

KAUFFMAN INDEX OF
entrepreneurial
activity
1996-2007

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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 2007 CPS data allow for an update to previous reports, with consideration of trends in the rates of entrepreneurial activity over the twelve-year period between 1996 and 2007. 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 2007 include:

- In 2007, an average of 0.30 percent of the adult population (or three hundred out of one hundred thousand adults) created a new business each month, representing approximately four hundred ninety-five thousand new businesses per month. This entrepreneurial activity rate is a slight increase over the 2006 rate of 0.29 percent.
- The entrepreneurial activity rate for men increased from 0.35 percent in 2006 to 0.41 percent in 2007. In contrast, the Kauffman Index for women declined from 0.23 percent to 0.20 percent.
- The entrepreneurial activity rate among Latinos increased from 0.33 percent in 2006 to 0.40 percent in 2007, the largest increase for any major ethnic or racial group.
- Non-Latino white and African-American business creation rates increased slightly from 2006 to 2007 (0.29 percent to 0.30 percent and 0.22 percent to 0.23 percent, respectively), and Asian entrepreneurship rates declined (0.32 percent to 0.29 percent).
- The immigrant entrepreneurial activity rate increased sharply from 0.37 percent in 2006 to 0.46 percent in 2007. In previous years, immigrants were more likely to start businesses than were the native-born; they are now substantially more likely to start businesses.
- The construction industry had the highest entrepreneurial activity rate of all major industry groups in 2007 (1.23 percent). The second-highest entrepreneurial activity rate was in the services industry (0.41 percent).
- The entrepreneurial activity rate increased in the Midwest and West from 2006 to 2007, but decreased in the Northeast. The entrepreneurial activity rate increased slightly in the South.
- The five states with the highest entrepreneurial activity rates were Idaho (460 per one hundred thousand adults), the District of Columbia (460 per one hundred thousand adults), Arizona (460 per one hundred thousand adults), Tennessee (440 per one hundred thousand adults), and Louisiana (440 per one hundred thousand adults). The five states with the lowest entrepreneurial activity rates were West Virginia (eighty per one hundred thousand adults), Alabama (one hundred per one hundred thousand adults), Delaware (140 per one hundred thousand adults), Pennsylvania (150 per one hundred thousand adults), and Ohio (190 per one hundred thousand adults).
- The states experiencing the largest increases in entrepreneurial activity rates over the past decade were Mississippi (with an increase of 0.14 percentage points), Hawaii (0.11 percentage points), Rhode Island (0.08 percentage points), and Massachusetts (0.07 percentage points). The states that experienced the largest decreases in their rates were Alaska (with a decrease of 0.25 percentage points), New Mexico (-0.22 percentage points), North Dakota (-0.17 percentage points), Kansas (-0.09 percentage points), and Nebraska (-0.09 percentage points).
- Among the fifteen largest MSAs in the United States, the highest entrepreneurial activity rates in 2006 were in Phoenix (0.58 percent), Riverside-San Bernardino (0.50 percent), Atlanta (0.48 percent), Los Angeles (0.44 percent), and Miami (0.41 percent). The large MSA with the lowest entrepreneurial activity rate was Philadelphia (0.11 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 2007.

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 are provided in previous reports and in the Appendix.¹

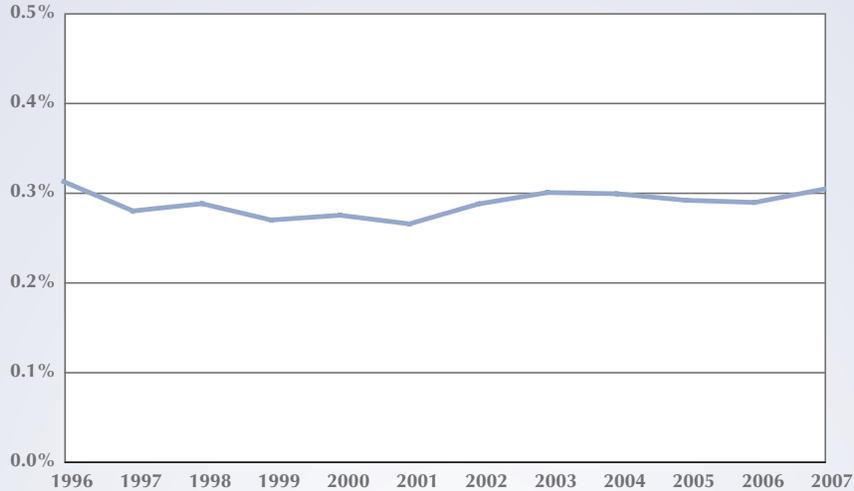
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Trends in Entrepreneurial Activity

In 2007, an average of 0.30 percent of the adult population, or three hundred out of one hundred thousand adults, created a new business each month. In other words, approximately four hundred ninety-five thousand new businesses were created each month during the year. In 2007, the business creation rate increased only slightly from 2006, when it was 0.29 percent. Over the past six years, the entrepreneurship rate has remained in the range of 0.29 to 0.30 percent. Over the past twelve years, the business creation rate fluctuated within only a slightly larger range of 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 2007.

In 2007, an average of 0.30 percent of the adult population, or three hundred out of one hundred thousand adults, created a new business each month.

FIGURE 1
KAUFFMAN INDEX
OF ENTREPRENEURIAL ACTIVITY
(1996–2007)



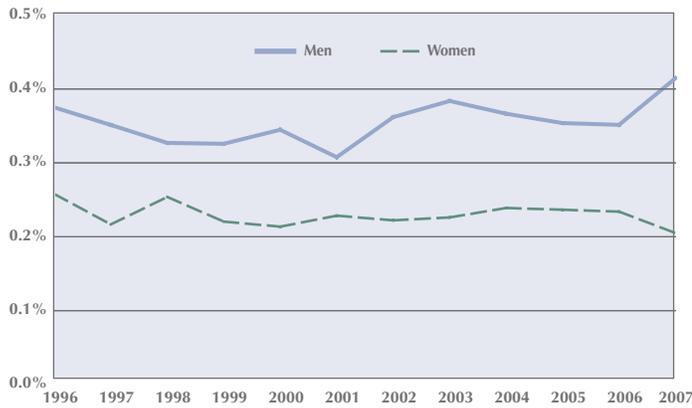
SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

TABLE 1
KAUFFMAN INDEX OF
ENTREPRENEURIAL ACTIVITY(1996–2007)

Year	MEN		WOMEN		TOTAL	
	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	.041%	271,807	0.20%	314,441	0.30%	586,248

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.

FIGURE 2
KAUFFMAN INDEX OF
ENTREPRENEURIAL ACTIVITY BY GENDER
(1996–2007)



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

ENTREPRENEURIAL ACTIVITY BY DEMOGRAPHIC GROUPS

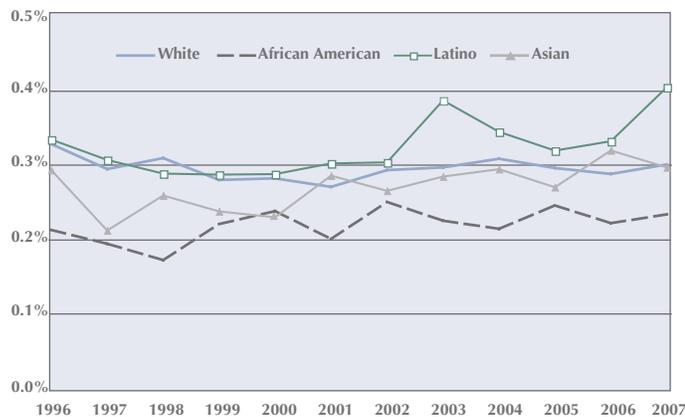
The detailed demographic information available in the CPS and large sample sizes allow for the estimation of separate indices by gender, race, education, age, and immigrant status. Large, nationally representative business-level datasets typically provide either no or very limited demographic information on the owner. Entrepreneurial activity increased for men from 2006 to 2007, but decreased for women. For men, the entrepreneurial activity rate increased from 0.35 percent in 2006 to 0.41 percent in 2007. The entrepreneurship rate decreased from 0.23 percent to 0.20 percent for women. The result of these divergent trends is that men now are twice as likely as women to start businesses each month, a larger differential than in any previous year. Figure 2 and Table 1 report estimates of the Kauffman Index by gender from 1996 to 2007. The average entrepreneurial activity rate for men over the twelve-year period was 0.35 percent, and the average rate for women during this time was 0.23 percent.

Latinos experienced the largest increase in entrepreneurial activity rates between 2006 and 2007. Figure 3 and Table 2 report estimates of the Kauffman Index by race and ethnicity. The Latino rate increased from 0.33 percent in 2006 to 0.40 percent in 2007. Non-Latino whites and African-Americans also experienced rising entrepreneurial activity rates, but the increases were much smaller. The non-Latino white entrepreneurial activity rate increased from 0.29 in 2006 to 0.30 in 2007, and the African-American entrepreneurial activity rate increased from 0.22 percent to 0.23 percent. In contrast to these patterns, the Asian entrepreneurial activity rate decreased from 0.32 percent in 2006 to 0.29 percent in 2007.

The entrepreneurial activity rate increased sharply for immigrants in 2007, 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 0.37 percent in 2006 to 0.46 percent in 2007, whereas the native-born rate remained constant at 0.27 percent. The resulting gap in the entrepreneurial activity rate

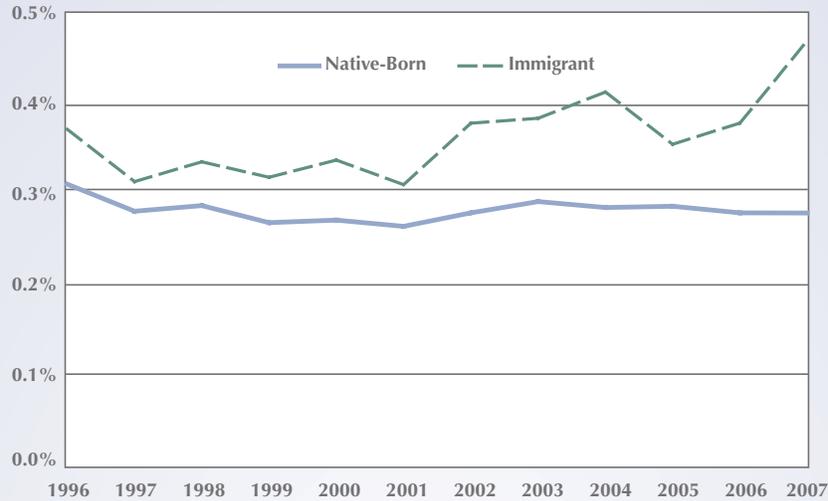
4 Latinos experienced the largest increase in entrepreneurial activity rates between 2006 and 2007.

FIGURE 3
KAUFFMAN INDEX OF
ENTREPRENEURIAL ACTIVITY BY RACE
(1996–2007)



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

FIGURE 4
KAUFFMAN INDEX OF
ENTREPRENEURIAL ACTIVITY BY NATIVITY
(1996–2007)



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

TABLE 2
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY RACE
(1996–2007)

Year	WHITE		AFRICAN-AMERICAN		LATINO		ASIAN		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

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.

between immigrants and natives is large. For immigrants, 460 out of one hundred thousand start a business each month, compared to 270 native-born.

Figure 5 and Table 4 report estimates of entrepreneurial activity rates by age group. Although entrepreneurial activity rates increased in 2007 for the youngest group (ages twenty to thirty-four), rates remained lower for this age group than for any other age group. From 2006 to 2007, the ages thirty-five to forty-four and ages forty-five to fifty-four groups experienced increases in entrepreneurial activity. The entrepreneurial activity rate decreased from 0.33 percent in 2006 to 0.31 percent in 2007 for the oldest group (ages fifty-five to sixty-four).

Entrepreneurial activity rates are highest among the least-educated and most-educated groups, as indicated in Figure 6 and Table 5. Both groups also experienced increases in entrepreneurial activity rates from 2006 to 2007. Although rates are the highest and increased the most 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.²

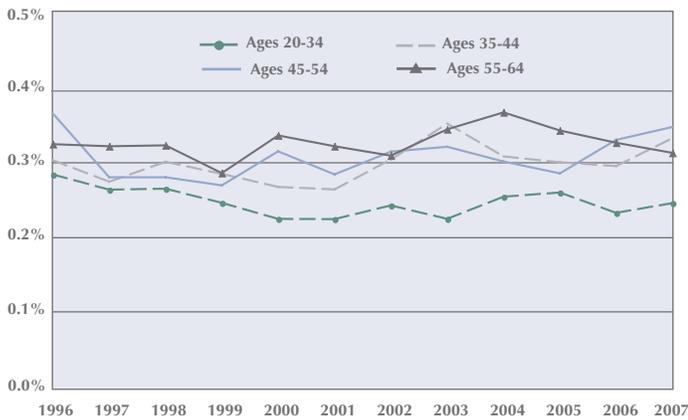
TABLE 3
KAUFFMAN INDEX OF
ENTREPRENEURIAL ACTIVITY BY NATIVITY
(1996-2007)

Year	NATIVE-BORN		IMMIGRANT		TOTAL	
	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

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.

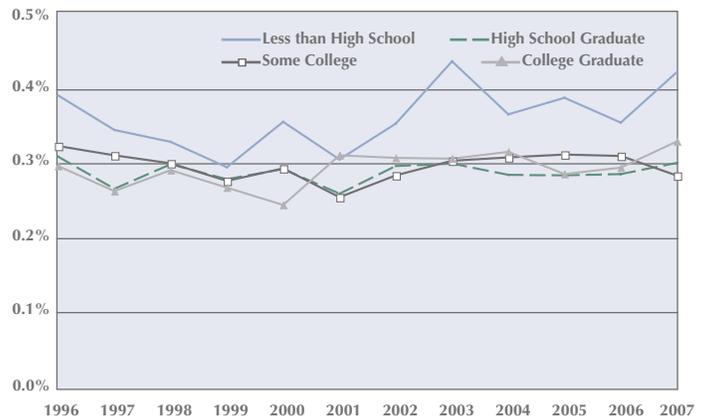
Entrepreneurial activity rates are highest among the least-educated and most-educated groups.

FIGURE 5
KAUFFMAN INDEX OF
ENTREPRENEURIAL ACTIVITY BY AGE
(1996-2007)



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

FIGURE 6
KAUFFMAN INDEX OF ENTREPRENEURIAL
ACTIVITY BY EDUCATION
(1996-2007)



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

TABLE 4
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY AGE
(1996–2007)

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

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 5
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY EDUCATION
(1996–2007)

Year	LESS THAN HIGH SCHOOL		HIGH SCHOOL GRADUATE		SOME COLLEGE		COLLEGE GRADUATE		TOTAL AGES 25-64	
	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

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.

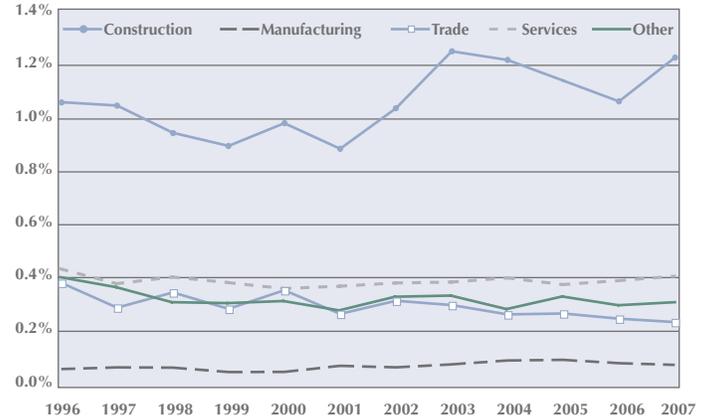
ENTREPRENEURIAL ACTIVITY BY INDUSTRY

Rates of entrepreneurial activity differed substantially by industry. Figure 7 and Table 6 report estimates of entrepreneurial activity by major industry. In 2007, entrepreneurial activity rates were highest in construction at 1.23 percent. Entrepreneurial activity rates in services also were high (0.41 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 2007.

ENTREPRENEURIAL ACTIVITY BY STATE

Entrepreneurial activity rates varied significantly by state in 2007. West Virginia exhibited the lowest entrepreneurial activity rate, with eighty per one hundred thousand adults starting new businesses each month. Idaho, the District of Columbia, and Arizona had the highest entrepreneurial activity rates, with 460 per one hundred thousand 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 7
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY INDUSTRY (1996–2007)



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

Manufacturing had substantially lower entrepreneurial activity rates than all other industries.

TABLE 6
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY INDUSTRY (1996–2007)

Year	CONSTRUCTION		MANUFACTURING		TRADE		SERVICES		OTHER	
	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

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.

TABLE 7
KAUFFMAN INDEX OF ENTREPRENEURIAL
ACTIVITY BY STATE (2007)

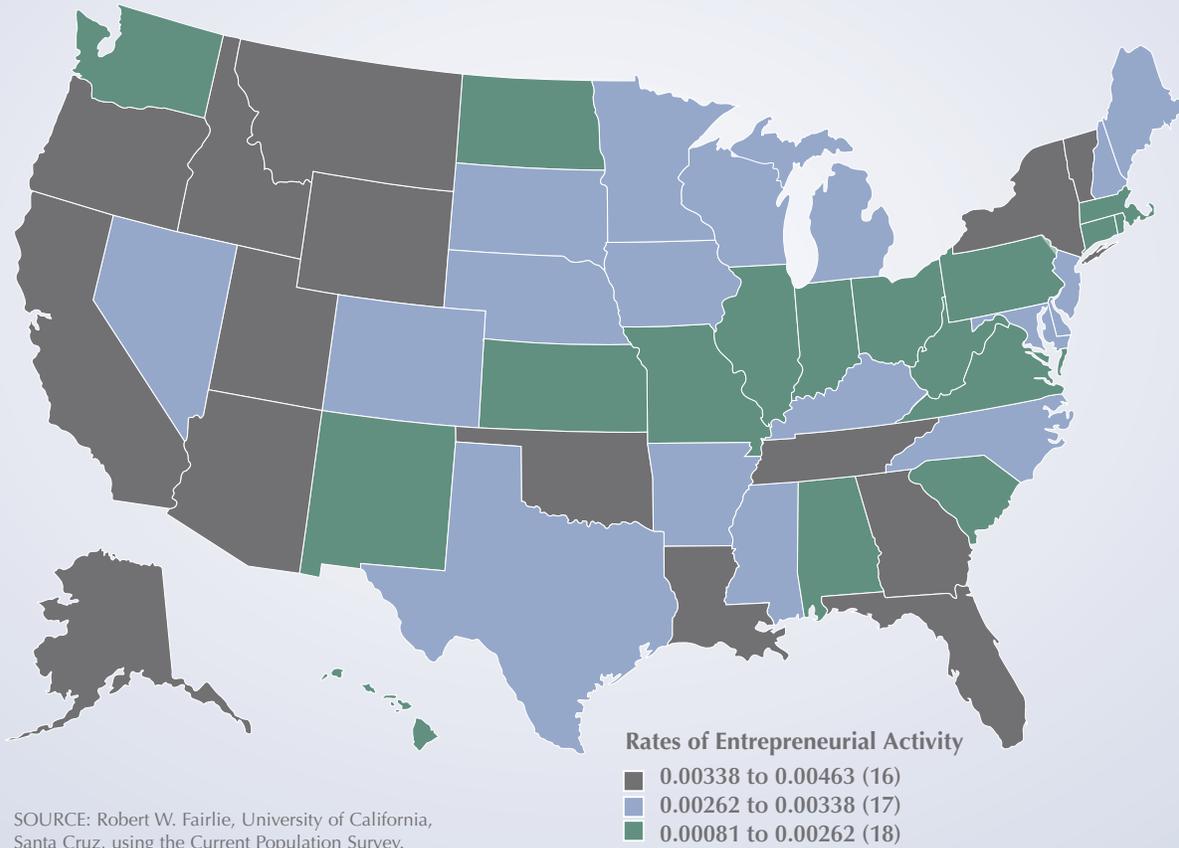
State	Index	Confidence Interval		Entrepreneurs per 100,000 People	Sample Size
		Lower	Upper		
U.S. Total	0.30%	0.29%	0.32%	300	586,248
Alabama	0.10%	0.02%	0.17%	100	6,655
Alaska	0.37%	0.24%	0.51%	370	7,737
Arizona	0.46%	0.30%	0.61%	460	7,782
Arkansas	0.34%	0.19%	0.48%	340	6,537
California	0.40%	0.34%	0.45%	400	47,449
Colorado	0.34%	0.24%	0.44%	340	12,724
Connecticut	0.21%	0.12%	0.29%	210	12,433
Delaware	0.14%	0.06%	0.21%	140	9,208
District of Columbia	0.46%	0.30%	0.62%	460	7,388
Florida	0.36%	0.28%	0.43%	360	22,974
Georgia	0.40%	0.29%	0.51%	400	12,960
Hawaii	0.21%	0.11%	0.32%	210	8,708
Idaho	0.46%	0.29%	0.63%	460	6,550
Illinois	0.24%	0.17%	0.32%	240	18,439
Indiana	0.24%	0.14%	0.34%	240	9,474
Iowa	0.26%	0.17%	0.36%	260	11,279
Kansas	0.25%	0.15%	0.35%	250	8,764
Kentucky	0.32%	0.20%	0.44%	320	8,849
Louisiana	0.44%	0.25%	0.63%	440	5,314
Maine	0.27%	0.17%	0.37%	270	11,122
Maryland	0.32%	0.22%	0.42%	320	13,488
Massachusetts	0.24%	0.14%	0.35%	240	8,705
Michigan	0.29%	0.20%	0.39%	290	14,486
Minnesota	0.31%	0.22%	0.40%	310	14,602
Mississippi	0.30%	0.14%	0.45%	300	5,574
Missouri	0.24%	0.14%	0.34%	240	9,854
Montana	0.40%	0.23%	0.57%	400	5,646
Nebraska	0.31%	0.18%	0.43%	310	8,869
Nevada	0.30%	0.18%	0.42%	300	9,369
New Hampshire	0.28%	0.18%	0.37%	280	12,693
New Jersey	0.26%	0.17%	0.36%	260	12,153
New Mexico	0.25%	0.12%	0.38%	250	5,709
New York	0.35%	0.27%	0.42%	350	23,960
North Carolina	0.32%	0.21%	0.43%	320	11,458
North Dakota	0.25%	0.13%	0.36%	250	7,354
Ohio	0.19%	0.13%	0.26%	190	16,810
Oklahoma	0.34%	0.20%	0.49%	340	7,191
Oregon	0.35%	0.23%	0.48%	350	8,092
Pennsylvania	0.15%	0.10%	0.21%	150	18,198
Rhode Island	0.21%	0.12%	0.31%	210	10,162
South Carolina	0.26%	0.15%	0.37%	260	8,170
South Dakota	0.29%	0.17%	0.41%	290	8,292
Tennessee	0.44%	0.29%	0.59%	440	8,082
Texas	0.29%	0.23%	0.36%	290	28,873
Utah	0.34%	0.21%	0.48%	340	7,430
Vermont	0.42%	0.28%	0.56%	420	8,402
Virginia	0.22%	0.14%	0.30%	220	12,512
Washington	0.22%	0.12%	0.31%	220	10,731
West Virginia	0.08%	0.02%	0.15%	80	7,802
Wisconsin	0.29%	0.19%	0.39%	290	11,604
Wyoming	0.43%	0.27%	0.59%	430	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.

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

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 Idaho (460 per one hundred thousand adults), the District of Columbia (460 per one hundred thousand adults), Arizona (460 per one hundred thousand adults), Tennessee (440 per one hundred thousand adults), and Louisiana (440 per one hundred thousand adults). The five states with the lowest entrepreneurial activity rates were West Virginia (eighty per one hundred thousand adults), Alabama (one hundred per one hundred thousand adults), Delaware (140 per one hundred thousand adults), Pennsylvania (150 per one hundred thousand adults), and Ohio (190 per one hundred thousand adults).

FIGURE 8
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY STATE (2007)



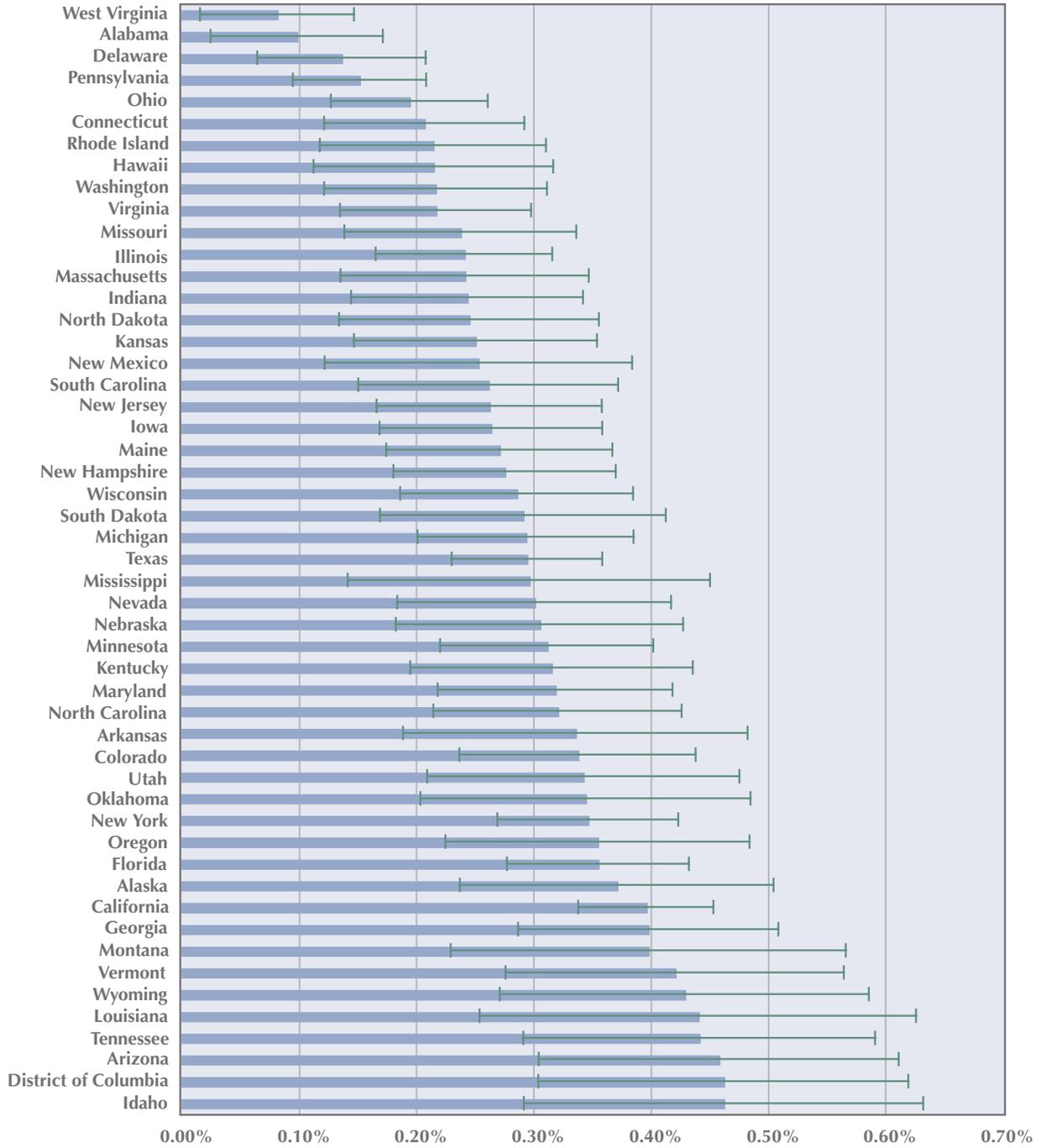
SOURCE: Robert W. Fairlie, University of California, Santa Cruz, using the Current Population Survey.

From 2006 to 2007, entrepreneurial activity rates increased substantially in the West and Midwest. Entrepreneurship rates declined in the Northeast and increased slightly in the South. Estimates of the Kauffman Index by region are reported in Figure 10 and Table 8. The entrepreneurial activity rate increased from 0.33 percent in 2006 to 0.37 percent in 2007 in the West. The region with the next-highest rate of entrepreneurial activity was the South (0.31 percent). The increase in rates in the Midwest from 0.22 percent to 0.25 percent and the decline in rates in the Northeast from 0.28 percent to 0.26 percent resulted in roughly similar levels of entrepreneurial activity in 2007 for these two regions. These differential trends in entrepreneurial activity by region from 2006 to

2007 are captured by differential trends by states across regions. Table 9 reports estimates of entrepreneurial activity rates by state from 2006 to 2007. 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, the three-year period between 2005 and 2007 is compared to the three-year period between 1996 (the earliest year included in the dataset) and 1998.³ Mississippi experienced the largest positive change in its entrepreneurial activity rate over this time period, increasing from 0.27 percent to 0.40 percent, or

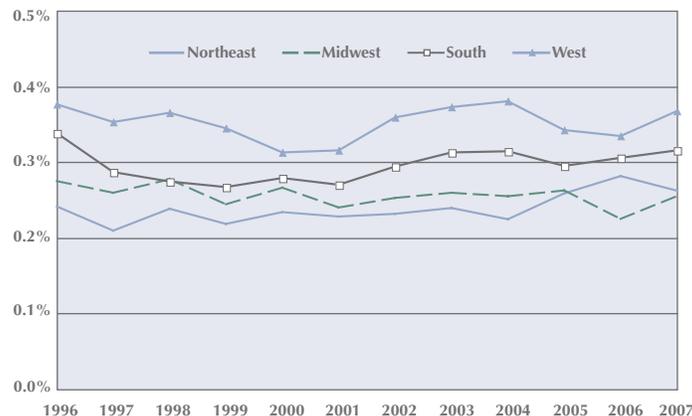
FIGURE 9
 KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY STATE
 WITH 95 PERCENT CONFIDENCE INTERVALS, 2007



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

0.14 percentage points. Other states experiencing large increases in entrepreneurial activity rates were Hawaii (0.11 percentage points), Rhode Island (0.08 percentage points), and Massachusetts (0.07 percentage points). States that experienced large decreases in entrepreneurial activity rates were Alaska (-0.25 percentage points), New Mexico (-0.22 percentage points), North Dakota (-0.17 percentage points), Kansas (-0.09 percentage points), and Nebraska (-0.09 percentage points). All of these changes over time are statistically significant at the 0.05 or 0.10 level of confidence.

FIGURE 10
KAUFFMAN INDEX OF
ENTREPRENEURIAL ACTIVITY BY REGION
(1996–2007)



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

From 2006 to 2007, entrepreneurial activity rates increased substantially in the West and Midwest, declined in the Northeast, and increased slightly in the South.

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TABLE 8
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY BY REGION
(1996–2007)

Year	NORTHEAST		MIDWEST		SOUTH		WEST		TOTAL	
	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

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.

TABLE 9
KAUFFMAN INDEX OF ENTREPRENEURIAL
ACTIVITY BY STATE (2006, 2007)

State	Index	2006			Sample Size	Index	2007		
		Confidence Lower	Interval Upper				Confidence Lower	Interval Upper	Sample Size
U.S. Total	0.29%	0.27%	0.30%	591,606	0.30%	0.29%	0.32%	586,248	
Alabama	0.25%	0.13%	0.37%	7,017	0.10%	0.02%	0.17%	6,655	
Alaska	0.25%	0.14%	0.36%	7,877	0.37%	0.24%	0.51%	7,737	
Arizona	0.30%	0.18%	0.42%	7,898	0.46%	0.30%	0.61%	7,782	
Arkansas	0.37%	0.22%	0.52%	6,386	0.34%	0.19%	0.48%	6,537	
California	0.35%	0.29%	0.40%	47,404	0.40%	0.34%	0.45%	47,449	
Colorado	0.28%	0.19%	0.37%	12,687	0.34%	0.24%	0.44%	12,724	
Connecticut	0.29%	0.19%	0.40%	12,783	0.21%	0.12%	0.29%	12,433	
Delaware	0.19%	0.09%	0.28%	9,253	0.14%	0.06%	0.21%	9,208	
District of Columbia	0.29%	0.16%	0.42%	7,151	0.46%	0.30%	0.62%	7,388	
Florida	0.34%	0.27%	0.42%	24,408	0.36%	0.28%	0.43%	22,974	
Georgia	0.44%	0.32%	0.56%	12,841	0.40%	0.29%	0.51%	12,960	
Hawaii	0.40%	0.24%	0.55%	8,519	0.21%	0.11%	0.32%	8,708	
Idaho	0.37%	0.22%	0.52%	6,837	0.46%	0.29%	0.63%	6,550	
Illinois	0.18%	0.12%	0.25%	18,200	0.24%	0.17%	0.32%	18,439	
Indiana	0.21%	0.11%	0.30%	9,481	0.24%	0.14%	0.34%	9,474	
Iowa	0.31%	0.21%	0.42%	11,150	0.26%	0.17%	0.36%	11,279	
Kansas	0.22%	0.12%	0.32%	8,578	0.25%	0.15%	0.35%	8,764	
Kentucky	0.24%	0.14%	0.34%	8,939	0.32%	0.20%	0.44%	8,849	
Louisiana	0.30%	0.15%	0.45%	5,203	0.44%	0.25%	0.63%	5,314	
Maine	0.42%	0.30%	0.54%	11,381	0.27%	0.17%	0.37%	11,122	
Maryland	0.27%	0.17%	0.36%	13,158	0.32%	0.22%	0.42%	13,488	
Massachusetts	0.35%	0.22%	0.47%	9,103	0.24%	0.14%	0.35%	8,705	
Michigan	0.16%	0.10%	0.23%	14,675	0.29%	0.20%	0.39%	14,486	
Minnesota	0.29%	0.20%	0.38%	14,347	0.31%	0.22%	0.40%	14,602	
Mississippi	0.52%	0.31%	0.72%	5,402	0.30%	0.14%	0.45%	5,574	
Missouri	0.25%	0.14%	0.35%	10,140	0.24%	0.14%	0.34%	9,854	
Montana	0.60%	0.39%	0.81%	5,792	0.40%	0.23%	0.57%	5,646	
Nebraska	0.28%	0.17%	0.38%	8,913	0.31%	0.18%	0.43%	8,869	
Nevada	0.33%	0.22%	0.45%	9,466	0.30%	0.18%	0.42%	9,369	
New Hampshire	0.21%	0.13%	0.28%	12,768	0.28%	0.18%	0.37%	12,693	
New Jersey	0.24%	0.16%	0.33%	12,021	0.26%	0.17%	0.36%	12,153	
New Mexico	0.35%	0.20%	0.49%	5,900	0.25%	0.12%	0.38%	5,709	
New York	0.33%	0.26%	0.41%	24,708	0.35%	0.27%	0.42%	23,960	
North Carolina	0.20%	0.12%	0.29%	11,909	0.32%	0.21%	0.43%	11,458	
North Dakota	0.29%	0.17%	0.41%	7,540	0.25%	0.13%	0.36%	7,354	
Ohio	0.22%	0.14%	0.30%	17,318	0.19%	0.13%	0.26%	16,810	
Oklahoma	0.43%	0.27%	0.58%	7,282	0.34%	0.20%	0.49%	7,191	
Oregon	0.38%	0.24%	0.52%	7,857	0.35%	0.23%	0.48%	8,092	
Pennsylvania	0.17%	0.11%	0.24%	18,367	0.15%	0.10%	0.21%	18,198	
Rhode Island	0.28%	0.17%	0.39%	10,418	0.21%	0.12%	0.31%	10,162	
South Carolina	0.18%	0.09%	0.27%	8,265	0.26%	0.15%	0.37%	8,170	
South Dakota	0.41%	0.27%	0.55%	8,568	0.29%	0.17%	0.41%	8,292	
Tennessee	0.25%	0.15%	0.36%	8,212	0.44%	0.29%	0.59%	8,082	
Texas	0.30%	0.24%	0.37%	29,239	0.29%	0.23%	0.36%	28,873	
Utah	0.29%	0.17%	0.41%	7,799	0.34%	0.21%	0.48%	7,430	
Vermont	0.38%	0.24%	0.52%	8,734	0.42%	0.28%	0.56%	8,402	
Virginia	0.28%	0.19%	0.38%	12,794	0.22%	0.14%	0.30%	12,512	
Washington	0.27%	0.17%	0.37%	10,583	0.22%	0.12%	0.31%	10,731	
West Virginia	0.19%	0.09%	0.29%	7,677	0.08%	0.02%	0.15%	7,802	
Wisconsin	0.27%	0.18%	0.37%	11,285	0.29%	0.19%	0.39%	11,604	
Wyoming	0.32%	0.19%	0.44%	7,373	0.43%	0.27%	0.59%	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

TABLE 10
KAUFFMAN INDEX OF ENTREPRENEURIAL
ACTIVITY BY STATE (1996–98 and 2005–2007)

State	Index	1996–98 Period			Sample Size	Index	2005–07 Period		
		Confidence Interval Lower	Confidence Interval Upper	Confidence Interval Lower			Confidence Interval Upper	Sample Size	
U.S. Total	0.29%	0.28%	0.30%	1,594,432	0.29%	0.28%	0.30%	1,775,052	
Alabama	0.23%	0.17%	0.30%	22,508	0.17%	0.12%	0.23%	21,103	
Alaska	0.59%	0.47%	0.71%	18,315	0.34%	0.26%	0.42%	23,528	
Arizona	0.40%	0.32%	0.49%	23,278	0.36%	0.28%	0.44%	23,529	
Arkansas	0.31%	0.24%	0.39%	21,495	0.39%	0.30%	0.49%	19,742	
California	0.34%	0.31%	0.38%	131,823	0.35%	0.32%	0.39%	141,527	
Colorado	0.44%	0.35%	0.53%	23,331	0.38%	0.32%	0.45%	37,971	
Connecticut	0.21%	0.14%	0.28%	16,576	0.26%	0.20%	0.31%	38,173	
Delaware	0.23%	0.15%	0.31%	16,571	0.16%	0.11%	0.21%	27,502	
District of Columbia	0.28%	0.19%	0.36%	15,322	0.34%	0.26%	0.42%	21,425	
Florida	0.34%	0.29%	0.38%	70,549	0.33%	0.28%	0.37%	71,444	
Georgia	0.31%	0.25%	0.38%	28,903	0.39%	0.32%	0.46%	37,826	
Hawaii	0.21%	0.14%	0.28%	16,292	0.32%	0.24%	0.39%	25,929	
Idaho	0.39%	0.30%	0.48%	22,702	0.43%	0.34%	0.53%	20,328	
Illinois	0.25%	0.21%	0.29%	68,087	0.23%	0.18%	0.27%	55,556	
Indiana	0.24%	0.18%	0.31%	22,680	0.25%	0.19%	0.31%	29,092	
Iowa	0.38%	0.29%	0.47%	20,436	0.31%	0.24%	0.37%	33,426	
Kansas	0.33%	0.25%	0.41%	20,354	0.24%	0.18%	0.30%	26,148	
Kentucky	0.28%	0.21%	0.36%	21,966	0.24%	0.18%	0.31%	26,763	
Louisiana	0.32%	0.24%	0.39%	21,989	0.35%	0.25%	0.45%	16,040	
Maine	0.38%	0.28%	0.48%	17,566	0.35%	0.29%	0.42%	34,164	
Maryland	0.25%	0.18%	0.33%	18,675	0.33%	0.26%	0.40%	38,897	
Massachusetts	0.20%	0.15%	0.25%	39,033	0.27%	0.21%	0.34%	27,728	
Michigan	0.25%	0.20%	0.29%	58,156	0.23%	0.18%	0.28%	44,841	
Minnesota	0.31%	0.23%	0.38%	23,027	0.30%	0.25%	0.36%	43,151	
Mississippi	0.27%	0.19%	0.34%	20,519	0.40%	0.29%	0.51%	16,680	
Missouri	0.29%	0.21%	0.37%	19,321	0.23%	0.17%	0.28%	30,426	
Montana	0.52%	0.42%	0.62%	20,860	0.50%	0.39%	0.61%	17,297	
Nebraska	0.36%	0.27%	0.45%	20,216	0.27%	0.20%	0.33%	26,886	
Nevada	0.36%	0.26%	0.45%	20,160	0.33%	0.26%	0.40%	27,924	
New Hampshire	0.25%	0.18%	0.33%	16,436	0.26%	0.20%	0.31%	37,961	
New Jersey	0.21%	0.17%	0.26%	48,937	0.27%	0.21%	0.32%	36,467	
New Mexico	0.57%	0.47%	0.68%	22,522	0.35%	0.26%	0.44%	17,483	
New York	0.28%	0.24%	0.31%	102,328	0.32%	0.28%	0.36%	74,150	
North Carolina	0.28%	0.23%	0.33%	43,195	0.25%	0.20%	0.31%	35,744	
North Dakota	0.46%	0.36%	0.56%	19,200	0.28%	0.21%	0.35%	22,164	
Ohio	0.25%	0.21%	0.30%	62,180	0.23%	0.18%	0.27%	52,023	
Oklahoma	0.38%	0.30%	0.46%	23,839	0.39%	0.31%	0.48%	21,467	
Oregon	0.43%	0.33%	0.52%	19,111	0.36%	0.28%	0.43%	23,996	
Pennsylvania	0.17%	0.14%	0.20%	69,109	0.17%	0.13%	0.20%	55,669	
Rhode Island	0.17%	0.10%	0.23%	16,782	0.24%	0.18%	0.30%	31,238	
South Carolina	0.30%	0.22%	0.38%	18,661	0.23%	0.17%	0.29%	24,532	
South Dakota	0.42%	0.33%	0.52%	19,954	0.34%	0.26%	0.41%	25,943	
Tennessee	0.35%	0.26%	0.43%	21,189	0.31%	0.24%	0.38%	24,861	
Texas	0.30%	0.26%	0.34%	78,273	0.32%	0.28%	0.35%	86,768	
Utah	0.32%	0.24%	0.40%	22,181	0.34%	0.26%	0.41%	23,410	
Vermont	0.40%	0.29%	0.50%	15,784	0.45%	0.36%	0.54%	25,738	
Virginia	0.26%	0.20%	0.33%	25,731	0.24%	0.19%	0.29%	37,925	
Washington	0.29%	0.21%	0.37%	21,359	0.24%	0.18%	0.30%	32,298	
West Virginia	0.19%	0.12%	0.25%	23,497	0.15%	0.10%	0.20%	23,418	
Wisconsin	0.23%	0.17%	0.29%	23,805	0.28%	0.22%	0.34%	34,447	
Wyoming	0.37%	0.28%	0.46%	19,649	0.41%	0.32%	0.50%	22,304	

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.

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).⁴ Among these metropolitan areas, Phoenix had the highest entrepreneurial activity rate at 580 per one hundred thousand adults. Riverside-San Bernardino (five hundred per one hundred thousand adults), Atlanta (480 per one hundred thousand adults), Los Angeles (440 per one hundred thousand adults), and Miami (410 per one hundred thousand adults) also had high entrepreneurial activity rates. In this group of large metropolitan statistical areas (MSAs), Philadelphia had the lowest entrepreneurial activity rate (110 per one hundred thousand adults).

Among the fifteen largest metropolitan areas in the United States, Phoenix had the highest entrepreneurial activity rate at 580 per one hundred thousand adults.

TABLE 11
KAUFFMAN INDEX OF ENTREPRENEURIAL ACTIVITY
FOR THE FIFTEEN LARGEST MSAs (2007)

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Metropolitan Statistical Area	Index	Confidence Interval		Entrepreneurs per 100,000 People	Sample Size
		Lower	Upper		
New York-Northern New Jersey-Long Island, NY-NJ-PA	0.39%	0.31%	0.48%	390	23,564
Los Angeles-Long Beach-Santa Ana, CA	0.44%	0.33%	0.54%	440	17,235
Chicago-Naperville-Joliet, IN-IN-WI	0.23%	0.14%	0.32%	230	12,837
Dallas-Fort Worth-Arlington, TX	0.29%	0.17%	0.41%	290	7,918
Philadelphia-Camden-Wilmington, PA-NJ-DE	0.11%	0.03%	0.19%	110	12,840
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.32%	0.22%	0.43%	320	17,440
Houston-Baytown-Sugar Land, TX	0.35%	0.20%	0.51%	350	6,337
Miami-Fort Lauderdale-Miami Beach, FL	0.41%	0.26%	0.57%	410	6,789
Atlanta-Sandy Springs-Marietta, GA	0.48%	0.31%	0.64%	480	7,353
Boston-Cambridge-Quincy, MA-NH	0.24%	0.12%	0.36%	240	9,799
Detroit-Warren-Livonia, MI	0.30%	0.16%	0.44%	300	6,322
Phoenix-Mesa-Scottsdale, AZ	0.58%	0.37%	0.78%	580	5,519
San Francisco-Oakland-Fremont, CA	0.37%	0.20%	0.53%	370	5,410
Riverside-San Bernardino, CA	0.50%	0.30%	0.70%	500	4,959
Seattle-Tacoma-Bellevue, WA	0.22%	0.10%	0.34%	220	5,738

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.

Summary

The Kauffman Index measures the monthly rate of business creation 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 CPS provide a uniquely large, nationally representative panel dataset for measuring this entrepreneurial activity. The total adult population sample size for the period 1996 to 2007 is nearly 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 2007, 0.30 percentage of the adult population or three hundred out of one hundred thousand adults created a new business each month, representing approximately four hundred ninety-five thousand new businesses per month. This total rate of business creation increased only slightly from 0.29 percent in 2006. In 2007, there are some interesting differences in changes in entrepreneurial activity rates for population subgroups. First, trends in entrepreneurial activity diverged for men and women. For men, the entrepreneurial activity rate increased from 0.35 percent in 2006 to 0.41 percent in 2007. In contrast, the entrepreneurial activity rate for women decreased from 0.23 percent in 2006 to 0.20 percent in 2007. Second, Latinos experienced a large increase in the entrepreneurial activity rate in 2007. The entrepreneurial activity rate increased from 0.33 percent in 2006 to 0.40 percent in 2007. Non-Latino whites and African-Americans experienced slight increases in entrepreneurial activity rates, and Asians experienced a decline in rates. A related finding is that the rate of entrepreneurial activity among immigrants, already high relative to the native-born, increased substantially between 2006 and 2007. From 2006 to 2007, the entrepreneurial activity rate among immigrants increased from 0.37 percent to 0.46 percent, considerably higher than the native-born entrepreneurial activity rate of 0.27 percent.

Entrepreneurial activity rates reflect strong regional patterns. Rates of new business creation

are highest in the West and South. From 2006 to 2007, the largest increases in entrepreneurial activity occurred in the West (0.33 percent to 0.37 percent) and Midwest (0.22 percent to 0.25 percent). The South experienced a slight increase in entrepreneurial activity rates (0.30 percent to 0.31 percent), whereas the Northeast experienced a decline in entrepreneurial activity rates (0.28 percent to 0.26 percent).

Entrepreneurial activity rates varied substantially across states, from a low of 0.08 percent in West Virginia to a high of 0.46 percent in Idaho. Entrepreneurial activity rates also were high in the District of Columbia (0.46 percent), Arizona (0.46 percent), Tennessee (0.44 percent), and Louisiana (0.44 percent). In addition to West Virginia, the lowest rates of entrepreneurial activity were found in Alabama (0.10 percent), Delaware (0.14 percent), Pennsylvania (0.15 percent), and Ohio (0.19 percent). The states experiencing the largest increases in entrepreneurial activity rates over the past decade were Mississippi (with an increase of 0.14 percentage points), Hawaii (0.11 percentage points), Rhode Island (0.08 percentage points), and Massachusetts (0.07 percentage points). The states that experienced the largest decreases in their rates were Alaska (with a decrease of 0.25 percentage points), New Mexico (-0.22 percentage points), North Dakota (-0.17 percentage points), Kansas (-0.09 percentage points), and Nebraska (-0.09 percentage points).

Analysis of the fifteen largest metropolitan areas in the United States reveals that Phoenix (0.58 percent) had the highest entrepreneurial activity rate in 2007. Philadelphia (0.11 percent) had the lowest entrepreneurial activity rate.

appendix

DATA

The underlying datasets used in this analysis are the basic monthly files to the Current Population Survey (CPS). These surveys, conducted monthly by the U.S. Bureau of the Census and the Bureau of Labor Statistics, represent the entire U.S. population and contain observations for more than one hundred thirty thousand people each month. By linking the CPS files over time, longitudinal data are created, allowing for the examination of business creations. Combining the 2007 monthly data creates a sample size of seven hundred thousand adults ages twenty to sixty-four. The dataset built for the analysis of the entire twelve-month period between 1996 and 2007 has a sample size of nearly 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. To match these data, the household and individual identifiers provided by the CPS are used. False matches are removed by comparing race, sex, and age codes from the two months. After removing all non-unique matches, the underlying CPS data are checked extensively for coding errors and other problems.

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

DETAILED DEFINITIONS

The CPS microdata capture all business owners, including those who own incorporated or unincorporated businesses, and those who are employers or non-employers. To create the

Kauffman Index, all individuals who do not own a business as their main job are identified in the first survey month. By matching CPS files, it then is 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 the first 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. These age categories follow the Bureau of Labor Statistics

practice of publishing unemployment rates for ages twenty-plus for total rates and ages twenty-five-plus for rates by education. Older individuals (ages sixty-five and older) are removed from the sample because retirement in this age group leads to lower entrepreneurial activity rates. There were major race and industry coding changes over the 1996 to 2006 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 rates are 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 (Polivka 2000). Sample sizes are drawn to ensure that the coefficient of variation, which is the standard error of the estimate divided by the estimate, is no larger than 8 percent for an annual average unemployment rate of 6 percent.⁵ For many states, the sample sizes contained in the CPS are much larger than this threshold. While state-level estimates are not affected by non-random sampling by state in the same way that national estimates are, they are still non-representative because of non-response and post-stratification raking (Polivka 2000). CPS sampling weights are used for all 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 five thousand 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 23 percent unemployment rate variance. 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 complicated 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 CPS sample weights, all estimates of entrepreneurial activity rates are correct.

COMPARISON TO OTHER MEASURES

The Kauffman Index differs from many other measures of entrepreneurial activity in that it measures flows into business ownership rather than the number of existing businesses at a specific point in time. Other measures of the

number of entrepreneurs, self-employed business owners, or businesses in the United States readily are available from several nationally representative government datasets. For example, the Economic Census: Survey of Minority-Owned and Female-Owned Business Enterprises provides estimates of the number of businesses every five years, and the CPS and Census of Population provide estimates of the number of self-employed business owners annually and every decade, respectively. Typical measures of business ownership based on these data, however, 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 numbers 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.⁶ These data, therefore, are likely to lead to a substantial undercount in the entrepreneurial activity rate, particularly for certain industries and regions, such as the high-technology industry.

Finally, the SUSB is 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 through sixty-four who are involved in either the start-up 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 start-up 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.

In addition to the SUSB data, there recently have been several state-level reports of entrepreneurial activity, including the Advanced Research Technologies, LLC (2005) report to the SBA and Burton: Center for American Progress (2005). The Kauffman Index offers more recent data than these other sources, and, unlike the others, provides a dynamic picture of flows into business ownership over time.

Visit www.kauffman.org/kauffmanindex/ to download tables and graphs.

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

² 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://econ.ucsc.edu/~fairlie/papers/siliconvalley.pdf>.

³ Annual estimates of state-level entrepreneurship rates are available for downloading at www.kauffman.org/kauffmanindex.

⁴ 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 five thousand observations.

⁵ The ratio of households sampled for each state range from one in one hundred households to one in three thousand households (Polivka 2000).

⁶ According to the 2003 Statistics of U.S. Businesses, U.S. Census Bureau, 23.6 percent of firms have employees.

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