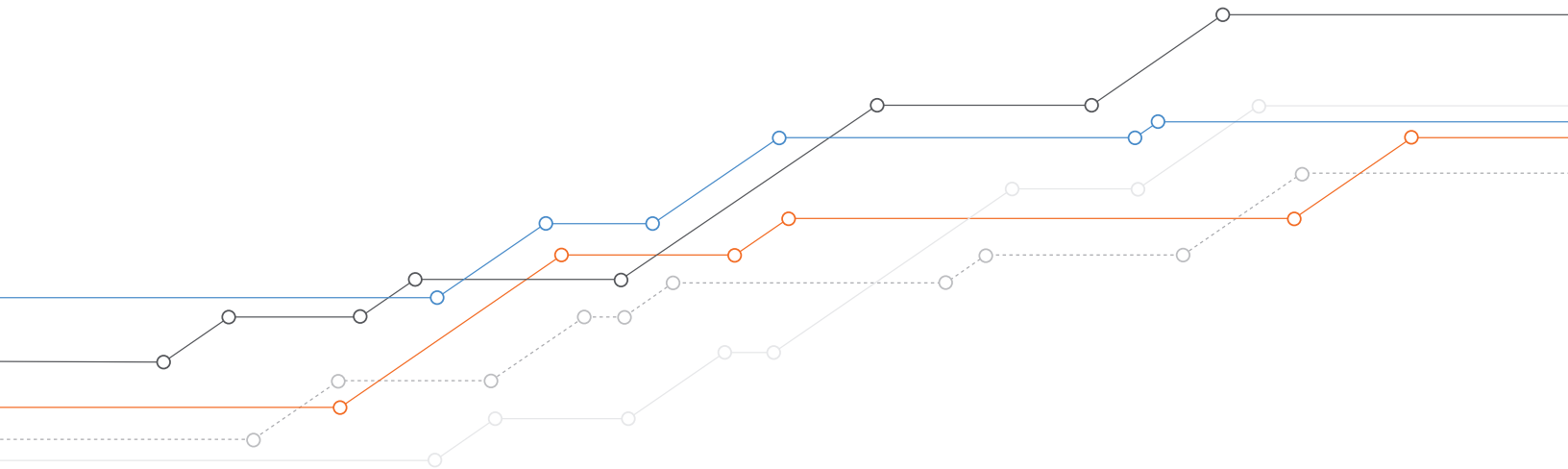




KAUFFMAN
INDICATORS *of*
ENTREPRENEURSHIP

NATIONAL REPORT ON **EARLY-STAGE** **ENTREPRENEURSHIP** IN THE **UNITED STATES: 2021**

MARCH 2022



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Suggested citation: Fairlie, Robert (2022). *National Report on Early-Stage Entrepreneurship in the United States: 2021*, Kauffman Indicators of Entrepreneurship, Ewing Marion Kauffman Foundation: Kansas City.

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EARLY-STAGE ENTREPRENEURSHIP IN THE UNITED STATES

This report tracks four indicators capturing early-stage entrepreneurship activity in the United States:

Rate of new entrepreneurs

Opportunity share of new entrepreneurs

Startup early job creation

Startup early survival rate

These indicators collectively inform the Kauffman Early-Stage Entrepreneurship (KESE) Index, a summary index of entrepreneurial activity.

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Executive Summary

The Kauffman Indicators of Early-Stage Entrepreneurship is a set of measures that represents new business creation in the United States, integrating several high-quality, timely sources of information on early-stage entrepreneurship.

This report presents four indicators that track early-stage entrepreneurship for the years 1996–2021: **rate of new entrepreneurs** reflects the number of new entrepreneurs in a given month, **opportunity share of new entrepreneurs** is the percentage of new entrepreneurs who created their businesses out of opportunity instead of necessity, **startup early job creation** is the total number of jobs created by startups per capita, and **startup early survival rate** is the one-year average survival rate for new firms. We report national trends for the four indicators as well as some demographic trends for the rate of new entrepreneurs and opportunity share of new entrepreneurs.

The rate of new entrepreneurs was lower in 2021 than in 2020 but higher than in pre-pandemic 2019, reflecting more transitions into entrepreneurial activity, broadly defined, among the population during pandemic 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.

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.

National Trends in Early-Stage Entrepreneurship in 2021:

- Nationally, the rate of new entrepreneurs in 2021 was 0.36 percent, meaning that an average of 360 out of every 100,000 adults became new entrepreneurs in a given month. The monthly rate increased substantially from 2019 to 2020 as the economy went through the shutdowns, job losses, and re-openings that characterized the early stages of the COVID-19 pandemic, and has only partly returned to pre-pandemic levels.
 - The **rate of new entrepreneurs** was 0.28 percent among women and 0.45 percent among men, reflecting a sharp increase from 2019 to 2020 and partial rebound from 2020 to 2021 to pre-pandemic levels.
 - In 2021, the rate of new entrepreneurs was 0.54 percent among those identifying as Latino, 0.28 percent among those identifying as Black or African American, 0.36 percent among those identifying as Asian, and 0.33 percent among those identifying as white. Rates remained higher for all groups compared to pre-pandemic levels.
- The rate of new entrepreneurs was 0.58 percent for immigrants – substantially higher than that for native-born Americans (0.32 percent). The rate of new entrepreneurs decreased slightly in 2021 but remained higher than pre-pandemic levels.
- The rate of new entrepreneurs was highest among the 45–54 year age group (0.44 percent) and lowest among the 20–34 year age group (0.27 percent). All age groups have higher rates than pre-pandemic levels.
- The **opportunity share of new entrepreneurs** rebounded substantially to 80.9 percent from its low of 69.8 percent in 2020, but remained much lower than its pre-pandemic level of 86.9 percent in 2019. The decline from 2019 to 2020 during the first year of the pandemic was 17.1 percentage points, which is much larger than the one-year decline of 6.9 percentage points from 2008 to 2009 during the Great Recession.
 - The opportunity share of new entrepreneurs was lower for both women and men in 2021 than pre-pandemic levels.

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.

- All ethnic and racial groups have lower opportunity shares in 2021 than pre-pandemic levels.
- The opportunity share of new entrepreneurs was lower for immigrants and the native-born population in 2021 than pre-pandemic levels.
- All age groups experienced decreases in the opportunity share from 2019 to 2021, reversing the upward trend since the Great Recession.
- Startup early job creation and startup early survival rates are based on data cycles that end in March, meaning that both indicators cover the first quarter of 2021.
 - **Startup early job creation** in 2021 was 4.7 jobs per capita, defined here as startups hired 4.7 jobs for every 1,000 people. Startup job creation was down from pre-pandemic levels.
 - The **startup early survival rate** was 81.7 percent in 2021, reflecting an increase from 2020 as the economy improved.
- The overall **KESE Index** — an equally-weighted composite of the four indicators — was 2.2, which was a large rebound from the drop in the first year of the pandemic. The index dropped from 1.2 in 2019 to -0.1 in 2020. This drop in the KESE Index was the largest drop since the Great Recession. The index is normalized at zero, which is a two-decade average.

The purpose of these indicators is to provide a guidepost for early-stage entrepreneurial activity so that interested individuals and organizations can better understand trends in different aspects of new business creation.

Kauffman Indicators of Entrepreneurship

The Kauffman Indicators of Early-Stage Entrepreneurship captures early-stage entrepreneurial activity, broadly defined. It includes four key early-stage measures of entrepreneurial activity:

1. **Rate of new entrepreneurs:** the broadest measure possible for business creation by population.
2. **Opportunity share of new entrepreneurs:** the percentage of new entrepreneurs who created a business out of choice instead of necessity.
3. **Startup early job creation:** the number of jobs created in the first year of business per capita.
4. **Startup early survival rate:** the rate of survival in the first year of business.

The first two indicators reflect *early entrepreneurial activity among the population*, and the next two capture *first-year business trends*. A summary index of entrepreneurship activity, the KESE Index, is also created from these four indicators. The KESE Index equally weights contributions from

the four indicators and presents a snapshot of early-stage entrepreneurial activity.

The purpose of these indicators is to provide a guidepost for early-stage entrepreneurial activity so that interested individuals and organizations can better understand trends in different aspects of new business creation. No single indicator can provide a complete picture of all types of entrepreneurial activity at any given time. For example, if the rate of new entrepreneurs were to increase rapidly while the startup early survival rate stayed fairly constant, it would suggest a need for further exploration of the causes of this difference. Along the same lines, if an indicator were to differ significantly across demographic groups, it would point to questions about the reasons for such variation.

The four early-stage entrepreneurship indicators and the summary index¹ are reported at the national level. Some demographic trends are also reported for the rate of new entrepreneurs and opportunity share of new entrepreneurs: sex (men, women), race and ethnicity (Asian, Black/African American, Latino, white), nativity (immigrant, native-born), age (20–34, 35–44, 45–54, 55–65 years), and veteran status.

Each of the indicators is based on either a nationally representative sample of more than a half-million observations

1. Refer to Fairlie and Desai (2022) for more on the measurement approach for the indicators.

each year, or the universe of employer businesses in the United States (roughly 5 million businesses), using datasets of the U.S. Census Bureau and U.S. Bureau of Labor Statistics. The indicators track changes in entrepreneurial activity over time,

across geographies, and among various demographic groups. Similar to many measures derived from large longitudinal datasets, the indicators are limited by sampling, interpretation, and reporting constraints.

INDICATORS

1. RATE OF NEW ENTREPRENEURS

The rate of new entrepreneurs 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 rate of new entrepreneurs 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.

Source: Author calculation using microdata from the Current Population Survey (CPS), a monthly survey of the U.S. Bureau of the Census and Bureau of Labor Statistics.

2. 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 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.

Source: Author calculation using microdata from the Current Population Survey (CPS), a monthly survey of the U.S. Bureau of the Census and Bureau of Labor Statistics.



3. STARTUP EARLY JOB CREATION

Startup early job creation captures the early employment of a cohort of startup businesses in their first year. It is an annual measure of the number of total jobs that are created by startups in their first year, and it is normalized by the population. As a result, it reflects total employment created by an average new employer firm in its first year for every 1,000 people. This measure represents the job creation power of startups in their first year of operations.⁴

Source: Startup data come from Business Employment Dynamics (BED), a database of the Bureau of Labor Statistics; population estimates come from the U.S. Census Bureau.

4. STARTUP EARLY SURVIVAL RATE

Startup early survival rate reflects early-stage business performance among startups within their first year. It measures the percentage of new employer establishments that are still active after one year of operation.⁵ This indicator is an annual measure of immediate and not long-term survival.

Source: Business Employment Dynamics (BED), a database of the Bureau of Labor Statistics.

2. Although most self-employed business owners are non-employers, about a million self-employed business owners are classified as employer businesses (see <https://www.census.gov/epcd/nonemployer/view/define.html>).
3. See Fairlie and Fossen (2019).
4. The measure does not directly reflect long-term job creation, compensation, longevity of a job, or job and industry characteristics that may influence job trends in startups.
5. This indicator measures the early survival rates of new establishments rather than new firms. New establishments can be generated from existing businesses (see Fairlie and Desai, 2022). Historically, the establishment early survival rate has been very similar to the firm survival rate.

Kauffman Early-Stage Entrepreneurship (KESE) Index

The KESE Index is a summary index that reflects early-stage entrepreneurial activity, broadly defined. It is an equally weighted index of the four indicators of early-stage entrepreneurship activity that has a mean of zero, and it is normalized based on values over the first two decades of available data (1996–2015).⁶

The KESE Index is a composite of the four indicators. In some cases, therefore, an index score may be driven by one very high or low indicator. As such, for more specific insights, we recommend that users focus primarily on each individual indicator and less on the overall composite score.

Table 1 provides values for the four indicators and the KESE Index for the United States in 2021.

TABLE 1		KAUFFMAN INDICATORS OF ENTREPRENEURSHIP AND KESE INDEX (2021)			
RATE OF NEW ENTREPRENEURS	OPPORTUNITY SHARE OF NEW ENTREPRENEURS	STARTUP EARLY JOB CREATION	STARTUP EARLY SURVIVAL RATE	KAUFFMAN EARLY-STAGE ENTREPRENEURSHIP (KESE) INDEX	
Percent of adults becoming entrepreneurs in a given month, year average	Percent of entrepreneurs driven by opportunity	Jobs created by startups per 1,000 people	Percent of firms surviving one year after founding	Equally weighted average of four indicators	
0.36%	80.9%	4.7	81.7%	2.2	

KAUFFMAN EARLY-STAGE ENTREPRENEURSHIP (KESE) INDEX

The **KESE Index** presents a snapshot of early-stage entrepreneurial activity and equally weights contributions from the four indicators. It can be used to track changes in entrepreneurial activity over time.

6. The KESE index is normalized using Z-scores for each variable for the first two decades of available data (1996-2015) to fix the measure over time and capture variation over essentially two business cycles. Over this period, the index is normalized to have a mean of zero and a standard deviation of one. This methodological adjustment in the index calculation started in 2020 (see Fairlie and Desai, 2022).

NATIONAL TRENDS IN THE RATE OF NEW ENTREPRENEURS

The rate of new entrepreneurs reflects how many adults start a business, on average each month, in a year. Figure 1 presents the rate of new entrepreneurs from 1996 to 2021. In 2021, an average of 0.36 percent of the adult population, or 360 out of 100,000 adults, created a new business each month.⁷

The rate of new entrepreneurs partially returned to pre-pandemic levels after the sharp increase from 2019 to 2020 in the first year of the pandemic. During tumultuous times such as the COVID-19 pandemic, the rate of new entrepreneurs 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 rate of new entrepreneurs, but this increase was much smaller than the unprecedented pandemic-induced recession of 2020. The decrease in the rate of new entrepreneurs from 2020 to 2021 reflects a partial return to pre-pandemic levels of economic activity.

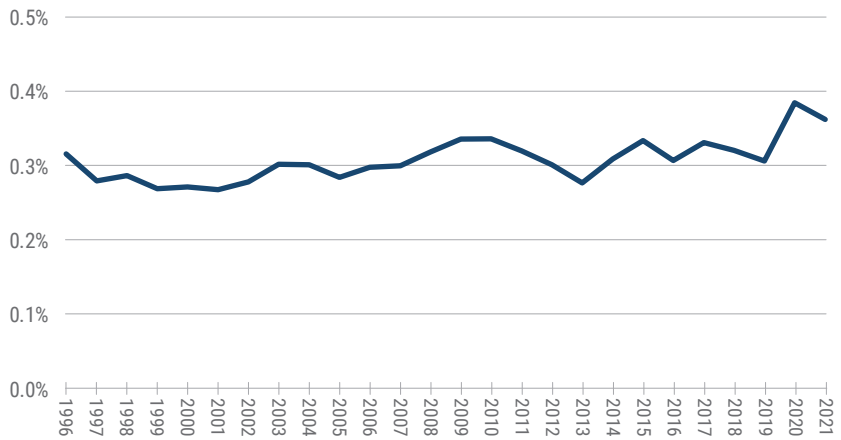


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RATE OF NEW ENTREPRENEURS

The **rate of new entrepreneurs** captures the percentage of the adult, non-business owner population that starts a business each month. This indicator captures all new business owners, including those who own incorporated or unincorporated businesses, and those who are employers or non-employers.⁸

FIGURE 1 RATE OF NEW ENTREPRENEURS (1996–2021)



Source: Estimates calculated from the Current Population Survey

During tumultuous times such as the COVID-19 pandemic, the rate of new entrepreneurs can increase substantially as businesses close and restart, and workers are laid off and turn to part-time business activities.

DEMOGRAPHIC TRENDS IN THE RATE OF NEW ENTREPRENEURS

The rate of new entrepreneurs decreased from 2020 to 2021 but remained higher than pre-pandemic levels for both women and men. Figure 2 and Table 2 show these trends. For women, the rate of new entrepreneurs increased from 0.23 percent in 2019 to 0.30 percent in 2020, and dropped to 0.28 percent in 2021. For men, it increased from 0.38 percent in 2019 to 0.48 percent in 2020, and dropped to 0.45 percent in 2021.

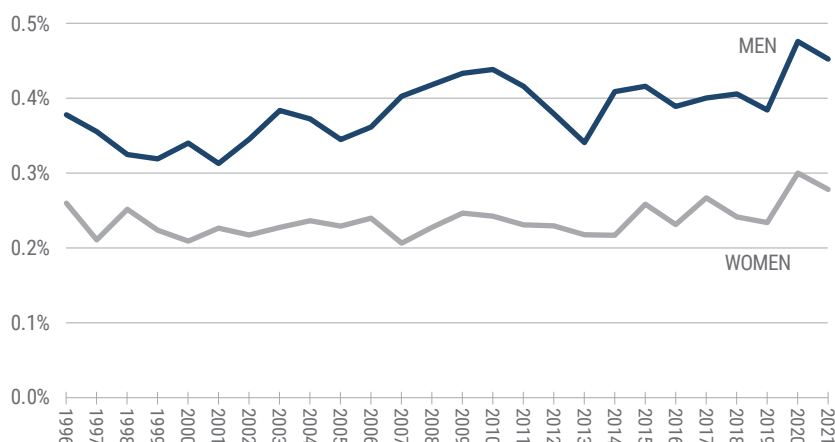
7. Estimates of annual business creation rates would be approximately six to eight times higher. They are not twelve times higher than monthly rates because an individual could start and exit the business multiple times in the same year. See Fairlie and Desai (2022).

8. All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Overall, men are substantially more likely to start businesses than women. In 2019, before the pandemic, 230 out of 100,000 women became new entrepreneurs in a given month, compared to 380 out of every 100,000 men.

The gender gap in new entrepreneurs has been persistent over the past 25 years and continued in 2021.

FIGURE 2 RATE OF NEW ENTREPRENEURS BY SEX (1996–2021)



Source: Estimates calculated from the Current Population Survey

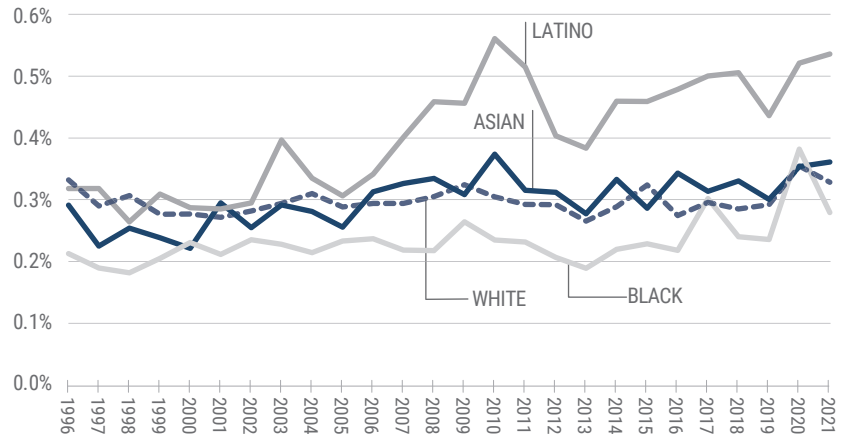
YEAR	WOMEN	MEN	TOTAL
1996	0.26%	0.38%	0.32%
1997	0.21%	0.36%	0.28%
1998	0.25%	0.32%	0.29%
1999	0.22%	0.32%	0.27%
2000	0.21%	0.34%	0.27%
2001	0.23%	0.31%	0.27%
2002	0.22%	0.35%	0.28%
2003	0.23%	0.38%	0.30%
2004	0.24%	0.37%	0.30%
2005	0.23%	0.35%	0.28%
2006	0.24%	0.36%	0.30%
2007	0.21%	0.40%	0.30%
2008	0.23%	0.42%	0.32%
2009	0.25%	0.43%	0.34%
2010	0.24%	0.44%	0.34%
2011	0.23%	0.42%	0.32%
2012	0.23%	0.38%	0.30%
2013	0.22%	0.34%	0.28%
2014	0.22%	0.41%	0.31%
2015	0.26%	0.42%	0.33%
2016	0.23%	0.39%	0.31%
2017	0.27%	0.40%	0.33%
2018	0.24%	0.41%	0.32%
2019	0.23%	0.38%	0.31%
2020	0.30%	0.48%	0.38%
2021	0.28%	0.45%	0.36%

Notes: (1) Estimates calculated from the Current Population Survey. (2) The rate of new entrepreneurs is the percent of individuals (ages 20–64) who do not own a business in the first survey month and start a business in the following month with 15 or more hours worked per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

The rate of new entrepreneurs remained higher than pre-pandemic levels for all ethnic and racial groups.⁹ Figure 3 and Table 3 provide estimates of the rate of new entrepreneurs by race and ethnicity.

Over most of the time period covered, the rate of new entrepreneurs is highest among the population identifying as Latino and lowest among the population identifying as Black or African American.

FIGURE 3 RATE OF NEW ENTREPRENEURS BY RACE AND ETHNICITY (1996–2021)



Source: Estimates calculated from the Current Population Survey

YEAR	ASIAN	BLACK	LATINO	WHITE	TOTAL
1996	0.29%	0.21%	0.32%	0.33%	0.32%
1997	0.23%	0.19%	0.32%	0.29%	0.28%
1998	0.25%	0.18%	0.27%	0.31%	0.29%
1999	0.24%	0.21%	0.31%	0.28%	0.27%
2000	0.22%	0.23%	0.29%	0.28%	0.27%
2001	0.30%	0.21%	0.29%	0.27%	0.27%
2002	0.26%	0.24%	0.30%	0.28%	0.28%
2003	0.29%	0.23%	0.40%	0.30%	0.30%
2004	0.28%	0.22%	0.34%	0.31%	0.30%
2005	0.26%	0.23%	0.31%	0.29%	0.28%
2006	0.31%	0.24%	0.34%	0.30%	0.30%
2007	0.33%	0.22%	0.40%	0.30%	0.30%
2008	0.34%	0.22%	0.46%	0.31%	0.32%
2009	0.31%	0.27%	0.46%	0.33%	0.34%
2010	0.37%	0.24%	0.56%	0.31%	0.34%
2011	0.32%	0.23%	0.52%	0.29%	0.32%
2012	0.31%	0.21%	0.40%	0.29%	0.30%
2013	0.28%	0.19%	0.38%	0.27%	0.28%
2014	0.33%	0.22%	0.46%	0.29%	0.31%
2015	0.29%	0.23%	0.46%	0.32%	0.33%
2016	0.34%	0.22%	0.48%	0.28%	0.31%
2017	0.31%	0.30%	0.50%	0.30%	0.33%
2018	0.33%	0.24%	0.51%	0.29%	0.32%
2019	0.30%	0.24%	0.44%	0.29%	0.31%
2020	0.35%	0.38%	0.52%	0.36%	0.38%
2021	0.36%	0.28%	0.54%	0.33%	0.36%

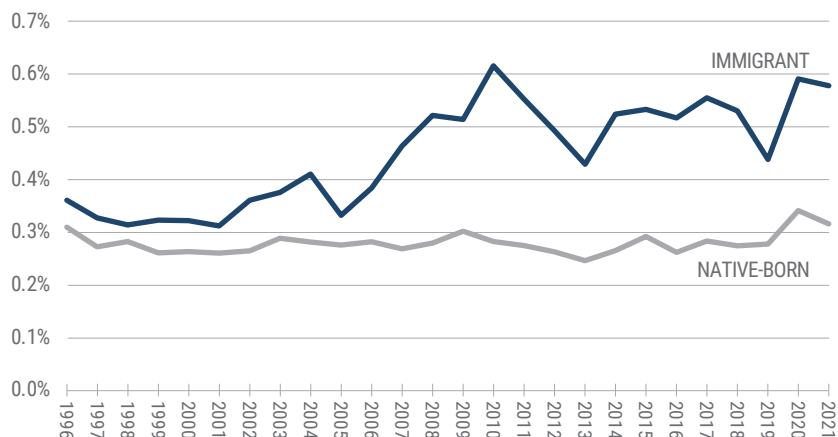
Notes: (1) Estimates calculated from the Current Population Survey. (2) The rate of new entrepreneurs is the percent of individuals (ages 20–64) who do not own a business in the first survey month and start a business in the following month with 15 or more hours worked per week. (3) Race and Latino codes 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.

9. See <https://www.census.gov/topics/population/race/about.html> for Census classifications. We use categories for which there were sufficient sample sizes to present accurate estimates. As a result, we are unable to include data for Native American, Native Hawaiian, or individuals of two or more races.

NATIONAL TRENDS IN THE RATE OF NEW ENTREPRENEURS

The rate of new entrepreneurs decreased from 2020 to 2021 for both immigrants and the native-born population, but remained higher than pre-pandemic levels. The rate of new entrepreneurs is higher for immigrants than the native-born population. The 2021 rate of new entrepreneurs among immigrants is 0.58 percent, which is substantially higher than the 0.32 percent rate for the native born. Figure 4 and Table 4 report estimates of the rate of new entrepreneurs by nativity.

FIGURE 4 RATE OF NEW ENTREPRENEURS BY NATIVITY (1996–2021)



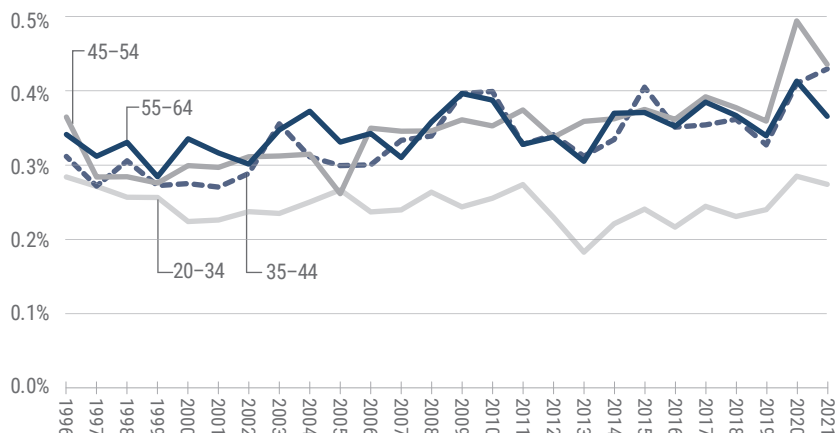
Source: Estimates calculated from the Current Population Survey

YEAR	IMMIGRANT	NATIVE-BORN	TOTAL
1996	0.36%	0.31%	0.32%
1997	0.33%	0.27%	0.28%
1998	0.31%	0.28%	0.29%
1999	0.32%	0.26%	0.27%
2000	0.32%	0.26%	0.27%
2001	0.31%	0.26%	0.27%
2002	0.36%	0.26%	0.28%
2003	0.38%	0.29%	0.30%
2004	0.41%	0.28%	0.30%
2005	0.33%	0.28%	0.28%
2006	0.38%	0.28%	0.30%
2007	0.46%	0.27%	0.30%
2008	0.52%	0.28%	0.32%
2009	0.51%	0.30%	0.34%
2010	0.62%	0.28%	0.34%
2011	0.55%	0.27%	0.32%
2012	0.49%	0.26%	0.30%
2013	0.43%	0.25%	0.28%
2014	0.52%	0.27%	0.31%
2015	0.53%	0.29%	0.33%
2016	0.52%	0.26%	0.31%
2017	0.56%	0.28%	0.33%
2018	0.53%	0.27%	0.32%
2019	0.44%	0.28%	0.31%
2020	0.59%	0.34%	0.38%
2021	0.58%	0.32%	0.36%

Notes: (1) Estimates calculated from the Current Population Survey. (2) The rate of new entrepreneurs is the percent of individuals (ages 20–64) who do not own a business in the first survey month and start a business in the following month with 15 or more hours worked per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

Figure 5 and Table 5 report estimates of the rate of new entrepreneurs by age group. The rate of new entrepreneurs are higher for all age groups in 2021 compared to pre-pandemic levels, and most groups experienced a partial return to pre-pandemic levels. The rate of new entrepreneurs is lowest among the youngest group (ages 20–34 years) and highest among the age group of 45–54 years.

FIGURE 5 RATE OF NEW ENTREPRENEURS BY AGE GROUP (1996–2021)



Source: Estimates calculated from the Current Population Survey

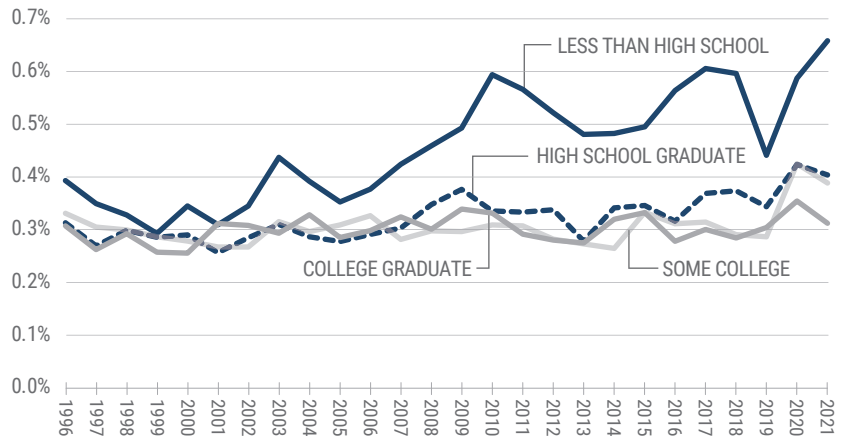
The rate of new entrepreneurs are higher for all age groups in 2021 compared to pre-pandemic levels.

TABLE 5		RATE OF NEW ENTREPRENEURS BY AGE GROUP (1996–2021)				
YEAR	AGES 20–34	AGES 35–44	AGES 45–54	AGES 55–64	TOTAL	
1996	0.28%	0.31%	0.36%	0.34%	0.32%	
1997	0.27%	0.27%	0.28%	0.31%	0.28%	
1998	0.26%	0.31%	0.28%	0.33%	0.29%	
1999	0.26%	0.27%	0.28%	0.28%	0.27%	
2000	0.22%	0.27%	0.30%	0.34%	0.27%	
2001	0.23%	0.27%	0.30%	0.32%	0.27%	
2002	0.24%	0.29%	0.31%	0.30%	0.28%	
2003	0.23%	0.36%	0.31%	0.35%	0.30%	
2004	0.25%	0.31%	0.31%	0.37%	0.30%	
2005	0.27%	0.30%	0.26%	0.33%	0.28%	
2006	0.24%	0.30%	0.35%	0.34%	0.30%	
2007	0.24%	0.33%	0.35%	0.31%	0.30%	
2008	0.26%	0.34%	0.35%	0.36%	0.32%	
2009	0.24%	0.40%	0.36%	0.40%	0.34%	
2010	0.26%	0.40%	0.35%	0.39%	0.34%	
2011	0.27%	0.33%	0.37%	0.33%	0.32%	
2012	0.23%	0.34%	0.34%	0.34%	0.30%	
2013	0.18%	0.31%	0.36%	0.31%	0.28%	
2014	0.22%	0.33%	0.36%	0.37%	0.31%	
2015	0.24%	0.40%	0.37%	0.37%	0.33%	
2016	0.22%	0.35%	0.36%	0.35%	0.31%	
2017	0.24%	0.35%	0.39%	0.38%	0.33%	
2018	0.23%	0.36%	0.38%	0.37%	0.32%	
2019	0.24%	0.33%	0.36%	0.34%	0.31%	
2020	0.28%	0.41%	0.49%	0.41%	0.38%	
2021	0.27%	0.43%	0.44%	0.37%	0.36%	

Notes: (1) Estimates calculated from the Current Population Survey. (2) The rate of new entrepreneurs is the percent of individuals (ages 20–64) who do not own a business in the first survey month and start a business in the following month with 15 or more hours worked per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

The rate of new entrepreneurs are higher for all education groups in 2021 compared to pre-pandemic levels. Although most groups experienced a partial return to pre-pandemic levels from 2020 to 2021 (i.e. decrease), the group with less than a high school degree experienced an increase in rates from 2020 to 2021. This might perhaps reflect limited improvement in opportunities for this group. Figure 6 and Table 6 report estimates by education level. The rate of new entrepreneurs is highest among those with less than a high school degree.¹⁰

FIGURE 6 RATE OF NEW ENTREPRENEURS BY EDUCATION (1996–2021)



Source: Estimates calculated from the Current Population Survey

TABLE 6 RATE OF NEW ENTREPRENEURS BY EDUCATION (1996–2021)

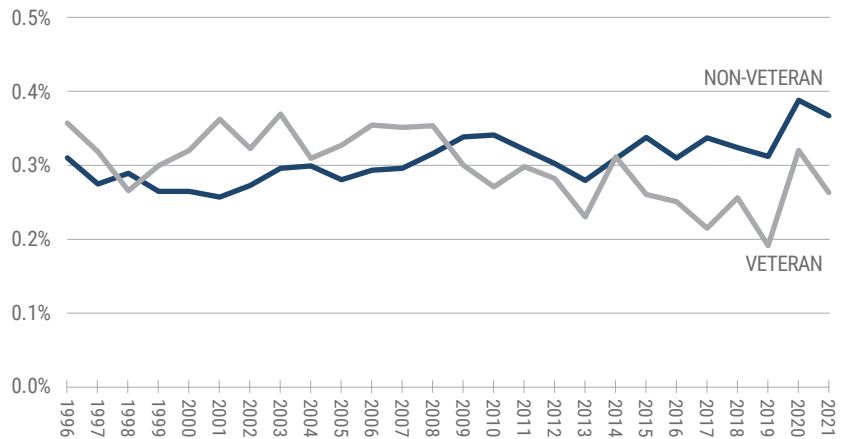
YEAR	LESS THAN HIGH SCHOOL	HIGH SCHOOL GRADUATE	SOME COLLEGE	COLLEGE GRADUATE	TOTAL
1996	0.39%	0.31%	0.33%	0.31%	0.32%
1997	0.35%	0.27%	0.31%	0.26%	0.28%
1998	0.33%	0.30%	0.30%	0.29%	0.29%
1999	0.29%	0.29%	0.29%	0.26%	0.27%
2000	0.35%	0.29%	0.28%	0.26%	0.27%
2001	0.31%	0.26%	0.27%	0.31%	0.27%
2002	0.35%	0.29%	0.27%	0.31%	0.28%
2003	0.44%	0.31%	0.32%	0.29%	0.30%
2004	0.39%	0.29%	0.30%	0.33%	0.30%
2005	0.35%	0.28%	0.31%	0.29%	0.28%
2006	0.38%	0.29%	0.33%	0.30%	0.30%
2007	0.42%	0.30%	0.28%	0.33%	0.30%
2008	0.46%	0.35%	0.30%	0.30%	0.32%
2009	0.49%	0.38%	0.30%	0.34%	0.34%
2010	0.59%	0.34%	0.31%	0.33%	0.34%
2011	0.57%	0.33%	0.31%	0.29%	0.32%
2012	0.52%	0.34%	0.28%	0.28%	0.30%
2013	0.48%	0.28%	0.27%	0.28%	0.28%
2014	0.48%	0.34%	0.27%	0.32%	0.31%
2015	0.50%	0.35%	0.33%	0.33%	0.33%
2016	0.56%	0.32%	0.31%	0.28%	0.31%
2017	0.61%	0.37%	0.31%	0.30%	0.33%
2018	0.60%	0.37%	0.29%	0.29%	0.32%
2019	0.44%	0.34%	0.29%	0.30%	0.31%
2020	0.59%	0.42%	0.43%	0.36%	0.38%
2021	0.66%	0.40%	0.39%	0.31%	0.36%

Notes: (1) Estimates calculated from the Current Population Survey. (2) The rate of new entrepreneurs is the percent of individuals (ages 20–64) who do not own a business in the first survey month and start a business in the following month with 15 or more hours worked per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded.

10. This finding may partially reflect a high level of necessity entrepreneurship for this group. See Fairlie and Fossen (2019).

Figure 7 and Table 7 report estimates of the rate of new entrepreneurs by veteran status. From 2019 to 2020, the rate of new entrepreneurs increased sharply for both veterans and non-veterans. From 2020 to 2021, however, the rate of new entrepreneurs partially returned to pre-pandemic levels for both groups.

FIGURE 7 RATE OF NEW ENTREPRENEURS BY VETERAN STATUS (1996–2021)



Source: Estimates calculated from the Current Population Survey

YEAR	NON-VETERANS	VETERANS	TOTAL
1996	0.31%	0.36%	0.32%
1997	0.27%	0.32%	0.28%
1998	0.29%	0.27%	0.29%
1999	0.26%	0.30%	0.27%
2000	0.26%	0.32%	0.27%
2001	0.26%	0.36%	0.27%
2002	0.27%	0.32%	0.28%
2003	0.30%	0.37%	0.30%
2004	0.30%	0.31%	0.30%
2005	0.28%	0.33%	0.28%
2006	0.29%	0.35%	0.30%
2007	0.30%	0.35%	0.30%
2008	0.32%	0.35%	0.32%
2009	0.34%	0.30%	0.34%
2010	0.34%	0.27%	0.34%
2011	0.32%	0.30%	0.32%
2012	0.30%	0.28%	0.30%
2013	0.28%	0.23%	0.28%
2014	0.31%	0.31%	0.31%
2015	0.34%	0.26%	0.33%
2016	0.31%	0.25%	0.31%
2017	0.34%	0.21%	0.33%
2018	0.32%	0.26%	0.32%
2019	0.31%	0.19%	0.31%
2020	0.39%	0.32%	0.38%
2021	0.37%	0.26%	0.36%

Notes: (1) Estimates calculated from the Current Population Survey. (2) The rate of new entrepreneurs is the percent of individuals (ages 20–64) who do not own a business in the first survey month and start a business in the following month with 15 or more hours worked per week. (3) All observations with allocated labor force status, class of worker, and hours worked variables are excluded. (4) The total sample size is slightly larger than the sum of the veteran and non-veteran sample sizes from 1996 to 2005 because of missing values for veteran status in those years.

NATIONAL TRENDS IN THE OPPORTUNITY SHARE OF NEW ENTREPRENEURS

The opportunity share represents new business activity that is inspired by opportunity rather than necessity (table 8 and figure 8). Nationally, the opportunity share of new entrepreneurs increased sharply in 2021. It increased from 69.8 percent in 2020 to 80.9 percent in 2021, reflecting improving economic conditions after the early-stage impacts of COVID-19.

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 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 efforts 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.

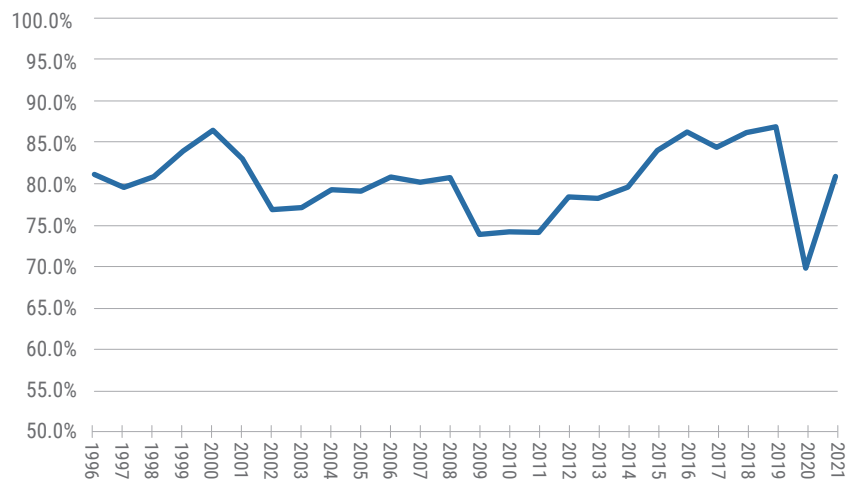


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OPPORTUNITY SHARE OF NEW ENTREPRENEURS

The rate of new entrepreneurs includes entrepreneurs and businesses of all types. It can be useful to distinguish between individuals who are “**opportunity entrepreneurs**,” including those coming out of wage and salary work, school, or other labor market status, and individuals who are “**necessity entrepreneurs**,” due to unemployment.¹¹ This distinction offers some insight into the influence of economic conditions on overall business creation. 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 the new business.

FIGURE 8 OPPORTUNITY SHARE OF NEW ENTREPRENEURS (1996–2021)



Source: Estimates calculated from the Current Population Survey

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 and perhaps much longer.

TABLE 8	OPPORTUNITY SHARE OF NEW ENTREPRENEURS (1996–2021)					
1996	81.1%	2005	79.1%	2014	79.6%	
1997	79.5%	2006	80.8%	2015	84.0%	
1998	80.8%	2007	80.2%	2016	86.3%	
1999	83.9%	2008	80.7%	2017	84.4%	
2000	86.4%	2009	73.8%	2018	86.2%	
2001	83.0%	2010	74.2%	2019	86.9%	
2002	76.8%	2011	74.1%	2020	69.8%	
2003	77.1%	2012	78.4%	2021	80.9%	
2004	79.3%	2013	78.2%			

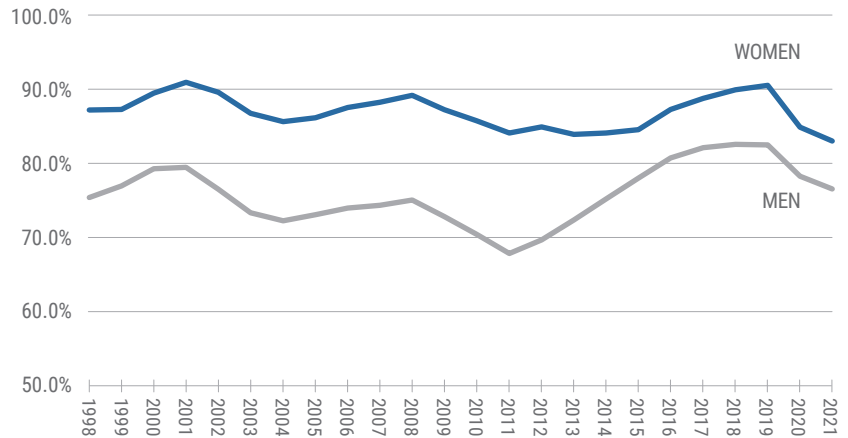
11. See Fairlie and Fossen (2019)

DEMOGRAPHIC TRENDS IN THE OPPORTUNITY SHARE OF NEW ENTREPRENEURS

Trends in the opportunity share of new entrepreneurs by demographic groups are also examined. Three-year moving averages are reported to increase the precision of estimates. The opportunity share of new entrepreneurs was lower for both women and men in 2021 than pre-pandemic levels. 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 9 reports estimates).

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.

FIGURE 9 OPPORTUNITY SHARE OF NEW ENTREPRENEURS BY SEX (1998–2021)

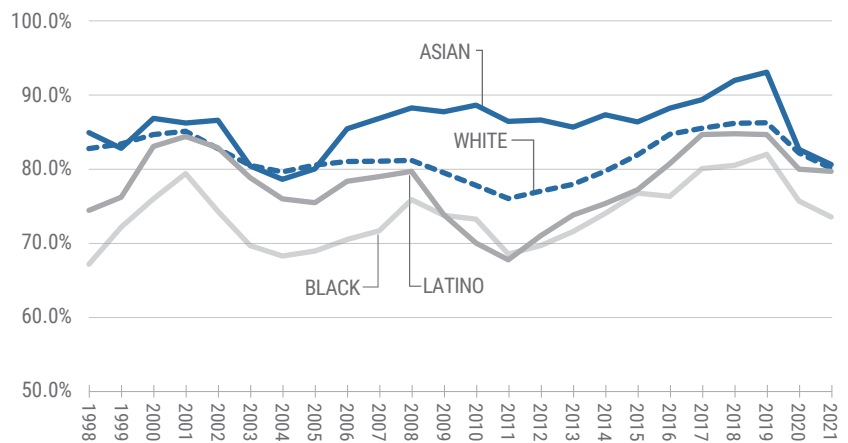


Source: Estimates calculated from the Current Population Survey

The opportunity share of new entrepreneurs for women has generally been more stable than that for men.

All ethnic and racial groups have lower opportunity shares of new entrepreneurs in 2021 than 2019, reversing upward trends over the past few years prior to the pandemic. Figure 10 reports estimates of the opportunity share of new entrepreneurs by race and ethnicity. Over this time period, this indicator is highest among the population identifying as Asian and lowest among the population identifying as Black or African American.

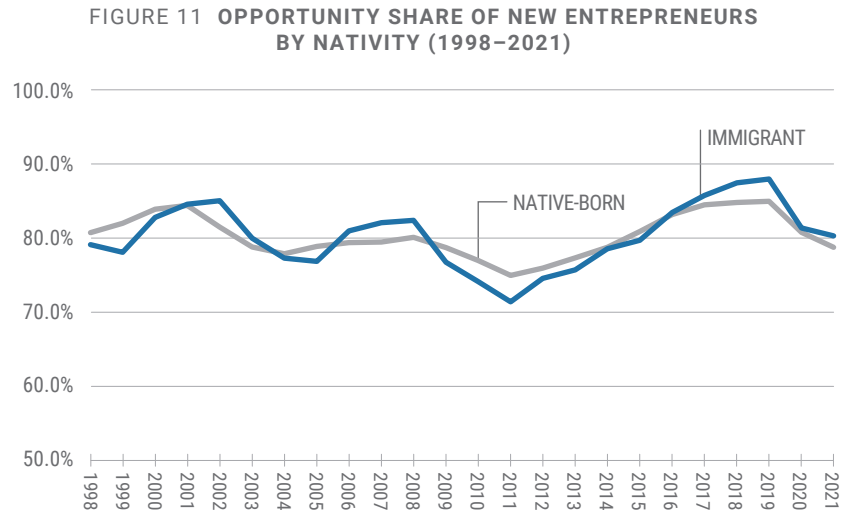
FIGURE 10 OPPORTUNITY SHARE OF NEW ENTREPRENEURS BY RACE AND ETHNICITY (1998–2021)



Source: Estimates calculated from the Current Population Survey

All ethnic and racial groups have lower opportunity shares of new entrepreneurs in 2021 than 2019, reversing upward trends over the past few years prior to the pandemic.

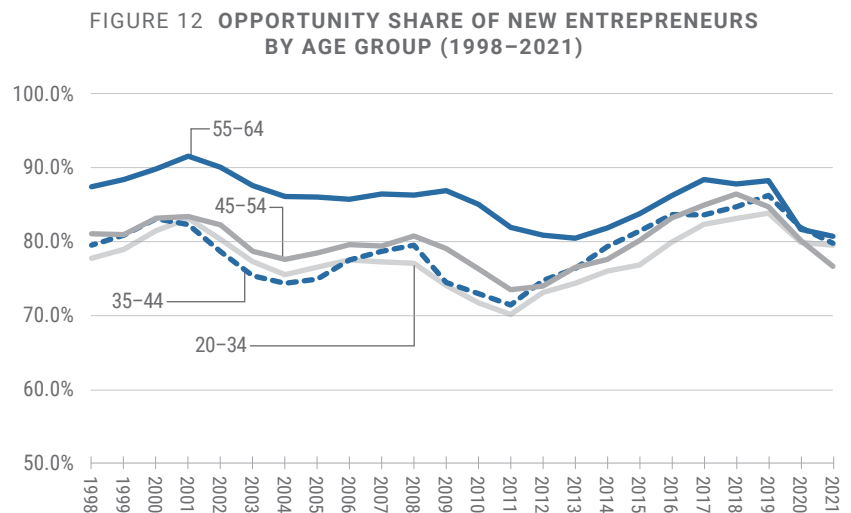
The opportunity share of new entrepreneurs was also lower for immigrants in 2021 than pre-pandemic levels. Figure 11 reports estimates of the opportunity share of new entrepreneurs by nativity. The drop of 7.7 percentage points from 88.0 percent in 2019 to 80.3 percent in 2021 was larger than the drop of 6.2 percentage points for the native-born population. In general, the opportunity share is higher for immigrants than for native-born Americans.



Source: Estimates calculated from the Current Population Survey

In general, the opportunity share is higher for immigrants than for native-born Americans.

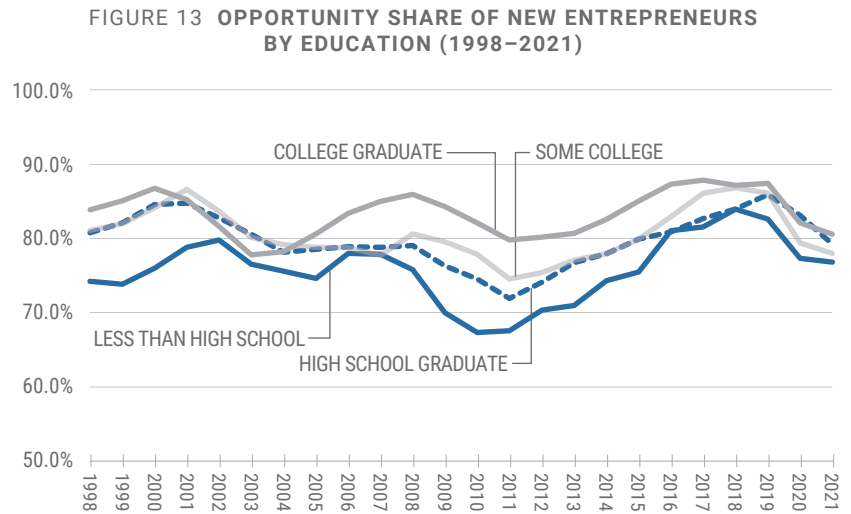
Figure 12 reports opportunity share of new entrepreneurs by age group. All age groups experienced decreases in the opportunity share from 2019 to 2021, continuing the pandemic-induced reversal of upward trends since the Great Recession. The indicator is highest among the oldest age group and lowest among the age group of 45–54 years in 2021.



Source: Estimates calculated from the Current Population Survey

All age groups experienced decreases in the opportunity share from 2019 to 2021, continuing the pandemic-induced reversal of upward trends since the Great Recession.

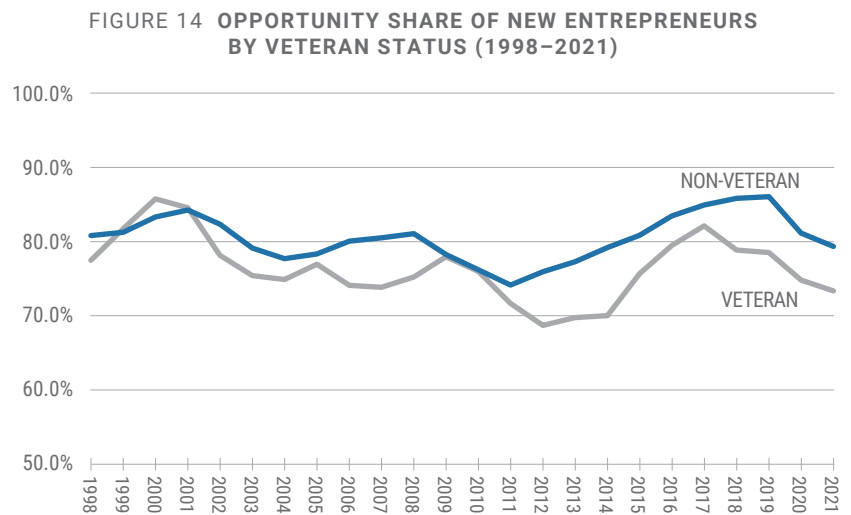
The opportunity share of new entrepreneurs also continued to decrease in 2021 for all education levels. The opportunity share is generally higher with each education level. Figure 13 reports estimates of this indicator by education level. Those with less than a high school degree have the lowest opportunity share of new entrepreneurs in 2021.



Source: Estimates calculated from the Current Population Survey

The opportunity share is generally higher with each education level.

Figure 14 reports estimates of the opportunity share of new entrepreneurs by veteran status. The opportunity share of new entrepreneurs decreased from 2019 to 2021 among veterans, reversing a longer-term positive trend since the Great Recession. The opportunity share is lower among veterans than non-veterans.



Source: Estimates calculated from the Current Population Survey

NATIONAL TRENDS IN STARTUP EARLY JOB CREATION

The number of jobs created by startups in their first year was 4.7 jobs per 1,000 people in 2021, representing a decline from pre-pandemic levels of 5.1 jobs per 1,000 people in 2019. Figure 15 presents the indicator from 1996 to 2021.¹²

The longer-term trends in the level of startup early job creation are worrisome. Although just prior to the pandemic, rates represented the highest levels since 2008 and continued the general upward trend since 2012, levels remain substantially lower in recent years than they were prior to the Great Recession and especially during the 1990s. Furthermore, the decline in the past few years raises additional concerns about falling job creation levels among startups. For comparison, startup early job creation per capita peaked at 7.9 in 1997, and it has since declined by almost a third.

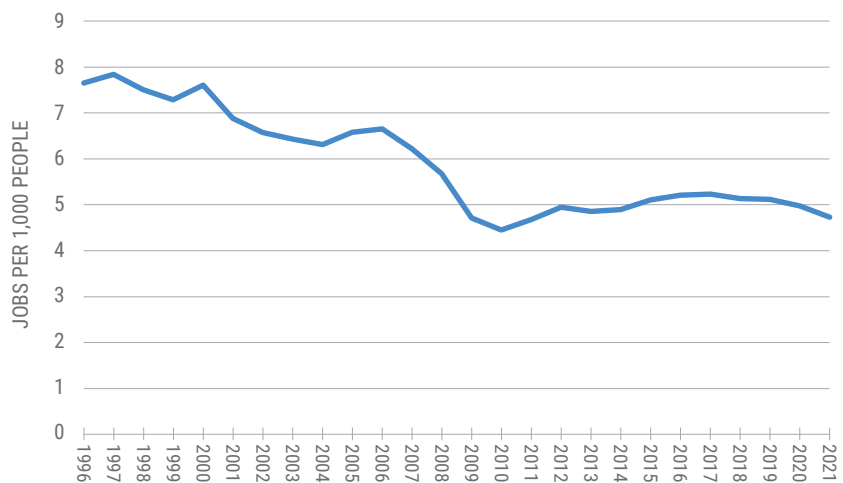


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STARTUP EARLY JOB CREATION

Startup early job creation measures how many total jobs are created by startups in their first year and is normalized by the population.

FIGURE 15 **STARTUP EARLY JOB CREATION**
(1996–2021)



Source: Calculated from the Business Employment Dynamics

The longer-term trends in the level of startup early job creation are worrisome. Levels remain substantially lower in recent years than they were prior to the Great Recession and especially during the 1990s.

12. The 2020 measure of jobs created is from March 2020 (the last month of the first quarter), and thus it largely predates the pandemic-related changes in demand, supply, and public policy that started in full force after March 2020 (Fairlie 2020).

NATIONAL TRENDS IN THE STARTUP EARLY SURVIVAL RATE

The startup early survival rate increased from 78.4 percent in 2020 to 81.7 percent in 2021. The increase reversed the drop earlier in the pandemic. The startup early survival rate dropped from 79.4 percent in 2019 to 78.4 percent in 2020. This decline captures the very early stages of the impact of the COVID-19 pandemic because it measures changes between March 2019 and March 2020. Figure 16 presents the startup early survival rate at the national level from 1996 to 2021.

Prior to 2020, the startup early survival rate trended upward from 75.2 percent in 2009, when it hit a low point in the Great Recession, to 79.4 percent in 2019. Survival rates generally show a pro-cyclical pattern. The drop in the startup early survival rate between 2019 and 2020 shows the early part of the pandemic-induced recession, but it does not capture the full extent of the pandemic in 2020 because it measures March-to-March changes instead of April-to-April or later month-to-month changes (Fairlie 2020).

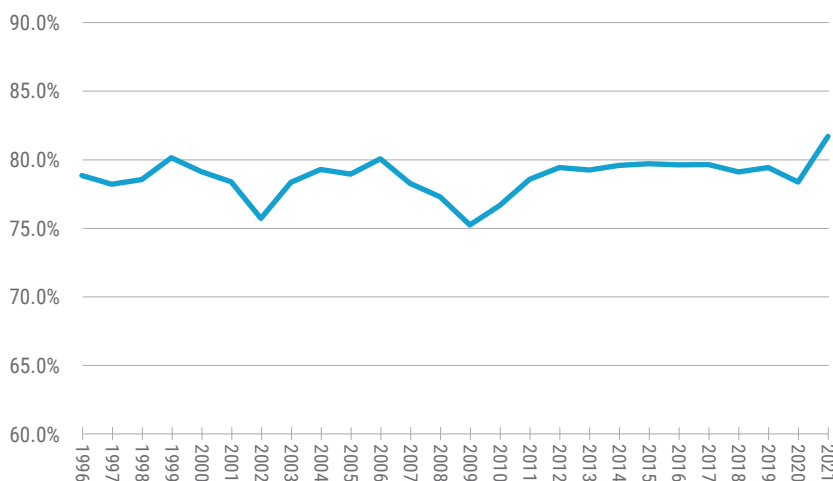


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STARTUP EARLY SURVIVAL RATE

The **startup early survival rate**, an early-stage indicator of business performance, measures the percentage of new employer establishments that are still active after one year of operation.

FIGURE 16 STARTUP EARLY SURVIVAL RATE (1996–2021)



Source: Calculated from the Business Employment Dynamics

The drop in the startup early survival rate between 2019 and 2020 shows the early part of the pandemic-induced recession, but it does not capture the full extent of the pandemic in 2020 because it measures March-to-March changes instead of April-to-April or later month-to-month changes.

Kauffman Early-Stage Entrepreneurship (KESE) Index

Figure 17 and Table 9 present the KESE Index from 1996-2021. The KESE Index is centered at zero, which is the average over the first two decades of available data (1996-2015). Thus, a positive index value indicates that the index is above this two-decade average, and a negative value indicates that it is below this average, which essentially covers two business cycles.¹³

The KESE Index experienced a sharp rebound from the drop in the first year of the pandemic. The index increased from -0.1 in 2020 to 2.2 in 2021. In contrast, the index dropped from 1.2 in 2019 to -0.1 in 2020, which represents one of the largest single year drops over the past 25 years. The index in 2021 was more than two standard deviations above its normalized value; whereas, the index in 2020 was below the mean. The few years prior to the pandemic have some of the highest levels recorded for the KESE Index over the past 25 years, capturing the strong economic conditions that existed just prior to the pandemic. The lowest point for the KESE Index was in 2009 at -1.9.



KESE INDEX

Using the four key indicators, we create the KESE Index, an equally weighted index of the four normalized indicators of entrepreneurship activity:

- 1) Rate of new entrepreneurs
- 2) Opportunity share of new entrepreneurs
- 3) Startup early job creation
- 4) Startup early survival rate

FIGURE 17 KAUFFMAN EARLY-STAGE ENTREPRENEURSHIP (KESE) INDEX (1996-2021)



Source: Calculated from CPS and BED data

The KESE Index experienced a sharp rebound from the drop in the first year of the pandemic.

1996	1.4	2005	0.0	2014	0.1
1997	0.2	2006	1.0	2015	1.4
1998	0.5	2007	0.1	2016	1.2
1999	1.1	2008	0.0	2017	1.5
2000	1.3	2009	-1.9	2018	1.3
2001	0.1	2010	-1.4	2019	1.2
2002	-1.7	2011	-1.0	2020	-0.1
2003	-0.2	2012	-0.3	2021	2.2
2004	0.4	2013	-1.0		

13. The summary index is also rescaled so that a one-unit change in the index is the equivalent of a one-standard deviation change in the index (as measured by the annual variation over the same two-decade time period).

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, 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/>
- U.S. Bureau of Labor Statistics. 2022. Business Employment Statistics (BES). <https://www.bls.gov/bdm/>



Explore the Kauffman Indicators further at: www.kauffman.org/indicators

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