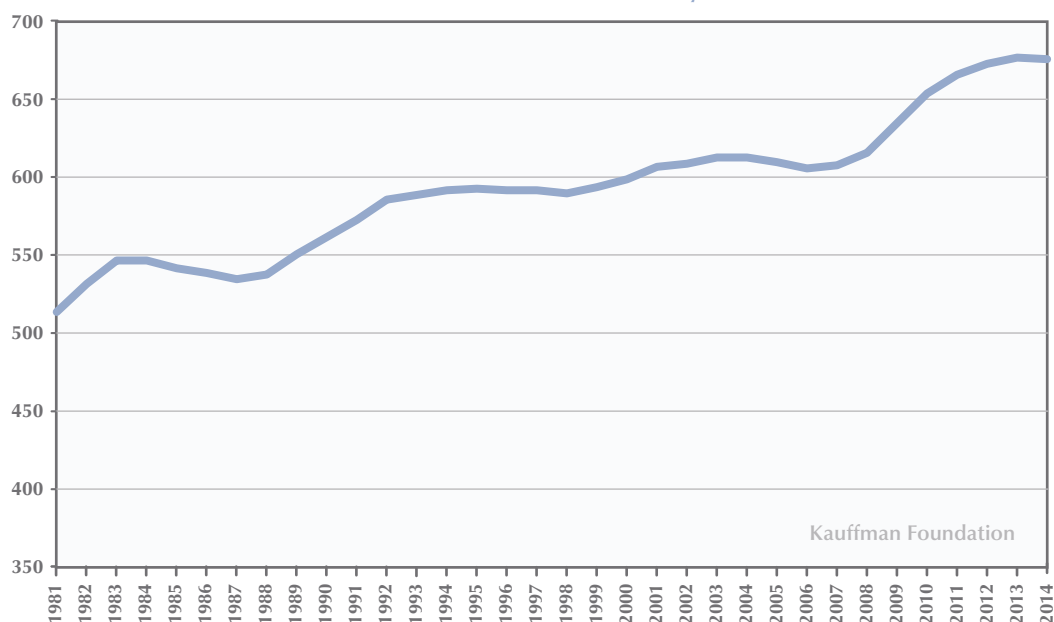
We present this indicator going back from 1981 to 2014, the latest year for which the data are available. This measure differs from the Rate of Business Owners in two key ways: 1) the Rate of Business Owners is a measure based on individuals—the business owners themselves. As

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 was 676.1 in the most recent year with data available, which is slightly down from the density of 676.5 in the previous year. While it has gone through ups and downs, the Established Small Business Density in the United States has mostly



Figure 1C
Established Small Business Density (1981–2014)



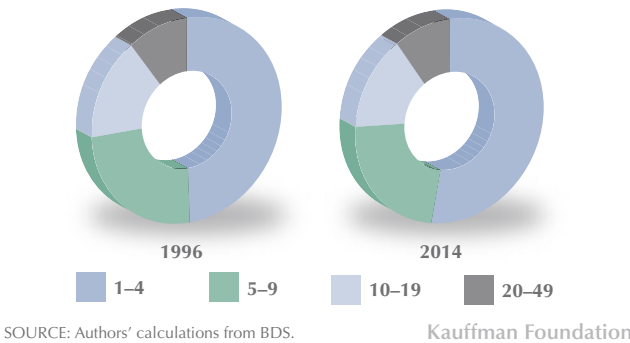
Source: Authors' calculations using BDS data. For an interactive version, please see: www.kauffmanindex.org.

increased over time, showing that a growing share of all U.S. businesses are Main Street companies—with both the upsides (e.g., companies operating for longer) and downsides (e.g., less-dynamic economy) that this suggests.

When we look into the size of these established small businesses, we see another relevant insight.

When compared to 1996, established small businesses are smaller than they used to be. The smallest small businesses—companies with one to four employees—make up 53.1 percent of all established small businesses, up from 49.5 percent in 1996

Figure 1D
Changes in Composition of Main Street
Businesses by Number of Employees
(1996, 2014)



Number of Employees	1996	2014
1 to 4	49.5%	53.1%
5 to 9	25.0%	23.2%
10 to 19	15.5%	14.4%
20 to 49	10.0%	9.3%

Appendix: National Data, Business Owner Demographic Profiles, and Charts



NATIONAL PROFILE

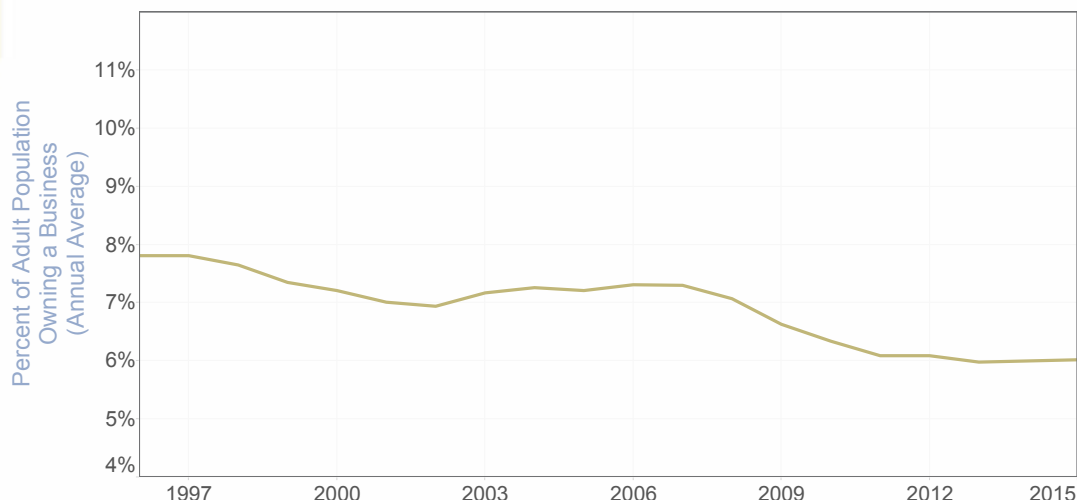
Rate of Business Owners

2016 Component	2015 Component
6.02%	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.

Rate of Business Owners



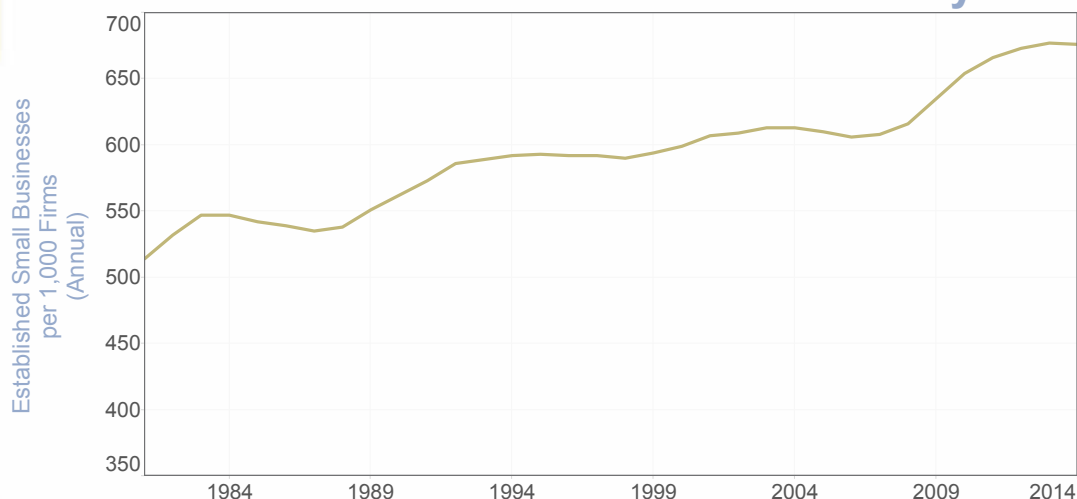
Established Small Business Density

2016 Component	2015 Component
676.1	676.5

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 Component	2015 Component
48.73%	45.95%

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

Source: Author calculations from BDS.

Survival Rate

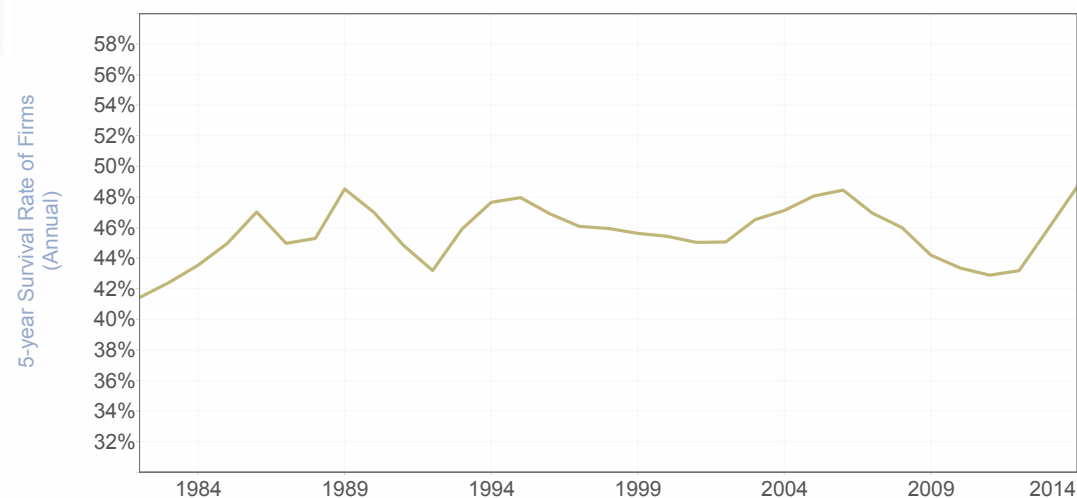
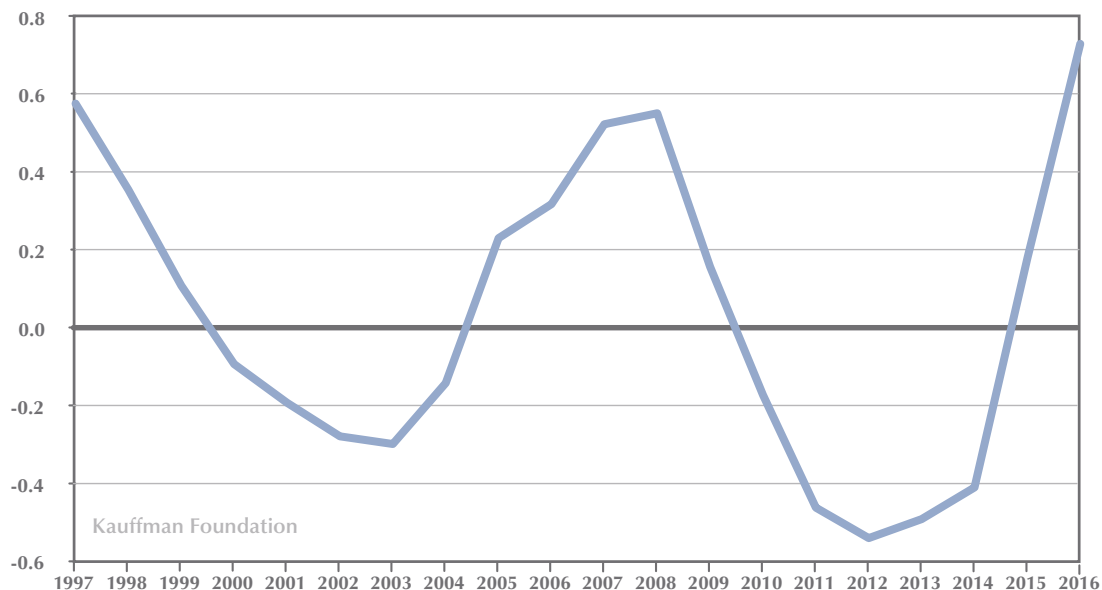


TABLE 1
Kauffman Index of Main Street Entrepreneurship (1997–2016)

		Main Street Index Component Measures					
		Rate of Business Owners		Established Small Business Density		Survival Rate of Firms	
Year	Main Street Entrepreneurship Index	Rate	N	Density	Pop (1,000s)	Rate	Firm Population (1,000s)
1997	0.6	7.81%	823,372	592.9	4613.849	47.98%	4613.849
1998	0.37	7.81%	826,002	591.7	4690.476	46.92%	4690.476
1999	0.13	7.65%	828,037	591.7	4752.255	46.10%	4752.255
2000	-0.08	7.35%	826,325	590.5	4796.229	45.96%	4796.229
2001	-0.18	7.21%	824,821	593.8	4824.483	45.64%	4824.483
2002	-0.26	7.01%	882,875	598.8	4836.58	45.45%	4836.58
2003	-0.28	6.94%	963,720	607.1	4881.589	45.05%	4881.589
2004	-0.13	7.17%	954,211	609.5	4908.71	45.08%	4908.71
2005	0.25	7.26%	937,905	612.8	4963.077	46.54%	4963.077
2006	0.34	7.21%	933,319	612.5	5039.479	47.14%	5039.479
2007	0.54	7.31%	926,655	609.7	5139.412	48.08%	5139.412
2008	0.57	7.30%	915,715	606.0	5179.788	48.47%	5179.788
2009	0.17	7.07%	909,374	608.1	5240.019	46.96%	5240.019
2010	-0.16	6.63%	917,089	615.7	5200.065	46.03%	5200.065
2011	-0.45	6.34%	917,287	634.9	5027.603	44.21%	5027.603
2012	-0.53	6.09%	903,065	653.9	4953.425	43.37%	4953.425
2013	-0.48	6.09%	895,076	665.9	4912.258	42.91%	4912.258
2014	-0.4	5.98%	883,138	673.1	4979.45	43.20%	4979.45
2015	0.2	6.00%	880,974	676.5	5022.874	45.95%	5022.874
2016	0.75	6.02%	861,622	676.1	5058.018	48.73%	5058.018

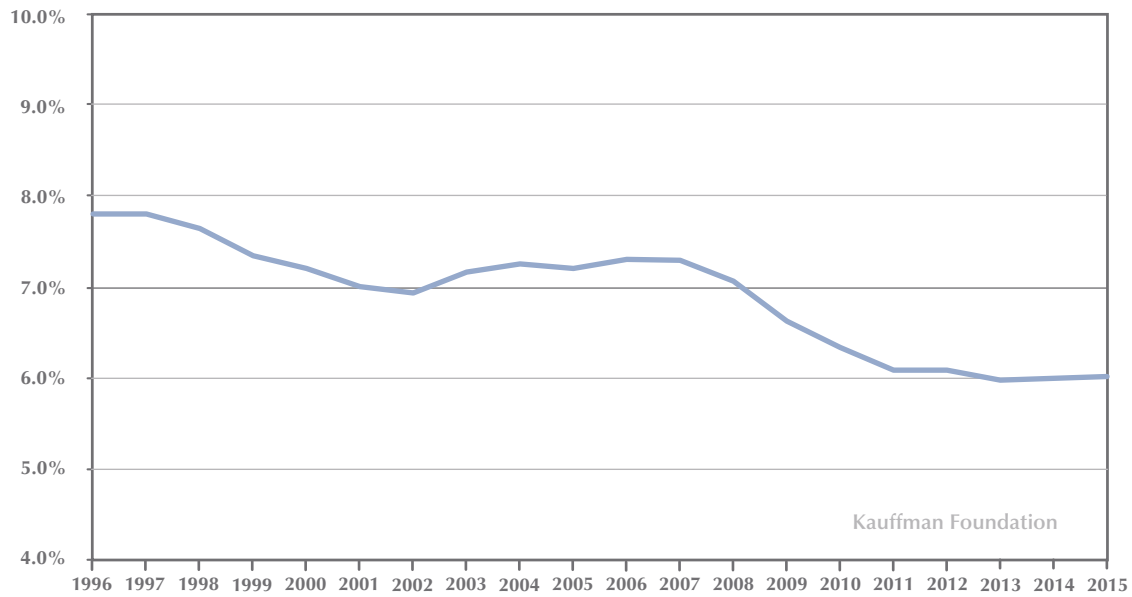
Notes: (1) Estimates calculated by authors using the Current Population Survey, the Business Dynamics Statistics, and population data from the Bureau of Economic Analysis. (2) The Rate of Business Owners is the percentage of individuals (ages twenty to sixty-four) who own a business as their main job with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

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.

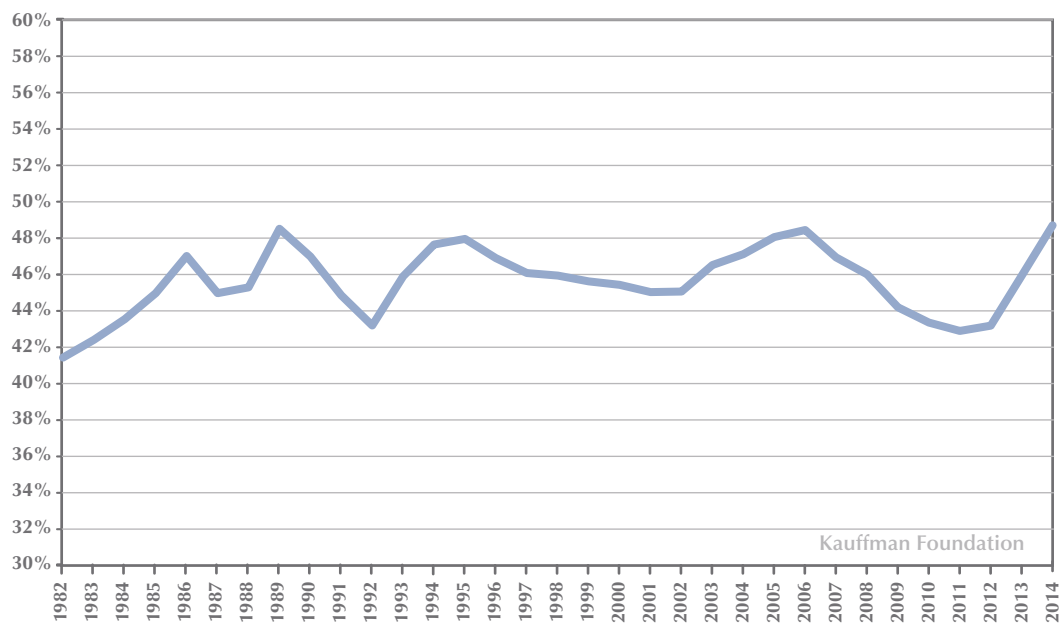
Figure 1A
Rate of Business Owners (1996–2015)



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



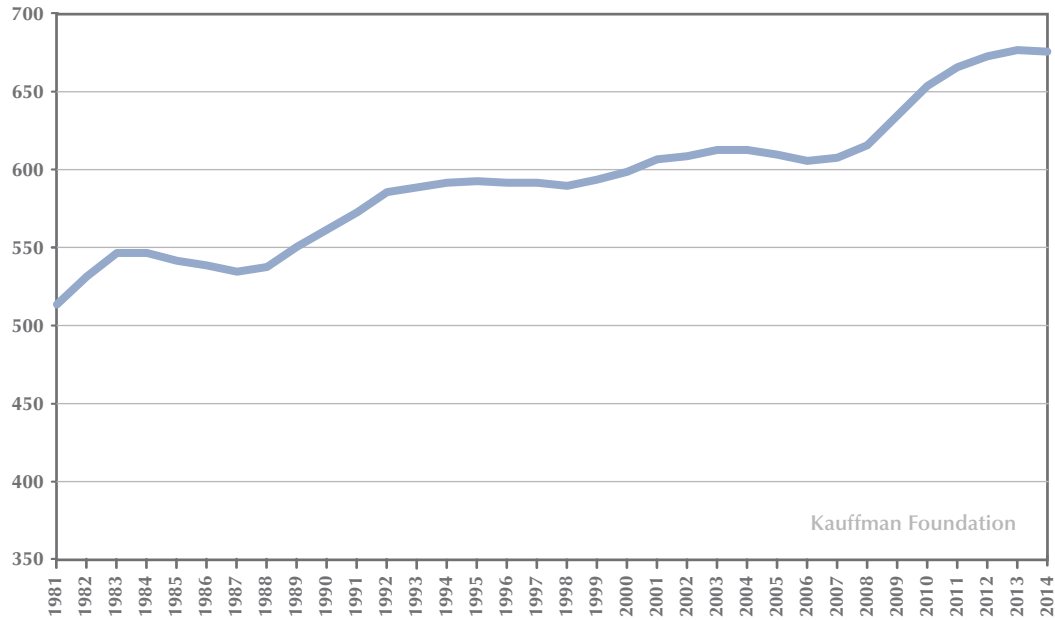
Figure 1B
Firm Survival Rate (1982–2014)



Source: Authors' calculations using BDS data. For an interactive version, please see: www.kauffmanindex.org.

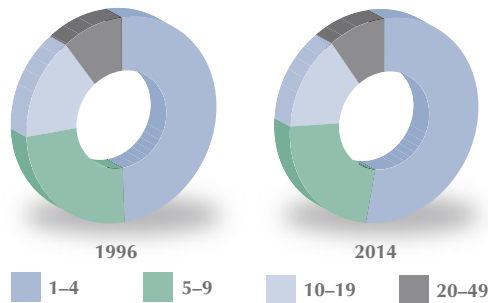


Figure 1C
Established Small Business Density (1981–2014)



Source: Authors' calculations using BDS data. For an interactive version, please see: www.kauffmanindex.org.

Figure 1D
Changes in Composition of Main Street
Businesses by Number of Employees
(1996, 2014)



SOURCE: Authors' calculations from BDS.

Kauffman Foundation

Number of Employees	1996	2014
1 to 4	49.5%	53.1%
5 to 9	25.0%	23.2%
10 to 19	15.5%	14.4%
20 to 49	10.0%	9.3%

TABLE 2
Rate of Business Owners by Gender (1996–2015)

Year	Male		Female		Total	
	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size
1996	10.95%	392,350	4.81%	431,022	7.81%	823,372
1997	10.94%	395,420	4.81%	430,582	7.81%	826,002
1998	10.75%	396,965	4.69%	431,072	7.65%	828,037
1999	10.28%	395,656	4.58%	430,669	7.35%	826,325
2000	10.06%	396,132	4.51%	428,689	7.21%	824,821
2001	9.77%	424,212	4.39%	458,663	7.01%	882,875
2002	9.71%	461,731	4.31%	501,989	6.94%	963,720
2003	9.98%	457,138	4.49%	497,073	7.17%	954,211
2004	10.10%	450,168	4.54%	487,737	7.26%	937,905
2005	10.06%	448,009	4.46%	485,310	7.21%	933,319
2006	10.17%	445,884	4.55%	480,771	7.31%	926,655
2007	10.22%	440,382	4.47%	475,333	7.30%	915,715
2008	9.88%	438,407	4.36%	470,967	7.07%	909,374
2009	9.15%	442,553	4.19%	474,536	6.63%	917,089
2010	8.69%	441,987	4.07%	475,300	6.34%	917,287
2011	8.31%	434,057	3.94%	469,008	6.09%	903,065
2012	8.25%	430,764	4.02%	464,312	6.09%	895,076
2013	8.13%	424,792	3.93%	458,346	5.98%	883,138
2014	8.22%	424,044	3.88%	456,930	6.00%	880,974
2015	8.25%	414,706	3.89%	446,916	6.02%	861,622

Notes: (1) Estimates calculated by the authors using the Current Population Survey. (2) The Rate of Business Owners is the percent of individuals (ages twenty to sixty-four) who own a business as their main job with fifteen or more hours worked per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 2
Rate of Business Owners by Gender (1996–2015)

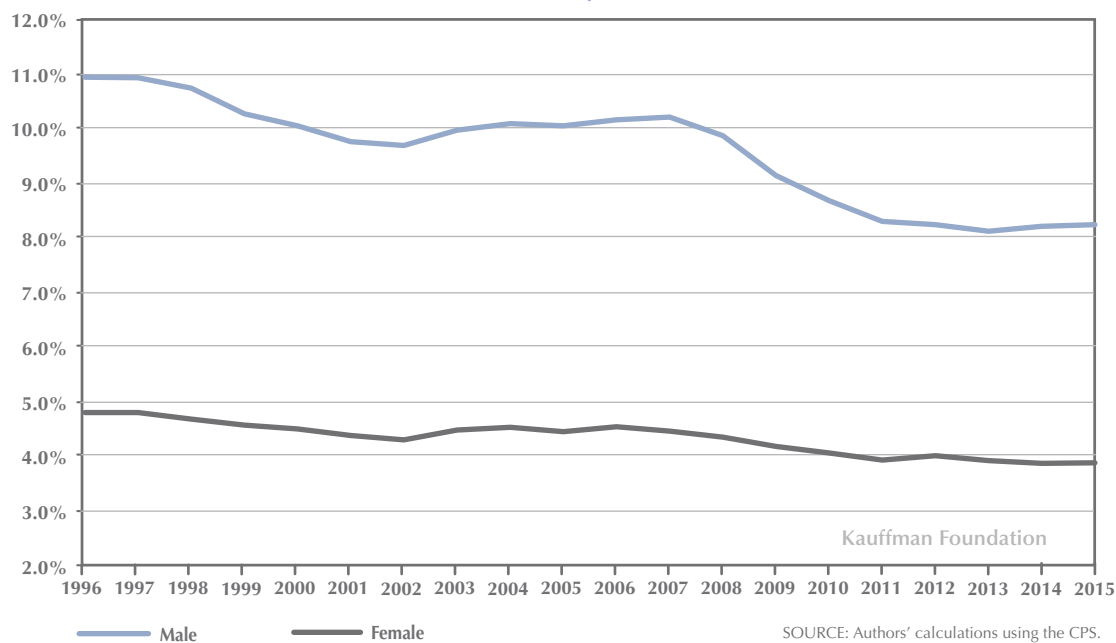
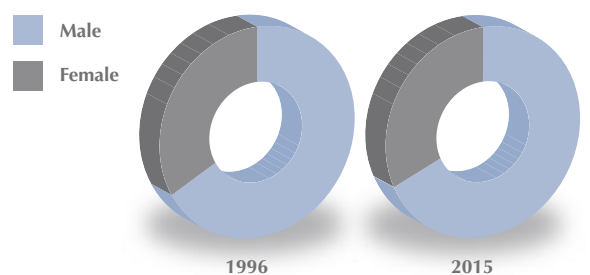


Figure 2A
Changes in the Composition of
Business Owners by Gender (1996, 2015)



SOURCE: Authors' calculations using the CPS.

Kauffman Foundation

Gender	1996	2015
Male	68.46%	66.98%
Female	31.54%	33.02%

TABLE 3
Rate of Business Owners by Race (1996–2015)

Year	White		Black		Latino		Asian		Total	
	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size
1996	9.11%	633,228	2.72%	81,534	4.46%	66,747	7.82%	31,735	7.81%	823,372
1997	9.13%	631,161	2.74%	82,404	4.53%	69,224	7.88%	32,375	7.81%	826,002
1998	8.94%	630,870	2.84%	81,884	4.30%	71,358	8.08%	33,349	7.65%	828,037
1999	8.52%	626,929	3.02%	81,386	4.50%	74,558	7.45%	33,246	7.35%	826,325
2000	8.39%	616,686	3.17%	83,136	4.22%	79,606	7.01%	34,308	7.21%	824,821
2001	8.13%	662,471	2.97%	87,820	4.24%	82,693	7.28%	37,552	7.01%	882,875
2002	8.10%	728,990	2.94%	92,404	4.26%	87,875	6.47%	41,122	6.94%	963,720
2003	8.36%	710,576	3.14%	88,685	4.68%	91,907	6.94%	37,618	7.17%	954,211
2004	8.41%	693,549	3.13%	86,096	4.96%	91,709	7.60%	38,223	7.26%	937,905
2005	8.35%	685,538	3.29%	84,676	4.93%	94,529	7.41%	40,523	7.21%	933,319
2006	8.36%	671,724	3.40%	85,565	5.32%	100,252	8.19%	42,312	7.31%	926,655
2007	8.38%	661,392	3.31%	86,862	5.58%	99,546	7.49%	42,665	7.30%	915,715
2008	8.10%	654,191	3.41%	86,307	5.50%	100,245	7.17%	44,052	7.07%	909,374
2009	7.61%	656,542	3.22%	88,456	5.09%	101,703	6.95%	45,482	6.63%	917,089
2010	7.29%	648,550	2.87%	92,151	5.01%	104,629	6.63%	47,271	6.34%	917,287
2011	7.10%	635,378	2.74%	90,888	4.71%	103,711	5.79%	48,730	6.09%	903,065
2012	7.02%	625,546	2.94%	89,605	4.96%	105,316	5.81%	50,424	6.09%	895,076
2013	6.85%	612,919	2.77%	89,095	4.99%	106,441	6.50%	50,829	5.98%	883,138
2014	6.85%	606,168	2.95%	90,621	5.42%	108,000	5.83%	51,235	6.00%	880,974
2015	6.91%	586,458	2.92%	92,678	5.56%	106,559	5.62%	50,741	6.02%	861,622

(1) Estimates calculated by the authors using the Current Population Survey. (2) The Rate of Business Owners is the percent of individuals (ages twenty to sixty-four) who own a business as their main job with fifteen or more hours worked per week. (3) Race and Spanish codes changed in 2003. Estimates for 2003 only include individuals reporting one race. (4) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 3
Rate of Business Owners by Race (1996–2015)

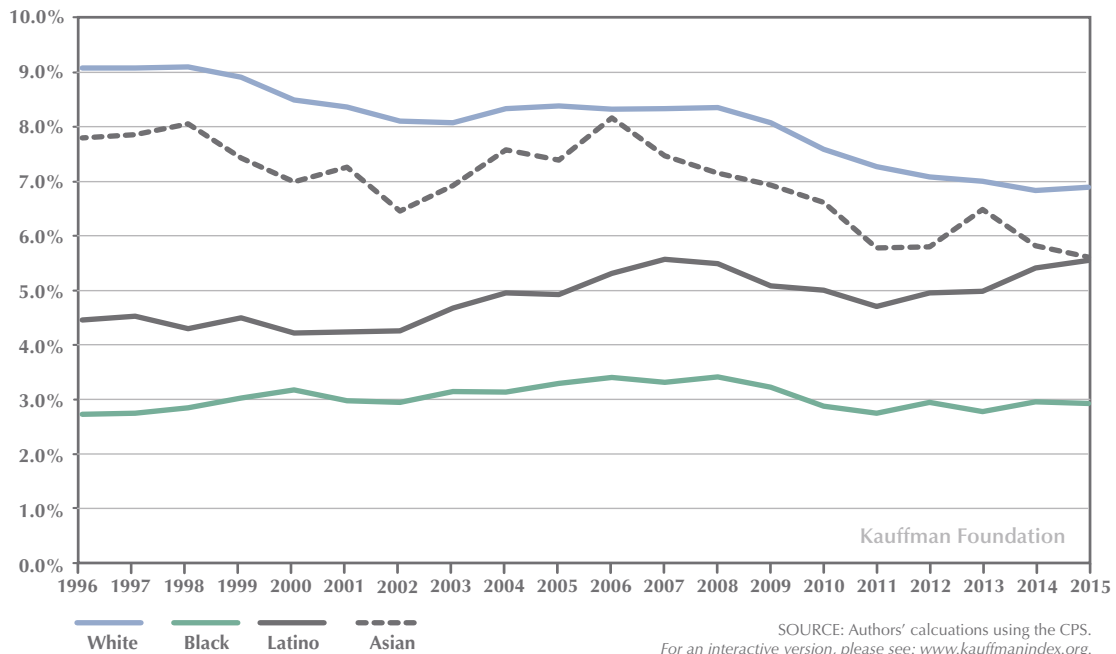
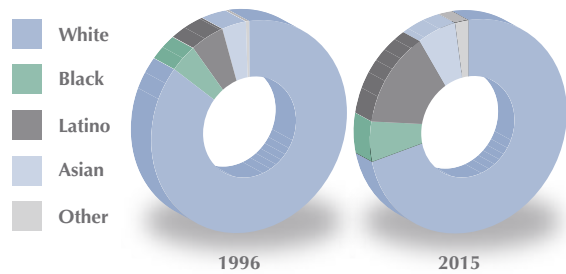


Figure 3A
Changes in Composition of
Business Owners by Race (1996, 2015)



SOURCE: Authors' calculations using the CPS. Kauffman Foundation

Race	1996	2015
White	86.00%	71.67%
Black	4.16%	6.22%
Latino	5.55%	13.99%
Asian	3.81%	6.16%
Other	0.50%	1.96%

TABLE 4
Rate of Business Owners by Nativity (1996–2015)

Year	Native-Born		Immigrant		Total	
	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size
1996	7.90%	735,704	7.14%	87,668	7.81%	823,372
1997	7.88%	734,986	7.34%	91,016	7.81%	826,002
1998	7.73%	733,649	7.11%	94,388	7.65%	828,037
1999	7.42%	730,815	6.93%	95,510	7.35%	826,325
2000	7.33%	722,873	6.41%	101,948	7.21%	824,821
2001	7.10%	774,322	6.47%	108,553	7.01%	882,875
2002	7.06%	847,497	6.22%	116,223	6.94%	963,720
2003	7.31%	836,987	6.44%	117,224	7.17%	954,211
2004	7.34%	821,230	6.84%	116,675	7.26%	937,905
2005	7.29%	813,781	6.77%	119,538	7.21%	933,319
2006	7.31%	801,727	7.34%	124,928	7.31%	926,655
2007	7.23%	791,007	7.66%	124,708	7.30%	915,715
2008	6.97%	784,765	7.61%	124,609	7.07%	909,374
2009	6.55%	790,420	7.04%	126,669	6.63%	917,089
2010	6.20%	787,166	7.04%	130,121	6.34%	917,287
2011	5.94%	773,829	6.85%	129,236	6.09%	903,065
2012	5.90%	765,644	7.02%	129,432	6.09%	895,076
2013	5.75%	755,062	7.10%	128,076	5.98%	883,138
2014	5.76%	752,910	7.18%	128,064	6.00%	880,974
2015	5.79%	736,804	7.10%	124,818	6.02%	861,622

Notes: (1) Estimates calculated by the authors using the Current Population Survey. (2) The Rate of Business Owners is the percent of individuals (ages twenty to sixty-four) who own a business as their main job with fifteen or more hours worked per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 4
Rate of Business Owners by Nativity (1996–2015)

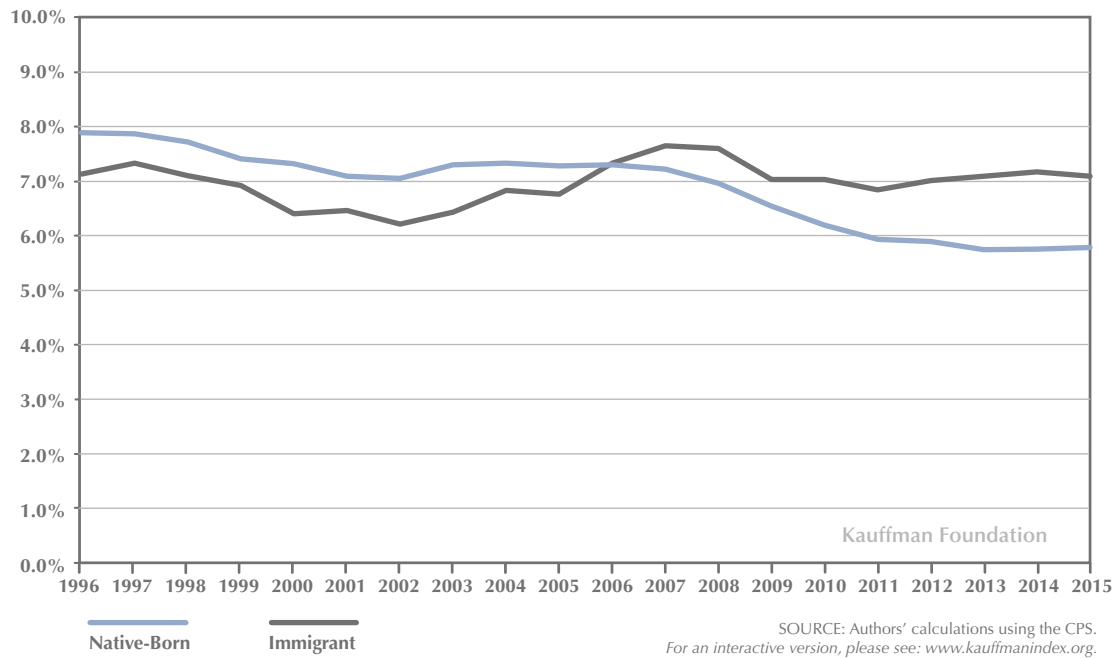
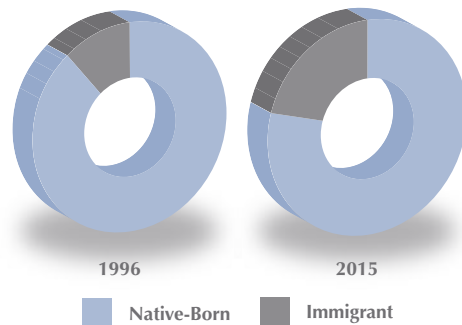


Figure 4A
Changes in Composition of
Business Owners by Nativity (1996, 2015)



SOURCE: Authors' calculations using the CPS.

Kauffman Foundation

Nativity	1996	2015
Native-Born	89.14%	79.35%
Immigrant	10.85%	20.65%

TABLE 5
Rate of Business Owners by Age (1996–2015)

Year	Ages 20–34		Ages 35–44		Ages 45–54		Ages 55–64		Total	
	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size
1996	4.41%	293,276	9.35%	232,094	11.05%	179,575	8.98%	118,427	7.81%	823,372
1997	4.16%	288,208	9.17%	233,862	11.00%	183,208	9.72%	120,724	7.81%	826,002
1998	4.01%	282,136	9.02%	231,813	10.63%	189,454	9.50%	124,634	7.65%	828,037
1999	3.94%	274,343	8.58%	229,232	10.06%	194,903	9.05%	127,847	7.35%	826,325
2000	3.76%	272,316	8.44%	226,735	9.93%	198,107	8.75%	127,663	7.21%	824,821
2001	3.55%	286,312	8.22%	238,868	9.51%	218,496	8.80%	139,199	7.01%	882,875
2002	3.47%	309,269	8.05%	256,355	9.43%	239,571	8.79%	158,525	6.94%	963,720
2003	3.63%	301,974	8.42%	247,783	9.60%	239,594	9.14%	164,860	7.17%	954,211
2004	3.80%	296,011	8.40%	235,440	9.62%	237,369	9.25%	169,085	7.26%	937,905
2005	3.78%	292,851	8.22%	231,784	9.65%	236,312	9.05%	172,372	7.21%	933,319
2006	3.83%	288,109	8.42%	225,462	9.77%	236,391	9.03%	176,693	7.31%	926,655
2007	3.69%	283,064	8.42%	217,752	9.99%	233,499	8.87%	181,400	7.30%	915,715
2008	3.58%	281,770	7.99%	210,495	9.70%	232,174	8.72%	184,935	7.07%	909,374
2009	3.16%	285,038	7.45%	207,126	9.16%	234,298	8.43%	190,627	6.63%	917,089
2010	3.01%	289,100	7.25%	203,024	8.64%	231,314	8.16%	193,849	6.34%	917,287
2011	2.92%	285,718	6.74%	196,584	8.44%	222,165	7.93%	198,598	6.09%	903,065
2012	2.84%	283,078	6.95%	194,090	8.34%	218,170	7.89%	199,738	6.09%	895,076
2013	2.77%	278,382	6.64%	189,568	8.34%	213,955	7.88%	201,233	5.98%	883,138
2014	2.77%	279,270	6.76%	188,197	8.42%	209,612	7.80%	203,895	6.00%	880,974
2015	2.78%	274,217	7.08%	185,017	8.15%	200,395	7.84%	201,993	6.02%	861,622

Notes: (1) Estimates calculated by the authors using the Current Population Survey. (2) The Rate of Business Owners is the percent of individuals (ages twenty to sixty-four) who own a business as their main job with fifteen or more hours worked per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 5
Rate of Business Owners by Age (1996–2015)

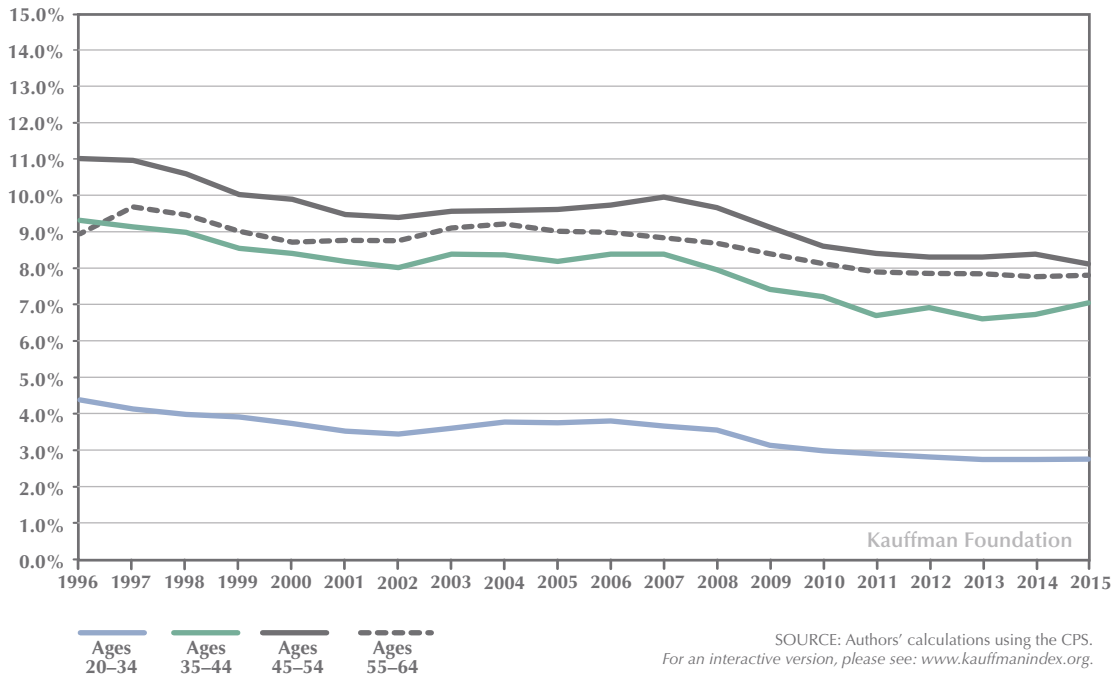
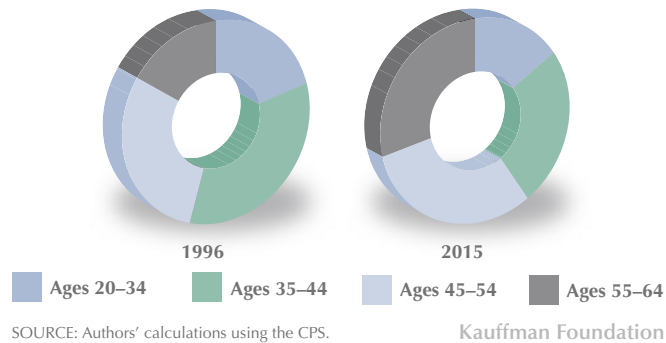


Figure 5A
Changes in Composition of
Business Owners by Age (1996, 2015)



Age	1996	2015
Ages 20–34	21.09%	15.79%
Ages 35–44	33.57%	24.93%
Ages 45–54	29.57%	30.81%
Ages 55–64	15.77%	28.47%

TABLE 6
Rate of Business Owners by Education (1996–2015)

Year	Less than High School		High School Graduate		Some College		College Graduate		Total	
	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size	Rate of Business Owners	Sample Size
1996	5.37%	97,418	7.77%	250,384	8.66%	197,076	11.19%	193,739	8.56%	738,617
1997	5.39%	95,214	7.84%	250,974	8.59%	197,644	11.20%	198,138	8.59%	741,970
1998	5.26%	92,729	7.75%	248,617	8.47%	198,461	10.73%	204,674	8.42%	744,481
1999	5.11%	88,894	7.40%	244,756	8.34%	200,678	9.95%	208,976	8.07%	743,304
2000	5.21%	87,884	7.31%	240,210	8.09%	202,124	9.73%	209,233	7.94%	739,451
2001	5.14%	91,464	7.05%	254,232	7.86%	219,049	9.50%	227,695	7.73%	792,440
2002	5.05%	96,348	7.10%	276,253	7.58%	238,406	9.45%	254,658	7.67%	865,665
2003	5.27%	94,060	7.29%	271,576	7.94%	235,173	9.70%	255,665	7.93%	856,474
2004	5.35%	91,722	7.32%	263,880	8.10%	232,617	9.70%	253,218	8.00%	841,437
2005	5.09%	91,415	7.29%	259,383	8.15%	232,040	9.60%	253,882	7.95%	836,720
2006	5.70%	90,497	7.29%	254,313	8.09%	230,610	9.67%	255,818	8.04%	831,238
2007	5.58%	85,472	7.63%	249,165	7.88%	228,568	9.48%	259,680	8.04%	822,885
2008	5.61%	82,569	7.17%	244,168	7.73%	229,220	9.13%	261,537	7.77%	817,494
2009	5.30%	82,706	6.75%	245,486	7.18%	231,852	8.65%	265,098	7.30%	825,142
2010	5.17%	81,791	6.43%	244,772	6.80%	230,746	8.32%	266,557	7.00%	823,866
2011	5.03%	79,200	6.13%	237,994	6.41%	227,673	8.10%	267,105	6.72%	811,972
2012	5.17%	76,223	6.23%	231,149	6.56%	226,858	7.85%	270,514	6.74%	804,744
2013	5.18%	73,472	6.10%	226,091	6.50%	223,702	7.65%	271,406	6.64%	794,671
2014	5.33%	72,789	6.21%	224,856	6.36%	222,586	7.62%	272,222	6.64%	792,453
2015	5.69%	72,981	6.28%	217,092	6.42%	216,560	7.40%	268,381	6.65%	775,014

Notes: (1) Estimates calculated by the authors using the Current Population Survey. (2) The Rate of Business Owners is the percent of individuals (ages twenty to sixty-four) who own a business as their main job with fifteen or more hours worked per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 6
Rate of Business Owners by Education (1996–2015)

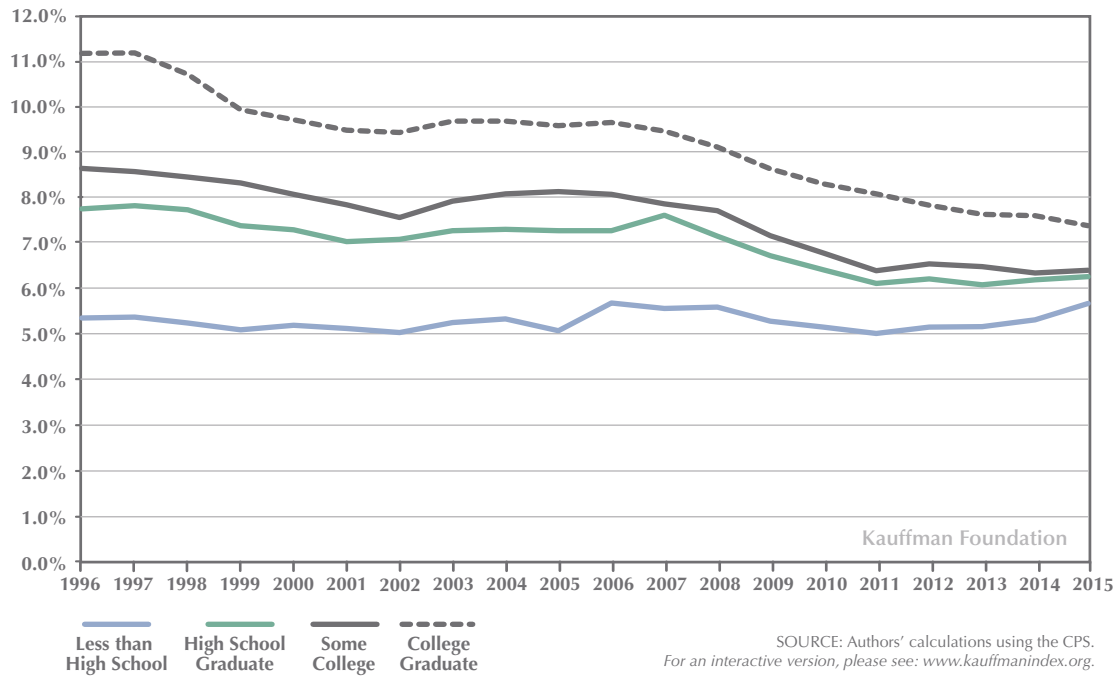
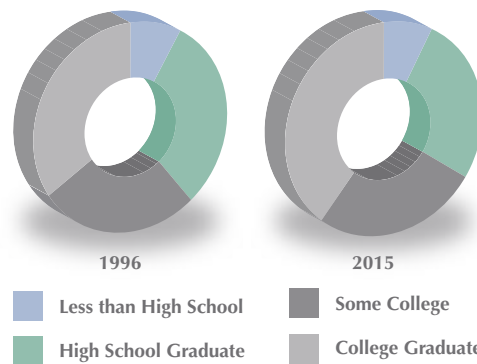


Figure 6A
Changes in Composition of
Business Owners by Education
(1996, 2015)



SOURCE: Authors' calculations using the CPS. Kauffman Foundation

Education	1996	2015
Less than High School	8.76%	8.73%
High School Graduate	30.42%	26.05%
Some College	26.81%	26.51%
College Graduate	34.01%	38.71%

2016 THE KAUFFMAN INDEX

mainstreet
entrepreneurship



Rate of Business Owners



Survival Rate



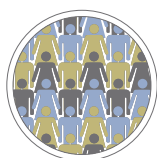
Established Small Business Density

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.

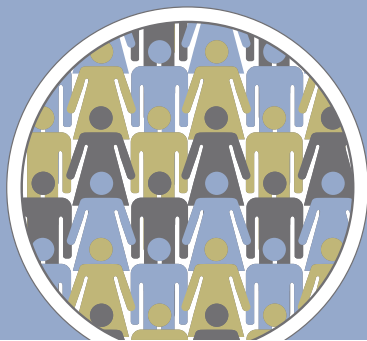
The main job is defined as the one with the most hours worked. Individuals who own side businesses will, therefore, not be counted if they are working more hours on a wage/salary job. The requirement that business owners work fifteen or more hours per week in the survey month is imposed to rule out part-time 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/empstat.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



- 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.



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 small-scale 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 business-level 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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4801 ROCKHILL ROAD
KANSAS CITY, MISSOURI 64110
816-932-1000
www.kauffman.org