

# The Great Recession and Entrepreneurship



Robert W. Fairlie  
University of California, Santa Cruz

Atlanta Federal Reserve

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## Great Recession

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- ❑ The U.S. Economy has lost more than 8 million jobs since the start of the recession in December 2007.
- ❑ The national unemployment rate is hovering around 10 percent, which is twice as high as it was only two years ago.
- ❑ The labor market has experienced its deepest downturn in the postwar era.
- ❑ Housing prices have plummeted since reaching their peak in mid 2007.
- ❑ The national housing price index experienced the largest decline on record (Federal Housing Finance Agency 2009).
- ❑ Home foreclosures have also risen rapidly over the past few years (Realtytrac 2010). 1 out every 400 housing units in Spring 2009.

## Recessions and Entrepreneurship

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- ❑ What effect is the recession having on entrepreneurship?
- ❑ On one hand, recessions may have negative effect on business starts because of the resulting decline in demand for the products and services produced by businesses.
- ❑ Recent housing slump restricts access to capital. Equity in one's home is the main asset for most Americans (U.S. Census 2008).
- ❑ Alternative sources of financial capital for business starts are also scarce.
- ❑ In the latest survey of lending officers, the Federal Reserve reports that commercial banks "have yet to unwind the considerable tightening that has occurred over the past two years" (Federal Reserve Board of Governors 2010).

## Recessions and Entrepreneurship

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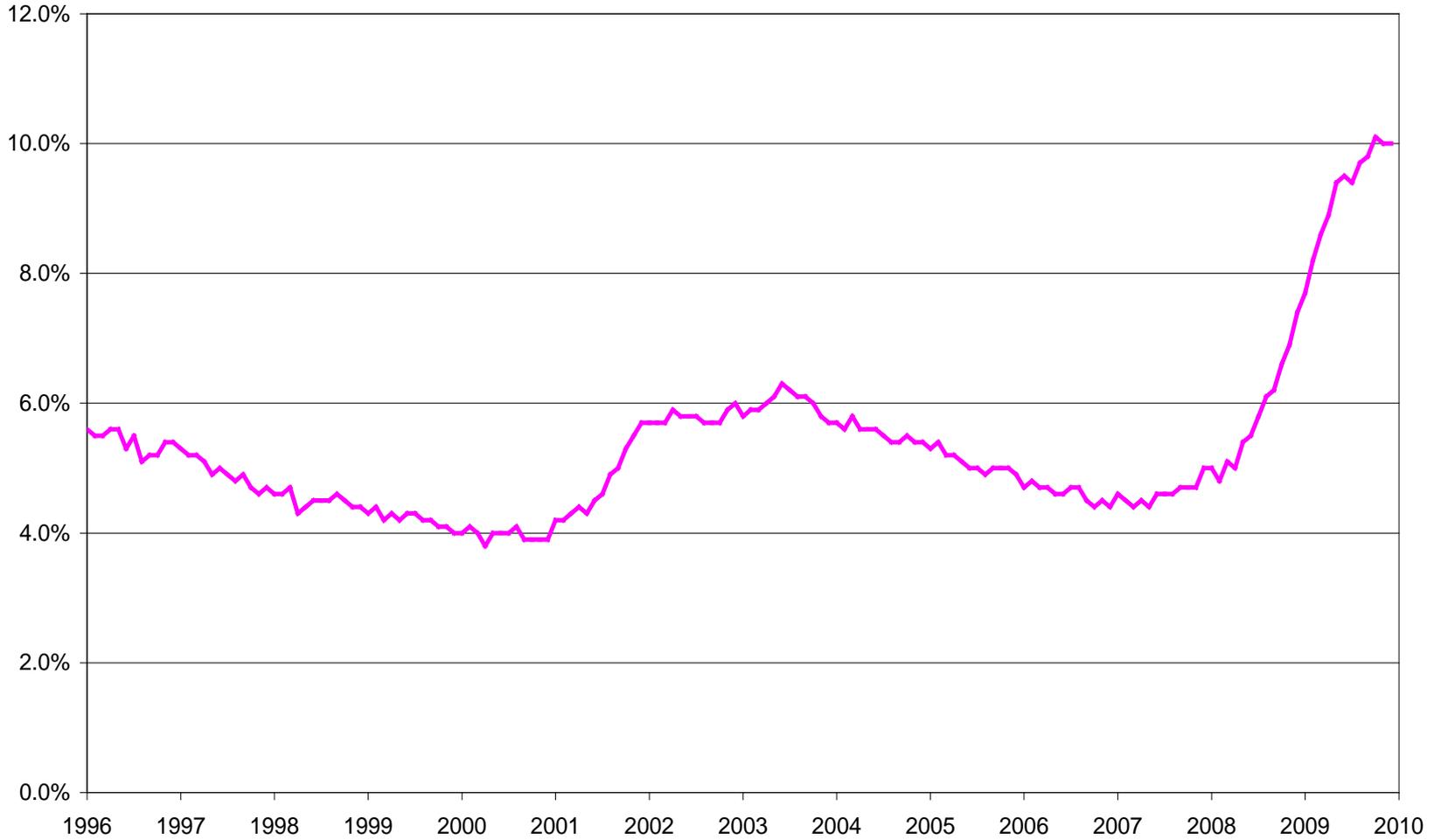
- ❑ On the other hand, the current recession may have increased "necessity" entrepreneurship or business creation because of the rapid rise in the number of layoffs and unemployment in the United States.
- ❑ Previous studies provide evidence that job loss and reduced labor market opportunities lead to entry into self-employed business ownership (Farber 1999; Parker 2009; Krashinsky 2005).
- ❑ Although the motivation might differ for starting the business in this case, many of these businesses may eventually be very successful. For example, a recent study by Stangler (2009) finds that the majority of Fortune 500 companies were started during recessions or bear markets.
- ❑ Although the current recession has resulted in many business closures and bankruptcies, the net effect of the recession on *business creation* is thus ambiguous.

## Introduction

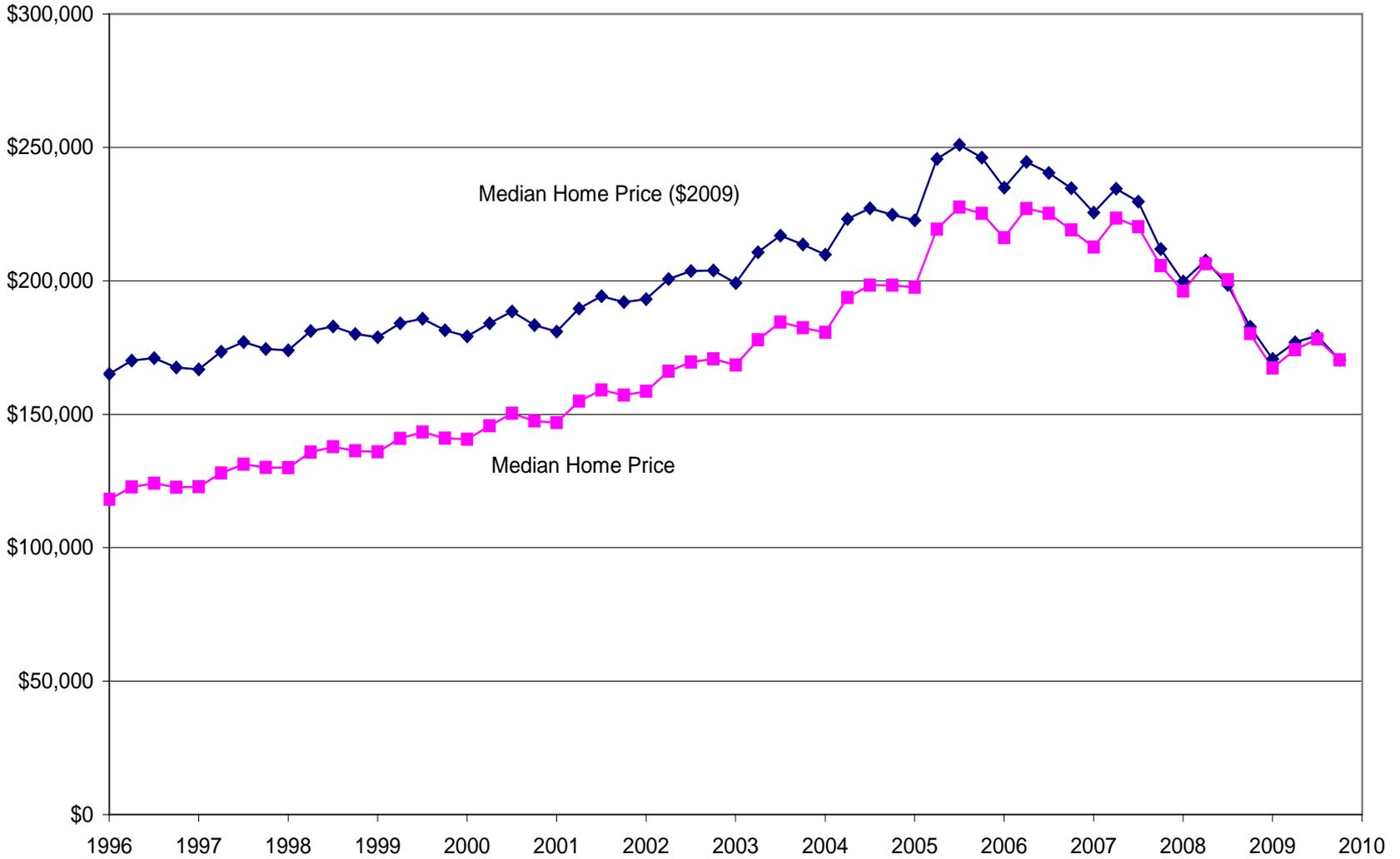
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- ❑ Conduct a detailed analysis of the determinants of entrepreneurship using newly created panel data from the most up-to-date microdata available -- the 1996 to 2009 Current Population Survey (CPS).
- ❑ Using these data, the effects of rising unemployment rates and the decline in housing values on entrepreneurship are examined by estimating the relationship between business creation at the individual level and local labor and housing markets.
- ❑ The analysis covers two recessions and two strong growth periods, and uses variation in unemployment and housing prices from more than 250 metropolitan areas.
- ❑ More extensive analysis of the relationship between local economic conditions and business formation than previously conducted in the literature.

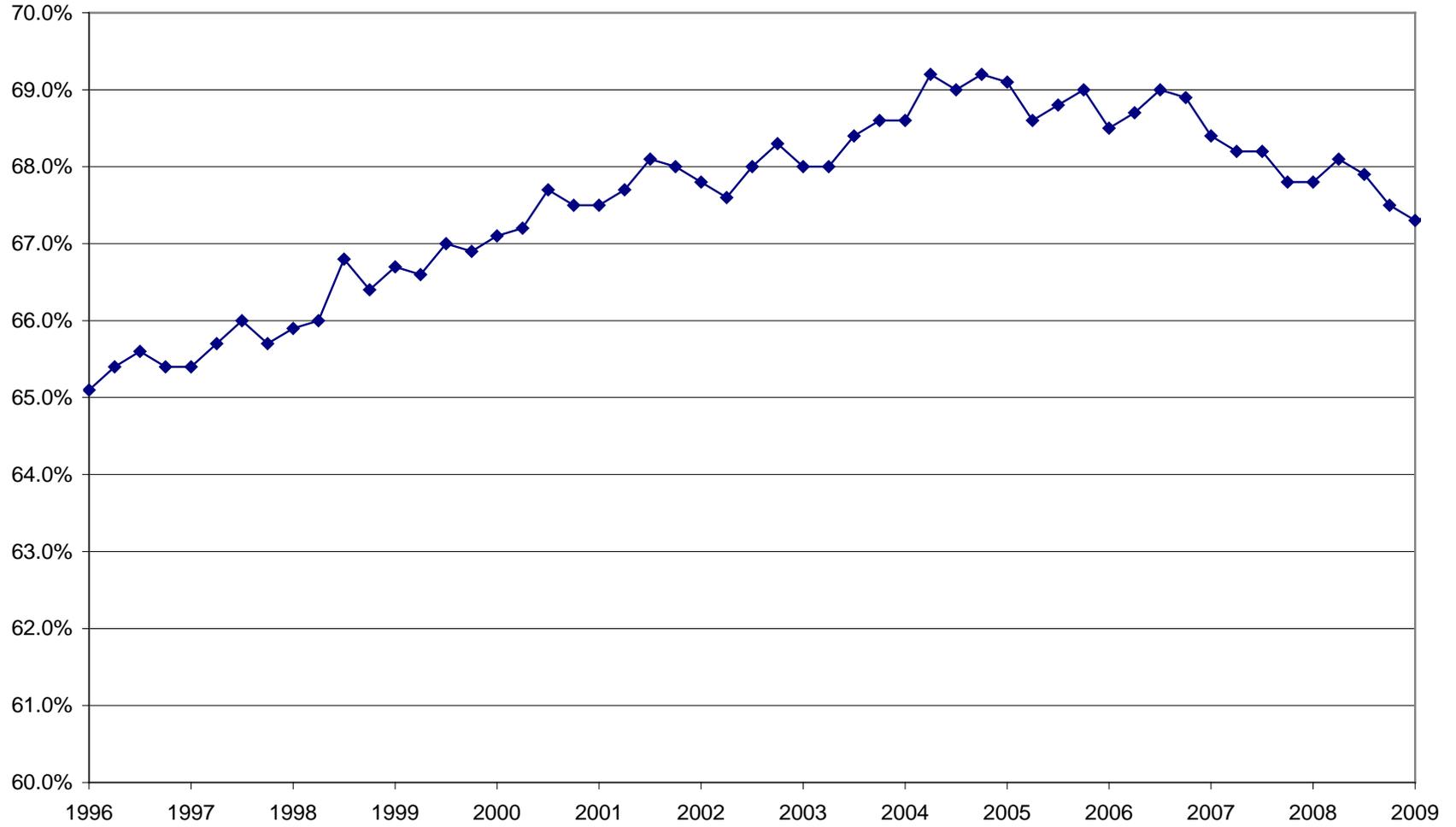
**Figure 1: National Unemployment Rate**  
**U.S. Bureau of Labor Statistics (1996-2009)**



**Figure 2: Median Sales Price of Existing Single-Family Homes  
National Association of Realtors (1996-2009)**



**Figure 3: National Home Ownership Rates  
Current Population Survey (1996-2009)**



## Current Population Survey

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- ❑ 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

## Measure of Entrepreneurship

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- ❑ CPS follows households for 2 sets of 4 consecutive months
- ❑ Dynamic measure captures business formation at the time the business is created.

### Month 1

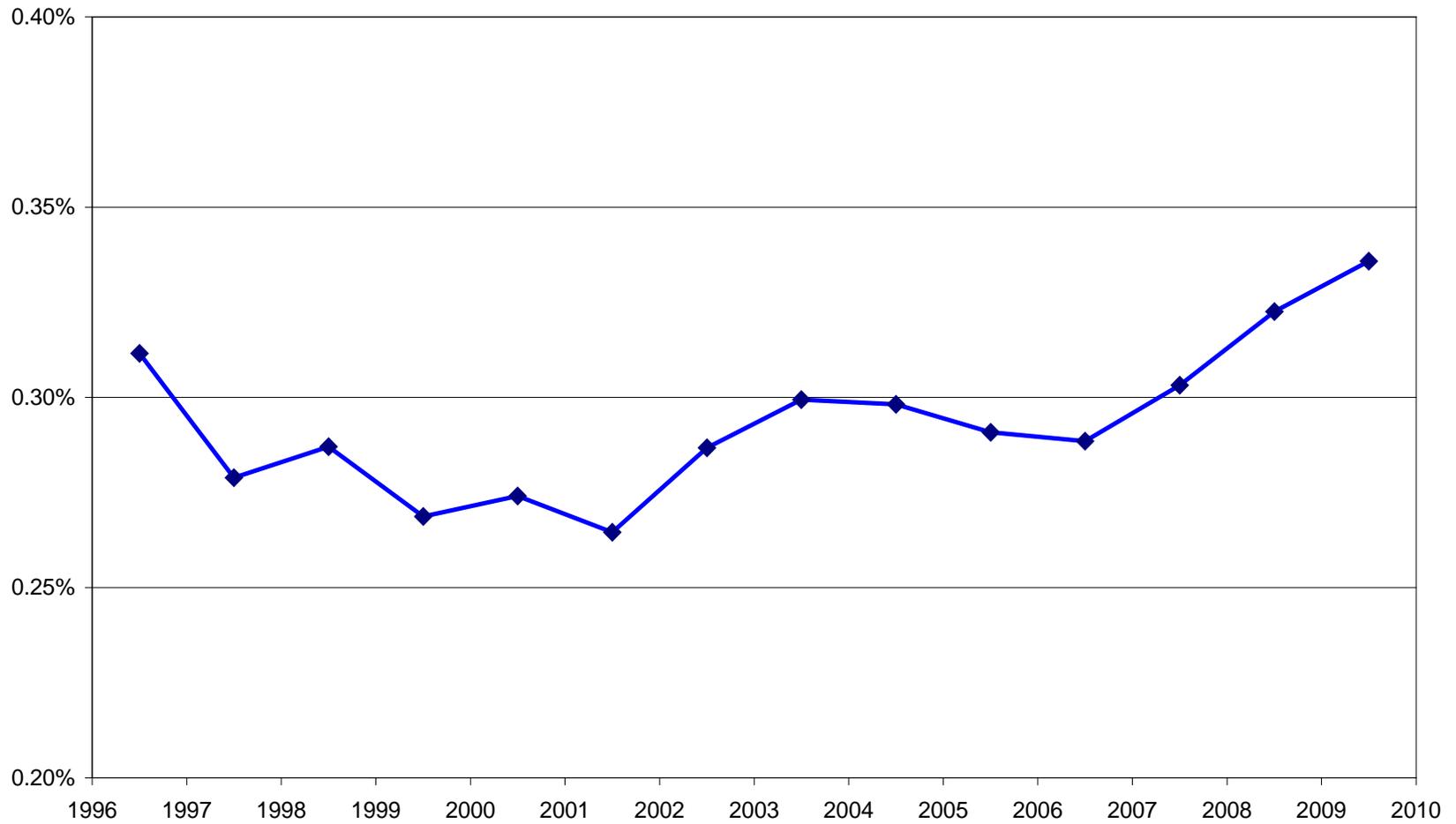
Non-business owners

### Month 2

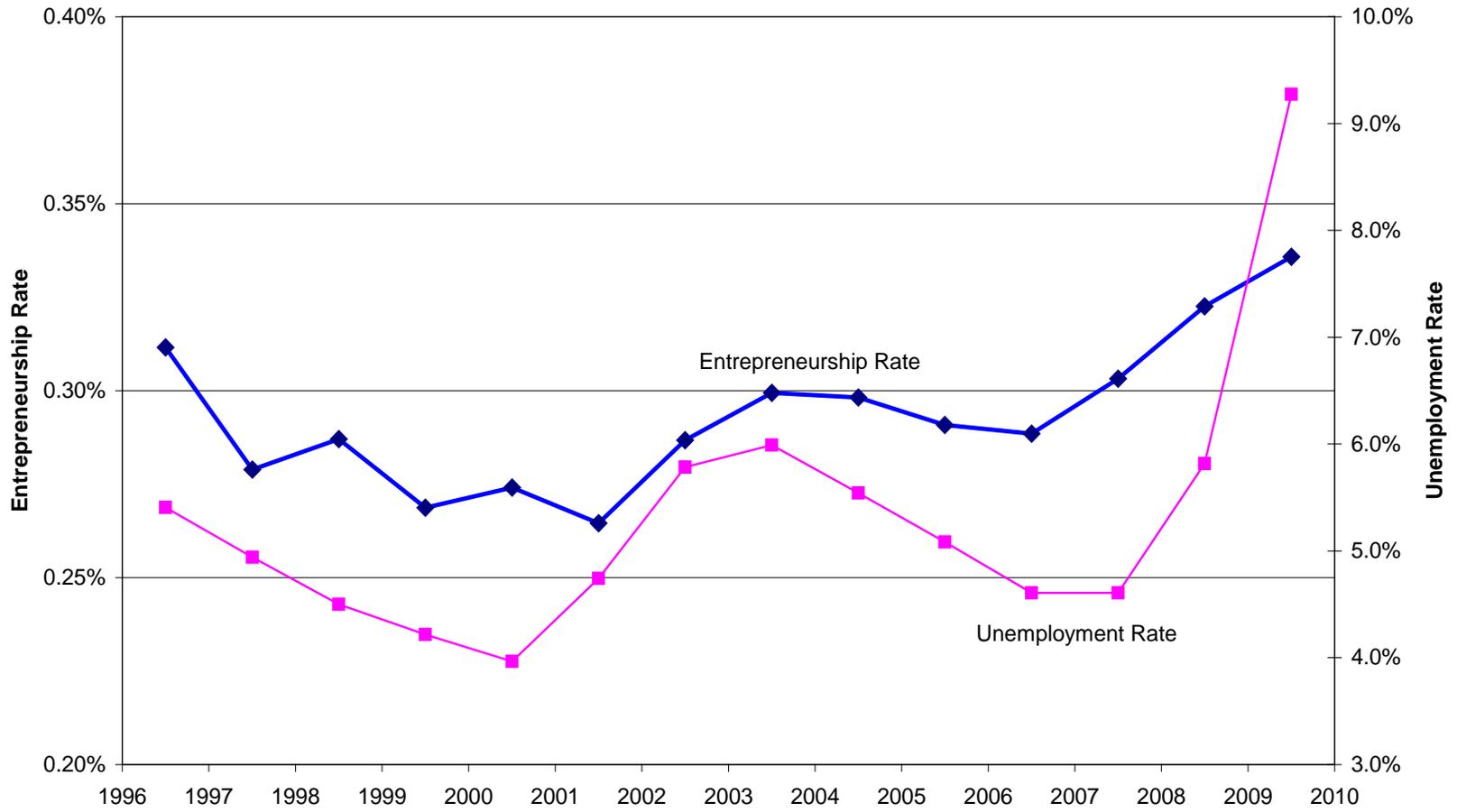
Business owners with 15 or more hours worked per week

- ❑ 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).
- ❑ The Kauffman Index of Entrepreneurial Activity

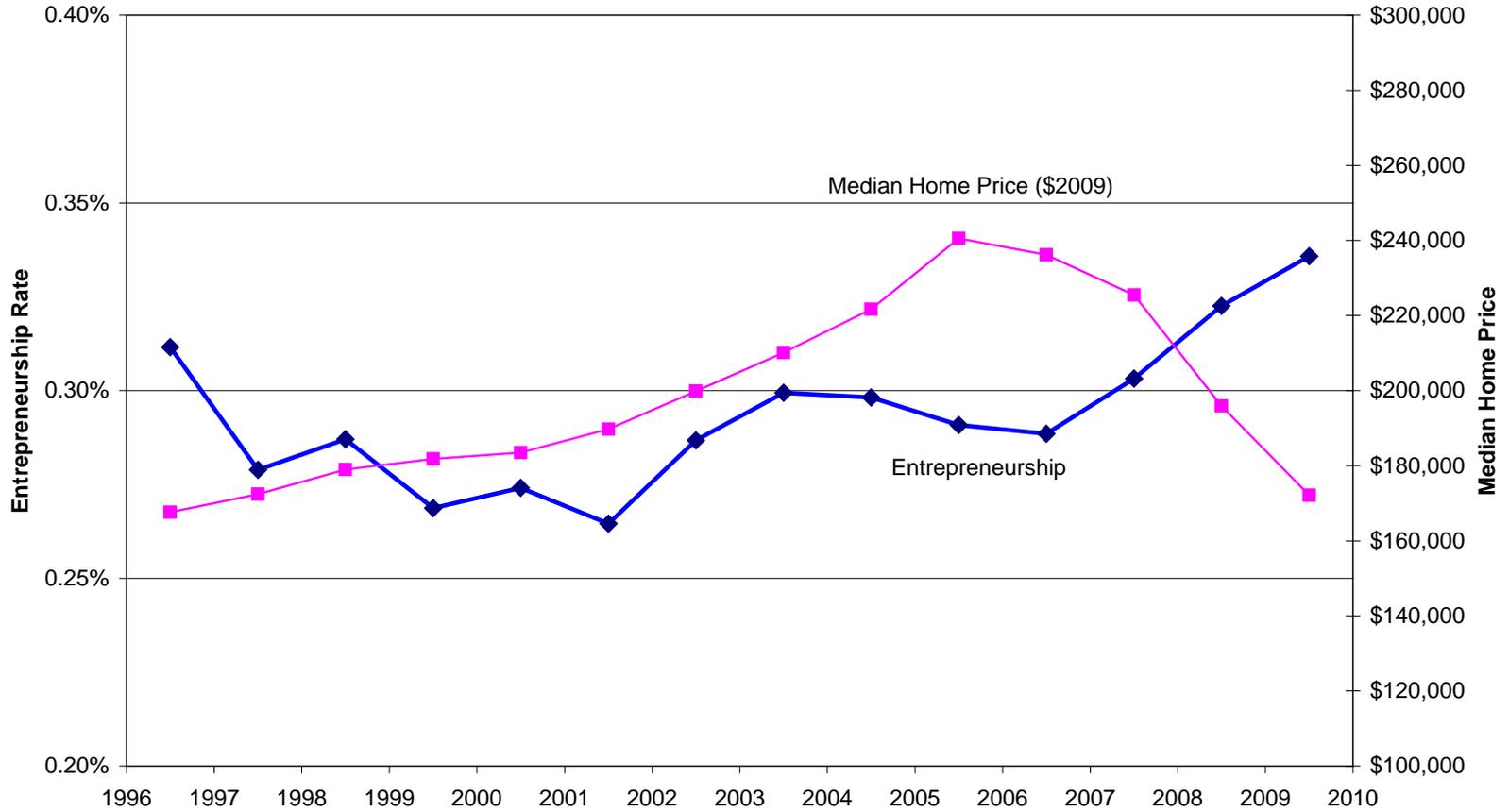
**Figure 4: Entrepreneurship Rates  
Current Population Survey (1996-2009)**



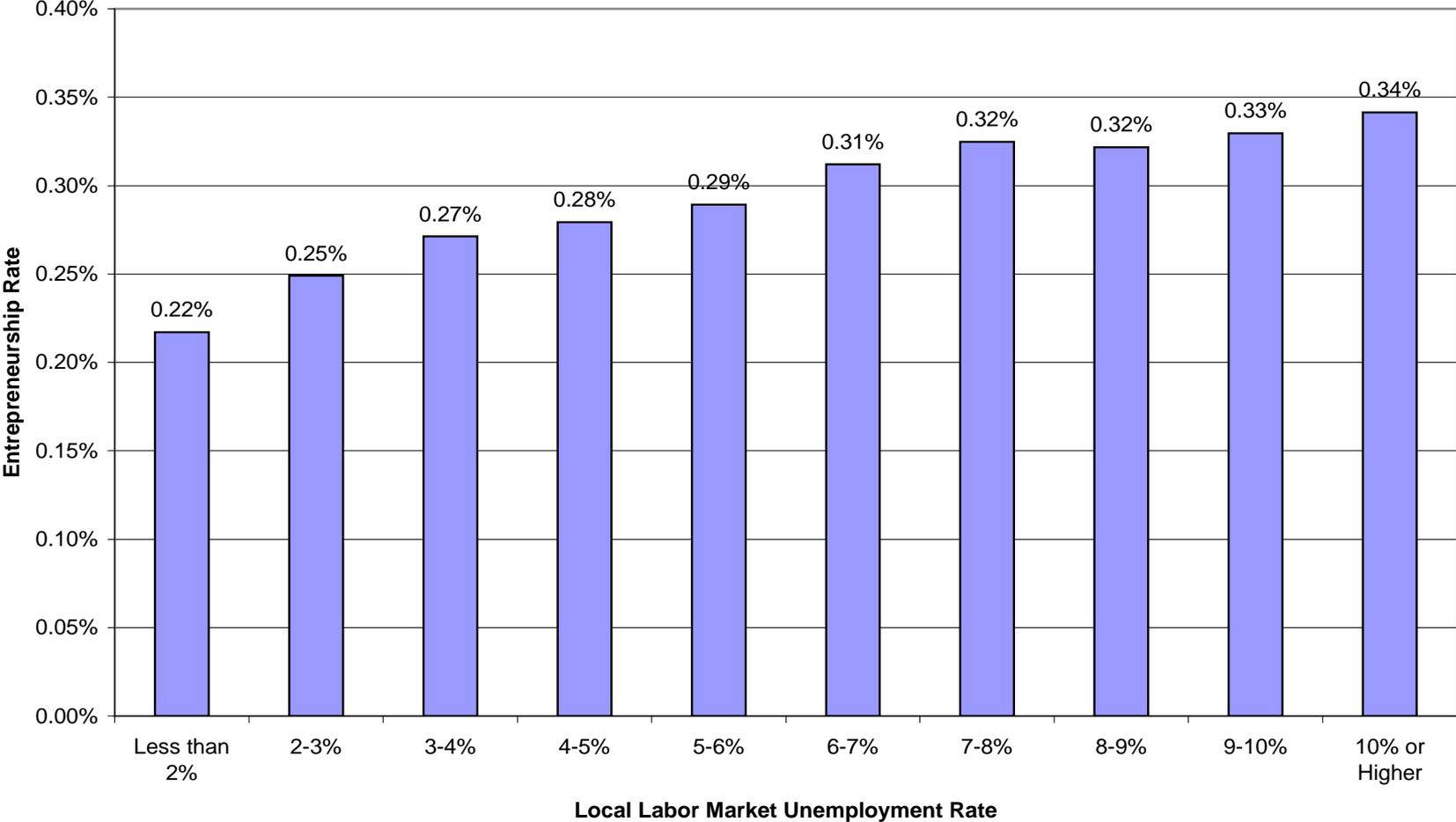
**Figure 5: Entrepreneurship and Unemployment Rates**  
Current Population Survey and U.S. Bureau of Labor Statistics (1996-2009)



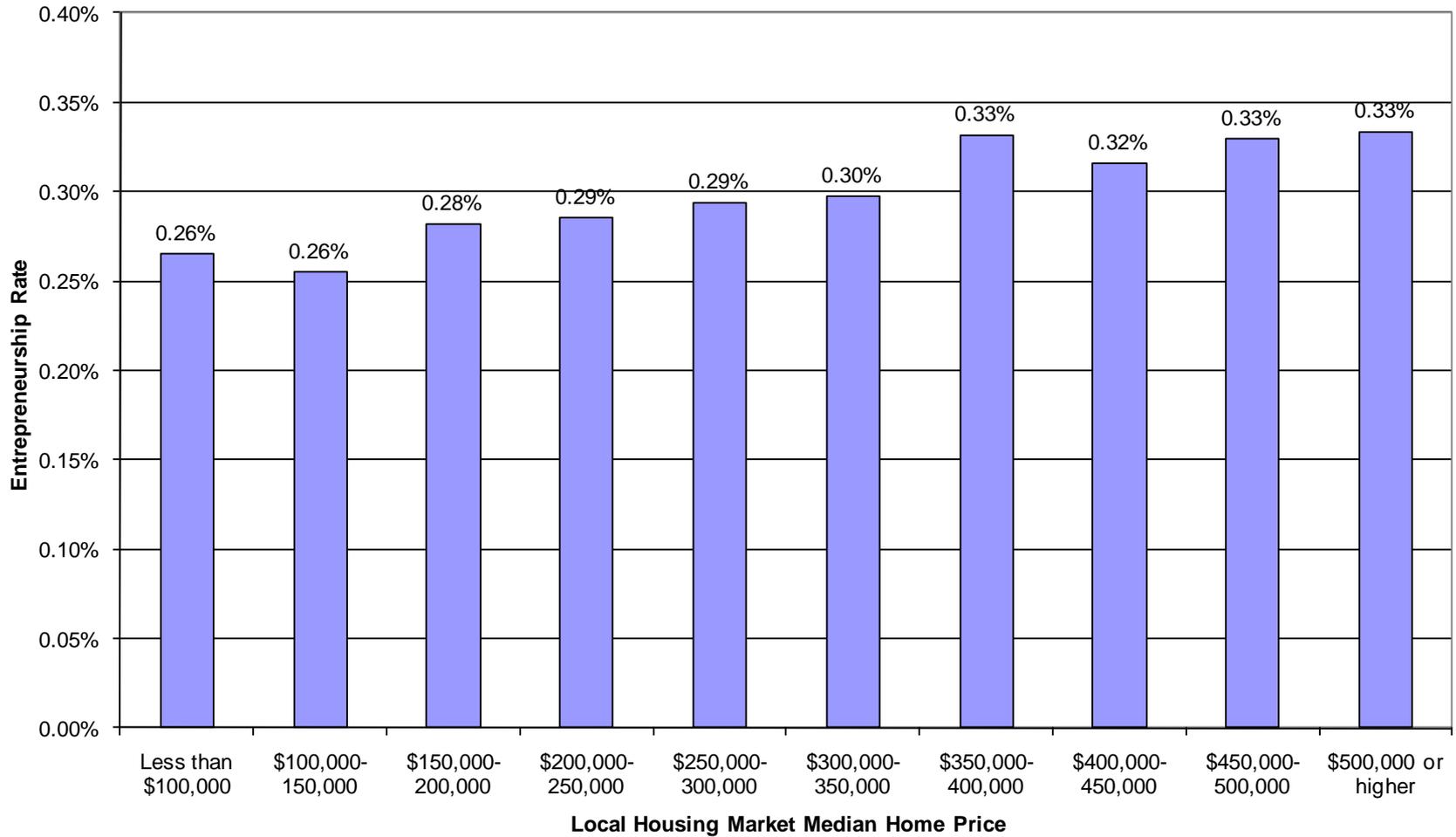
**Figure 6: Entrepreneurship Rates and Median Home Prices**  
**Current Population Survey and National Association of Realtors (1996-2009)**



**Figure 7: Entrepreneurship Rates by Local Unemployment Rates  
Current Population Survey (1996-2009)**



**Figure 8: Entrepreneurship Rates by MSA Median Home Prices  
Current Population Survey (1996-2009)**



## Regression Analysis

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- ❑ Regression analysis to examine the independent effects of local labor market unemployment rates and housing markets,
- ❑ Regressions control for gender, race/ethnicity, nativity, age, education, family income, marital status, region, urban status and month fixed effects (seasonality).
- ❑ Additional controls include industry, quadratic time trend to capture any long-term, slower moving trends in entrepreneurship, and MSA fixed effects (264) to control for differences that are fixed over time such as the general political and business climate

Table 1  
 Regressions for Probability of Entrepreneurship  
 Current Population Survey (1996-2009)

Explanatory Variables	(1)	(2)	(3)	(4)
Female	-0.00136 (0.00005)	-0.00165 (0.00005)	-0.00136 (0.00005)	-0.00137 (0.00005)
Black	-0.00089 (0.00007)	-0.00074 (0.00007)	-0.00089 (0.00007)	-0.00100 (0.00007)
Latino	-0.00056 (0.00008)	-0.00043 (0.00008)	-0.00058 (0.00008)	-0.00076 (0.00009)
Native American	-0.00013 (0.00028)	-0.00020 (0.00028)	-0.00013 (0.00028)	-0.00018 (0.00028)
Asian	-0.00127 (0.00012)	-0.00127 (0.00012)	-0.00128 (0.00012)	-0.00126 (0.00012)
Immigrant	0.00117 (0.00008)	0.00109 (0.00008)	0.00116 (0.00008)	0.00096 (0.00008)
Age (00s)	0.01686 (0.00140)	0.03214 (0.00142)	0.01709 (0.00140)	0.01672 (0.00140)
Age squared	-0.01767 (0.00164)	-0.03772 (0.00167)	-0.01805 (0.00165)	-0.01765 (0.00165)
Married	0.00056 (0.00006)	0.00043 (0.00006)	0.00058 (0.00006)	0.00062 (0.00006)
Previously married	0.00023 (0.00008)	0.00035 (0.00008)	0.00024 (0.00008)	0.00026 (0.00008)
High School graduate	-0.00036 (0.00008)	0.00018 (0.00008)	-0.00037 (0.00008)	-0.00040 (0.00008)
Some college	-0.00029 (0.00008)	0.00040 (0.00008)	-0.00030 (0.00008)	-0.00035 (0.00008)
College graduate	-0.00001 (0.00009)	0.00085 (0.00009)	-0.00002 (0.00009)	-0.00013 (0.00009)
Graduate school	-0.00006 (0.00011)	0.00105 (0.00011)	-0.00007 (0.00011)	-0.00016 (0.00011)
Family income: missing	-0.00023 (0.00008)	-0.00001 (0.00008)	-0.00028 (0.00009)	-0.00030 (0.00009)
Family income: \$25,000 to \$50,000	-0.00120 (0.00007)	-0.00059 (0.00007)	-0.00122 (0.00007)	-0.00124 (0.00007)
Family income: \$50,000 to \$75,000	-0.00184 (0.00008)	-0.00106 (0.00008)	-0.00187 (0.00008)	-0.00192 (0.00008)
Family income: \$75,000 or more	-0.00172 (0.00008)	-0.00098 (0.00008)	-0.00178 (0.00008)	-0.00188 (0.00008)

(continued)

Table 1 (Continued)

Explanatory Variables	(1)	(2)	(3)	(4)
Local Unemployment Rate	0.00842 (0.00085)	0.00807 (0.00085)	0.00674 (0.00088)	0.01153 (0.00091)
Home owner	0.00012 (0.00006)	0.00008 (0.00006)	0.00013 (0.00006)	0.00020 (0.00006)
Industry controls	No	Yes	No	No
Entrepreneurship trend	No	No	Yes	No
MSA fixed effects	No	No	No	Yes
Mean of dependent variable	0.00287	0.00287	0.00287	0.00287
Sample size	5,694,980	5,694,980	5,694,980	5,694,980

Notes: (1) The sample consists of individuals (ages 20-64) who do not own a business in the first survey month. (2) Additional controls include month, region and urban status dummies.

Table 2  
 Regressions for Probability of Entrepreneurship with Home Values  
 Current Population Survey (1996-2009)

Explanatory Variables	(1)	(2)	(3)	(4)
Local unemployment rate	0.00942 (0.00101)	0.00888 (0.00101)	0.00756 (0.00106)	0.01175 (0.00107)
Local home value for home owners (\$100,000)	0.00011 (0.00002)	0.00008 (0.00002)	0.00010 (0.00002)	0.00005 (0.00002)
Industry controls	No	Yes	No	No
Entrepreneurship trend	No	No	Yes	No
MSA fixed effects	No	No	No	Yes
Mean of dependent variable	0.00290	0.00290	0.00290	0.00290
Sample size	4,976,595	4,976,595	4,976,595	4,976,595

Notes: (1) The sample consists of individuals (ages 20-64) who do not own a business in the first survey month. (2) Additional controls include month, region and urban status dummies.

Table 3  
 Regressions for Probability of Entrepreneurship with Labor Force Interactions  
 Current Population Survey (1996-2009)

Explanatory Variables	(1)	(2)	(3)	(4)
Employed*local	0.00121	0.00131	-0.00015	0.00467
unemployment rate	(0.00101)	(0.00101)	(0.00104)	(0.00106)
Not employed*local	0.00903	0.00411	0.00772	0.01261
unemployment rate	(0.00152)	(0.00153)	(0.00154)	(0.00156)
Not employed	0.00606	0.00871	0.00605	0.00605
	(0.00011)	(0.00013)	(0.00011)	(0.00011)
Home owner	-0.00002	0.00007	-0.00001	0.00006
	(0.00006)	(0.00006)	(0.00006)	(0.00006)
Industry controls	No	Yes	No	No
Entrepreneurship trend	No	No	Yes	No
MSA fixed effects	No	No	No	Yes
Mean of dependent variable	0.00287	0.00287	0.00287	0.00287
Sample size	5,694,980	5,694,980	5,694,980	5,694,980

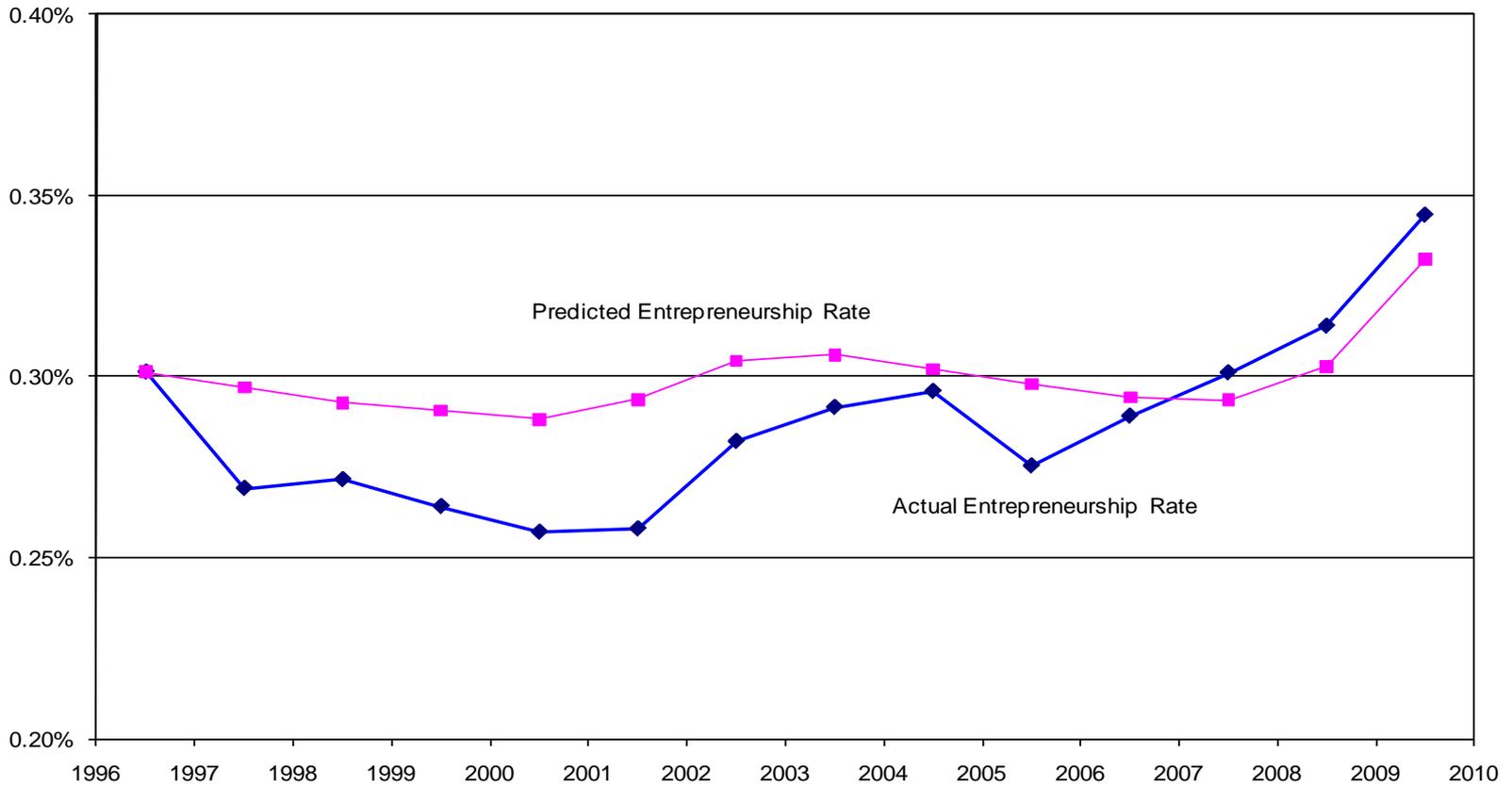
Notes: (1) The sample consists of individuals (ages 20-64) who do not own a business in the first survey month. (2) Additional controls include month, region and urban status dummies.

**Table 5**  
**Industry Distribution for Businesses Created in High and Low Unemployment MSAs**  
**Current Population Survey (1996-2009)**

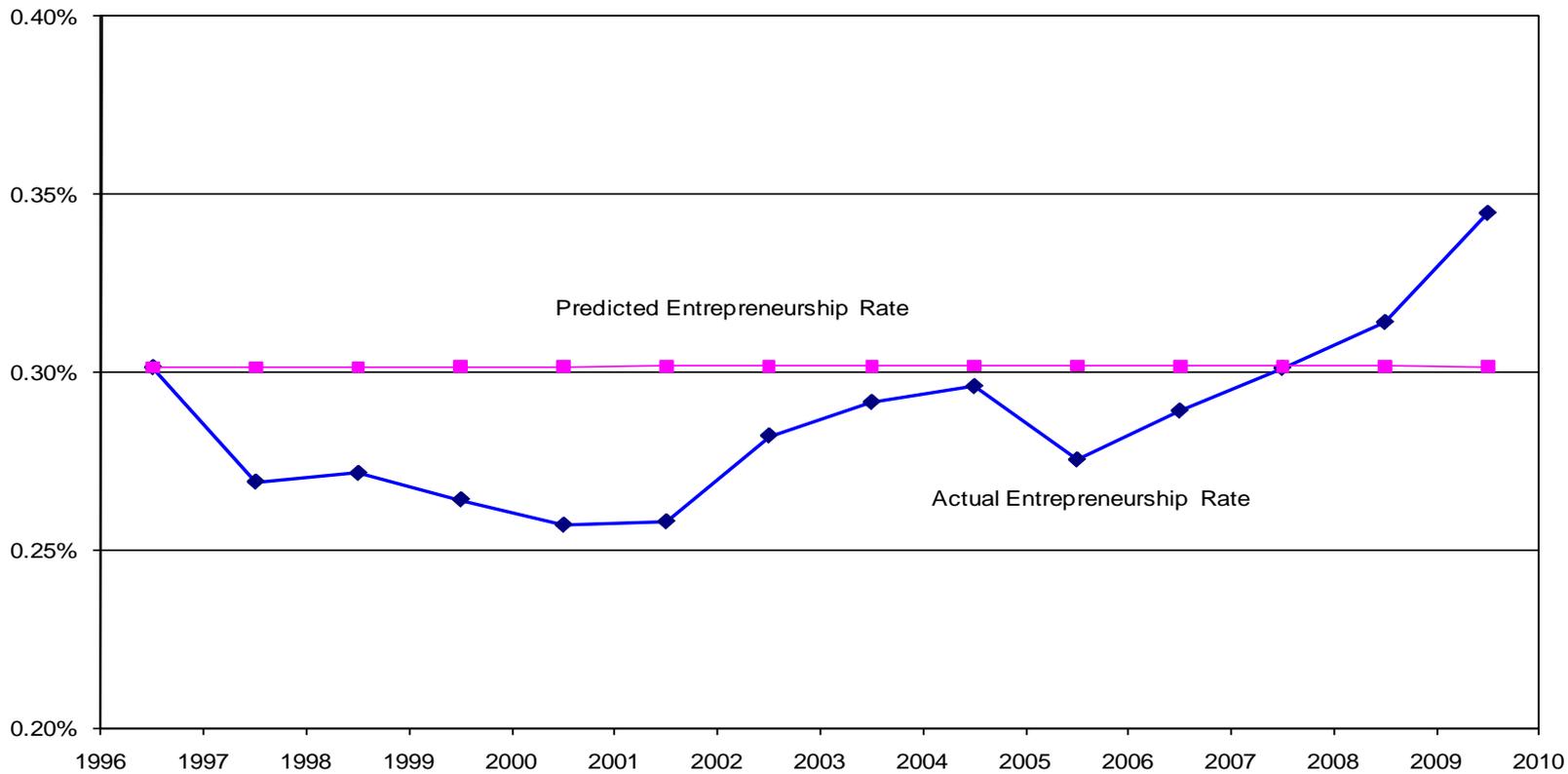
Industry	High Unemployment MSAs	Low Unemployment MSAs	All MSAs
Agriculture	3.6%	3.9%	3.3%
Construction	20.6%	18.4%	19.3%
Manufacturing	3.3%	2.9%	3.2%
Wholesale/Retail Trade	12.3%	10.8%	12.0%
Trans/Utilities	3.8%	3.2%	3.5%
Information	2.7%	2.3%	2.7%
Financial Activities	6.2%	6.9%	6.7%
Professional/Business Services	20.8%	23.4%	22.2%
Education/Health Services	12.7%	14.9%	13.5%
Leisure/Hospitality	6.5%	5.8%	6.3%
Other Services	7.5%	7.6%	7.4%
Sample size	4,270	3,760	16,223

Notes: (1) The sample consists of individuals (ages 20-64) who start a business in the second survey month. (2) High unemployment MSAs are defined by having unemployment rates in the 4th quartile (6.6 percent and higher), and low unemployment MSAs are defined by having unemployment rates in the 1st quartile (3.7 percent and less).

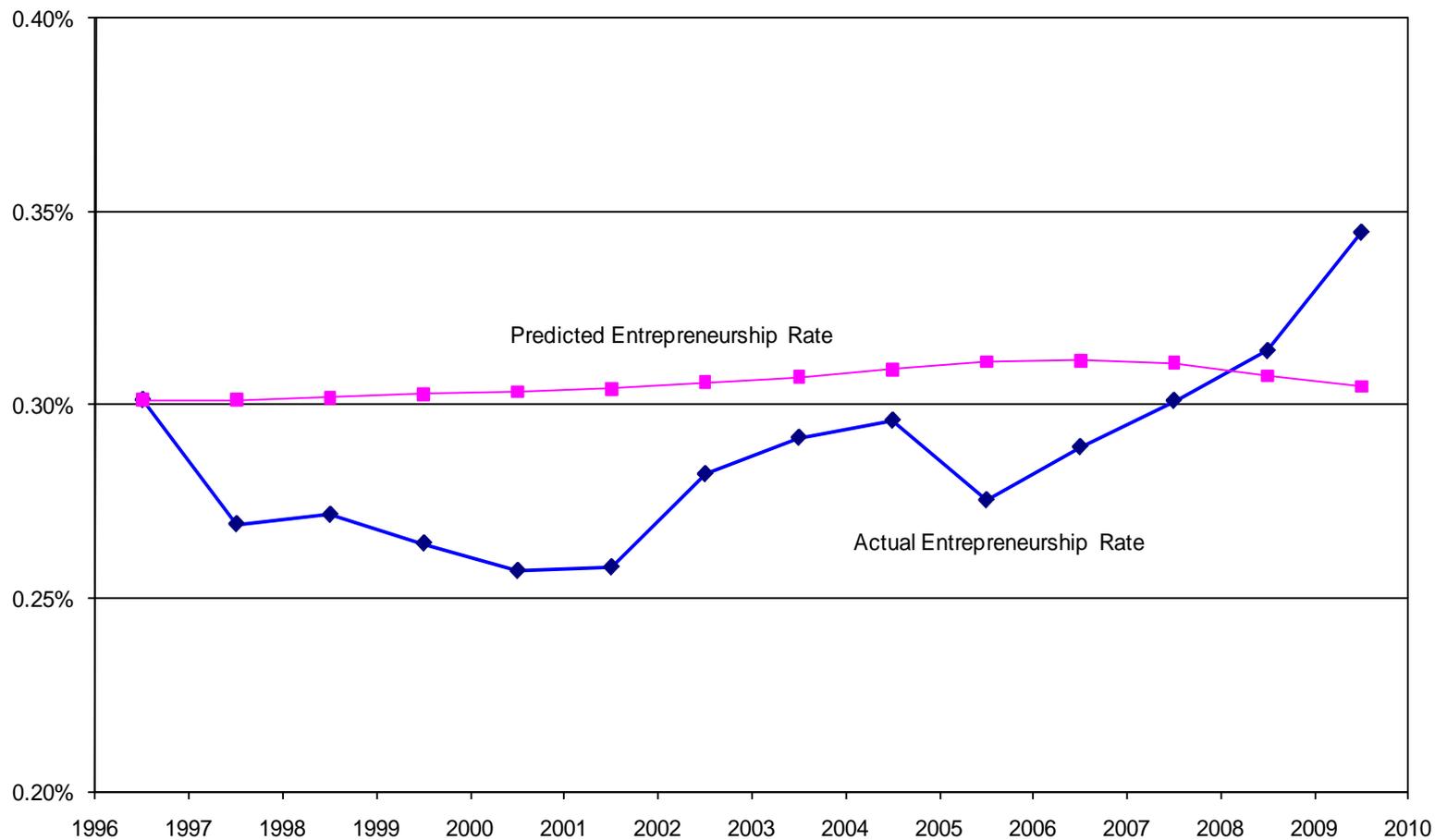
**Figure 9: Actual and Predicted MSA Entrepreneurship Rates from Local Unemployment Trends  
Current Population Survey (1996-2009)**



**Figure 10: Actual and Predicted MSA Entrepreneurship Rates from Home Ownership Trends  
Current Population Survey (1996-2009)**



**Figure 11: Actual and Predicted MSA Entrepreneurship Rates from Local Home Value Trends  
Current Population Survey (1996-2009)**



## Conclusions

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- ❑ Local labor market conditions are a major determinant of entrepreneurship.
  - Higher local unemployment rates increase business creation.
- ❑ Home ownership and local home values for home owners have positive effects on business creation, but these effects are noticeably smaller.
- ❑ The positive effects of lower opportunity costs appear to outweigh the negative effects of limited demand and access to capital.
- ❑ Able to predict the entire increase in entrepreneurship rates in the past few years from only the rapidly deteriorating labor market conditions.
- ❑ Business formation in the current recession is not limited to a narrow set of industries and thus some eventually successful firms might emerge.