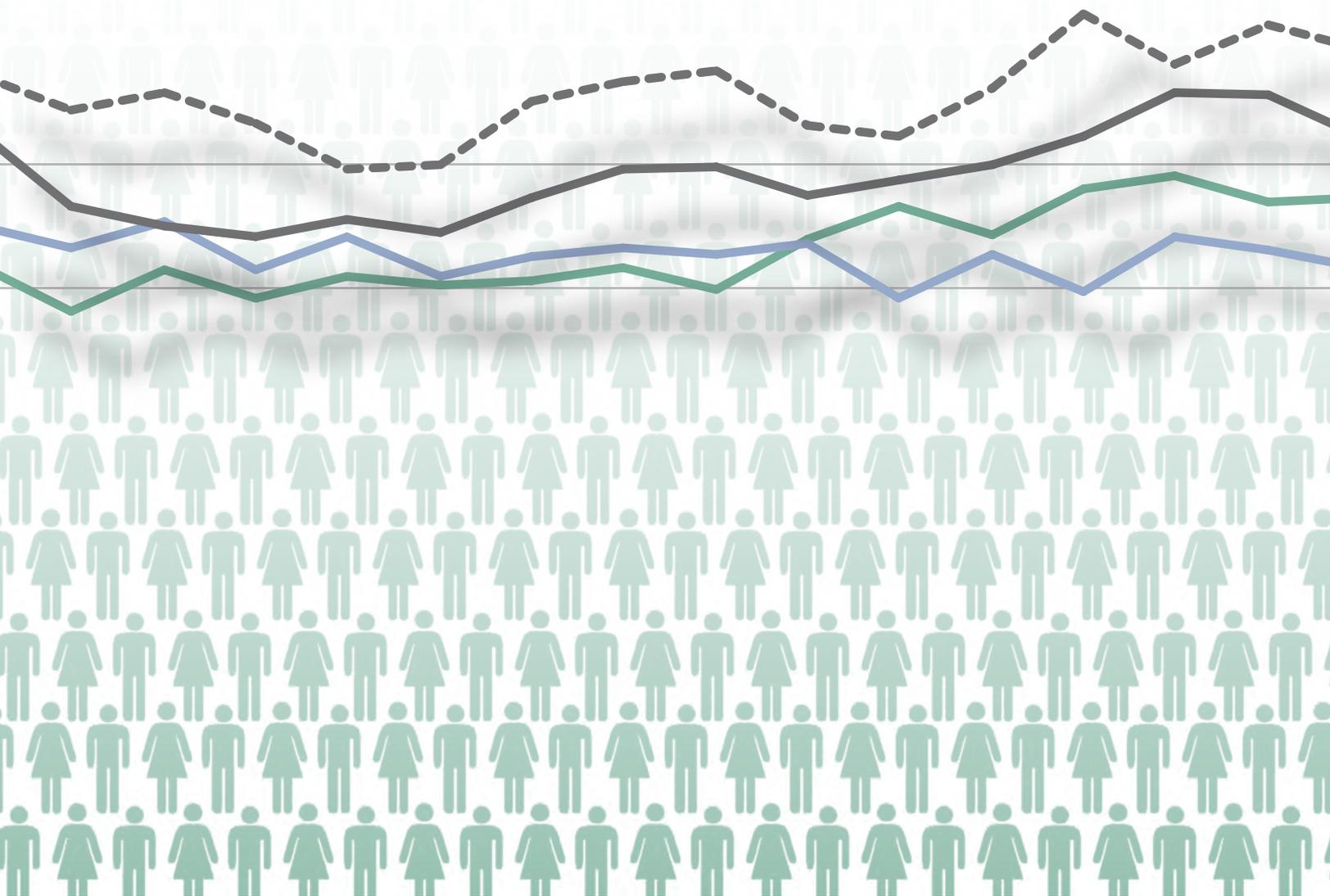


KAUFFMAN INDEX OF
**entrepreneurial
activity**

—1996–2012—

Robert W. Fairlie | April 2013



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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). 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 business creation by specific demographic groups.

New 2012 data allow for an update to previous reports, with consideration of trends in the rates of entrepreneurial activity over the seventeen-year period between 1996 and 2012. 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 2012 is the reporting of trends in entrepreneurial activity among veterans. The estimates reported here for veterans represent some of the first evidence on business creation for this group. Key findings for 2012 include:

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- The rate of business creation declined from 320 out of 100,000 adults in 2011 to 300 out of 100,000 adults in 2012. The business creation rate of 0.30 percent translates into approximately 514,000 new business owners each month during 2012; it was 543,000 in 2011.
- The decline in the business creation rate to 0.30 percent in 2012 is important because this rate is only slightly higher than pre-recessionary and long-term levels. The decline in business creation over the past year may be due to improving labor market conditions putting less pressure on individuals to start businesses out of necessity.
- The rate of employer business creation did not change in 2012. From 2011 to 2012 the quarterly employer establishment birth rate remained the same at 0.11 percent, which is lower than the level prior to the Great Recession.
- The overall decline in business creation rates was entirely driven by a substantial decline in business creation rates among men. Entrepreneurial activity remained unchanged in 2012 for women.
- The entrepreneurial activity rate among Latinos decreased from 0.52 percent in 2011 to 0.40 percent in 2012, but remained at a high level relative to previous years and other demographic groups. The African-American entrepreneurial activity rate decreased in 2012 (from 0.23 percent to 0.21 percent), and the Asian rate decreased slightly (from 0.32 percent to 0.31 percent).
- Immigrants were nearly twice as likely as were the native-born to start businesses each month in 2012. The immigrant rate of entrepreneurial activity decreased from 0.55 percent in 2011 to 0.49 percent in 2012.

- The youngest age group (ages 20–34) and those ages 45–54 experienced large decreases in entrepreneurial activity from 2011 to 2012.
- Over the past seventeen years, Latinos, Asians, and immigrants experienced rising shares of all new entrepreneurs, partly because of rising rates of entrepreneurship, but also because of increasing populations. The oldest age group (ages 55–64) also experienced a rising share of all new entrepreneurs, mainly because it represents an increasing share of the population.
- Although the entrepreneurship rate declined for high school dropouts from 2011 to 2012 (0.57 percent to 0.52 percent), this group has the highest rate of business creation, which may be due to more limited labor market opportunities than for more highly educated groups.
- New estimates of entrepreneurial activity for veterans indicate that business creation for veterans declined from 0.30 percent in 2011 to 0.28 percent in 2012. The share of all businesses created by veterans declined sharply over the past seventeen 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 2012 (1.43 percent). The second-highest rate of entrepreneurial activity was in the services industry (0.41 percent).
- From 2011 to 2012, 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 rates of entrepreneurial activity were Montana (530 per 100,000 adults), Vermont (520 per 100,000 adults), New Mexico (520 per 100,000 adults), Alaska (430 per 100,000 adults), and Mississippi (430 per 100,000 adults). The states with the lowest rates of entrepreneurial activity were Minnesota (150 per 100,000 adults), Nebraska (170 per 100,000 adults), Michigan (180 per 100,000 adults), Wisconsin (180 per 100,000 adults), and Ohio (190 per 100,000 adults).
- The states experiencing the largest increases in entrepreneurial activity rates over the past decade were Nevada (0.21 percentage points), Georgia (0.16 percentage points), Vermont (0.13 percentage points), California (0.12 percentage points), Louisiana (0.12 percentage points), and Massachusetts (0.12 percentage points). States that experienced the largest decreases in entrepreneurial activity rates were Wyoming (-0.13 percentage points), Wisconsin (-0.12 percentage points), and South Dakota (-0.10).
- Among the fifteen largest MSAs in the United States, Miami (0.56 percent) had the highest entrepreneurial activity rate in 2012, and Detroit (0.10 percent) had the lowest rate.

Introduction

The Kauffman Index of Entrepreneurial Activity (KIEA) 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.¹ 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 (BLS). This report updates previous accounts of the Kauffman Index, incorporating new data from 2012 and new estimates for veterans.

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.² 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, and information on owner demographics.

The Kauffman Index of Entrepreneurial Activity measures the rate of business creation at the individual owner level.

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Trends in Entrepreneurial Activity

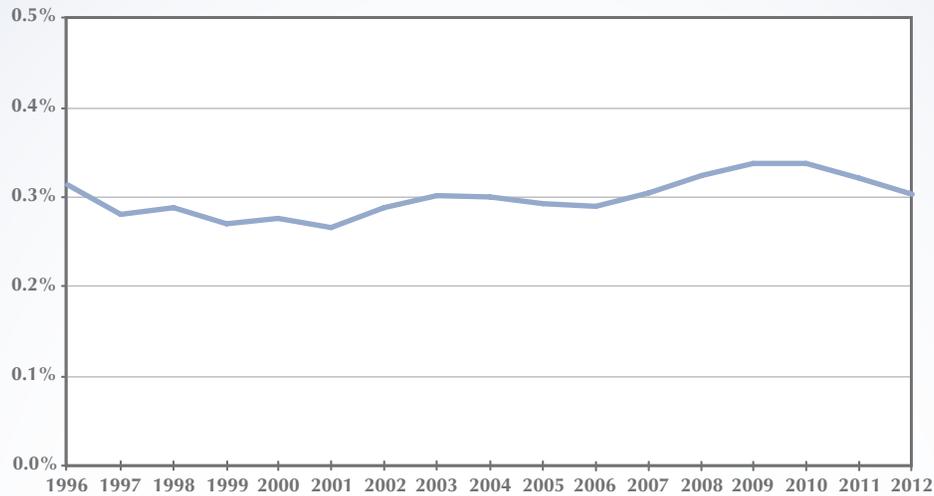
In 2012, an average of 0.30 percent of the adult population, or 300 out of 100,000 adults created a new business each month.³ This business-creation rate translates into approximately 514,000 new businesses being created each month during the year. The entrepreneurial activity rate declined from last year. In 2011, an average of 0.32 percent of the adult population, or 320 out of 100,000 adults created a new business each month. Thus, there was a decline of twenty new businesses per month out of 100,000 adults, representing a decrease of 6.3 percent.

In 2012, entrepreneurship rates returned to pre-recessionary levels, 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 7.8 percent. Figure 1 and Table 1 report average monthly estimates of the Kauffman Index

by year from 1996 to 2012.⁴ 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 business creation rate 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, represents a return to longer-term levels, and is possibly 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-

Figure 1
Kauffman Index of Entrepreneurial Activity
 (1996–2012)



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

TABLE 1
Kauffman Index of Entrepreneurial Activity
 (1996–2012)

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

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.

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 potential businesses (sometimes referred to as “opportunity” entrepreneurship) or worsening labor market conditions resulting in “necessity” entrepreneurship.⁵ Similarly, it is impossible to know whether necessity or opportunity entrepreneurship is driving the year-to-year changes in the entrepreneurship rates reported here for the nation, demographic groups, or geographical areas without taking into consideration underlying economic conditions. Other factors such as the

unemployment rate, changes in the Gross Domestic Product, population growth, and general labor market conditions can be coupled with the KIA rate to help interpret whether changes in the KIA rate likely are being driven by changes in opportunity entrepreneurship, necessity entrepreneurship, or both, although even with these other factors, the complete answer is difficult to ascertain. The end result is that great care should be taken when interpreting trends in business creation and what they mean. Furthermore, although the motivation might differ for starting businesses when economic conditions are weak, many of these businesses may eventually be very successful.⁶

Comparison to Employer Business Creation Rates

The Kauffman Index of Entrepreneurial Activity indicates that 514,000 new businesses were created each month during 2012. This *per month* figure differs drastically from employer establishment creation such as the Business Employer Dynamics (BED), which indicate roughly the same number of new businesses *per year*. 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 from 2011 to 2012 differs from an essentially flat pattern in employer business creation from 2011 to 2012. Figure 1B 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 2012. 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 compiled by the U.S. Bureau of Labor Statistics, and the number of non-business owners is estimated using cross-sectional CPS data. The employer establishment birth rate was

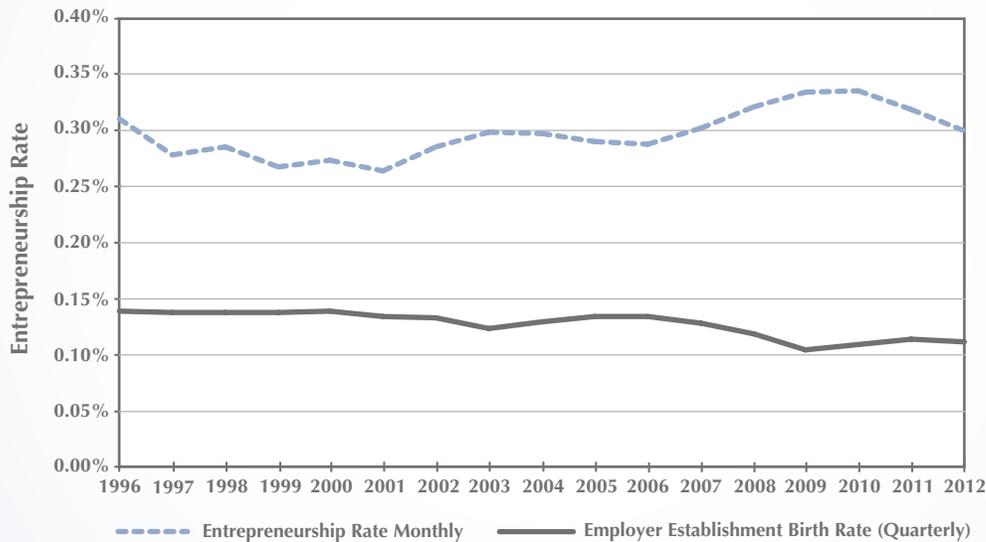
0.11 percent or eleven out of 100,000 people per quarter in 2012 (only the first quarter of data were available for 2012 at the time of this report). This rate translates into an average of 193,000 employer establishment births per quarter in 2012.

Looking back over the past several years, the quarterly employer establishment birth rate dropped from 0.13 percent in 2007 to 0.10 percent in 2009.⁷ Over this same period, the monthly entrepreneurial 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 rates of unemployment. These individuals were probably more likely to start sole proprietorships and other non-employer firms instead of more costly employer firms. From 2009 to 2010, the employer establishment birth rate rose slightly and remained at a level of 0.11 percent since then 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

Figure 1B
**Kauffman Index of Entrepreneurial Activity (1996–2012)
 and Employer Establishment Birth Rate (1996–2012 Q1)**



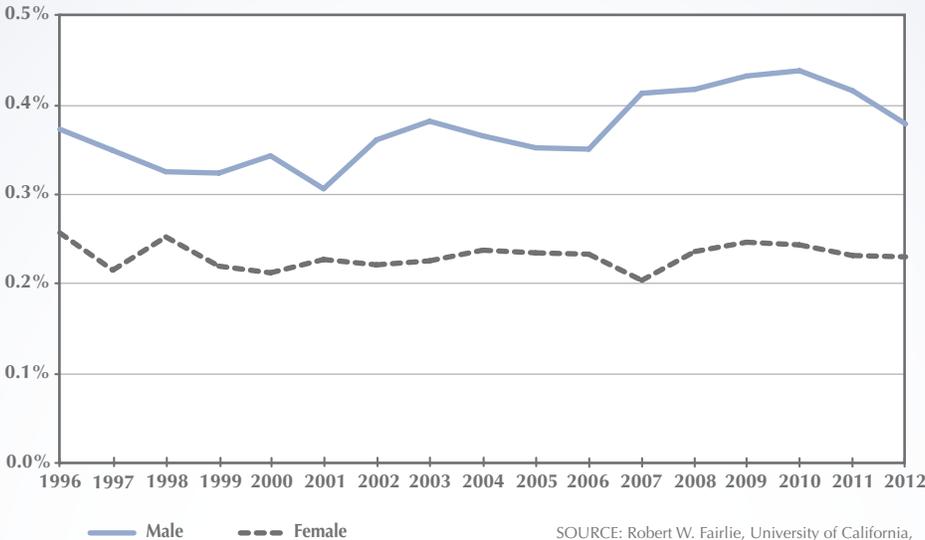
SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the CPS and BLS.
 NOTE: 2012 Employer Establishment Birth Rate only includes Q1.

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. Entrepreneurial activity decreased for men from 2011 to 2012, but not for women. For men, the entrepreneurial activity rate decreased substantially from 0.42 percent in 2011 to 0.38 percent in 2012, reaching pre-recessionary levels. For women, the entrepreneurship rate remained the same at 0.23 percent. It is notable, however, that the female entrepreneurship rate of 0.23 percent in 2012 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 2012. Overall, men are substantially more likely to

start a business each month than are women. The average rate of entrepreneurial activity for men over the seventeen-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 2011 and 2012. Figure 3 and Table 2 report estimates of the Kauffman Index by race and ethnicity. The Latino rate of business creation decreased from 0.52 percent in 2011 to 0.40 percent in 2012, and the African American rate of business creation decreased from 0.23 percent in 2010 to 0.21 percent in 2012. The Asian rate of business creation declined slightly from 0.32 percent to 0.31 percent. The white rate of business creation remained constant from 2011 to 2012 at 0.29 percent.

Figure 2
**Kauffman Index of Entrepreneurial Activity
 by Gender (1996–2012)**



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Figure 3
**Kauffman Index of Entrepreneurial Activity by Race
 (1996–2012)**

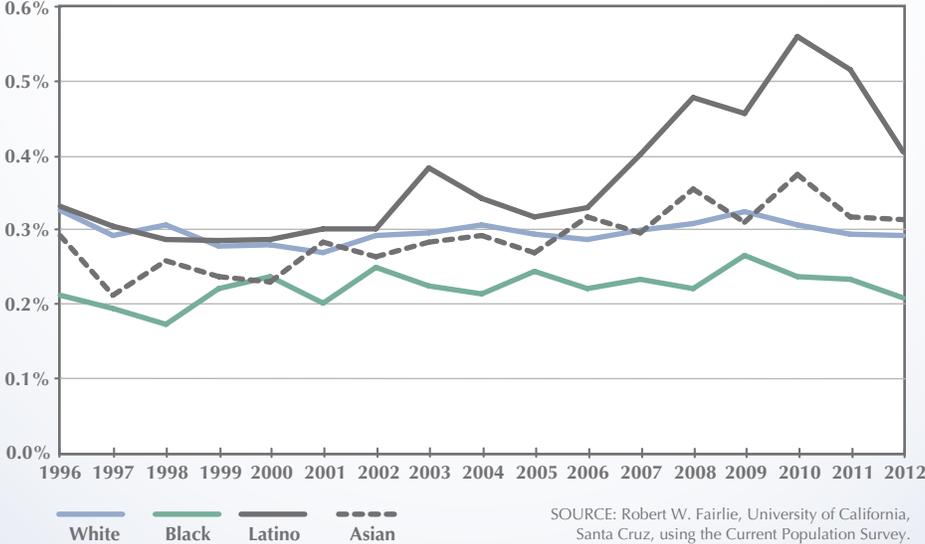


TABLE 2
Kauffman Index of Entrepreneurial Activity by Race
(1996–2012)

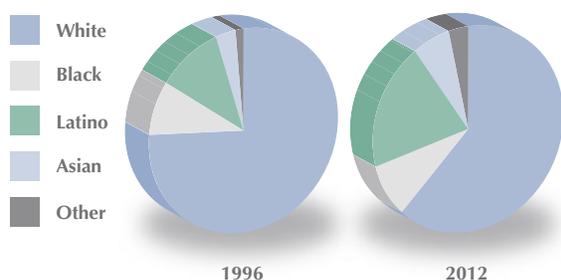
Year	White		Black		Latino		Asian		Total	
	Entrep. Index	Sample Size								
1996	0.33%	405,007	0.21%	54,799	0.33%	44,033	0.29%	20,489	0.31%	531,007
1997	0.29%	402,519	0.19%	55,300	0.30%	45,537	0.21%	20,711	0.28%	531,129
1998	0.31%	402,681	0.17%	54,669	0.29%	46,940	0.26%	21,099	0.29%	532,296
1999	0.28%	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

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/kea to download the data files.

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 10.5 percent in 1996 to 19.5 percent in 2012. Figure 3B reports estimates of the share of new entrepreneurs by race from 1996 to 2012. The Asian share of new entrepreneurs also rose substantially from 1996 to 2012, but remains relatively small at 6.1 percent. The white share of new entrepreneurs declined over the past seventeen years, whereas the black share increased slightly.

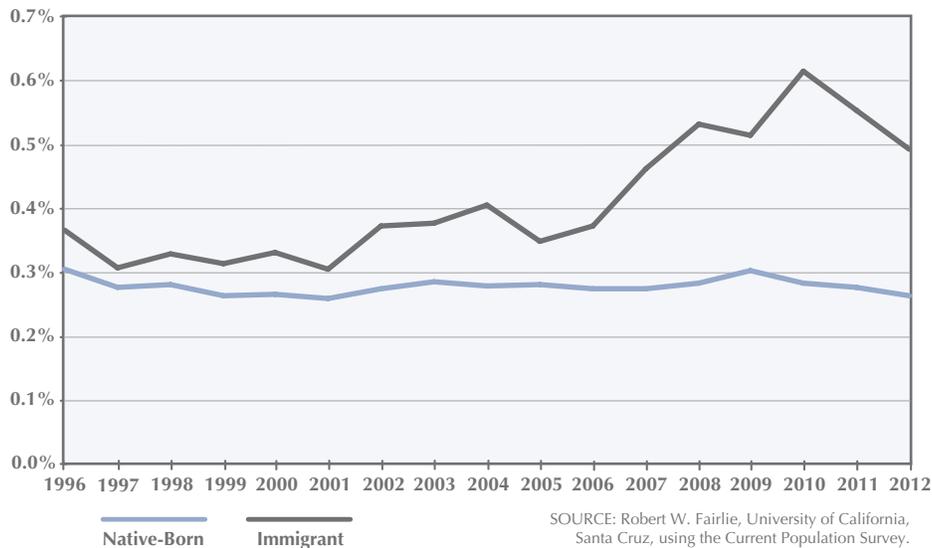
Figure 3B
Changes in Composition of
New Entrepreneurs by Race
(1996, 2012)



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

Race	1996	2012
White	76.4%	62.4%
Black	8.4%	8.8%
Latino	10.5%	19.5%
Asian	3.5%	6.1%
Other	1.2%	3.2%

Figure 4
**Kauffman Index of Entrepreneurial Activity by Nativity
 (1996–2012)**



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

TABLE 3
**Kauffman Index of Entrepreneurial Activity
 by Nativity (1996–2012)**

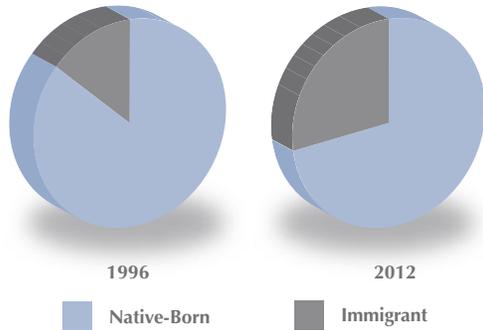
Year	Native-Born		Immigrant		Total	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.30%	474,984	0.36%	56,023	0.31%	531,007
1997	0.27%	473,208	0.31%	57,921	0.28%	531,129
1998	0.28%	472,458	0.33%	59,838	0.29%	532,296
1999	0.26%	472,107	0.31%	60,883	0.27%	532,990
2000	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

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.

The entrepreneurial activity rate decreased for immigrants in 2012 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 0.55 percent in 2011 to 0.49 percent in 2012. The longer-run pattern in entrepreneurship rates for immigrants, however, is an upward trend starting in 2006. The immigrant rate of entrepreneurship increased from 0.35 percent in 2005 to 0.49 percent in 2012. The native-born rate has remained relatively flat over the last seventeen years. The result of these contrasting trends is that immigrants were nearly twice as likely to start a business each month as were the native-born in 2012. For immigrants, 490 out of 100,000 people started a business each month, compared with 260 out of 100,000 people for the native-born.

Figure 4B
Changes in Composition of New Entrepreneurs by Nativity (1996, 2012)



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

Nativity	1996	2012
Native-Born	86.3%	72.9%
Immigrant	13.7%	27.1%

A growing immigrant population and rising entrepreneurship rate contributed to a rise in the share of new entrepreneurs that are immigrant. Figure 4B reports estimates of the share of new entrepreneurs by nativity. The immigrant share of new entrepreneurs is 27.1 percent, up from 13.7 percent in 1996.

Figure 5 and Table 4 reports estimates of entrepreneurial activity rates by age group. The youngest age group (ages 20–34) experienced a large decrease in business creation rates, dropping from 0.27 percent in 2011 to 0.23 percent in 2012. The 45–54 age group also experienced declining rates from 2011 to 2012. From 2011 to 2012, both the 35–44 and 55–64 age groups experienced slight increases in rates. Over the entire period, business creation was the lowest among the youngest group.

Figure 5
Kauffman Index of Entrepreneurial Activity by Age (1996–2012)



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

TABLE 4
Kauffman Index of Entrepreneurial Activity by Age (1996–2012)

Year	Ages 20–34		Ages 35–44		Ages 45–54		Ages 55–64		Total	
	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

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.

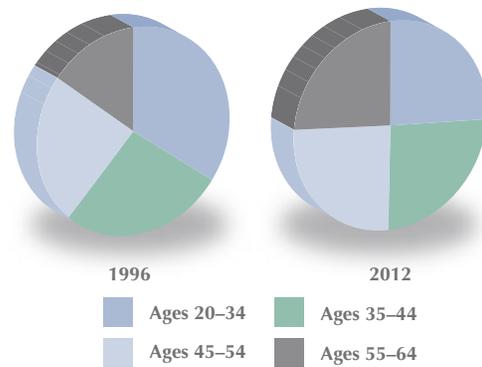
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Figure 5B
Changes in Composition of New Entrepreneurs by Age (1996, 2012)

Figure 5B reports estimates of the share of new entrepreneurs by age group. An aging population and increasing rate of entrepreneurship among older ages has led to a rising share of new entrepreneurs in the 55–64 age group. This group represented 14.3 percent of new entrepreneurs in 1996, whereas it represented 23.4 percent of new entrepreneurs in 2012.

Entrepreneurial activity rates declined sharply in 2012 for the least-educated group, possibly reflecting an improving labor market. Although rates dropped in the past two years, entrepreneurship rates are higher for this educational group than for 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 out of necessity. Entrepreneurship rates declined for those with some college, decreased slightly for college graduates, and increased slightly for high school graduates.



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

Age	1996	2012
Ages 20–34	34.8%	26.2%
Ages 35–44	27.0%	24.2%
Ages 45–54	23.9%	26.3%
Ages 55–64	14.3%	23.4%

Figure 6
**Kauffman Index of Entrepreneurial Activity
 by Education (1996–2012)**

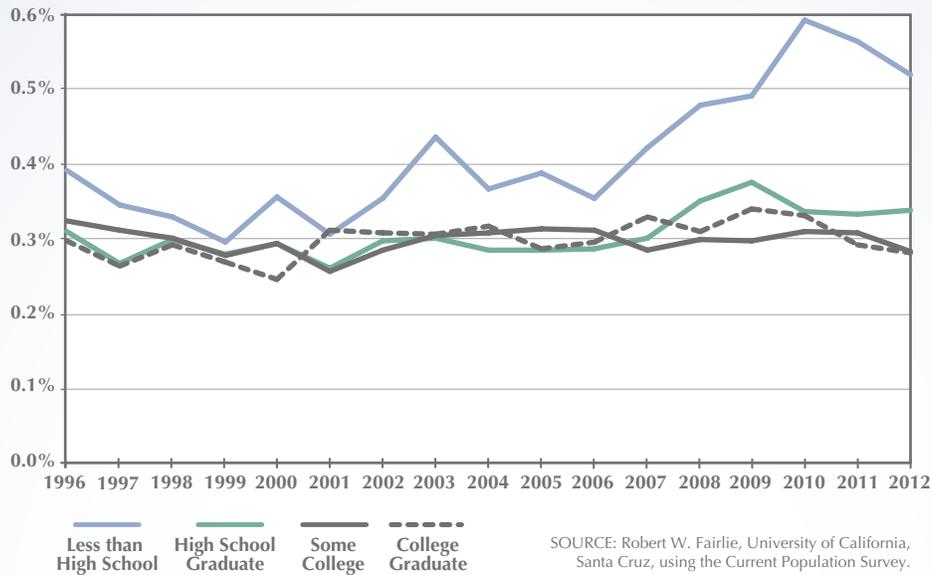


TABLE 5
Kauffman Index of Entrepreneurial Activity by Education (1996–2012)

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

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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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.⁸

ENTREPRENERIAL ACTIVITY BY VETERAN STATUS

For the first time in this series of annual reports on entrepreneurial activity, entrepreneurship rates are reported by veteran status. New data extracts for every month of CPS data from 1996 to 2012 were downloaded and compiled to create estimates of entrepreneurship rates by veteran status. This new data allow for an analysis of trends in the rates of entrepreneurial activity over the past seventeen years and are reported in Table 6 and Figure 7. In 2012, the business creation rate was 0.28 percent for veterans. The non-veteran entrepreneurship rate was 0.30 percent. Entrepreneurship rates declined

from 0.30 percent in 2011 to 0.28 percent in 2012 for veterans. Over the last seventeen years, veteran entrepreneurship rates generally have been higher than non-veteran entrepreneurship rates. Over the past four years, however, veteran rates have been lower than non-veteran rates.

The share of all new entrepreneurs represented by veterans was 12.3 percent in 1996. This share steadily declined to 5.7 percent by 2012 (see Figure 7B). Part of the decline in the veteran share of new entrepreneurs over the past seventeen 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 declining share of veterans in the U.S. working-age population. The decline in the veteran population ages 20–64 from 1996 to 2012 is due to declines in the Korean and Vietnam War veteran share of the working-age population over the past seventeen years.⁹

TABLE 6
Kauffman Index of Entrepreneurial Activity by Veteran Status (1996–2012)

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

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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Figure 7
**Kauffman Index of Entrepreneurial Activity by
 Veteran Status (1996–2012)**

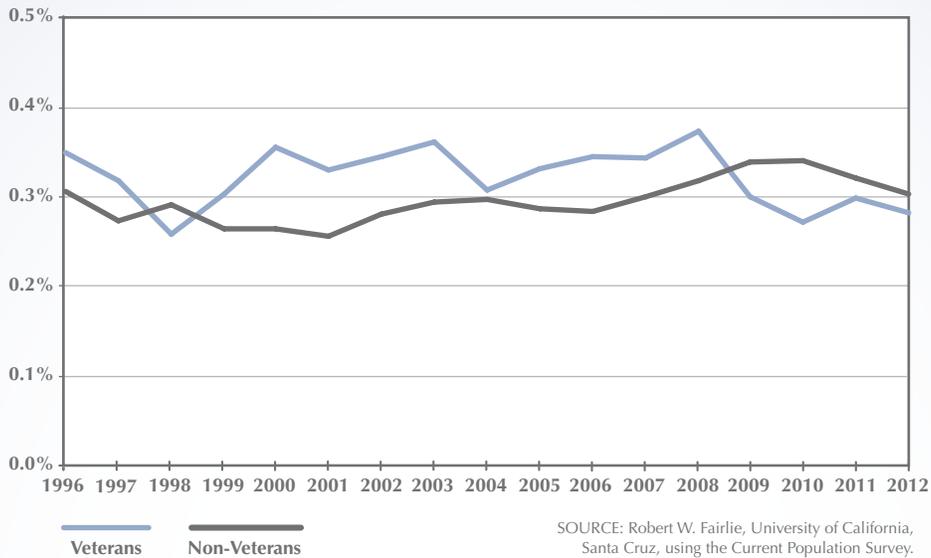
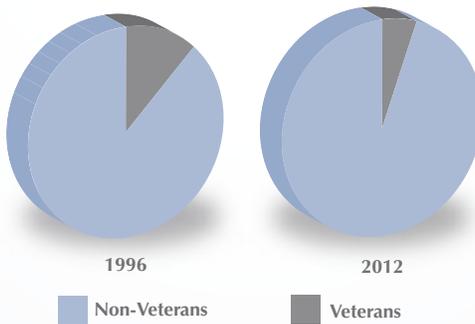


Figure 7B
**Share of New Entrepreneurs
 by Veteran Status
 (1996, 2012)**

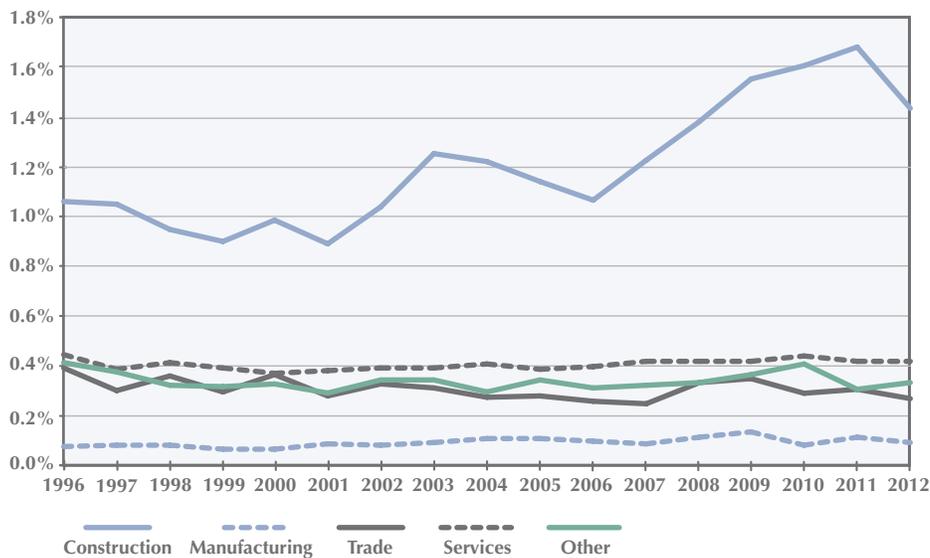


Veteran Status	1996	2012
Veterans	12.3%	5.7%
Non-Veterans	87.3%	94.3%

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 2012, entrepreneurial activity rates were highest in construction at 1.43 percent, but decreased substantially from 2011 levels. Entrepreneurial activity rates in services also were high (0.41 percent). Manufacturing had substantially lower rates of entrepreneurial activity than all other industries, with only 0.08 percent of non-business owners starting businesses per month in this industry in 2012.

Figure 8
Kauffman Index of Entrepreneurial Activity
by Industry (1996–2012)



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

TABLE 7

Kauffman Index of Entrepreneurial Activity by Industry (1996–2012)

Year	Construction		Manufacturing		Trade		Services		Other	
	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

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 2012. Montana had the highest entrepreneurial activity rate, with 530 per 100,000 adults creating new businesses each month. Minnesota exhibited the lowest entrepreneurial activity rate with 150 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 (530 per 100,000 adults), Vermont (520 per 100,000 adults), New Mexico (520 per 100,000 adults), Alaska (430 per 100,000 adults), and Mississippi (430 per 100,000 adults). The five states with the lowest rates of entrepreneurial activity were Minnesota (150 per 100,000 adults), Nebraska (170 per 100,000 adults),

TABLE 8
Kauffman Index of Entrepreneurial Activity by State (2012)

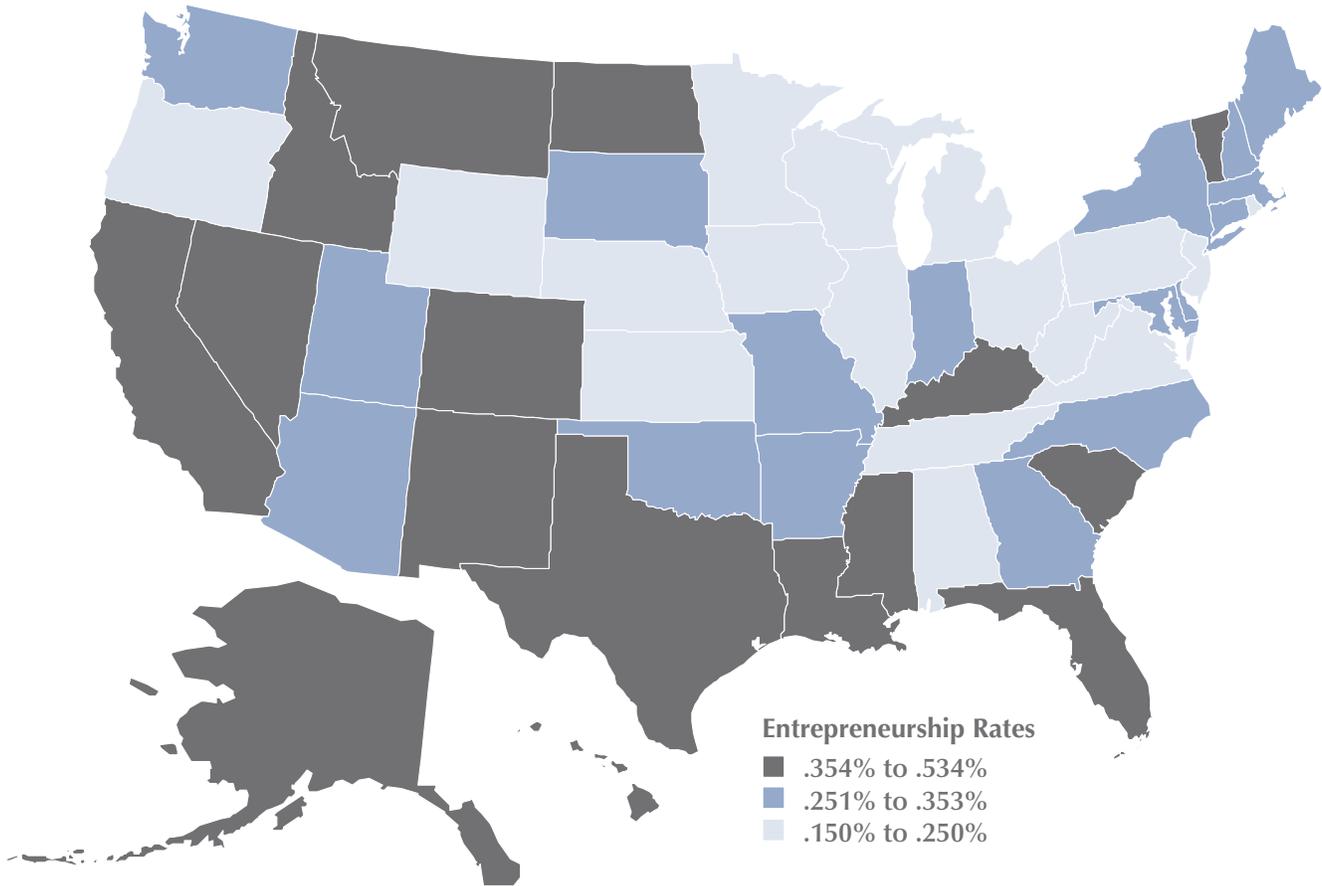
State	Entrep. Index	Confidence Interval		Entreps. per 100,000 People	Size
		Lower	Upper		
U.S. Total	0.30%	0.28%	0.32%	300	580,953
Alabama	0.23%	0.11%	0.35%	230	6,551
Alaska	0.43%	0.28%	0.59%	430	7,011
Arizona	0.34%	0.20%	0.48%	340	6,950
Arkansas	0.28%	0.14%	0.41%	280	6,274
California	0.41%	0.35%	0.47%	410	50,344
Colorado	0.37%	0.27%	0.48%	370	12,794
Connecticut	0.32%	0.22%	0.42%	320	12,553
Delaware	0.27%	0.17%	0.38%	270	8,549
District of Columbia	0.26%	0.14%	0.37%	260	7,971
Florida	0.36%	0.28%	0.44%	360	22,108
Georgia	0.27%	0.17%	0.37%	270	12,099
Hawaii	0.40%	0.26%	0.54%	400	8,678
Idaho	0.41%	0.25%	0.57%	410	6,279
Illinois	0.22%	0.15%	0.29%	220	18,462
Indiana	0.26%	0.16%	0.37%	260	8,969
Iowa	0.21%	0.13%	0.30%	210	11,337
Kansas	0.23%	0.12%	0.34%	230	8,360
Kentucky	0.38%	0.24%	0.51%	380	9,033
Louisiana	0.40%	0.23%	0.56%	400	5,693
Maine	0.35%	0.24%	0.47%	350	10,407
Maryland	0.25%	0.17%	0.34%	250	13,699
Massachusetts	0.27%	0.16%	0.38%	270	8,832
Michigan	0.18%	0.11%	0.25%	180	13,857
Minnesota	0.15%	0.09%	0.21%	150	14,791
Mississippi	0.43%	0.25%	0.60%	430	5,476
Missouri	0.35%	0.22%	0.47%	350	9,674
Montana	0.53%	0.33%	0.74%	530	5,280
Nebraska	0.17%	0.09%	0.25%	170	8,948
Nevada	0.39%	0.26%	0.53%	390	8,707
New Hampshire	0.33%	0.23%	0.44%	330	12,349
New Jersey	0.21%	0.12%	0.30%	210	11,759
New Mexico	0.52%	0.31%	0.74%	520	4,688
New York	0.34%	0.27%	0.42%	340	25,009
North Carolina	0.26%	0.16%	0.36%	260	11,394
North Dakota	0.37%	0.23%	0.51%	370	7,479
Ohio	0.19%	0.12%	0.27%	190	15,554
Oklahoma	0.31%	0.17%	0.45%	310	6,544
Oregon	0.22%	0.11%	0.33%	220	8,327
Pennsylvania	0.20%	0.13%	0.26%	200	18,058
Rhode Island	0.20%	0.12%	0.29%	200	9,566
South Carolina	0.36%	0.21%	0.51%	360	7,977
South Dakota	0.27%	0.16%	0.39%	270	8,470
Tennessee	0.24%	0.13%	0.35%	240	8,015
Texas	0.36%	0.29%	0.43%	360	31,444
Utah	0.33%	0.20%	0.45%	330	7,314
Vermont	0.52%	0.37%	0.68%	520	8,346
Virginia	0.20%	0.12%	0.28%	200	12,590
Washington	0.30%	0.20%	0.41%	300	10,289
West Virginia	0.21%	0.10%	0.33%	210	6,807
Wisconsin	0.18%	0.10%	0.26%	180	11,646
Wyoming	0.24%	0.12%	0.35%	240	7,642

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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Figure 9

Kauffman Index of Entrepreneurial Activity by State (2012)



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

Michigan (180 per 100,000 adults), Wisconsin (180 per 100,000 adults), and Ohio (190 per 100,000 adults).

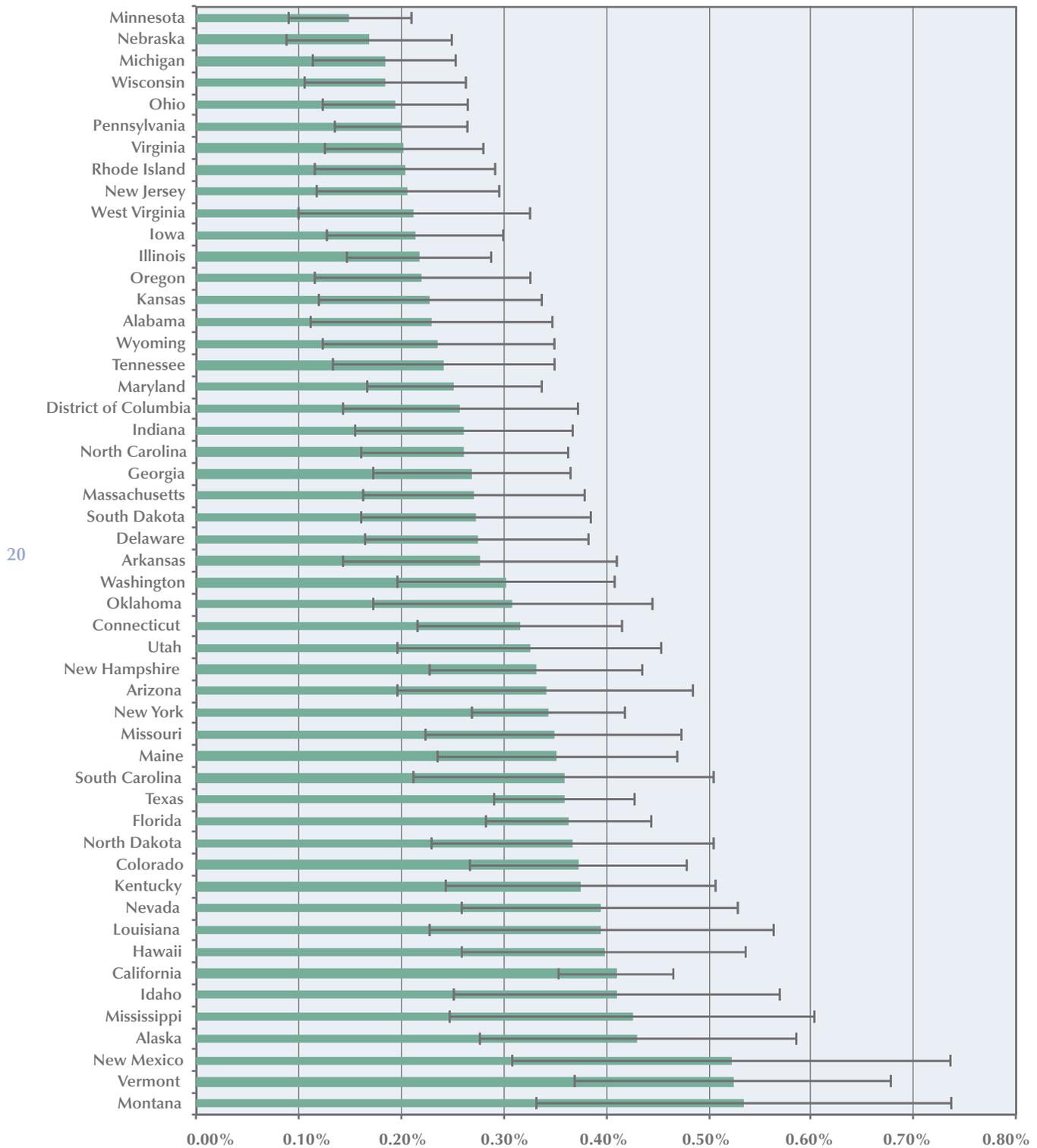
The decline in business creation rates from 2011 to 2012 was experienced in all regions of the United States. Estimates of the Kauffman Index by region are reported in Figure 11 and Table 9. Entrepreneurship rates are highest in the West, followed by the South. Rates are the lowest in the Midwest.

Trends in state entrepreneurship rates over the past decade are reported in Table 10. To increase sample sizes and precision, the three-year period 2010–2012 is compared to the three-year period 2000–2002, 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.¹⁰ Estimates

for 2005–2007 also are reported to demonstrate shorter-run trends in entrepreneurial activity across states. Nevada experienced the largest positive change in its entrepreneurial activity rate over the past decade, nearly doubling its incidence from 0.22 percent to 0.43 percent. Other states experiencing large increases in rates of entrepreneurial activity were Georgia (0.16 percentage points), Vermont (0.13 percentage points), California (0.12 percentage points), Louisiana (0.12 percentage points), and Massachusetts (0.12 percentage points). States that experienced large decreases in entrepreneurial activity rates were Wyoming (-0.13 percentage points), Wisconsin (-0.12 percentage points), and South Dakota (-0.10 percentage points). All of these changes over time are statistically significant at the 0.05 level of confidence.

Figure 10

Kauffman Index of Entrepreneurial Activity by State with 95 Percent Confidence Intervals, 2012



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

Figure 11
**Kauffman Index of Entrepreneurial Activity
 by Region (1996–2012)**

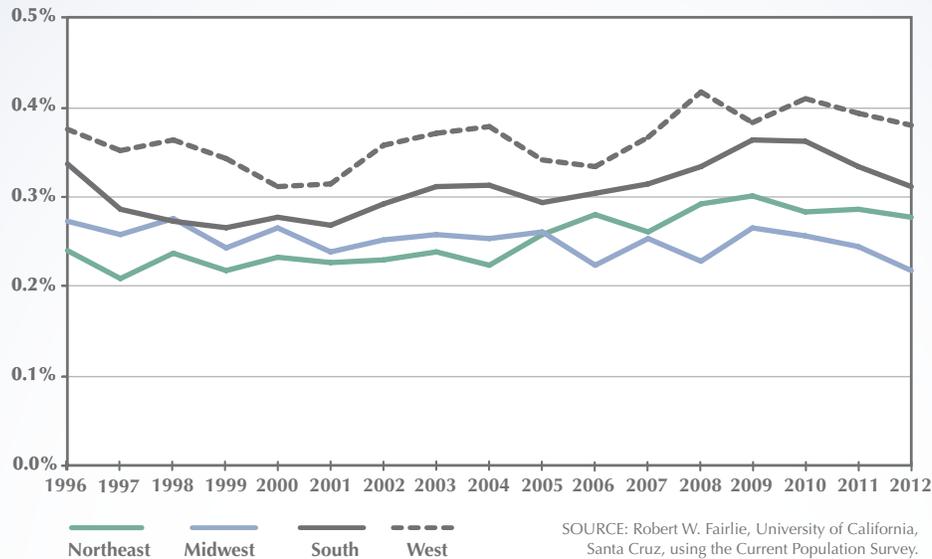


TABLE 9
Kauffman Index of Entrepreneurial Activity by Region (1996–2012)

Year	Northeast		Midwest		South		West		Total	
	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

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	2000–2002 Period			2005–2007 Period			2010–2012 Period			Sample Size
	Entrep. Index	Confidence Interval		Entrep. Index	Confidence Interval		Entrep. Index	Confidence Interval		
		Lower	Upper		Lower	Upper		Lower	Upper	
U.S. Total	0.27%	0.26%	0.28%	0.29%	0.28%	0.30%	0.32%	0.31%	0.33%	1,760,370
Alabama	0.22%	0.16%	0.28%	0.17%	0.12%	0.23%	0.25%	0.18%	0.32%	19,976
Alaska	0.52%	0.42%	0.62%	0.36%	0.28%	0.43%	0.42%	0.33%	0.52%	21,934
Arizona	0.38%	0.30%	0.46%	0.34%	0.26%	0.42%	0.40%	0.31%	0.49%	21,181
Arkansas	0.30%	0.22%	0.38%	0.38%	0.29%	0.47%	0.33%	0.24%	0.42%	18,597
California	0.32%	0.29%	0.35%	0.36%	0.32%	0.39%	0.44%	0.41%	0.48%	149,689
Colorado	0.41%	0.33%	0.48%	0.38%	0.32%	0.45%	0.41%	0.35%	0.48%	38,085
Connecticut	0.25%	0.17%	0.32%	0.26%	0.21%	0.32%	0.30%	0.24%	0.35%	38,984
Delaware	0.17%	0.11%	0.23%	0.16%	0.11%	0.21%	0.25%	0.19%	0.32%	26,208
Dist. of Columbia	0.33%	0.23%	0.42%	0.32%	0.24%	0.39%	0.29%	0.22%	0.36%	23,514
Florida	0.28%	0.24%	0.32%	0.32%	0.28%	0.36%	0.38%	0.33%	0.43%	66,374
Georgia	0.22%	0.16%	0.28%	0.40%	0.33%	0.47%	0.38%	0.31%	0.44%	37,551
Hawaii	0.27%	0.20%	0.35%	0.32%	0.25%	0.40%	0.28%	0.21%	0.34%	25,890
Idaho	0.40%	0.31%	0.49%	0.44%	0.35%	0.54%	0.39%	0.30%	0.49%	19,073
Illinois	0.25%	0.21%	0.29%	0.22%	0.17%	0.26%	0.22%	0.18%	0.27%	55,631
Indiana	0.26%	0.19%	0.32%	0.26%	0.20%	0.33%	0.22%	0.16%	0.28%	27,026
Iowa	0.29%	0.22%	0.37%	0.31%	0.24%	0.37%	0.25%	0.19%	0.30%	33,974
Kansas	0.31%	0.24%	0.38%	0.24%	0.18%	0.30%	0.28%	0.22%	0.35%	25,515
Kentucky	0.25%	0.19%	0.32%	0.23%	0.16%	0.29%	0.34%	0.27%	0.42%	27,051
Louisiana	0.27%	0.20%	0.35%	0.35%	0.25%	0.44%	0.40%	0.30%	0.50%	16,892
Maine	0.29%	0.22%	0.36%	0.36%	0.29%	0.42%	0.33%	0.27%	0.40%	32,543
Maryland	0.28%	0.21%	0.35%	0.34%	0.27%	0.41%	0.26%	0.21%	0.31%	41,618
Massachusetts	0.16%	0.12%	0.20%	0.29%	0.22%	0.35%	0.29%	0.22%	0.35%	26,732
Michigan	0.24%	0.19%	0.28%	0.23%	0.18%	0.27%	0.22%	0.17%	0.26%	42,077
Minnesota	0.24%	0.18%	0.30%	0.30%	0.25%	0.35%	0.20%	0.15%	0.24%	44,082
Mississippi	0.31%	0.22%	0.40%	0.41%	0.30%	0.52%	0.37%	0.28%	0.47%	16,733
Missouri	0.25%	0.18%	0.32%	0.24%	0.18%	0.30%	0.35%	0.28%	0.42%	30,016
Montana	0.42%	0.32%	0.51%	0.47%	0.36%	0.58%	0.42%	0.32%	0.52%	15,767
Nebraska	0.32%	0.25%	0.40%	0.26%	0.20%	0.33%	0.25%	0.19%	0.31%	27,174
Nevada	0.22%	0.17%	0.28%	0.32%	0.25%	0.39%	0.43%	0.35%	0.51%	26,240
New Hampshire	0.24%	0.18%	0.31%	0.26%	0.21%	0.31%	0.28%	0.23%	0.34%	38,287
New Jersey	0.22%	0.18%	0.27%	0.27%	0.21%	0.32%	0.24%	0.19%	0.29%	36,295
New Mexico	0.37%	0.28%	0.46%	0.35%	0.26%	0.44%	0.37%	0.27%	0.47%	14,547
New York	0.30%	0.26%	0.33%	0.32%	0.27%	0.36%	0.36%	0.32%	0.40%	75,981
North Carolina	0.31%	0.25%	0.37%	0.25%	0.19%	0.30%	0.30%	0.24%	0.36%	34,904
North Dakota	0.30%	0.22%	0.38%	0.28%	0.21%	0.35%	0.32%	0.24%	0.39%	22,229
Ohio	0.19%	0.16%	0.23%	0.22%	0.18%	0.26%	0.25%	0.21%	0.30%	48,589
Oklahoma	0.28%	0.20%	0.35%	0.41%	0.32%	0.49%	0.28%	0.20%	0.35%	20,589
Oregon	0.34%	0.26%	0.42%	0.35%	0.28%	0.43%	0.27%	0.20%	0.33%	25,324
Pennsylvania	0.16%	0.13%	0.19%	0.17%	0.14%	0.21%	0.18%	0.14%	0.22%	53,631
Rhode Island	0.13%	0.08%	0.18%	0.24%	0.18%	0.30%	0.23%	0.17%	0.28%	29,423
South Carolina	0.20%	0.14%	0.27%	0.23%	0.17%	0.29%	0.29%	0.22%	0.37%	23,792
South Dakota	0.37%	0.29%	0.44%	0.34%	0.26%	0.41%	0.26%	0.20%	0.33%	26,600
Tennessee	0.22%	0.16%	0.27%	0.31%	0.24%	0.38%	0.31%	0.24%	0.39%	23,988
Texas	0.36%	0.31%	0.40%	0.32%	0.28%	0.36%	0.40%	0.36%	0.44%	93,890
Utah	0.31%	0.23%	0.38%	0.35%	0.27%	0.43%	0.33%	0.25%	0.40%	21,400
Vermont	0.33%	0.24%	0.41%	0.45%	0.36%	0.53%	0.45%	0.37%	0.54%	25,827
Virginia	0.21%	0.15%	0.26%	0.25%	0.20%	0.30%	0.21%	0.17%	0.26%	38,525
Washington	0.27%	0.20%	0.33%	0.24%	0.18%	0.30%	0.26%	0.20%	0.32%	31,169
West Virginia	0.15%	0.10%	0.21%	0.16%	0.10%	0.21%	0.18%	0.12%	0.24%	20,494
Wisconsin	0.32%	0.25%	0.39%	0.29%	0.23%	0.36%	0.20%	0.15%	0.25%	35,102
Wyoming	0.35%	0.27%	0.43%	0.40%	0.31%	0.48%	0.22%	0.16%	0.29%	23,657

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).¹¹ Among these metropolitan areas, Miami had the highest entrepreneurial activity rate at 560 per 100,000 adults. Los Angeles (530 per 100,000 adults) and Houston (480 per 100,000 adults) also had high rates of entrepreneurial activity. The metropolitan area with the lowest entrepreneurial activity rate in this group of large MSAs was Detroit (100 per 100,000 adults).

TABLE 11
Kauffman Index of Entrepreneurial Activity for the Fifteen Largest MSAs (2012)

Metropolitan Statistical Area	2012 Entrep. Index	Confidence Interval		Entrep. per 100,000 People	2010-2012		
		Lower	Upper		Sample Size	Entrep. Index	Sample Size
New York-Northern New Jersey-Long Island, NY-NJ-PA	0.34%	0.26%	0.42%	340	24,076	0.38%	74,585
Los Angeles-Long Beach-Santa Ana, CA	0.53%	0.42%	0.64%	530	17,953	0.57%	53,852
Chicago-Naperville-Joliet, IL-IN-WI	0.23%	0.14%	0.32%	230	13,157	0.24%	39,712
Dallas-Fort Worth-Arlington, TX	0.24%	0.14%	0.35%	240	8,565	0.29%	25,766
Houston-Baytown-Sugar Land, TX	0.48%	0.32%	0.63%	480	7,421	0.48%	21,307
Philadelphia-Camden-Wilmington, PA-NJ-DE	0.23%	0.13%	0.34%	230	12,612	0.19%	37,854
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.23%	0.15%	0.31%	230	18,386	0.27%	54,779
Miami-Fort Lauderdale-Miami Beach, FL	0.56%	0.37%	0.74%	560	6,844	0.52%	20,176
Atlanta-Sandy Springs-Marietta, GA	0.31%	0.17%	0.45%	310	6,832	0.46%	21,254
Boston-Cambridge-Quincy, MA-NH	0.22%	0.11%	0.33%	220	10,005	0.27%	30,317
San Francisco-Oakland-Fremont, CA	0.38%	0.22%	0.54%	380	6,190	0.43%	18,195
Detroit-Warren-Livonia, MI	0.10%	0.02%	0.17%	100	5,965	0.19%	18,331
Phoenix-Mesa-Scottsdale, AZ	0.33%	0.16%	0.51%	330	4,667	0.40%	14,114
Riverside-San Bernardino, CA	0.35%	0.19%	0.51%	350	5,213	0.37%	15,306
Seattle-Tacoma-Bellevue, WA	0.35%	0.19%	0.51%	350	5,603	0.29%	16,766

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 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 2012, 0.30 percent of the adult population, or 300 out of 100,000 adults, created new businesses each month, representing approximately 514,000 new businesses per month. This total rate of business creation decreased from 0.32 percent in 2011, which might be due to improving labor market conditions. The national unemployment rate was 8.5 percent at the end of 2011 and dropped to 7.8 percent at the end of 2012.

In 2012, there are some interesting differences in changes in entrepreneurial activity rates for population subgroups. First, the overall decline in entrepreneurship rates in 2012 was due entirely to a large drop in rates among men. The female rate was unchanged from 2011 to 2012. Latinos experienced a large decrease in the business creation rate in 2012, but continue to have relatively high rates of business creation. Business creation rates among African Americans and Asians also declined in 2012, but not as sharply. Related to the findings for race and ethnicity, entrepreneurial activity among immigrants decreased sharply in 2012, although the rate of business creation remains nearly twice as high as the native-born rate. The youngest age group (ages 20–34) and the 45–54 age group experienced large declines in entrepreneurial activity rates from 2011 to 2012. Business creation among those without a high school degree also experienced a large drop from 2010 to 2011.

For the first time in this series of annual reports, entrepreneurial activity by veteran status is reported.

There is very little data on businesses owned by veterans compared to non-veterans, and these data represent some of the first evidence on business creation for this group. The entrepreneurship rate for veterans was 0.28 percent in 2012. The rate of business creation among veterans declined from a higher level in 2011 (0.30 percent). The share of all new entrepreneurs represented by veterans declined from 12.3 percent in 1996 to 5.7 percent by 2012, which was 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 2012. Entrepreneurial activity rates varied substantially across states, from a high of 0.53 percent in Montana to a low of 0.15 percent in Minnesota. Entrepreneurial activity rates also were high in Vermont (520 per 100,000 adults), New Mexico (520 per 100,000 adults), Alaska (430 per 100,000 adults), and Mississippi (430 per 100,000 adults). In addition to Minnesota, the lowest rates of entrepreneurial activity were found in Nebraska (170 per 100,000 adults), Michigan (180 per 100,000 adults), Wisconsin (180 per 100,000 adults), and Ohio (190 per 100,000 adults). Among the fifteen largest metropolitan areas in the United States, Miami (0.56 percent) had the highest entrepreneurial activity rate in 2012, and Detroit (0.10 percent) had the lowest rate.

Appendix

DATA

The underlying datasets that are 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) will, therefore, 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 business, 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, individuals are asked by survey-takers 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 consistency in reporting.

The main job is defined as the one with the most hours worked. Individuals who start 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 second 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 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 switched 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 older) are removed from the sample because retirement in this age group leads to lower rates of entrepreneurial activity. 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 rates of entrepreneurial activity.

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).¹² 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.¹²

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 variance of the unemployment rate 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 rates of entrepreneurial activity 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 over 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 flows into business ownership rather than 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 in several major ways from the Survey of Business Owners (SBO) conducted every five years by the U.S. Census Bureau. 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 from existing quarterly state unemployment insurance records through the Quarterly Census of Employment and Wages or ES-202 program. The SUSB data are collected by the U.S. Census Bureau and summarized by the U.S. Small Business Administration (SBA), Office of Advocacy. Both of these datasets include only employer firms. Employer firms represent roughly 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 age eighteen to sixty-four population who currently are nascent entrepreneurs (i.e. individuals who are

actively involved in setting up a business) or who currently are an owner-manager 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. Because it is based on panel data, the Kauffman Index also differs from the TEA in that it captures entrepreneurship at the point in time when the business is created.

Endnotes

1. 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>.

2. See "Kauffman Index of Entrepreneurial Activity, 1996 - 2011" (Fairlie 2012) and <http://www.kauffman.org/research-and-policy/kauffman-index-of-entrepreneurial-activity.aspx> for previous reports.

3. 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 can potentially 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.

4. 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.

5. See Fairlie (2011) "Entrepreneurship, Economic Conditions, and the Great Recession" University of California, Santa Cruz, Working Paper at <http://people.ucsc.edu/~rfairlie/papers/recessionentrep.pdf>, for more evidence and discussion.

6. For example, the majority of Fortune 500 companies were started during recessions or bear markets. See Stangler, Dane (2009), "The Economic

Future just Happened," Kansas City: Ewing Marion Kauffman Foundation at <http://www.kauffman.org/uploadedFiles/the-economic-future-just-happened.pdf>.

7. 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.

8. 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>.

9. 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.

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

11. As there is no oversampling of metropolitan areas in the CPS, only the largest metropolitan areas have sufficient observations to calculate reasonably accurate rates of entrepreneurial activity. All MSAs reported in Table 11 have at least 4,600 observations.

12. The ratio of households sampled for each state range from one in 100 households to one in 3,000 households (Polivka 2000).

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