KAUFFMAN INDEX OF entrepreneurial activity

1996–2008

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KAUFFMAN
The Foundation of Entrepreneurship

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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. Analysis of matched monthly data from the Current Population Survey (CPS) allows for comparisons of the percentage of the adult, non-business-owner population that starts a business over time. 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 2008 CPS data allow for an update to previous reports, with consideration of trends in entrepreneurial activity rates over the thirteen-year period covering 1996 and 2008. While the entrepreneurial activity rate has remained roughly consistent over the past decade, the Kauffman Index reveals important shifts in the demographic and geographic composition of new entrepreneurs across the country. Key findings for 2008 include:

- In 2008, an average of 0.32 percent of the adult population (or 320 out of 100,000 adults) created a new business each month, representing approximately 530,000 new businesses per month. This entrepreneurial activity rate is a slight increase over the 2007 rate of 0.30 percent.
- From 2007 to 2008, entrepreneurship rates increased for the lowest-income-potential types of businesses (120 per 100,000 to 130 per 100,000) and middle-income-potential types of businesses (110 per 100,000 to 123 per 100,000). For the highest-income-potential types of businesses, entrepreneurship rates decreased from 73 per 100,000 to 69 per 100,000, which may be due to early effects of the current recession.
- The entrepreneurial activity rate for men increased slightly from 0.41 percent in 2007 to 0.42 percent in 2008. The Kauffman Index for women increased from 0.20 percent to 0.24 percent, but the increase for women only returned entrepreneurship levels to where they were in the mid-2000s.
- The entrepreneurial activity rate among Latinos increased from 0.40 percent in 2007 to 0.48 percent in 2008, continuing an upward trend that started in 2005. Asian Americans also experienced a large increase in entrepreneurship rates, from 0.29 percent in 2007 to 0.35 in 2008.
- Non-Latino white business-creation rates increased slightly from 2007 to 2008 (0.30 percent to 0.31 percent), whereas African American rates declined slightly (0.23 percent to 0.22 percent).
- The immigrant rate of entrepreneurial activity increased from 0.46 percent in 2007 to 0.51 percent in 2008, further widening the gap between immigrant and native-born rates. Native-born rates increased only slightly, from 0.27 percent to 0.28 percent.
- The increase in entrepreneurship rates from 2007 to 2008 among immigrants was driven entirely by low- and medium-income-potential types of businesses. Immigrants, however, also are more likely to start high-income-potential types of businesses than the native born.

- While business-creation rates increased for less-educated individuals, the college-educated experienced a decline in entrepreneurial activity rates, from 0.33 percent in 2007 to 0.31 percent in 2008.
- The oldest age group (ages fifty-five to sixty-four) experienced the largest increase in entrepreneurial activity from 2007 to 2008 (0.31 percent to 0.36 percent), making it the age group with the highest entrepreneurial activity rate.
- The construction industry had the highest entrepreneurial activity rate of all major industry groups in 2008 (1.38 percent). The second-highest entrepreneurial activity rate was in the services industry (0.41 percent).
- The entrepreneurial activity rate increased in all regions from 2007 to 2008, except in the Midwest. The business-creation rate in the Midwest declined slightly from 0.25 percent to 0.23 percent.
- The states with the highest entrepreneurial activity rates were Georgia (590 per 100,000 adults), New Mexico (580 per 100,000 adults), Montana (530 per 100,000 adults), Arizona (490 per 100,000 adults), Alaska (440 per 100,000 adults), and California (440 per 100,000 adults). The states with the lowest entrepreneurial activity rates were Pennsylvania (140 per 100,000 adults), Missouri (150 per 100,000 adults), Wisconsin (170 per 100,000 adults), West Virginia (170 per 100,000 adults), Iowa (190 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 Georgia (with an increase of 0.17 percentage points), Mississippi (0.12 percentage points), Massachusetts (0.09 percentage points), New York (0.09 percentage points), and Rhode Island (0.08 percentage points). The states that experienced the largest decreases in their rates were Alaska (with a decrease of 0.23 percent percentage points), North Dakota (-0.19 percentage points), New Mexico (-0.18 percentage points), and Iowa (-0.13 percentage points).
- Among the fifteen largest MSAs in the United States, the highest entrepreneurial activity rate in 2008 was in Atlanta (0.74 percent). The large MSA with the lowest entrepreneurial activity rate was Philadelphia (0.16 percent).

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

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 business owners, including those who own incorporated or unincorporated businesses, and those who are employers or non-employers. The Kauffman Index analyzes 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 CPS data from 2008.

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 first survey month. By matching CPS files for the following month, 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.[1] 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.

Trends in Entrepreneurial Activity

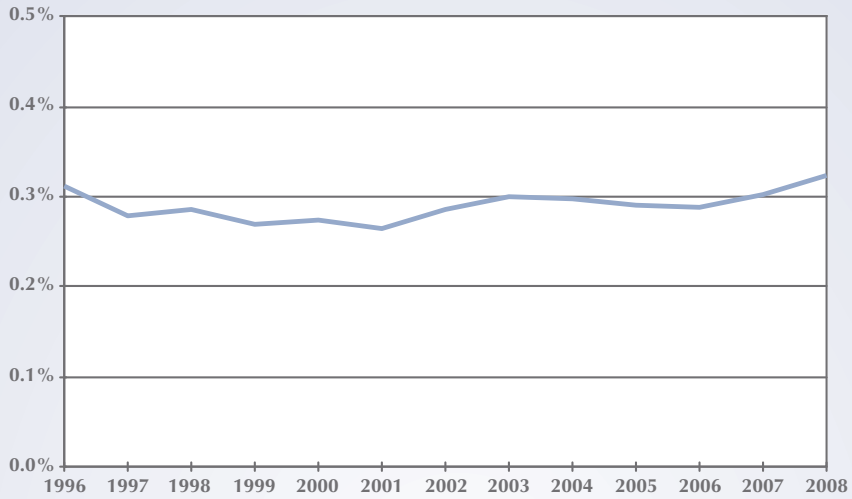
In 2008, an average of 0.32 percent of the adult population, or 320 out of 100,000 adults, created a new business each month.

In 2008, an average of 0.32 percent of the adult population, or 320 out of 100,000 adults, created a new business each month. This business-creation rate translates into 530,000 new businesses being created each month during the year. The entrepreneurial activity rate increased only slightly from 2007, when it was 0.30 percent. Over the past twelve years, the business-creation rate fluctuated between 0.27 percent and 0.32 percent. Figure 1 and Table 1 report average monthly estimates of the Kauffman Index by year from 1996 to 2008.

These trends in the total business-creation rate may mask divergent patterns in business creation for different types of businesses. In particular, over the past year there may have been differential trends in entrepreneurship rates based on the potential for businesses to produce high levels of income and growth. The difference between low-income-potential and high-income-potential businesses is related to the idea that there is a distinction between

Figure 1

Kauffman Index of Entrepreneurial Activity (1996–2008)



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

TABLE 1

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY (1996–2008)

	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

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.

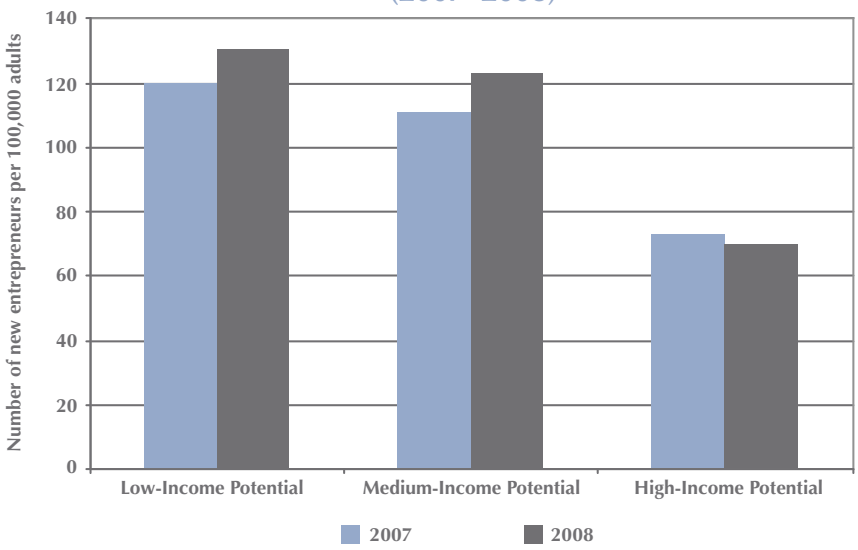
Visit www.kauffman.org/kauffmanindex to download the data files.

"necessity" vs. "opportunity" entrepreneurship. Using CPS data, businesses are classified into different levels of potential for income and growth based on average net business income for all businesses in their detailed industries. For example, a business is considered high-income-potential if it is located in an industry in which the net business income of all firms, young and old, in that industry is relatively high on average. Businesses in those industries have the potential to produce high income levels for the entrepreneur. Of course, there are always examples of very successful firms in industries in which average business incomes are low. Nevertheless, this method is useful for distinguishing between different types of business creation.

To create separate measures of the entrepreneurship rate by business income potential, average business income is calculated for all detailed industries. Information on business income by detailed industry is obtained from combining the 1996 to 2008 waves of the Annual Demographic Files of the CPS.2 The monthly CPS data used to calculate the entrepreneurship rate does not include information on business income. Average business income by industry then is assigned to each entrepreneur based on the industry code of the business created. Entrepreneurship is broken into three categories—low-, medium-, and high-income-potential. Low-income-potential entrepreneurship captures the creation of businesses in industries in the bottom third of the average business income distribution. Medium- and high-income-potential entrepreneurship captures the middle and top thirds of the average business income distribution across industries, respectively. Appendix Table 1 provides a list of detailed industries comprising each category.

As reported in Figure 1B, business-creation rates differ across these three types of entrepreneurship. In 2008, 130 new businesses were created per 100,000 people each month in low-income-potential types of businesses. The business-creation rate was slightly lower for medium-income-potential types of businesses at 123 per 100,000. For high-income-potential types of businesses, sixty-nine new businesses were created each month per 100,000 people. The sum

Figure 1B
Kauffman Index of Entrepreneurial Activity by Business Income Potential (2007–2008)



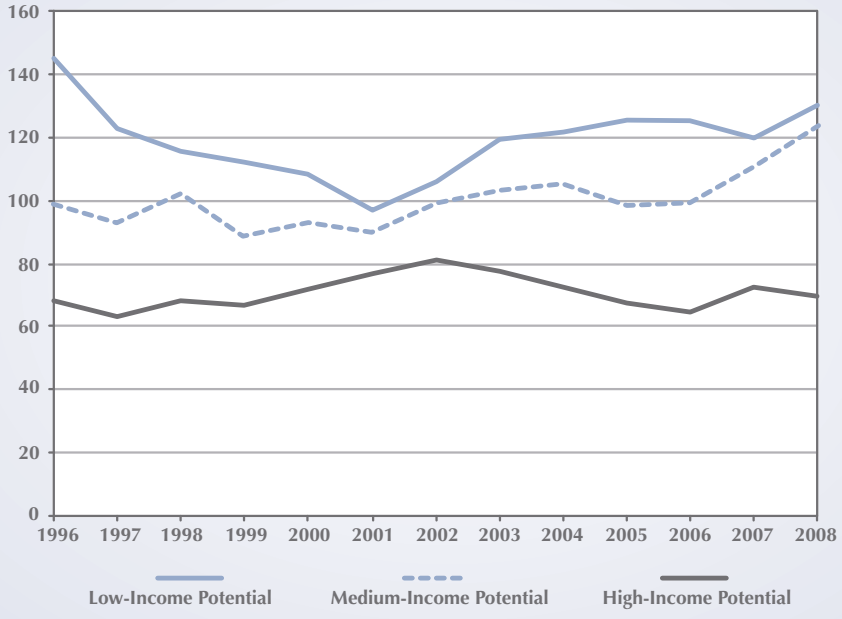
of business-creation rates for these three types of businesses equals the total business-creation rate of 322 per 100,000 people.

From 2007 to 2008, business-creation rates increased for the two lowest-income-potential categories, but decreased for the highest-income-potential category. Although the current recession only affects a small part of 2008, these patterns provide some early evidence that "necessity" entrepreneurship is increasing and "opportunity" entrepreneurship is decreasing. For high-income-potential types of businesses, the entrepreneurship rate decreased from seventy-three per 100,000 in 2007 to sixty-nine per 100,000 in 2008.

Trends in low-, medium-, and high-income-potential entrepreneurship rates generally show consistent patterns over changing economic conditions. Figure 1C reports estimates over the past thirteen years. Low- and medium-income-potential business-creation rates generally decreased when economic conditions were strong, whereas high-income-potential business creation generally increased. When economic conditions worsened, high-income-potential entrepreneurship rates generally decreased and low- and medium-income-potential entrepreneurship rates increased.

From 2007 to 2008, business-creation rates increased for the two lowest-income-potential categories, but decreased for the highest-income-potential category.

Figure 1C
Kauffman Index of Entrepreneurial Activity by Business Income Potential (1996–2008)



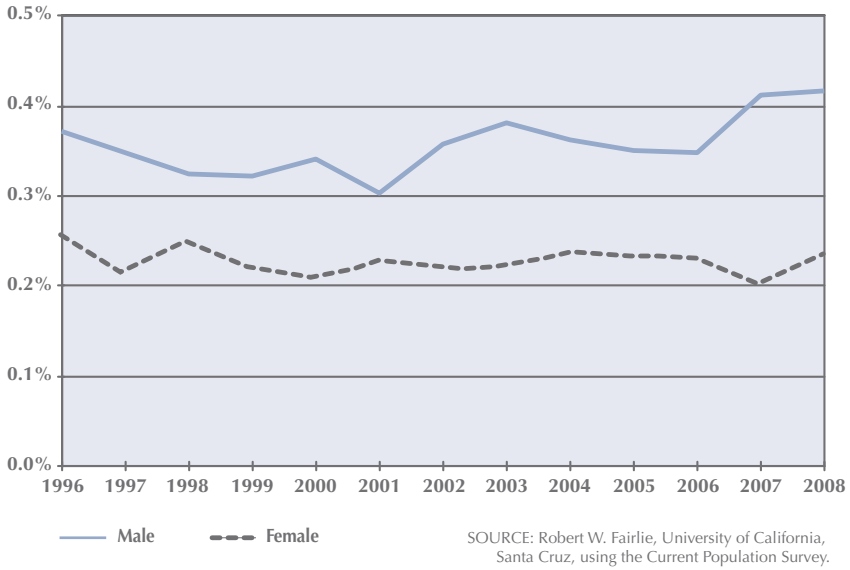
ENTREPRENEURIAL ACTIVITY BY DEMOGRAPHIC GROUPS

The detailed demographic information available in the CPS and large sample sizes allow for the estimation of separate indices by gender, race, education, age, and immigrant status. Large, nationally representative business-level datasets typically provide either no or very limited demographic information on the owner. Entrepreneurial activity increased slightly for men from 2007 to 2008, but increased sharply for women. For men, the entrepreneurial activity rate increased from 0.41 percent in 2007 to 0.42 percent in 2008. The entrepreneurship rate increased from 0.20 percent to 0.24 percent for women, returning female levels of entrepreneurial activity to what they were in the mid-2000s. The business-creation rate was 0.24 percent in 2004 and 2005. Although men remain substantially more likely to start a business each month, the gap between male and female entrepreneurship rates narrowed in 2008. Figure 2 and Table 1 report estimates of the Kauffman Index by gender from 1996 to 2007. The average rate of entrepreneurial activity for men over the twelve-year period was 0.36 percent, and the average rate for women during this time was 0.23 percent.

Entrepreneurship rates by income potential indicate that, from 2007 to 2008, entrepreneurship rates only increased for the medium-income-potential types of businesses for men. For women, entrepreneurship rates increased for low- and medium-income-potential types of businesses, but decreased for high-income-potential types of businesses. Figures 2B and 2C report estimates of entrepreneurship rates by business income potential for men and women, respectively.

Entrepreneurial activity increased slightly for men from 2007 to 2008, but increased sharply for women.

Figure 2
Kauffman Index of Entrepreneurial Activity by Gender (1996–2008)



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

Figure 2B Men

Kauffman Index of Entrepreneurial Activity by Business Income Potential (2007–2008)

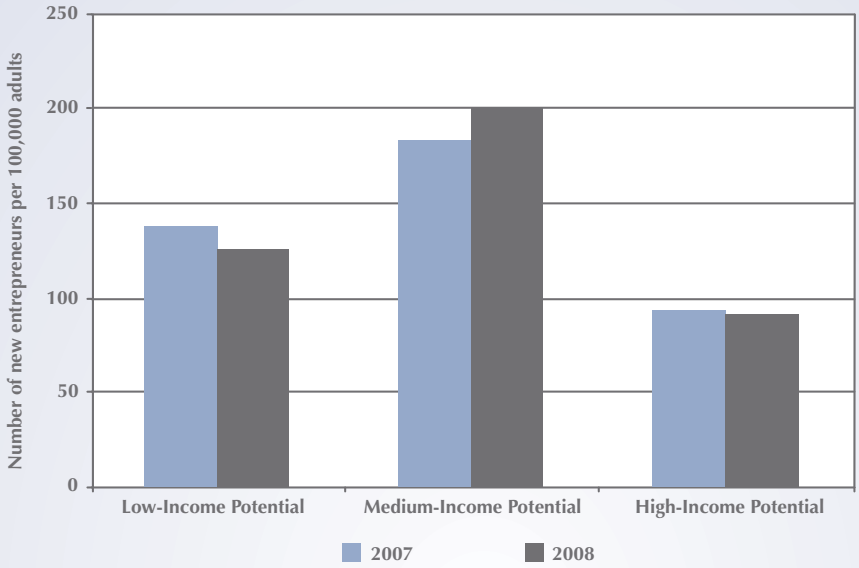
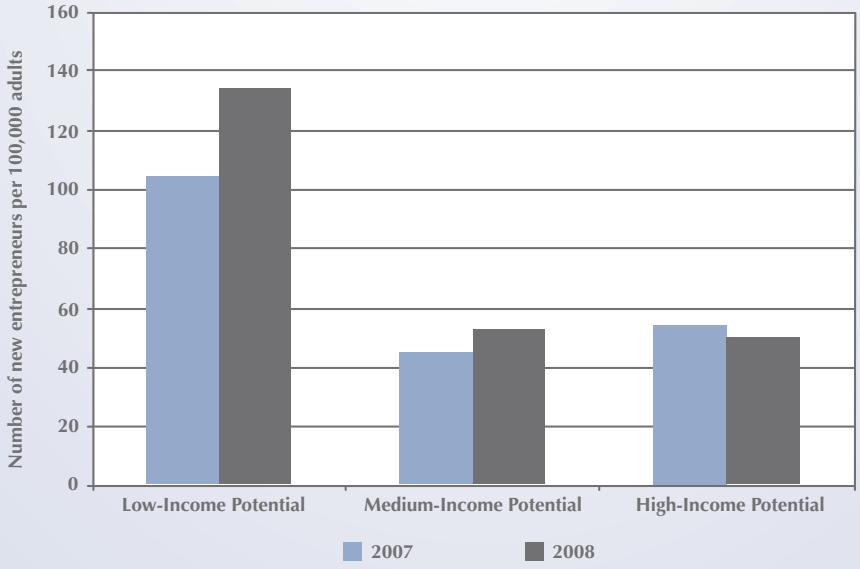


Figure 2C Women

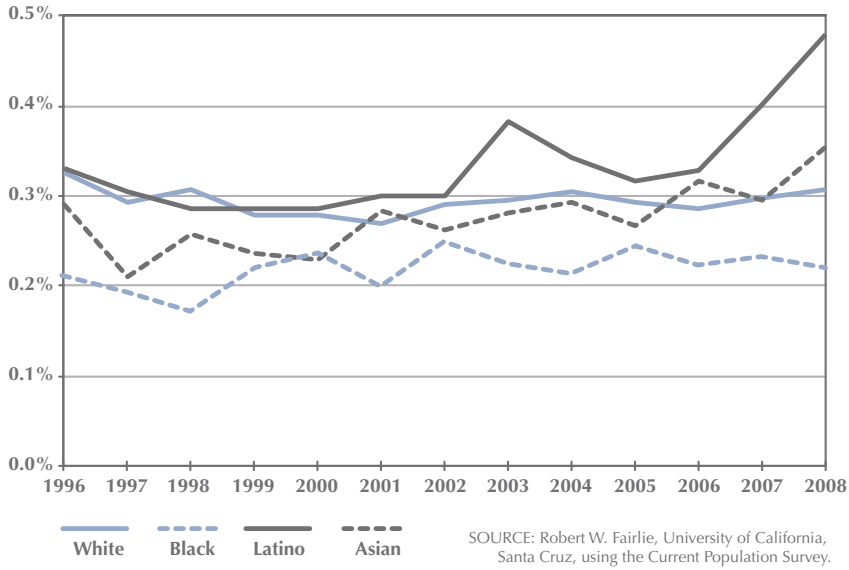
Kauffman Index of Entrepreneurial Activity by Business Income Potential (2007–2008)



The entrepreneurial rates increased sharply for immigrants in 2008.

Latino and Asian Americans experienced the largest increase in entrepreneurial activity rates between 2007 and 2008. Figure 3 and Table 2 report estimates of the Kauffman Index by race and ethnicity.[3] The Latino rate increased from 0.40 percent in 2007 to 0.48 percent in 2008, continuing an upward trend over the past couple of years. Business-creation rates increased from 0.29 percent in 2007 to 0.35 percent in 2008 among Asian Americans. In contrast, African Americans experienced a slight decline in entrepreneurial activity rates. The black entrepreneurial activity rate

Figure 3
Kauffman Index of Entrepreneurial Activity by Race (1996–2008)



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

TABLE 2
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY RACE (1996–2008)

	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

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) Race and Latino 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/kauffmanindex to download the data files.

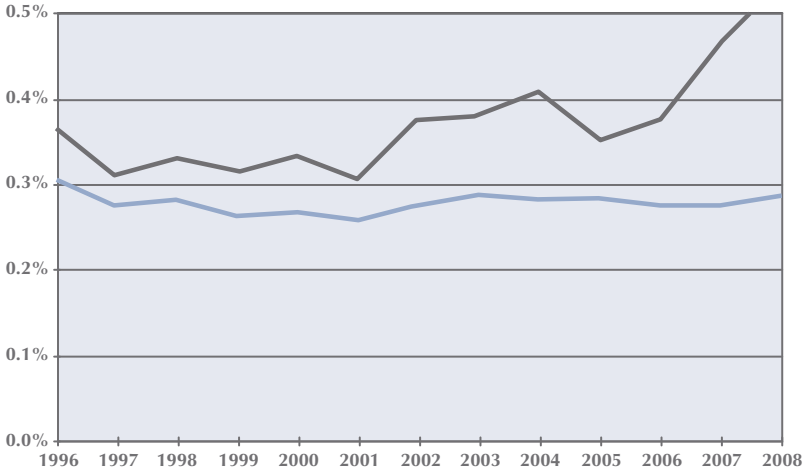
decreased 0.23 percent in 2007 to 0.22 percent in 2008. Following the trend for the U.S. total, the non-Latino white entrepreneurship rate increased slightly from 0.30 percent in 2007 to 0.31 percent in 2008.

The entrepreneurial activity rate increased sharply for immigrants in 2008, further widening the 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 increased from 0.46 percent in 2007 to 0.53 percent in 2008, whereas the native-born rate increased only slightly (0.27 percent to 0.28 percent). The resulting gap in the entrepreneurial activity rate between immigrants and natives is large. For immigrants, 530 out of 100,000 people start a business each month compared to 280 out of 100,000 native-born people.

Further exploring the increase in entrepreneurship rates among immigrants from 2007 to 2008, entrepreneurship rates by business income potential are estimated. Figure 4B reports estimates of immigrant entrepreneurship rates for low-, medium-, and high-income-potential types of businesses. All of the increase in the total entrepreneurship rate for immigrants is from the creation of low- and medium-income-potential types of businesses. For the native born, entrepreneurship rates in the low- and medium-income-potential categories increased only slightly (Figure 4C). Overall, immigrants

Latino- and Asian-Americans experienced the largest increase in entrepreneurial activity rates between 2007 and 2008.

Figure 4
Kauffman Index of Entrepreneurial Activity by Nativity (1996–2008)



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

TABLE 3
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY NATIVITY (1996–2008)

	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

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/kauffmanindex to download the data files.

Figure 4B **Immigrant**

Kauffman Index of Entrepreneurial Activity by Business Income Potential (2007–2008)

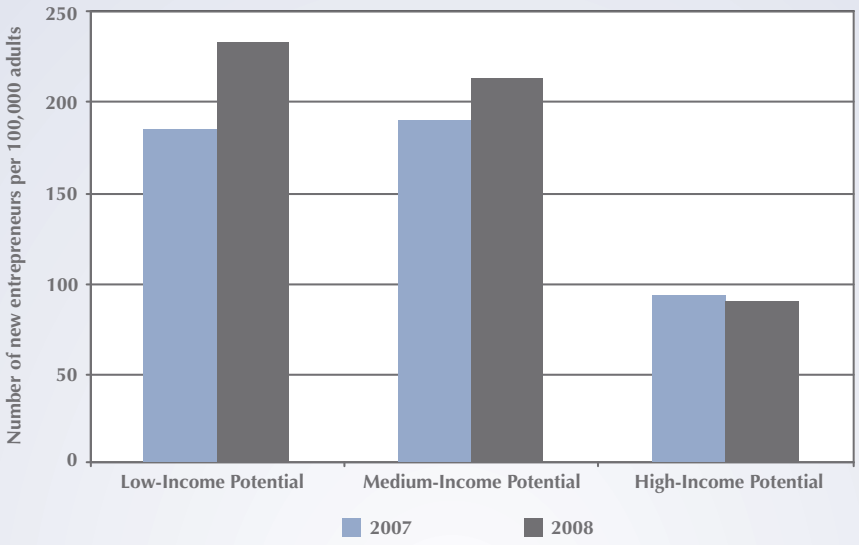
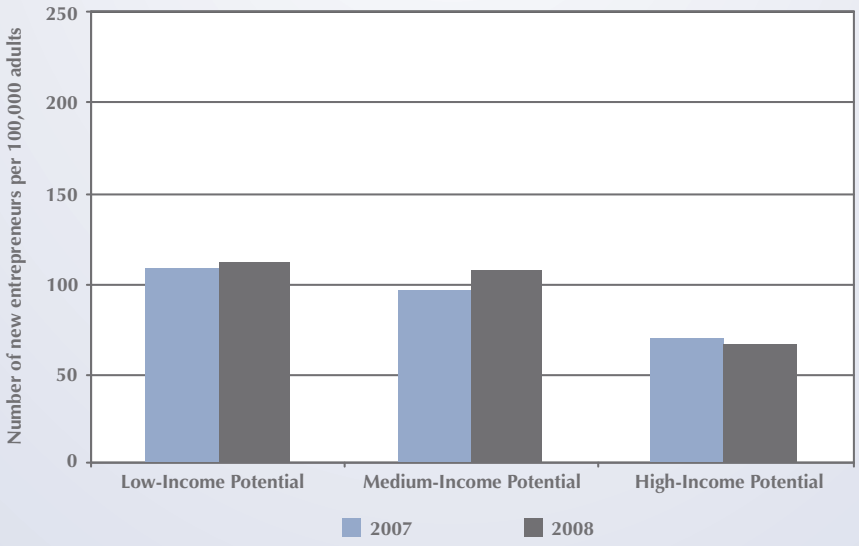


Figure 4C **Native Born**

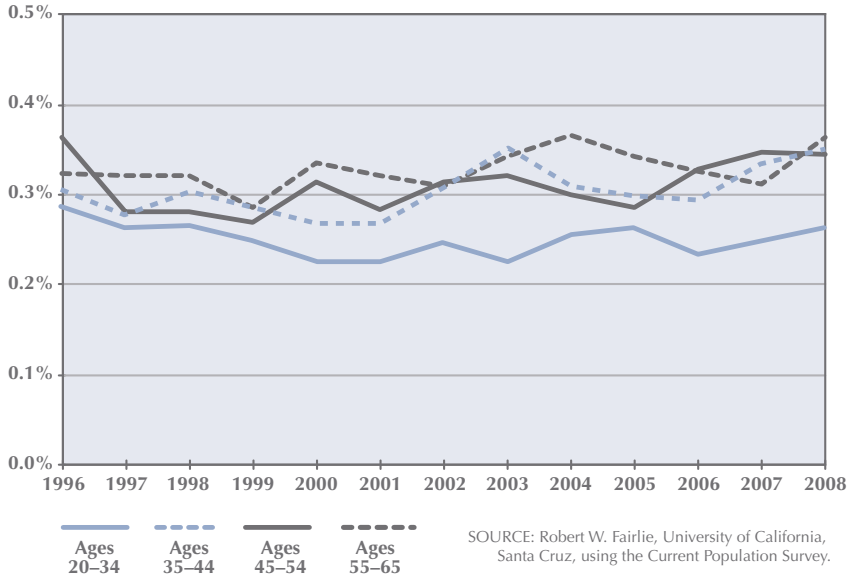
Kauffman Index of Entrepreneurial Activity by Business Income Potential (2007–2008)



have much higher low- and medium-income-potential entrepreneurship rates than the native born. But, immigrants also are more likely to start high-income-potential types of businesses.

Figure 5 and Table 4 report estimates of entrepreneurial activity rates by age group. The oldest age group (ages fifty-five to sixty-four) experienced the largest increase in business-creation rates from 2007 to 2008 and, as a result, has the highest level of business creation (0.36 percent). From 2007 to 2008, the twenty to thirty-four and thirty-five to forty-four age groups experienced slight increases in entrepreneurial activity, and entrepreneurial activity remained constant for the forty-five to fifty-four age group.

Figure 5
Kauffman Index of Entrepreneurial Activity by Age (1996–2008)



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

TABLE 4
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY AGE (1996–2008)

	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

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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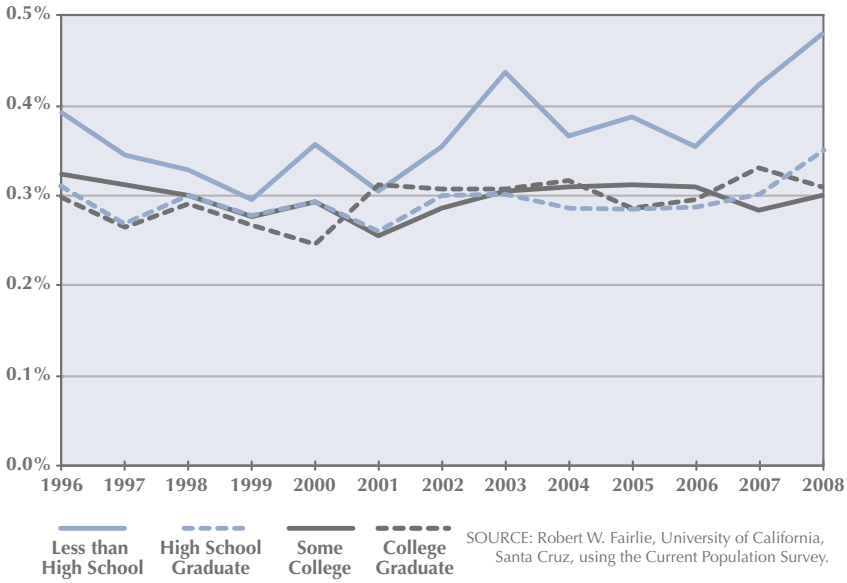
Entrepreneurial activity rates are highest among the least-educated group, as indicated in Figure 6 and Table 5. The least-educated group experienced a sharp increase in entrepreneurial activity rates from 2007 to 2008. Although rates are highest for the least-educated group, previous research that controls for other correlated factors such as race, ethnicity, and unemployment status indicates increasing rates of entrepreneurship with higher levels of education.[4] For college-educated individuals, business-creation rates declined from 0.33 percent in 2007 to 0.31 percent in 2008.

The least-educated group experienced a sharp increase in entrepreneurial activity rates from 2007 to 2008.

Figure 6
Kauffman Index of Entrepreneurial Activity by Education (1996–2008)



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

TABLE 5
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY EDUCATION (1996–2008)

	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

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-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 per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

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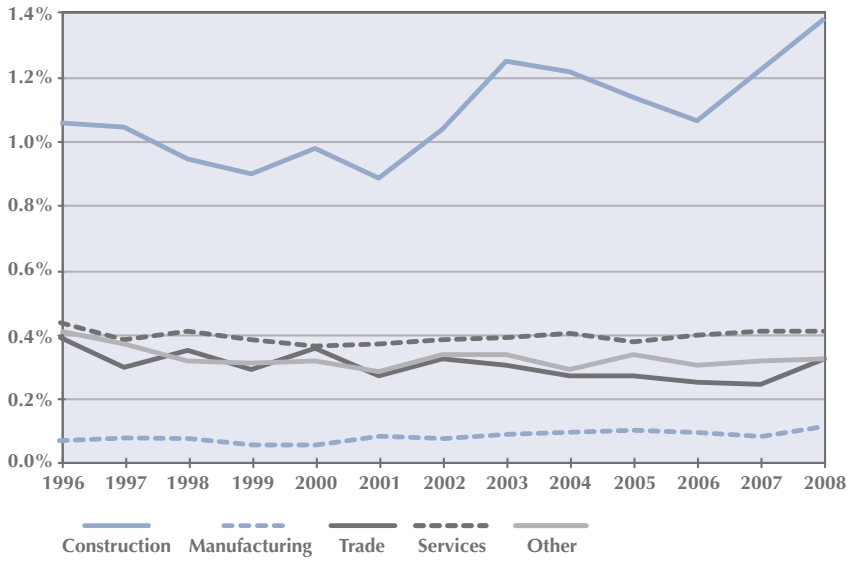
ENTREPRENEURIAL ACTIVITY BY INDUSTRY

Entrepreneurial activity rates differed substantially by major industry groups. Figure 7 and Table 6 report estimates of entrepreneurial activity by major industry. In 2008, entrepreneurial activity rates were highest in construction, at 1.38 percent. 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 0.11 percent of non-business owners starting businesses per month in this industry in 2008.

In 2008, entrepreneurial activity rates were highest in construction.

Figure 7
Kauffman Index of Entrepreneurial Activity by Industry (1996–2008)



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

TABLE 6

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY INDUSTRY (1996–2008)

	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%	56,262	0.33%	62,200	0.41%	247,636	0.33%	57,592

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 2008. Pennsylvania exhibited the lowest entrepreneurial activity rate with 140 per 100,000 adults starting new businesses each month. Georgia had the highest entrepreneurial activity rate, with 590 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.

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 six states with the highest entrepreneurial activity rates were Georgia (590 per 100,000 adults), New Mexico (580 per 100,000 adults), Montana (530 per 100,000 adults), Arizona (490 per 100,000 adults), Alaska (440 per 100,000 adults), and California (440 per 100,000 adults). The six states with the lowest entrepreneurial activity rates were Pennsylvania (140 per 100,000 adults), Missouri (150 per 100,000 adults), Wisconsin (170 per 100,000

TABLE 7

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY STATE (2008)

State	Index	Confidence Interval Lower	Confidence Interval Upper	Entrepreneurs per 100,000 People	Sample Size
U.S. Total	0.32%	0.31%	0.34%	320	584,385
Alabama	0.21%	0.09%	0.33%	210	6,657
Alaska	0.44%	0.25%	0.64%	440	7,778
Arizona	0.49%	0.32%	0.66%	490	7,189
Arkansas	0.39%	0.24%	0.54%	390	6,449
California	0.44%	0.38%	0.50%	440	48,441
Colorado	0.43%	0.31%	0.54%	430	12,594
Connecticut	0.30%	0.20%	0.40%	300	12,858
Delaware	0.20%	0.11%	0.30%	200	8,785
District of Columbia	0.29%	0.17%	0.41%	290	7,526
Florida	0.37%	0.29%	0.45%	370	22,098
Georgia	0.59%	0.46%	0.73%	590	12,462
Hawaii	0.22%	0.12%	0.32%	220	8,675
Idaho	0.37%	0.22%	0.51%	370	6,297
Illinois	0.26%	0.18%	0.33%	260	18,243
Indiana	0.28%	0.17%	0.39%	280	9,261
Iowa	0.19%	0.11%	0.26%	190	11,529
Kansas	0.25%	0.14%	0.35%	250	8,608
Kentucky	0.36%	0.23%	0.49%	360	8,963
Louisiana	0.26%	0.12%	0.40%	260	5,521
Maine	0.38%	0.26%	0.50%	380	10,954
Maryland	0.23%	0.15%	0.32%	230	13,529
Massachusetts	0.28%	0.17%	0.39%	280	9,084
Michigan	0.28%	0.19%	0.37%	280	14,059
Minnesota	0.21%	0.14%	0.29%	210	14,651
Mississippi	0.36%	0.19%	0.53%	360	5,543
Missouri	0.15%	0.07%	0.23%	150	9,984
Montana	0.53%	0.33%	0.72%	530	5,460
Nebraska	0.27%	0.16%	0.38%	270	8,936
Nevada	0.38%	0.25%	0.51%	380	9,027
New Hampshire	0.27%	0.18%	0.36%	270	13,168
New Jersey	0.28%	0.18%	0.38%	280	12,210
New Mexico	0.58%	0.38%	0.79%	580	5,295
New York	0.40%	0.32%	0.49%	400	24,055
North Carolina	0.23%	0.15%	0.32%	230	11,828
North Dakota	0.28%	0.15%	0.40%	280	7,217
Ohio	0.19%	0.12%	0.26%	190	16,773
Oklahoma	0.30%	0.17%	0.44%	300	6,922
Oregon	0.37%	0.24%	0.50%	370	8,367
Pennsylvania	0.14%	0.08%	0.19%	140	18,360
Rhode Island	0.25%	0.15%	0.35%	250	9,929
South Carolina	0.25%	0.14%	0.36%	250	7,933
South Dakota	0.30%	0.18%	0.41%	300	8,488
Tennessee	0.33%	0.20%	0.46%	330	7,822
Texas	0.37%	0.30%	0.44%	370	29,232
Utah	0.40%	0.25%	0.55%	400	7,334
Vermont	0.27%	0.16%	0.39%	270	8,554
Virginia	0.20%	0.12%	0.29%	200	12,450
Washington	0.27%	0.17%	0.38%	270	10,603
West Virginia	0.17%	0.08%	0.27%	170	7,501
Wisconsin	0.17%	0.10%	0.24%	170	11,552
Wyoming	0.27%	0.15%	0.38%	270	7,631

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. (4) Approximate 95 percent confidence intervals for the index for each state are reported.

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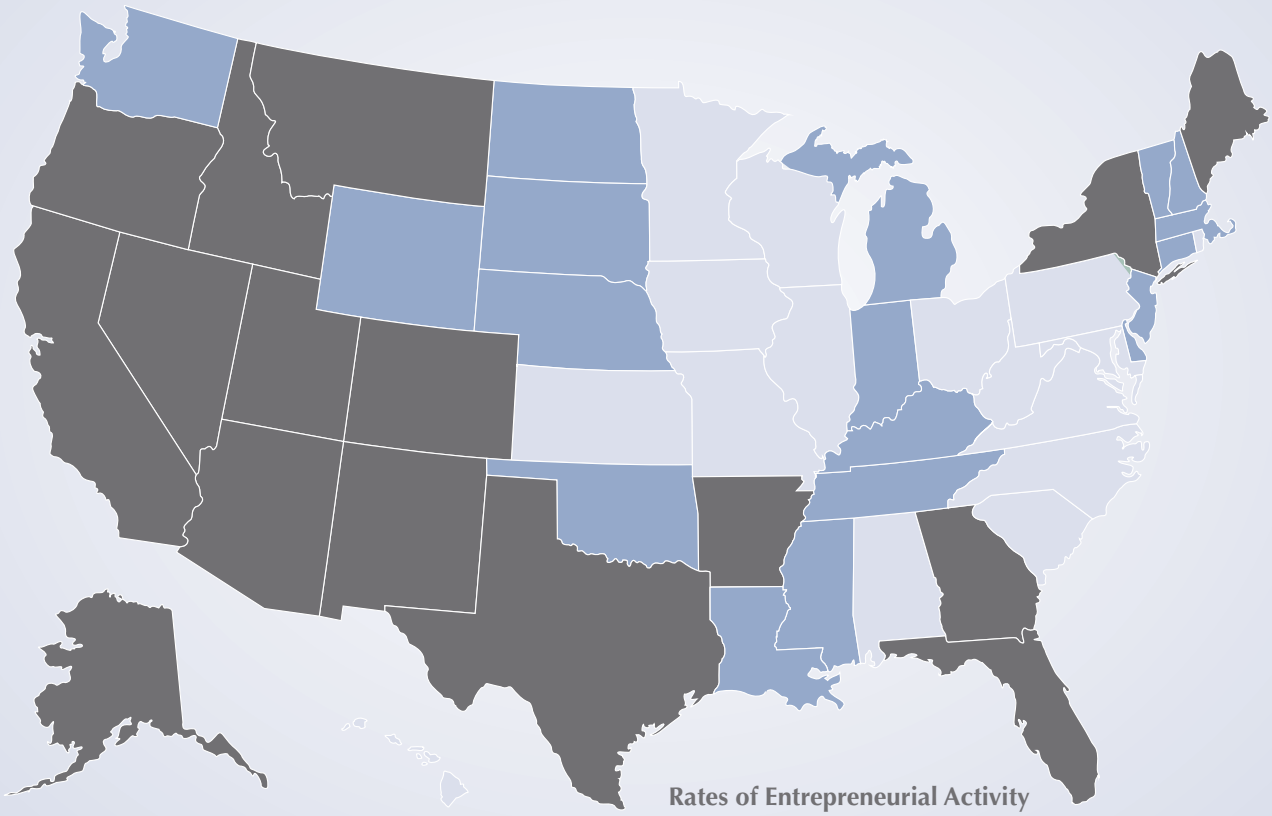
FIGURE 8

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY STATE (2008)



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

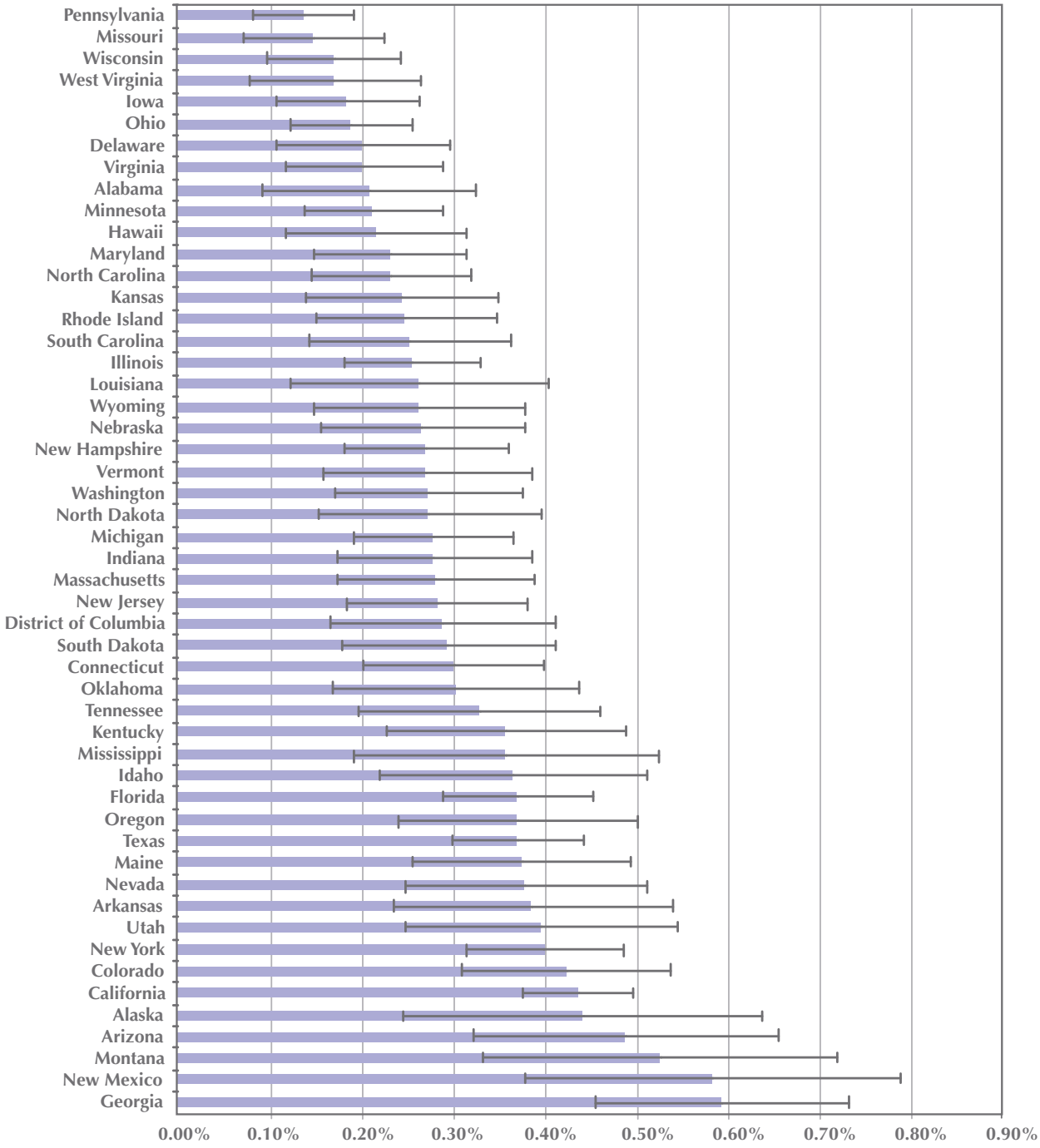
adults), West Virginia (170 per 100,000 adults), Iowa (190 per 100,000 adults), and Ohio (190 per 100,000 adults).

From 2007 to 2008, entrepreneurial activity rates increased substantially in the West, continuing an upward trend that started the previous year. The business-creation rate increased from 0.37 percent in 2007 to 0.42 percent in 2008. Estimates of the Kauffman Index by region are reported in Figure 10 and Table 8. Entrepreneurial activity rates also increased in the South, which has the second-highest business creation rate, and in the Northeast. In contrast, entrepreneurial activity rates decreased in the Midwest. The business-creation rate of 0.23 percent in the Midwest was the lowest of all regions. These differential trends in entrepreneurial activity by region from 2007 to 2008 are captured by differential trends by states across regions. Table 9 reports estimates of entrepreneurial activity rates by state from 2007 to 2008. 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.

Table 10 reports trends in state entrepreneurship rates over the past decade.

Figure 9

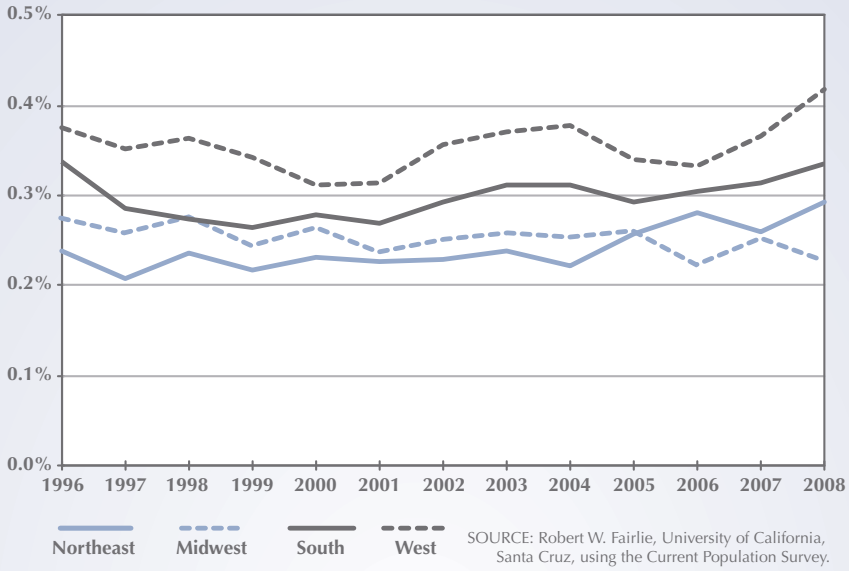
Kauffman Index of Entrepreneurial Activity by State with 95 Percent Confidence Intervals, 2008



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

Figure 10

Kauffman Index of Entrepreneurial Activity by Region (1996–2008)



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

TABLE 8

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY REGION (1996–2008)

	NORTHEAST		MIDWEST		SOUTH		WEST		TOTAL	
Year	Index	Sample Size	Index	Sample Size	Index	Sample Size	Index	Sample Size	Index	Sample Size
1996	0.25%	114,903	0.27%	126,744	0.34%	164,976	0.39%	126,072	0.32%	532,695
1997	0.21%	114,290	0.26%	125,935	0.29%	164,865	0.36%	127,751	0.28%	532,841
1998	0.24%	114,739	0.28%	125,789	0.28%	164,770	0.37%	128,871	0.29%	534,169
1999	0.23%	113,301	0.26%	125,765	0.28%	165,095	0.36%	130,846	0.28%	535,007
2000	0.24%	111,809	0.27%	127,390	0.28%	164,427	0.32%	129,934	0.28%	533,560
2001	0.24%	123,006	0.25%	140,086	0.28%	170,190	0.32%	138,566	0.27%	571,848
2002	0.24%	135,651	0.26%	156,763	0.30%	179,950	0.36%	153,238	0.29%	625,602
2003	0.25%	133,507	0.27%	154,611	0.32%	178,064	0.39%	151,072	0.31%	617,254
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

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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TABLE 9

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY STATE (2007, 2008)

State	2007 Index	2007 Confidence Interval Lower	2007 Confidence Interval Upper	2007 Sample Size	2008 Index	2008 Confidence Interval Lower	2008 Confidence Interval Upper	2008 Sample Size
U.S. Total	0.30%	0.29%	0.32%	586,248	0.32%	0.31%	0.34%	584,385
Alabama	0.10%	0.02%	0.17%	6,655	0.21%	0.09%	0.33%	6,657
Alaska	0.37%	0.24%	0.51%	7,737	0.44%	0.25%	0.64%	7,778
Arizona	0.46%	0.30%	0.61%	7,782	0.49%	0.32%	0.66%	7,189
Arkansas	0.34%	0.19%	0.48%	6,537	0.39%	0.24%	0.54%	6,449
California	0.40%	0.34%	0.45%	47,449	0.44%	0.38%	0.50%	48,441
Colorado	0.34%	0.24%	0.44%	12,724	0.43%	0.31%	0.54%	12,594
Connecticut	0.21%	0.12%	0.29%	12,433	0.30%	0.20%	0.40%	12,858
Delaware	0.14%	0.06%	0.21%	9,208	0.20%	0.11%	0.30%	8,785
District of Columbia	0.46%	0.30%	0.62%	7,388	0.29%	0.17%	0.41%	7,526
Florida	0.36%	0.28%	0.43%	22,974	0.37%	0.29%	0.45%	22,098
Georgia	0.40%	0.29%	0.51%	12,960	0.59%	0.46%	0.73%	12,462
Hawaii	0.21%	0.11%	0.32%	8,708	0.22%	0.12%	0.32%	8,675
Idaho	0.46%	0.29%	0.63%	6,550	0.37%	0.22%	0.51%	6,297
Illinois	0.24%	0.17%	0.32%	18,439	0.26%	0.18%	0.33%	18,243
Indiana	0.24%	0.14%	0.34%	9,474	0.28%	0.17%	0.39%	9,261
Iowa	0.26%	0.17%	0.36%	11,279	0.19%	0.11%	0.26%	11,529
Kansas	0.25%	0.15%	0.35%	8,764	0.25%	0.14%	0.35%	8,608
Kentucky	0.32%	0.20%	0.44%	8,849	0.36%	0.23%	0.49%	8,963
Louisiana	0.44%	0.25%	0.63%	5,314	0.26%	0.12%	0.40%	5,521
Maine	0.27%	0.17%	0.37%	11,122	0.38%	0.26%	0.50%	10,954
Maryland	0.32%	0.22%	0.42%	13,488	0.23%	0.15%	0.32%	13,529
Massachusetts	0.24%	0.14%	0.35%	8,705	0.28%	0.17%	0.39%	9,084
Michigan	0.29%	0.20%	0.39%	14,486	0.28%	0.19%	0.37%	14,059
Minnesota	0.31%	0.22%	0.40%	14,602	0.21%	0.14%	0.29%	14,651
Mississippi	0.30%	0.14%	0.45%	5,574	0.36%	0.19%	0.53%	5,543
Missouri	0.24%	0.14%	0.34%	9,854	0.15%	0.07%	0.23%	9,984
Montana	0.40%	0.23%	0.57%	5,646	0.53%	0.33%	0.72%	5,460
Nebraska	0.31%	0.18%	0.43%	8,869	0.27%	0.16%	0.38%	8,936
Nevada	0.30%	0.18%	0.42%	9,369	0.38%	0.25%	0.51%	9,027
New Hampshire	0.28%	0.18%	0.37%	12,693	0.27%	0.18%	0.36%	13,168
New Jersey	0.26%	0.17%	0.36%	12,153	0.28%	0.18%	0.38%	12,210
New Mexico	0.25%	0.12%	0.38%	5,709	0.58%	0.38%	0.79%	5,295
New York	0.35%	0.27%	0.42%	23,960	0.40%	0.32%	0.49%	24,055
North Carolina	0.32%	0.21%	0.43%	11,458	0.23%	0.15%	0.32%	11,828
North Dakota	0.25%	0.13%	0.36%	7,354	0.28%	0.15%	0.40%	7,217
Ohio	0.19%	0.13%	0.26%	16,810	0.19%	0.12%	0.26%	16,773
Oklahoma	0.34%	0.20%	0.49%	7,191	0.30%	0.17%	0.44%	6,922
Oregon	0.35%	0.23%	0.48%	8,092	0.37%	0.24%	0.50%	8,367
Pennsylvania	0.15%	0.10%	0.21%	18,198	0.14%	0.08%	0.19%	18,360
Rhode Island	0.21%	0.12%	0.31%	10,162	0.25%	0.15%	0.35%	9,929
South Carolina	0.26%	0.15%	0.37%	8,170	0.25%	0.14%	0.36%	7,933
South Dakota	0.29%	0.17%	0.41%	8,292	0.30%	0.18%	0.41%	8,488
Tennessee	0.44%	0.29%	0.59%	8,082	0.33%	0.20%	0.46%	7,822
Texas	0.29%	0.23%	0.36%	28,873	0.37%	0.30%	0.44%	29,232
Utah	0.34%	0.21%	0.48%	7,430	0.40%	0.25%	0.55%	7,334
Vermont	0.42%	0.28%	0.56%	8,402	0.27%	0.16%	0.39%	8,554
Virginia	0.22%	0.14%	0.30%	12,512	0.20%	0.12%	0.29%	12,450
Washington	0.22%	0.12%	0.31%	10,731	0.27%	0.17%	0.38%	10,603
West Virginia	0.08%	0.02%	0.15%	7,802	0.17%	0.08%	0.27%	7,501
Wisconsin	0.29%	0.19%	0.39%	11,604	0.17%	0.10%	0.24%	11,552
Wyoming	0.43%	0.27%	0.59%	7,631	0.27%	0.15%	0.38%	7,631

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. (4) Approximate 95 percent confidence intervals for the index for each state are reported.

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

TABLE 10

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY STATE (1996–1998 and 2006–2008)

	1996–1998 Period				2006–2008 Period			
		Confidence Interval		Sample		Confidence Interval		Sample
State	Index	Lower	Upper	Size	Index	Lower	Upper	Size
U.S. Total	0.29%	0.28%	0.30%	1,594,432	0.30%	0.30%	0.31%	1,762,239
Alabama	0.23%	0.17%	0.30%	22,508	0.19%	0.13%	0.25%	20,329
Alaska	0.59%	0.47%	0.71%	18,315	0.36%	0.27%	0.45%	23,392
Arizona	0.40%	0.32%	0.49%	23,278	0.42%	0.33%	0.51%	22,869
Arkansas	0.31%	0.24%	0.39%	21,495	0.37%	0.28%	0.45%	19,372
California	0.34%	0.31%	0.38%	131,823	0.39%	0.36%	0.43%	143,294
Colorado	0.44%	0.35%	0.53%	23,331	0.35%	0.29%	0.41%	38,005
Connecticut	0.21%	0.14%	0.28%	16,576	0.27%	0.21%	0.32%	38,074
Delaware	0.23%	0.15%	0.31%	16,571	0.17%	0.12%	0.23%	27,246
District of Columbia	0.28%	0.19%	0.36%	15,322	0.35%	0.27%	0.43%	22,065
Florida	0.34%	0.29%	0.38%	70,549	0.36%	0.31%	0.40%	69,480
Georgia	0.31%	0.25%	0.38%	28,903	0.48%	0.40%	0.55%	38,263
Hawaii	0.21%	0.14%	0.28%	16,292	0.28%	0.21%	0.35%	25,902
Idaho	0.39%	0.30%	0.48%	22,702	0.40%	0.31%	0.49%	19,684
Illinois	0.25%	0.21%	0.29%	68,087	0.23%	0.19%	0.27%	54,882
Indiana	0.24%	0.18%	0.31%	22,680	0.24%	0.18%	0.30%	28,216
Iowa	0.38%	0.29%	0.47%	20,436	0.25%	0.20%	0.31%	33,958
Kansas	0.33%	0.25%	0.41%	20,354	0.24%	0.18%	0.30%	25,950
Kentucky	0.28%	0.21%	0.36%	21,966	0.30%	0.23%	0.37%	26,751
Louisiana	0.32%	0.24%	0.39%	21,989	0.33%	0.24%	0.42%	16,038
Maine	0.38%	0.28%	0.48%	17,566	0.36%	0.29%	0.42%	33,457
Maryland	0.25%	0.18%	0.33%	18,675	0.27%	0.22%	0.33%	40,175
Massachusetts	0.20%	0.15%	0.25%	39,033	0.29%	0.23%	0.36%	26,892
Michigan	0.25%	0.20%	0.29%	58,156	0.25%	0.20%	0.29%	43,220
Minnesota	0.31%	0.23%	0.38%	23,027	0.27%	0.22%	0.32%	43,600
Mississippi	0.27%	0.19%	0.34%	20,519	0.39%	0.29%	0.49%	16,519
Missouri	0.29%	0.21%	0.37%	19,321	0.21%	0.16%	0.27%	29,978
Montana	0.52%	0.42%	0.62%	20,860	0.51%	0.40%	0.62%	16,898
Nebraska	0.36%	0.27%	0.45%	20,216	0.28%	0.22%	0.35%	26,718
Nevada	0.36%	0.26%	0.45%	20,160	0.34%	0.27%	0.41%	27,862
New Hampshire	0.25%	0.18%	0.33%	16,436	0.25%	0.20%	0.30%	38,629
New Jersey	0.21%	0.17%	0.26%	48,937	0.26%	0.21%	0.32%	36,384
New Mexico	0.57%	0.47%	0.68%	22,522	0.39%	0.30%	0.49%	16,904
New York	0.28%	0.24%	0.31%	102,328	0.36%	0.31%	0.41%	72,723
North Carolina	0.28%	0.23%	0.33%	43,195	0.25%	0.20%	0.31%	35,195
North Dakota	0.46%	0.36%	0.56%	19,200	0.27%	0.20%	0.34%	22,111
Ohio	0.25%	0.21%	0.30%	62,180	0.20%	0.16%	0.24%	50,901
Oklahoma	0.38%	0.30%	0.46%	23,839	0.36%	0.27%	0.44%	21,395
Oregon	0.43%	0.33%	0.52%	19,111	0.37%	0.29%	0.45%	24,316
Pennsylvania	0.17%	0.14%	0.20%	69,109	0.15%	0.12%	0.19%	54,925
Rhode Island	0.17%	0.10%	0.23%	16,782	0.25%	0.19%	0.31%	30,509
South Carolina	0.30%	0.22%	0.38%	18,661	0.23%	0.17%	0.29%	24,368
South Dakota	0.42%	0.33%	0.52%	19,954	0.33%	0.26%	0.40%	25,348
Tennessee	0.35%	0.26%	0.43%	21,189	0.34%	0.27%	0.42%	24,116
Texas	0.30%	0.26%	0.34%	78,273	0.32%	0.28%	0.36%	87,344
Utah	0.32%	0.24%	0.40%	22,181	0.34%	0.26%	0.42%	22,563
Vermont	0.40%	0.29%	0.50%	15,784	0.36%	0.28%	0.44%	25,690
Virginia	0.26%	0.20%	0.33%	25,731	0.23%	0.18%	0.28%	37,756
Washington	0.29%	0.21%	0.37%	21,359	0.25%	0.20%	0.31%	31,917
West Virginia	0.19%	0.12%	0.25%	23,497	0.15%	0.10%	0.20%	22,980
Wisconsin	0.23%	0.17%	0.29%	23,805	0.24%	0.19%	0.30%	34,441
Wyoming	0.37%	0.28%	0.46%	19,649	0.34%	0.26%	0.42%	22,635

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. (4) Approximate 95 percent confidence intervals for the index for each state are reported.

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

To increase sample sizes, the three-year period between 2006 and 2008 is compared to the three-year period between 1996 (the earliest year included in the dataset) and 1998.[5] Georgia experienced the largest positive change in its entrepreneurial activity rate over this time period, increasing from 0.31 percent to 0.48 percent, or 0.17 percentage points. Other states experiencing large increases in rates of entrepreneurial activity were Mississippi (0.12 percentage points), Massachusetts (0.09 percentage points), New York (0.09 percentage points), and Rhode Island (0.08 percentage points). States that experienced large decreases in entrepreneurial activity rates were Alaska (-0.23 percentage points), North Dakota (-0.19 percentage points), New Mexico (-0.18 percentage points), and Iowa (-0.13 percentage points). All of these changes over time are statistically significant at the 0.05 or 0.10 level of confidence.

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).[6] Among these metropolitan areas, Atlanta had the highest entrepreneurial activity rate at 740 per 100,000 adults. Phoenix (550 per 100,000 adults), Riverside-San Bernardino (520 per 100,000 adults), Los Angeles (510 per 100,000 adults), and Miami (500 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 Philadelphia (160 per 100,000 adults).

TABLE 11

KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY FOR THE FIFTEEN LARGEST MSAs (2008)

Metropolitan Statistical Area	2008 Index	Confidence Interval Lower	Confidence Interval Upper	Entrepreneurs per 100,000 People	Sample Size	2006–2008 Index	Sample Size
New York-Northern New Jersey-Long Island, NY-NJ-PA	0.45%	0.36%	0.55%	450	23,774	0.41%	70,861
Los Angeles-Long Beach-Santa Ana, CA	0.51%	0.39%	0.62%	510	17,513	0.43%	52,215
Chicago-Naperville-Joliet, IN-IN-WI	0.29%	0.19%	0.38%	290	12,876	0.23%	38,491
Dallas-Fort Worth-Arlington, TX	0.42%	0.27%	0.56%	420	7,878	0.32%	23,461
Atlanta-Sandy Springs-Marietta, GA	0.74%	0.54%	0.94%	740	7,305	0.57%	21,926
Philadelphia-Camden-Wilmington, PA-NJ-DE	0.16%	0.07%	0.25%	160	12,650	0.17%	38,324
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.30%	0.19%	0.40%	300	17,274	0.30%	51,782
Houston-Baytown-Sugar Land, TX	0.34%	0.19%	0.49%	340	6,200	0.34%	19,042
Miami-Fort Lauderdale-Miami Beach, FL	0.50%	0.32%	0.67%	500	6,567	0.47%	20,394
Boston-Cambridge-Quincy, MA-NH	0.25%	0.13%	0.37%	250	10,329	0.29%	30,209
Detroit-Warren-Livonia, MI	0.25%	0.13%	0.37%	250	6,233	0.23%	18,985
Phoenix-Mesa-Scottsdale, AZ	0.55%	0.34%	0.76%	550	5,045	0.46%	16,114
San Francisco-Oakland-Fremont, CA	0.42%	0.26%	0.58%	420	5,864	0.41%	16,801
Riverside-San Bernardino, CA	0.52%	0.32%	0.72%	520	4,977	0.47%	15,005
Seattle-Tacoma-Bellevue,WA	0.20%	0.08%	0.32%	200	5,730	0.21%	17,141

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. (4) Approximate 95 percent confidence intervals for the index for each MSA are reported.

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

Summary

The Kauffman Index measures the monthly business-creation rate at the individual owner level, reporting the percent 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 2008 is more than eight million. Detailed demographic information available in the CPS and large sample sizes also allow for estimates of separate indices by gender, race, education, age, and immigrant status. Indices for all states and the largest MSAs also are calculated. In 2008, 0.32 percent of the adult population, or 320 out of 100,000 adults, created a new business each month, representing approximately 530,000 new businesses per month. This total rate of business creation increased only slightly from 0.30 percent in 2007. Underlying these overall trends in the business-creation rate were some divergent trends in business-creation rates by type of business. In particular, over the past year there were notable increases in the entrepreneurship rate for the lowest-income-potential types of businesses (120 per 100,000 to 130 per 100,000) and middle-income-potential types of businesses (110 per 100,000 to 123 per 100,000). In contrast, for the highest-income-potential types of businesses, the entrepreneurship rate decreased from seventy-three per 100,000 to sixty-nine per 100,000. These divergent trends may capture the contrasting early effects of the current recession on "necessity" and "opportunity" entrepreneurship.

In 2008, there are some interesting differences in changes in 2007 entrepreneurial activity rates for population subgroups. First, Latinos and Asians experienced large increases in entrepreneurial activity rates in 2008. African Americans experienced a slight decline in entrepreneurial activity rates, and the trend for non-Latino whites followed the slight upward trend for the U.S. total. A related finding is that the rate of entrepreneurial activity among immigrants, already high relative to the native born, continued a strong upward trend. From 2007 to 2008, the entrepreneurial activity rate among immigrants increased from 0.46 percent to 0.53 percent, which is considerably higher than the 0.28 percent rate of entrepreneurial activity among the native born. All of the entrepreneurship rate increase for immigrants was concentrated in low- and medium-income-potential types of businesses, although immigrants also are more likely to create high-income-potential types of businesses than the native born are. Another interesting finding is that entrepreneurial activity rates declined from 0.33 percent in 2007 to 0.31 percent in 2008 for the college educated, but increased for the least educated. Finally, the oldest age group (ages fifty-five to sixty-four) experienced the largest increase in entrepreneurial activity rates from 2007 to 2008.

Entrepreneurial activity rates reflect strong regional patterns. New-business-creation rates are highest in the West and South. From 2007 to 2008, the largest increase in entrepreneurial activity occurred in the West (0.37 percent to 0.42 percent). Entrepreneurial activity rates also increased in the Northeast (0.26 percent to 0.29 percent) and South (0.31 percent to 0.33 percent), whereas entrepreneurial activity rates declined in the Midwest (0.25 percent to 0.23 percent).

Entrepreneurial activity rates varied substantially across states, from a low of

0.14 percent in Pennsylvania to a high of 0.59 percent in Georgia. Entrepreneurial activity rates also were high in New Mexico (0.58 percent), Montana (0.53 percent), Arizona (0.49 percent), Alaska (0.44 percent), and California (0.44 percent). In addition to Pennsylvania, the lowest rates of entrepreneurial activity were found in Missouri (0.15 percent), Wisconsin (0.17 percent), West Virginia (0.17 percent), Iowa (0.19 percent), and Ohio (0.19 percent). The states experiencing the largest increases in entrepreneurial activity rates over the past decade were Georgia (with an increase of 0.17 percentage points), Mississippi (0.12 percentage points), Massachusetts (0.09 percentage points), New York (0.09 percentage points), and Rhode Island (0.08 percentage points). The states that experienced the largest decreases in their rates were Alaska (with a decrease of 0.23 percent percentage points), North Dakota (-0.19 percentage points), New Mexico (-0.18 percentage points), and Iowa (-0.13 percentage points).

Analysis of the fifteen largest metropolitan areas in the United States reveals that Atlanta (0.74 percent) had the highest entrepreneurial activity rate in 2008. Philadelphia (0.16 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 2008 monthly data creates a sample size of 700,000 adults ages twenty to sixty-four. The dataset built for the analysis of the entire thirteen-year period between 1996 and 2008 has a sample size of more than eight 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 monthly panel data for up to 75 percent of all CPS respondents. These data are matched using the household and individual identifiers provided by the CPS. False matches are removed by comparing race, sex, and age codes from the two months. After removing all non-unique matches, the underlying CPS data are checked extensively for coding errors and other problems.

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

The microdata used in this report and a codebook are available for downloading at www.kauffman.org/kauffmanindex. 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.

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 ages twenty and sixty-four. For estimates of entrepreneurial activity rates by education level, the population between ages 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 2008 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 older. The total national sample size is drawn to ensure a high level of precision for the *monthly* national unemployment rate. For each of the fifty states 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).[7] 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., 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 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 estimates of entrepreneurial activity rates are correct.

ADVANTAGES OVER OTHER POSSIBLE MEASURES OF ENTREPRENEURSHIP

The Kauffman Index of Entrepreneurial Activity has several advantages over other possible measures of entrepreneurship based on household or business-level data. First, the CPS data are available only a couple of months after the end of the year, whereas even relatively timely data such as the American Community Survey (ACS) take more than a year to be released. Second, the index includes all types of business activities (employers, non-employers, unincorporated, and incorporated businesses), but does not include small-scale business activities such as consulting and casual businesses (by contrast, 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 SPECIFIC DATASETS

The Kauffman Index differs from possible measures of entrepreneurial activity in the ACS (and related decennial Census of the Population), in that it measures flows into business ownership rather than the number of existing business owners at a specific point in time. The ACS is a cross-sectional dataset, and thus does not provide information on business ownership over time for the same individual. This is similar to the limitation of estimates based on the cross-sectional CPS data and SBO data. Typical measures of business ownership based on these datasets do not capture the dynamic nature of entrepreneurial activity that the Kauffman Index illustrates.

The Kauffman Index differs from the 2002 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 2002 that filed tax forms as individual proprietorships, partnerships, or any type of corporation. Second, the Kauffman Index captures business entry, whereas the SBO captures numbers of existing businesses. Increases in the number of existing businesses over time may be a result of more business creation, less business closure or a combination of the two. 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 birth data from the Statistics of U.S. Businesses (SUSB). These data, collected by the U.S. Census Bureau and summarized by the U.S. Small Business Administration (SBA), Office of Advocacy, include only employer firms. Employer firms represent only approximately one-fourth of all firms, and many firms start with no employees.[8] These data, therefore, are likely to lead to a substantial undercount in the rate of entrepreneurial activity, particularly for certain industries and regions, such as the high-

technology industry. Finally, the SUSB are a business-level measure, while the CPS is a person-level measure.

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 in either 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.

Appendix Table 1

Detailed Industry List for Low-, Medium-, and High-Income Potential Types of Businesses

Code	Industry
	Low-Income-Potential Types of Businesses
170	Crop production
180	Animal production
190	Forestry except logging
270	Logging
280	Fishing, hunting, and trapping
290	Support activities for agriculture and forestry
670	Water, steam, air-conditioning, and irrigation systems
1080	Sugar and confectionery products
1190	Retail bakeries
1290	Not-specified food industries
1470	Fiber, yarn, and thread mills
1570	Carpet and rug mills
1590	Textile product mills, except carpets and rugs
1670	Knitting mills
1690	Apparel accessories and other apparel manufacturing
1790	Leather tanning and products, except footwear manufacturing
2090	Miscellaneous petroleum and coal products
2380	Tire manufacturing
2470	Pottery, ceramics, and related products manufacturing
2480	Structural clay product manufacturing
2490	Glass and glass product manufacturing
2970	Ordnance
3070	Agricultural implement manufacturing
3470	Household appliance manufacturing
3680	Ship and boat building
3690	Other transportation equipment manufacturing
3970	Toys, amusement, and sporting goods manufacturing
3990	Not-specified manufacturing industries
4480	Farm product raw materials, merchant wholesalers
4770	Furniture and home furnishings stores
4890	Lawn and garden equipment, and supplies stores
4970	Grocery stores
4980	Specialty food stores
5170	Clothing and accessories, except shoe, stores
5270	Sporting goods, camera, and hobby and toy stores
5280	Sewing, needlework, and piece goods stores
5370	Book stores and news dealers
5390	Miscellaneous general merchandise stores
5470	Retail florists
5490	Used merchandise stores
5570	Gift, novelty, and souvenir shops
5580	Miscellaneous retail stores
5591	Electronic auctions
5670	Vending machine operators
5690	Other direct-selling establishments
6190	Taxi and limousine service
6280	Scenic and sightseeing transportation
6470	Newspaper publishers
7690	Services to buildings and dwellings
7770	Landscaping services
7890	Other schools, instruction, and educational services
8170	Home health care services
8470	Child day care services
8560	Independent artists, performing arts, spectator sports, and related industries
8660	Traveler accommodation
8670	Recreational vehicle parks and camps, and rooming/boarding houses
8690	Drinking places, alcoholic beverages
8770	Automotive repair and maintenance
8780	Car washes
8790	Electronic and precision equipment repair and maintenance
8870	Commercial and industrial machinery and equipment repair and maintenance
8880	Personal and household goods repair and maintenance
8890	Footwear and leather goods repair
8970	Barber shops
8980	Beauty salons
8990	Nail salons and other personal care services
9070	Drycleaning and laundry services
9090	Other personal services
9160	Religious organizations
9290	Private households
	Medium-Income-Potential Types of Businesses
380	Coal mining
770	Construction
1070	Animal food, grain, and oilseed milling
1680	Cut-and-sew apparel manufacturing
1770	Footwear manufacturing
2170	Resin, synthetic rubber and fibers, and filaments manufacturing
3770	Sawmills and wood preservation
3790	Prefabricated wood buildings and mobile homes
3870	Miscellaneous wood products
3890	Furniture and related product manufacturing
3980	Miscellaneous manufacturing, n.e.c.
4280	Recyclable material, merchant wholesalers

4570	Farm supplies, merchant wholesalers
4580	Miscellaneous nondurable goods, merchant wholesalers
4690	Auto parts, accessories, and tire stores
4990	Beer, wine, and liquor stores
5080	Health and personal care, except drug, stores
5090	Gasoline stations
5180	Shoe stores
5190	Jewelry, luggage, and leather goods stores
5290	Music stores
5380	Department stores and discount stores
5480	Office supplies and stationery stores
5590	Electronic shopping
5790	Not-specified retail trade
6170	Truck transportation
6180	Bus service and urban transit
6290	Services incidental to transportation
6380	Couriers and messengers
6390	Warehousing and storage
6590	Sound recording industries
6675	Internet publishing and broadcasting
6692	Internet service providers
6695	Data processing, hosting, and related services
6770	Libraries and archives
7170	Video tape and disk rental
7370	Specialized design services
7490	Other professional, scientific, and technical services
7590	Business support services
7670	Travel arrangements and reservation services
7880	Business, technical, and trade schools and training
8290	Residential care facilities, without nursing
8370	Individual and family services
8380	Community food and housing, and emergency services
8580	Bowling centers
8590	Other amusement, gambling, and recreation industries
8680	Restaurants and other food services
9470	Justice, public order, and safety activities

High-Income-Potential Types of Businesses

370	Oil and gas extraction
390	Metal ore mining
470	Nonmetallic mineral mining and quarrying
490	Support activities for mining
570	Electric power generation, transmission and distribution
580	Natural gas distribution
1090	Fruit and vegetable preserving, and specialty food manufacturing
1170	Dairy product manufacturing
1180	Animal slaughtering and processing
1270	Bakeries, except retail
1280	Seafood and other miscellaneous foods, n.e.c.
1370	Beverage manufacturing
1480	Fabric mills, except knitting
1490	Textile and fabric finishing and coating mills
1870	Pulp, paper, and paperboard mills
1880	Paperboard containers and boxes
1890	Miscellaneous paper and pulp products
1990	Printing and related support activities
2070	Petroleum refining
2180	Agricultural chemical manufacturing
2190	Pharmaceutical and medicine manufacturing
2270	Paint, coating, and adhesive manufacturing
2280	Soap, cleaning compound, and cosmetics manufacturing
2290	Industrial and miscellaneous chemicals
2370	Plastics product manufacturing
2390	Rubber products, except tires, manufacturing
2570	Cement, concrete, lime, and gypsum product manufacturing
2590	Miscellaneous nonmetallic mineral product manufacturing
2670	Iron and steel mills and steel product manufacturing
2680	Aluminum production and processing
2690	Nonferrous metal, except aluminum, production and processing
2770	Foundries
2780	Metal forgings and stampings
2790	Cutlery and hand tool manufacturing
2870	Structural metals, and tank and shipping container manufacturing
2880	Machine shops; turned product; and screw, nut, and bolt manufacturing
2890	Coating, engraving, heat treating, and allied activities
2980	Miscellaneous fabricated metal products manufacturing
2990	Not-specified metal industries
3080	Construction, mining, and oil field machinery manufacturing
3090	Commercial and service industry machinery manufacturing
3170	Metalworking machinery manufacturing
3180	Engines, turbines, and power transmission equipment manufacturing
3190	Machinery manufacturing, n.e.c.
3290	Not specified machinery manufacturing
3360	Computer and peripheral equipment manufacturing
3370	Communications, audio, and video equipment manufacturing
3380	Navigational, measuring, electromedical, and control instruments manufacturing
3390	Electronic component and product manufacturing, n.e.c.

3490	Electrical lighting, equipment, and supplies manufacturing, n.e.c.
3570	Motor vehicles and motor vehicle equipment manufacturing
3580	Aircraft and parts manufacturing
3590	Aerospace products and parts manufacturing
3670	Railroad rolling stock manufacturing
3780	Veneer, plywood, and engineered wood products
3960	Medical equipment and supplies manufacturing
4070	Motor vehicles, parts and supplies, merchant wholesalers
4080	Furniture and home furnishing, merchant wholesalers
4090	Lumber and other construction materials, merchant wholesalers
4170	Professional and commercial equipment and supplies, merchant wholesalers
4180	Metals and minerals, except petroleum, merchant wholesalers
4190	Electrical goods, merchant wholesalers
4260	Hardware, plumbing, and heating equipment, and supplies, merchant wholesalers
4270	Machinery, equipment, and supplies, merchant wholesalers
4290	Miscellaneous durable goods, merchant wholesalers
4370	Paper and paper products, merchant wholesalers
4380	Drugs, sundries, and chemical and allied products, merchant wholesalers
4390	Apparel, fabrics, and notions, merchant wholesalers
4470	Groceries and related products, merchant wholesalers
4490	Petroleum and petroleum products, merchant wholesalers
4560	Alcoholic beverages, merchant wholesalers
4585	Wholesale electronic markets, agents and broker
4590	Not-specified wholesale trade
4670	Automobile dealers
4680	Other motor vehicle dealers
4780	Household appliance stores
4790	Radio, TV, and computer stores
4870	Building material and supplies dealers
4880	Hardware stores
5070	Pharmacies and drug stores
5592	Mail order houses
5680	Fuel dealers
6070	Air transportation
6080	Rail transportation
6090	Water transportation
6270	Pipeline transportation
6480	Publishing, except newspapers and software
6490	Software publishing
6570	Motion pictures and video industries
6670	Radio and television broadcasting and cable
6680	Wired telecommunications carriers
6690	Other telecommunications services
6780	Other information services
6870	Banking and related activities
6880	Savings institutions, including credit unions
6890	Non-depository credit and related activities
6970	Securities, commodities, funds, trusts, and other financial investments
6990	Insurance carriers and related activities
7070	Real estate
7080	Automotive equipment rental and leasing
7180	Other consumer goods rental
7190	Commercial, industrial, and other intangible assets rental and leasing
7270	Legal services
7280	Accounting, tax preparation, bookkeeping, and payroll services
7290	Architectural, engineering, and related services
7380	Computer systems design and related services
7390	Management, scientific, and technical consulting services
7460	Scientific research and development services
7470	Advertising and related services
7480	Veterinary services
7570	Management of companies and enterprises
7580	Employment services
7680	Investigation and security services
7780	Other administrative and other support services
7790	Waste management and remediation services
7860	Elementary and secondary schools
7870	Colleges and universities, including junior colleges
7970	Offices of physicians
7980	Offices of dentists
7990	Offices of chiropractors
8070	Offices of optometrists
8080	Offices of other health practitioners
8090	Outpatient care centers
8180	Other health care services
8190	Hospitals
8270	Nursing care facilities
8390	Vocational rehabilitation services
8570	Museums, art galleries, historical sites, similar institutions
9080	Funeral homes, cemeteries, and crematories
9370	Executive offices and legislative bodies
9590	National security and international affairs

1. See “Kauffman Index of Entrepreneurial Activity, 1996–2004” (Fairlie 2005), “Kauffman Index of Entrepreneurial Activity, National Report 1996 to 2005” (Fairlie 2006), “Kauffman Index of Entrepreneurial Activity, State Report 1996–2005” (Fairlie 2006), and “Kauffman Index of Entrepreneurial Activity, 1996–2006” (Fairlie 2007).

2. Similar hours-worked restrictions (fifteen or more hours per week) are imposed for the sample of business owners used to calculate average net business income by industry from the Annual Demographic Files of the CPS. Owners of all businesses—unincorporated, incorporated, non-employer, employer, young, old—are included in the estimation of average net business income by industry.

3. See Fairlie and Robb (2008) "Race and Entrepreneurial Success: Black-, Asian-, and White-Owned Businesses in the United States," MIT Press for more information on ethnic and racial differences in entrepreneurship.

4. 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.

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

6. 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 5,000 observations.

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

8. According to the 2003 Statistics of U.S. Businesses, U.S. Census Bureau, 23.6 percent of firms have employees.

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