

Kauffman Index of Entrepreneurial Activity



Kauffman Symposium on Entrepreneurship and Innovation
Data

Robert W. Fairlie
University of California, Santa Cruz

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New Measure of Entrepreneurship

- ❑ Create new measure of entrepreneurial activity created from microdata from matched monthly files from the Current Population Survey (CPS).
- ❑ Dynamic measure of entrepreneurship that captures the rate of business formation at the individual owner level.
- ❑ Want to capture business formation instead of business ownership.

Current Population Survey

- ❑ Conducted by the U.S. Census Bureau and the Bureau of Labor Statistics
- ❑ Designed to be representative of U.S. population, individual states and other specified areas
- ❑ Currently interviews more than 50,000 households and 130,000 individuals each month
- ❑ Designed to primarily collect employment information, but also to collect demographic and supplemental information

Business Ownership in the CPS

- ❑ Class of worker question for main job
- ❑ Self-employed in their own unincorporated or incorporated business
- ❑ Captures non-employer and employer firms
- ❑ Impose hours restriction to rule out very small-scale business activities
- ❑ Less inclusive than business-level data sources

Number of Business owners in CPS	11 million
Number of businesses in the SBO	23 million
Number of employer firms	5.5 million
Number of businesses in D&B	14 million

Creating Monthly Panel Data from the CPS

- ❑ CPS households are interviewed for 4 consecutive months, not interviewed for the following 8 months, and interviewed again for 4 months

CPS Rotation Pattern

J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	2	3	4									5	6	7	8								
	1	2	3	4									5	6	7	8							
		1	2	3	4									5	6	7	8						

Creating Monthly Panel Data from the CPS

- ❑ 75 percent of respondents can be matched to the following month
- ❑ False positives are removed by comparing race, sex and age codes
- ❑ Match rates are generally between 94 and 96 percent
- ❑ Remove observations with allocated variables

Definition of Entrepreneurship

- ❑ Captures business formation at the time the business is created.

Month 1

Non-business owners

Month 2

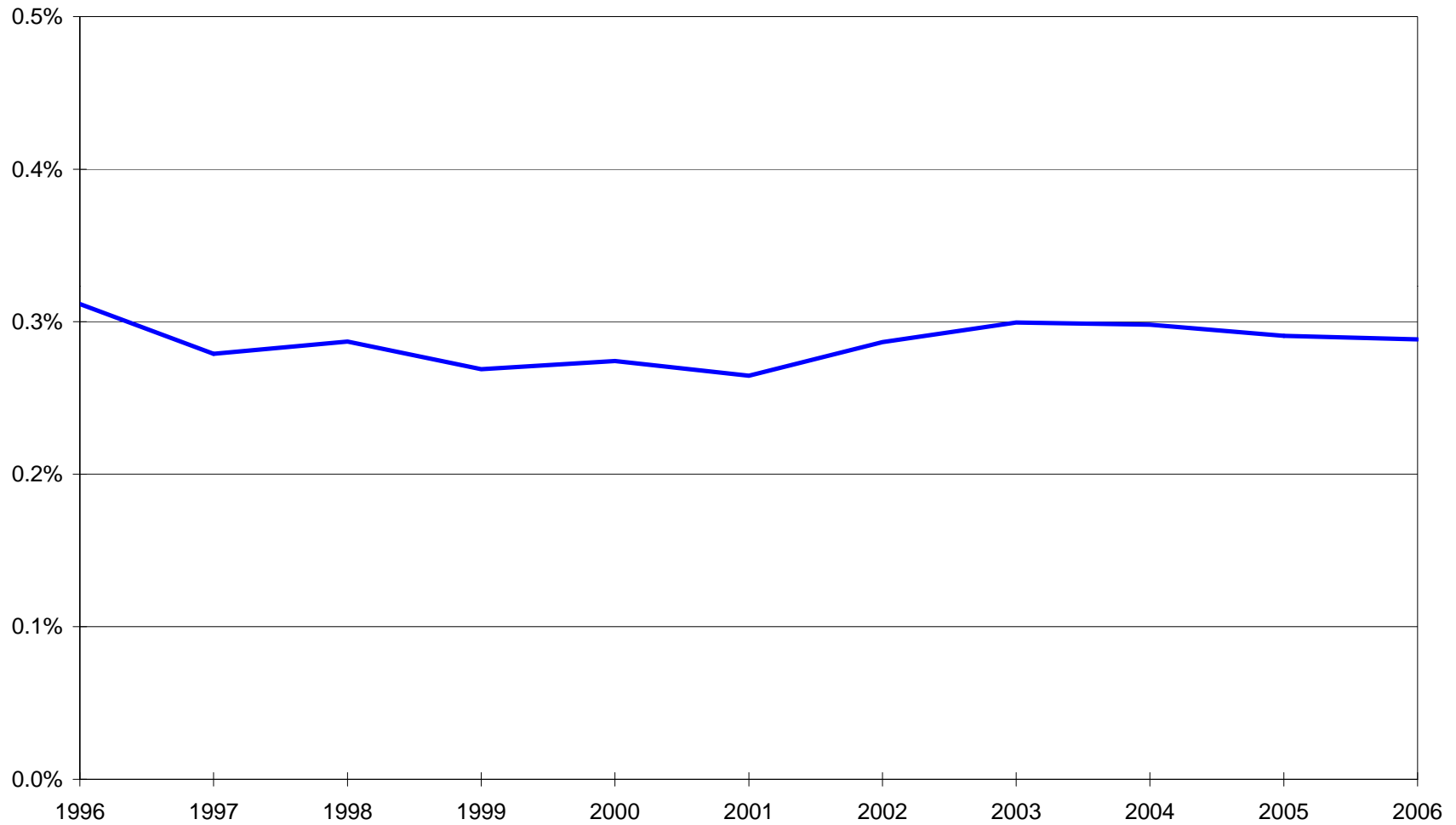
Business owners with 15 or more
hours worked per week

- ❑ A major advantage is that all new business owners are captured including those who own incorporated or unincorporated businesses, and those who are employers or non-employers.
- ❑ Recent measures of entrepreneurial activity or firm formation typically include only larger, employer firm births (see Advanced Research Technologies, LLC, 2005 and Burton: Center for American Progress 2005 for example).
- ❑ Employer firms represent only 25 percent of all existing firms (U.S. Small Business Administration 2001, Headd 2005), and a significant number of new employer firms start as non-employer firms (Davis, et. al. 2006).

U.S. Rates

- ❑ In the United States, 290 out of 100,000 (or 0.29 percent) people start a business each month.
- ❑ Approximately 465,000 people start a business each month.
- ❑ Large sample sizes, $n=6.3$ million or 570,000 per year

Figure 1
Kauffman Index of Entrepreneurial Activity (1996-2006)



Source: Robert W. Fairlie, UC Santa Cruz using the CPS .

Figure 2
Kauffman Index of Entrepreneurial Activity by Gender (1996-2006)

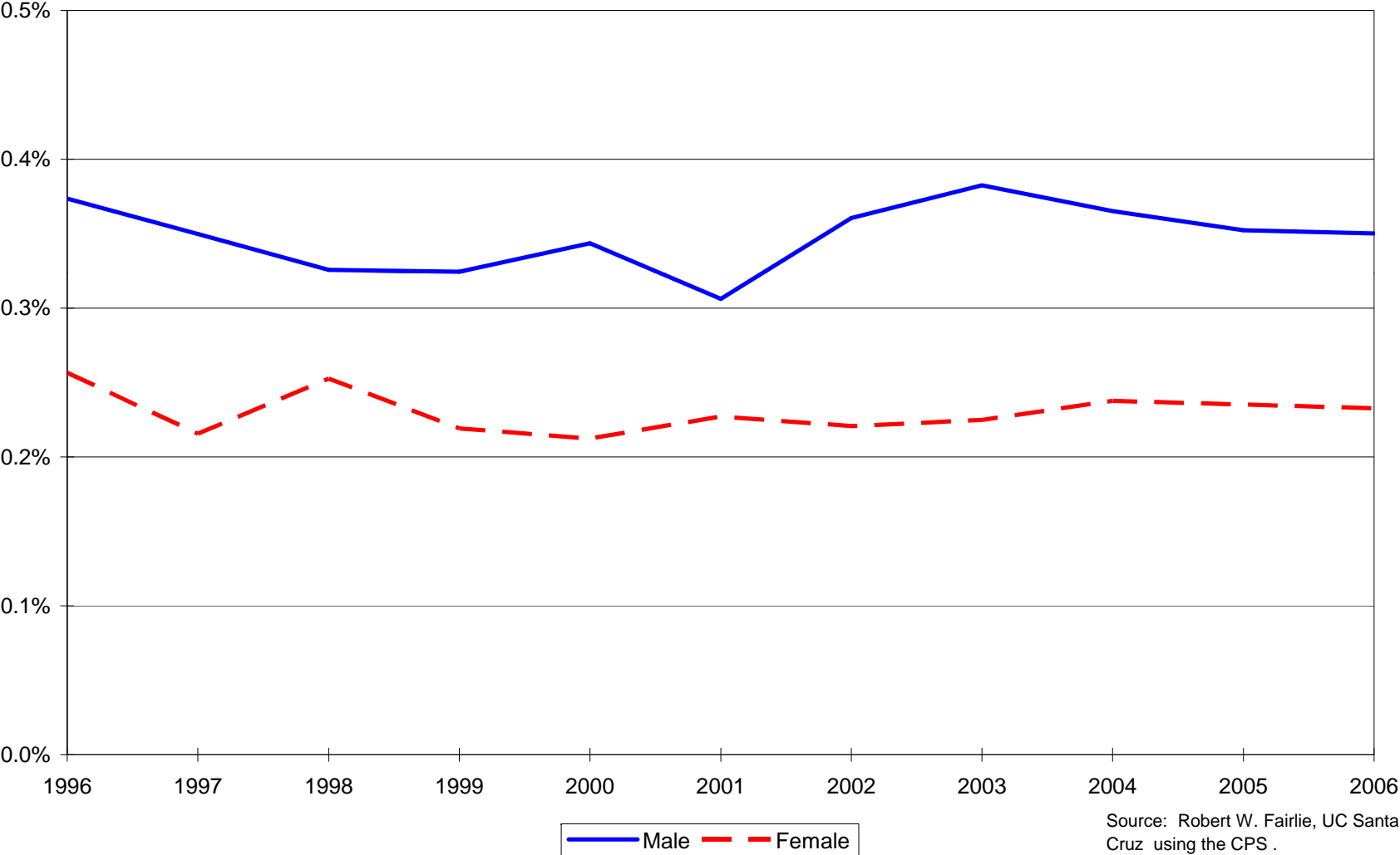


Figure 3
Kauffman Index of Entrepreneurial Activity by Race (1996-2006)

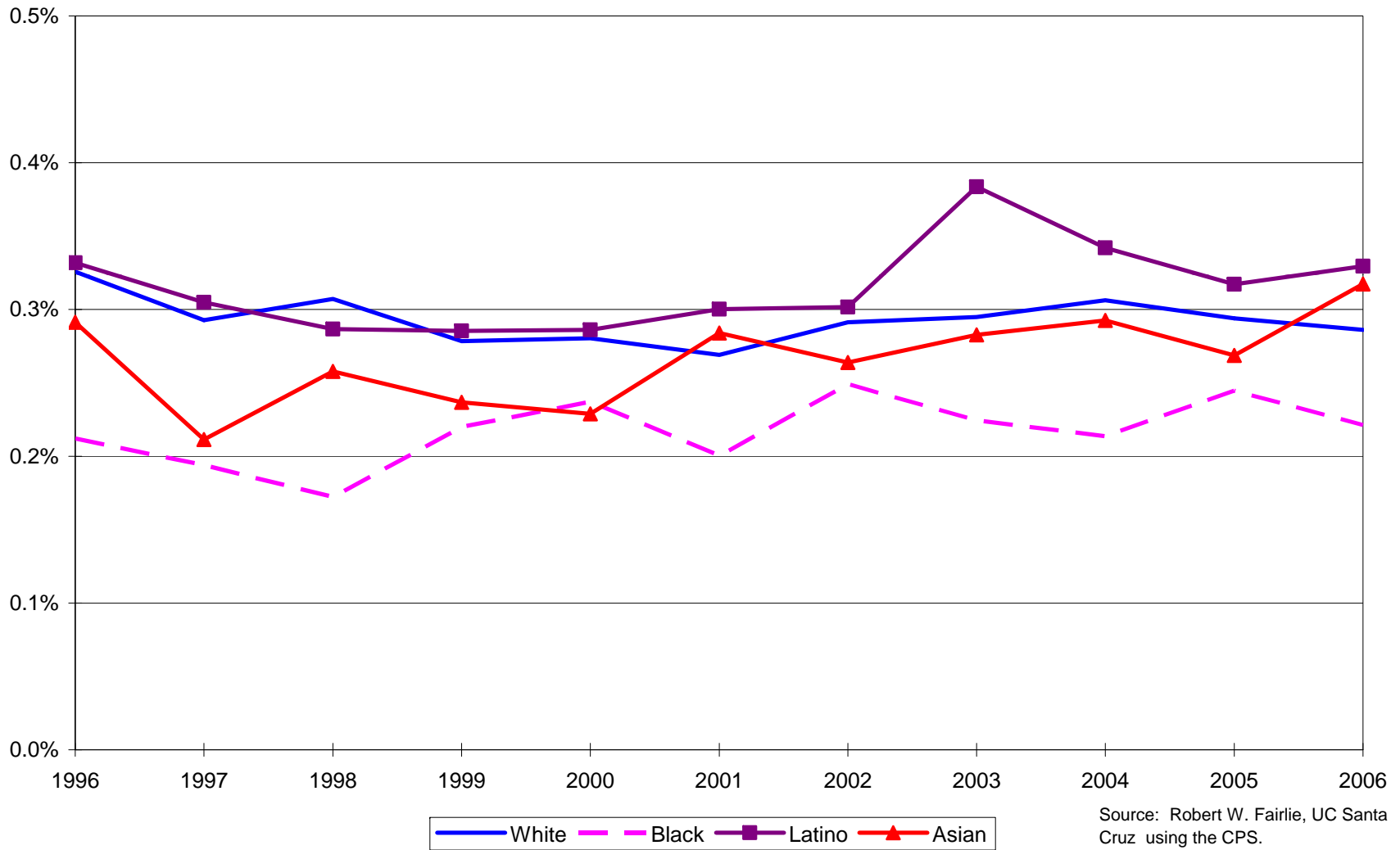


Figure 4
Kauffman Index of Entrepreneurial Activity by Nativity (1996-2006)

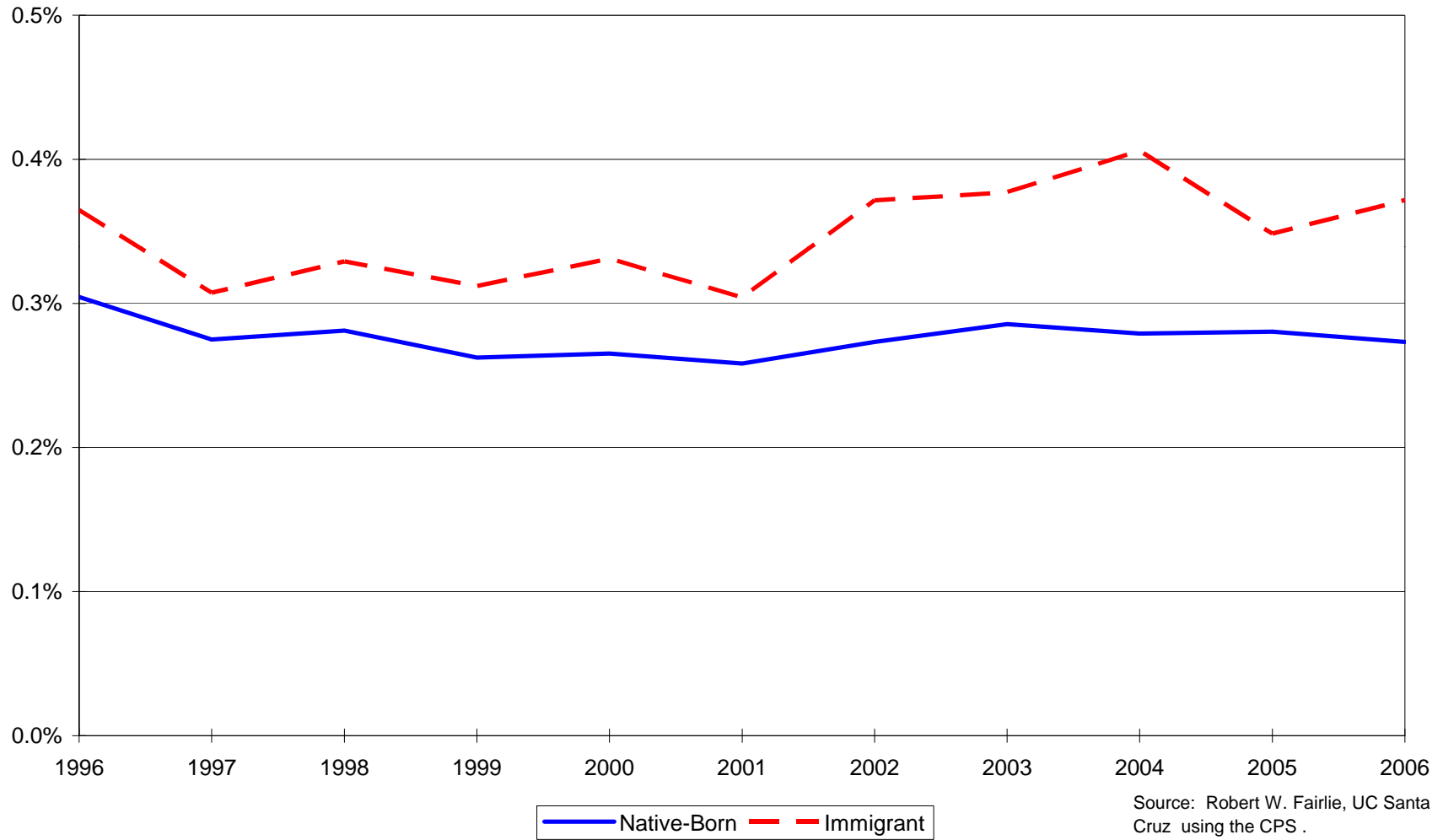


Figure 7
Kauffman Index of Entrepreneurial Activity by Region (1996-2006)

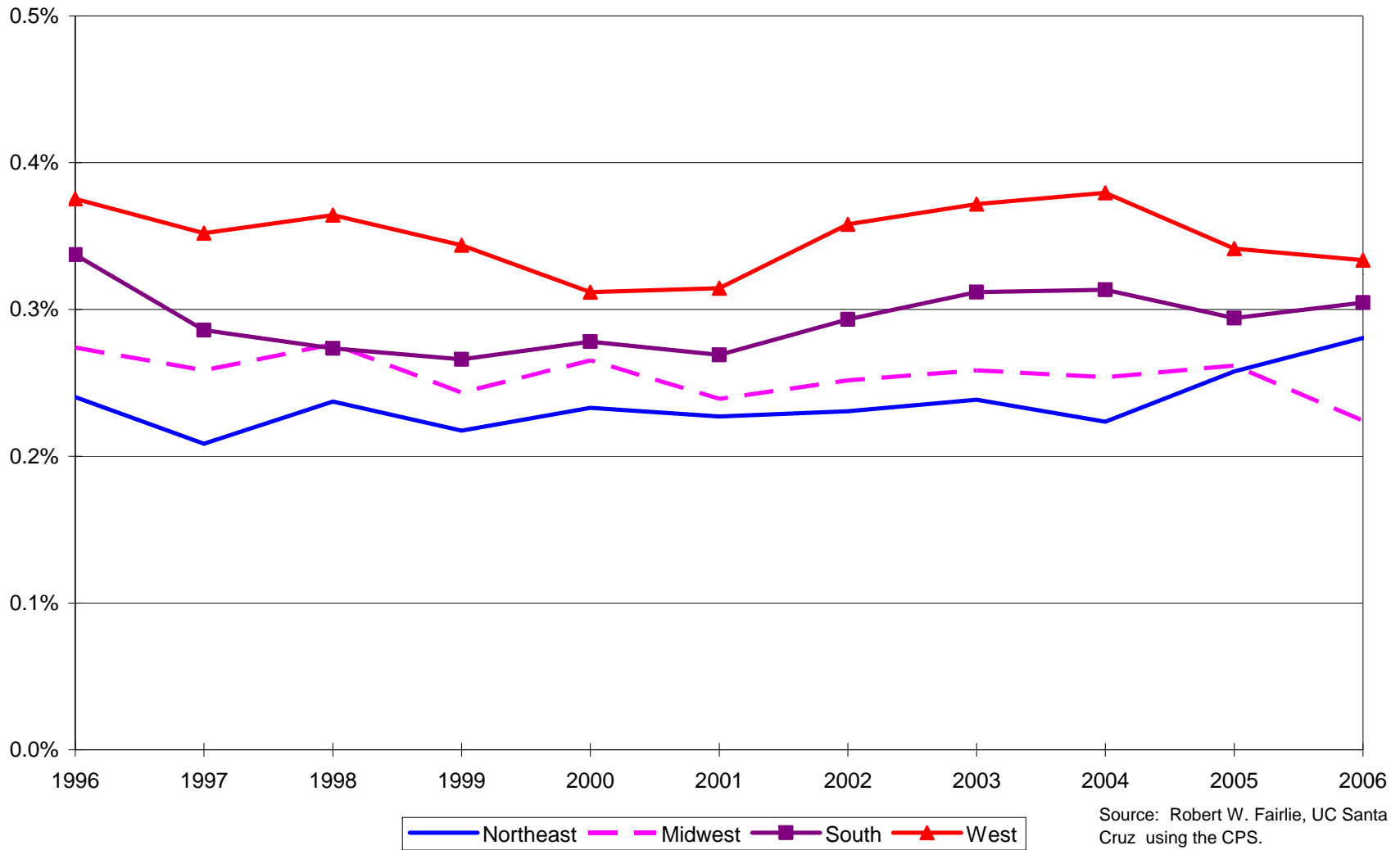


Figure 1: Kauffman Index of Entrepreneurial Activity by State (2006)

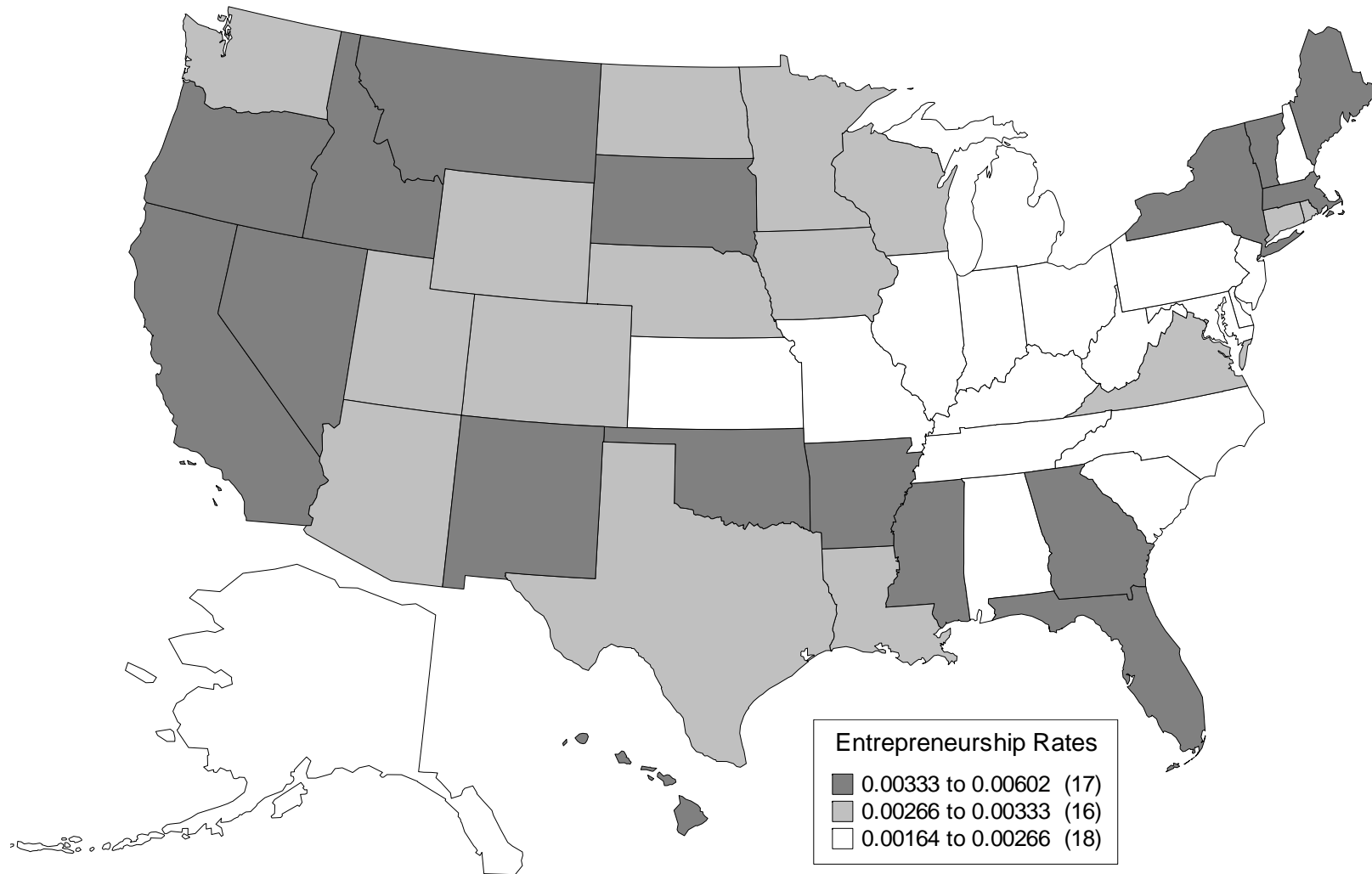


Table 4
Kauffman Index of Entrepreneurial Activity for the 15 Largest MSAs (2006)

Metropolitan Statistical Area	Entrep. Index	Confidence Interval		Entreps. per 100,000 People	Sample Size
		Lower	Upper		
New York-Northern New Jersey-Long Island, NY-NJ-PA	0.39%	0.31%	0.47%	390	23,523
Los Angeles-Long Beach-Santa Ana, CA	0.34%	0.25%	0.44%	340	17,467
Chicago-Naperville-Joliet, IN-IN-WI	0.18%	0.11%	0.26%	180	12,778
Dallas-Fort Worth-Arlington, TX	0.24%	0.13%	0.35%	240	7,665
Philadelphia-Camden-Wilmington, PA-NJ-DE	0.23%	0.12%	0.34%	230	12,834
Washington-Arlington-Alexandria, DC-VA-MD-WV	0.28%	0.18%	0.37%	280	17,068
Miami-Fort Lauderdale-Miami Beach, FL	0.50%	0.33%	0.66%	500	7,038
Houston-Baytown-Sugar Land, TX	0.33%	0.19%	0.47%	330	6,505
Atlanta-Sandy Springs-Marietta, GA	0.49%	0.32%	0.66%	490	7,268
Detroit-Warren-Livonia, MI	0.13%	0.04%	0.21%	130	6,430
Boston-Cambridge-Quincy, MA-NH	0.38%	0.23%	0.54%	380	10,081
San Francisco-Oakland-Fremont, CA	0.44%	0.26%	0.61%	440	5,527
Phoenix-Mesa-Scottsdale, AZ	0.23%	0.11%	0.36%	230	5,550
Riverside-San Bernardino, CA	0.38%	0.21%	0.55%	380	5,069
Seattle-Tacoma-Bellevue, WA	0.22%	0.09%	0.34%	220	5,673

Entrepreneurship in Silicon Valley during the Boom and Bust

- ❑ Was entrepreneurship higher in Silicon Valley than other parts of the United States in the economic expansion of the late 1990s?
- ❑ Or, was entrepreneurship suppressed in Silicon Valley in the late 1990s relative to the rest of the country because of the unusually tight labor market?

Figure 6
Entrepreneurship Rates by Geographical Area (1996-2005)

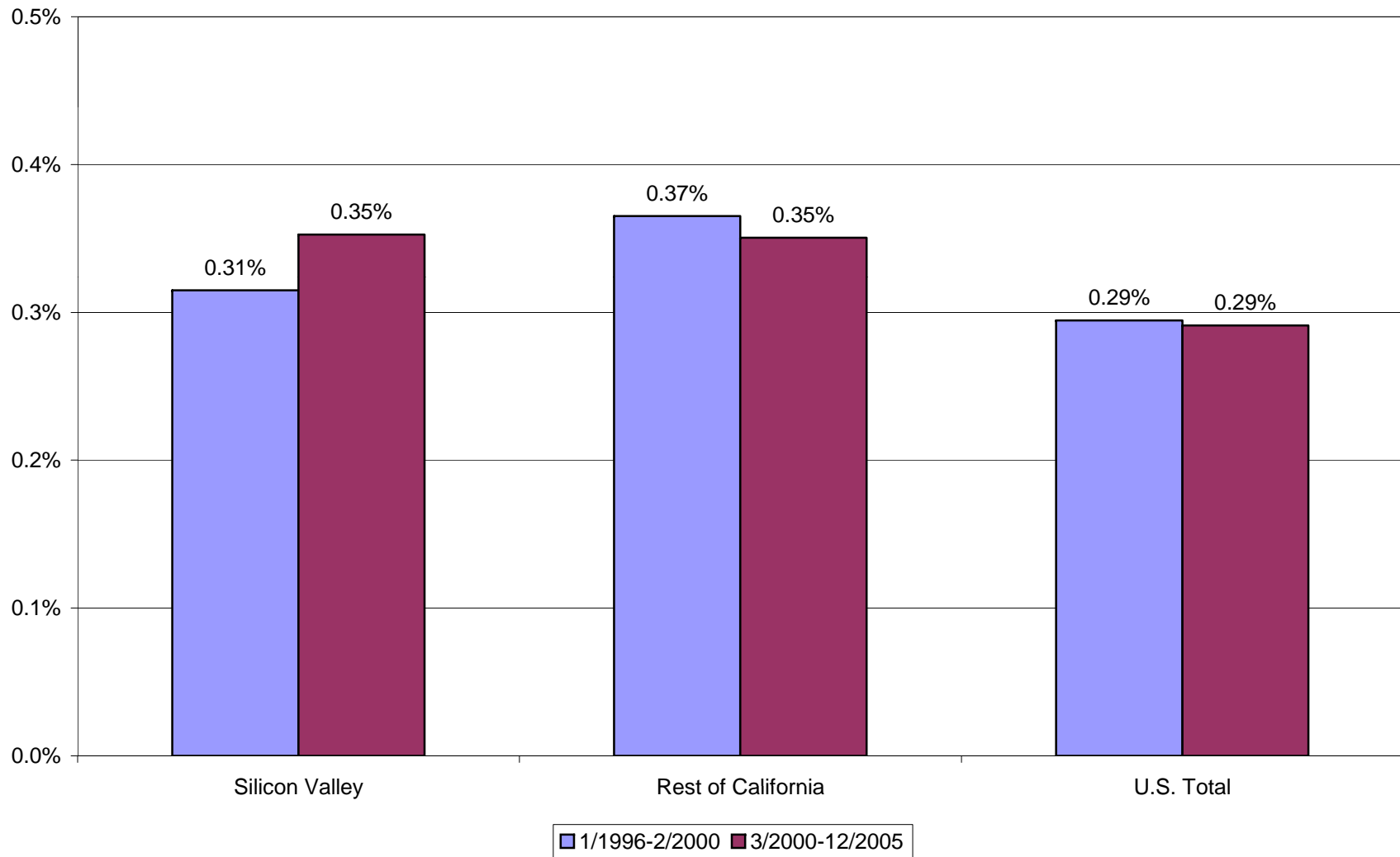
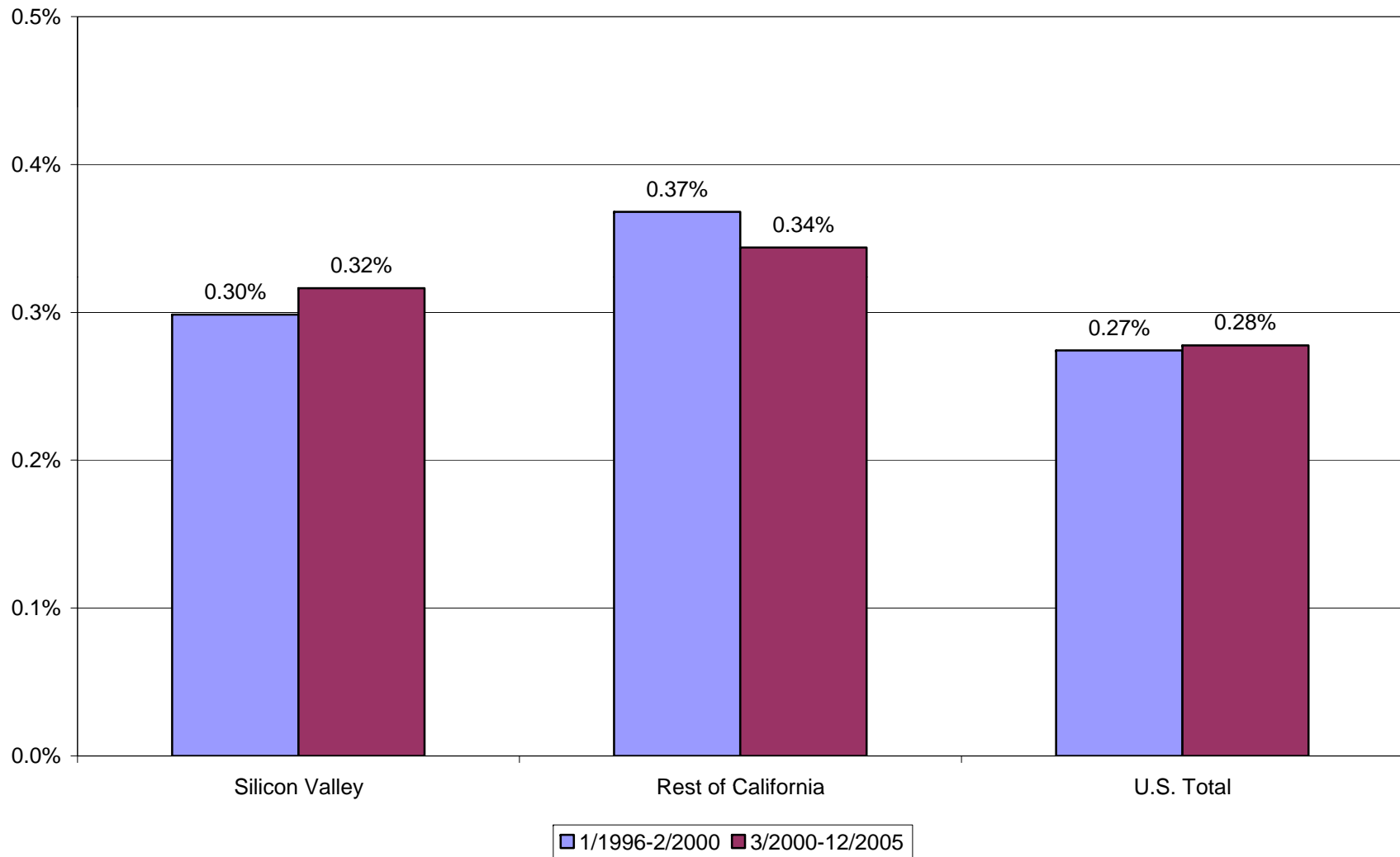
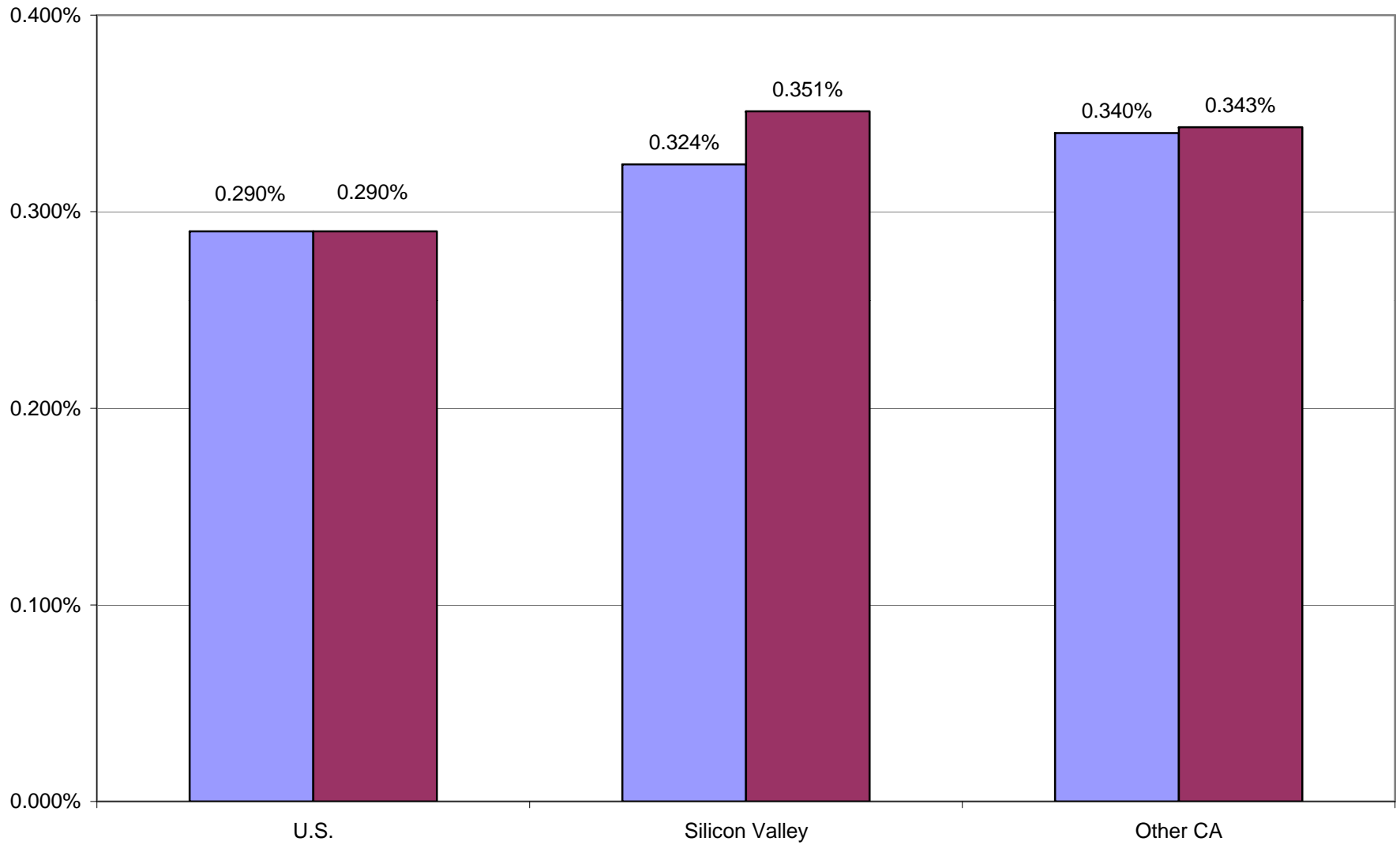


Figure 6
Entrepreneurship Rates by Geographical Area for the Highly-Educated (1996-2005)



Regression Adjusted Entrepreneurship Rates



Variables in the Underlying Microdata

Individual characteristics

- ❑ Age
- ❑ Sex
- ❑ Race/Ethnicity
- ❑ Immigrant status
- ❑ Education
- ❑ Marital status and children
- ❑ Family income
- ❑ Home ownership
- ❑ Geographical information

Business characteristics

- ❑ Industry
- ❑ Hours worked by owner

Current Population Survey Summary

- Advantages
 - Panel data (allows measure of business formation)
 - Large sample sizes
 - Up-to-date
 - Comparison group of non-entrepreneurs
 - Detailed information on owner
- Disadvantages
 - Short panel
 - Limited information on the business, especially outcomes

Data Release

- KIEA reports released each Spring
 - U.S Rates by race (1996-)
 - State-level estimates (1996-)
- Underlying microdata released one year later (1996-)