

Indicators of Entrepreneurial Activity: 2023

Robert Fairlie - UCLA

rfairlie@ucla.edu

January 2024

Abstract: Up-to-date information on trends in entrepreneurship are not readily available. This paper creates and reports trends for two important indicators of entrepreneurial activity through the end of 2023. Trends from 1996–2023 are examined for two measures: (i) *the new entrepreneurship rate* which captures the share of new entrepreneurs in a given month out of the population, and (ii) *the opportunity share of new entrepreneurs* which captures the percentage of new entrepreneurs who created their businesses out of opportunity instead of necessity. The measures were included in the discontinued series, the Kauffman Early-Stage Entrepreneurship (KESE) Index (reported in *Early-Stage Entrepreneurship in the United States*). The KESE series was previously known as the *Kauffman Index of Entrepreneurial Activity* and The *Kauffman Index of Startup Activity*. In 2023, the new entrepreneurship rate was 0.35 percent and the opportunity share was 85.2 percent. Both of these measures of entrepreneurship continued a return to pre-pandemic levels in 2023. The opportunity share dropped precipitously in the pandemic. In 2023, Entrepreneurship rates were the highest for men, Latinx Americans, and immigrants relative to their comparison groups, whereas opportunity shares were the highest for women, Asian Americans, and immigrants. Among states, Florida (0.60 percent), Texas (0.47 percent) and California (0.47 percent) had the highest new entrepreneurship rates in 2023 whereas Minnesota (0.17 percent), Kansas (0.18 percent), and Wisconsin (0.18 percent) had the lowest entrepreneurship rates. The opportunity share was the highest in Minnesota (97.2 percent), Iowa (95.5 percent), and Utah (94.6 percent), and the lowest in the District of Columbia (69.3 percent), Rhode Island (73.3 percent), Virginia (75.3 percent), and Indiana (75.3 percent).

1. Introduction

Measuring trends in entrepreneurship is important for taking the pulse of the U.S. economy but there is a lack of up-to-date information from high-quality nationally representative sources. This paper creates and reports trends for two important indicators of entrepreneurial activity using the most timely available data available. The indicators of entrepreneurial activity created here capture early-stage entrepreneurial activity through the end of 2023. They include two key measures of entrepreneurial activity: (i) the new entrepreneurship rate which captures the broadest measure possible for business creation by the population. (ii) the opportunity share of new entrepreneurs which captures the percentage of new entrepreneurs who created a business out of choice or opportunity instead of necessity. Each of these indicators is based on a nationally representative sample of more than a half-million observations each year from underlying microdata produced by the U.S. Census Bureau and U.S. Bureau of Labor Statistics. The measures are not published by any government agency and are calculated from compiled and matched microdata.

The two measures were included in the discontinued series, the Kauffman Early-Stage Entrepreneurship (KESE) Index reported in *Early-Stage Entrepreneurship in the United States*.¹ Prior to the KESE reports, the two measures were included in the discontinued series, the *Kauffman Index of Entrepreneurial Activity* and The *Kauffman Index of Startup Activity*.

National trends from 1996 to 2023 are reported for the two indicators as well as trends for major demographic groups (i.e. race, gender, and nativity). These data are the only available information on demographic characteristics of business owners that are released within one month of data collection. I also report state trends in both indicators.

The New Entrepreneurship Rate

The new entrepreneurship rate provides a broad measure of entrepreneurship, capturing all new business owners, regardless of business size or origin. As such, it includes businesses of all types, regardless of their growth potential or the intentions of their owners. It captures all new business owners, including those who own incorporated or unincorporated businesses, and those who are employers or non-employers.²

The new entrepreneurship rate captures the percentage of the adult, non-business owner population that starts a business each month. New business owners are defined here as those individuals who worked an average of 15 or more hours per week in their businesses in the preceding month. This measure is calculated from compiled microdata from the Current Population Survey (CPS), a monthly survey of the U.S. Bureau of the Census and Bureau of Labor Statistics.

¹ See <https://indicators.kauffman.org/wp-content/uploads/sites/2/2022/03/2021-Early-State-Entrepreneurship-National-Report.pdf> and <https://indicators.kauffman.org/series/earlystage>.

² Business-level data from the Comprehensive Startup Panel (CSP) indicate that roughly 11 percent of all business entity startups in the U.S. economy each year are employer startups, 76 percent are sole proprietorships with no employees, and 13 percent are incorporated or partnerships with no employees (Fairle et al. 2023).

The Opportunity Share of New Entrepreneurs

The opportunity share of new entrepreneurs provides broad insight into the influence of economic conditions on overall business creation among new entrepreneurs. It distinguishes between individuals who are “opportunity entrepreneurs”—including those coming out of work, school, or another labor market status—and individuals who are “necessity entrepreneurs” due to unemployment.³ The opportunity share of new entrepreneurs reflects the percent of the total number of new entrepreneurs who were not unemployed and not looking for a job as they started a new business. Although the motivations for starting businesses can differ (and can be seen in the context of weak economic conditions and high unemployment rates), necessity businesses could eventually become very successful. This measure is calculated from compiled microdata from the Current Population Survey (CPS), a monthly survey of the U.S. Bureau of the Census and Bureau of Labor Statistics.

2. National Trends in the New Entrepreneurship Rate

The new entrepreneurship rate reflects how many adults start a business, on average each month, in a year. Figure 1.A and Appendix Table 1 presents the new entrepreneurship rate from 1996 to 2023.⁴ In 2023, an average of 0.35 percent of the adult population, or 350 out of 100,000 adults, created a new business each month.⁵

The new entrepreneurship rate remained higher than pre-pandemic levels after the sharp increase from 2019 to 2020 in the first year of the pandemic.⁶ During tumultuous times such as the COVID-19 pandemic, the new entrepreneurship rate can increase substantially as businesses close and restart, and workers are laid off and turn to part-time business activities. The measure is based on month-to-month movement into new business activity. The large-scale damage to the economy that began near the end of March 2020 showed up in more movement into and out of self-employment and new business activity during 2020 than in previous years. The Great Recession also witnessed an increase in the new entrepreneurship rate, but this increase was much smaller than the unprecedented pandemic-induced recession of 2020. The new entrepreneurship rate might be at a higher plateau after the pandemic with more of the population trying business ownership than before the pandemic. But, there does appear to be somewhat of a return to pre-pandemic levels over the past few years.

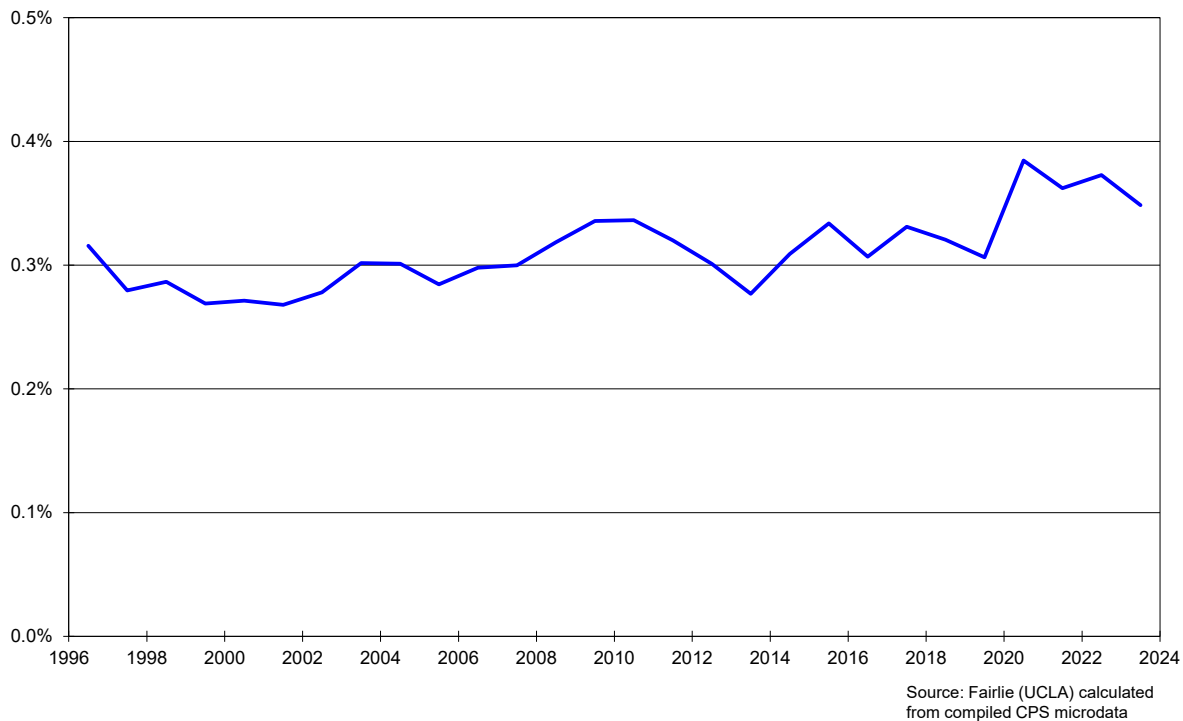
³ See Fairlie and Fossen (2019).

⁴ The entrepreneurship index is the percent of individuals (ages 20-64) who do not own a business in the first survey month that start a business in the following month with 15 or more hours worked. All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

⁵ Estimates of annual new entrepreneurship rates would be approximately six to eight times higher. They are not twelve times higher than monthly rates because an individual could start and exit the business multiple times in the same year. See Fairlie and Desai (2022).

⁶ Monthly data indicate an extremely large drop in self-employed business activity in April 2020 and partial rebounds in May and June 2020 (Fairlie 2020).

Figure 1.A
New Entrepreneurship Rate (1996-2023)



Demographic Trends in the New Entrepreneurship Rate

The new entrepreneurship rate increased sharply in the first year of the pandemic and remained at a higher level through 2023 for both women and men. Figure 1.B shows these trends (also see Appendix Table 1). For women, the new entrepreneurship rate increased from 0.23 percent in 2019 to 0.30 percent in 2020, and remained at a higher level at 0.28 percent in 2021 and 2022 but dropped to 0.26 in 2023. For men, it increased from 0.38 percent in 2019 to 0.48 percent in 2020, and is returning to pre-pandemic levels (currently at 0.44 percent in 2023).

Overall, men are substantially more likely to start businesses than women. In 2019, before the pandemic, 380 out of every 100,000 men became new entrepreneurs in a given month, compared to 230 out of 100,000 women. The large gender gap in new entrepreneurship rates has been persistent over the past 25 years and continued in 2023.

Figure 1.B
New Entrepreneurship Rate by Sex (1996-2023)

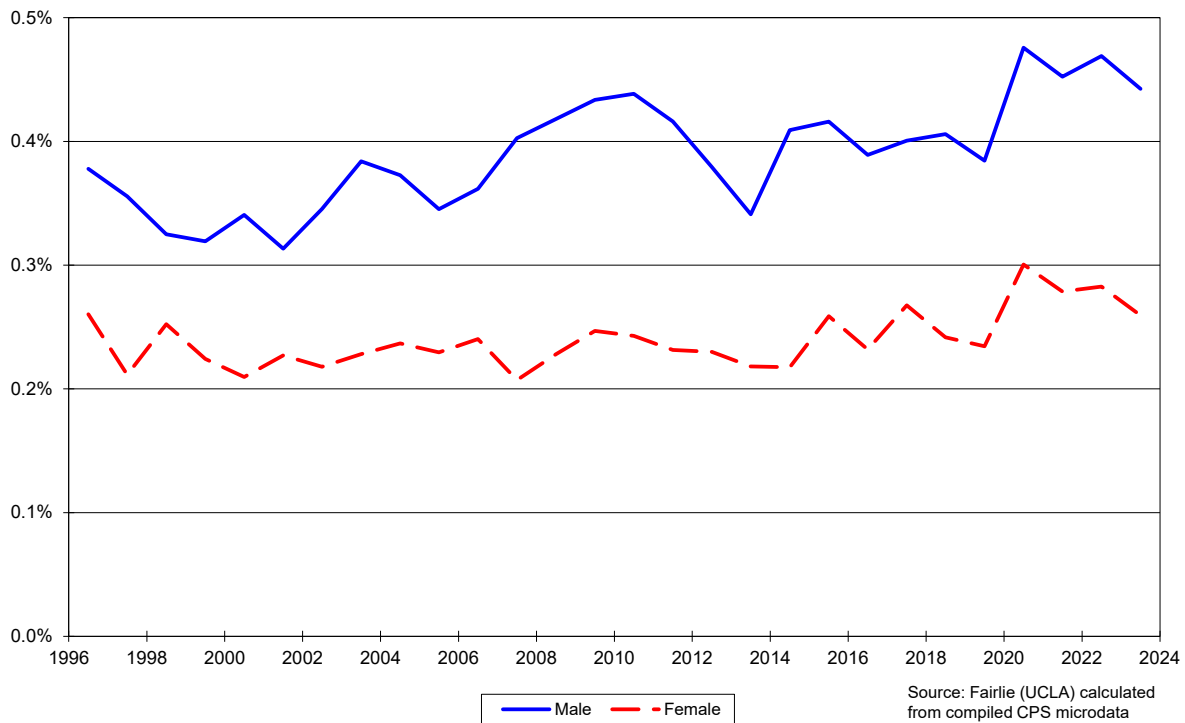


Figure 2 and Appendix Table 2 provide estimates of the new entrepreneurship rate by race and ethnicity. The new entrepreneurship rate increased substantially for all race and ethnic groups in the first year of the pandemic. The rates for Black and Latinx Americans remain higher in 2023 than pre-pandemic levels. For white and Asian Americans, the new entrepreneurship rate has mostly returned to pre-pandemic levels. Over most of the time period covered, the rate of new entrepreneurship was highest among Latinx Americans and lowest among Black Americans.

Figure 2
New Entrepreneurship Rate by Race and Ethnicity (1996-2023)

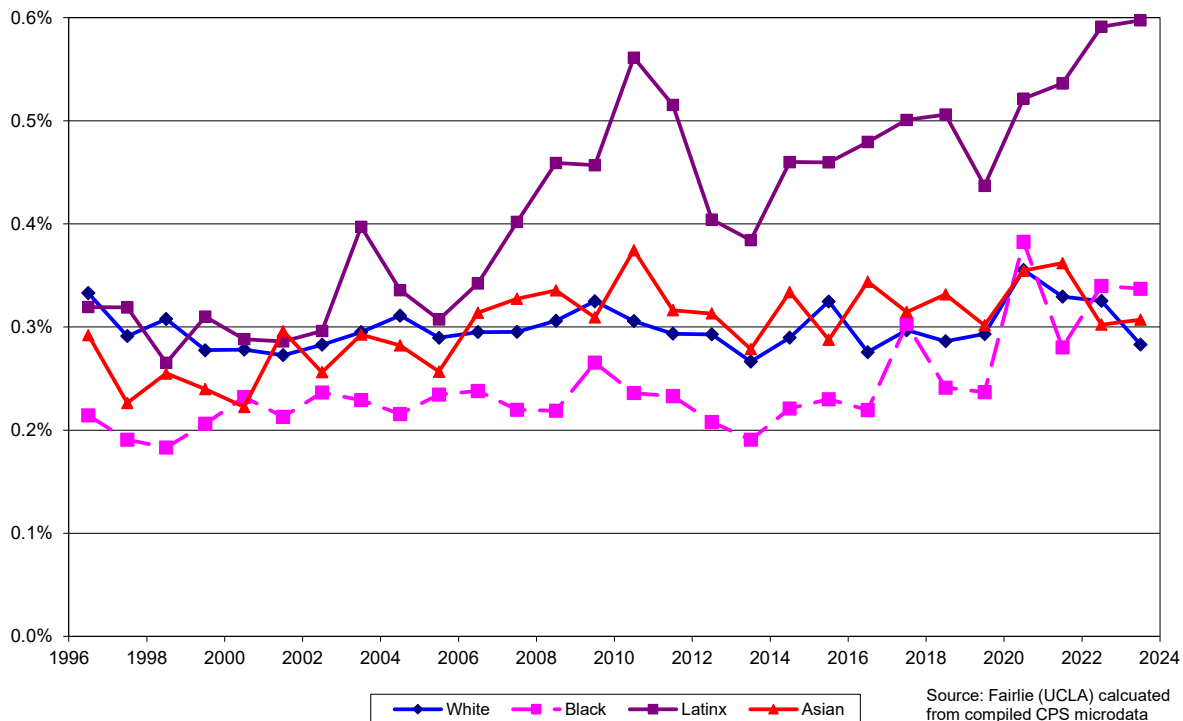
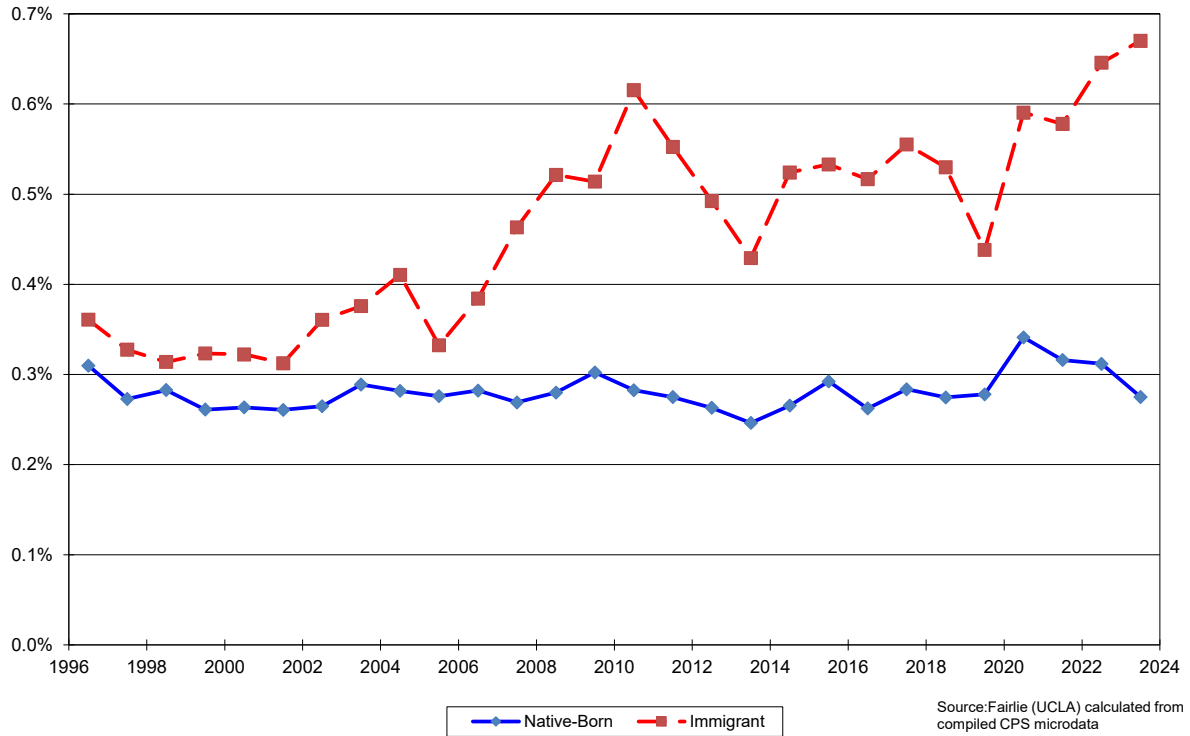


Figure 3 and Appendix Table 3 report estimates of the new entrepreneurship rate by nativity. The new entrepreneurship rate increased substantially in the first year of the pandemic but the patterns differed by nativity since 2020. For the immigrant population entrepreneurship rates increased in the pandemic and continued to increase in 2023. For the native-born population entrepreneurship rates increased in the first year of the pandemic but then decreased slightly in 2021 and continued to decrease through 2023. For immigrants, the new entrepreneurship rate was higher in 2023 than pre-pandemic levels. The new entrepreneurship rate, however, is the same for the native-born in 2023 as in 2019.

Overall, the new entrepreneurship rate is higher for immigrants than the native-born population. The 2023 new entrepreneurship rate among immigrants was 0.67 percent, which is substantially higher than the 0.28 percent rate for the native born.

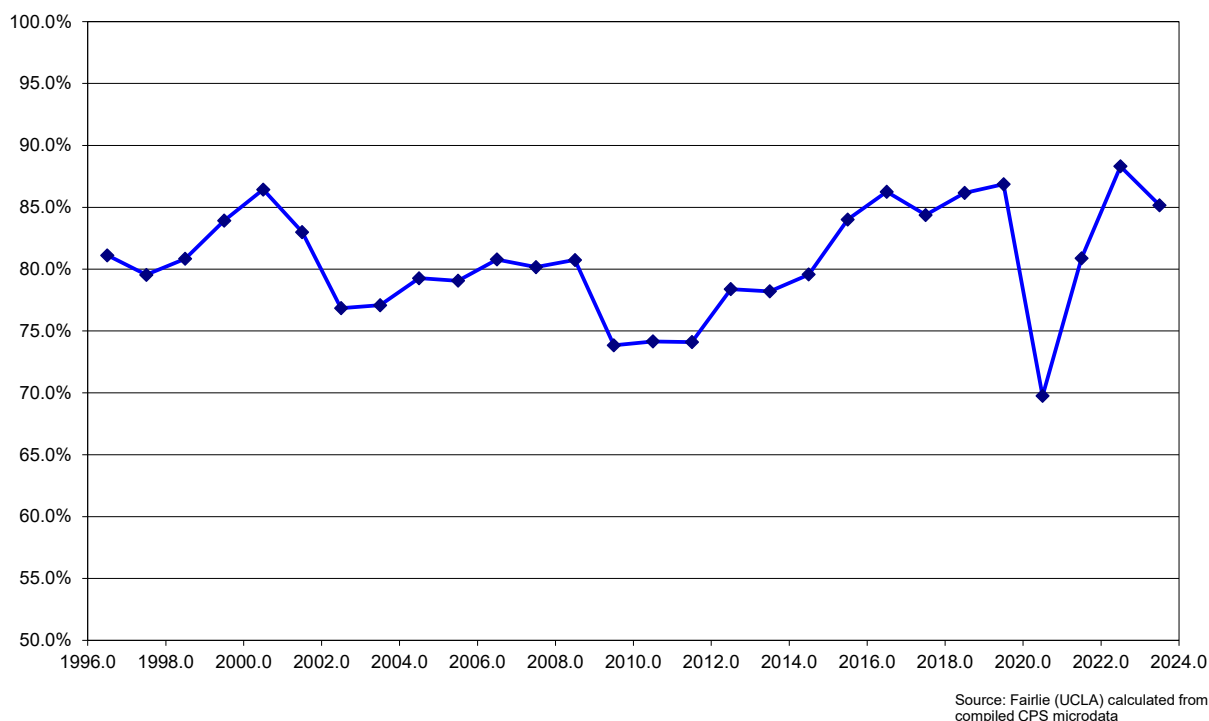
Figure 3
New Entrepreneurship Rate by Nativity (1996-2023)



3. National Trends in the Opportunity Share of New Entrepreneurs

The opportunity share of new entrepreneurs captures new business activity that is inspired by opportunity rather than necessity. Figure 4.A and Appendix Table 4 report annual estimates of the opportunity share of new entrepreneurs from 1996 to 2023. Nationally, the opportunity share of new entrepreneurs decreased slightly to 85.2 percent in 2023. It increased from 80.9 percent in 2020 to 88.3 percent in 2021 reflecting a continuation of improving economic conditions after the early-stage impacts of COVID-19. In 2022 and 2023, the opportunity share roughly returned to pre-pandemic levels.

Figure 4.A
Opportunity Share of New Entrepreneurs (Annual) (1996-2023)



In the first year of the pandemic, the opportunity share of new entrepreneurs plummeted. It decreased from 86.9 percent in 2019 to 69.8 percent in 2020, representing the largest drop over the past 25 years (as tracked in this series) and perhaps much longer. The sharp decrease in the opportunity share in 2020 reflects the massive economic losses during the pandemic. As non-essential businesses closed to stop the rapid spread of COVID-19, consumers cut back on in-person consumption and owners and their employees scaled back work effort for health concerns, new business creation originating from opportunities instead of necessity fell precipitously.

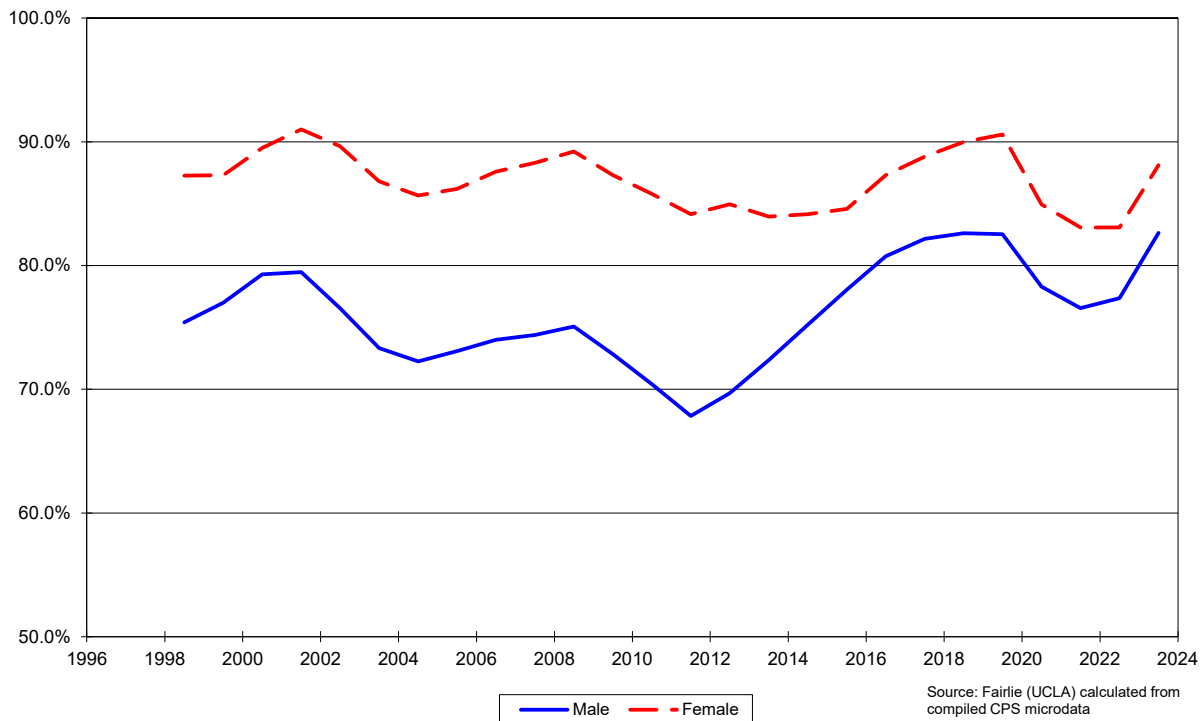
The decline in the opportunity share of new entrepreneurs from 2019 to 2020 was 17.1 percentage points. In comparison, the drop in the opportunity share from 2008 to 2009 during the Great Recession was 6.9 percentage points.

Demographic Trends in the Opportunity Share of New Entrepreneurs

Trends in the opportunity share of new entrepreneurs by demographic groups are also examined. Figure 4.B and Appendix Table 4 report three-year moving averages from 1998 to 2023. Three-year moving averages are reported to increase the precision of estimates and reduce the influence of year-to-year fluctuations from sampling variability. In 2023, the opportunity share of new entrepreneurs for men was 82.6 percent and the opportunity share for women was 88.1 percent. The opportunity share of new entrepreneurs returned to pre-pandemic levels for men in 2023, but remained lower than pre-pandemic levels for women. The opportunity share was 90.6

percent in 2019 for women. In the few years prior to the pandemic, there was a general upward trend in the opportunity share for both women and men as the economy continued to grow.

Figure 4.B
Opportunity Share of New Entrepreneurs (3-Year Moving Average) by Gender (1996-2023)



The opportunity share of new entrepreneurs is lower for men than for women. Furthermore, the opportunity share of new entrepreneurs for women has generally been more stable than that for men.

All race and ethnic groups experienced increases in opportunity shares roughly returning to pre-pandemic levels. Figure 5 and Appendix Table 5 report trends in three-year moving averages of opportunity shares from 1998 to 2023. For all groups the opportunity share of new entrepreneurs has risen since 2019, reversing upward trends over the few years prior to the pandemic. Over most of the time period this indicator is highest among Asian Americans and lowest among Black Americans.

Figure 5
Opportunity Share of New Entrepreneurs (3-Year Moving Average) by Race (1996-2023)

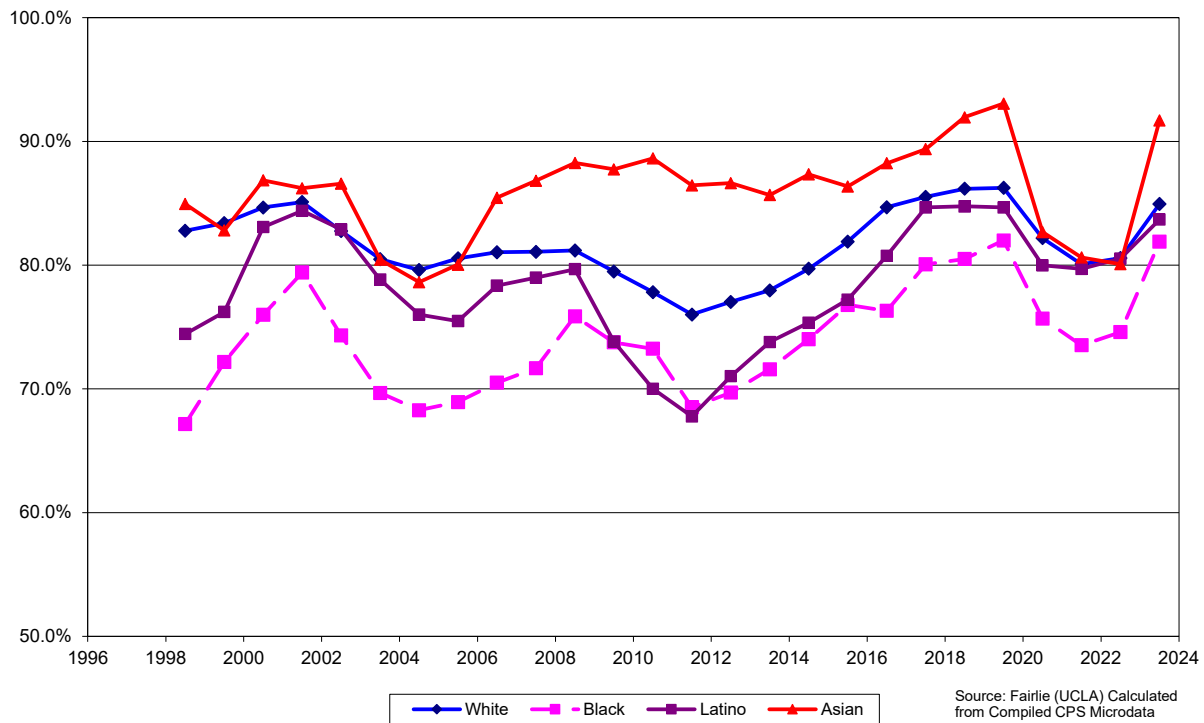
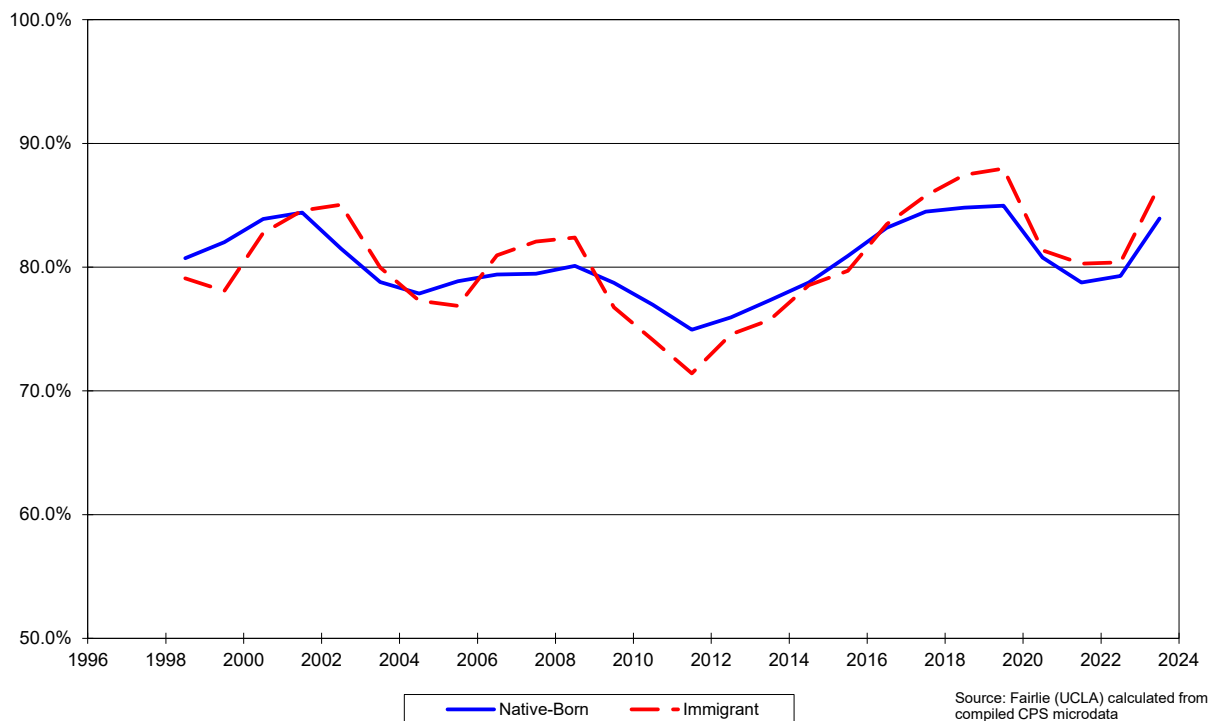


Figure 6 and Appendix Table 6 report estimates of the opportunity share of new entrepreneurs by nativity. The opportunity share of new entrepreneurs also continued the bounce back from pre-pandemic levels for both immigrants and the native-born. In most years, the opportunity share is higher for immigrant population than for the native-born population.

Figure 6
Opportunity Share of New Entrepreneurs (3-Year Moving Average) by Nativity (1996-2023)



4. State Trends in New Entrepreneurship Rate and Opportunity Share

Appendix Table 6 reports new entrepreneurship rates by state from 1998 to 2023. Estimates are reported as three-year moving averages to increase precision.

The states with the highest new entrepreneurship rates in 2023 are Florida (0.60 percent), Texas (0.47 percent) and California (0.47 percent). The states with the lowest new entrepreneurship rates in 2023 are Minnesota (0.17 percent), Kansas (0.18 percent), and Wisconsin (0.18 percent). These estimates imply large differences between Florida where 600 out of 100,000 people start a business each month compared to only 170 out of 100,000 people starting a business each month in Minnesota.

Appendix Table 7 reports opportunity shares of new entrepreneurs by state from 1998 to 2023. Estimates are reported as three-year moving averages to increase precision.

The states with the highest opportunity shares in 2023 are Minnesota (97.2 percent), Iowa (95.5 percent), and Utah (94.6 percent). The states with the lowest opportunity shares in 2023 are District of Columbia (69.3 percent), Rhode Island (73.3 percent), Virginia (75.3 percent), and Indiana (75.3 percent).

5. Conclusion

The new entrepreneurship rate was higher in 2023 than in pre-pandemic 2019, reflecting more transitions into entrepreneurial activity, broadly defined, among the population during pandemic and pandemic recovery conditions. At the same time, the opportunity share of this activity increased from 2020 when it was at its lowest level in at least 25 years, indicating that many of these transitions were undertaken by people with few other options for economic engagement. In 2023, the rebound from the widespread economic damage of the COVID-19 pandemic showed up through a partial return to pre-pandemic levels in both new entrepreneurial activity and the opportunity share of new entrepreneurs.

Demographic trends in new entrepreneurship rates and opportunity shares of new entrepreneurs indicate substantial differences across groups which are not always in the same direction. For example, new entrepreneurship rates are higher for men than women but women have higher opportunity shares than men. State variation in entrepreneurial indicators is also substantial. Florida, California and Texas are found to have high new entrepreneurship rates whereas Minnesota and Iowa had the highest opportunity shares.

REFERENCES

Fairlie, R. 2020. "The Impact of COVID-19 on Small Business Owners: The First Three Months after Social-Distancing Restrictions." *Journal of Economics and Management Strategy*, 29(4): 727-740.

Fairlie, Robert W., Zachary Kroff, Javier Miranda, and Nikolas Zolas. 2023. *The Promise and Peril of Entrepreneurship: Job Creation and Survival among US Startups*, Cambridge: MIT Press.

Fairlie, R. and Desai, S. 2022. "Early-Stage Entrepreneurship: Indicators and a Summary Index." Technical Report Number 1. Ewing Marion Kauffman Foundation.

Fairlie, R. and Fossen, F. 2019. "Defining Opportunity versus Necessity Entrepreneurship: Two Components of Business Creation," National Bureau of Economic Research Working Paper No. 26377.

U.S. Bureau of Labor Statistics. 2022. Current Population Survey. [\(CPS\)](https://www.bls.gov/cps/).
<https://www.bls.gov/cps/>

Appendix Table 1
New Entrepreneurship Rate by Gender (1996-2023)

Year	Male		Female		Total	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.38%	242,558	0.26%	286,670	0.32%	529,228
1997	0.36%	244,856	0.21%	286,481	0.28%	531,337
1998	0.32%	245,941	0.25%	286,602	0.29%	532,543
1999	0.32%	245,815	0.22%	286,416	0.27%	532,231
2000	0.34%	247,027	0.21%	285,355	0.27%	532,382
2001	0.31%	260,936	0.23%	300,637	0.27%	561,573
2002	0.35%	289,130	0.22%	335,173	0.28%	624,303
2003	0.38%	284,487	0.23%	330,102	0.30%	614,589
2004	0.37%	279,600	0.24%	323,571	0.30%	603,171
2005	0.35%	277,131	0.23%	321,046	0.28%	598,177
2006	0.36%	275,538	0.24%	317,379	0.30%	592,917
2007	0.40%	271,413	0.21%	314,074	0.30%	585,487
2008	0.42%	272,789	0.23%	312,888	0.32%	585,677
2009	0.43%	276,445	0.25%	315,254	0.34%	591,699
2010	0.44%	277,387	0.24%	315,884	0.34%	593,271
2011	0.42%	273,887	0.23%	312,259	0.32%	586,146
2012	0.38%	272,246	0.23%	308,707	0.30%	580,953
2013	0.34%	268,540	0.22%	304,060	0.28%	572,600
2014	0.41%	266,891	0.22%	302,210	0.31%	569,101
2015	0.42%	259,471	0.26%	293,416	0.33%	552,887
2016	0.39%	257,057	0.23%	291,530	0.31%	548,587
2017	0.40%	250,881	0.27%	284,605	0.33%	535,486
2018	0.41%	241,728	0.24%	271,967	0.32%	513,695
2019	0.38%	230,118	0.23%	257,507	0.31%	487,625
2020	0.48%	200,874	0.30%	223,486	0.38%	424,360
2021	0.45%	202,078	0.28%	223,285	0.36%	425,363
2022	0.47%	191,775	0.28%	211,173	0.37%	402,948
2023	0.44%	186,822	0.26%	204,784	0.35%	391,606

Notes: (1) Fairlie (UCLA) calculations from compiled Current Population Survey microdata. (2) The entrepreneurship index is the percent of individuals (ages 20-64) who do not own a business in the first survey month that start a business in the following month with 15 or more hours worked.

Appendix Table 2
New Entrepreneurship Rate by Race (1996-2023)

Year	White		Black		Latinx		Asian		Total	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.33%	403,882	0.21%	54,582	0.32%	43,663	0.29%	20,344	0.32%	529,228
1997	0.29%	402,742	0.19%	55,372	0.32%	45,460	0.23%	20,729	0.28%	531,337
1998	0.31%	402,851	0.18%	54,726	0.27%	46,886	0.25%	21,137	0.29%	532,543
1999	0.28%	401,523	0.21%	54,183	0.31%	48,682	0.24%	21,139	0.27%	532,231
2000	0.28%	395,793	0.23%	55,089	0.29%	52,274	0.22%	21,892	0.27%	532,382
2001	0.27%	418,654	0.21%	57,667	0.29%	53,780	0.30%	23,603	0.27%	561,573
2002	0.28%	469,788	0.24%	61,598	0.30%	57,638	0.26%	26,534	0.28%	624,303
2003	0.30%	456,940	0.23%	58,699	0.40%	59,441	0.29%	23,889	0.30%	614,589
2004	0.31%	444,473	0.22%	56,789	0.34%	59,238	0.28%	24,310	0.30%	603,171
2005	0.29%	438,870	0.23%	55,069	0.31%	60,526	0.26%	25,541	0.28%	598,177
2006	0.30%	429,197	0.24%	55,675	0.34%	64,085	0.31%	26,555	0.30%	592,917
2007	0.30%	422,208	0.22%	56,392	0.40%	63,617	0.33%	26,882	0.30%	585,487
2008	0.31%	420,349	0.22%	56,405	0.46%	64,786	0.34%	28,066	0.32%	585,677
2009	0.33%	423,378	0.27%	57,564	0.46%	65,514	0.31%	28,961	0.34%	591,699
2010	0.31%	418,536	0.24%	60,550	0.56%	67,853	0.37%	30,243	0.34%	593,271
2011	0.29%	411,118	0.23%	59,939	0.52%	67,695	0.32%	31,456	0.32%	586,146
2012	0.29%	405,044	0.21%	58,800	0.40%	68,637	0.31%	32,688	0.30%	580,953
2013	0.27%	396,399	0.19%	58,700	0.38%	69,291	0.28%	32,693	0.28%	572,600
2014	0.29%	390,776	0.22%	59,010	0.46%	70,034	0.33%	33,114	0.31%	569,101
2015	0.32%	375,378	0.23%	60,147	0.46%	68,384	0.29%	32,669	0.33%	552,887
2016	0.28%	369,856	0.22%	59,051	0.48%	70,171	0.34%	33,337	0.31%	548,587
2017	0.30%	361,597	0.30%	56,661	0.50%	68,311	0.31%	33,109	0.33%	535,486
2018	0.29%	346,291	0.24%	52,717	0.51%	66,145	0.33%	32,578	0.32%	513,695
2019	0.29%	327,619	0.24%	50,016	0.44%	63,873	0.30%	30,798	0.31%	487,625
2020	0.36%	286,991	0.38%	43,347	0.52%	53,329	0.35%	28,146	0.38%	424,360
2021	0.33%	282,436	0.28%	44,787	0.54%	56,279	0.36%	28,773	0.36%	425,363
2022	0.33%	264,323	0.34%	41,941	0.59%	55,485	0.30%	28,330	0.37%	402,948
2023	0.28%	255,164	0.34%	39,133	0.60%	56,882	0.31%	27,437	0.35%	391,606

Notes: (1) Fairlie (UCLA) calculations from compiled Current Population Survey microdata. (2) The entrepreneurship index is the percent of individuals (ages 20-64) who do not own a business in the first survey month that start a business in the following month with 15 or more hours worked. (3) Race and Spanish codes changed in 2003. Estimates for 2003 only include individuals reporting one race.

Appendix Table 3
New Entrepreneurship Rate by Nativity (1996-2023)

Year	Native-Born		Immigrant		Total	
	Entrep. Index	Sample Size	Entrep. Index	Sample Size	Entrep. Index	Sample Size
1996	0.31%	473,602	0.36%	55,626	0.32%	529,228
1997	0.27%	473,536	0.33%	57,801	0.28%	531,337
1998	0.28%	472,728	0.31%	59,815	0.29%	532,543
1999	0.26%	471,772	0.32%	60,459	0.27%	532,231
2000	0.26%	467,393	0.32%	64,989	0.27%	532,382
2001	0.26%	493,029	0.31%	68,544	0.27%	561,573
2002	0.26%	550,023	0.36%	74,280	0.28%	624,303
2003	0.29%	540,397	0.38%	74,192	0.30%	614,589
2004	0.28%	529,234	0.41%	73,937	0.30%	603,171
2005	0.28%	523,221	0.33%	74,956	0.28%	598,177
2006	0.28%	514,691	0.38%	78,226	0.30%	592,917
2007	0.27%	507,469	0.46%	78,018	0.30%	585,487
2008	0.28%	507,088	0.52%	78,589	0.32%	585,677
2009	0.30%	511,798	0.51%	79,901	0.34%	591,699
2010	0.28%	510,631	0.62%	82,640	0.34%	593,271
2011	0.27%	503,500	0.55%	82,646	0.32%	586,146
2012	0.26%	498,127	0.49%	82,826	0.30%	580,953
2013	0.25%	491,045	0.43%	81,555	0.28%	572,600
2014	0.27%	487,845	0.52%	81,256	0.31%	569,101
2015	0.29%	474,013	0.53%	78,874	0.33%	552,887
2016	0.26%	469,116	0.52%	79,471	0.31%	548,587
2017	0.28%	457,808	0.56%	77,678	0.33%	535,486
2018	0.27%	437,344	0.53%	76,351	0.32%	513,695
2019	0.28%	416,202	0.44%	71,423	0.31%	487,625
2020	0.34%	363,764	0.59%	60,596	0.38%	424,360
2021	0.32%	362,854	0.58%	62,509	0.36%	425,363
2022	0.31%	341,000	0.65%	61,948	0.37%	402,948
2023	0.28%	329,812	0.67%	61,794	0.35%	391,606

Notes: (1) Fairlie (UCLA) calculations from compiled Current Population Survey microdata. (2) The entrepreneurship index is the percent of individuals (ages 20-64) who do not own a business in the first survey month that start a business in the following month with 15 or more hours worked.

Appendix Table 4
Opportunity Share of New Entrepreneurs (Annual and 3-Year
Moving Average) by Gender

Year	Male		Female		Total	
	Opp. Share	Sample Size	Opp. Share	Sample Size	Opp. Share	Sample Size
1996	.	.	.	.	81.1%	1,692
1997	.	.	.	.	79.5%	1,570
1998	75.4%	2,680	87.3%	2,213	80.8%	1,631
1999	77.0%	2,554	87.3%	2,114	83.9%	1,467
2000	79.3%	2,528	89.5%	2,107	86.4%	1,537
2001	79.5%	2,501	91.0%	2,010	83.0%	1,507
2002	76.5%	2,694	89.7%	2,097	76.8%	1,747
2003	73.3%	2,881	86.8%	2,227	77.1%	1,854
2004	72.3%	3,133	85.7%	2,301	79.3%	1,833
2005	73.1%	3,132	86.2%	2,322	79.1%	1,767
2006	74.0%	3,083	87.6%	2,307	80.8%	1,790
2007	74.4%	3,068	88.3%	2,227	80.2%	1,738
2008	75.1%	3,146	89.2%	2,168	80.7%	1,786
2009	72.8%	3,284	87.3%	2,177	73.8%	1,937
2010	70.4%	3,404	85.8%	2,239	74.2%	1,920
2011	67.8%	3,434	84.1%	2,248	74.1%	1,825
2012	69.7%	3,333	84.9%	2,192	78.4%	1,780
2013	72.4%	3,092	84.0%	2,122	78.2%	1,609
2014	75.2%	3,060	84.2%	2,063	79.6%	1,734
2015	78.0%	3,071	84.6%	2,100	84.0%	1,828
2016	80.7%	3,136	87.3%	2,112	86.3%	1,686
2017	82.2%	3,065	88.8%	2,192	84.4%	1,743
2018	82.6%	2,940	90.0%	2,128	86.2%	1,639
2019	82.5%	2,822	90.6%	2,054	86.9%	1,494
2020	78.3%	2,737	84.9%	1,970	69.8%	1,574
2021	76.6%	2,642	83.1%	1,895	80.9%	1,469
2022	77.4%	2,594	83.1%	1,858	88.3%	1,409
2023	82.6%	2,472	88.1%	1,721	85.2%	1,315

Notes: (1) Fairlie (UCLA) calculations from compiled Current Population Survey microdata. (2) The opportunity share of new entrepreneurs is the share of all individuals (ages 20-64) who start a business who were not unemployed in the preceding month. (3) Sample sizes are for all three years used to calculate the three-year moving average except for total column.

Appendix Table 5
Opportunity Share of New Entrepreneurs (3-Year Moving Average) by Race

Year	White		Black		Latino		Asian	
	Opp. Share	Tot. Sample Size	Opp. Share	Tot. Sample Size	Opp. Share	Tot. Sample Size	Opp. Share	Tot. Sample Size
1996	.	.	.	.	.	.	.	.
1997	.	.	.	.	.	.	.	.
1998	82.8%	3,925	67.2%	320	74.4%	407	84.9%	151
1999	83.4%	3,715	72.2%	308	76.2%	419	82.8%	148
2000	84.7%	3,630	76.0%	341	83.1%	434	86.9%	155
2001	85.1%	3,477	79.4%	360	84.4%	443	86.2%	162
2002	82.8%	3,675	74.3%	395	82.9%	463	86.6%	179
2003	80.5%	3,875	69.7%	385	78.8%	546	80.4%	189
2004	79.6%	4,128	68.3%	385	76.0%	582	78.6%	190
2005	80.6%	4,120	68.9%	370	75.5%	594	80.0%	187
2006	81.0%	4,057	70.5%	375	78.3%	569	85.4%	201
2007	81.1%	3,904	71.7%	380	79.0%	625	86.8%	218
2008	81.2%	3,827	75.9%	374	79.7%	716	88.3%	234
2009	79.5%	3,898	73.8%	386	73.8%	788	87.7%	238
2010	77.8%	3,918	73.2%	402	70.0%	900	88.6%	261
2011	76.0%	3,884	68.5%	418	67.8%	957	86.5%	268
2012	77.0%	3,745	69.7%	394	71.0%	945	86.6%	285
2013	78.0%	3,546	71.6%	374	73.8%	858	85.7%	274
2014	79.7%	3,470	74.0%	371	75.3%	830	87.3%	298
2015	81.9%	3,485	76.8%	381	77.2%	852	86.4%	292
2016	84.7%	3,480	76.3%	394	80.7%	904	88.2%	309
2017	85.5%	3,427	80.1%	429	84.7%	933	89.4%	301
2018	86.2%	3,207	80.5%	420	84.8%	965	92.0%	316
2019	86.3%	3,103	82.0%	401	84.7%	927	93.1%	301
2020	82.2%	3,024	75.7%	380	80.0%	862	82.7%	299
2021	80.1%	2,901	73.5%	381	79.7%	824	80.6%	291
2022	80.6%	2,749	74.6%	402	80.5%	867	80.1%	286
2023	84.9%	2,468	81.9%	373	83.7%	927	91.7%	276

Notes: (1) Fairlie (UCLA) calculations from compiled Current Population Survey microdata. (2) The opportunity share of new entrepreneurs is the share of all individuals (ages 20-64) who start a business who were not unemployed in the preceding month. (3) Sample sizes are for all three years used to calculate the three-year moving average.

Appendix Table 6
Opportunity Share of New Entrepreneurs (3-Year
Moving Average) by Immigrant

Year	Native-Born		Immigrant	
	Opp. Share	Sample Size	Opp. Share	Sample Size
1996	.	.	.	.
1997	.	.	.	.
1998	80.7%	4,326	79.1%	567
1999	82.0%	4,104	78.1%	564
2000	83.9%	4,038	82.8%	597
2001	84.4%	3,897	84.6%	614
2002	81.5%	4,104	85.0%	687
2003	78.8%	4,365	80.0%	743
2004	77.9%	4,609	77.3%	825
2005	78.9%	4,639	76.9%	815
2006	79.4%	4,568	81.0%	822
2007	79.5%	4,432	82.1%	863
2008	80.1%	4,340	82.4%	974
2009	78.7%	4,381	76.7%	1,080
2010	77.0%	4,439	74.1%	1,204
2011	74.9%	4,426	71.4%	1,256
2012	75.9%	4,270	74.6%	1,255
2013	77.3%	4,065	75.7%	1,149
2014	78.8%	3,989	78.5%	1,134
2015	80.9%	4,032	79.7%	1,139
2016	83.2%	4,072	83.5%	1,176
2017	84.5%	4,077	85.8%	1,180
2018	84.8%	3,889	87.5%	1,179
2019	85.0%	3,770	88.0%	1,106
2020	80.8%	3,658	81.4%	1,049
2021	78.8%	3,529	80.3%	1,008
2022	79.3%	3,379	80.4%	1,073
2023	83.9%	3,078	86.6%	1,115

Notes: (1) Fairlie (UCLA) calculations from compiled Current Population Survey microdata. (2) The opportunity share of new entrepreneurs is the share of all individuals (ages 20-64) who start a business who were not unemployed in the preceding month. (3) Sample sizes are for all three years used to calculate the three-year moving average.

Appendix Table 7: New Entrepreneurship Rate by State, 3-Year MA (2014-2023)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Alabama	0.0022	0.0025	0.0023	0.0024	0.0021	0.0023	0.0025	0.0026	0.0030	0.0029
Alaska	0.0045	0.0048	0.0044	0.0040	0.0041	0.0044	0.0048	0.0042	0.0038	0.0032
Arizona	0.0031	0.0033	0.0040	0.0039	0.0035	0.0033	0.0038	0.0039	0.0036	0.0027
Arkansas	0.0025	0.0027	0.0029	0.0029	0.0029	0.0032	0.0033	0.0035	0.0037	0.0037
California	0.0039	0.0039	0.0042	0.0044	0.0045	0.0042	0.0043	0.0043	0.0048	0.0047
Colorado	0.0035	0.0033	0.0035	0.0033	0.0035	0.0030	0.0035	0.0042	0.0046	0.0046
Connecticut	0.0030	0.0029	0.0027	0.0023	0.0020	0.0019	0.0028	0.0031	0.0039	0.0033
Delaware	0.0029	0.0024	0.0020	0.0016	0.0023	0.0025	0.0027	0.0026	0.0023	0.0028
District of Columbia	0.0025	0.0023	0.0022	0.0024	0.0027	0.0025	0.0024	0.0022	0.0023	0.0025
Florida	0.0035	0.0036	0.0038	0.0042	0.0046	0.0047	0.0053	0.0061	0.0065	0.0060
Georgia	0.0029	0.0029	0.0033	0.0038	0.0042	0.0041	0.0036	0.0047	0.0046	0.0046
Hawaii	0.0035	0.0033	0.0031	0.0027	0.0030	0.0034	0.0041	0.0035	0.0033	0.0032
Idaho	0.0033	0.0032	0.0032	0.0035	0.0038	0.0038	0.0038	0.0033	0.0034	0.0033
Illinois	0.0023	0.0023	0.0023	0.0024	0.0025	0.0027	0.0027	0.0028	0.0027	0.0030
Indiana	0.0023	0.0023	0.0022	0.0020	0.0021	0.0025	0.0025	0.0023	0.0026	0.0032
Iowa	0.0018	0.0018	0.0020	0.0022	0.0028	0.0031	0.0031	0.0022	0.0019	0.0019
Kansas	0.0022	0.0027	0.0030	0.0030	0.0027	0.0027	0.0030	0.0028	0.0024	0.0018
Kentucky	0.0035	0.0028	0.0025	0.0023	0.0026	0.0026	0.0027	0.0030	0.0029	0.0030
Louisiana	0.0033	0.0028	0.0028	0.0031	0.0034	0.0036	0.0037	0.0037	0.0041	0.0041
Maine	0.0029	0.0029	0.0029	0.0033	0.0031	0.0037	0.0040	0.0042	0.0042	0.0035
Maryland	0.0024	0.0028	0.0026	0.0032	0.0027	0.0030	0.0026	0.0029	0.0031	0.0032
Massachusetts	0.0029	0.0029	0.0029	0.0026	0.0023	0.0025	0.0027	0.0027	0.0025	0.0024
Michigan	0.0026	0.0029	0.0026	0.0025	0.0023	0.0025	0.0029	0.0029	0.0031	0.0025
Minnesota	0.0017	0.0025	0.0028	0.0030	0.0020	0.0018	0.0018	0.0020	0.0022	0.0017
Mississippi	0.0034	0.0033	0.0037	0.0037	0.0032	0.0033	0.0032	0.0037	0.0037	0.0038
Missouri	0.0028	0.0029	0.0030	0.0032	0.0032	0.0037	0.0037	0.0037	0.0032	0.0027
Montana	0.0054	0.0050	0.0043	0.0040	0.0040	0.0034	0.0035	0.0036	0.0041	0.0042
Nebraska	0.0025	0.0025	0.0025	0.0025	0.0030	0.0027	0.0027	0.0028	0.0029	0.0025
Nevada	0.0037	0.0038	0.0041	0.0038	0.0034	0.0034	0.0032	0.0034	0.0040	0.0046
New Hampshire	0.0025	0.0024	0.0024	0.0024	0.0022	0.0028	0.0031	0.0029	0.0029	0.0027
New Jersey	0.0024	0.0032	0.0034	0.0032	0.0029	0.0031	0.0036	0.0037	0.0035	0.0030
New Mexico	0.0040	0.0032	0.0035	0.0038	0.0042	0.0040	0.0051	0.0055	0.0054	0.0045
New York	0.0033	0.0035	0.0036	0.0033	0.0032	0.0030	0.0039	0.0038	0.0044	0.0041
North Carolina	0.0031	0.0033	0.0034	0.0028	0.0027	0.0025	0.0031	0.0034	0.0035	0.0036
North Dakota	0.0027	0.0029	0.0031	0.0039	0.0036	0.0038	0.0032	0.0029	0.0024	0.0021
Ohio	0.0021	0.0024	0.0024	0.0022	0.0020	0.0020	0.0025	0.0028	0.0029	0.0024
Oklahoma	0.0036	0.0040	0.0045	0.0041	0.0039	0.0039	0.0044	0.0044	0.0041	0.0038
Oregon	0.0027	0.0031	0.0034	0.0032	0.0027	0.0026	0.0029	0.0034	0.0036	0.0037
Pennsylvania	0.0020	0.0018	0.0017	0.0018	0.0019	0.0020	0.0018	0.0017	0.0020	0.0021
Rhode Island	0.0020	0.0023	0.0021	0.0018	0.0012	0.0017	0.0016	0.0019	0.0020	0.0023
South Carolina	0.0032	0.0029	0.0029	0.0025	0.0026	0.0026	0.0026	0.0029	0.0036	0.0039
South Dakota	0.0034	0.0035	0.0031	0.0028	0.0032	0.0029	0.0029	0.0024	0.0031	0.0030
Tennessee	0.0024	0.0025	0.0023	0.0026	0.0027	0.0029	0.0035	0.0035	0.0038	0.0033
Texas	0.0036	0.0039	0.0040	0.0042	0.0043	0.0041	0.0038	0.0037	0.0045	0.0047
Utah	0.0030	0.0028	0.0028	0.0030	0.0029	0.0025	0.0024	0.0025	0.0026	0.0030
Vermont	0.0040	0.0036	0.0040	0.0038	0.0036	0.0034	0.0041	0.0042	0.0039	0.0029
Virginia	0.0022	0.0024	0.0021	0.0021	0.0018	0.0020	0.0023	0.0026	0.0025	0.0020
Washington	0.0024	0.0024	0.0027	0.0032	0.0030	0.0032	0.0027	0.0030	0.0027	0.0031
West Virginia	0.0020	0.0021	0.0021	0.0025	0.0021	0.0018	0.0016	0.0017	0.0017	0.0020
Wisconsin	0.0017	0.0019	0.0021	0.0026	0.0025	0.0023	0.0022	0.0022	0.0023	0.0018
Wyoming	0.0032	0.0039	0.0045	0.0047	0.0045	0.0039	0.0041	0.0041	0.0034	0.0028

Appendix Table 8: Opportunity Share of New Entrepreneurs by State, 3-Year MA (2014-2023)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Alabama	69.0%	66.4%	72.1%	78.9%	84.1%	89.7%	79.9%	77.2%	78.0%	89.9%
Alaska	74.1%	71.3%	72.4%	79.2%	82.5%	85.3%	78.4%	77.6%	75.0%	82.4%
Arizona	80.9%	80.8%	82.7%	89.6%	85.7%	87.8%	81.4%	78.4%	76.7%	76.8%
Arkansas	82.5%	81.4%	82.0%	84.2%	84.5%	86.7%	91.1%	93.1%	92.9%	90.5%
California	76.0%	78.5%	82.5%	87.0%	87.9%	87.4%	79.7%	77.6%	76.9%	82.8%
Colorado	84.9%	85.1%	87.2%	83.6%	80.4%	85.4%	77.0%	72.6%	73.0%	78.5%
Connecticut	74.9%	76.3%	81.1%	81.9%	87.3%	75.1%	74.5%	69.4%	84.9%	92.4%
Delaware	83.6%	86.2%	86.1%	93.4%	93.4%	89.0%	85.3%	80.0%	78.8%	81.4%
District of Columbia	70.5%	74.3%	72.0%	74.5%	74.0%	71.4%	77.2%	76.6%	79.7%	69.3%
Florida	80.3%	79.5%	83.3%	85.4%	86.7%	88.3%	85.7%	86.1%	86.6%	91.7%
Georgia	69.7%	76.7%	86.6%	87.3%	90.9%	88.4%	84.0%	81.6%	84.7%	90.7%
Hawaii	88.9%	88.7%	84.6%	81.4%	88.7%	88.4%	84.4%	79.8%	78.9%	88.2%
Idaho	90.3%	89.4%	89.3%	83.9%	87.9%	87.2%	88.0%	89.3%	90.2%	92.0%
Illinois	86.4%	82.2%	78.8%	74.1%	79.5%	83.8%	78.5%	73.7%	76.3%	82.0%
Indiana	75.2%	75.0%	80.2%	83.4%	86.8%	90.3%	81.0%	76.3%	69.0%	75.3%
Iowa	86.9%	89.6%	92.5%	94.0%	93.6%	85.3%	83.1%	86.9%	97.8%	95.5%
Kansas	90.1%	81.2%	82.5%	80.2%	84.5%	88.1%	89.5%	86.3%	81.1%	77.0%
Kentucky	69.3%	75.9%	79.9%	85.9%	85.4%	84.8%	79.4%	72.3%	78.7%	89.7%
Louisiana	89.2%	86.4%	79.7%	75.6%	71.9%	72.7%	76.9%	82.5%	82.3%	85.5%
Maine	80.4%	77.7%	75.2%	78.3%	87.6%	88.4%	85.6%	79.1%	78.3%	81.1%
Maryland	84.3%	82.3%	73.1%	75.9%	76.5%	85.6%	79.3%	80.7%	82.0%	88.6%
Massachusetts	73.4%	75.7%	85.4%	88.6%	84.6%	78.6%	66.0%	68.7%	74.2%	84.9%
Michigan	76.4%	82.0%	84.2%	87.6%	85.3%	82.6%	74.3%	65.1%	70.8%	78.7%
Minnesota	73.8%	75.2%	78.6%	88.0%	84.0%	81.6%	66.5%	76.3%	78.0%	97.2%
Mississippi	79.7%	81.3%	78.6%	82.5%	86.3%	86.4%	83.9%	81.9%	85.0%	90.9%
Missouri	76.8%	83.0%	83.2%	88.5%	84.0%	80.8%	79.0%	81.7%	77.0%	80.0%
Montana	84.0%	84.1%	83.9%	86.2%	85.4%	85.6%	78.2%	75.8%	77.1%	85.8%
Nebraska	88.7%	90.3%	91.4%	94.0%	92.5%	90.1%	82.4%	77.5%	78.2%	85.9%
Nevada	79.3%	87.4%	92.1%	86.8%	85.8%	82.6%	79.9%	76.4%	78.2%	85.9%
New Hampshire	72.6%	77.6%	77.4%	82.8%	85.1%	91.0%	82.7%	72.3%	74.4%	82.9%
New Jersey	76.1%	85.2%	88.0%	85.5%	87.0%	84.9%	79.8%	72.3%	68.7%	76.7%
New Mexico	74.2%	81.1%	79.9%	76.0%	69.5%	75.4%	80.8%	83.1%	81.5%	85.6%
New York	81.8%	83.0%	84.1%	87.0%	87.0%	89.3%	83.9%	81.9%	81.1%	83.7%
North Carolina	79.2%	82.6%	83.9%	87.2%	90.4%	87.5%	80.4%	76.5%	79.6%	83.4%
North Dakota	89.5%	90.8%	87.3%	88.3%	88.2%	92.7%	95.1%	91.3%	87.2%	88.8%
Ohio	89.2%	90.7%	88.2%	82.6%	81.4%	75.9%	73.4%	73.8%	80.2%	84.8%
Oklahoma	81.9%	84.7%	89.5%	87.7%	85.4%	82.6%	83.9%	84.6%	85.9%	85.1%
Oregon	72.6%	75.8%	76.1%	80.0%	89.9%	90.0%	85.7%	76.6%	73.0%	76.6%
Pennsylvania	71.5%	75.6%	83.0%	84.7%	86.5%	87.3%	83.1%	77.9%	79.5%	86.0%
Rhode Island	87.8%	87.3%	80.4%	68.7%	72.5%	84.0%	80.7%	66.9%	61.7%	73.3%
South Carolina	72.6%	79.8%	79.6%	77.6%	83.3%	84.9%	85.2%	84.0%	84.8%	87.3%
South Dakota	86.9%	84.4%	89.7%	92.7%	94.1%	96.2%	83.0%	84.7%	76.8%	90.1%
Tennessee	70.0%	78.2%	88.7%	89.4%	88.1%	91.5%	88.0%	81.1%	81.5%	88.3%
Texas	80.6%	81.0%	84.6%	83.8%	84.6%	83.6%	79.6%	79.6%	80.0%	84.7%
Utah	85.8%	83.6%	88.1%	90.0%	89.5%	91.5%	86.0%	91.4%	91.6%	94.6%
Vermont	79.4%	75.7%	78.3%	76.5%	78.7%	82.3%	79.2%	75.2%	76.2%	86.0%
Virginia	81.4%	82.5%	77.6%	79.9%	76.1%	83.5%	80.1%	79.9%	75.3%	75.3%
Washington	76.2%	81.3%	87.4%	92.0%	90.1%	87.9%	74.0%	75.7%	71.7%	83.1%
West Virginia	77.6%	78.8%	85.7%	89.0%	90.4%	85.3%	85.3%	82.3%	83.6%	85.1%
Wisconsin	71.2%	74.2%	66.4%	73.3%	68.4%	84.4%	83.4%	85.2%	82.6%	88.9%
Wyoming	88.7%	89.5%	86.4%	85.6%	88.3%	91.8%	88.0%	85.2%	88.8%	92.4%