KAUFFMAN INDEX OF

entrepreneurial activity

1996–2010

Robert W. Fairlie

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KAUFFMAN
The Foundation of Entrepreneurship

Robert W. Fairlie is a
Professor of Economics and the
Director of the Master's Program in
Applied Economics and Finance at
the University of California,
Santa Cruz.

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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 2010 data allow for an update to previous reports, with consideration of trends in the rates of entrepreneurial activity over the fifteen-year period between 1996 and 2010. 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. Key findings for 2010 include:

- In 2010, 0.34 percent of the adult population (or 340 out of 100,000 adults) created a new business each *month*, representing approximately 565,000 new businesses per month. The 2010 entrepreneurial activity rate is the same as the 2009 rate, but represents an increase from 2007, and represents the highest level over the past decade and a half.
- The recent upward trend in entrepreneurship rates contrasts with a recent downward trend in employer business creation. From 2007 to 2010, the quarterly employer establishment birth rate dropped from 0.13 percent to 0.10 percent. Over this same period, the monthly entrepreneurship activity rate increased from 0.30 percent to 0.34 percent. These opposing trends may be due to the Great Recession and its high unemployment rates pushing many individuals into business ownership. These individuals probably were more likely to start sole proprietorships and other non-employer firms instead of starting more costly employer firms.
- The entrepreneurial activity rate among Latinos increased from 0.46 percent in 2009 to 0.56 percent in 2010, reaching the highest level over the past decade and a half.
- The Asian entrepreneurial activity rate also increased substantially in 2010 (from 0.31 percent to 0.37 percent).
- The African-American and non-Latino white entrepreneurial activity rates decreased from 2009 to 2010.
- Immigrants were more than twice as likely to start businesses each month than were the native-born in 2010. The immigrant rate of entrepreneurial activity increased sharply, from 0.51 percent in 2009 to 0.62 percent in 2010, further widening the gap between immigrant and native-born rates. The native-born rate is 0.28 percent.
- The youngest age group (ages twenty-five to thirty-four) experienced an increase in entrepreneurial activity from 2009 to 2010 (0.24 percent to 0.26 percent).

- Over the past decade and a half, Latinos, Asians, immigrants, and the oldest age group (ages fifty-five to sixty-four) experienced rising shares of all new entrepreneurs, partly because of rising rates of entrepreneurship, but also because of increasing populations.
- Entrepreneurship rates increased the most for high school dropouts (0.49 percent to 0.59 percent), and decreased the most for high school graduates (0.38 percent to 0.34 percent) in 2010, also signaling that opposing trends may be due to the Great Recession pushing many individuals into business ownership because of high unemployment rates.
- The construction industry had the highest rate of entrepreneurial activity of all major industry groups in 2010 (1.60 percent). The second-highest rate of entrepreneurial activity was in the services industry (0.44 percent).
- The entrepreneurial activity rate increased in the West from 0.38 percent in 2009 to 0.41 percent in 2010. Business-creation rates decreased in the Northeast and Midwest and remained the same in the South.
- The states with the highest entrepreneurial activity rates were Nevada (510 per 100,000 adults), Georgia (510 per 100,000 adults), California (470 per 100,000 adults), Louisiana (460 per 100,000 adults), and Colorado (450 per 100,000 adults). The states with the lowest entrepreneurial activity rates were West Virginia (170 per 100,000 adults), Pennsylvania (180 per 100,000 adults), Wisconsin (180 per 100,000 adults), South Dakota (190 per 100,000 adults), and Indiana (190 per 100,000 adults).
- The states experiencing the largest increases in entrepreneurial activity rates over the past decade were Georgia (0.23 percentage points), Nevada (0.19 percentage points), Tennessee (0.14 percentage points), Massachusetts (0.13 percentage points), California (0.11 percentage points), Texas (0.11 percentage points), Kentucky (0.11 percentage points), and Florida (0.10 percentage points). The states that experienced the largest decreases in their rates were Wyoming (-0.18 percentage points), New Mexico (-0.14 percentage points), and Alaska (-0.13 percentage points).
- Among the fifteen largest MSAs in the United States, the highest entrepreneurial activity rate in 2010 was in Los Angeles (0.62 percent). The large MSA with the lowest entrepreneurial activity rate was Philadelphia (0.15 percent).

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.[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. This report updates previous accounts of the Kauffman Index, incorporating new data from 2010.

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 then is 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.

Trends in Entrepreneurial Activity

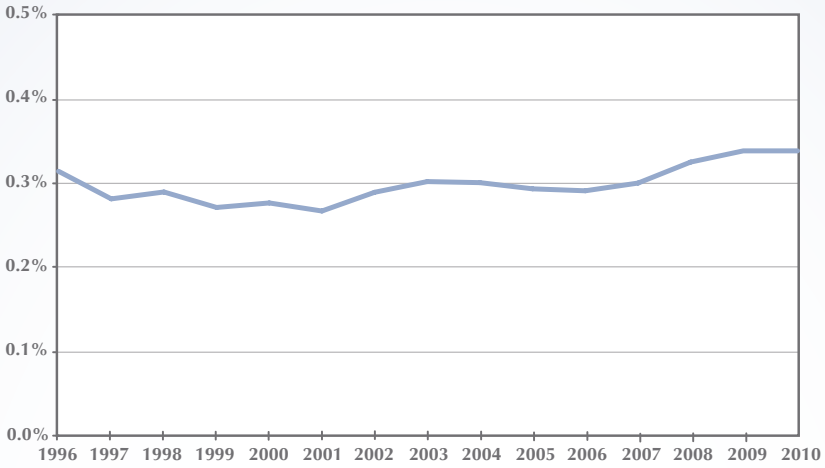
In 2010, an average of 0.34 percent of the adult population, or 340 out of 100,000 adults, created a new business each month.[3] This business-creation rate translates into 565,000 new businesses being created each month during the year. The average number of existing self-employed business owners over 2010 was 11.9 million, representing 6.5 percent of the adult population. The entrepreneurial activity rate was the same as in 2009, which is consistent with economic conditions not changing substantially over the two years. Although the official end of the recession is June 2009, the national unemployment rate did not decrease and remained near 10 percent throughout 2010.[4]

The entrepreneurship rate is higher than before the recession started. In 2007, the entrepreneurship rate was 0.30 percent. Over the past decade and a half, the business-creation rate fluctuated between 0.27 percent and 0.31 percent, but then rose above this level in the past three years. Figure 1 and Table 1 report average monthly estimates of the Kauffman Index by year from 1996 to 2010.[5] While there are, without a doubt, divergent patterns in business creation below the surface here, with many high-potential businesses starting and many people being forced into entrepreneurship because they lack other job opportunities, unfortunately, it is impossible to cleanly disaggregate those trends.

The recent upward trend in entrepreneurship rates contrasts with a recent downward trend in employer business creation. Figure 1B reports average quarterly estimates of employer establishment birth rates, in addition to the average monthly estimates of the Kauffman Index by year

Figure 1

Kauffman Index of Entrepreneurial Activity (1996–2010)



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

TABLE 1

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY (1996–2010)

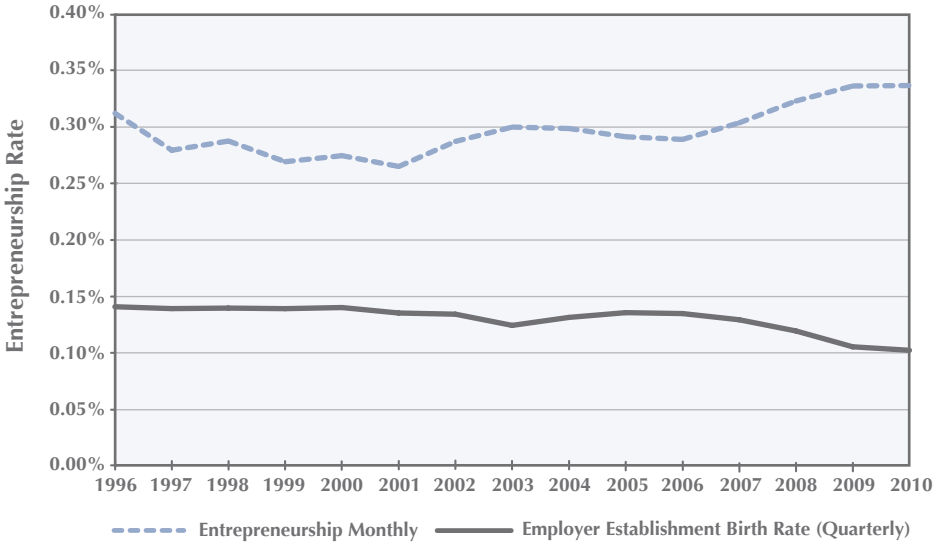
	MALE		FEMALE		TOTAL	
Year	Index	Sample Size	Index	Sample Size	Index	Sample Size
1996	0.37%	243,368	0.26%	287,639	0.31%	531,007
1997	0.35%	244,863	0.22%	286,266	0.28%	531,129
1998	0.33%	245,820	0.25%	286,476	0.29%	532,296
1999	0.32%	246,225	0.22%	286,765	0.27%	532,990
2000	0.34%	246,522	0.21%	284,901	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

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 1B

Kauffman Index of Entrepreneurial Activity (1996–2010) and Employer Establishment Birth Rate (1996–2010)



SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the CPS and BLS.
NOTE: 2010 Employer Establishment Birth Rate only includes Q1 and Q2

from 1996 to 2010. 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 0.10 percent, or ten out of 100,000 people per quarter in 2010 (only the first two quarters of data were available for 2010 at the time of this report). This rate translates into an average of 172,000 employer establishment births per quarter in 2010 Q1–Q2. This number and rate of business creation are substantially smaller than the number and rate of business creation from the Kauffman Index, especially after taking into account that the KIEA is a monthly rate. The large difference is primarily because the employer establishment birth rate only captures new establishments with employees, indicating that they represent only a small share of all new businesses.

From 2007 to 2010, the quarterly employer establishment birth rate dropped from 0.13 percent to 0.10 percent. Over this same period, the monthly entrepreneurship activity rate increased from 0.30 percent to 0.34 percent. These opposing trends may be due to the Great Recession and its high unemployment rates pushing many individuals into business ownership. These individuals probably were more likely to start sole proprietorships and other non-employer firms instead of starting more costly employer firms.

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. Large, nationally representative business-level datasets typically provide either no or very limited demographic information on the owner. Entrepreneurial activity increased slightly for men and decreased slightly for women from 2009 to

2010. For men, the entrepreneurial activity rate increased from 0.43 percent in 2009 to 0.44 percent in 2010, continuing an upward trend over the past few years. The entrepreneurship rate decreased from 0.25 percent to 0.24 percent for women. Figure 2 reports estimates of the Kauffman Index by gender from 1996 to 2010. Overall, men are substantially more likely to start businesses each month than are women. The average rate of entrepreneurial activity for men over the fifteen-year period was 0.37 percent. The average rate for women was lower, at 0.23 percent.

Latinos experienced the largest increase in entrepreneurial activity rates between 2009 and 2010. Figure 3 and Table 2 report estimates of the Kauffman Index by race and ethnicity. The Latino business-creation rate increased from 0.46 percent in 2009 to 0.56 percent in 2010, which was the highest rate over the fifteen years of reported data. The increase in entrepreneurship rates for Latinos continued an upward trend that started in 2006. Asians also experienced a large increase in entrepreneurship rates, resulting in the highest rate in the past decade and a half of available data. The Asian entrepreneurial activity rate increased from 0.31 percent in 2009 to 0.37 percent in 2010. In contrast to these patterns, both African-Americans and non-Latino whites experienced declines in entrepreneurial activity rates. The African-American entrepreneurial activity rate decreased from 0.27 percent in 2009 to 0.24 percent in 2010, and the white entrepreneurial activity rate decreased from 0.33 percent in 2009 to 0.31 percent in 2010.

Reflecting the trends showing rising rates of entrepreneurship and a growing share of the

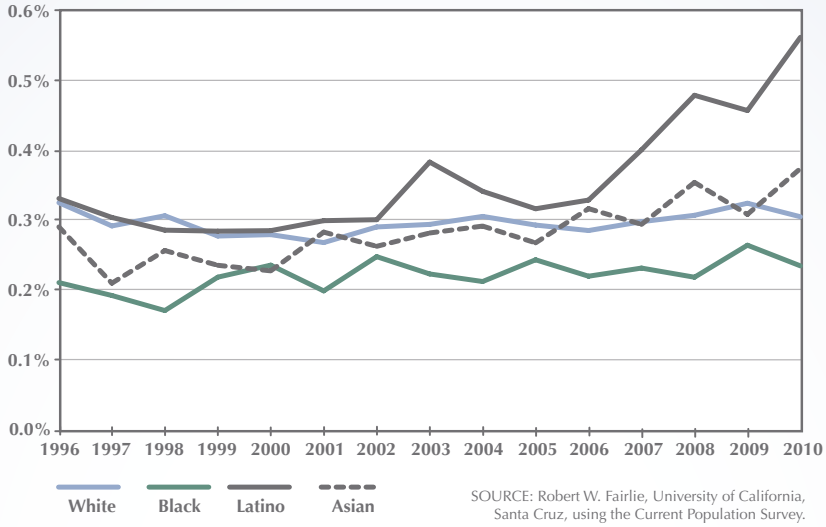
Figure 2

Kauffman Index of Entrepreneurial Activity by Gender (1996–2010)

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

Figure 3

Kauffman Index of Entrepreneurial Activity by Race (1996–2010)



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

TABLE 2

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY RACE (1996–2010)

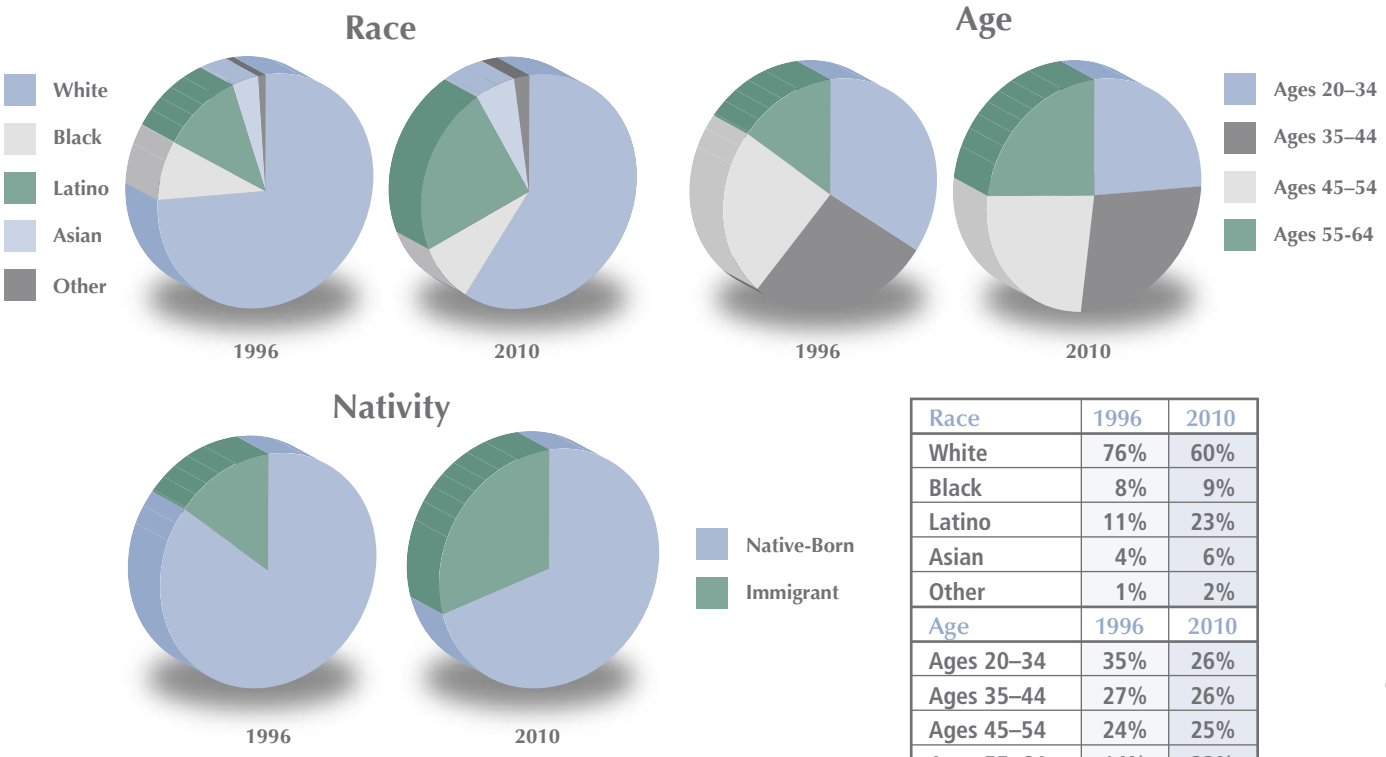
	WHITE		BLACK		LATINO		ASIAN		TOTAL	
Year	Index	Sample Size	Index	Sample Size	Index	Sample Size	Index	Sample Size	Index	Sample Size
1996	0.33%	405,007	0.21%	54,799	0.33%	44,033	0.29%	20,489	0.31%	531,007
1997	0.29%	402,519	0.19%	55,300	0.30%	45,537	0.21%	20,711	0.28%	531,129
1998	0.31%	402,681	0.17%	54,669	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

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.

Figure 3B

Big Changes in Composition of New Entrepreneurs
Share of All New Entrepreneurs (1996, 2010)



Race	1996	2010
White	76%	60%
Black	8%	9%
Latino	11%	23%
Asian	4%	6%
Other	1%	2%
Age	1996	2010
Ages 20–34	35%	26%
Ages 35–44	27%	26%
Ages 45–54	24%	25%
Ages 55–64	14%	23%
Nativity	1996	2010
Native-Born	86%	71%
Immigrant	14%	29%

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

total U.S. population, the Latino share of all new entrepreneurs rose from a little more than 10 percent in 1996 to 23.4 percent in 2010. The Asian share of new entrepreneurs also rose substantially from 1996 to 2010, but remains relatively small at 5.8 percent. The white share of new entrepreneurs declined over the past decade and a half, while the African-American share remained essentially the same. Figure 3B reports estimates of the share of new entrepreneurs by race from 1996 to 2010.

The entrepreneurial activity rate increased substantially for immigrants in 2010 and declined slightly for the native-born. These trends further widened 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 rose from 0.51 percent in 2009 to 0.62 percent in 2010. The large increase in entrepreneurship rates continued an upward trend starting in 2006. The native-born rate declined from 0.30 percent to 0.28 percent from 2009 to 2010. The result of these contrasting trends is that immigrants were more than twice as likely to start businesses each month in 2010 than were the native-born. For immigrants, 620 out of 100,000 people started a business each month, compared with 280 out of 100,000 people for the native-born.

A growing immigrant population and rising entrepreneurship rate contributed to a rise in

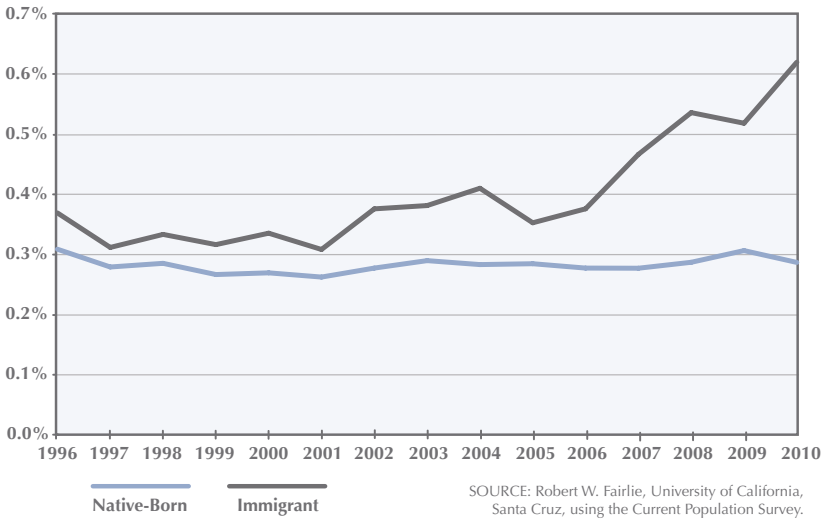
the share of new entrepreneurs that are immigrant. Figure 3B reports estimates of the share of new entrepreneurs by nativity. The immigrant share of new entrepreneurs is 29.5 percent, which is up from 13.4 percent in 1996.

Figure 5 and Table 4 report estimates of entrepreneurial activity rates by age group. The youngest age group (ages twenty to thirty-four) experienced an increase in business-creation rates from 2009 to 2010, rising from 0.24 in 2009 to 0.26 in 2010. From 2009 to 2010, both the forty-five to fifty-four and fifty-five to sixty-four age groups experienced slight drops in rates, and the thirty-five to forty-four age group experienced no change in entrepreneurial activity. Over the entire period, business creation was lowest among the youngest group. Figure 3B reports estimates of the share of new entrepreneurs by age group. An aging population and increasing rate of entrepreneurship among older adults has led to a rising share of new entrepreneurs in the fifty-five to sixty-four age group. This age group represented 14.5 percent of new entrepreneurs in 1996, whereas it represented 22.9 percent of new entrepreneurs in 2010. The youngest age group (ages twenty to thirty-four) experienced a declining share of new entrepreneurs over the period.

Entrepreneurial activity rates increased substantially in 2010 for the least-educated group and are the highest among all education

Figure 4

Kauffman Index of Entrepreneurial Activity by Nativity (1996–2010)



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

TABLE 3

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY NATIVITY (1996–2010)

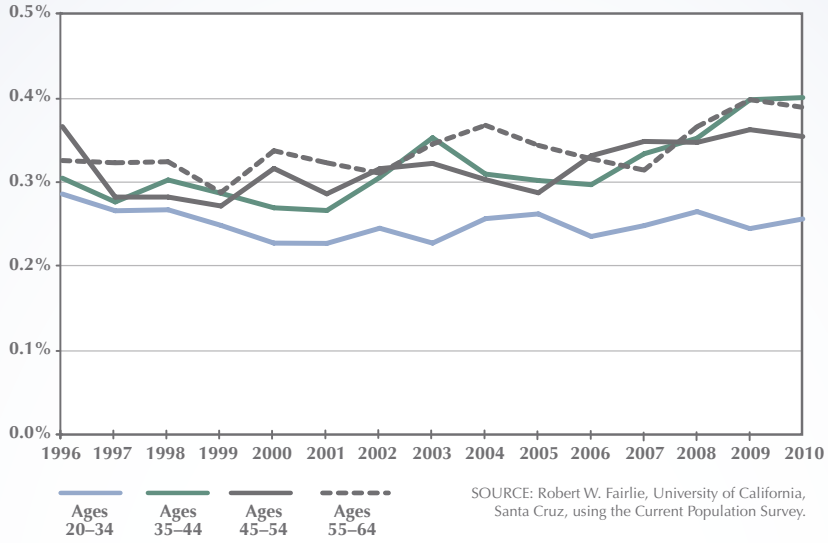
	NATIVE-BORN		IMMIGRANT		TOTAL	
Year	Index	Sample Size	Index	Sample Size	Index	Sample Size
1996	0.30%	474,984	0.36%	56,023	0.31%	531,007
1997	0.27%	473,208	0.31%	57,921	0.28%	531,129
1998	0.28%	472,458	0.33%	59,838	0.29%	532,296
1999	0.26%	472,107	0.31%	60,883	0.27%	532,990
2000	0.27%	466,150	0.33%	65,273	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

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 5

Kauffman Index of Entrepreneurial Activity by Age (1996–2010)



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

TABLE 4

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY AGE (1996–2010)

	AGES 20–34		AGES 35–44		AGES 45–54		AGES 55–64		TOTAL	
Year	Index	Sample Size	Index	Sample Size	Index	Sample Size	Index	Sample Size	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

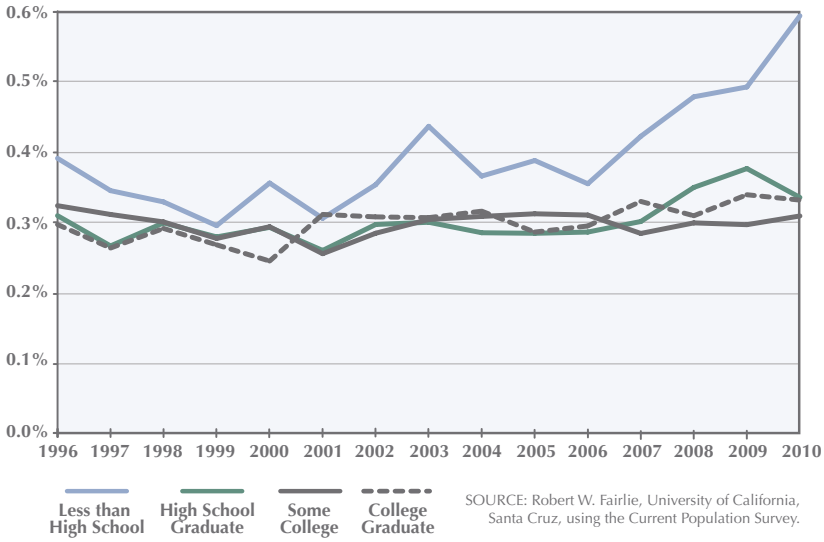
Notes: (1) Estimates calculated by Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey. (2) The entrepreneurship index is the percent of individuals (ages twenty to sixty-four) who do not own a business in the first survey month that start a business in the following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

groups, as indicated in Figure 6 and Table 5. The entrepreneurship index increased from 0.49 percent in 2009 to 0.59 percent in 2010 for those with less than a high-school degree, suggesting an increased number of people entering entrepreneurship out of necessity. The largest decrease in entrepreneurship rates occurred for high school graduates. The entrepreneurship rate decreased from 0.38 percent in 2009 to 0.34 percent in 2010. Entrepreneurship rates changed only slightly for the other two educational groups. Although rates are 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.[6]

Figure 6

Kauffman Index of Entrepreneurial Activity by Education (1996–2010)



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

TABLE 5

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY EDUCATION (1996–2010)

	LESS THAN HIGH SCHOOL		HIGH SCHOOL GRADUATE		SOME COLLEGE		COLLEGE GRADUATE		TOTAL AGES 25–64	
Year	Index	Sample Size	Index	Sample Size	Index	Sample Size	Index	Sample Size	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

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-five 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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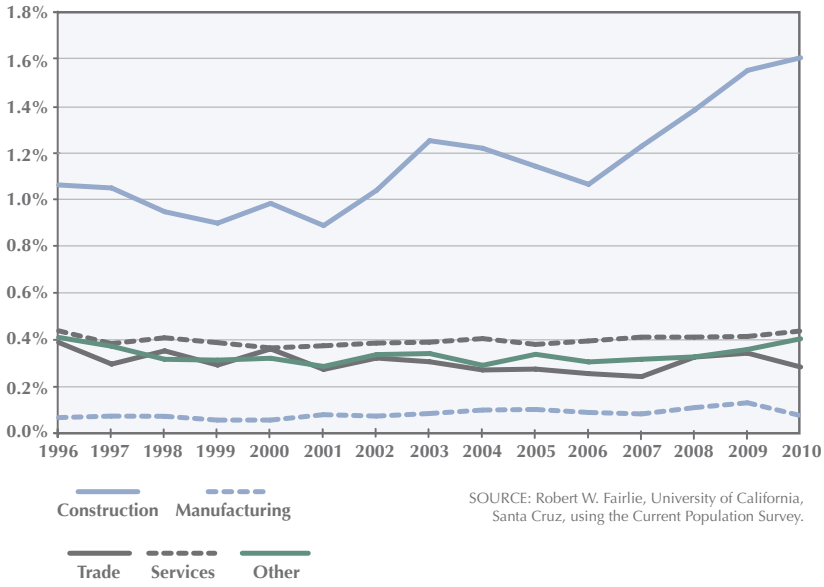
ENTREPRENEURIAL ACTIVITY BY INDUSTRY

Entrepreneurial activity rates differed substantially by major industry groups. Figure 7 and Table 6 report estimates of entrepreneurial activity by major industry. In 2010, entrepreneurial activity rates were highest in construction at 1.60 percent. Entrepreneurial activity rates in services also were high (0.44 percent). Manufacturing had substantially lower entrepreneurial activity rates than all other industries, with only 0.08 percent of non-business owners starting businesses per month in this industry in 2010.

Figure 7

Kauffman Index of Entrepreneurial Activity by Industry (1996–2010)



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

TABLE 6

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY INDUSTRY (1996–2010)

	CONSTRUCTION		MANU-FACTURING		TRADE		SERVICES		OTHER	
Year	Index	Sample Size	Index	Sample Size	Index	Sample Size	Index	Sample Size	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

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 generally is highest in Western and Southern states, and lowest in the Midwestern and Northeastern states.

TABLE 7

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY STATE (2010)

State	Index	Confidence Interval Lower	Confidence Interval Upper	Entrepreneurs per 100,000 People	Sample Size
U.S. Total	0.34%	0.32%	0.35%	340	593,271
Alabama	0.25%	0.13%	0.37%	250	6,786
Alaska	0.43%	0.28%	0.58%	430	7,640
Arizona	0.33%	0.19%	0.46%	330	7,070
Arkansas	0.37%	0.21%	0.54%	370	6,212
California	0.47%	0.41%	0.54%	470	49,766
Colorado	0.45%	0.33%	0.57%	450	12,665
Connecticut	0.24%	0.15%	0.32%	240	13,329
Delaware	0.22%	0.12%	0.32%	220	8,735
District of Columbia	0.31%	0.18%	0.45%	310	7,553
Florida	0.40%	0.31%	0.48%	400	22,438
Georgia	0.51%	0.38%	0.64%	510	12,946
Hawaii	0.24%	0.13%	0.34%	240	8,657
Idaho	0.39%	0.23%	0.55%	390	6,332
Illinois	0.26%	0.18%	0.33%	260	18,859
Indiana	0.19%	0.11%	0.28%	190	9,176
Iowa	0.30%	0.19%	0.40%	300	11,136
Kansas	0.35%	0.22%	0.48%	350	8,506
Kentucky	0.29%	0.17%	0.40%	290	9,078
Louisiana	0.46%	0.28%	0.64%	460	5,519
Maine	0.29%	0.19%	0.39%	290	11,457
Maryland	0.24%	0.16%	0.33%	240	13,692
Massachusetts	0.32%	0.20%	0.44%	320	8,996
Michigan	0.25%	0.16%	0.33%	250	14,295
Minnesota	0.21%	0.14%	0.29%	210	14,662
Mississippi	0.44%	0.26%	0.62%	440	5,644
Missouri	0.29%	0.19%	0.40%	290	10,438
Montana	0.39%	0.22%	0.57%	390	5,246
Nebraska	0.30%	0.19%	0.41%	300	9,135
Nevada	0.51%	0.36%	0.67%	510	8,833
New Hampshire	0.25%	0.16%	0.34%	250	12,995
New Jersey	0.25%	0.16%	0.33%	250	12,428
New Mexico	0.32%	0.17%	0.48%	320	5,015
New York	0.36%	0.29%	0.44%	360	25,512
North Carolina	0.35%	0.25%	0.46%	350	12,020
North Dakota	0.30%	0.17%	0.42%	300	7,525
Ohio	0.30%	0.21%	0.39%	300	16,919
Oklahoma	0.32%	0.18%	0.45%	320	7,194
Oregon	0.32%	0.20%	0.44%	320	8,452
Pennsylvania	0.18%	0.11%	0.24%	180	17,887
Rhode Island	0.25%	0.15%	0.35%	250	10,134
South Carolina	0.23%	0.13%	0.34%	230	8,012
South Dakota	0.19%	0.10%	0.28%	190	9,102
Tennessee	0.41%	0.27%	0.55%	410	8,154
Texas	0.40%	0.33%	0.47%	400	30,971
Utah	0.37%	0.22%	0.51%	370	7,057
Vermont	0.45%	0.31%	0.59%	450	8,817
Virginia	0.24%	0.15%	0.32%	240	12,948
Washington	0.24%	0.14%	0.33%	240	10,503
West Virginia	0.17%	0.07%	0.27%	170	6,903
Wisconsin	0.18%	0.10%	0.26%	180	11,818
Wyoming	0.22%	0.11%	0.32%	220	8,104

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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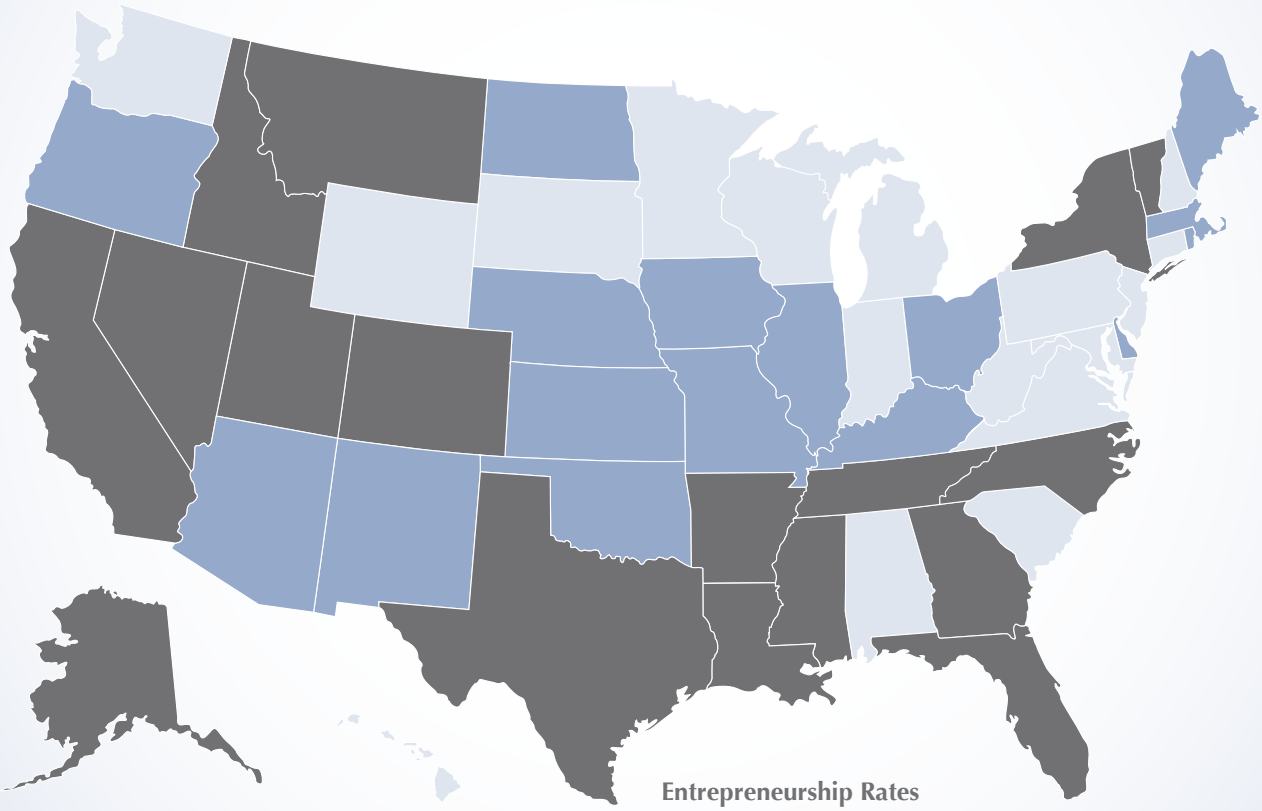
ENTREPRENEURIAL ACTIVITY BY STATE

Entrepreneurial activity rates varied significantly across states in 2010. West Virginia exhibited the lowest entrepreneurial activity rate, with 170 per 100,000 adults starting new businesses each month. Nevada and Georgia had the highest entrepreneurial activity rate, with 510 per 100,000 adults creating businesses each month. Table 7 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.

Figure 8

Kauffman Index of Entrepreneurial Activity by State (2010)



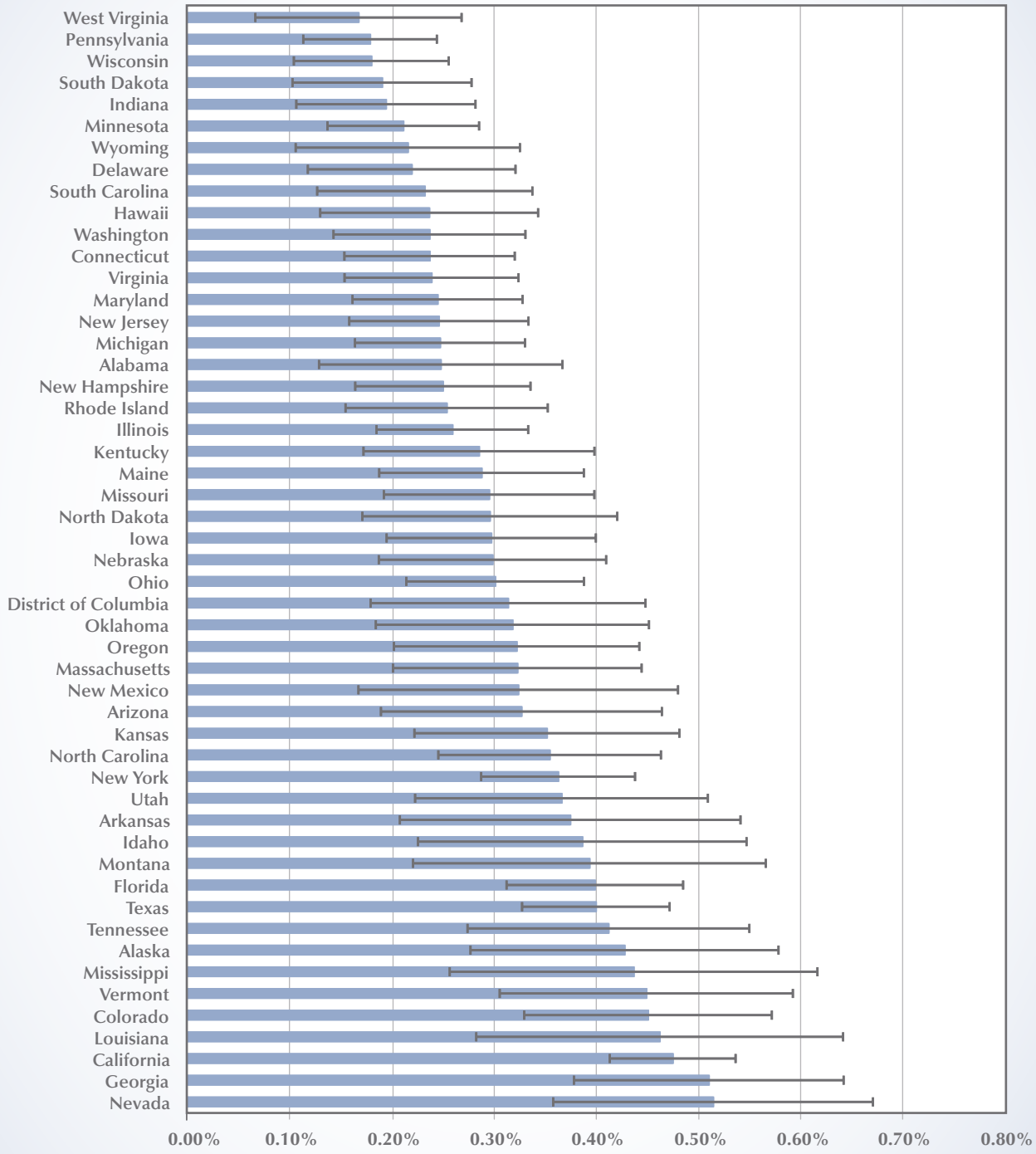
SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

Entrepreneurial activity rates follow strong geographical patterns. Entrepreneurial activity generally is highest in Western and Southern states, and lowest in the Midwestern and Northeastern states. Figure 8 illustrates variation in entrepreneurial activity levels across the United States, and Figure 9 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 Nevada (510 per 100,000 adults), Georgia (510 per 100,000 adults), California (470 per 100,000 adults), Louisiana (460 per 100,000 adults), and Colorado (450 per 100,000 adults). The five states with the lowest entrepreneurial activity rates were West Virginia (170 per 100,000 adults), Pennsylvania (180 per 100,000 adults), Wisconsin (180 per 100,000 adults), South Dakota (190 per 100,000 adults), and Indiana (190 per 100,000 adults).

From 2009 to 2010, entrepreneurial activity rates increased in the West, further widening the gap between the West and other regions. The business-creation rate in the West increased from 0.38 percent in 2009 to 0.41 percent in 2010. Estimates of the Kauffman Index by region are reported in Figure 10 and Table 8. In contrast to rising rates in the West, entrepreneurial activity

Figure 9

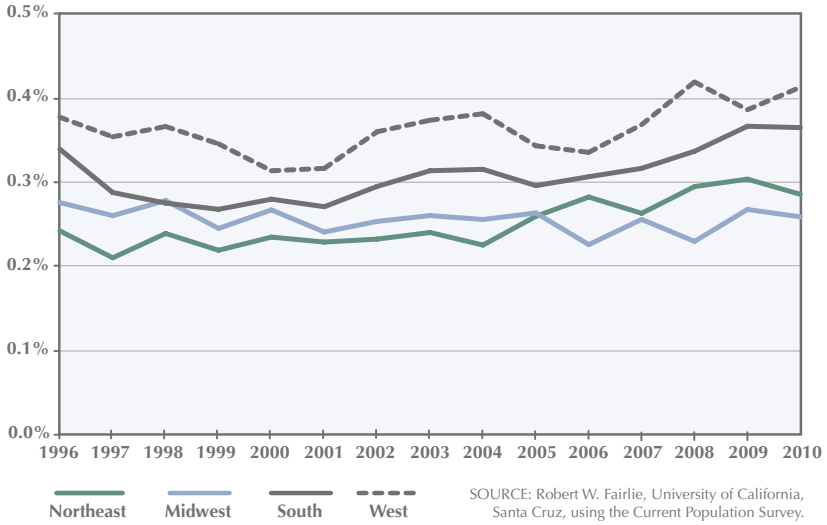
Kauffman Index of Entrepreneurial Activity by State with 95 Percent Confidence Intervals, 2010



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

Figure 10

Kauffman Index of Entrepreneurial Activity by Region (1996–2010)



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

TABLE 8

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY REGION (1996–2010)

	NORTHEAST		MIDWEST		SOUTH		WEST		TOTAL	
Year	Index	Sample Size	Index	Sample Size	Index	Sample Size	Index	Sample Size	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

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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rates decreased in the Northeast and Midwest, and remained the same in the South. These differential trends in entrepreneurial activity by region from 2009 to 2010 are captured by differential trends by states across regions. Table 9 reports estimates of entrepreneurial activity rates by state from 2009 to 2010. Estimated rates for some smaller states, however, can vary somewhat between the two years because of imprecise estimates instead of actual changes in economic conditions for entrepreneurship.

Trends in state entrepreneurship rates over the past decade are reported in Table 10. To increase sample sizes and precision, the three-year period 2008–2010 is compared to the three-year period 1998–2000.[7] Georgia experienced the largest positive change in its entrepreneurial activity rate over the past decade, increasing from 0.27 percent to 0.51 percent, or 0.23 percentage points. Other states experiencing large entrepreneurial activity rate increases were Nevada (0.19 percentage points), Tennessee (0.14 percentage points), Massachusetts (0.13 percentage points), California (0.11 percentage points), Texas (0.11 percentage points), Kentucky (0.11 percentage points), and Florida (0.10 percentage points). States that experienced large entrepreneurial activity rate decreases were Wyoming (-0.18 percentage points), New Mexico (-0.14 percentage points), and Alaska (-0.13 percentage points). All of these changes over time are statistically significant at the 0.05 or 0.10 level of confidence.

From 2009 to 2010, entrepreneurial activity rates increased in the West, further widening the gap between the West and other regions.

TABLE 9

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY STATE (2009, 2010)

State	2009 Index	2009 Confidence Interval Lower	2009 Confidence Interval Upper	2009 Sample Size	2010 Index	2010 Confidence Interval Lower	2010 Confidence Interval Upper	2010 Sample Size
U.S. Total	0.34%	0.32%	0.35%	591,699	0.34%	0.32%	0.35%	593,271
Alabama	0.21%	0.11%	0.32%	6,704	0.25%	0.13%	0.37%	6,786
Alaska	0.34%	0.21%	0.47%	7,784	0.43%	0.28%	0.58%	7,640
Arizona	0.46%	0.30%	0.62%	6,865	0.33%	0.19%	0.46%	7,070
Arkansas	0.36%	0.21%	0.52%	6,233	0.37%	0.21%	0.54%	6,212
California	0.41%	0.35%	0.47%	48,940	0.47%	0.41%	0.54%	49,766
Colorado	0.38%	0.27%	0.49%	12,782	0.45%	0.33%	0.57%	12,665
Connecticut	0.29%	0.19%	0.38%	13,193	0.24%	0.15%	0.32%	13,329
Delaware	0.30%	0.19%	0.41%	8,865	0.22%	0.12%	0.32%	8,735
District of Columbia	0.32%	0.19%	0.45%	7,569	0.31%	0.18%	0.45%	7,553
Florida	0.44%	0.35%	0.52%	22,279	0.40%	0.31%	0.48%	22,438
Georgia	0.44%	0.32%	0.56%	12,553	0.51%	0.38%	0.64%	12,946
Hawaii	0.27%	0.16%	0.37%	8,831	0.24%	0.13%	0.34%	8,657
Idaho	0.45%	0.28%	0.63%	6,453	0.39%	0.23%	0.55%	6,332
Illinois	0.24%	0.17%	0.32%	18,769	0.26%	0.18%	0.33%	18,859
Indiana	0.28%	0.17%	0.38%	9,323	0.19%	0.11%	0.28%	9,176
Iowa	0.23%	0.14%	0.32%	11,430	0.30%	0.19%	0.40%	11,136
Kansas	0.23%	0.13%	0.34%	8,504	0.35%	0.22%	0.48%	8,506
Kentucky	0.25%	0.14%	0.36%	8,991	0.29%	0.17%	0.40%	9,078
Louisiana	0.43%	0.24%	0.62%	5,674	0.46%	0.28%	0.64%	5,519
Maine	0.34%	0.23%	0.44%	11,301	0.29%	0.19%	0.39%	11,457
Maryland	0.29%	0.20%	0.38%	13,729	0.24%	0.16%	0.33%	13,692
Massachusetts	0.33%	0.22%	0.45%	9,046	0.32%	0.20%	0.44%	8,996
Michigan	0.30%	0.21%	0.39%	14,143	0.25%	0.16%	0.33%	14,295
Minnesota	0.22%	0.15%	0.29%	14,992	0.21%	0.14%	0.29%	14,662
Mississippi	0.17%	0.06%	0.28%	5,557	0.44%	0.26%	0.62%	5,644
Missouri	0.27%	0.17%	0.38%	10,386	0.29%	0.19%	0.40%	10,438
Montana	0.47%	0.29%	0.65%	5,394	0.39%	0.22%	0.57%	5,246
Nebraska	0.20%	0.11%	0.29%	9,278	0.30%	0.19%	0.41%	9,135
Nevada	0.38%	0.25%	0.50%	9,126	0.51%	0.36%	0.67%	8,833
New Hampshire	0.28%	0.19%	0.38%	13,359	0.25%	0.16%	0.34%	12,995
New Jersey	0.33%	0.23%	0.44%	12,287	0.25%	0.16%	0.33%	12,428
New Mexico	0.26%	0.12%	0.39%	5,095	0.32%	0.17%	0.48%	5,015
New York	0.34%	0.27%	0.42%	25,087	0.36%	0.29%	0.44%	25,512
North Carolina	0.25%	0.16%	0.34%	11,869	0.35%	0.25%	0.46%	12,020
North Dakota	0.32%	0.18%	0.45%	7,249	0.30%	0.17%	0.42%	7,525
Ohio	0.27%	0.19%	0.35%	17,181	0.30%	0.21%	0.39%	16,919
Oklahoma	0.47%	0.31%	0.64%	7,133	0.32%	0.18%	0.45%	7,194
Oregon	0.38%	0.24%	0.52%	8,525	0.32%	0.20%	0.44%	8,452
Pennsylvania	0.20%	0.13%	0.27%	17,974	0.18%	0.11%	0.24%	17,887
Rhode Island	0.24%	0.15%	0.34%	10,055	0.25%	0.15%	0.35%	10,134
South Carolina	0.23%	0.13%	0.34%	8,010	0.23%	0.13%	0.34%	8,012
South Dakota	0.43%	0.29%	0.57%	8,771	0.19%	0.10%	0.28%	9,102
Tennessee	0.36%	0.23%	0.50%	8,146	0.41%	0.27%	0.55%	8,154
Texas	0.45%	0.38%	0.53%	30,455	0.40%	0.33%	0.47%	30,971
Utah	0.36%	0.22%	0.51%	7,068	0.37%	0.22%	0.51%	7,057
Vermont	0.37%	0.24%	0.50%	8,779	0.45%	0.31%	0.59%	8,817
Virginia	0.27%	0.18%	0.36%	12,635	0.24%	0.15%	0.32%	12,948
Washington	0.24%	0.14%	0.34%	10,424	0.24%	0.14%	0.33%	10,503
West Virginia	0.35%	0.21%	0.48%	7,259	0.17%	0.07%	0.27%	6,903
Wisconsin	0.30%	0.20%	0.40%	11,679	0.18%	0.10%	0.26%	11,818
Wyoming	0.33%	0.19%	0.46%	7,965	0.22%	0.11%	0.32%	8,104

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.

TABLE 10

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY STATE (1998–2000 and 2008–2010)

State	1998–2000 Period				2008–2010 Period			
	Index	Confidence Interval Lower	Confidence Interval Upper	Sample Size	Index	Confidence Interval Lower	Confidence Interval Upper	Sample Size
U.S. Total	0.28%	0.27%	0.28%	1,597,156	0.33%	0.32%	0.34%	1,770,647
Alabama	0.19%	0.14%	0.25%	23,278	0.22%	0.16%	0.29%	20,161
Alaska	0.52%	0.41%	0.64%	18,368	0.40%	0.30%	0.49%	23,190
Arizona	0.34%	0.27%	0.42%	24,386	0.44%	0.34%	0.53%	21,127
Arkansas	0.31%	0.24%	0.39%	21,181	0.38%	0.29%	0.48%	18,876
California	0.33%	0.29%	0.36%	133,147	0.44%	0.40%	0.47%	147,248
Colorado	0.40%	0.32%	0.49%	23,932	0.42%	0.35%	0.49%	37,997
Connecticut	0.21%	0.14%	0.28%	16,908	0.27%	0.22%	0.33%	39,364
Delaware	0.17%	0.10%	0.23%	16,352	0.23%	0.17%	0.28%	26,389
District of Columbia	0.28%	0.19%	0.38%	14,815	0.32%	0.24%	0.39%	22,764
Florida	0.30%	0.25%	0.34%	72,721	0.40%	0.35%	0.45%	66,906
Georgia	0.27%	0.21%	0.34%	28,020	0.51%	0.43%	0.58%	38,007
Hawaii	0.27%	0.18%	0.36%	15,750	0.23%	0.17%	0.29%	26,232
Idaho	0.40%	0.31%	0.48%	23,087	0.39%	0.30%	0.49%	19,067
Illinois	0.23%	0.19%	0.26%	67,964	0.27%	0.22%	0.32%	55,963
Indiana	0.30%	0.22%	0.38%	22,389	0.25%	0.19%	0.31%	27,792
Iowa	0.31%	0.23%	0.39%	20,464	0.24%	0.19%	0.30%	34,136
Kansas	0.28%	0.21%	0.35%	20,692	0.27%	0.21%	0.34%	25,618
Kentucky	0.19%	0.13%	0.25%	22,164	0.30%	0.23%	0.37%	27,079
Louisiana	0.31%	0.23%	0.38%	21,433	0.39%	0.29%	0.49%	16,697
Maine	0.36%	0.27%	0.46%	17,596	0.32%	0.26%	0.39%	33,747
Maryland	0.29%	0.21%	0.38%	17,954	0.25%	0.20%	0.31%	41,013
Massachusetts	0.16%	0.12%	0.20%	38,872	0.29%	0.23%	0.36%	27,178
Michigan	0.24%	0.20%	0.28%	57,813	0.27%	0.22%	0.33%	42,495
Minnesota	0.28%	0.21%	0.35%	23,695	0.22%	0.18%	0.27%	44,353
Mississippi	0.38%	0.29%	0.47%	19,309	0.33%	0.24%	0.42%	16,763
Missouri	0.25%	0.18%	0.32%	19,315	0.23%	0.18%	0.29%	30,842
Montana	0.48%	0.39%	0.58%	21,371	0.48%	0.37%	0.60%	16,148
Nebraska	0.30%	0.22%	0.37%	20,655	0.26%	0.20%	0.33%	27,357
Nevada	0.23%	0.17%	0.30%	22,648	0.42%	0.34%	0.50%	27,029
New Hampshire	0.26%	0.18%	0.34%	17,127	0.26%	0.21%	0.31%	39,552
New Jersey	0.23%	0.19%	0.28%	48,529	0.28%	0.23%	0.34%	36,914
New Mexico	0.53%	0.43%	0.63%	21,854	0.39%	0.29%	0.49%	15,436
New York	0.30%	0.26%	0.34%	99,202	0.36%	0.32%	0.41%	74,669
North Carolina	0.30%	0.24%	0.35%	42,281	0.29%	0.23%	0.34%	35,748
North Dakota	0.38%	0.29%	0.47%	19,608	0.29%	0.22%	0.37%	22,008
Ohio	0.24%	0.19%	0.28%	62,124	0.25%	0.21%	0.30%	50,838
Oklahoma	0.30%	0.23%	0.38%	23,783	0.35%	0.27%	0.43%	21,307
Oregon	0.43%	0.34%	0.53%	19,621	0.36%	0.28%	0.43%	25,346
Pennsylvania	0.15%	0.12%	0.18%	67,659	0.17%	0.13%	0.21%	54,288
Rhode Island	0.15%	0.09%	0.22%	17,103	0.25%	0.19%	0.31%	30,087
South Carolina	0.25%	0.17%	0.32%	18,361	0.24%	0.17%	0.30%	23,956
South Dakota	0.39%	0.30%	0.48%	20,078	0.30%	0.23%	0.37%	26,329
Tennessee	0.24%	0.17%	0.30%	22,006	0.37%	0.29%	0.45%	24,137
Texas	0.29%	0.25%	0.33%	80,361	0.40%	0.36%	0.45%	90,755
Utah	0.32%	0.25%	0.40%	22,262	0.35%	0.27%	0.43%	21,472
Vermont	0.37%	0.27%	0.48%	15,468	0.37%	0.30%	0.45%	26,125
Virginia	0.18%	0.13%	0.24%	25,838	0.24%	0.19%	0.29%	38,030
Washington	0.26%	0.19%	0.33%	21,510	0.25%	0.19%	0.31%	31,625
West Virginia	0.21%	0.14%	0.28%	22,767	0.22%	0.16%	0.29%	21,713
Wisconsin	0.28%	0.20%	0.35%	23,178	0.22%	0.17%	0.27%	35,042
Wyoming	0.46%	0.36%	0.56%	20,157	0.28%	0.20%	0.35%	23,732

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.

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).[8] Among these metropolitan areas, Los Angeles had the highest entrepreneurial activity rate at 620 per 100,000 adults. Houston (580 per 100,000 adults), Atlanta (580 per 100,000 adults), and San Francisco (550 per 100,000 adults) also had high rates of entrepreneurial activity. The metropolitan areas with the lowest entrepreneurial activity rates in this group of large MSAs were Philadelphia (150 per 100,000 adults) and Seattle (220 per 100,000 adults).

Among the fifteen largest metropolitan areas in the United States, Los Angeles had the highest entrepreneurial activity rate. Houston, Atlanta, and San Francisco also had high rates of entrepreneurial activity.

TABLE 11

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY FOR THE FIFTEEN LARGEST MSAs (2010)

Metropolitan Statistical Area	2010 Index	Confidence Interval Lower	Confidence Interval Upper	Entrepreneurs per 100,000 People	Sample Size	2008–2010 Index	Sample Size
New York-Northern New Jersey-Long Island, NY-NJ-PA	0.36%	0.29%	0.44%	360	25,344	0.41%	73,573
Los Angeles-Long Beach-Santa Ana, CA	0.62%	0.51%	0.74%	620	18,004	0.52%	53,535
Chicago-Naperville-Joliet, IN-IN-WI	0.29%	0.20%	0.39%	290	13,462	0.30%	39,584
Dallas-Fort Worth-Arlington, TX	0.26%	0.15%	0.37%	260	8,672	0.33%	24,944
Houston-Baytown-Sugar Land, TX	0.58%	0.40%	0.77%	580	6,705	0.51%	19,562
Miami-Fort Lauderdale-Miami Beach, FL	0.54%	0.36%	0.72%	540	6,759	0.54%	19,979
Philadelphia-Camden-Wilmington, PA-NJ-DE	0.15%	0.06%	0.23%	150	12,467	0.16%	37,644
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.36%	0.25%	0.46%	360	17,741	0.31%	52,817
Atlanta-Sandy Springs-Marietta, GA	0.58%	0.40%	0.76%	580	7,453	0.60%	22,126
Boston-Cambridge-Quincy, MA-NH	0.33%	0.19%	0.47%	330	10,163	0.27%	30,764
San Francisco-Oakland-Fremont, CA	0.55%	0.36%	0.73%	550	6,018	0.50%	17,616
Detroit-Warren-Livonia, MI	0.28%	0.15%	0.41%	280	6,317	0.29%	18,838
Phoenix-Mesa-Scottsdale, AZ	0.36%	0.18%	0.54%	360	4,699	0.49%	14,374
Riverside-San Bernardino, CA	0.32%	0.16%	0.48%	320	4,943	0.40%	14,745
Seattle-Tacoma-Bellevue, WA	0.22%	0.10%	0.35%	220	5,629	0.19%	16,996

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. The total adult population sample size for the period from 1996 to 2010 is more than ten million. Detailed demographic information available in the CPS and large sample sizes also allow for estimates of separate indices by gender, race, immigrant status, age, and education. Indices for all states and the largest MSAs also are calculated. In 2010, 0.34 percent of the adult population, or 340 out of 100,000 adults, created a new business each month, representing approximately 565,000 new businesses per month. This total rate of business creation increased from 0.30 percent in 2007.

In 2010, there are some interesting differences in changes in entrepreneurial activity rates for population subgroups. First, Latinos experienced a large entrepreneurial activity rate increase in 2010. The rate of 0.56 percent represents the highest rate for this group over the past decade and a half. Asians also experienced a large increase from 2009 to 2010. African-Americans and whites experienced declines in entrepreneurial activity rates. A related finding is that the rate of entrepreneurial activity among immigrants increased sharply in 2010, further widening the gap between immigrant and native-born rates. The youngest age group (ages twenty to thirty-four) experienced an increase in entrepreneurial activity rates from 2009 to 2010. Finally, entrepreneurial activity rates increased for those without a high school degree and dropped for high school graduates from 2009 to 2010.

Entrepreneurial activity rates reflect strong regional patterns. Rates of new business creation are highest in the West and South. The West experienced the largest increase in rates from 2009 to 2010 (0.38 percent to 0.41 percent). The Northeast and Midwest experienced declines in entrepreneurial activity rates from 2009 to 2010.

Entrepreneurial activity rates varied substantially across states, from a low of 0.17 percent in West Virginia to a high of 0.51 percent in Nevada and Georgia. Entrepreneurial activity rates also were high in California (470 per 100,000 adults), Louisiana (460 per 100,000 adults), and Colorado (450 per 100,000 adults). In addition to West Virginia, the lowest entrepreneurial activity rates were found in Pennsylvania (180 per 100,000 adults), Wisconsin (180 per 100,000 adults), South Dakota (190 per 100,000 adults), and Indiana (190 per 100,000 adults). The states experiencing the largest increases in entrepreneurial activity rates over the past decade were Georgia (0.23 percentage points), Nevada (0.19 percentage points), Tennessee (0.14 percentage points), Massachusetts (0.13 percentage points), California (0.11 percentage points), Texas (0.11 percentage points), Kentucky (0.11 percentage points), and Florida (0.10 percentage points). States that experienced the largest decreases in entrepreneurial activity rates were Wyoming (-0.18 percentage points), New Mexico (-0.14 percentage points), and Alaska (-0.13 percentage points).

Analysis of the fifteen largest metropolitan areas in the United States reveals that Los Angeles (0.62 percent) had the highest entrepreneurial activity rate in 2010. Philadelphia (0.15 percent) had the lowest entrepreneurial activity rate.

Appendix

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 2010 monthly data creates a sample size of 700,000 adults ages twenty to sixty-four. The dataset built for the analysis of the entire fifteen-year period between 1996 and 2010 has a sample size of more than ten million adults.

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 CPS-provided household and individual identifiers 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, the interviewer carries forward job information, including business ownership from the previous month's survey. If the answer is no, 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, 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 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 over) 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 1996 to 2010 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).[9] 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 U.S. Bureau of Labor Statistics 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 entrepreneurial activity rate estimates 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 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 from the 2007 Survey of Business Owners (SBO), conducted 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 2007 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 do 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 BLS 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, Office of Advocacy. Both of these datasets include only employer firms. Employer firms represent only 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 entrepreneurial activity rate, 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.

For comparison, the Kauffman Index indicates that 0.34 percent of the adult non-business-owner population created a new business each month in 2010, representing 565,000 new businesses each month. CPS estimates using similar definitions indicate that the number of self-employed business owners was 11.9 million in 2010. The BED data indicate an average of 172,000 employer establishment births per quarter in 2010 Q1–Q2. Dividing this number by the non-business-owner population, the employer establishment birth rate was 0.10 percent per quarter in 2010. The SUSB data indicate that there were 668,395 employer firm births from 2006 to 2007.[10] Dividing this number by the non-business owner population, the SUSB employer birth rate was 0.04 percent per year. Using the same underlying data sources, the total number of employer firms in the United States was 6,049,655 in 2007, representing 22 percent of all firms (employer plus non-employer). The Kauffman Index also differs from the Total Entrepreneurial Activity (TEA) index used in the Global Entrepreneurship Monitor. The TEA captures individuals ages eighteen to sixty-four who are involved either in the startup phase or managing a business that is less than forty-two months old (Reynolds, Bygrave, and Autio 2003). This measure of nascent entrepreneurship, therefore, includes individuals who are still in the startup phase of business creation and are not necessarily captured in the Kauffman Index because they may not be working on the new business for fifteen hours each week. In addition, the Kauffman Index captures entrepreneurs only once when they first create their businesses.

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, 1996–2009" (Fairlie 2010) 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. National Bureau of Economic Research. 2010. Business Cycle Expansions and Contractions, http://www.nber.org/cycles.html.

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. 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.

7. Annual estimates of state-level entrepreneurship rates are available for downloading at www.kauffman.org/kauffmanindex.

8. 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.

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

10. See Data on Small Businesses, U.S. Small Business Administration, Office of Advocacy, http://www.sba.gov/advocacy/849/12162.

KAUFFMAN

The Foundation of Entrepreneurship

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

DATE QTY PRINTER