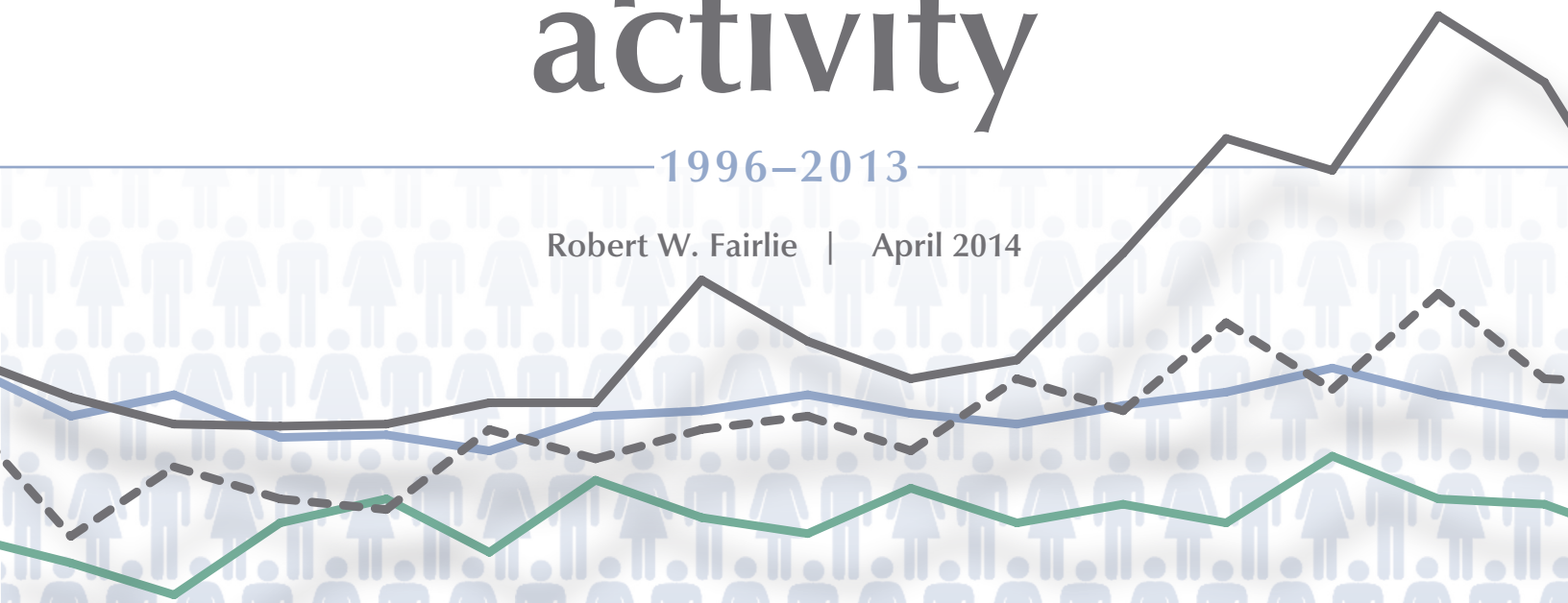
KAUFFMAN INDEX OF

entrepreneurial activity

1996–2013

Robert W. Fairlie | April 2014



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executive summary

The Kauffman Index of Entrepreneurial Activity is a leading indicator of new business creation in the United States. Capturing new business owners in their first month of significant business activity, this measure provides the earliest documentation of new business development across the country. The percentage of the adult, non-business-owner population that starts a business each month is measured using data from the Current Population Survey (CPS).The Index captures all types of business activity and is based on nationally-representative sample sizes of more than a half-million observations each year. In addition to this overall rate of entrepreneurial activity, separate estimates for specific demographic groups, states, and select metropolitan statistical areas (MSAs) are presented. The Index provides the only national measure of the rate of business creation by specific population groups.

New 2013 data allow for an update to previous reports, with consideration of trends in the entrepreneurial activity rates over the eighteen-year period between 1996 and 2013. The Kauffman Index reveals important shifts in the national level of entrepreneurial activity and shifts in the demographic and geographic composition of new entrepreneurs across the country. Also, new for 2013 is the reporting of trends in the share of entrepreneurial activity coming from new entrepreneurs who are not coming directly out of unemployment. The new estimates provide suggestive evidence on trends in "opportunity" business creation relative to unemployment-related ("necessity") business creation over the business cycle. For only the second year, estimates also are reported for veterans, representing some of the first evidence on business creation for this group.

This report presents rates of entrepreneurial activity for each demographic group (e.g. male, female, immigrant, native-born, etc.), but in some cases the share of all new entrepreneurs represented by each demographic group also is presented. The former represents the overall entrepreneurial rate for each subgroup, whereas the latter represents the proportional representation of the individual subgroup to the total number of new entrepreneurs. For example, the rate of entrepreneurial activity for immigrants has always exceeded the rate for the native-born. This does not indicate that there are more immigrant entrepreneurs than native-born entrepreneurs, however, because the native-born population is substantially larger than the immigrant population.[1] Key findings for 2013 include:

- The rate of business creation declined from 300 out of 100,000 adults in 2012 to 280 out of 100,000 adults in 2013. The business creation of 0.28 percent translates into approximately 476,000 new business owners each month during the year.
- The decline in the business creation rate to 0.28 percent in 2013 is important because this rate finally returns levels of business creation to levels found prior to the Great Recession.
- The decline in business creation over the past year is likely due to improved labor market conditions, putting less pressure on individuals to start businesses out of necessity. Trends in the share of business starts, presented in this report for the first time, indicate that the share of new entrepreneurs who are not coming directly out of unemployment was much higher

in 2013 than the share at the end of the Great Recession.

- The rate of employer business creation increased slightly from levels prior to the Great Recession.
- The overall decline in business creation rates was due mainly to a drop in business creation rates among men, but also was due to a slight drop in rates among women.
- The entrepreneurial activity rate decreased for all racial and ethnic groups. The rate decreased from 0.21 percent in 2012 to 0.19 percent in 2013 for African-Americans, from 0.40 percent in 2012 to 0.38 percent in 2013 for Latinos, from 0.31 percent in 2012 to 0.28 percent in 2013 for Asians, and from 0.29 percent in 2012 to 0.27 percent in 2013 for whites.
- Immigrants were nearly twice as likely to start businesses each month as were the native-born in 2013. The immigrant rate of entrepreneurial activity decreased from 0.49 percent in 2012 to 0.43 percent in 2013.
- All age groups experienced declines in entrepreneurial activity from 2012 to 2013, except for the ages forty-five to fifty-four group, which experienced an increase.
- Over the past eighteen years, Latinos, Asians, and immigrants experienced rising shares of all new entrepreneurs, mainly because of increasing populations, but also because of rising rates of entrepreneurship. The oldest age group (ages fifty-five to sixty-four) also experienced a rising share of all new entrepreneurs primarily because it represents an increasing share of the population.
- Entrepreneurship rates declined for all education groups, except for college graduates who experienced constant rates from 2012 to 2013. The least educated have the highest rate of business creation, which might be due to more limited labor market opportunities than for more highly educated groups.
- Relatively new estimates of entrepreneurial activity for veterans indicate that business creation for veterans declined from 0.28 percent in 2012 to 0.23 percent in 2013. The share of all businesses created by veterans declined sharply over the past eighteen years as the working-age veteran population declined over this period.
- The construction industry had the highest rate of entrepreneurial activity of all major industry groups in 2013 (1.27 percent). The second-highest rate of entrepreneurial activity was in the services industry (0.37 percent).
- From 2012 to 2013, entrepreneurial activity rates decreased in all regions in the United States. Entrepreneurship rates are highest in the West and lowest in the Midwest.
- The states with the highest entrepreneurial activity rates were Montana (610 per 100,000 adults), Alaska (470 per 100,000 adults), South Dakota (410 per 100,000 adults), California (400 per 100,000 adults), and Colorado (380 per 100,000 adults). The states with the lowest entrepreneurial activity rates were Iowa (110 per 100,000 adults), Rhode Island (140 per 100,000 adults), Indiana (160 per 100,000 adults), Minnesota (160 per 100,000 adults), Washington (170 per 100,000 adults), and Wisconsin (170 per 100,000 adults).
- Among the fifteen largest MSAs in the United States, San Francisco (0.57 percent) had the highest entrepreneurial activity rate in 2013, and Philadelphia (0.18 percent) had the lowest rate.

Introduction

The Kauffman Index of Entrepreneurial Activity measures the rate of business creation at the individual owner level. Presenting the percentage of the adult, non-business-owner population that starts a business each *month*, the Kauffman Index captures *all* new business owners, including those who own incorporated or unincorporated businesses, and those who are employers or non-employers.[2] The Kauffman Index is calculated from matched 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. This report updates previous accounts of the Kauffman Index, incorporating new data from 2013.

To create the Kauffman Index, all individuals between ages twenty and sixty-four who do not own a business as their main job are identified in the initial survey month. By matching CPS files for the subsequent month to create a two-month survey pair, it is then determined if these individuals own a business as their main job with fifteen or more usual hours worked per week in the following survey month. These monthly entrepreneurial activity rates then are averaged to calculate an average monthly estimate for each year. More details about the datasets and measures used and where to access the microdata for research are provided in previous reports and in the Appendix.[3] The Kauffman Index of Entrepreneurial Activity improves over other possible measures of entrepreneurship because of its timeliness, dynamic nature, inclusion of all types of business activity, exclusion of "casual" businesses, information on owner demographics, and measurement at the time of business creation instead of retrospectively.

Trends in Entrepreneurial Activity

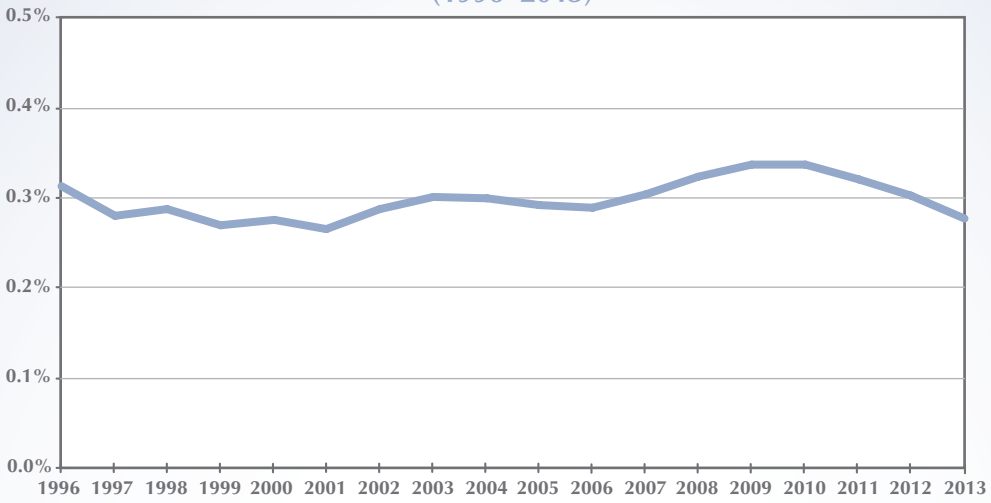
In 2013, an average of 0.28 percent of the adult population, or 280 out of 100,000 adults, created new businesses each month.[4] This business-creation rate translates into 476,000 new businesses being created each month during the year. The entrepreneurial activity rate steadily declined over the past two years. In 2011, an average of 0.32 percent of the adult population, or 320 out of 100,000 adults, created new businesses each month. In 2012, the entrepreneurship rate dropped to 0.30 percent and, in 2013, the entrepreneurship rate dropped again to 0.28. The drop of twenty new businesses per month out of 100,000 adults in 2012 and 2013 represents a decrease of 6 percent to 7 percent in each of these two years.

In 2013, entrepreneurship rates returned to the pre-recessionary level of 2006, which is likely due to improving economic conditions. The national unemployment rate hit a peak of roughly 10 percent from the Great Recession, but has declined since then, ending the year at below 7 percent for the first time in five years (Bureau of Labor Statistics 2014a). Figure 1 and Table 1 report average monthly estimates of the Kauffman Index by year from 1996 to 2013.[5] From 1996 to 2007, the business creation rate fluctuated within a range of 0.27 percent to 0.31 percent, but then rose above this level in 2008 (the official start date of the Great Recession is December 2007). Over the next four years when the labor market was weak, the total rate of business creation rose to an elevated level of between 0.32 percent and 0.34 percent. The decline in the business creation rate to 0.30 percent in 2012 and further decrease to 0.28 percent in 2013 represents a return to pre-recessionary, longer-term levels, and likely is due to improving opportunities in the labor market. On the one hand, economic growth increases potential business income and access to credit, but it also improves opportunities in the wage/salary sector, exerting a strong negative effect on business creation.

With this measure of business creation that includes businesses of *all* types, it is impossible to cleanly disaggregate between the creation of high-growth potential businesses and individuals starting businesses because of limited job opportunities. Thus, an increase in entrepreneurship rates could be driven by improving conditions for high-growth

Figure 1

Kauffman Index of Entrepreneurial Activity (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

TABLE 1

Kauffman Index of Entrepreneurial Activity (1996–2013)

Year	Male		Female		Total	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.37%	243,368	0.26%	287,639	0.31%	531,007
1997	0.35%	244,863	0.22%	286,266	0.28%	531,129
1998	0.33%	245,820	0.25%	286,476	0.29%	532,296
1999	0.32%	246,225	0.22%	286,765	0.27%	532,990
2000	0.34%	246,522	0.21%	284,901	0.27%	531,423
2001	0.31%	264,693	0.23%	304,765	0.26%	569,458
2002	0.36%	288,595	0.22%	334,562	0.29%	623,157
2003	0.38%	284,391	0.22%	330,166	0.30%	614,557
2004	0.37%	279,373	0.24%	323,314	0.30%	602,687
2005	0.35%	276,836	0.24%	320,362	0.29%	597,198
2006	0.35%	274,825	0.23%	316,781	0.29%	591,606
2007	0.41%	271,807	0.20%	314,441	0.30%	586,248
2008	0.42%	272,218	0.24%	312,167	0.32%	584,385
2009	0.43%	276,445	0.25%	315,254	0.34%	591,699
2010	0.44%	277,387	0.24%	315,884	0.34%	593,271
2011	0.42%	273,887	0.23%	312,259	0.32%	586,146
2012	0.38%	272,246	0.23%	308,707	0.30%	580,953
2013	0.34%	268,540	0.22%	304,060	0.28%	572,600

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Visit www.kauffman.org/kiea to download the data files.

potential businesses (sometimes referred to as "opportunity" entrepreneurship) or worsening labor market conditions that result in "necessity" entrepreneurship.[6] Similarly, it is impossible to know whether necessity or opportunity entrepreneurship is driving the year-to-year changes in business creation rates reported here for the nation, demographic groups, or geographical areas without taking into consideration underlying economic conditions.

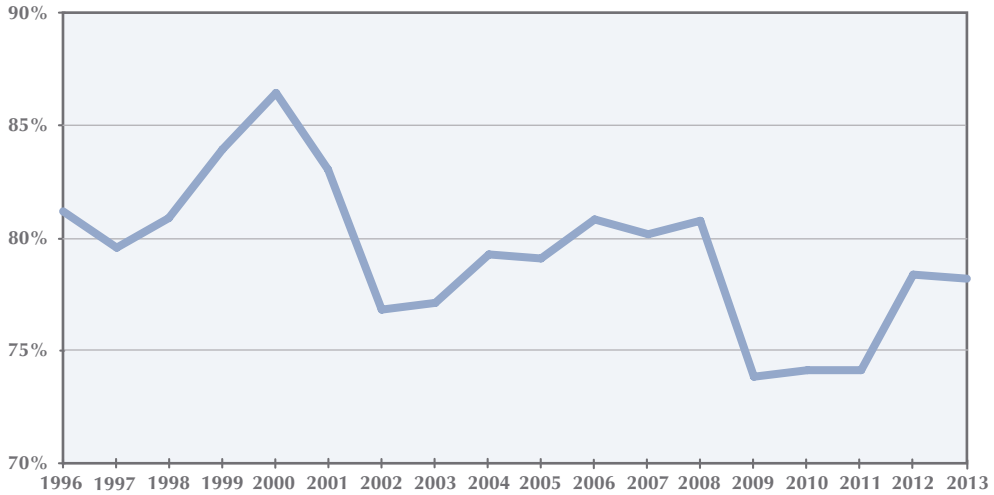
One approximate method for disentangling these two opposing trends is to examine the share of new entrepreneurs coming out of unemployment compared to the share of the new entrepreneurs coming out of wage and salary work, school, or other labor market states. Individuals starting businesses out of unemployment might be more inclined to start those businesses out of necessity than opportunity. The distinction is not perfect because many successful businesses are created by people who have lost their jobs and are unemployed, but the distinction offers at least some suggestive evidence on the influence of economic conditions on overall business creation.

The share of new entrepreneurs who are not coming directly out of unemployment was substantially higher than at the end of the Great Recession. In 2013, 78.2 percent of new entrepreneurs were from those who were not coming directly out of unemployment. This share is more than four percentage points higher than it was in 2009 at the end of the recession. Figure 1.B displays trends in the share from 1996 to 2013. Over the past eighteen years, the share of new business creation from "opportunity" entrepreneurship increased when economic conditions were improving and decreased when economic conditions were worsening. The largest share of "opportunity" entrepreneurship occurred at the height of the "Roaring '90s," and the smallest share was in 2009 at the end of the Great Recession. The share of opportunity business creation also decreased in the recession of the early 2000s and increased in the following growth period in the mid-2000s.

In addition to an examination of these trends, other factors, such as the unemployment rate, changes in Gross Domestic Product, population growth, and general labor market conditions, can be coupled with the KIEA to help interpret whether changes in the entrepreneurship rate are likely being driven by changes in opportunity entrepreneurship, necessity entrepreneurship, or both. Even with all of this evidence, however, the complete answer is difficult to ascertain and care should be taken when

Figure 1.B

Share of Total Business Creation by New Entrepreneurs who are not Coming Directly Out of Unemployment (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

interpreting what trends in rates of total business creation mean. For example, the motivation for starting businesses when economic conditions are weak and unemployment rates are high may differ from those created in stronger economic conditions, but many of these businesses may eventually be very successful.[7]

Comparison to Employer Business Creation Rates

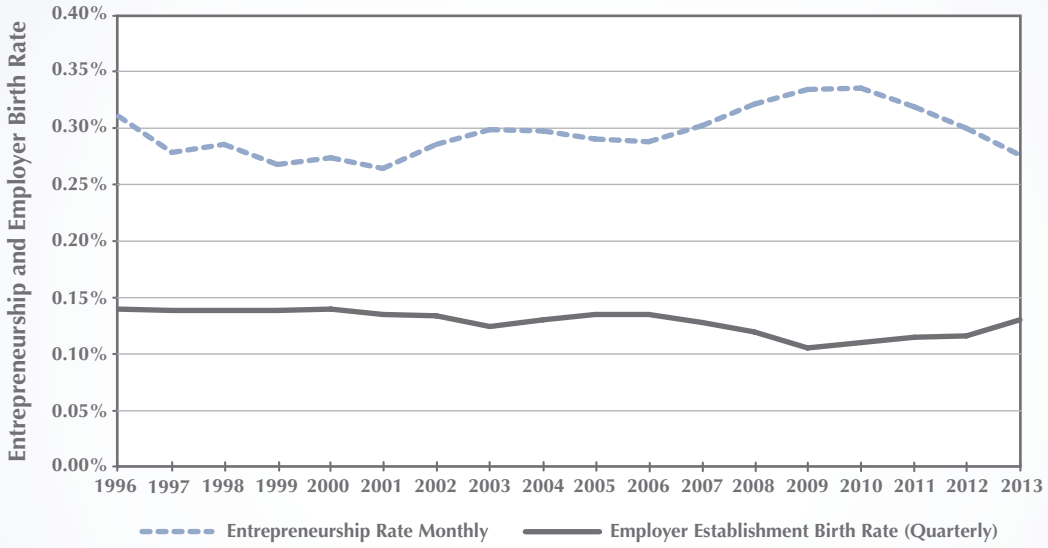
The Kauffman Index of Entrepreneurial Activity indicates that 476,000 new businesses were created each month during 2013. This *per-month* figure differs drastically from employer establishment creation measures, such as the Business Employer Dynamics, which indicate roughly the same number of new businesses per year (Bureau of Labor Statistics 2014b). The primary difference is that the Kauffman Index counts both employer and non-employer firms, whereas other measures consider only the former. New businesses with employees represent only a small share of all new businesses.

The drop in entrepreneurship rates over the past two years differs from a slight upward trend in employer business creation from 2011 to 2013. Figure 1.C reports average quarterly estimates of employer establishment birth rates in addition to the average monthly estimates of the Kauffman Index by year from 1996 to 2013. The employer establishment birth rate is the ratio of the average quarterly number of establishment births divided by the average number of non-business owners. The number of establishment births is from the Business Employer Dynamics (BED), compiled by the U.S. Bureau of Labor Statistics (BLS), and the number of non-business owners is estimated using cross-sectional CPS data. The employer establishment birth rate was 0.12 percent, or twelve out of 100,000 people per quarter in 2012, and 0.13 percent, or thirteen out of 100,000 people per quarter in 2013 (only the second quarter of data was available for 2013 at the time of this report).[8] This rate translates into an average of 226,000 employer establishment births per quarter in 2013.

Looking back over the past several years, the quarterly employer establishment birth rate dropped

Figure 1C

Kauffman Index of Entrepreneurial Activity (1996–2013) and Employer Establishment Birth Rate (1996–2013 Q2)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the CPS and BLS.
NOTE: 2013 Employer Establishment Birth Rate only includes Q2.

from 0.13 percent in 2007 to 0.10 percent in 2009.[9] Over this same period of time, the monthly entrepreneurship activity rate increased from 0.30 percent to 0.34 percent. These opposing trends may be due to the Great Recession pushing many individuals into business ownership because of high unemployment rates. These individuals were probably more likely to start sole proprietorships and other non-employer firms instead of more costly employer firms. From 2009 to 2013 the employer establishment birth rate rose slightly, while the entrepreneurship rate declined over the same time period.

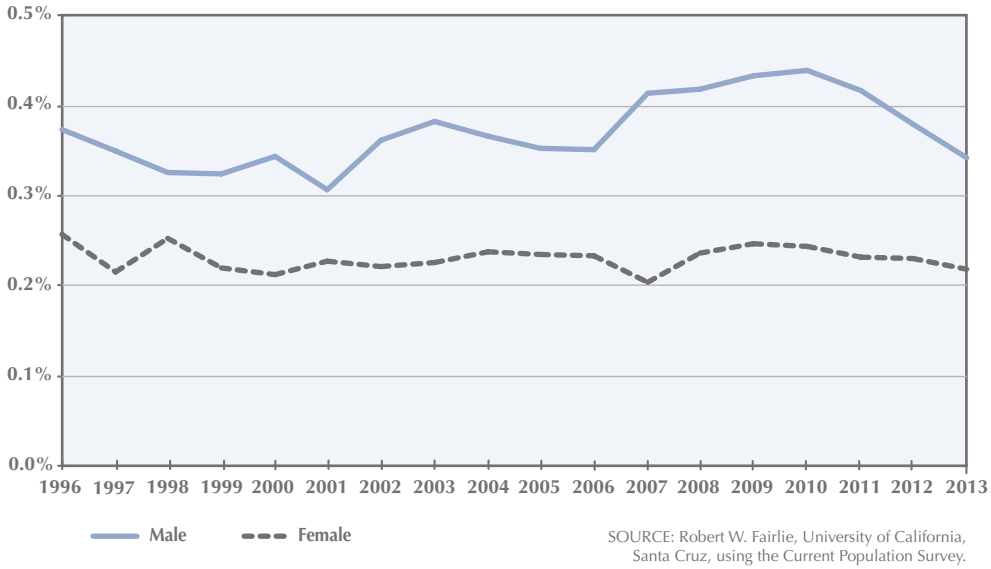
ENTREPRENEURIAL ACTIVITY BY DEMOGRAPHIC GROUPS

The detailed demographic information available in the CPS and large sample sizes allow for the estimation of separate indices by gender, race, immigrant status, age, and 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.[10] Entrepreneurial activity decreased for men from 2012 to 2013, continuing a downward trend that started in 2011. The male entrepreneurial activity rate decreased substantially, from 0.38 percent in 2012 to 0.34 percent in 2013, reaching pre-recessionary levels. For women, the entrepreneurship rate dropped slightly from 0.23 percent in 2012 to 0.22 percent in 2013. The female entrepreneurship rate in 2013 was lower than the recessionary peak of 0.25 percent in 2009. Figure 2 and Table 1 report estimates of the Kauffman Index by gender from 1996 to 2013. Overall, men are substantially more likely to start businesses each month than are women. The average rate of entrepreneurial activity for men over the eighteen-year period was 0.37 percent. The average rate for women was substantially lower at 0.23 percent.

All racial and ethnic groups experienced declines in entrepreneurial activity rates between 2012 and 2013. Figure 3 and Table 2 report estimates of the Kauffman Index by race and ethnicity. The Latino rate

Figure 2

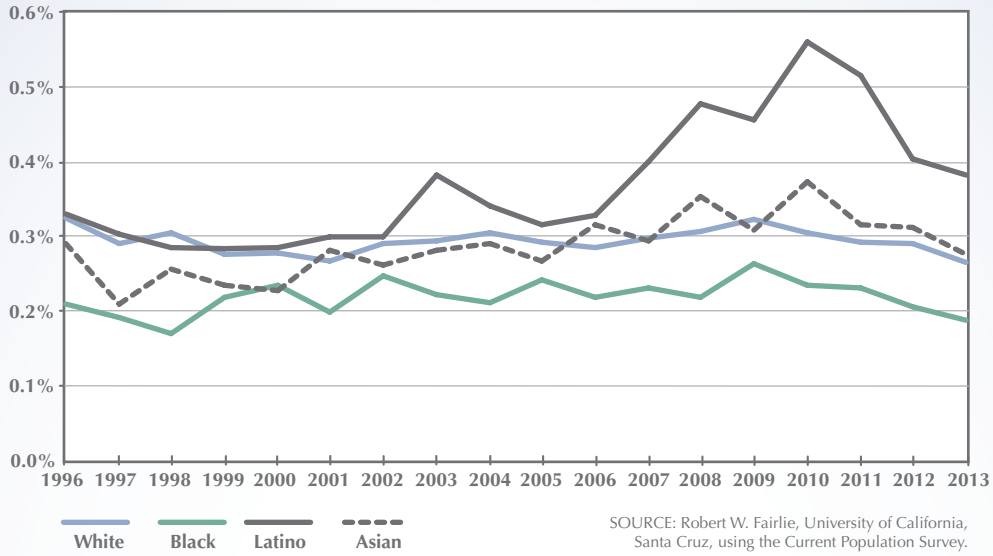
Kauffman Index of Entrepreneurial Activity by Gender (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

Figure 3

Kauffman Index of Entrepreneurial Activity by Race (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

TABLE 2

Kauffman Index of Entrepreneurial Activity by Race (1996–2013)

Year	White		Black		Latino		Asian		Total	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.33%	405,007	0.21%	54,799	0.33%	44,033	0.29%	20,489	0.31%	531,007
1997	0.29%	402,519	0.19%	55,300	0.30%	45,537	0.21%	20,711	0.28%	531,129
1998	0.31%	402,681	0.17%	54,669	0.29%	46,940	0.26%	21,099	0.29%	532,296
1999	0.28%	401,712	0.22%	54,241	0.29%	49,074	0.24%	21,256	0.27%	532,990
2000	0.28%	394,524	0.24%	55,249	0.29%	52,428	0.23%	21,897	0.27%	531,423
2001	0.27%	425,149	0.20%	58,250	0.30%	54,155	0.28%	23,895	0.26%	569,458
2002	0.29%	469,626	0.25%	61,083	0.30%	57,514	0.26%	26,373	0.29%	623,157
2003	0.29%	455,554	0.22%	58,797	0.38%	59,676	0.28%	24,011	0.30%	614,557
2004	0.31%	444,321	0.21%	56,587	0.34%	59,170	0.29%	24,227	0.30%	602,687
2005	0.29%	437,420	0.24%	55,069	0.32%	60,828	0.27%	25,690	0.29%	597,198
2006	0.29%	428,021	0.22%	55,532	0.33%	64,204	0.32%	26,578	0.29%	591,606
2007	0.30%	422,369	0.23%	56,529	0.40%	63,900	0.29%	27,128	0.30%	586,248
2008	0.31%	419,454	0.22%	56,311	0.48%	64,470	0.35%	28,097	0.32%	584,385
2009	0.33%	423,378	0.27%	57,564	0.46%	65,514	0.31%	28,961	0.34%	591,699
2010	0.31%	418,536	0.24%	60,550	0.56%	67,853	0.37%	30,243	0.34%	593,271
2011	0.29%	411,118	0.23%	59,939	0.52%	67,695	0.32%	31,456	0.32%	586,146
2012	0.29%	405,044	0.21%	58,800	0.40%	68,637	0.31%	32,688	0.30%	580,953
2013	0.27%	396,399	0.19%	58,700	0.38%	69,291	0.28%	32,693	0.28%	572,600

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (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.

Visit www.kauffman.org/kiea to download the data files.

of business creation decreased from 0.40 percent in 2012 to 0.38 percent in 2013, and the African-American rate of business creation decreased from 0.21 percent in 2012 to 0.19 percent in 2013. The Asian rate of business creation rate declined from 0.31 percent to 0.28 percent, and the white rate of business creation declined from 0.29 percent in 2012 to 0.27 percent in 2013.

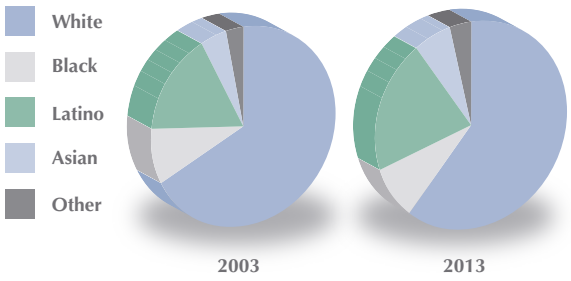
Reflecting the longer-term trends showing rising Latino rates of entrepreneurship and a growing share of the total U.S. population, the Latino share of all new entrepreneurs rose from 16.0 percent in 2003 to 20.4 percent in 2013. Figure 3.B report estimates of the share of new entrepreneurs by race from 2003 to 2013. The Asian share of new entrepreneurs also rose from 2003 to 2013, but remains relatively small at 6.1 percent. The white share of new entrepreneurs declined over the past ten years, whereas the black share increased minimally.

The entrepreneurial activity rate decreased for immigrants in 2013 and declined slightly for the native-born. These trends slightly reduced the large positive gap between immigrant and native-born rates. Figure 4 and Table 3 report estimates of the Kauffman Index by nativity. The entrepreneurial activity rate for immigrants dropped from 0.49 percent in 2012 to 0.43 percent in 2013. The longer-run pattern in entrepreneurship rates for immigrants, however, is a return to levels that are closer to pre-recessionary levels. The immigrant rate of entrepreneurship increased from 0.37 percent in 2006 to levels above 0.50 percent in the Great Recession and dropped to 0.43 percent by 2013. The native-born rate has remained relatively flat over the last eighteen years. The result of these contrasting trends is that immigrants were substantially more likely to start businesses each month than were the native-born in 2013. For immigrants, 430 out of 100,000 people start businesses each month, compared with 250 out of 100,000 people for the native-born.

A growing immigrant population and rising entrepreneurship rate contributed to a rising share of new entrepreneurs that are immigrant.

Figure 3B

Changes in Composition of New Entrepreneurs by Race (2003, 2013)

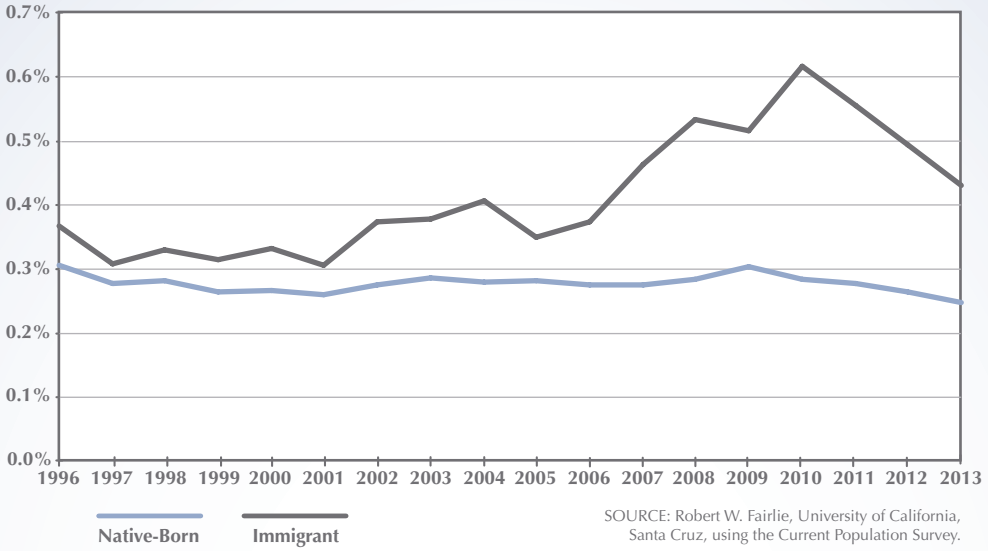


SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

Race	2003	2013
White	67.8%	61.2%
Black	9.0%	8.8%
Latino	16.0%	20.4%
Asian	4.4%	6.1%
Other	2.9%	3.5%

Figure 4

Kauffman Index of Entrepreneurial Activity by Nativity (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

TABLE 3

Kauffman Index of Entrepreneurial Activity by Nativity (1996–2013)

Year	Native-Born		Immigrant		Total	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.30%	474,984	0.36%	56,023	0.31%	531,007
1997	0.27%	473,208	0.31%	57,921	0.28%	531,129
1998	0.28%	472,458	0.33%	59,838	0.29%	532,296
1999	0.26%	472,107	0.31%	60,883	0.27%	532,990
2000	0.27%	466,150	0.33%	65,273	0.27%	531,423
2001	0.26%	500,292	0.30%	69,166	0.26%	569,458
2002	0.27%	549,356	0.37%	73,801	0.29%	623,157
2003	0.29%	539,914	0.38%	74,643	0.30%	614,557
2004	0.28%	528,881	0.41%	73,806	0.30%	602,687
2005	0.28%	521,967	0.35%	75,231	0.29%	597,198
2006	0.27%	513,386	0.37%	78,220	0.29%	591,606
2007	0.27%	507,985	0.46%	78,263	0.30%	586,248
2008	0.28%	505,911	0.53%	78,474	0.32%	584,385
2009	0.30%	511,798	0.51%	79,901	0.34%	591,699
2010	0.28%	510,631	0.62%	82,640	0.34%	593,271
2011	0.27%	503,500	0.55%	82,646	0.32%	586,146
2012	0.26%	498,127	0.49%	82,826	0.30%	580,953
2013	0.25%	491,045	0.43%	81,555	0.28%	572,600

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Visit www.kauffman.org/kiea to download the data files.

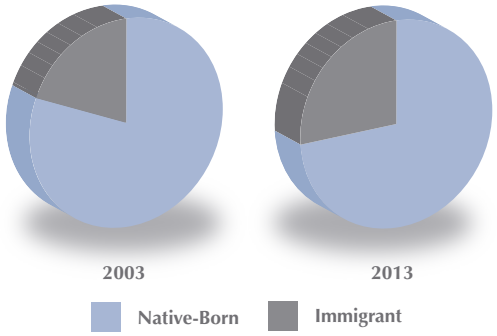
Figure 4.B reports estimates of the share of new entrepreneurs by nativity. The immigrant share of new entrepreneurs is 25.9 percent up from 19.1 percent in 2003.

Figure 5 and Table 4 report estimates of entrepreneurial activity rates by age group. All of the age groups experienced declines in business creation rates, except for the forty-five to fifty-four age group, which experienced an increase from 0.34 percent to 0.36 percent. The youngest age group (ages twenty to thirty-four) experienced a drop from 0.23 percent in 2012 to 0.18 percent in 2013, the next age group (ages thirty-five to forty-four) experienced a drop from 0.34 percent in 2012 to 0.31 percent in 2013, and the oldest age group (ages fifty-four to sixty-four) experienced a drop from 0.34 percent in 2012 to 0.31 percent in 2013. Over the entire period, business creation was the lowest among the youngest group.

Figure 5.B reports estimates of the share of new entrepreneurs by age group. An aging population has led to a rising share of new entrepreneurs in

Figure 4B

Changes in Composition of New Entrepreneurs by Nativity (2003, 2013)

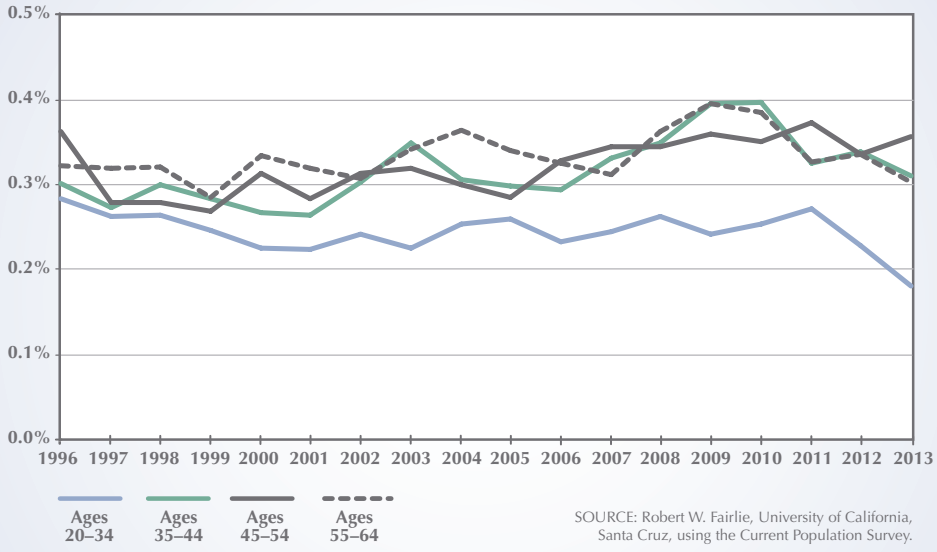


SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

Nativity	2003	2013
Native-Born	80.9%	74.1%
Immigrant	19.1%	25.9%

Figure 5

Kauffman Index of Entrepreneurial Activity by Age (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

TABLE 4

Kauffman Index of Entrepreneurial Activity by Age (1996–2013)

Year	Ages 20–34		Ages 35–44		Ages 45–54		Ages 55–64		Total	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.28%	193,242	0.30%	148,251	0.36%	113,187	0.32%	76,327	0.31%	531,007
1997	0.26%	189,631	0.28%	149,034	0.28%	115,371	0.32%	77,093	0.28%	531,129
1998	0.27%	185,691	0.30%	147,668	0.28%	119,502	0.32%	79,435	0.29%	532,296
1999	0.25%	180,102	0.29%	146,808	0.27%	123,993	0.29%	82,087	0.27%	532,990
2000	0.23%	178,854	0.27%	144,969	0.31%	125,619	0.34%	81,981	0.27%	531,423
2001	0.23%	187,883	0.27%	153,012	0.28%	139,228	0.32%	89,335	0.26%	569,458
2002	0.24%	203,569	0.30%	164,997	0.31%	152,841	0.31%	101,750	0.29%	623,157
2003	0.23%	198,248	0.35%	158,205	0.32%	152,447	0.34%	105,657	0.30%	614,557
2004	0.26%	193,373	0.31%	150,221	0.30%	150,743	0.37%	108,350	0.30%	602,687
2005	0.26%	190,271	0.30%	147,905	0.29%	149,119	0.34%	109,903	0.29%	597,198
2006	0.23%	186,939	0.30%	142,910	0.33%	149,117	0.33%	112,640	0.29%	591,606
2007	0.25%	184,710	0.33%	138,016	0.35%	147,387	0.31%	116,135	0.30%	586,248
2008	0.26%	184,338	0.35%	133,968	0.35%	147,230	0.36%	118,849	0.32%	584,385
2009	0.24%	187,073	0.40%	133,289	0.36%	149,073	0.40%	122,264	0.34%	591,699
2010	0.26%	190,232	0.40%	130,670	0.35%	147,479	0.39%	124,890	0.34%	593,271
2011	0.27%	188,276	0.33%	127,160	0.37%	142,498	0.33%	128,212	0.32%	586,146
2012	0.23%	186,889	0.34%	125,285	0.34%	139,858	0.34%	128,921	0.30%	580,953
2013	0.18%	183,389	0.31%	122,475	0.36%	136,815	0.31%	129,921	0.28%	572,600

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

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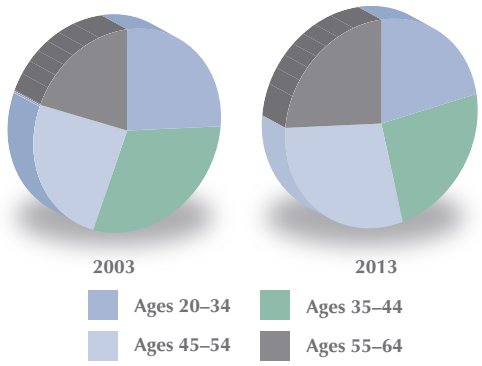
the ages fifty-five to sixty-four group. The ages fifty-five to sixty-four group represented 18.7 percent of new entrepreneurs in 2003, whereas it represented 23.4 percent of new entrepreneurs in 2013. The next-oldest age group (ages forty-five to fifty-four) also experienced a rising share of new entrepreneurs (25.2 percent in 2003 to 30.0 percent in 2013).

Entrepreneurial activity rates continued a sharp downward trend for the least-educated group, possibly reflecting an improving labor market. Although rates dropped in the past two years, entrepreneurship rates are the highest for this educational group compared to all other education groups, as indicated in Figure 6 and Table 5. These high rates for the least-educated group suggest an increased number of people entering entrepreneurship more out of necessity. Entrepreneurship rates declined for high school graduates, slightly declined for those with some college, and remained constant for college

Figure 5B

Changes in Composition of New Entrepreneurs by Age (2003, 2013)

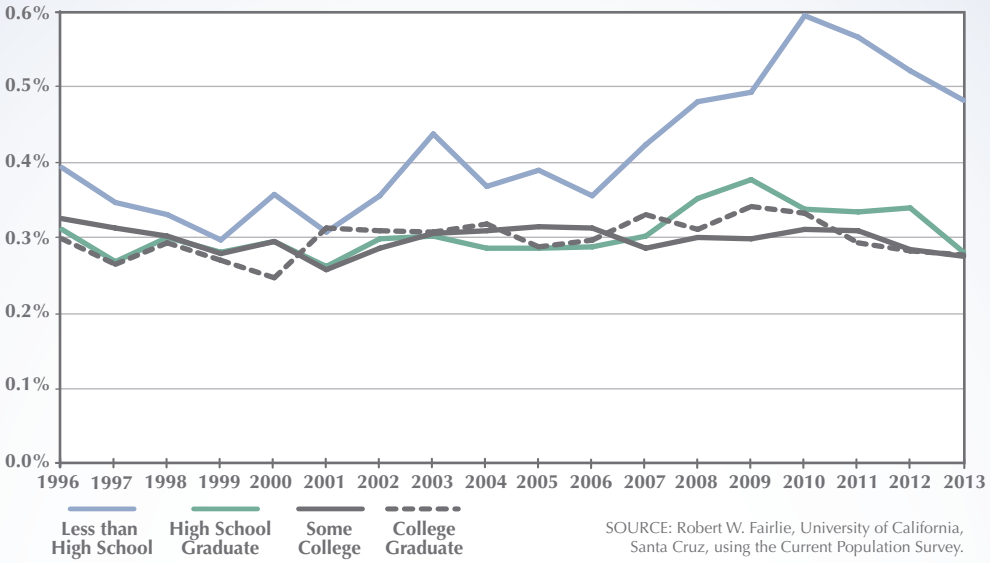


SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

Age	2003	2013
Ages 20-34	26.4%	22.7%
Ages 35-44	29.8%	24.0%
Ages 45-54	25.2%	30.0%
Ages 55-64	18.7%	23.4%

Figure 6

Kauffman Index of Entrepreneurial Activity by Education (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

TABLE 5

Kauffman Index of Entrepreneurial Activity by Education (1996–2013)

Year	Less than High School		High School Graduate		Some College		College Graduate		Total (Ages 25–64)	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.39%	64,210	0.31%	162,390	0.32%	126,376	0.30%	121,451	0.32%	474,427
1997	0.35%	62,653	0.27%	162,088	0.31%	126,570	0.26%	123,904	0.29%	475,215
1998	0.33%	60,824	0.30%	160,574	0.30%	126,861	0.29%	128,391	0.30%	476,650
1999	0.30%	58,617	0.28%	158,787	0.28%	128,497	0.27%	131,801	0.28%	477,702
2000	0.36%	57,710	0.29%	155,477	0.29%	129,658	0.25%	131,932	0.29%	474,777
2001	0.31%	60,007	0.26%	164,765	0.26%	140,562	0.31%	144,419	0.28%	509,753
2002	0.35%	63,257	0.30%	179,230	0.29%	153,908	0.31%	161,682	0.30%	558,077
2003	0.44%	61,472	0.30%	175,389	0.30%	151,086	0.31%	161,841	0.32%	549,788
2004	0.37%	59,907	0.29%	170,234	0.31%	148,945	0.32%	160,064	0.31%	539,150
2005	0.39%	59,405	0.29%	166,435	0.31%	147,920	0.29%	159,962	0.31%	533,722
2006	0.36%	58,330	0.29%	162,751	0.31%	146,951	0.30%	161,102	0.30%	529,134
2007	0.42%	55,143	0.30%	159,239	0.28%	146,639	0.33%	163,843	0.32%	524,864
2008	0.48%	53,574	0.35%	156,810	0.30%	147,302	0.31%	166,125	0.34%	523,811
2009	0.49%	53,791	0.38%	158,573	0.30%	149,708	0.34%	168,737	0.36%	530,809
2010	0.59%	53,366	0.34%	157,939	0.31%	149,218	0.33%	170,832	0.36%	531,355
2011	0.57%	51,934	0.33%	154,501	0.31%	147,693	0.29%	171,581	0.34%	525,709
2012	0.52%	49,911	0.34%	149,790	0.28%	147,249	0.28%	173,884	0.32%	520,834
2013	0.48%	48,059	0.28%	146,623	0.27%	144,977	0.28%	174,294	0.30%	513,953

Notes: (1) Estimates calculated by Robert W. Fairlie using the Current Population Survey. (2) The Kauffman Index of Entrepreneurial Activity is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. For the rate by education level, the sample is limited to ages twenty-five to sixty-four to capture completed formal education. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

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graduates. Although rates are the highest for the least-educated group, previous research that controls for other correlated factors such as race, ethnicity, and unemployment status indicates increasing rates of entrepreneurship with higher levels of education.[11]

ENTREPRENEURIAL ACTIVITY BY VETERAN STATUS

For only the second time in this series of annual reports on entrepreneurial activity, entrepreneurship rates are reported by veteran status. The new data on entrepreneurship rates by veteran status over the past eighteen years are reported in Table 6 and Figure 7. In 2013, the business creation rate was 0.23 percent for veterans. The non-veteran entrepreneurship rate was 0.28 percent. Entrepreneurship rates declined from 0.28 percent in 2012 to 0.23 percent in 2013 for veterans. Over the earlier reported period, veteran entrepreneurship rates generally have been higher than non-veteran entrepreneurship rates. Over the past five years, however, veteran rates have been lower than non-veteran rates.

The share of all new entrepreneurs represented by veterans was 10.2 percent in 2003. This share steadily declined to 4.8 percent by 2013 (see Figure 7.B). Part of the decline in the veteran share of new entrepreneurs over the past ten years was due to declining rates among veteran entrepreneurs compared to only a slight decline in rates among non-veterans, but the bulk of the drop in the veteran share appears to be due to the

TABLE 6

Kauffman Index of Entrepreneurial Activity by Veteran Status (1996–2013)

Year	Veterans		Non-Veteran		Total	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.35%	59,461	0.31%	469,571	0.31%	531,007
1997	0.32%	57,440	0.27%	471,302	0.28%	531,129
1998	0.26%	56,104	0.29%	473,546	0.29%	532,296
1999	0.30%	54,931	0.26%	474,514	0.27%	532,990
2000	0.36%	51,852	0.26%	474,912	0.27%	531,423
2001	0.33%	53,773	0.26%	510,009	0.26%	569,458
2002	0.34%	57,616	0.28%	557,889	0.29%	623,157
2003	0.36%	54,614	0.29%	550,951	0.30%	614,557
2004	0.31%	52,374	0.30%	540,855	0.30%	602,687
2005	0.33%	50,503	0.29%	541,172	0.29%	597,198
2006	0.35%	48,681	0.28%	542,925	0.29%	591,606
2007	0.34%	46,642	0.30%	539,606	0.30%	586,248
2008	0.37%	45,221	0.32%	539,164	0.32%	584,385
2009	0.30%	44,114	0.34%	547,585	0.34%	591,699
2010	0.27%	42,163	0.34%	551,108	0.34%	593,271
2011	0.30%	40,396	0.32%	545,750	0.32%	586,146
2012	0.28%	37,481	0.30%	543,472	0.30%	580,953
2013	0.23%	35,124	0.28%	537,476	0.28%	572,600

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded. (4) The total sample size is slightly larger than the sum of the veteran and non-veteran sample sizes from 1996 to 2005 because of missing values for veteran status in those years.

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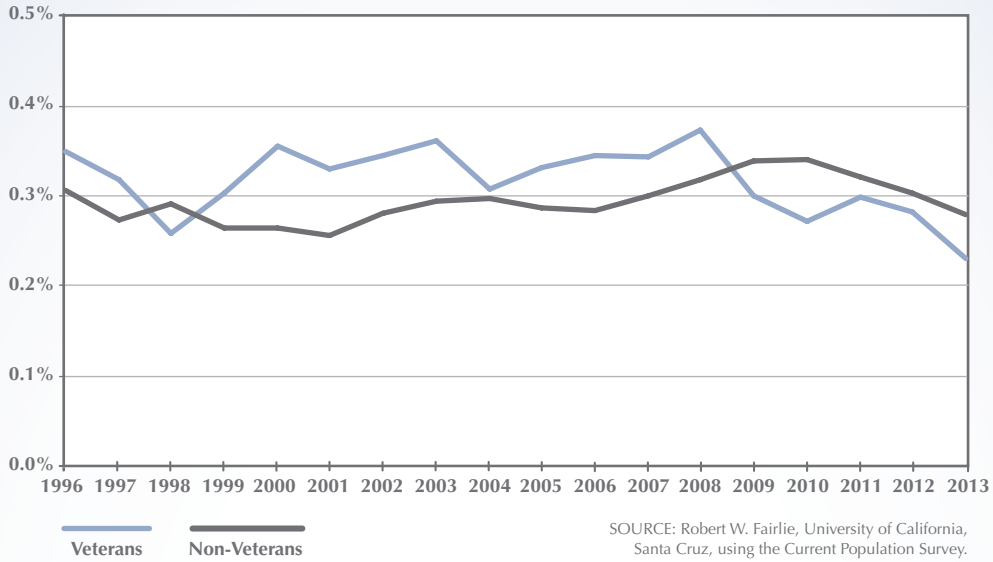
Figure 7

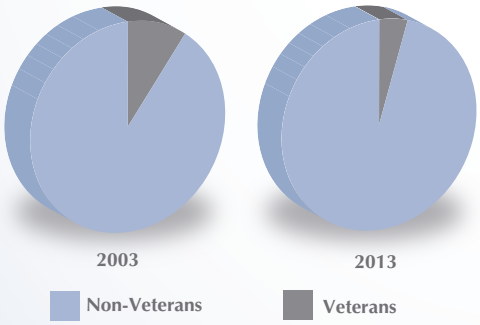
Kauffman Index of Entrepreneurial Activity by Veteran Status (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

Figure 7B

Changes in Composition of New Entrepreneurs by Veteran Status (2003, 2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

Veteran Status	2003	2013
Veterans	10.2%	4.8%
Non-Veterans	89.8%	95.2%

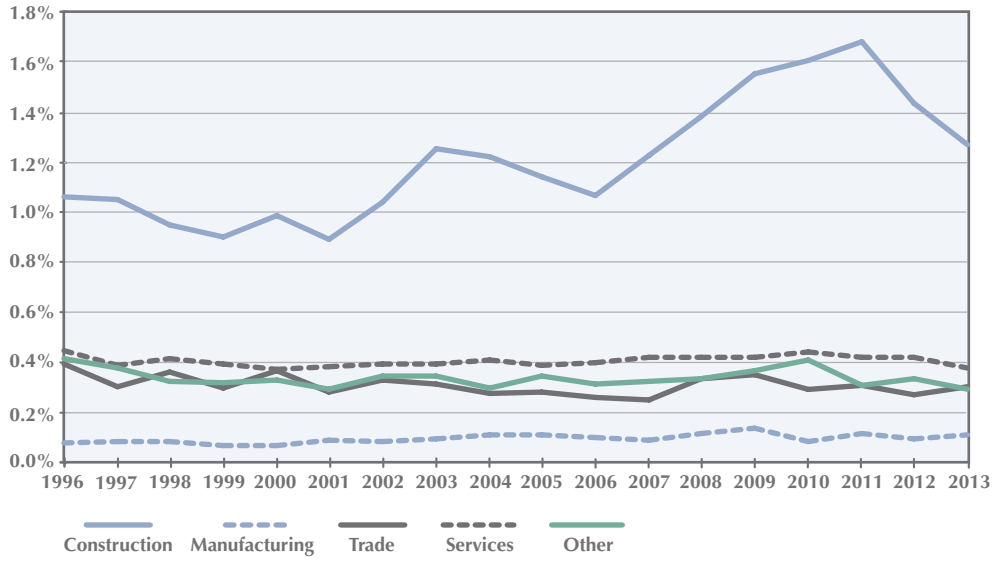
declining share of veterans in the U.S. working-age population. The decline in the veteran population ages twenty to sixty-four from 2003 to 2013 is due to declines in the Korean and Vietnam War veteran share of the working-age population over the past ten years.[12]

ENTREPRENEURIAL ACTIVITY BY INDUSTRY

Entrepreneurial activity rates differed substantially by major industry groups. Figure 8 and Table 7 report estimates of entrepreneurial activity by major industry. In 2013, entrepreneurial activity rates were highest in construction at 1.27 percent, but continued a downward trend from 2011 levels. Entrepreneurial activity rates in services also were relatively high (0.37 percent). Manufacturing had substantially lower entrepreneurial activity rates than all other industries did, with only 0.10 percent of non-business owners starting businesses per month in this industry in 2013.

Figure 8

Kauffman Index of Entrepreneurial Activity by Industry (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

TABLE 7

Kauffman Index of Entrepreneurial Activity by Industry (1996–2013)

Year	Construction		Manufacturing		Trade		Services		Other	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	1.06%	23,693	0.07%	71,120	0.39%	60,144	0.44%	205,664	0.41%	55,604
1997	1.05%	23,694	0.08%	71,152	0.30%	59,480	0.38%	208,199	0.37%	55,302
1998	0.95%	23,961	0.07%	69,792	0.35%	59,763	0.41%	211,337	0.32%	55,124
1999	0.90%	24,754	0.06%	66,980	0.29%	59,935	0.39%	213,046	0.31%	54,331
2000	0.98%	25,771	0.06%	65,676	0.36%	59,445	0.37%	212,927	0.32%	53,941
2001	0.89%	28,472	0.08%	67,844	0.27%	63,069	0.38%	231,578	0.29%	56,704
2002	1.04%	31,212	0.08%	70,348	0.32%	69,660	0.39%	257,048	0.34%	61,376
2003	1.25%	31,542	0.09%	65,494	0.31%	69,037	0.39%	254,486	0.34%	58,302
2004	1.22%	31,726	0.10%	62,079	0.27%	67,839	0.41%	248,391	0.29%	56,946
2005	1.14%	32,179	0.10%	59,476	0.28%	67,491	0.38%	246,875	0.34%	57,671
2006	1.06%	32,760	0.09%	57,677	0.26%	65,244	0.40%	247,242	0.31%	57,386
2007	1.23%	31,860	0.08%	56,828	0.24%	62,789	0.41%	245,946	0.32%	57,394
2008	1.38%	30,406	0.11%	55,262	0.33%	62,200	0.41%	247,636	0.33%	57,592
2009	1.55%	29,465	0.13%	53,287	0.34%	62,662	0.42%	252,851	0.36%	57,527
2010	1.60%	27,827	0.08%	51,537	0.28%	62,895	0.44%	253,068	0.41%	58,028
2011	1.68%	26,315	0.11%	50,375	0.30%	60,956	0.42%	249,309	0.30%	56,807
2012	1.43%	25,330	0.08%	50,490	0.26%	60,444	0.41%	247,984	0.33%	55,504
2013	1.27%	25,081	0.10%	49,336	0.29%	58,366	0.37%	243,323	0.29%	54,670

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The index of entrepreneurial activity is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month 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.

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ENTREPRENEURIAL ACTIVITY BY STATE

There was substantial variation in entrepreneurial activity rates across states in 2013. Montana had the highest entrepreneurial activity rate, with 610 per 100,000 adults creating businesses each month. Iowa exhibited the lowest entrepreneurial activity rate, with 110 per 100,000 adults starting new businesses each month. Table 8 reports estimates of the Kauffman Index for all fifty states and the District of Columbia, as well as sample sizes and approximate 95 percent confidence intervals for each state.

Entrepreneurial activity rates follow strong geographical patterns. Entrepreneurial activity generally is highest in Western and Southern states and lowest in Midwestern and Northeastern states. Figure 9 illustrates variation in entrepreneurial activity levels across the United States, and Figure 10 ranks states by levels of entrepreneurial activity, with 95 percent confidence intervals for each state. The five states with the highest entrepreneurial activity rates were Montana (610 per 100,000 adults), Alaska (470 per 100,000 adults), South Dakota (410 per 100,000 adults), California (400 per 100,000 adults), and Colorado (380 per 100,000 adults). The six states with the lowest entrepreneurial activity rates were Iowa (110 per 100,000 adults), Rhode Island (140 per 100,000 adults), Indiana (160 per 100,000 adults), Minnesota (160 per 100,000 adults), Washington (170 per 100,000 adults), and Wisconsin (170 per 100,000 adults).

All regions of the United States experienced the decline in business creation rates from 2012 to 2013. The downward trends in business creation rates in all regions generally started at the end of the Great Recession and continued from 2012 to 2013. Estimates of the Kauffman Index by region are reported in Figure 11 and Table 9. Entrepreneurship rates are highest in the West, followed by the South. Rates are the lowest in the Midwest.

Trends in entrepreneurship rates by state over the past decade are reported in Table 10. To increase sample sizes and precision, the three-year period 2011–13 is compared to the three-year period 2001–03, providing a decadal estimate of trends. Year-to-year estimates are not presented here because of the lack of precision in entrepreneurship rates, especially for smaller states.[13] Estimates for 2006–08 also are reported to demonstrate shorter-run trends in entrepreneurial activity across states. Delaware experienced the largest positive change in its entrepreneurial activity rate over the past decade, nearly doubling its incidence from 0.15 percent to 0.28 percent. Other states experiencing large increases in entrepreneurial activity rates were Massachusetts (0.08 percentage points), Nevada (0.08 percentage points), Alabama (0.08 percentage points), Florida (0.07 percentage points), California (0.07 percentage points), and New York (0.07 percentage points). States that experienced large decreases in entrepreneurial activity rates were Oregon (-0.11 percentage points), Iowa (-0.10 percentage points), Minnesota (-0.08 percentage points), and Wisconsin (-0.08 percentage points). All of the changes over time are statistically significant at the 0.05 level of confidence, except for two changes which are statistically significant at the 0.10 level.

Montana had the highest entrepreneurial activity rate, with 610 per 100,000 adults creating businesses each month.

TABLE 8

Kauffman Index of Entrepreneurial Activity by State (2013)

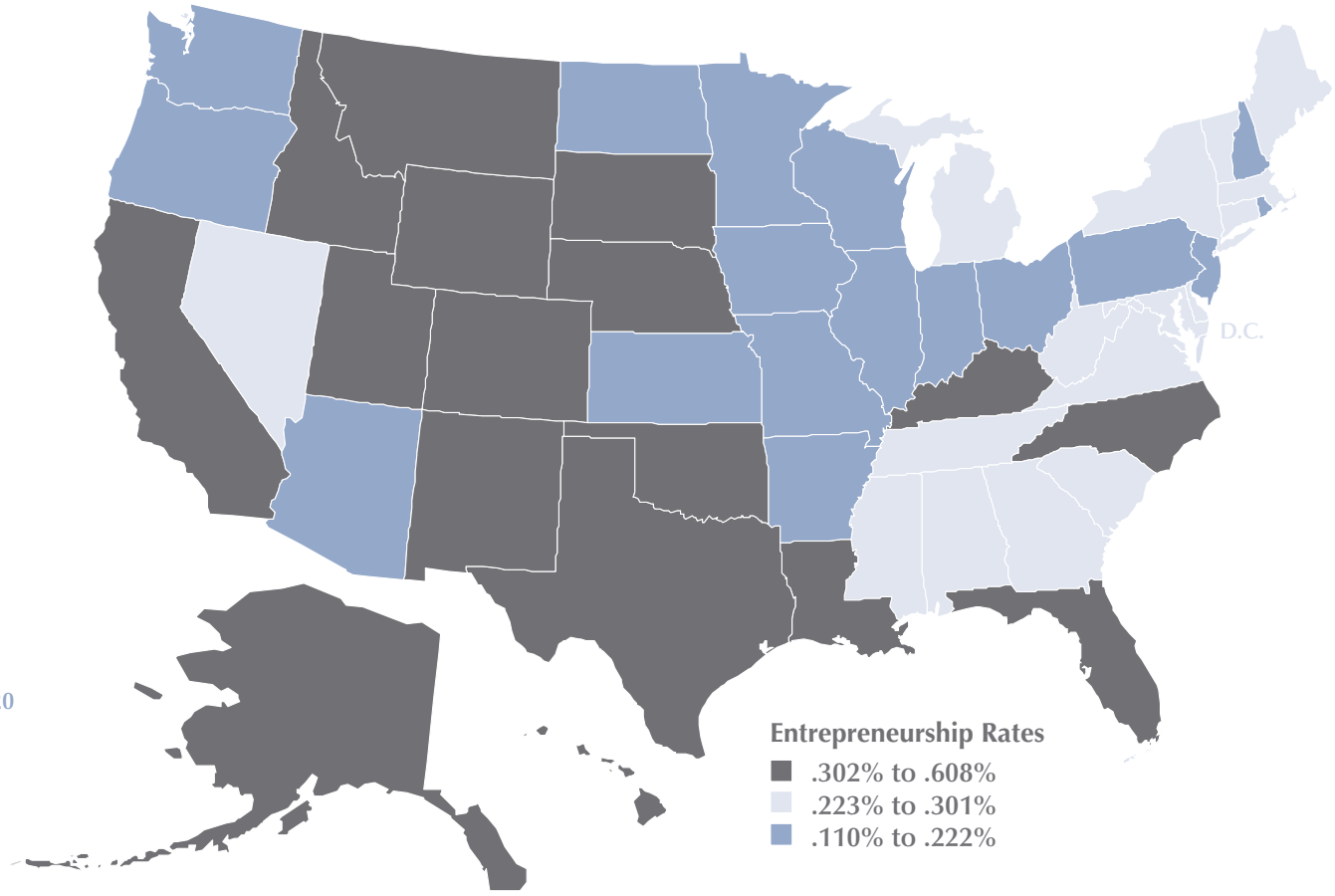
State	Entrep. Index	Confidence Interval		Entreps. per 100,000 People	Size
		Lower	Upper		
U.S. Total	0.28%	0.26%	0.29%	280	572,600
Alabama	0.25%	0.13%	0.36%	250	6,562
Alaska	0.47%	0.30%	0.64%	470	6,593
Arizona	0.22%	0.10%	0.34%	220	6,712
Arkansas	0.21%	0.10%	0.31%	210	6,543
California	0.40%	0.35%	0.46%	400	50,211
Colorado	0.38%	0.27%	0.49%	380	12,794
Connecticut	0.28%	0.19%	0.37%	280	12,255
Delaware	0.28%	0.17%	0.40%	280	8,571
District of Columbia	0.29%	0.17%	0.41%	290	8,337
Florida	0.34%	0.26%	0.41%	340	21,892
Georgia	0.24%	0.15%	0.33%	240	12,531
Hawaii	0.34%	0.22%	0.47%	340	8,896
Idaho	0.31%	0.17%	0.45%	310	5,900
Illinois	0.20%	0.13%	0.26%	200	17,845
Indiana	0.16%	0.07%	0.24%	160	8,812
Iowa	0.11%	0.04%	0.18%	110	11,108
Kansas	0.18%	0.09%	0.28%	180	8,294
Kentucky	0.36%	0.24%	0.48%	360	8,857
Louisiana	0.31%	0.17%	0.44%	310	6,100
Maine	0.29%	0.19%	0.40%	290	9,902
Maryland	0.27%	0.18%	0.35%	270	13,515
Massachusetts	0.25%	0.14%	0.35%	250	8,575
Michigan	0.29%	0.20%	0.38%	290	13,684
Minnesota	0.16%	0.09%	0.23%	160	14,307
Mississippi	0.24%	0.10%	0.38%	240	5,306
Missouri	0.22%	0.12%	0.31%	220	9,444
Montana	0.61%	0.39%	0.83%	610	5,289
Nebraska	0.31%	0.19%	0.43%	310	8,479
Nevada	0.23%	0.13%	0.33%	230	8,394
New Hampshire	0.20%	0.12%	0.28%	200	12,164
New Jersey	0.19%	0.11%	0.27%	190	11,199
New Mexico	0.34%	0.17%	0.50%	340	4,633
New York	0.29%	0.22%	0.36%	290	23,631
North Carolina	0.32%	0.21%	0.42%	320	11,505
North Dakota	0.19%	0.09%	0.29%	190	7,586
Ohio	0.20%	0.13%	0.27%	200	15,570
Oklahoma	0.30%	0.17%	0.44%	300	6,356
Oregon	0.21%	0.10%	0.31%	210	8,182
Pennsylvania	0.20%	0.13%	0.26%	200	17,841
Rhode Island	0.14%	0.06%	0.21%	140	9,213
South Carolina	0.26%	0.14%	0.38%	260	7,780
South Dakota	0.41%	0.27%	0.54%	410	8,380
Tennessee	0.30%	0.17%	0.43%	300	7,744
Texas	0.32%	0.26%	0.39%	320	31,243
Utah	0.32%	0.19%	0.46%	320	7,498
Vermont	0.26%	0.15%	0.37%	260	7,845
Virginia	0.24%	0.15%	0.32%	240	12,683
Washington	0.17%	0.09%	0.24%	170	10,422
West Virginia	0.28%	0.14%	0.41%	280	6,395
Wisconsin	0.17%	0.09%	0.24%	170	11,808
Wyoming	0.37%	0.22%	0.52%	370	7,214

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded. (4) Approximate 95 percent confidence intervals are reported for the entrepreneurship index.

Visit www.kauffman.org/kiea to download the data files.

Figure 9

Kauffman Index of Entrepreneurial Activity by State (2013)

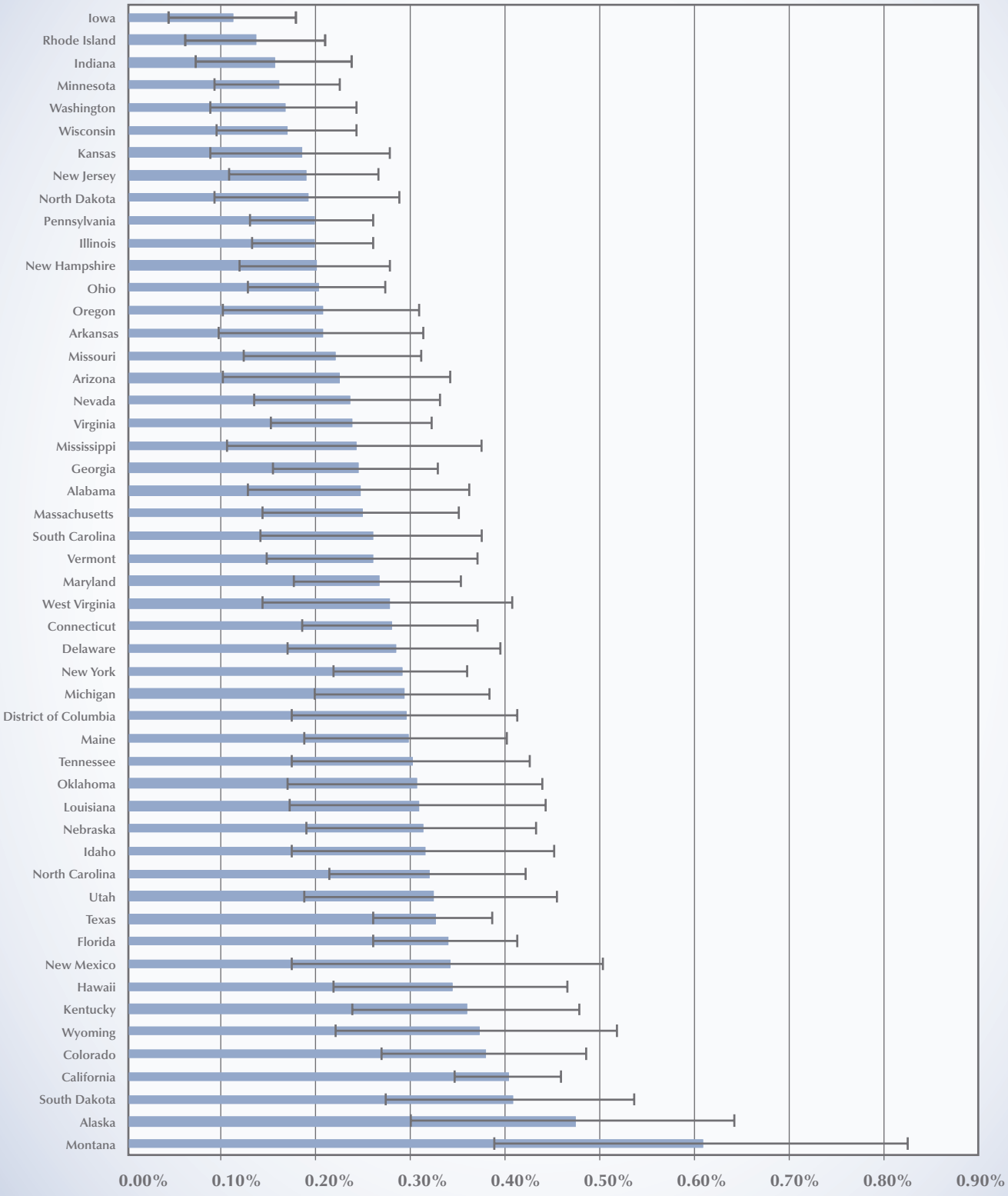


SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

Entrepreneurial activity generally is highest in Western and Southern states and lowest in Midwestern and Northeastern states.

Figure 10

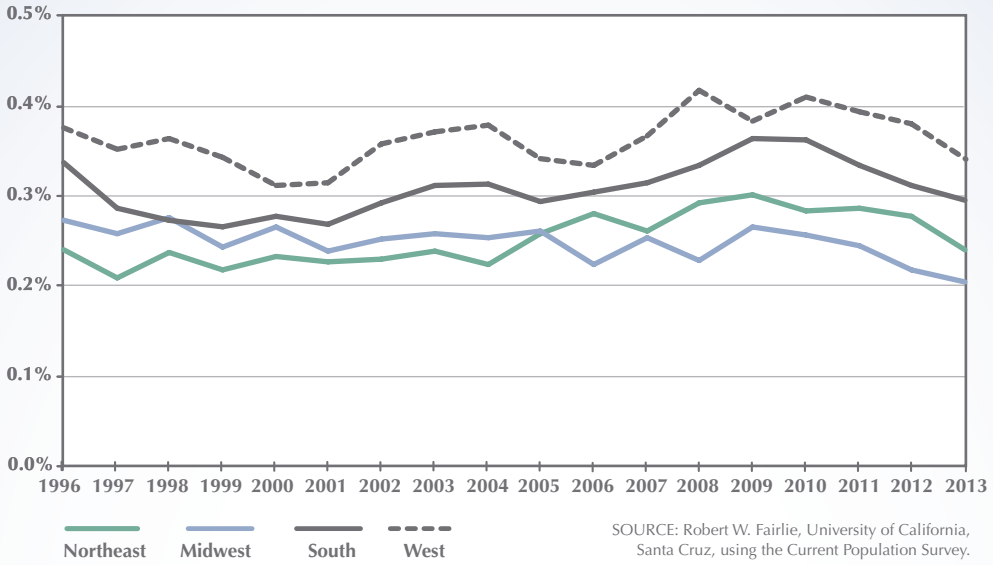
Kauffman Index of Entrepreneurial Activity by State with 95 Percent Confidence Intervals, 2013



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

Figure 11

Kauffman Index of Entrepreneurial Activity by Region (1996–2013)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

TABLE 9

Kauffman Index of Entrepreneurial Activity by Region (1996–2013)

	Northeast		Midwest		South		West		Total	
Year	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.24%	114,486	0.27%	126,402	0.34%	164,415	0.38%	125,704	0.31%	531,007
1997	0.21%	113,819	0.26%	125,603	0.29%	164,277	0.35%	127,430	0.28%	531,129
1998	0.24%	114,246	0.28%	125,411	0.27%	164,190	0.36%	128,449	0.29%	532,296
1999	0.22%	112,804	0.24%	125,372	0.27%	164,416	0.34%	130,398	0.27%	532,990
2000	0.23%	111,319	0.27%	126,975	0.28%	163,720	0.31%	129,409	0.27%	531,423
2001	0.23%	122,399	0.24%	139,538	0.27%	169,480	0.31%	138,041	0.26%	569,458
2002	0.23%	135,033	0.25%	156,223	0.29%	179,221	0.36%	152,680	0.29%	623,157
2003	0.24%	132,855	0.26%	153,953	0.31%	177,302	0.37%	150,447	0.30%	614,557
2004	0.22%	128,536	0.25%	149,380	0.31%	178,789	0.38%	145,982	0.30%	602,687
2005	0.26%	123,177	0.26%	144,081	0.29%	183,966	0.34%	145,974	0.29%	597,198
2006	0.28%	120,283	0.22%	140,195	0.30%	185,136	0.33%	145,992	0.29%	591,606
2007	0.26%	117,828	0.25%	139,827	0.31%	183,035	0.37%	145,558	0.30%	586,248
2008	0.29%	119,172	0.23%	139,301	0.33%	181,221	0.42%	144,691	0.32%	584,385
2009	0.30%	121,081	0.27%	141,705	0.36%	183,661	0.38%	145,252	0.34%	591,699
2010	0.28%	121,555	0.26%	141,571	0.36%	184,805	0.41%	145,340	0.34%	593,271
2011	0.29%	119,269	0.24%	138,897	0.33%	183,667	0.39%	144,313	0.32%	586,146
2012	0.28%	116,879	0.22%	137,547	0.31%	182,224	0.38%	144,303	0.30%	580,953
2013	0.24%	112,625	0.20%	135,317	0.30%	181,920	0.34%	142,738	0.28%	572,600

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The index of entrepreneurial activity is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month 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.

Visit www.kauffman.org/kiea to download the data files.

TABLE 10

Kauffman Index of Entrepreneurial Activity by State (Recent Three-Year Periods)

State	2001–2003 Period			2006–2008 Period			2011–2013 Period			
	Entrep. Index	Confidence Interval		Entrep. Index	Confidence Interval		Entrep. Index	Confidence Interval		Sample Size
		Lower	Upper		Lower	Upper		Lower	Upper	
U.S. Total	0.28%	0.27%	0.29%	0.31%	0.30%	0.32%	0.30%	0.29%	0.31%	1,739,699
Alabama	0.17%	0.12%	0.22%	0.20%	0.13%	0.26%	0.25%	0.17%	0.32%	19,752
Alaska	0.49%	0.40%	0.59%	0.35%	0.26%	0.44%	0.44%	0.34%	0.53%	20,887
Arizona	0.35%	0.28%	0.43%	0.42%	0.33%	0.51%	0.36%	0.28%	0.45%	20,823
Arkansas	0.29%	0.21%	0.36%	0.37%	0.29%	0.46%	0.27%	0.20%	0.35%	18,928
California	0.35%	0.31%	0.38%	0.40%	0.36%	0.43%	0.42%	0.38%	0.45%	150,134
Colorado	0.41%	0.33%	0.48%	0.35%	0.29%	0.41%	0.39%	0.33%	0.46%	38,214
Connecticut	0.23%	0.16%	0.29%	0.27%	0.22%	0.33%	0.31%	0.25%	0.37%	37,910
Delaware	0.15%	0.10%	0.21%	0.16%	0.11%	0.21%	0.28%	0.21%	0.34%	26,044
District of Columbia	0.27%	0.19%	0.35%	0.35%	0.27%	0.43%	0.28%	0.21%	0.35%	24,298
Florida	0.29%	0.25%	0.33%	0.35%	0.31%	0.40%	0.36%	0.31%	0.41%	65,828
Georgia	0.27%	0.20%	0.33%	0.47%	0.40%	0.54%	0.29%	0.23%	0.34%	37,136
Hawaii	0.27%	0.20%	0.34%	0.27%	0.20%	0.34%	0.31%	0.24%	0.38%	26,129
Idaho	0.35%	0.27%	0.43%	0.40%	0.30%	0.49%	0.37%	0.28%	0.46%	18,641
Illinois	0.25%	0.21%	0.29%	0.23%	0.19%	0.27%	0.20%	0.16%	0.24%	54,617
Indiana	0.23%	0.18%	0.29%	0.25%	0.19%	0.31%	0.21%	0.15%	0.26%	26,662
Iowa	0.29%	0.22%	0.35%	0.26%	0.20%	0.31%	0.19%	0.14%	0.23%	33,946
Kansas	0.29%	0.23%	0.36%	0.24%	0.18%	0.30%	0.23%	0.17%	0.29%	25,303
Kentucky	0.30%	0.23%	0.37%	0.31%	0.24%	0.38%	0.37%	0.29%	0.44%	26,830
Louisiana	0.27%	0.20%	0.34%	0.35%	0.26%	0.45%	0.35%	0.26%	0.44%	17,473
Maine	0.27%	0.21%	0.33%	0.36%	0.29%	0.42%	0.34%	0.27%	0.40%	30,988
Maryland	0.32%	0.24%	0.39%	0.26%	0.21%	0.32%	0.27%	0.22%	0.32%	41,441
Massachusetts	0.18%	0.14%	0.22%	0.28%	0.21%	0.34%	0.26%	0.20%	0.32%	26,311
Michigan	0.25%	0.21%	0.30%	0.25%	0.20%	0.30%	0.23%	0.18%	0.28%	41,466
Minnesota	0.26%	0.21%	0.32%	0.28%	0.23%	0.32%	0.18%	0.14%	0.22%	43,727
Mississippi	0.24%	0.16%	0.32%	0.39%	0.29%	0.49%	0.31%	0.22%	0.40%	16,395
Missouri	0.25%	0.19%	0.31%	0.21%	0.15%	0.26%	0.32%	0.25%	0.39%	29,022
Montana	0.48%	0.38%	0.58%	0.50%	0.39%	0.61%	0.49%	0.37%	0.61%	15,810
Nebraska	0.32%	0.25%	0.39%	0.29%	0.23%	0.36%	0.25%	0.19%	0.31%	26,518
Nevada	0.26%	0.21%	0.32%	0.33%	0.26%	0.40%	0.34%	0.27%	0.41%	25,801
New Hampshire	0.26%	0.19%	0.32%	0.26%	0.21%	0.31%	0.27%	0.21%	0.32%	37,456
New Jersey	0.25%	0.20%	0.30%	0.27%	0.21%	0.32%	0.22%	0.17%	0.27%	35,066
New Mexico	0.41%	0.31%	0.51%	0.39%	0.30%	0.49%	0.37%	0.27%	0.48%	14,165
New York	0.27%	0.23%	0.30%	0.36%	0.31%	0.40%	0.34%	0.29%	0.38%	74,100
North Carolina	0.31%	0.25%	0.37%	0.26%	0.21%	0.32%	0.29%	0.22%	0.35%	34,389
North Dakota	0.29%	0.22%	0.36%	0.27%	0.20%	0.34%	0.28%	0.21%	0.35%	22,290
Ohio	0.21%	0.17%	0.25%	0.20%	0.16%	0.24%	0.22%	0.18%	0.27%	47,240
Oklahoma	0.32%	0.24%	0.39%	0.35%	0.27%	0.43%	0.27%	0.20%	0.35%	19,751
Oregon	0.34%	0.26%	0.41%	0.37%	0.29%	0.44%	0.23%	0.16%	0.29%	25,054
Pennsylvania	0.18%	0.15%	0.21%	0.16%	0.12%	0.19%	0.19%	0.15%	0.22%	53,585
Rhode Island	0.16%	0.11%	0.21%	0.25%	0.19%	0.31%	0.19%	0.14%	0.24%	28,502
South Carolina	0.22%	0.16%	0.28%	0.24%	0.17%	0.30%	0.30%	0.22%	0.38%	23,560
South Dakota	0.34%	0.26%	0.41%	0.33%	0.25%	0.40%	0.33%	0.26%	0.41%	25,878
Tennessee	0.23%	0.17%	0.28%	0.34%	0.27%	0.42%	0.28%	0.21%	0.35%	23,578
Texas	0.39%	0.35%	0.44%	0.33%	0.29%	0.37%	0.37%	0.33%	0.41%	94,162
Utah	0.28%	0.21%	0.35%	0.33%	0.25%	0.40%	0.31%	0.23%	0.39%	21,841
Vermont	0.30%	0.23%	0.37%	0.37%	0.29%	0.45%	0.39%	0.31%	0.47%	24,855
Virginia	0.24%	0.19%	0.30%	0.24%	0.19%	0.29%	0.21%	0.17%	0.26%	38,260
Washington	0.30%	0.23%	0.36%	0.25%	0.20%	0.31%	0.23%	0.18%	0.29%	31,088
West Virginia	0.17%	0.12%	0.22%	0.15%	0.10%	0.20%	0.21%	0.15%	0.28%	19,986
Wisconsin	0.27%	0.22%	0.33%	0.24%	0.19%	0.29%	0.19%	0.15%	0.24%	35,092
Wyoming	0.34%	0.26%	0.42%	0.34%	0.26%	0.42%	0.28%	0.20%	0.35%	22,767

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded. (4) Approximate 95 percent confidence intervals are reported for the entrepreneurship index.

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ENTREPRENEURIAL ACTIVITY BY METROPOLITAN AREA

An index of entrepreneurial activity also was created for the fifteen largest metropolitan areas in the United States (Table 11).[14] Among these metropolitan areas, San Francisco had the highest entrepreneurial activity rate at 570 per 100,000 adults. Los Angeles (490 per 100,000 adults) and Miami (430 per 100,000 adults) also had high entrepreneurial activity rates. The metropolitan area with the lowest entrepreneurial activity rate in this group of large MSAs was Philadelphia (180 per 100,000 adults).

TABLE 11

Kauffman Index of Entrepreneurial Activity for the Fifteen Largest MSAs (2013)

Metropolitan Statistical Area	2013 Entrep. Index	Confidence Interval		Entrep. per 100,000 People	2011–2013		
		Lower	Upper		Sample Size	Entrep. Index	Sample Size
New York-Northern New Jersey-Long Island, NY-NJ-PA	0.32%	0.24%	0.39%	320	22,587	0.36%	71,828
Los Angeles-Long Beach-Santa Ana, CA	0.49%	0.39%	0.59%	490	18,281	0.53%	54,129
Chicago-Naperville-Joliet, IL-IN-WI	0.20%	0.13%	0.28%	200	12,878	0.20%	39,128
Dallas-Fort Worth-Arlington, TX	0.33%	0.21%	0.45%	330	8,627	0.31%	25,721
Houston-Baytown-Sugar Land, TX	0.34%	0.20%	0.48%	340	7,176	0.40%	21,778
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.27%	0.18%	0.36%	270	18,656	0.24%	55,694
Miami-Fort Lauderdale-Miami Beach, FL	0.43%	0.28%	0.59%	430	6,879	0.49%	20,296
Philadelphia-Camden-Wilmington, PA-NJ-DE	0.18%	0.09%	0.26%	180	12,264	0.20%	37,651
Atlanta-Sandy Springs-Marietta, GA	0.28%	0.15%	0.40%	280	6,970	0.36%	20,771
Boston-Cambridge-Quincy, MA-NH	0.25%	0.13%	0.37%	250	9,959	0.24%	30,113
San Francisco-Oakland-Fremont, CA	0.57%	0.37%	0.76%	570	5,912	0.44%	18,089
Detroit-Warren-Livonia, MI	0.28%	0.15%	0.42%	280	5,979	0.19%	17,993
Riverside-San Bernardino, CA	0.27%	0.13%	0.41%	270	5,320	0.35%	15,683
Phoenix-Mesa-Scottsdale, AZ	0.25%	0.09%	0.41%	250	4,522	0.36%	13,937
Seattle-Tacoma-Bellevue, WA	0.22%	0.10%	0.35%	220	5,686	0.29%	16,823

Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following month with fifteen or more hours worked. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded. (4) Approximate 95 percent confidence intervals are reported for the entrepreneurship index.

Visit www.kauffman.org/kiea to download the data files.

Summary

The Kauffman Index measures the monthly business-creation rate at the individual owner level, reporting the percentage of non-business-owning adults who start businesses with more than fifteen hours worked per week. The matched basic monthly files from the Current Population Survey (CPS) provide a uniquely large, nationally representative panel dataset for measuring this entrepreneurial activity. Detailed demographic information available in the CPS and large sample sizes also allow for estimates of separate indices by gender, race, immigrant status, age, education, and veteran status. Indices for all states and the largest MSAs also are calculated.

In 2013, 0.28 percent of the adult population, or 280 out of 100,000 adults, created a new business each month, representing approximately 476,000 new businesses per month. The drop in the total rate of business creation from 2012 to 2013 continued the downward trend that started in 2011, which is likely due to improving labor market conditions. The national unemployment rate was 8.5 percent at the end of 2011 and dropped to 6.7 percent at the end of 2013. The share of business creation from "opportunity" entrepreneurship versus unemployment ("necessity") entrepreneurship was substantially higher in 2013 than shares found in the Great Recession. The share of total business creation by new entrepreneurs who are not coming directly out of unemployment closely tracks fluctuations in the business cycle over the past eighteen years, which is presented here for the first time.

There are some interesting patterns in changes in entrepreneurial activity rates for population subgroups. First, the overall decline in entrepreneurship rates in 2013 was primarily due to a large drop in rates among men, but also was due to a slight drop in rates among women. All racial and ethnic groups—African-Americans, Latinos, Asians, and whites—experienced declines in business creation rates in 2013. Related to the findings for race and ethnicity, entrepreneurial activity among immigrants also decreased sharply in 2013, although the business creation rate remains nearly twice as high as the native-born rate. All age groups experienced declines in entrepreneurial activity from 2012 to 2013, except the ages forty-five to fifty-four group, which experienced an increase. Finally, all educational groups experienced a decline in rates, except college graduates, whose rates remained constant from 2012 to 2013.

Over the past ten years, Latinos, Asians, and immigrants experienced rising shares of all new entrepreneurs, mainly because of increasing populations, but also because of rising entrepreneurship rates. The oldest age group (ages fifty-five to sixty-four) also experienced a rising share of all new entrepreneurs, primarily because it represents an increasing share of the population.

For only the second time in this series of annual reports, entrepreneurial activity by veteran status is reported. The entrepreneurship rate for veterans was 0.23 percent in 2013. The rate of business creation among veterans declined from a higher level in 2012 (0.28 percent). The share of all new entrepreneurs represented by veterans declined from 10.0 percent in 2003 to 4.8 percent by 2013, primarily due to the declining share of veterans in the U.S. working-age population.

Entrepreneurial activity rates reflect strong geographical patterns in the United States. By broad region, rates of new business creation are the highest in the West and lowest in the Midwest. All regions experienced declining rates in 2013, continuing the downward trend since the end of the Great Recession. Entrepreneurial activity rates varied substantially across states, from a high of 0.61 percent in Montana to a low of 0.11 percent in Iowa. Among the fifteen largest metropolitan areas in the United States, San Francisco (0.57 percent) had the highest entrepreneurial activity rate in 2013 and Philadelphia (0.18 percent) had the lowest rate.

Appendix

DATA

The underlying datasets used in this analysis are the basic monthly files to the Current Population Survey (CPS). These surveys, conducted monthly by the U.S. Bureau of the Census and the Bureau of Labor Statistics, represent the entire U.S. population and contain observations for more than 130,000 people each month. By linking the CPS files over time, longitudinal data are created, allowing for the examination of business creations. Combining the monthly files creates a sample size of roughly 700,000 adults ages twenty to sixty-four each year.

Households in the CPS are interviewed each month over a four-month period. Eight months later, they are re-interviewed in each month of a second four-month period. Thus, individuals who are interviewed in January, February, March, and April of one year are interviewed again in January, February, March, and April of the following year. The CPS rotation pattern makes it possible to match information on individuals monthly and, therefore, to create two-month panel data for up to 75 percent of all CPS respondents. To match these data, the household and individual identifiers provided by the CPS are used. False matches are removed by comparing race, sex, and age codes from the two months. After removing all non-unique matches, the underlying CPS data are checked extensively for coding errors and other problems.

Monthly match rates generally are between 94 percent and 96 percent (see Fairlie 2005). Household moves are the primary reason for non-matching. A somewhat non-random sample (mainly geographic movers), therefore, will be lost due to the matching routine. Moves do not appear to create a serious problem for month-to-month matches, however, because the observable characteristics of the original sample and the matched sample are very similar (see Fairlie 2005).

The microdata used in this report and a codebook are available for downloading at http://www.kauffman.org/research-and-policy/kiea-data-files.aspx. The dataset includes the entrepreneurial index as well as many additional variables for analysis.

DETAILED DEFINITIONS

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 Kauffman Index, all individuals who do not own a business as their main job are identified in the first survey month. By matching CPS files, it is then determined whether these individuals own a business as their main job with fifteen or more usual hours worked in the following survey month. Reducing the likelihood of reporting spurious changes in business ownership status from month to month, survey-takers ask individuals whether they currently have the same main job as reported in the previous month. If the answer is yes, then the interviewer carries forward job information, including business ownership, from the previous month's survey. If the answer is no, then the respondent is asked the full series of job-related questions. Survey-takers ask this question at the beginning of the job section to save time during the interview process and improve reporting consistency.

The main job is defined as the one with the most hours worked. Individuals who start side businesses, therefore, will 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 second month is imposed to rule out part-time business owners and very small business activities. It therefore may result in an understatement of the percent of individuals creating any type of business. The Kauffman Index also excludes individuals who owned a business and worked fewer than fifteen hours in the first survey month. Thus, the Kauffman Index does not capture business owners who increased their hours from less than fifteen per week in one month to fifteen or more hours per week in the second month. In addition, the Kauffman Index does not capture when these business owners changed from non-business owners to business owners with less than fifteen hours worked. These individuals are excluded from the sample but may have been at the earliest stages of starting a business. More information

concerning the definition is provided in Fairlie (2006).

The Kauffman Index also may overstate business creation in certain respects because of small changes in how individuals report their work status. Longstanding business owners who also have salaried positions may, for example, report that they are not business owners as their main jobs in a particular month because their wage/salary jobs had more hours in that month. If the individuals then switch to having more hours in business ownership the following month, it would appear that a new business had been created.

The main sample used to calculate the Kauffman Index includes only adults between the ages of twenty and sixty-four. For estimates of entrepreneurial activity rates by education level, the population between the ages of twenty-five and sixty-four is used instead to capture completed formal education. Older individuals (ages sixty-five and over) are removed from the sample because retirement in this age group leads to lower entrepreneurial activity rates. There were major changes in race and industry coding over the included period. Although every effort was devoted to creating consistent coding, definitions are not perfectly consistent over time.

For the definition of entrepreneurial activity discussed in this report, all observations with allocated labor force status, class of worker, and hours worked variables are excluded. Entrepreneurial activity is substantially higher for allocated or imputed observations. These observations were included in the first Kauffman Index report (Fairlie 2005). See Fairlie (2006) for a complete discussion of the issues and comparisons between unadjusted and adjusted entrepreneurial activity rates.

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 over. 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 and the District of Columbia, 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.

STANDARD ERRORS AND CONFIDENCE INTERVALS

The analysis of entrepreneurial activity by state includes confidence intervals that indicate confidence bands of approximately 0.15 percent around the rates of entrepreneurial activity. While larger states have smaller confidence bands, the smallest states have larger confidence bands of approximately 0.20 percent. Oversampling in the CPS ensures that these small states have sample sizes of at least 5,000 observations, and, therefore, provides a minimum level of precision.

The standard errors used to create the confidence intervals reported here may understate the true variability in the state estimates. Both stratification of the sample and the raking procedure (post-stratification) will reduce the variance of CPS estimates (Polivka 2000 and Train, Cahoon, and Maken 1978). On the other hand, the CPS clustering (i.e., nearby houses on the same block and multiple household members) leads to a larger sampling variance than would have been obtained from simple random sampling. It appears as though the latter effect dominates in the CPS and treating the CPS as random generally understates standard errors (Polivka 2000). National unemployment rate estimates indicate that treating the CPS as a random sample leads to an understatement of the unemployment rate variance by 23 percent. Another problem associated with the estimates reported here is that multiple observations (up to three) may occur for the same individual.

All of the reported confidence intervals should be considered approximate, as the actual confidence intervals may be slightly larger. The complete correction for the standard errors and confidence intervals involves obtaining confidential replicate weights from the BLS and employing sophisticated statistical procedures. Corrections for the possibility of multiple observations per person, which may create the largest bias in standard errors, are made using statistical survey procedures for all reported confidence intervals. It is important to note,

however, that the estimates of entrepreneurial activity rates are not subject to any of these problems. By using the sample weights provided by the CPS, all estimates of entrepreneurial activity rates are correct.

ADVANTAGES OVER OTHER POSSIBLE MEASURES OF ENTREPRENEURSHIP

The Kauffman Index of Entrepreneurial Activity has several advantages over other possible measures of entrepreneurship based on household or business-level data. 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, the index includes all types of business activities (employers, non-employers, unincorporated, and incorporated businesses), but does not include small-scale business activities such as consulting and casual businesses. For example, the County Business Patterns data include only employer firms, and the Survey of Business Owners and underlying non-employer data include any business activity with at least $1,000 in annual sales. Third, the panel data created from matching consecutive months of the CPS allow for a dynamic measure of business creation, whereas most datasets only allow for a static measure of business ownership (e.g., ACS). Finally, the CPS data included 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).

COMPARISON TO SELECTED DATASETS

The main difference between the Kauffman Index and possible measures of entrepreneurial activity from the ACS (and related decennial Census of the Population) is that the index measures flow into business ownership rather than flowing into the number of existing business owners at a specific point in time. Cross-sectional datasets, such as the ACS, do not provide information on business creation. Static measures of business ownership based on cross-sectional data do not capture the dynamic nature of entrepreneurial activity that the Kauffman Index illustrates.

The Kauffman Index differs from the Survey of Business Owners (SBO) conducted every five years by the U.S. Census Bureau in several major ways. First, the Kauffman Index is based on household survey data and measures individual business owners. The SBO includes all firms operating during the year that filed tax forms as individual proprietorships, partnerships, or any type of corporation. Second, the Kauffman Index captures business creation, whereas the SBO captures the number of existing businesses at a point in time. Third, the Kauffman Index only includes individuals starting businesses as their main work activity with a substantial hours commitment. The SBO includes all firms with receipts of $1,000 or more, which may include side or "casual" businesses owned by wage/salary workers, the unemployed, or retired workers. Finally, the Kauffman Index includes all new business owners, whereas the SBO excludes agricultural and a few other types of businesses.

The Kauffman Index captures a broader range of entrepreneurial activity than the national- and state-level firm or establishment birth data from the Business Employer Dynamics (BED) or the Statistics of U.S. Businesses (SUSB). The BED data are compiled by the U.S. Bureau of Labor Statistics (BLS) from existing quarterly state unemployment insurance (UI) records through the Quarterly Census of Employment and Wages (QCEW) or ES-202 program. The SUSB data are collected by the U.S. Census Bureau and summarized by the U.S. Small Business Administration, Office of Advocacy. Both of these datasets include only employer firms. Employer firms represent approximately one-fourth of all firms, and many firms start with no employees. These data, therefore, are likely to lead to a substantial undercount in the rate of entrepreneurial activity, particularly for certain industries and regions. Finally, the BED and SUSB data are business-level data containing essentially no information on the owner's characteristics, while the CPS is person-level data containing very detailed information on the owner.

The Kauffman Index also differs from the Total early-stage Entrepreneurial Activity (TEA) index used in the Global Entrepreneurship Monitor. The TEA captures the percentage of the population ages eighteen through sixty-four who are currently nascent entrepreneurs (i.e., individuals who are actively involved in setting up businesses) or who

are currently owner-managers of a new business (i.e., businesses with no payments to owners or employees for more than forty-two months). The nascent entrepreneurs captured in the TEA who are still in the startup phase of business creation are not necessarily captured in the Kauffman Index because they may not be working on the new business for fifteen hours or more per week. The Kauffman Index also differs from the TEA in that it captures entrepreneurship at the point in time when the business is created because it is based on panel data.

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Endnotes

1. This report presents selected share measures. Full share measures over time are available in the demographic data of the Kauffman Index Data Visualization at www.kauffman.org/KIEA. Shares displayed in tables do not always sum to 100 percent due to rounding.

2. The U.S. Census Bureau notes that the definitions of non-employers and self-employed business owners are not the same. Although most self-employed business owners are non-employers, about a million self-employed business owners are classified as employer businesses. http://www.census.gov/econ/nonemployer/index.html.

3. See "Kauffman Index of Entrepreneurial Activity, 1996–2012" (Fairlie 2013) and http://www.kauffman.org/research-and-policy/kauffman-index-of-entrepreneurial-activity.aspx for previous reports.

4. Estimates of annual business creation rates would be approximately six to eight times higher. Annual rates are not twelve times higher than monthly rates because individuals potentially can start and exit from business ownership multiple times within the same year. Additionally, because of the broader definition of new business owners used in the Kauffman Index, it is not possible to directly compare the monthly statistics in the Kauffman Index with the quarterly and annual statistics of new employer businesses produced by the U.S. Census Bureau and U.S. Bureau of Labor Statistics.

5. Starting in 2009, the annual entrepreneurship rate is calculated using data from December to December. In previous years, annual entrepreneurship rates are calculated using data from January to January. See Fairlie (2010) for more details.

6. See Fairlie (2011), "Entrepreneurship, Economic Conditions, and the Great Recession" *Journal of Economics and Management Strategy* for more evidence and discussion.

7. For example, the majority of Fortune 500 companies were started during recessions or bear markets. See Stangler, Dane. 2009. T*he Economic Future just Happened*, Kansas City: Ewing Marion Kauffman Foundation, http://www.kauffman.org/uploadedFiles/the-economic-future-just-happened.pdf.

8. Due to a reclassification of codes, the first quarter of data for 2013 is not comparable to other quarters and is not included.

9. Employer firms also were starting with fewer employees. See Reedy and Litan (2011), "Starting Smaller; Staying Smaller: America's Slow Leak in Job Creation," Kauffman Foundation Report for more information on job creation among new employer firms.

10. See Kauffman Foundation and LegalZoom (2014) *Who Started New Businesses in 2013?* for evidence on the demographic and other characteristics of a sample of 720 responses to a survey of newly incorporated business owners using LegalZoom.

11. For evidence of the relationship between education and entrepreneurship from a multivariate analysis that controls for other factors, see Fairlie (2007), "Entrepreneurship in Silicon Valley during the Boom and Bust," University of California, Santa Cruz Working Paper at http://people.ucsc.edu/~rfairlie/papers/siliconvalley.pdf.

12. See Fairlie (2012), "Kauffman Index of Entrepreneurial Activity by Veteran Status, 1996-2011,"http://www.kauffman.org/uploadedFiles/DownLoadableResources/2012%20KIEA_VET_FINAL.pdf for more details.

13. Annual estimates of state-level entrepreneurship rates are available for downloading at www.kaffman.org/kauffmanindex, but care should be taken in analyzing changes over time in these rates.

14. As there is no oversampling of metropolitan areas in the CPS, only the largest metropolitan areas have sufficient observations to calculate reasonably accurate entrepreneurial activity rates. All MSAs reported in Table 11 have at least 4,500 observations.

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