2015 THE KAUFFMAN INDEX

startupactivity

METROPOLITAN AREA AND CITY TRENDS

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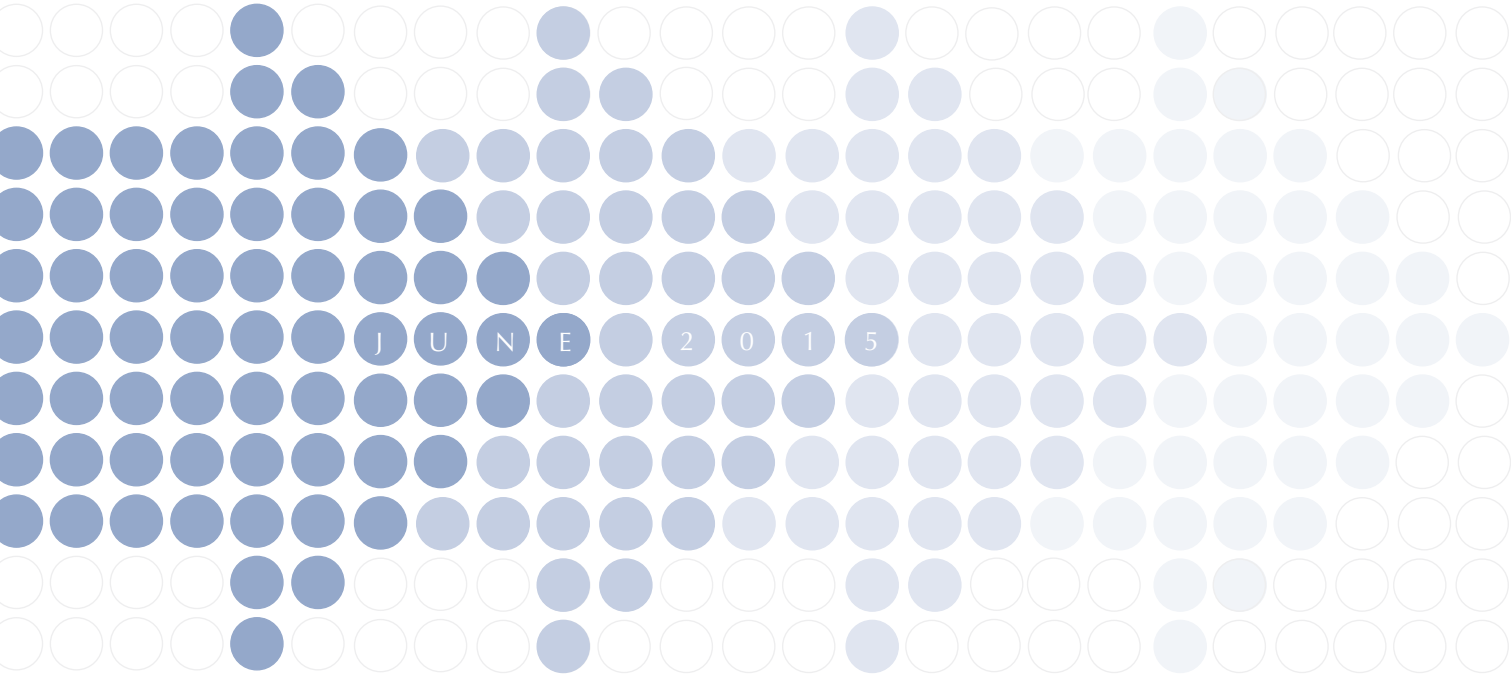

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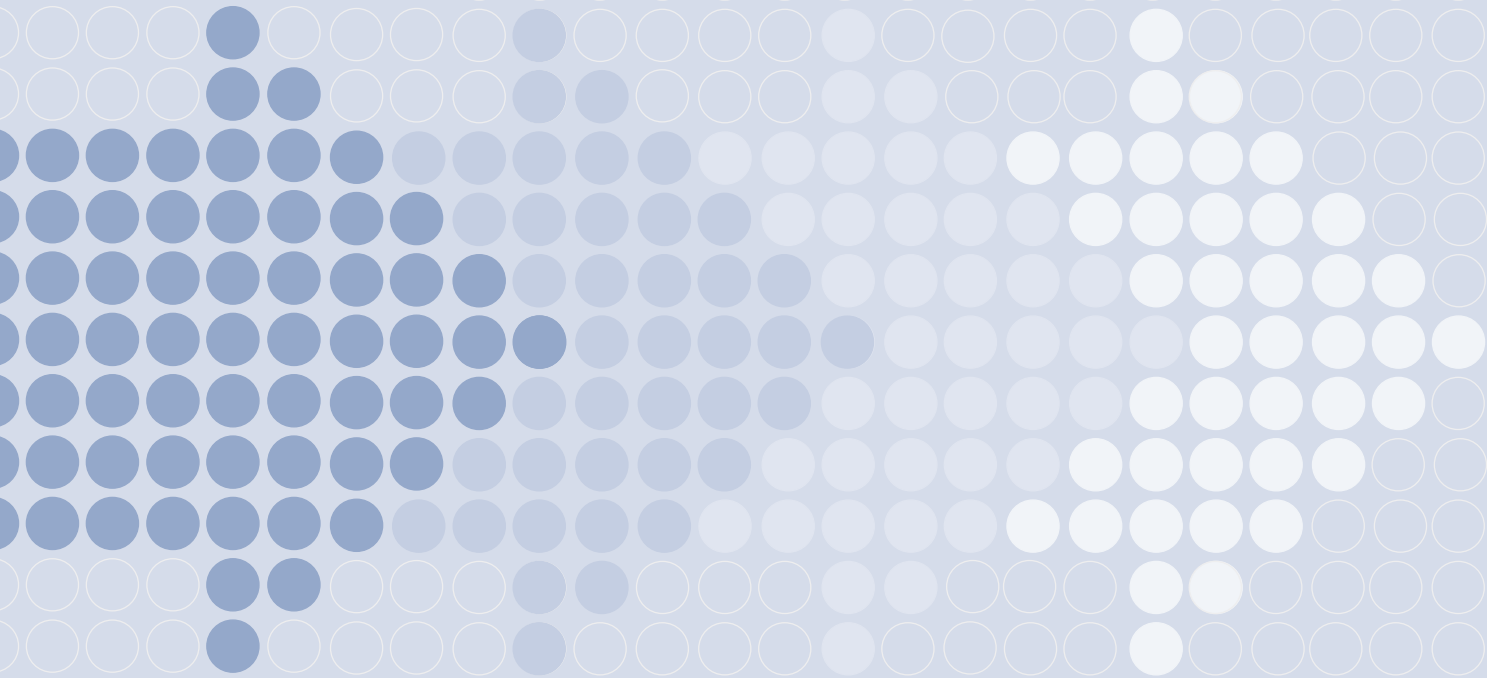

Explore the interactive data at
www.kauffmanindex.org

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TABLE OF CONTENTS

Foreword

by Dane Stangler, Vice President of Research and Policy, Kauffman Foundation

Entrepreneurship is one of the most important activities of modern economic life. The creation and growth of new companies, as well as the closure and shrinkage of existing companies, are at the heart of "economic dynamism." Many of the statistics tracked closely by economists, policymakers, investors, and others—such as unemployment, wage growth, and productivity—are driven by entrepreneurial activity.

Yet the measurement of entrepreneurship has consistently lagged behind these other "leading indicators." In part, this is due to the diversity of the phenomenon we call "entrepreneurship." It includes the venture-backed startups of Silicon Valley as well as the new restaurant down the street; for many, entrepreneurship includes independent franchise owners and those who might take over and transform a century-old bank.

But why should measurement matter with respect to entrepreneurship? The American economy has been consistently entrepreneurial for more than 200 years in the absence of solid data for tracking that entrepreneurial activity—what difference will better entrepreneurship data make? There are three main reasons that come to mind.

First, as Zachary Karabell laid out in his book, *The Leading Indicators*, there are serious limitations to the current set of economic statistics on which we all rely to track the economy. Second, entrepreneurship will grow in importance as technological progress forces change in different economic structures: new, young, and growing companies will assume an even more prominent role in economic dynamism. Third, as the saying goes, you can't manage what you don't measure. Even though entrepreneurial activity is not necessarily something that can be strictly "managed," improvements in entrepreneurship data allow for improvements in public and private decision-making. This includes federal economic policy, university courses and programs, state and local spending priorities, and individual choices.

Data innovations from the Census Bureau and others in the last decade have allowed economists to reveal that new and young firms are the principal sources of net job creation in the United States. Previously, as a result of mis-measurement, it was assumed that either small or big companies played this role. The magnitude of the mindset shift that this prompted—from an exclusive focus on firm size to an appreciation of the importance of firm age—is hard to overestimate. Further work with these datasets, including by Federal Reserve researchers, has generated insight into the role that new and young firms play in wage growth and career dynamics for young workers. The Kauffman Foundation has been a proud partner in these efforts.

The impact of data innovations is not restricted to public datasets. In recent years, companies like Crunchbase, Mattermark, and AngelList have demonstrated the importance of private data and the impact it can have for investors and entrepreneurs and others.

Measurement matters, and further improvements in entrepreneurship data will continue to shape public policy, private decision-making, and other areas.

This is why the Kauffman Foundation has put so much effort into improving one of our signature products, the Kauffman Index of Entrepreneurship. Readers will find more detail about this effort in the pages that follow. Kauffman researchers Arnobio Morelix, E.J. Reedy, and Josh Russell have worked diligently with economist Robert Fairlie and others to produce this report and the reports that will follow later this year.

Numbers, of course, are only as good as they're used. For this reason, the Kauffman Foundation continues to devote considerable resources to innovations in data collection, data access, and data use. We are working closely with the Census Bureau and other government agencies on the new Annual Survey of Entrepreneurs (ASE), which is an effort to expand the quinquennial Survey of Business Owners. The first results from the new ASE will be available in 2016.

What a society measures is an indication of what that society values. Entrepreneurship in all its forms will continue to be essential to rising standards of living and expanding economic opportunity. Innovations and improvements in entrepreneurship data will allow us to do a better job in pursuit of those objectives.

Introducing the New Kauffman Index

How can I actually measure the entrepreneurial activity in my region?

This is a question we at the Kauffman Foundation often hear from economic and policy leaders. As cities around the globe rally to foster entrepreneurship, the challenge of how to consistently measure and benchmark progress remains largely unanswered.

While anecdotal evidence abounds, most ecosystems struggle to answer straightforward, yet often elusive, questions: How many new startups does our city or state have? How much are our ventures growing? How many of our businesses are surviving?

To begin to answer these questions and address this challenge, we introduce the new Kauffman Index of Entrepreneurship, the first and largest index tracking entrepreneurship across city, state, and national levels for the United States. In this release, we introduce the Kauffman Index: Startup Activity—the first of various research installments under the umbrella of the new Kauffman Index of Entrepreneurship.

For the past ten years, the original Kauffman Index—authored by Robert W. Fairlie—has been an early indicator for entrepreneurship in the United States, used by entrepreneurs and policymakers, from the federal to state and local levels. The Kauffman Index also has been one of the most requested and far-reaching entrepreneurship indicators in the United States and, arguably, the world.

In the policy world, the Index has been referenced in multiple testimonies to the U.S. Senate and House of Representatives, by U.S. Embassies and Consulates across various countries—including nations like Spain, Ukraine, and United Kingdom—by multiple federal agencies, by state governments and governors from fifteen states—from Arizona to New York—and by the White House's office of the President of the United States. On the academic side, more than 200 research papers quote the Kauffman Index. In media circles, the Kauffman Index has been highlighted in more than 100 media channels, including most major publications like *The New York Times*, *The Wall Street Journal, TIME, CNN*, the *Financial Times*, and *Harvard Business Review*.

Originally, the Kauffman Index tracked one of the earliest measures of business creation: When and how many people first start working for themselves, becoming entrepreneurs. Now, we are expanding it to include other dimensions of entrepreneurship.

The new and expanded Kauffman Index of Entrepreneurship 2015 remains focused primarily on entrepreneurial outcomes, as opposed to inputs. That means we are more concerned with actual results of entrepreneurial activity—things like new companies and growth rates.

The Kauffman Index: Startup Activity algorithm presented in this report takes into account three variables:

- Rate of New Entrepreneurs
- Opportunity Share of New Entrepreneurs
- Startup Density

Future installments of the Kauffman Index to be released later this year also take into consideration, among other variables:

- Venture Growth
- Density of Scale-Ups
- Survival Rates
- Percent of Business Owners in the Population

And, with the Kauffman Index of Entrepreneurship 2015, all these data will be presented at three geographic levels:

- National
- State
- Metropolitan—covering the forty largest U.S. metropolitan areas by population

Wherever possible, the Kauffman Index also presents demographic characteristics of the business owners examined in different contexts.

The new Kauffman Index of Entrepreneurship is based on extensive entrepreneurship research, and our algorithm attempts to present a balanced perspective on how to measure entrepreneurship. Nonetheless, entrepreneurship is a complex phenomenon, and we expect to further build out and enhance the Index in the coming years, particularly as new data become available from the Annual Survey of Entrepreneurs, a forthcoming project from a major public-private partnership between the U.S. Census Bureau and the Kauffman Foundation.

The Kauffman Index 2015 series will include two more reports that follow the Startup Activity report, one on "main street" businesses and one on growth ventures, and a final report that synthesizes all three reports into one view of U.S. business activity for the year.

To help state and local leaders access the data relevant to their locales, the Index will offer enhanced, customizable data visualization, benchmarking tools, and detailed reports diving into the trends of different ecosystems across the United States.

We hope that you can use what we developed here to learn more about and foster your own entrepreneurial ecosystem.

Executive Summary

The Kauffman Index: Startup Activity is a novel early indicator of new business creation in the United States, integrating several high-quality sources of timely entrepreneurship information into one composite indicator of startup activity. The Index captures business activity in all industries, and is based on both a nationally representative sample size of more than a half million observations each year and on the universe of all employer businesses in the United States. This allows us to look at both entrepreneurs and the startups they create.

This report presents trends in startup activity for the forty largest metropolitan areas in the United States by population. Broad-based entrepreneurship in America appears to be slowly crawling its way out of the depths it has been stuck in since 2010.

Startup activity rose in 2015, reversing a five-year downward trend in the United States, giving rise to hope for a revival of entrepreneurship. However, the return remains tepid and well below historical trends, as shown in Figure 1 below. A principle driver of this year's uptick is the growth of male opportunity entrepreneurship, accompanied by the continued strength of immigrant entrepreneurship—covered in the *Kauffman Index: Startup Activity | National Trends*. Males were hit particularly hard during the Great Recession. State stars of the startup surge include perennial favorites like Colorado and Florida, as well as some less-highlighted places, such as Montana and Wyoming—covered in the *Kauffman Index: Startup Activity | State Trends*.

In this report, we focus on startup activity at the metropolitan and city area. Key findings include:

Metropolitan Area and City Trends in Startup Activity

Startup Activity and Rankings

- In the 2015 Index, startup activity was higher for eighteen of the forty metropolitan areas covered in this study, when compared to the previous year.
- The five metro areas with the highest startup activity in the 2015 Index were, in this order, the metros centered around the cities of Austin, Tex.; Miami, Fla.; San Jose, Calif.; Los Angeles, Calif.; and Denver, Colo.
- While there was some movement within the top ten metros with the most startup activity, all the metros that were among the top ten in the 2014 Startup Activity Index also were in the top ten in the 2015 Index. In addition to the five metros mentioned above, these top ten metros in the 2015 Index include the metros of San Francisco, Calif.; New York, N.Y.; Houston, Tex.; San Diego, Calif.; and San Antonio, Tex.

Rate of New Entrepreneurs

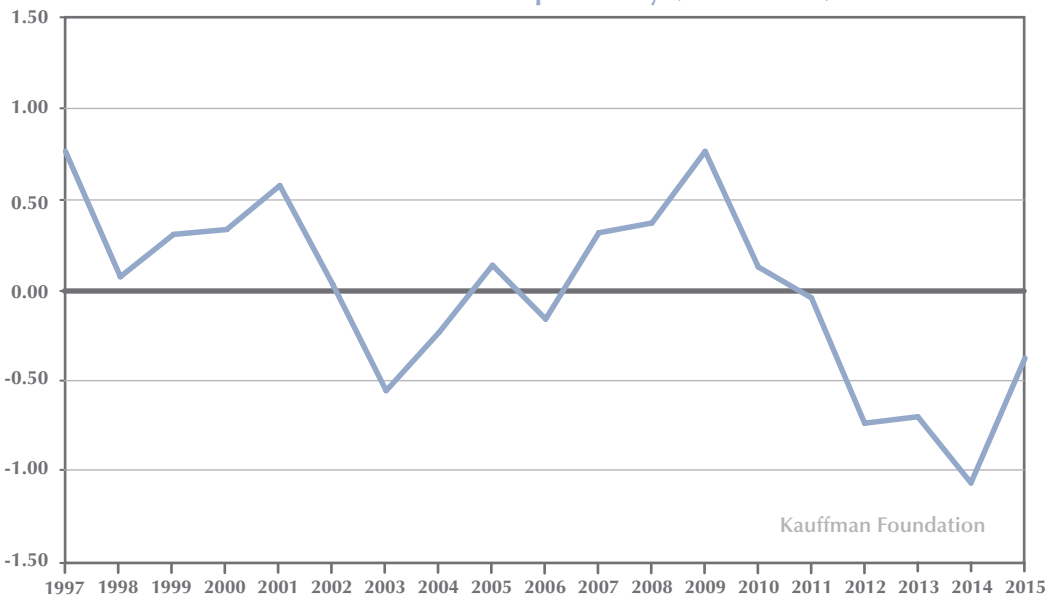
- Looking at the first component of the Startup Index, the Rate of New Entrepreneurs varied widely across metropolitan areas in the 2015 Index, going from 130 new entrepreneurs for every 100,000 adults (Milwaukee metro) in a given month, to 550 new entrepreneurs for every 100,000 adults (Austin metro) in a given month.

Opportunity Share of New Entrepreneurs

- The Opportunity Share of New Entrepreneurs—the second component of the Index—also varies across

Figure 1

Kauffman Index: Startup Activity (1997–2015)



SOURCE: Authors' calculations using the CPS, BDS, and BEA. *For an interactive version, please see: www.kauffmanindex.org.*

areas of the country, going from 60.0 percent in the metro area of Nashville to 91.2 percent in the San Jose metro—often considered the heart of Silicon Valley. This means that, in Nashville, approximately four out of every ten new entrepreneurs were previously unemployed, while in San Jose less than one out of every ten new entrepreneurs was previously unemployed.

Startup Density

- Startup Density—a component of the Index measuring the number of startups per 100,000 people—has high variation across metro areas, ranging from 93.9 startups per 100,000 people in the Cincinnati metro to 247.6 startups per 100,000 in the Miami metro. Startup density in twenty-four of the forty metropolitan areas studied in the 2015 Index was higher than the overall United States' Startup density of 130.6 startups per 100,000 people.

Introduction

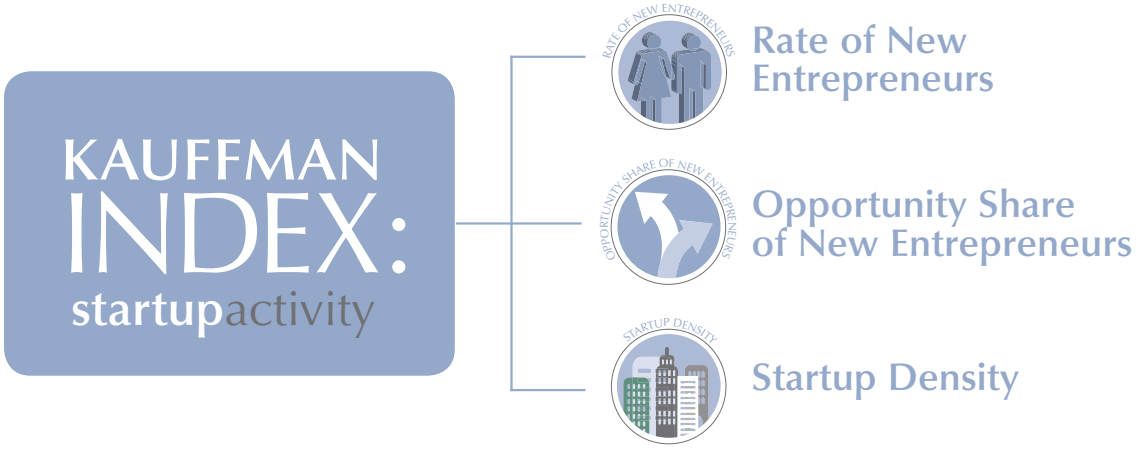
The Kauffman Index: Startup Activity presents a novel index measure of a broad range of startup activity in the United States—across national, state, and metropolitan-area levels. The index captures startup activity along three dimensions. First, it captures the Rate of New Entrepreneurs in the economy—the percentage of adults becoming entrepreneurs in a given month. Second, it captures the Opportunity Share of New Entrepreneurs, the percentage of new entrepreneurs driven primarily by "opportunity entrepreneurship" as opposed to "necessity entrepreneurship." Third, it captures Startup Density, the rate at which businesses with employees are created in the economy. The combination of these three distinct and important dimensions of new business creation provides a broad view of startup activity in the country, across national, state, and metropolitan-area levels.

The Kauffman Index: Startup Activity is an early indicator of new business creation in the United States. Capturing new entrepreneurs in their first month and new employer businesses in their first year, the Index provides the earliest documentation of new business development across the country. The Startup Activity Index captures all types of business activity and is based on nationally representative sample sizes of more than a half million observations each year or administrative data covering the universe of employer business entities. The separate components of the Index also provide evidence on potentially different trends in business creation created by "opportunity" business creation relative to unemployment-related ("necessity") business creation over the business cycle. The Startup Activity Index improves over other possible measures of entrepreneurship because of its timeliness, dynamic nature, exclusion of "casual" businesses, and inclusion of all types of business activity, regardless of industry.

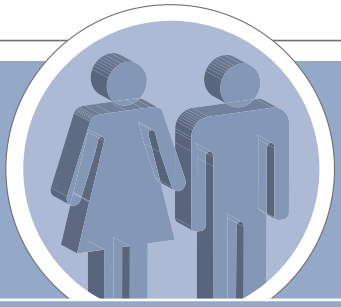
The Components of the Kauffman Index: Startup Activity

The Kauffman Index: Startup Activity provides a broad index measure of business startup activity in the United States. It is an equally weighted index of three normalized measures of startup activity.[1] The three component measures of the Startup Activity Index are:

i) The Rate of New Entrepreneurs in the economy, calculated as the percentage of adults becoming entrepreneurs in a given month.



1. We normalize each of three measures by subtracting the mean and dividing by the standard deviation for that measure (i.e., create a z-score for each variable). This creates a comparable scale for including the three measures in the Startup Activity Index. We use annual estimates from 1996 to the latest year available (2012 or 2014) to calculate the mean and standard deviations for each component measure (see Methodology and Framework for more details).



Rate of New Entrepreneurs

- Early and broad measure of business ownership.
- Measures the percent of the U.S. adult population that became entrepreneurs, on average, in a given month.
- Includes entrepreneurs with incorporated or unincorporated businesses, with or without employees.
- Data based on the Current Population Survey, jointly produced by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics.
- What the number means:
  - For example, the Rate of New Entrepreneurs was 0.35 percent for Colorado in the 2015 Index. That means that, on average, 350 people out of 100,000 adults became entrepreneurs in Colorado in each month.

ii) The Opportunity Share of New Entrepreneurs, calculated as the percentage of new entrepreneurs driven primarily by "opportunity" vs. "necessity."

iii) The Startup Density of a region, measured as the number of new employer businesses normalized by population.

Before presenting trends in the Startup Activity Index, we briefly discuss each component measure (see Methodology and Framework for more details).

First, the Rate of New Entrepreneurs captures the percentage of the adult, non-business-owner population that starts a business each *month*. This component was formerly known as the Kauffman Index of Entrepreneurial Activity and was presented in a series of reports over more than a decade (Fairlie 2014).[2] The Rate of New Entrepreneurs as measured here captures *all* new business owners, including those who own incorporated or unincorporated businesses, and those who are employers or non-employers.[3] The Rate of New Entrepreneurs is calculated from matched data from the Current Population Survey (CPS), a monthly survey conducted by the U.S. Bureau of the Census and the Bureau of Labor Statistics.

Opportunity Share of New Entrepreneurs

- Proxy indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities.
- Measures the percentage of new entrepreneurs who were not unemployed before starting their businesses (e.g., have been previously working for another organization or studying in school).
- This indicator is important for two reasons: 1) Entrepreneurs who were previously unemployed seem to be more likely to start businesses with lower growth potential, out of necessity. Thus, the Opportunity Share of New Entrepreneurs serves as a broad proxy for growth prospects. 2) This measure helps us understand changes in the Rate of New Entrepreneurs motivated by weak job markets, such as the one we had after the recent Great Recession. If the Rate of New Entrepreneurs goes up but the Opportunity Share of New Entrepreneurs is low, we can see that many new entrepreneurs are starting businesses coming out of unemployment, and arguably started their companies largely out of necessity.
- Data based on the Current Population Survey jointly produced by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics.
- What the number means:
  - For example, the United States Opportunity Share of New Entrepreneurs was 79.57 percent in the 2015 Index. That means that approximately eight out of every ten new entrepreneurs in this year started their businesses coming out of another job, school, or other labor market states. Meanwhile, two out of ten started their businesses directly coming out of unemployment.

2. See "Kauffman Index of Entrepreneurial Activity, 1996–2012" (Fairlie 2013) and http://www.kauffman.org/research-and-policy/kauffman-index-of-entrepreneurial-activity.aspx for previous reports.

3. The U.S. Census Bureau notes that the definitions of non-employers and self-employed business owners are not the same. Although most self-employed business owners are non-employers, about a million self-employed business owners are classified as employer businesses. http://www.census.gov/econ/nonemployer/index.html.

Another component measure of the Startup Activity Index is the percentage of new entrepreneurs driven by "opportunity entrepreneurship" as opposed to "necessity entrepreneurship." The Rate of New Entrepreneurs includes businesses of all types, and thus cannot cleanly disaggregate between the creation of high-growth-potential businesses and individuals starting businesses because of limited job opportunities.[4] One approximate method for disentangling these two types of startups is to examine the share of new entrepreneurs coming out of unemployment compared to the share of the new entrepreneurs coming out of wage and salary work, school, or other labor market statuses (Fairlie 2014). Individuals starting businesses out of unemployment might be more inclined to start those businesses out of necessity than opportunity (although many of those businesses could eventually be very successful).

The third component of the Startup Activity Index is a measure of the rate of creation of businesses with employees. These employer businesses are generally larger and have higher growth potential than non-employer businesses do. Startup Density is defined as the number of newly established employer businesses to the total population (in 100,000s). The number of newly created employer businesses is from the U.S. Census Business Dynamics Statistics (BDS) and is taken from the universe of businesses with payroll tax records in the United States, as recorded by the Internal Revenue Service. Although new businesses with employees represent only a small share of all new businesses, they represent an important group for job creation and economic growth in the economy.

In this report, we present estimates of the Startup Activity Index by metropolitan areas first, covering the forty largest metro areas in the United States by population. This includes rankings and maps. We then present trends in each of the three component measures of the Index.

Startup Density

- Number of startup firms by total population.
- Startup businesses here are defined as employer firms less than one year old employing at least one person besides the owner. All industries are included on this measure.
- Measures the number of new employer startup businesses normalized by the population of an area. Because companies captured by this indicator have employees, they tend to be at a more advanced stage than are the companies in the Rate of New Entrepreneurs measure.
- Data based on the U.S. Census's Business Dynamics Statistics.
- What the number means:
  - For example, the 2015 Index Startup Density for the New York metropolitan area was 197.3 by 100,000 population. That means that, for every 100,000 people living in the New York metro area, there were 197.3 employer startup firms that were less than one year old in this year.

4. See Fairlie (2011). "Entrepreneurship, Economic Conditions, and the Great Recession," *Journal of Economics and Management Strategy* for more evidence and discussion.

METROPOLITAN AREA AND CITY TRENDS

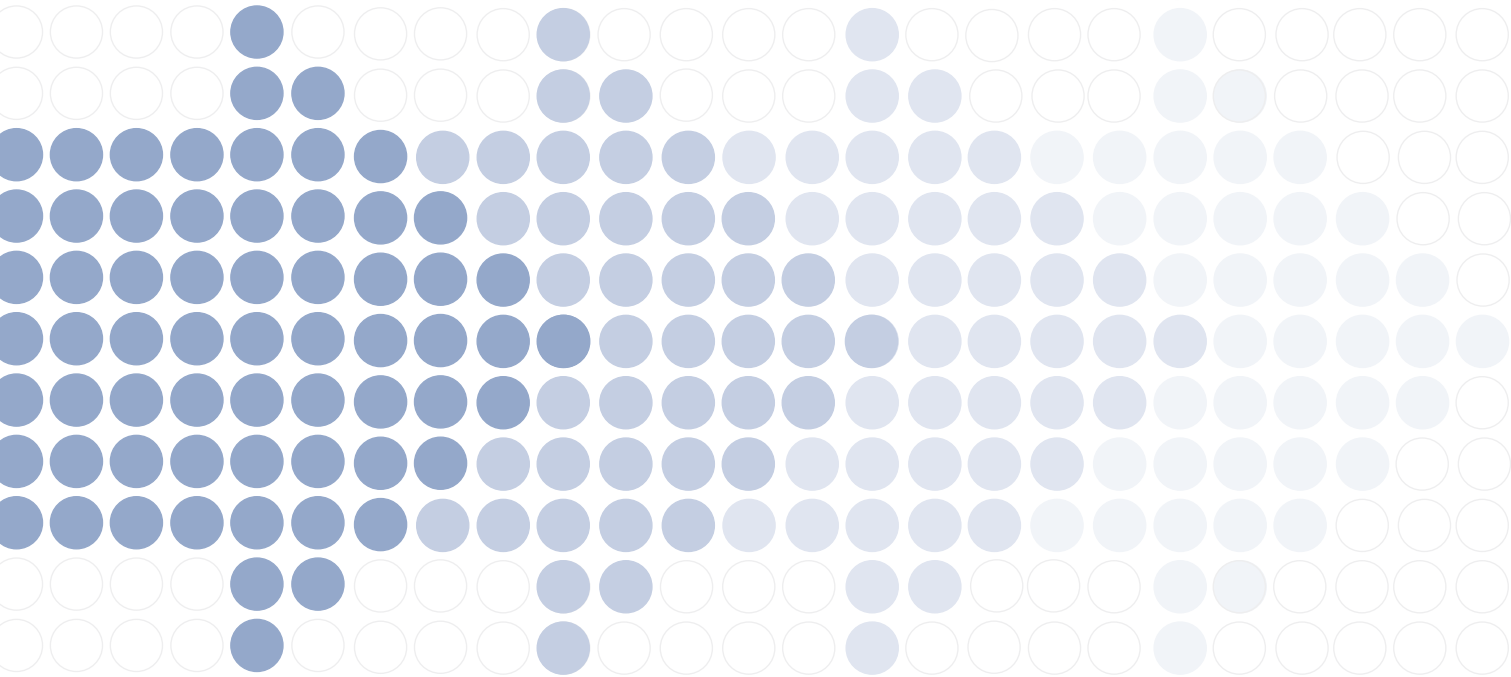


TABLE 1

Metro Rankings—Kauffman Index: Startup Activity

Rank 2015	Index 2015	City (Main)	Metropolitan Area	Rank 2014	Change in Rank	Rate of New Entrepreneurs	Opportunity Share of New Entrepreneurs	Startup Density
1	4.29	Austin	Austin-Round Rock-San Marcos, TX	2	1	0.55%	79.30%	180.8
2	4.24	Miami	Miami-Fort Lauderdale-Pompano Beach, FL	3	1	0.52%	73.90%	247.6
3	3.04	San Jose	San Jose-Sunnyvale-Santa Clara, CA	1	-2	0.41%	91.20%	168.3
4	2.51	Los Angeles	Los Angeles-Long Beach-Santa Ana, CA	4	0	0.50%	72.30%	170.4
5	2.01	Denver	Denver-Aurora-Broomfield, CO	8	3	0.37%	85.70%	177.8
6	1.57	San Francisco	San Francisco-Oakland-Fremont, CA	5	-1	0.39%	80.70%	161.8
7	1.26	New York	New York-Northern New Jersey-Long Island, NY-NJ-PA	6	-1	0.34%	81.00%	197.3
8	0.81	Houston	Houston-Sugar Land-Baytown, TX	9	1	0.40%	75.40%	136.9
9	0.66	San Diego	San Diego-Carlsbad-San Marcos, CA	10	1	0.34%	80.90%	154.7
10	0.52	San Antonio	San Antonio-New Braunfels, TX	7	-3	0.34%	86.50%	111.9
11	0.43	Las Vegas	Las Vegas-Paradise, NV	14	3	0.38%	72.70%	158.3
12	-0.03	Columbus	Columbus, OH	22	10	0.35%	80.00%	104
13	-0.15	Atlanta	Atlanta-Sandy Springs-Marietta, GA	18	5	0.37%	69.00%	154.5
14	-0.16	Phoenix	Phoenix-Mesa-Glendale, AZ	12	-2	0.34%	76.70%	127.5
15	-0.58	Dallas	Dallas-Fort Worth-Arlington, TX	13	-2	0.30%	78.00%	142.5
16	-0.61	Seattle	Seattle-Tacoma-Bellevue, WA	17	1	0.28%	76.80%	167.9
17	-0.8	Baltimore	Baltimore-Towson, MD	19	2	0.23%	89.40%	118.8
18	-0.99	Riverside	Riverside-San Bernardino-Ontario, CA	11	-7	0.30%	78.70%	99.9
19	-1.02	Virginia Beach	Virginia Beach-Norfolk-Newport News, VA-NC	23	4	0.28%	81.20%	107.3
20	-1.03	Tampa	Tampa-St. Petersburg-Clearwater, FL	15	-5	0.30%	68.80%	174.8
21	-1.1	Chicago	Chicago-Joliet-Naperville, IL-IN-WI	29	8	0.23%	82.80%	140.8
22	-1.17	Boston	Boston-Cambridge-Quincy, MA-NH	31	9	0.29%	74.80%	136.1
23	-1.18	Sacramento	Sacramento-Arden-Arcade-Roseville, CA	16	-7	0.28%	76.40%	126.2
24	-1.38	Nashville	Nashville-Davidson-Murfreesboro-Franklin, TN	20	-4	0.37%	60.00%	132.5
25	-1.63	Charlotte	Charlotte-Gastonia-Rock Hill, NC-SC	28	3	0.29%	68.00%	150.6
26	-1.69	Portland	Portland-Vancouver-Hillsboro, OR-WA	24	-2	0.25%	71.20%	165.8
27	-1.73	Jacksonville	Jacksonville, FL	25	-2	0.21%	78.20%	156.2
28	-1.76	Indianapolis	Indianapolis-Carmel, IN	30	2	0.23%	79.70%	122.1
29	-1.82	Kansas City	Kansas City, MO-KS	26	-3	0.23%	76.30%	137.3
30	-1.83	Washington	Washington-Arlington-Alexandria, DC-VA-MD-WV	27	-3	0.23%	77.50%	133.7
31	-2.29	Philadelphia	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	32	1	0.23%	74.50%	124.1
32	-2.32	Cincinnati	Cincinnati-Middletown, OH-KY-IN	34	2	0.23%	78.80%	93.9
33	-2.53	Orlando	Orlando-Kissimmee-Sanford, FL	21	-12	0.16%	72.60%	196.1
34	-2.73	Providence	Providence-New Bedford-Fall River, RI-MA	38	4	0.17%	79.30%	118.9
35	-3.05	Cleveland	Cleveland-Elyria-Mentor, OH	36	1	0.15%	81.70%	105.9
36	-3.23	Detroit	Detroit-Warren-Livonia, MI	37	1	0.22%	66.60%	123.4
37	-3.75	Minneapolis	Minneapolis-St. Paul-Bloomington, MN-WI	33	-4	0.16%	70.00%	132.1
38	-4.14	St. Louis	St. Louis, MO-IL	35	-3	0.16%	66.50%	126.6
39	-4.25	Milwaukee	Milwaukee-Waukesha-West Allis, WI	39	0	0.13%	74.50%	100.9
40	-5.36	Pittsburgh	Pittsburgh, PA	40	0	0.15%	60.70%	98.3

For an interactive version of the rankings, please see: www.kauffmanindex.org.

Metro Trends in Startup Activity

The Kauffman Index: Startup Activity calculates a broad index measure of business startup activity across the top forty metropolitan areas in the United States by population, according to the Bureau of Economic Analysis data.

Startup Activity rates have high variability across metropolitan areas. As you can see on the map below, the cities with the most startup activity in 2015 tend to cluster in the western and southern parts of the United States—although with some clear exceptions, primarily New York and Miami.

Largely following the trends at the national level—which experienced a rise in startup activity—eighteen of the forty metropolitan areas studied saw their 2015 Startup Activity Index go up compared to the 2014 Index. Seven of them saw small to no changes in startup activity compared to the previous year, and fifteen saw their startup activity levels fall in the past year.

Changes in rankings—which measure performance relative to other metros, as opposed to performance relative to a metro's own performance in the previous year—were slightly different. Twenty metro areas ranked higher than they did last year, three experienced no changes in rankings, and seventeen ranked lower.

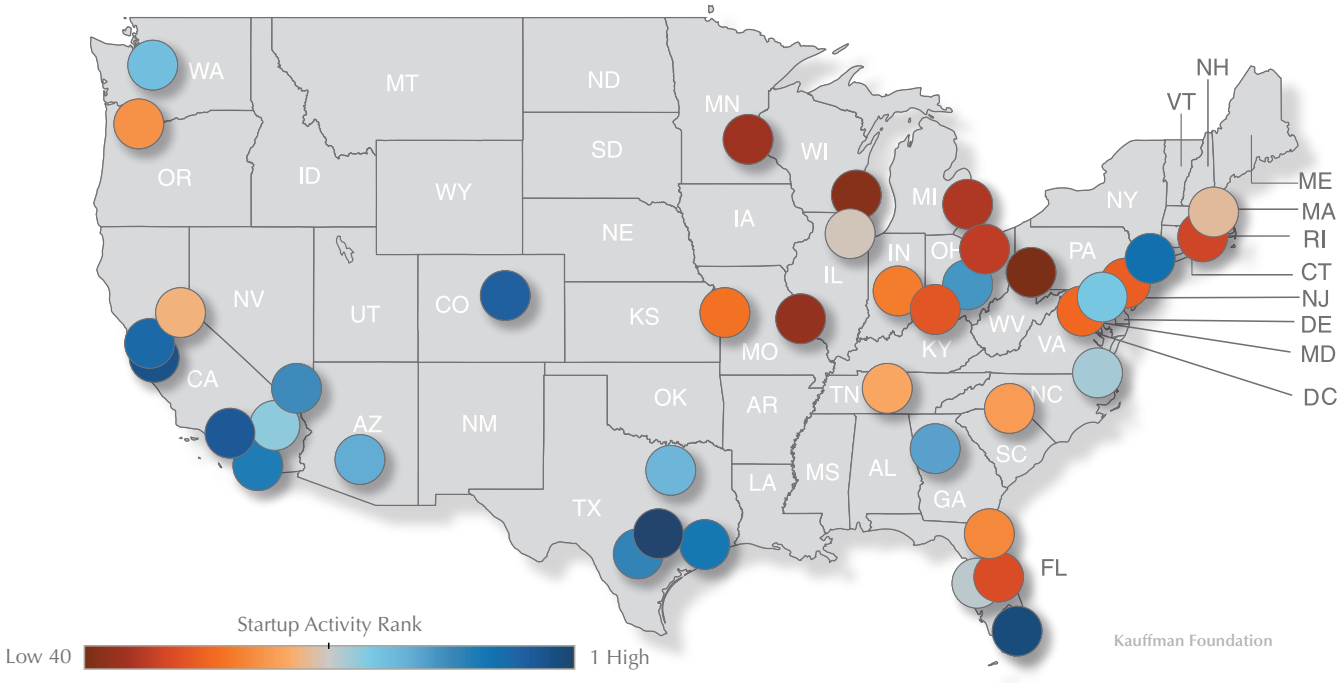
The five metros that experienced the biggest positive shifts in rank in 2015 compared to 2014, with a tie for fifth place, were:

Metros with the Biggest Positive Shift in Rank—Kauffman Index: Startup Activity

City (Main)	Metropolitan Area	Rank 2015	Rank 2014	Change
Columbus	Columbus, OH	12	22	10
Boston	Boston-Cambridge-Quincy, MA-NH	22	31	9
Chicago	Chicago-Joliet-Naperville, IL-IN-WI	21	29	8
Atlanta	Atlanta-Sandy Springs-Marietta, GA	13	18	5
Virginia Beach	Virginia Beach-Norfolk-Newport News, VA-NC	19	23	4
Providence	Providence-New Bedford-Fall River, RI-MA	34	38	4

Figure 2

2015 Rank for the Kauffman Index: Startup Activity by Metropolitan Area



For an interactive version of the map, please see: www.kauffmanindex.org.

The five metros areas that experienced the biggest negative shifts in rank in 2015 compared to 2014, also with a tie for fifth place, were:

Metros with the Biggest Negative Shift in Rank—Kauffman Index: Startup Activity				
City (Main)	Metropolitan Area	Rank 2015	Rank 2014	Change
Orlando	Orlando-Kissimmee-Sanford, FL	33	21	-12
Riverside	Riverside-San Bernardino-Ontario, CA	18	11	-7
Sacramento	Sacramento-Arden-Arcade-Roseville, CA	23	16	-7
Tampa	Tampa-St. Petersburg-Clearwater, FL	20	15	-5
Nashville	Nashville-Davidson-Murfreesboro-Franklin, TN	24	20	-4
Minneapolis	Minneapolis-St. Paul-Bloomington, MN-WI	37	33	-4

Though there was some movement within the top ten cities with the most startup activity, all the cities that were in the top ten with the most startup activity in 2014 continued in the top ten in 2015. These ten cities were:

Top Ten Metros in Rank—Kauffman Index: Startup Activity	
City (Main)	Metropolitan Area
Austin	Austin-Round Rock-San Marcos, TX
Miami	Miami-Fort Lauderdale-Pompano Beach, FL
San Jose	San Jose-Sunnyvale-Santa Clara, CA
Los Angeles	Los Angeles-Long Beach-Santa Ana, CA
Denver	Denver-Aurora-Broomfield, CO
San Francisco	San Francisco-Oakland-Fremont, CA
New York	New York-Northern New Jersey-Long Island, NY-NJ-PA
Houston	Houston-Sugar Land-Baytown, TX
San Diego	San Diego-Carlsbad-San Marcos, CA
San Antonio	San Antonio-New Braunfels, TX

In the following sections, we discuss metro-level trends for each component of the Startup Activity Index: 1) Rate of New Entrepreneurs, 2) Opportunity Share of New Entrepreneurs, and 3) Startup Density.

Metro Trends in Rate of New Entrepreneurs

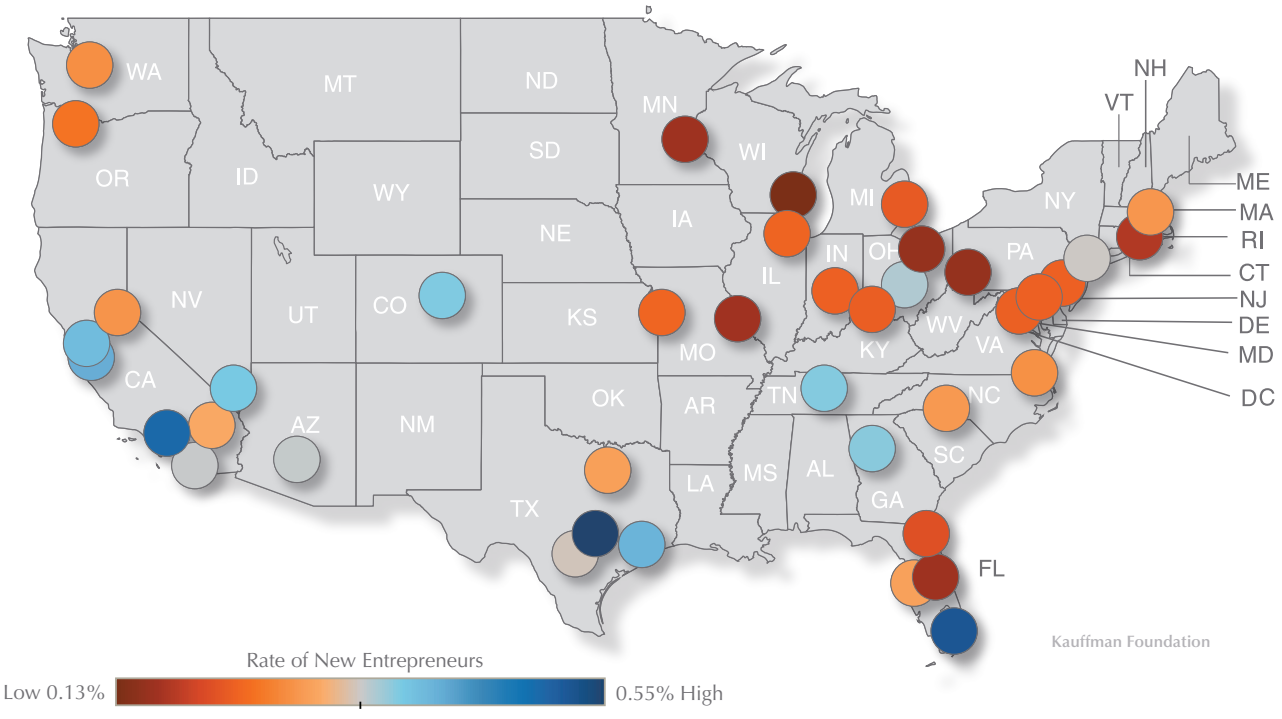
The Rate of New Entrepreneurs component of the Kauffman Index is a broad measure of startup activity capturing the percentage of the adult population starting a new business each month—regardless of incorporation status and how many people they employ, if any. We use the U.S. Census Current Population Survey as the data source for this rate. The Rate of New Entrepreneurs is calculated on a three-year moving average for metropolitan areas, from 2008 to 2014—the latest year with data available.

The Rate of New Entrepreneurs provides a very early measure of startup activity—when someone first starts working on a business as the main job.

The Rate of New Entrepreneurs varies dramatically across metropolitan areas—from 0.13 percent to 0.55 percent. As you can see on the map in Figure 3, the big cities in the southern half of the country seem to perform well—particularly the metro areas of Austin, Miami, and Los Angeles.

Figure 3

2015 Rate of New Entrepreneurs Component of the Kauffman Index: Startup Activity by Metropolitan Area



For an interactive version of the map, please see: www.kauffmanindex.org.

Metro Trends in Opportunity Share of New Entrepreneurs

The Opportunity Share of New Entrepreneurs component of the Kauffman Index: Startup Activity measures the percentage of the new entrepreneurs—measured by Rate of New Entrepreneurs described in the previous section—not coming out of unemployment. For metropolitan areas, we calculate Opportunity Shares of New Entrepreneurs on a five-year moving average, from 2010 to 2014, the latest year with data available. The data source for this indicator is the U.S. Census Bureau Current Population Survey.

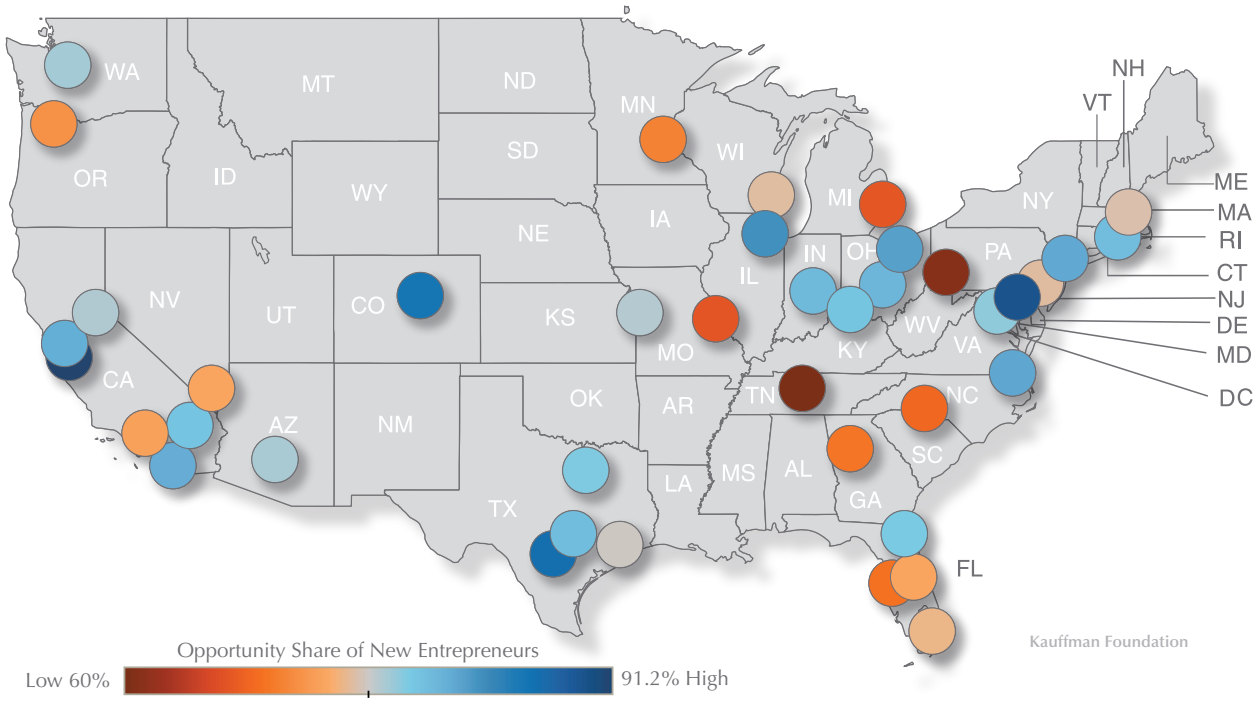
The Opportunity Share provides us nuance on the Rate of New Entrepreneurs: because entrepreneurs coming from unemployment are more likely to start new companies for necessity reasons rather than for opportunity reasons, Opportunity Share is a broad proxy used to identify the new businesses more likely to grow. Of course, entrepreneurs coming out of unemployment also can achieve high growth, but Opportunity Share can give us an early indicator of potential. Moreover, the Opportunity Share helps us understand changes in the Rate of New Entrepreneurs that are potentially driven by weak job markets.

As with other Startup Activity indicators, there is high variance on Opportunity Share across different areas of the country, going from 60.0 percent in the metro area of Nashville to 91.2 percent in the San Jose metro—often considered the heart of Silicon Valley. This means that in Nashville, approximately four out of every ten new entrepreneurs was previously unemployed, while in San Jose, less than one out of every ten new entrepreneurs was previously unemployed.

While western and southern metropolitan areas performed better in other indicators of Startup Activity, the northeastern cities of the United States performed relatively better on Opportunity Share of New Entrepreneurs.

Figure 4

2015 Opportunity Share of New Entrepreneurs Component of the Kauffman Index: Startup Activity by Metropolitan Area



For an interactive version of the map, please see: www.kauffmanindex.org.

Metro Trends in Startup Density

The Startup Density component of the Kauffman Index measures the number of startups per 100,000 people. Here, we define startups as firms that are less than one year old and employing at least one person. This is a yearly measure calculated from the U.S. Census Business Dynamics Statistics—for firm data—and the Bureau of Economic Analysis—for population data.

We present this indicator going back from 1977 to 2012, the latest year for which the data are available. This measure differs from the Rate of New Entrepreneurs in two key ways: 1) the Rate of New Entrepreneurs tracks the percentage of individuals starting new businesses, while the Startup Density indicator tracks the new businesses themselves; and 2) the Rate of New Entrepreneurs is a very early and broad measure of startup activity, including all entrepreneurs, regardless of how many people their businesses employ, if any. Startup Density only includes businesses employing at least one person—thus being a slightly more mature measure of startup activity.

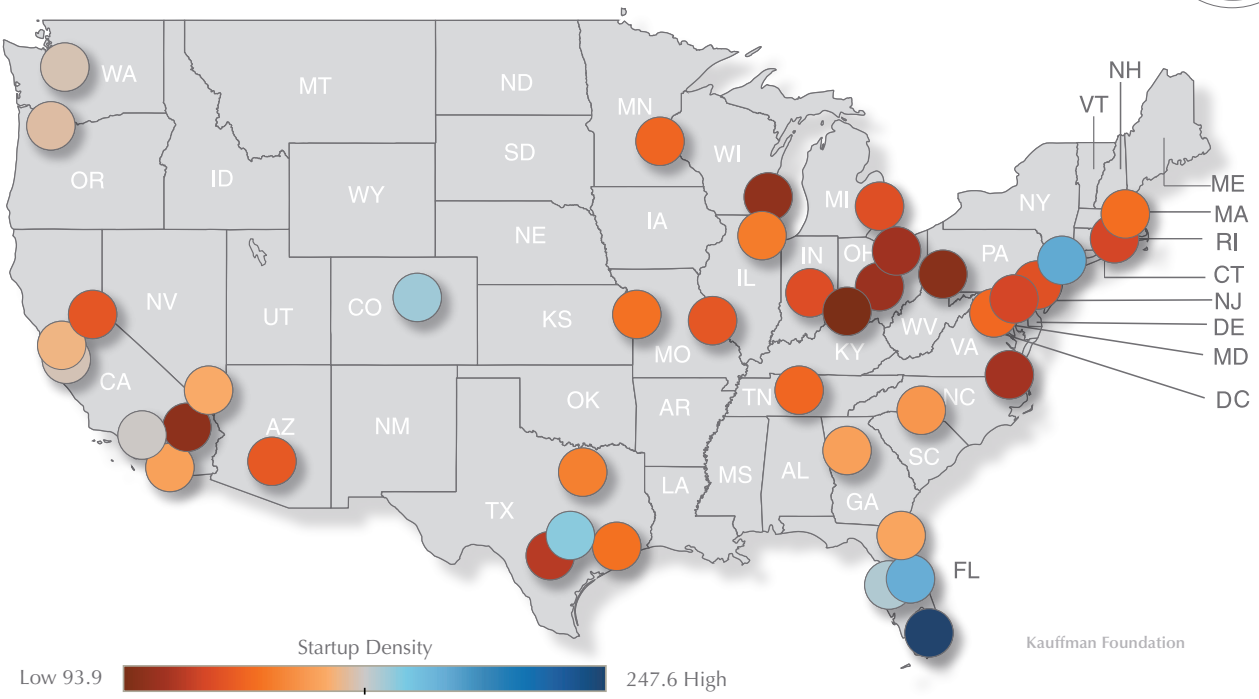
Both researchers and entrepreneurs have suggested density as a key indicator of vibrancy in entrepreneurial ecosystems, and there is high variation on this indicator across U.S. metropolitan areas (Stangler and Bell-Masterson 2015 and Feld 2012). For the latest year available, the range of density goes all the away from the lower end of 93.9 startups per 100,000 people in the Cincinnati metro area to the higher end of 247.6 startups per 100,000 people for the Miami metropolitan area. This means that the density of startups in the Miami area is 163.7 percent higher than the density of startups in Cincinnati.

Compared to the U.S. startup density of 130.6 startups per 100,000 people for the latest year with data available, twenty-four metropolitan areas out of the forty studied had higher density rates.

Largely trailing national trends, most metropolitan areas experienced growth in startup density when compared to the previous year. Similar to other startup activity indicators, the highest-ranked cities tend to be in the western and southern parts of the United States.

Figure 5

2015 Startup Density Component of the Kauffman Index: Startup Activity by Metropolitan Area



For an interactive version of the map, please see: www.kauffmanindex.org.

APPENDIX: METRO STARTUP ACTIVITY PROFILES, ORDERED BY RANK

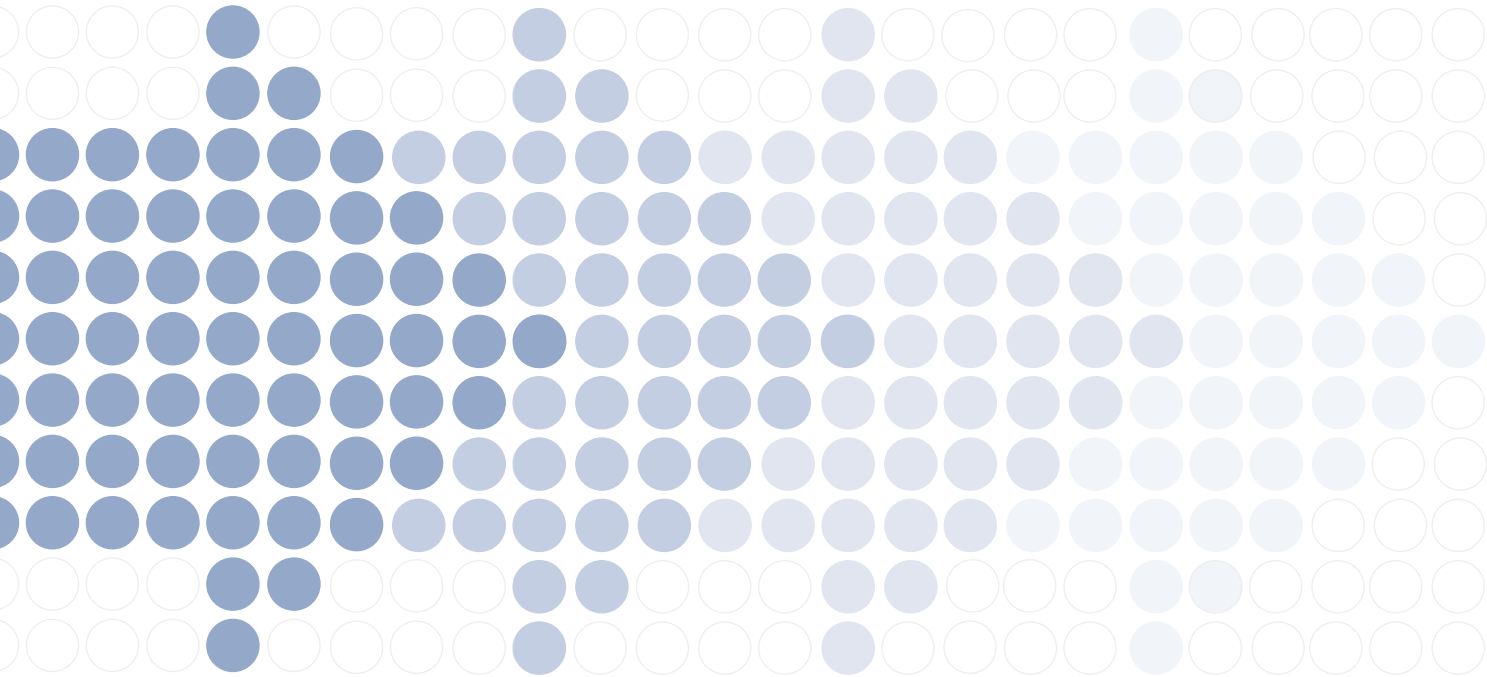


TABLE 1

Metro Rankings—Kauffman Index: Startup Activity

Rank 2015	Index 2015	City (Main)	Metropolitan Area	Rank 2014	Change in Rank	Rate of New Entrepreneurs	Opportunity Share of New Entrepreneurs	Startup Density
1	4.29	Austin	Austin-Round Rock-San Marcos, TX	2	1	0.55%	79.30%	180.8
2	4.24	Miami	Miami-Fort Lauderdale-Pompano Beach, FL	3	1	0.52%	73.90%	247.6
3	3.04	San Jose	San Jose-Sunnyvale-Santa Clara, CA	1	-2	0.41%	91.20%	168.3
4	2.51	Los Angeles	Los Angeles-Long Beach-Santa Ana, CA	4	0	0.50%	72.30%	170.4
5	2.01	Denver	Denver-Aurora-Broomfield, CO	8	3	0.37%	85.70%	177.8
6	1.57	San Francisco	San Francisco-Oakland-Fremont, CA	5	-1	0.39%	80.70%	161.8
7	1.26	New York	New York-Northern New Jersey-Long Island, NY-NJ-PA	6	-1	0.34%	81.00%	197.3
8	0.81	Houston	Houston-Sugar Land-Baytown, TX	9	1	0.40%	75.40%	136.9
9	0.66	San Diego	San Diego-Carlsbad-San Marcos, CA	10	1	0.34%	80.90%	154.7
10	0.52	San Antonio	San Antonio-New Braunfels, TX	7	-3	0.34%	86.50%	111.9
11	0.43	Las Vegas	Las Vegas-Paradise, NV	14	3	0.38%	72.70%	158.3
12	-0.03	Columbus	Columbus, OH	22	10	0.35%	80.00%	104
13	-0.15	Atlanta	Atlanta-Sandy Springs-Marietta, GA	18	5	0.37%	69.00%	154.5
14	-0.16	Phoenix	Phoenix-Mesa-Glendale, AZ	12	-2	0.34%	76.70%	127.5
15	-0.58	Dallas	Dallas-Fort Worth-Arlington, TX	13	-2	0.30%	78.00%	142.5
16	-0.61	Seattle	Seattle-Tacoma-Bellevue, WA	17	1	0.28%	76.80%	167.9
17	-0.8	Baltimore	Baltimore-Towson, MD	19	2	0.23%	89.40%	118.8
18	-0.99	Riverside	Riverside-San Bernardino-Ontario, CA	11	-7	0.30%	78.70%	99.9
19	-1.02	Virginia Beach	Virginia Beach-Norfolk-Newport News, VA-NC	23	4	0.28%	81.20%	107.3
20	-1.03	Tampa	Tampa-St. Petersburg-Clearwater, FL	15	-5	0.30%	68.80%	174.8
21	-1.1	Chicago	Chicago-Joliet-Naperville, IL-IN-WI	29	8	0.23%	82.80%	140.8
22	-1.17	Boston	Boston-Cambridge-Quincy, MA-NH	31	9	0.29%	74.80%	136.1
23	-1.18	Sacramento	Sacramento-Arden-Arcade-Roseville, CA	16	-7	0.28%	76.40%	126.2
24	-1.38	Nashville	Nashville-Davidson-Murfreesboro-Franklin, TN	20	-4	0.37%	60.00%	132.5
25	-1.63	Charlotte	Charlotte-Gastonia-Rock Hill, NC-SC	28	3	0.29%	68.00%	150.6
26	-1.69	Portland	Portland-Vancouver-Hillsboro, OR-WA	24	-2	0.25%	71.20%	165.8
27	-1.73	Jacksonville	Jacksonville, FL	25	-2	0.21%	78.20%	156.2
28	-1.76	Indianapolis	Indianapolis-Carmel, IN	30	2	0.23%	79.70%	122.1
29	-1.82	Kansas City	Kansas City, MO-KS	26	-3	0.23%	76.30%	137.3
30	-1.83	Washington	Washington-Arlington-Alexandria, DC-VA-MD-WV	27	-3	0.23%	77.50%	133.7
31	-2.29	Philadelphia	Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	32	1	0.23%	74.50%	124.1
32	-2.32	Cincinnati	Cincinnati-Middletown, OH-KY-IN	34	2	0.23%	78.80%	93.9
33	-2.53	Orlando	Orlando-Kissimmee-Sanford, FL	21	-12	0.16%	72.60%	196.1
34	-2.73	Providence	Providence-New Bedford-Fall River, RI-MA	38	4	0.17%	79.30%	118.9
35	-3.05	Cleveland	Cleveland-Elyria-Mentor, OH	36	1	0.15%	81.70%	105.9
36	-3.23	Detroit	Detroit-Warren-Livonia, MI	37	1	0.22%	66.60%	123.4
37	-3.75	Minneapolis	Minneapolis-St. Paul-Bloomington, MN-WI	33	-4	0.16%	70.00%	132.1
38	-4.14	St. Louis	St. Louis, MO-IL	35	-3	0.16%	66.50%	126.6
39	-4.25	Milwaukee	Milwaukee-Waukesha-West Allis, WI	39	0	0.13%	74.50%	100.9
40	-5.36	Pittsburgh	Pittsburgh, PA	40	0	0.15%	60.70%	98.3

For an interactive version of the rankings, please see: www.kauffmanindex.org.

Startup Activity Rank

2015	2014
1	2

METRO PROFILE

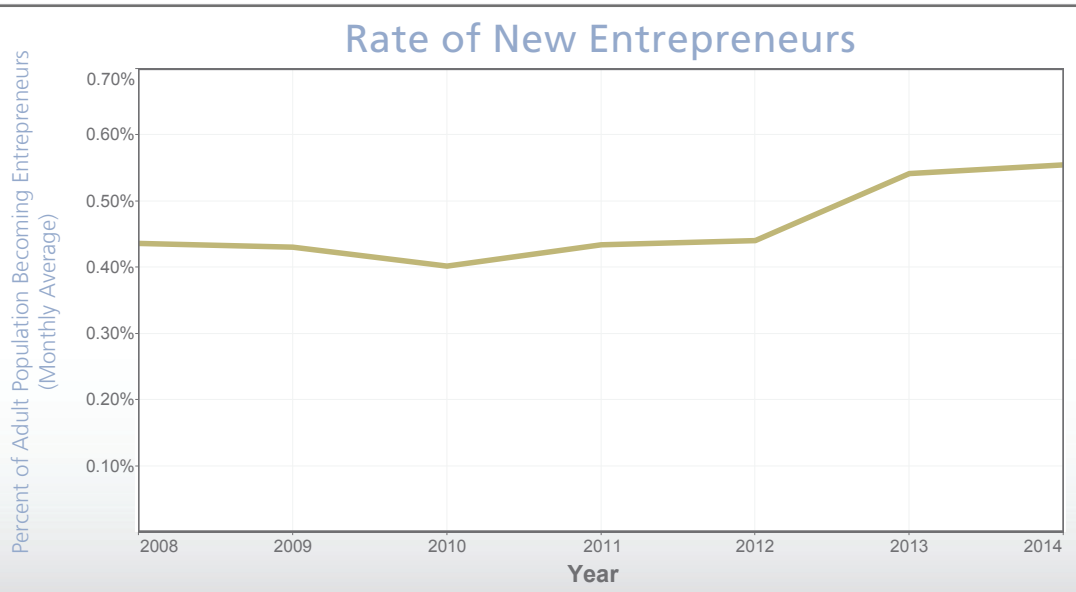
Metro: Austin-Round Rock-San Marcos | State: Texas

Rate of New Entrepreneurs

2015 Component	2014 Component
0.55%	0.54%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

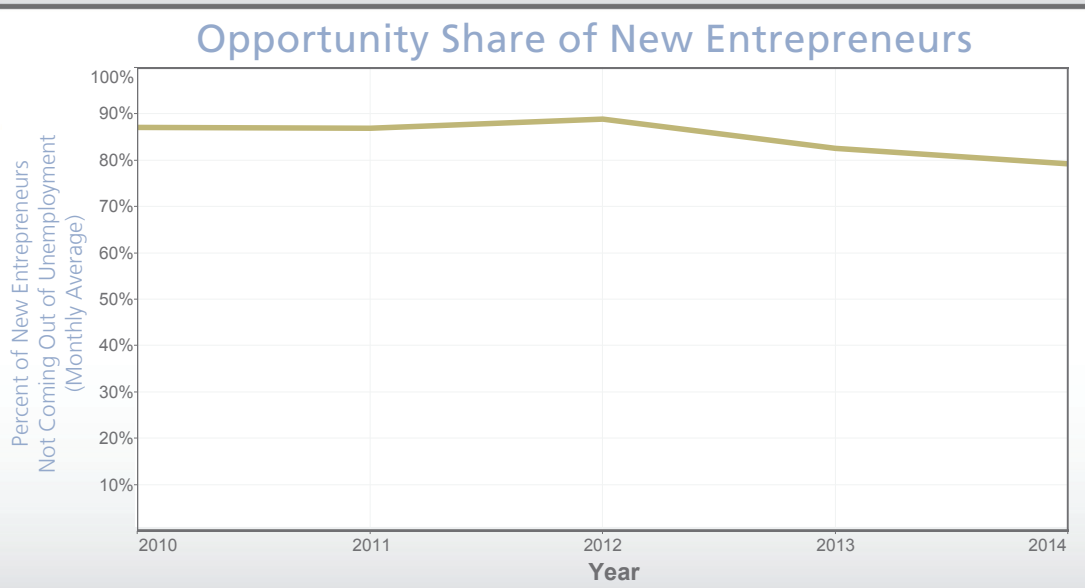


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
79.3%	82.6%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

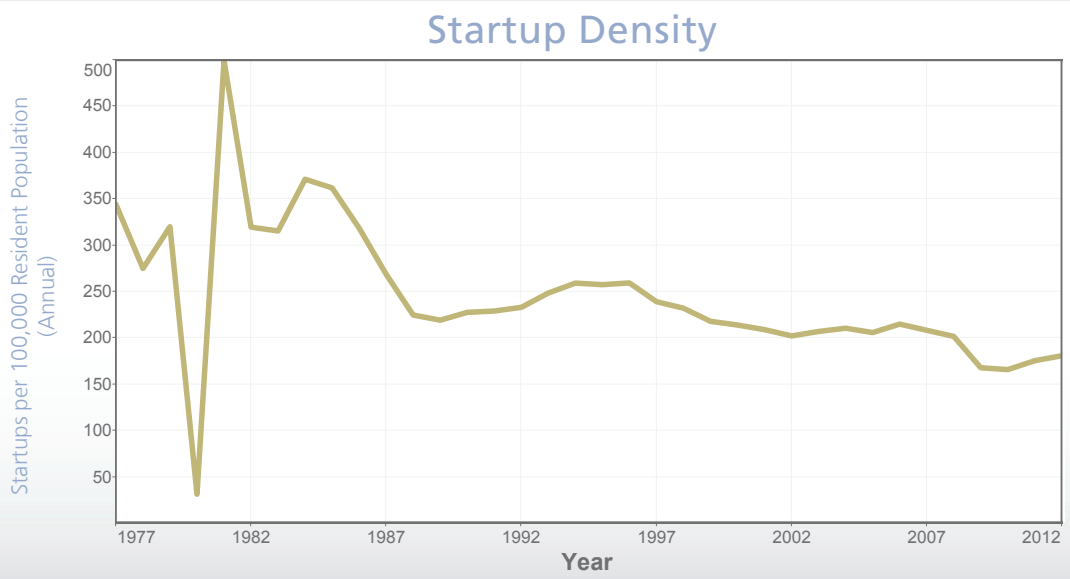


Startup Density

2015 Component	2014 Component
180.8	175.4

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
2	3

METRO PROFILE

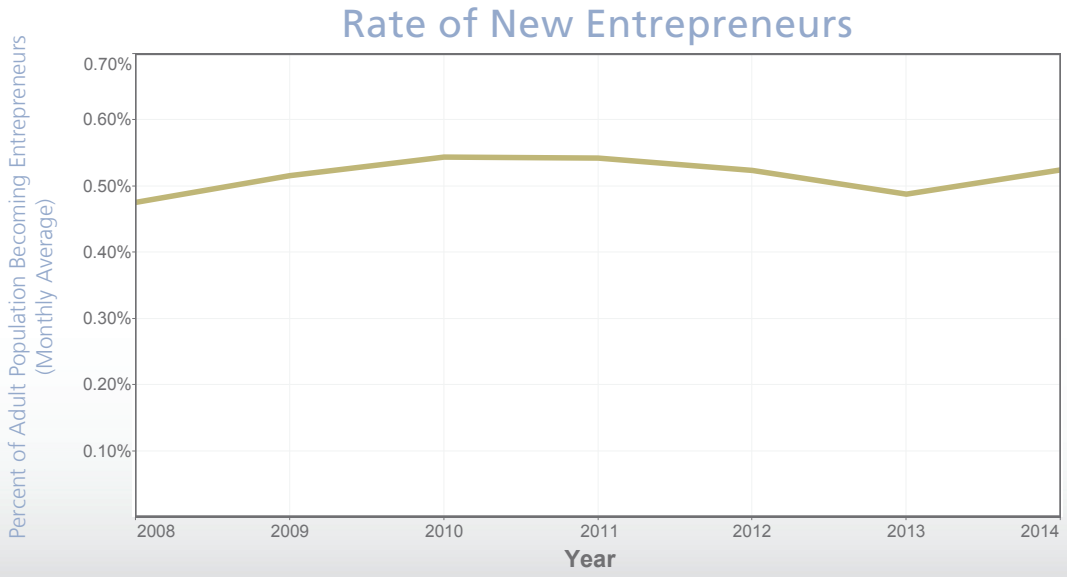
Metro: Miami-Fort Lauderdale-Pompano Beach | State: Florida

Rate of New Entrepreneurs

2015 Component	2014 Component
0.52%	0.49%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

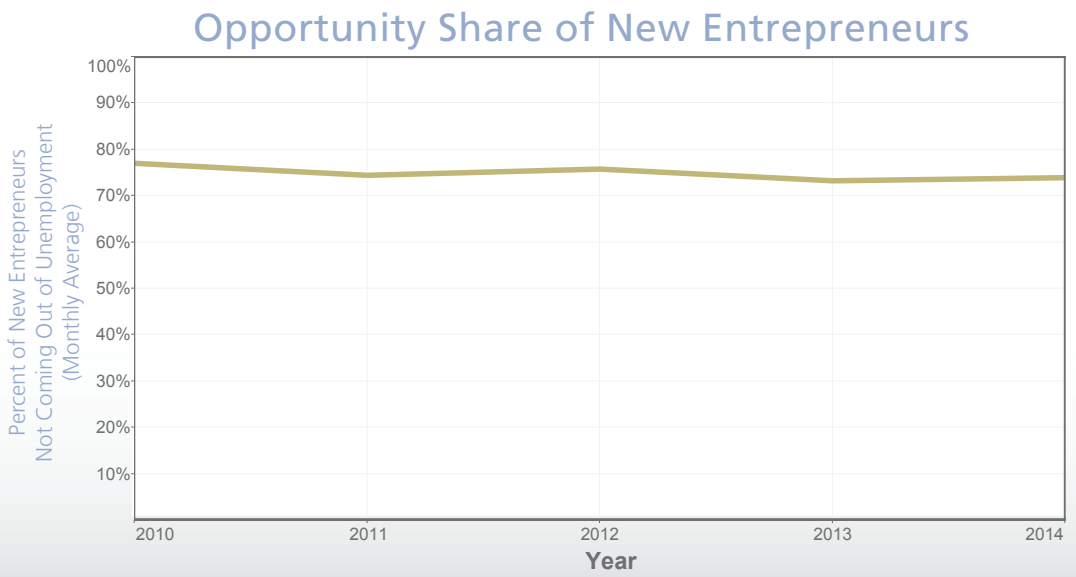


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
73.9%	73.2%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

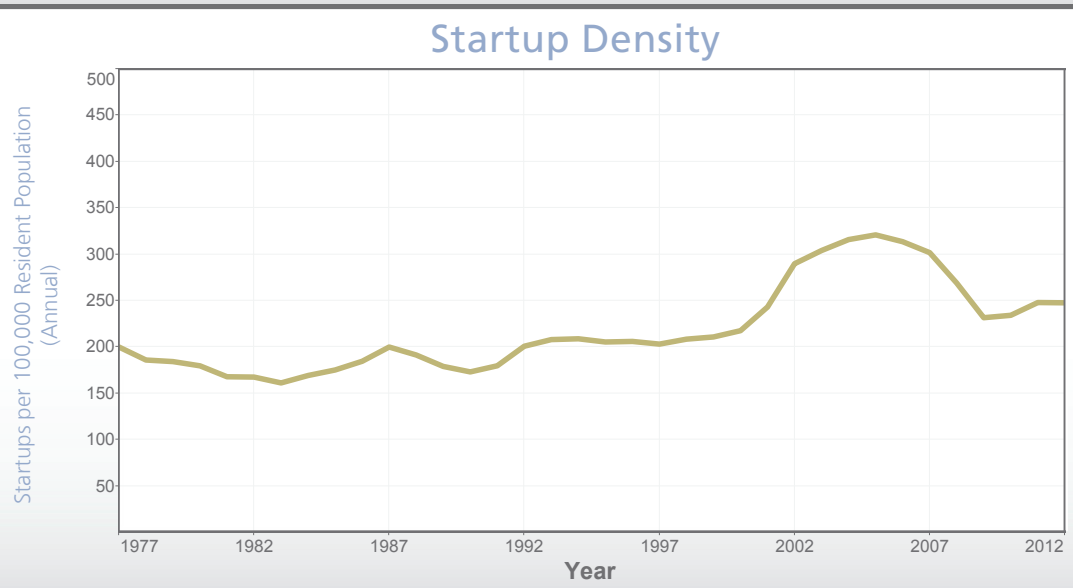


Startup Density

2015 Component	2014 Component
247.6	247.9

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
3	1

METRO PROFILE

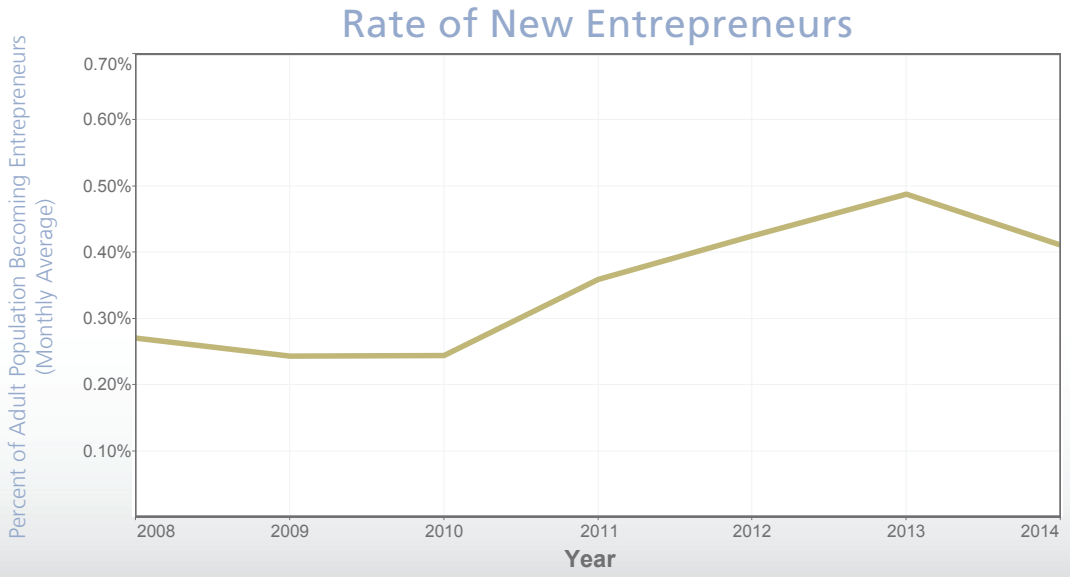
Metro: San Jose-Sunnyvale-Santa Clara | State: California

Rate of New Entrepreneurs

2015 Component	2014 Component
0.41%	0.49%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

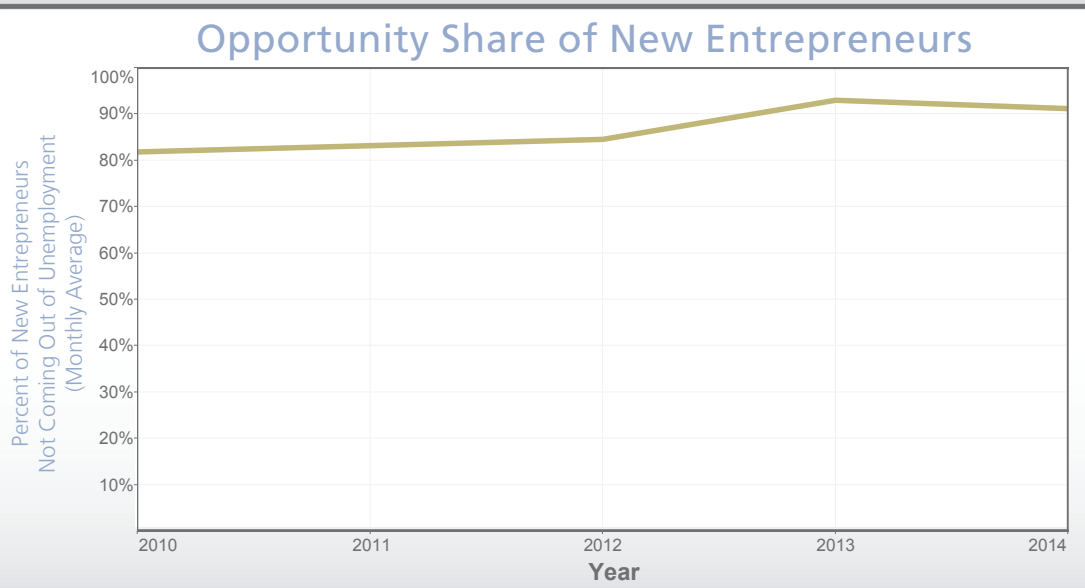


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
91.2%	93.0%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

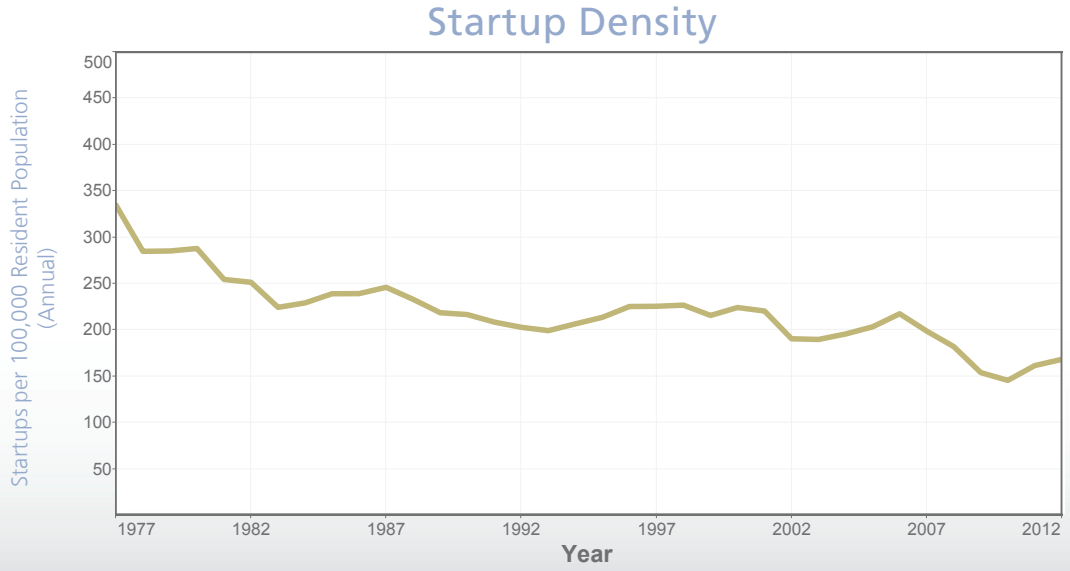


Startup Density

2015 Component	2014 Component
168.3	161.6

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank	
2015	2014
4	4

METRO PROFILE

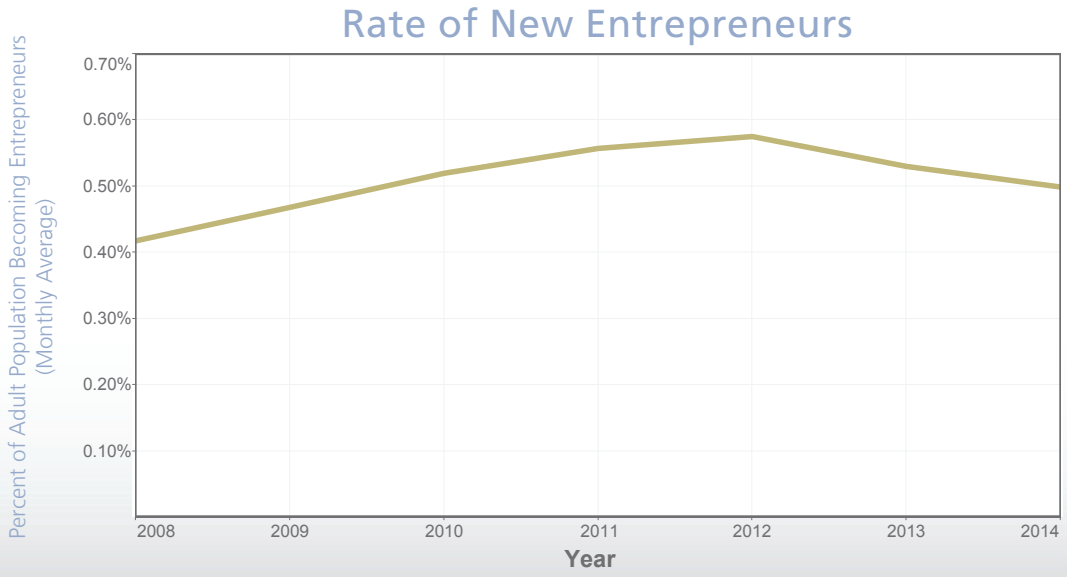
Metro: Los Angeles-Long Beach-Santa Ana | State: California

Rate of New Entrepreneurs

2015 Component	2014 Component
0.50%	0.53%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

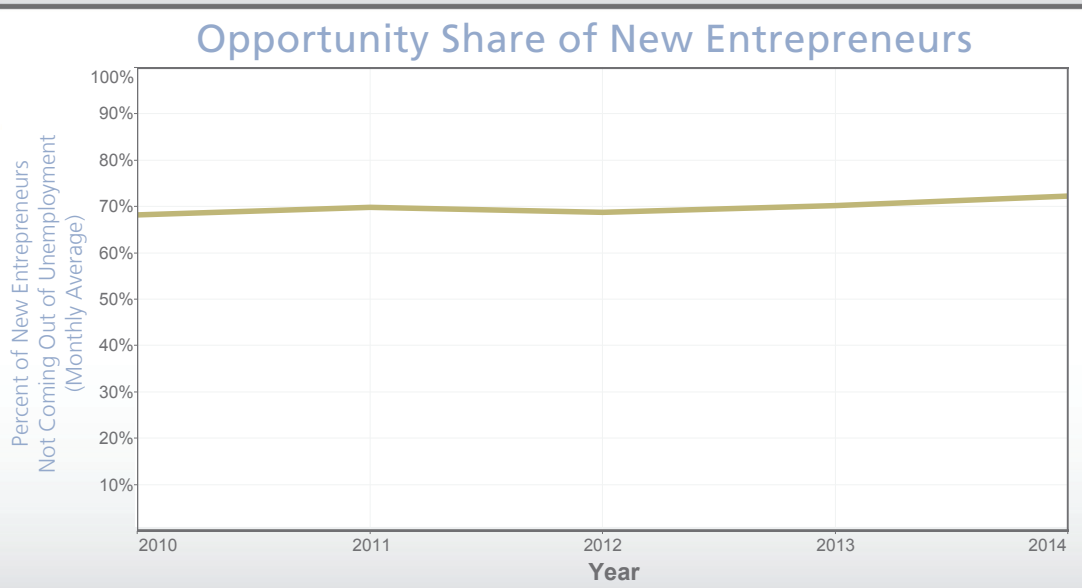


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
72.3%	70.3%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

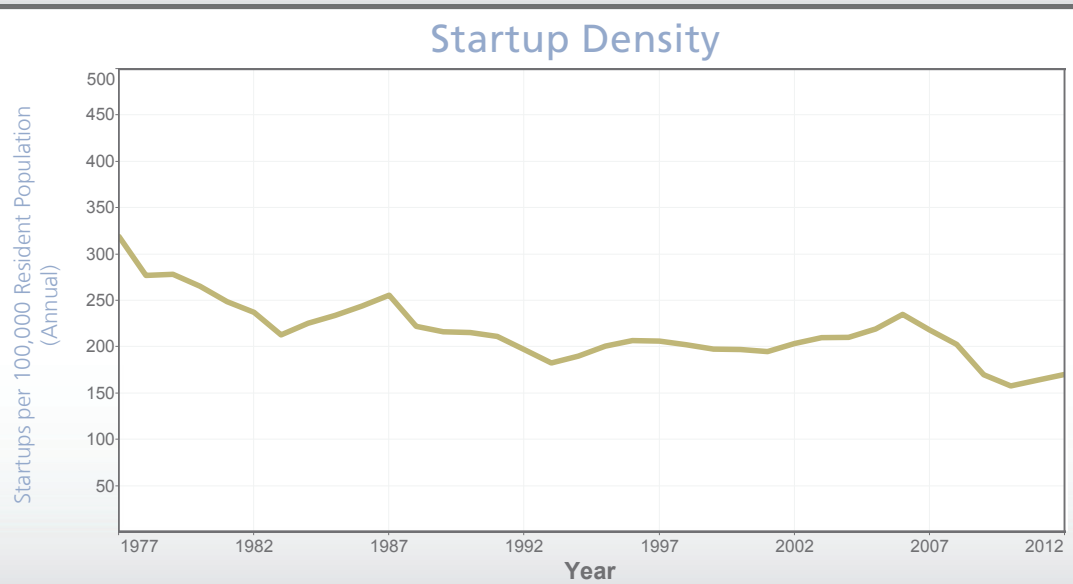


Startup Density

2015 Component	2014 Component
170.4	164.2

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
5	8

METRO PROFILE

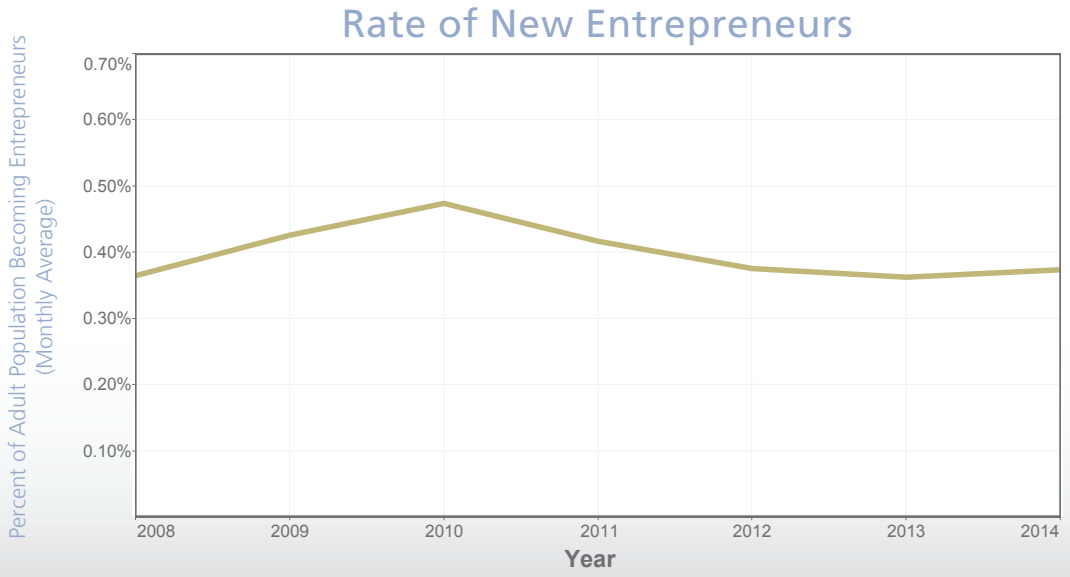
Metro: Denver-Aurora-Broomfield | State: Colorado

Rate of New Entrepreneurs

2015 Component	2014 Component
0.37%	0.36%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

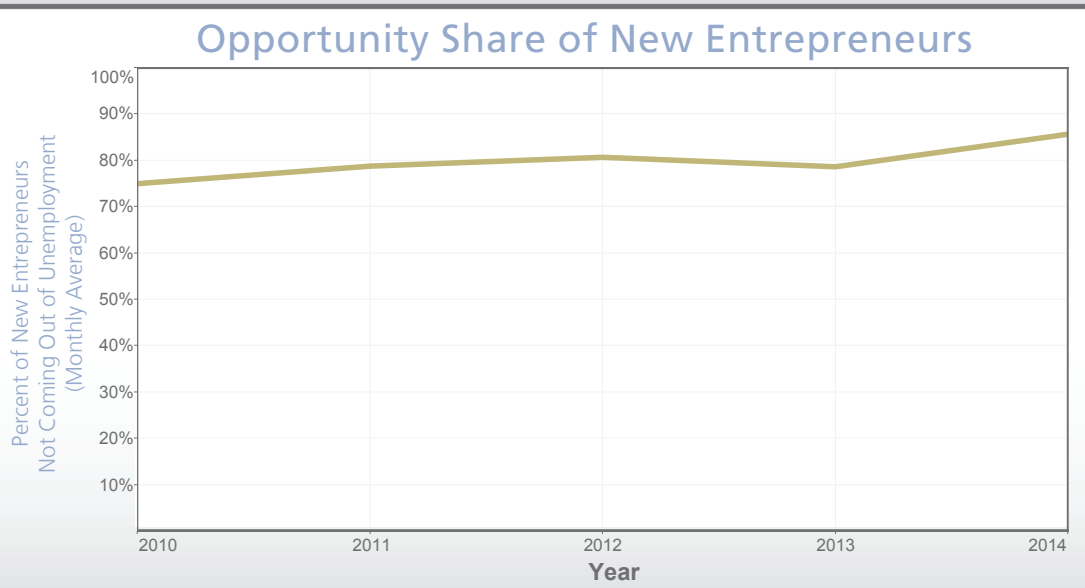


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
85.7%	78.6%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

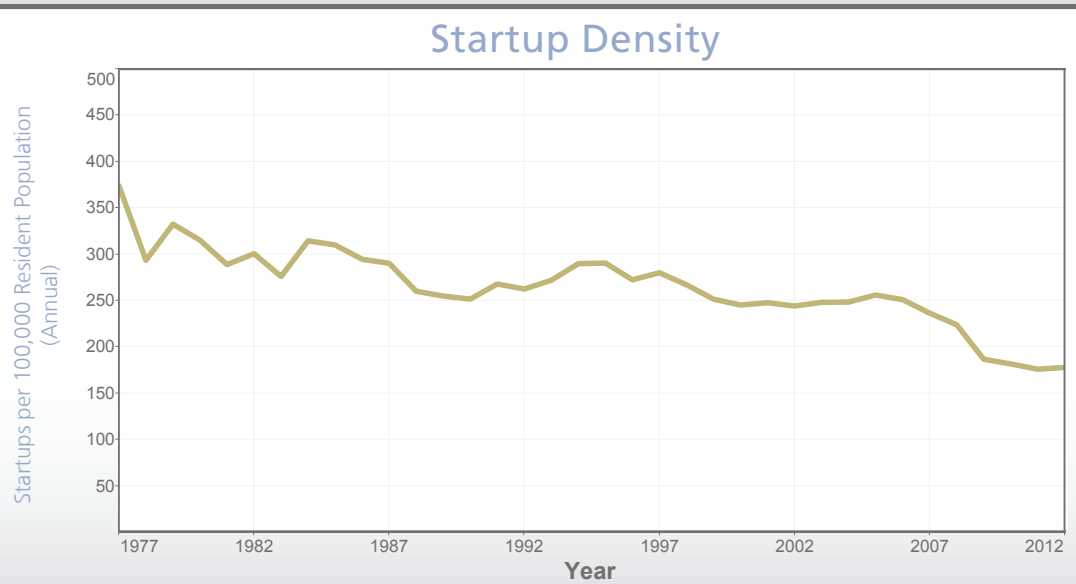


Startup Density

2015 Component	2014 Component
177.8	176.0

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
6	5

METRO PROFILE

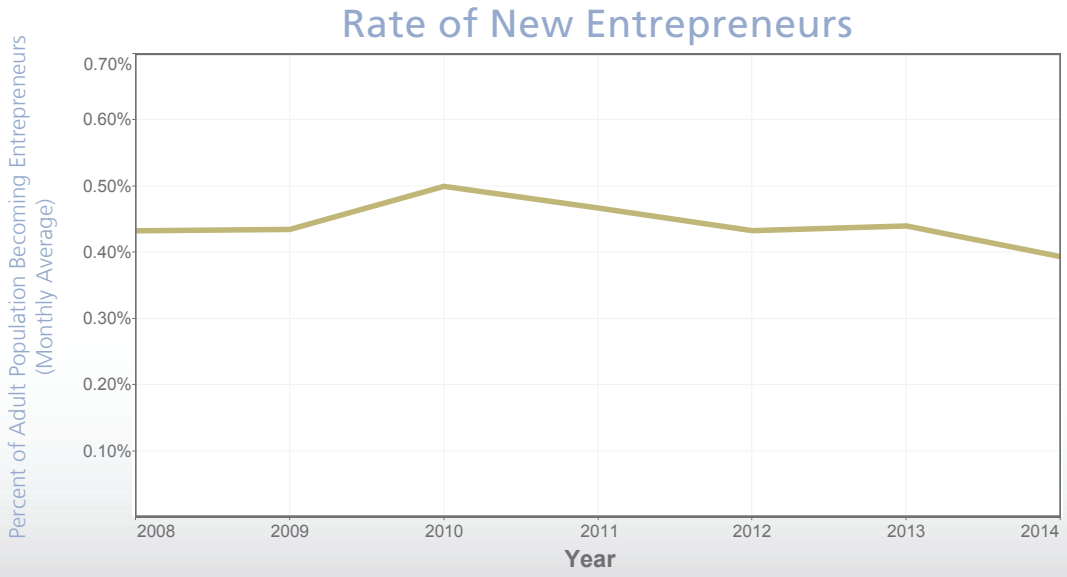
Metro: San Francisco-Oakland-Fremont | State: California

Rate of New Entrepreneurs

2015 Component	2014 Component
0.39%	0.44%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

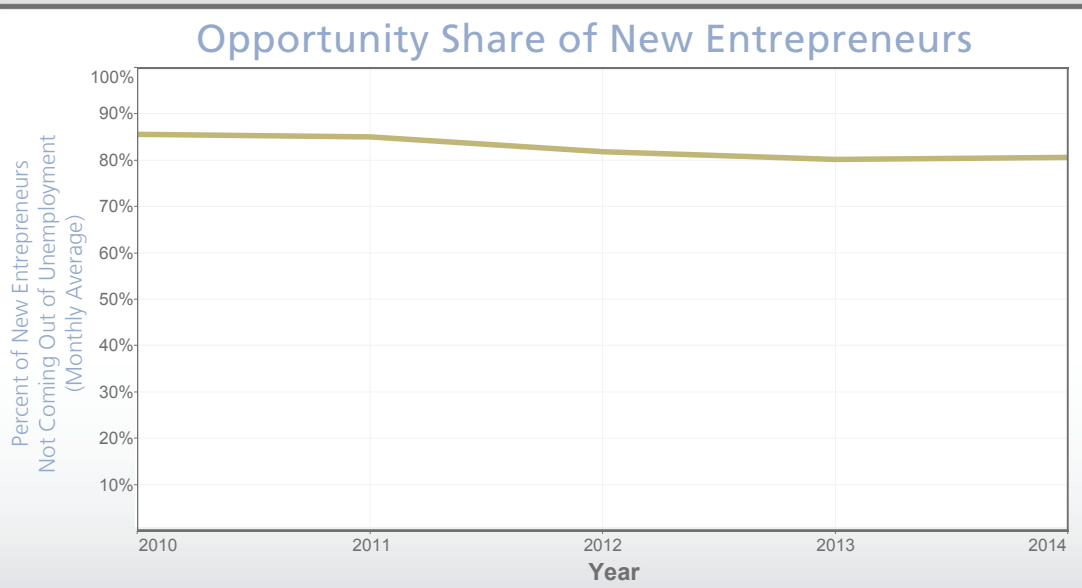


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
80.7%	80.2%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

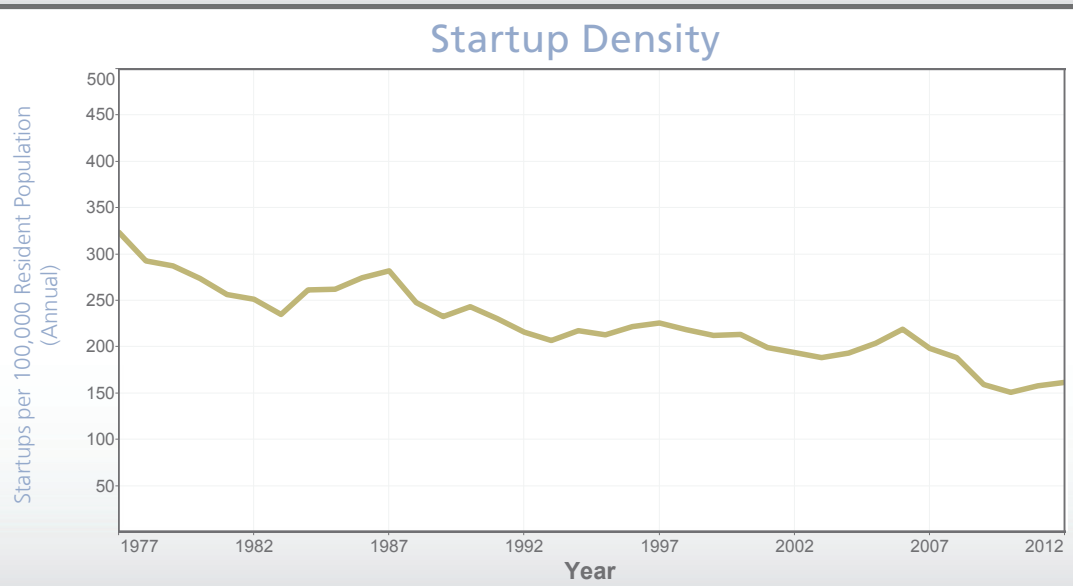


Startup Density

2015 Component	2014 Component
161.8	158.0

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



METRO PROFILE

Metro: New York-Northern New Jersey-Long Island | State: New York-New Jersey-Pennsylvania

Startup Activity Rank

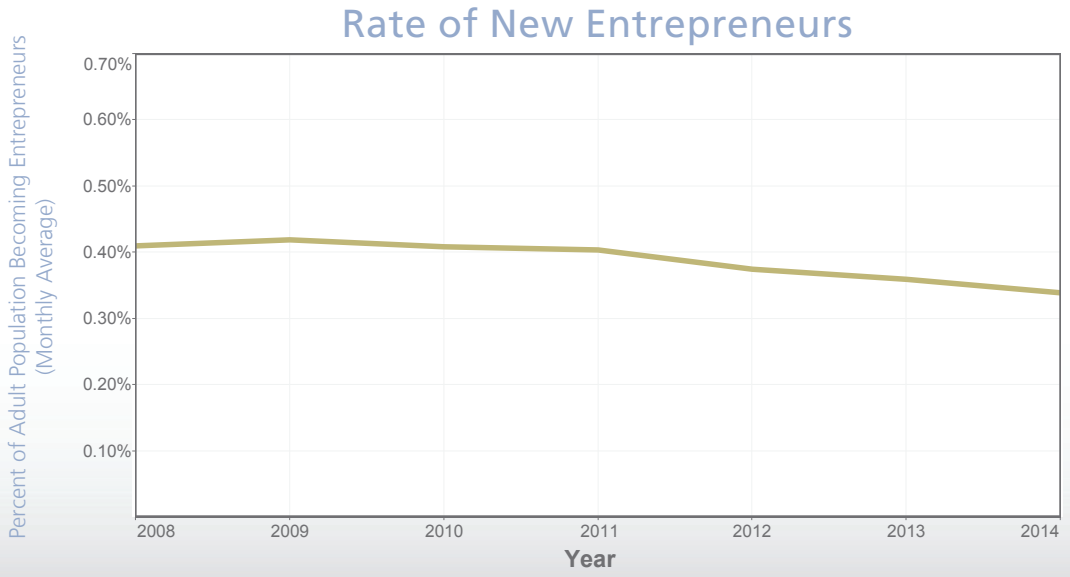
2015	2014
7	6

Rate of New Entrepreneurs

2015 Component	2014 Component
0.34%	0.36%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

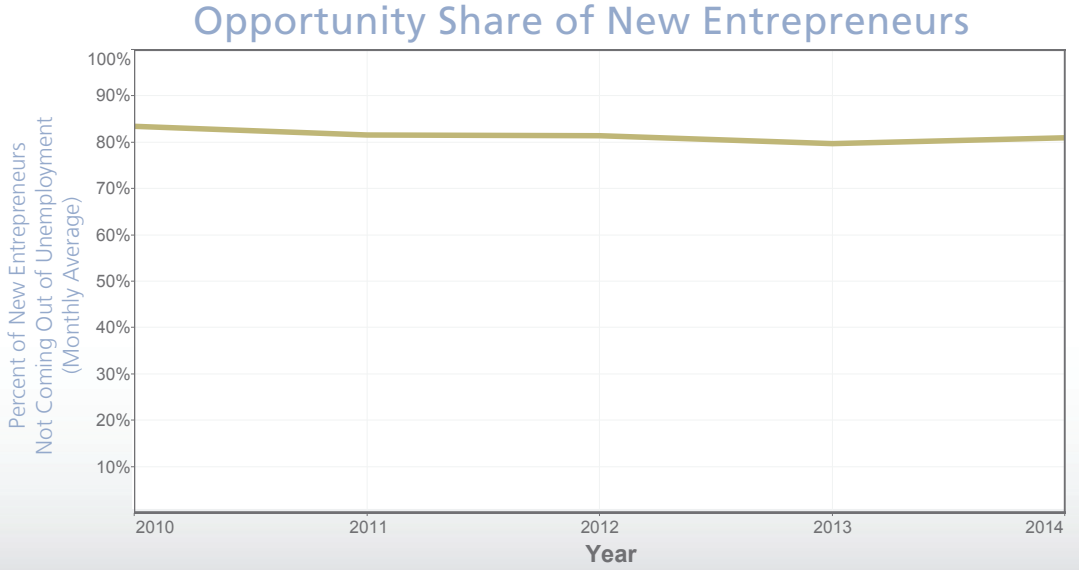


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
81.0%	79.8%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

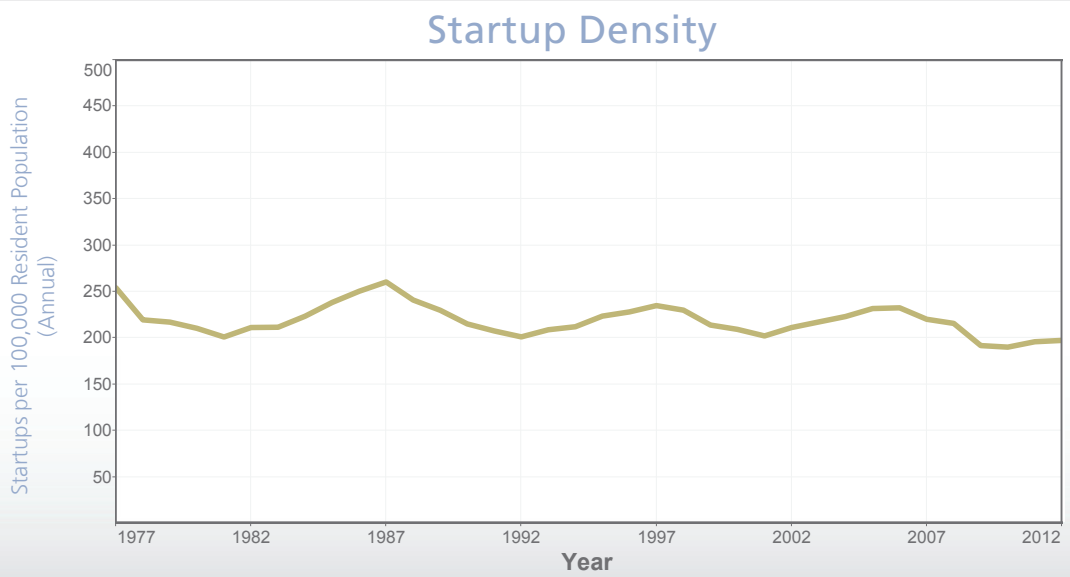


Startup Density

2015 Component	2014 Component
197.3	195.9

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
8	9

METRO PROFILE

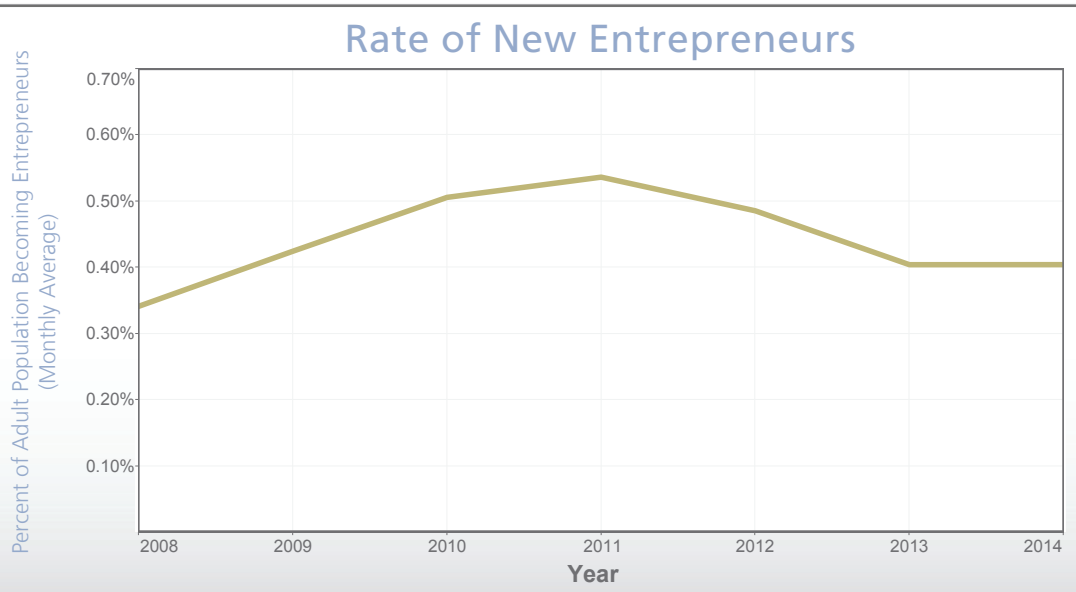
Metro: Houston-Sugar Land-Baytown | State: Texas

Rate of New Entrepreneurs

2015 Component	2014 Component
0.40%	0.40%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

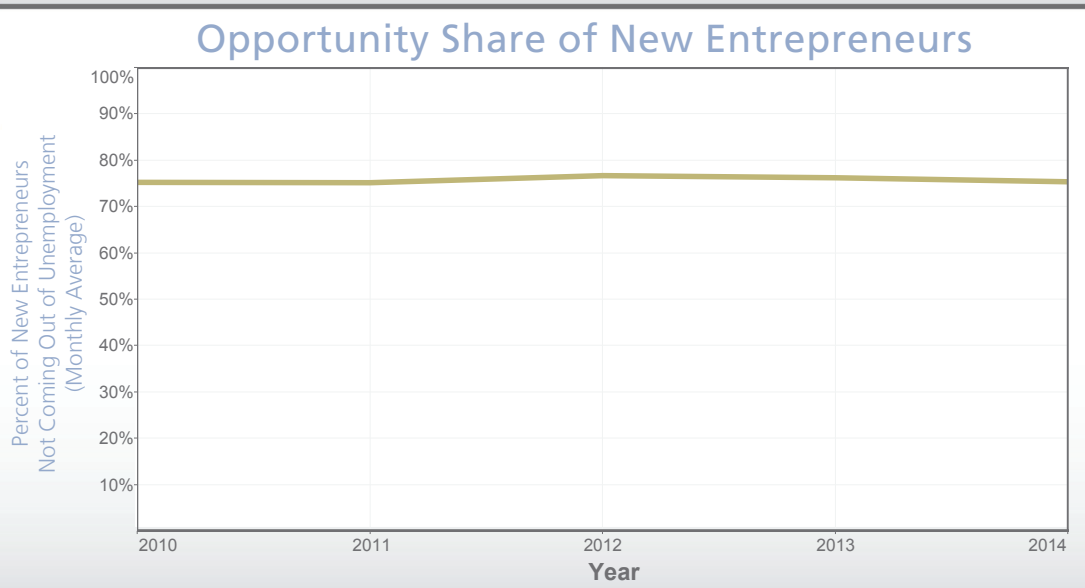


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
75.4%	76.3%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

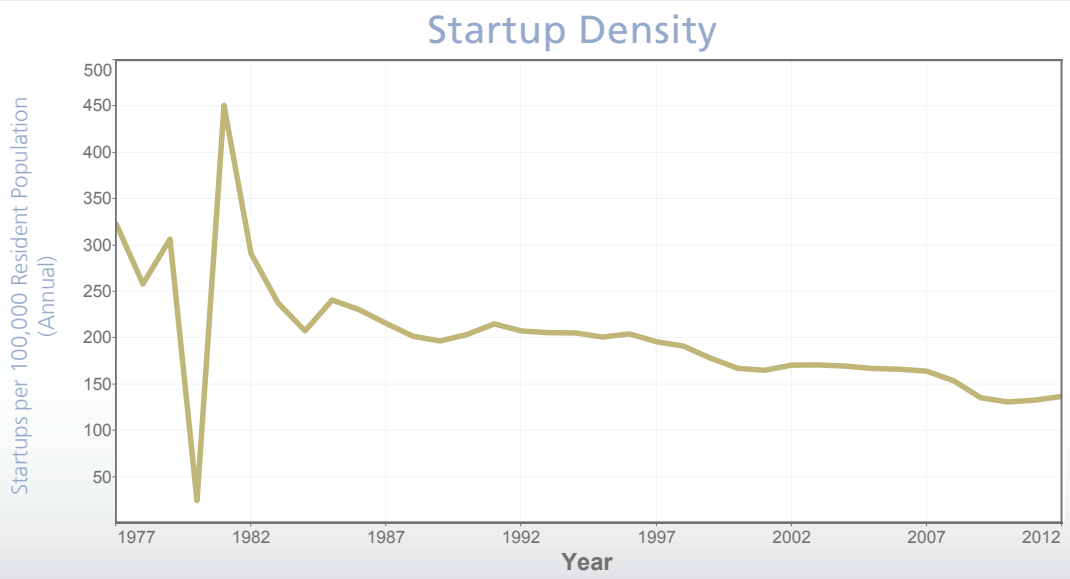


Startup Density

2015 Component	2014 Component
136.9	132.9

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
9	10

METRO PROFILE

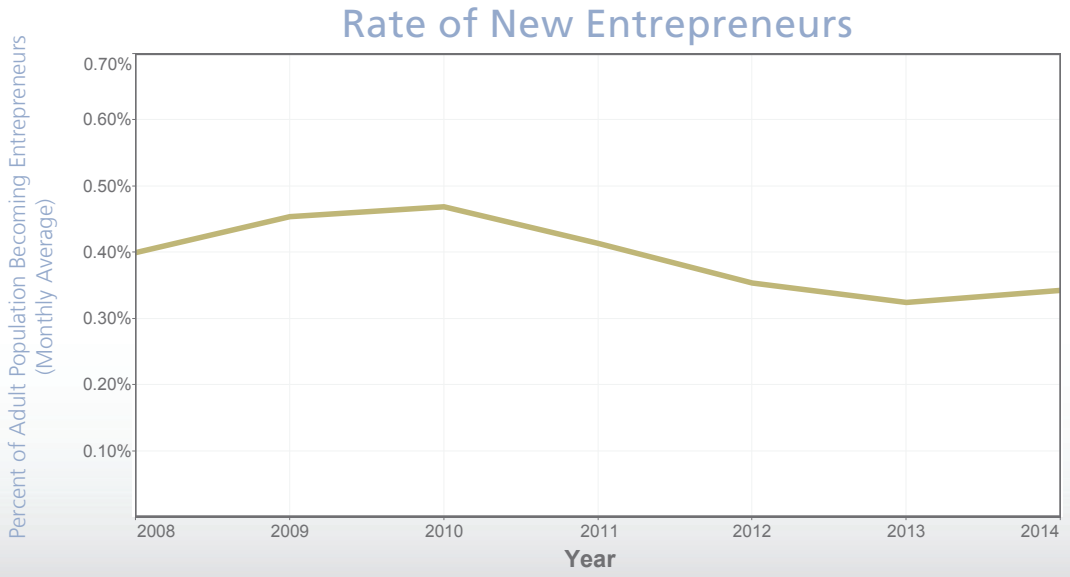
Metro: San Diego-Carlsbad-San Marcos | State: California

Rate of New Entrepreneurs

2015 Component	2014 Component
0.34%	0.32%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

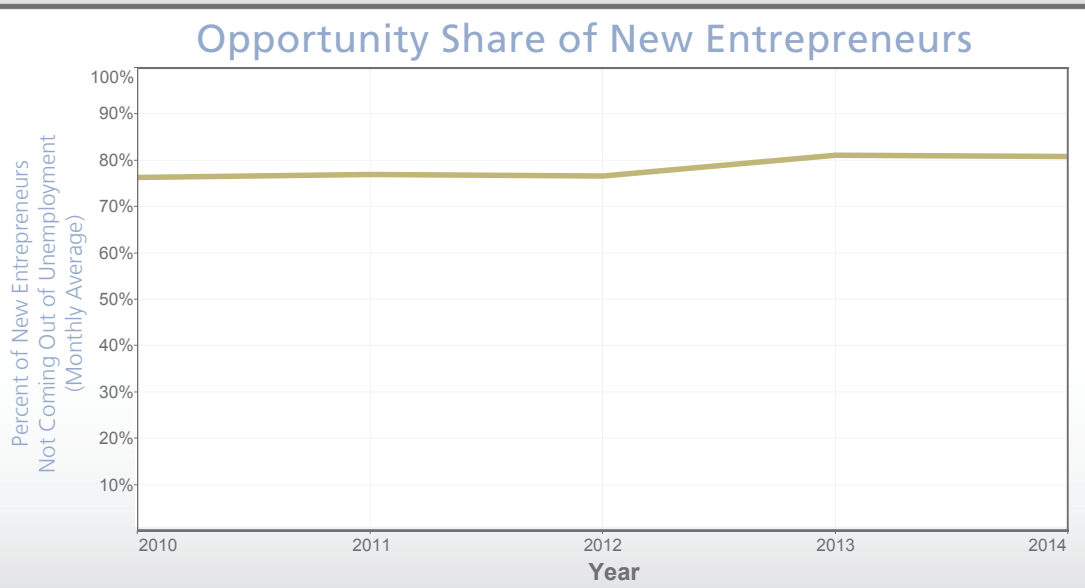


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
80.9%	81.1%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

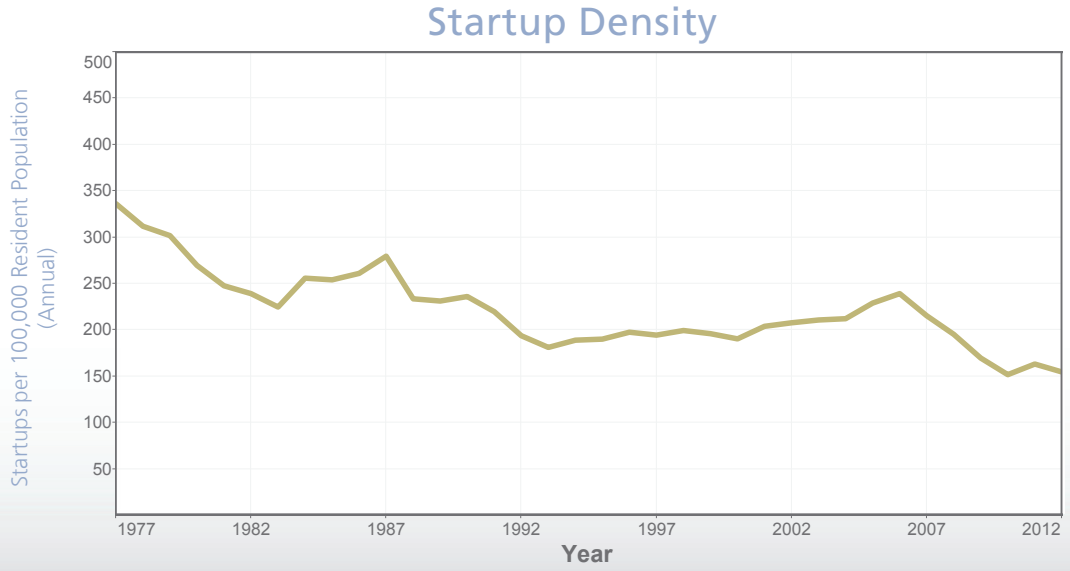


Startup Density

2015 Component	2014 Component
154.7	163.2

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
10	7

METRO PROFILE

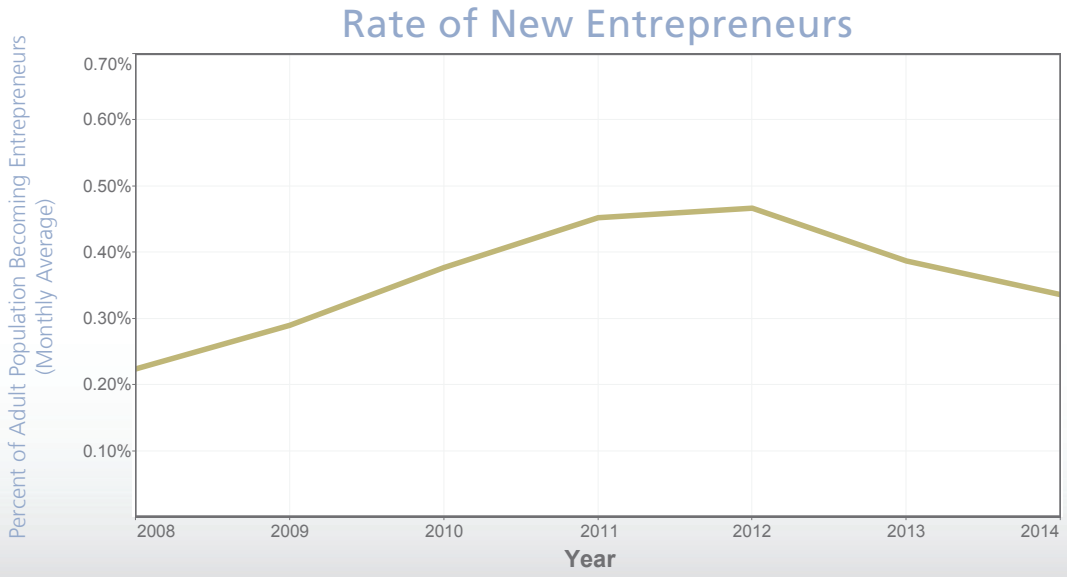
Metro: San Antonio-New Braunfels | State: Texas

Rate of New Entrepreneurs

2015 Component	2014 Component
0.34%	0.39%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

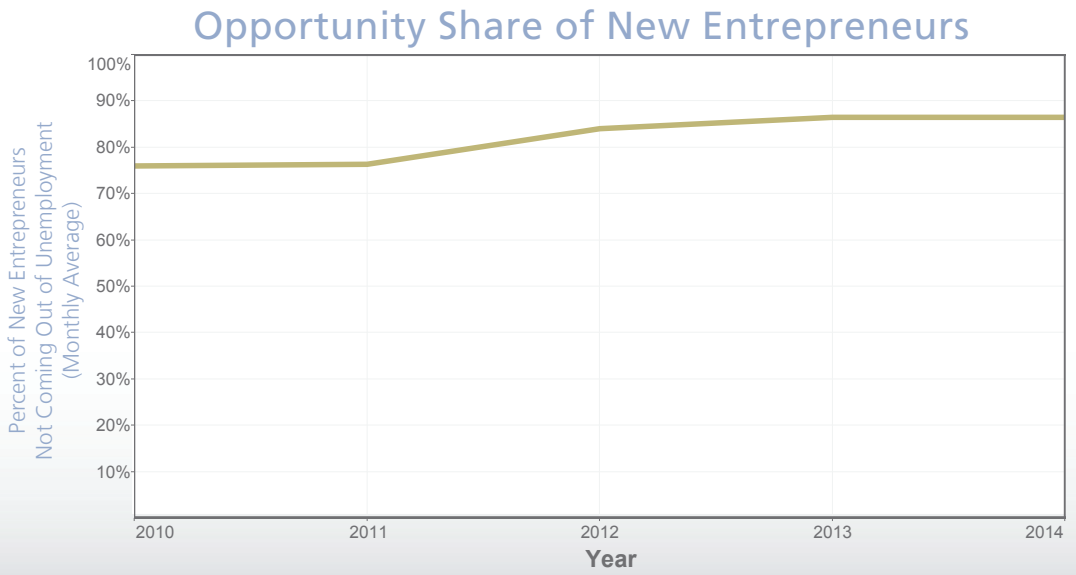


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
86.5%	86.5%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

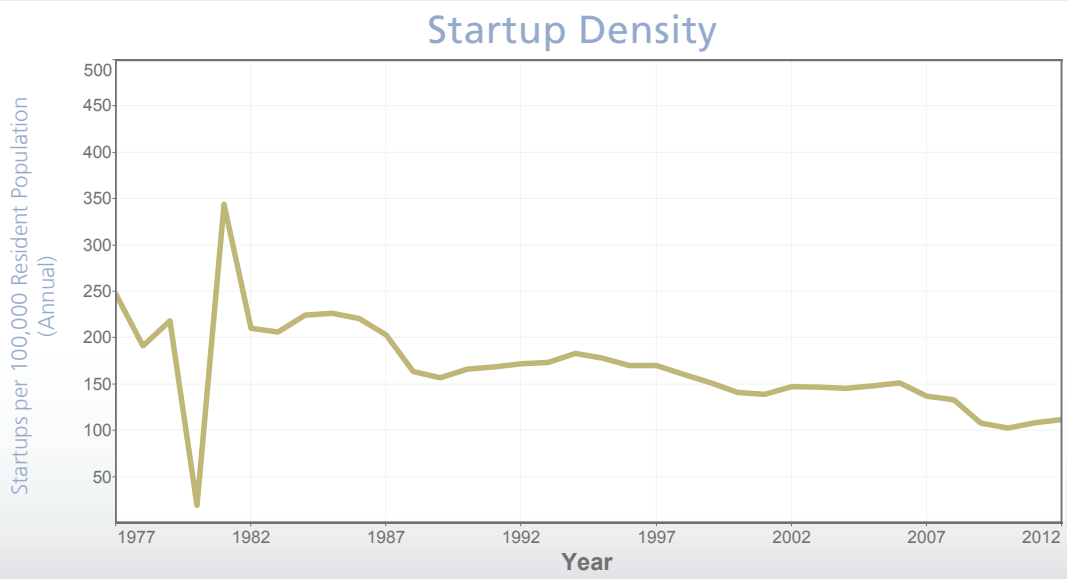


Startup Density

2015 Component	2014 Component
111.9	108.5

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
11	14

METRO PROFILE

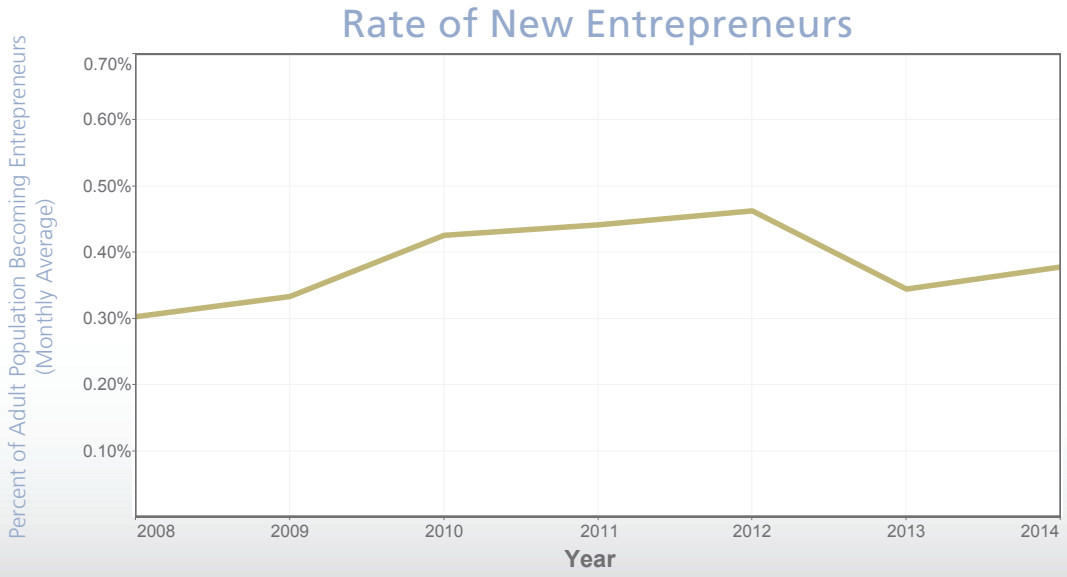
Metro: Las Vegas-Paradise | State: Nevada

Rate of New Entrepreneurs

2015 Component	2014 Component
0.38%	0.34%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

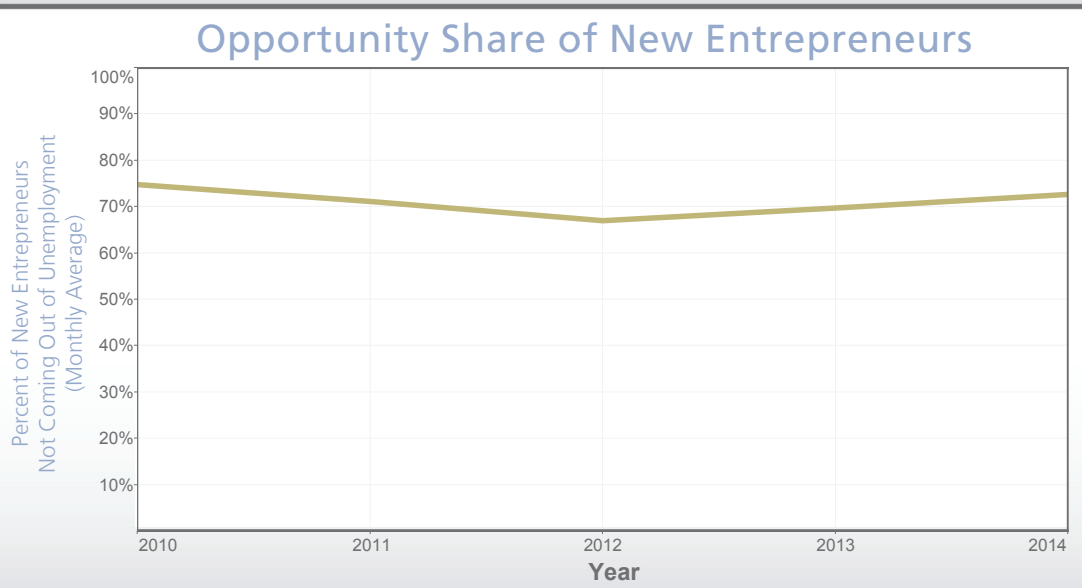


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
72.7%	69.7%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

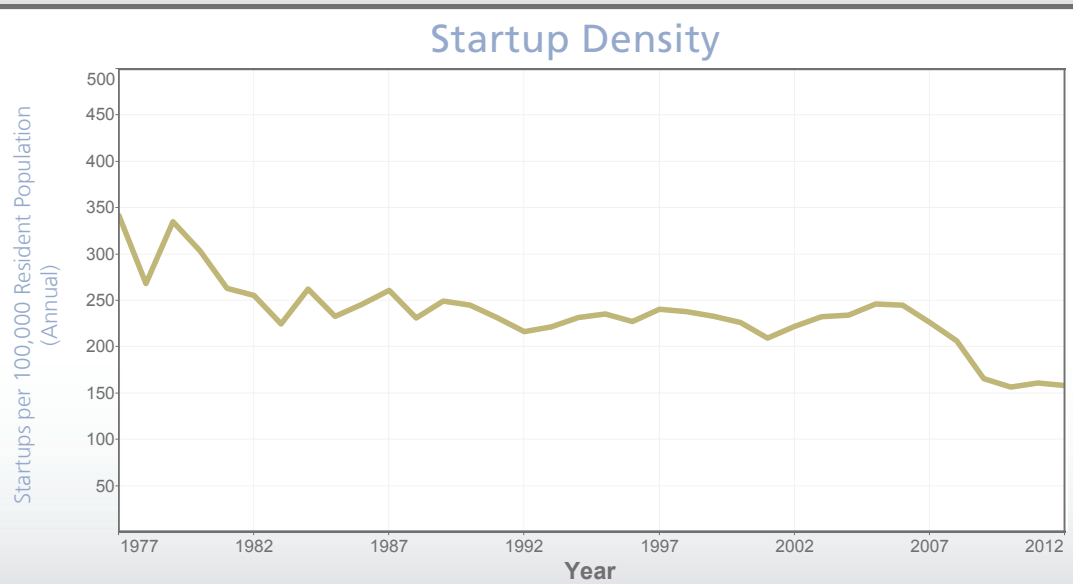


Startup Density

2015 Component	2014 Component
158.3	161.1

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank	
2015	2014
12	22

METRO PROFILE

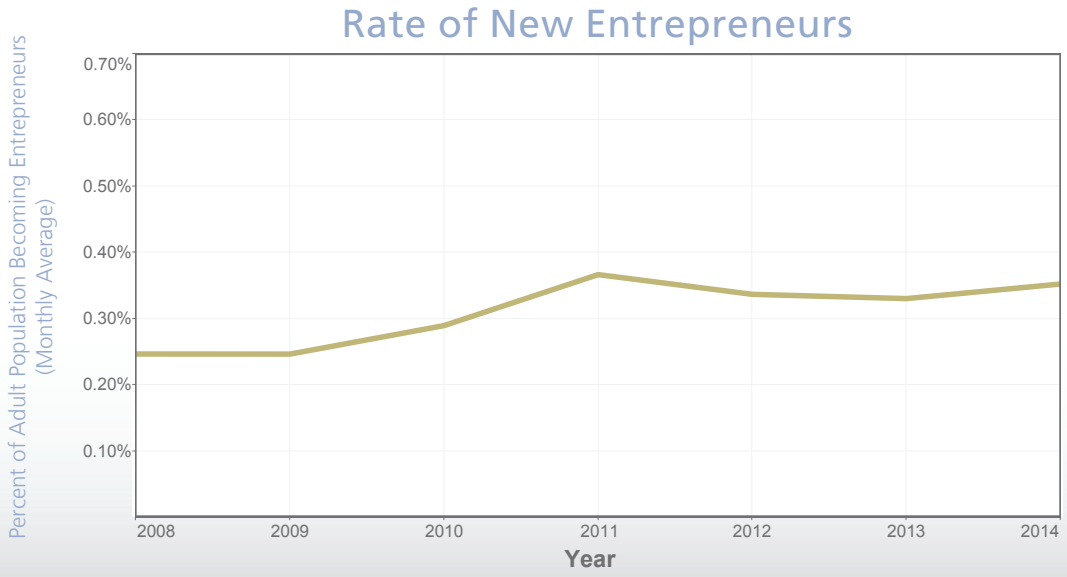
Metro: Columbus | State: Ohio

Rate of New Entrepreneurs

2015 Component	2014 Component
0.35%	0.33%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

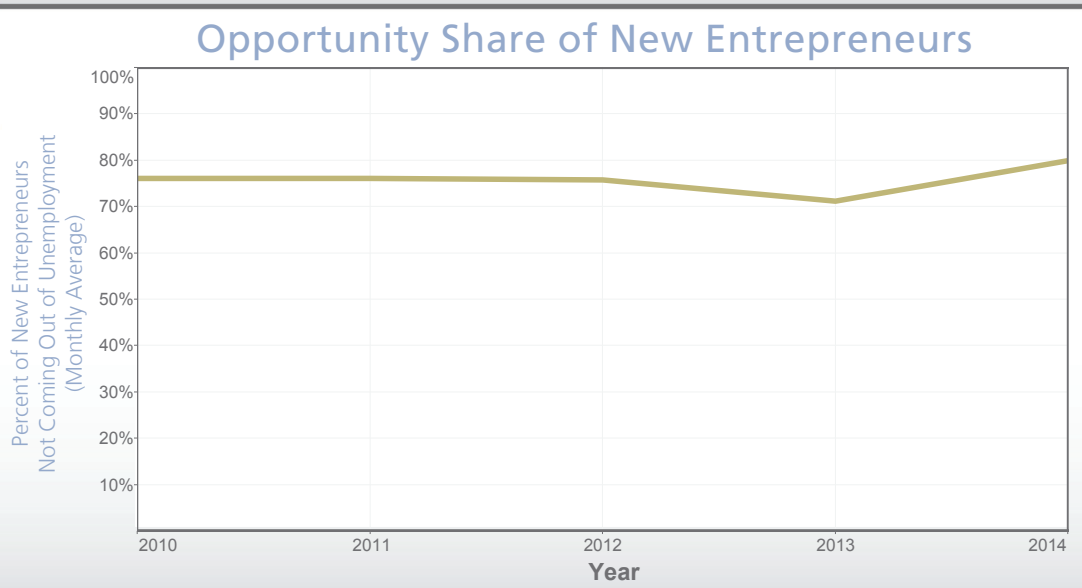


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
80.0%	71.2%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

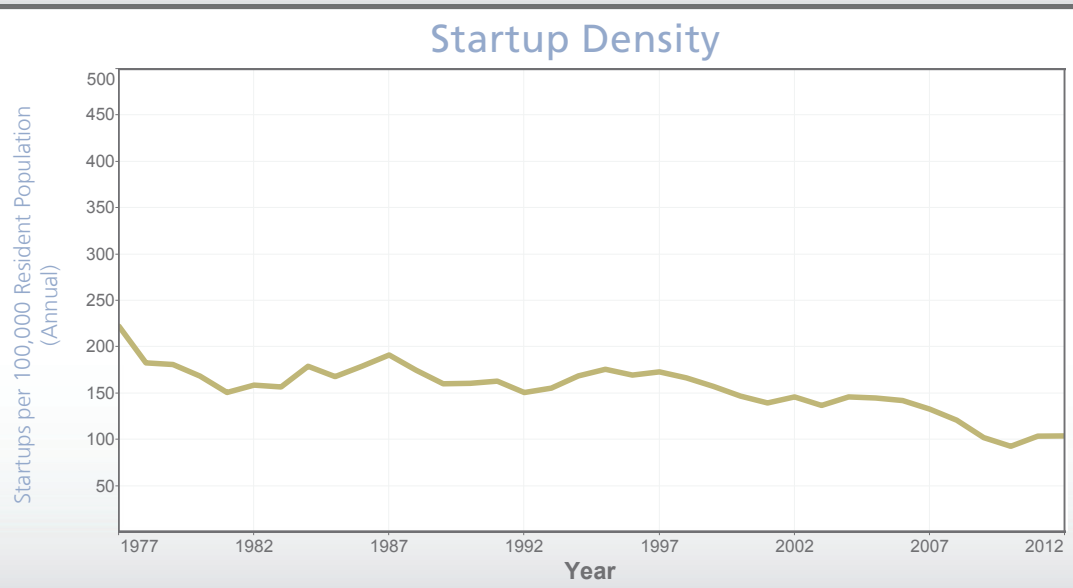


Startup Density

2015 Component	2014 Component
104.0	103.7

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
13	18

METRO PROFILE

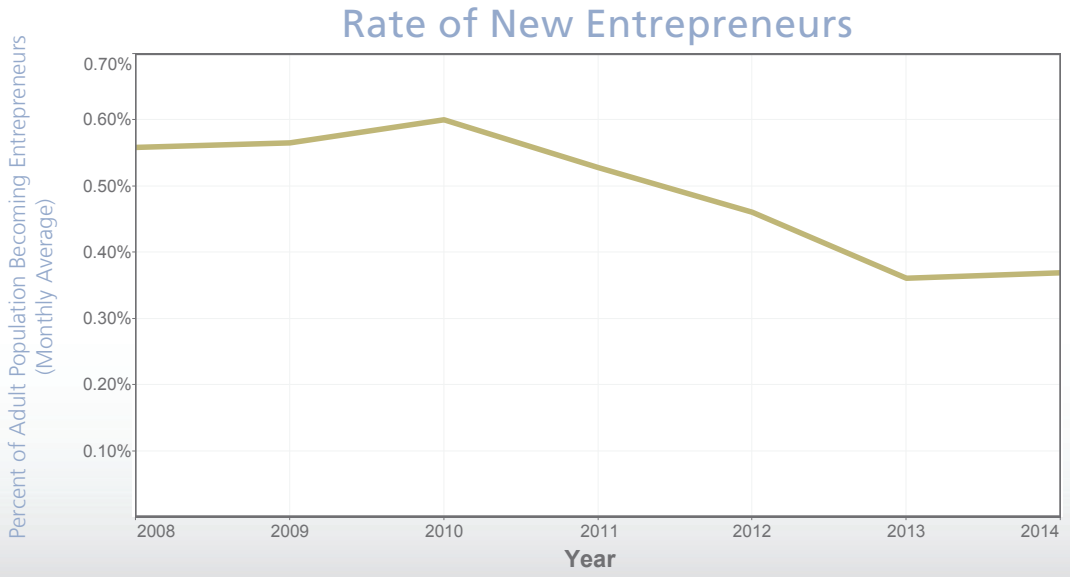
Metro: Atlanta-Sandy Springs-Marietta | State: Georgia

Rate of New Entrepreneurs

2015 Component	2014 Component
0.37%	0.36%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

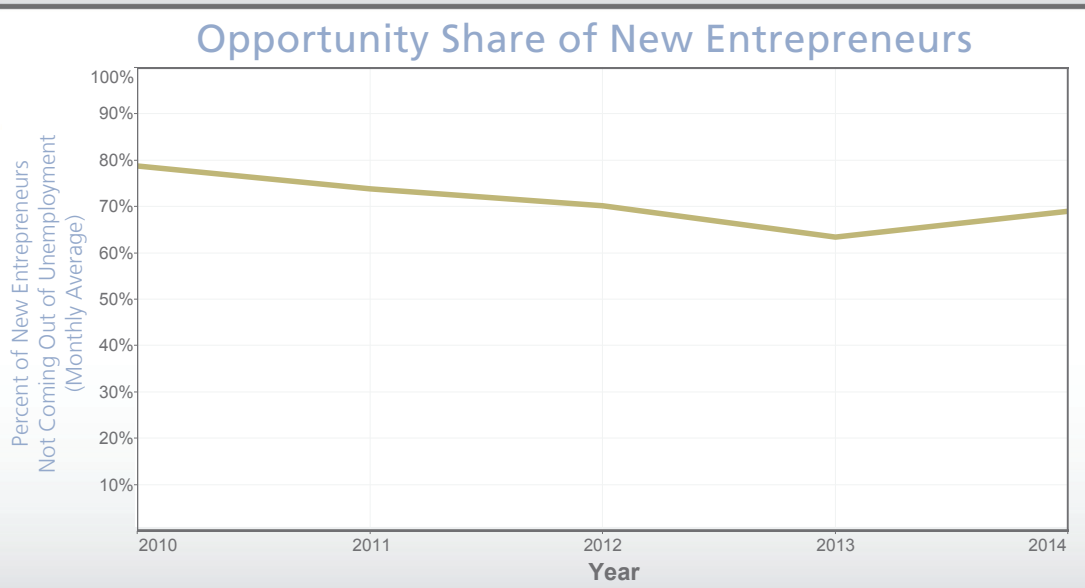


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
69.0%	63.5%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

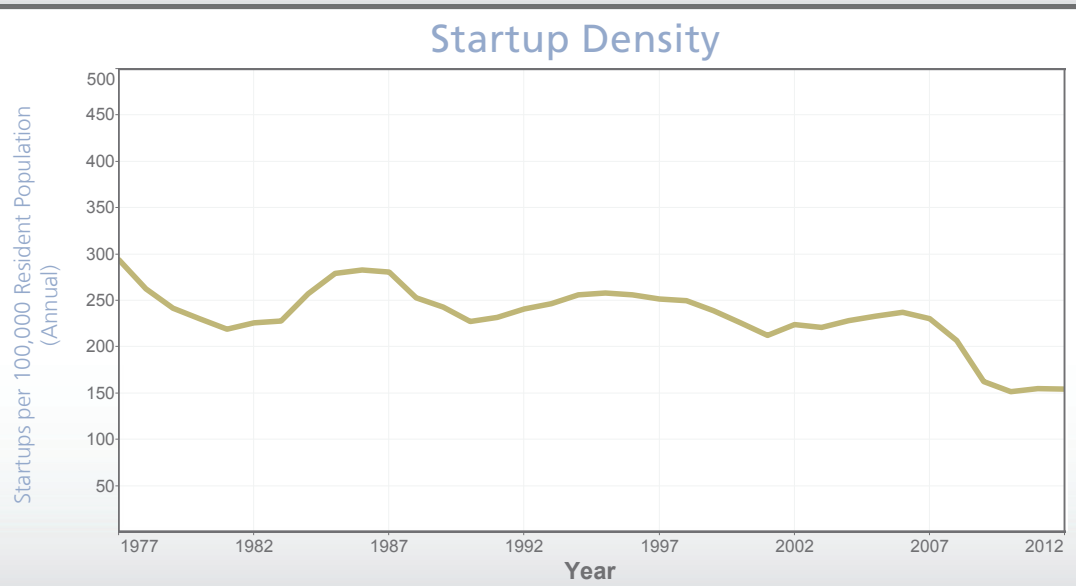


Startup Density

2015 Component	2014 Component
154.5	155.0

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
14	12

METRO PROFILE

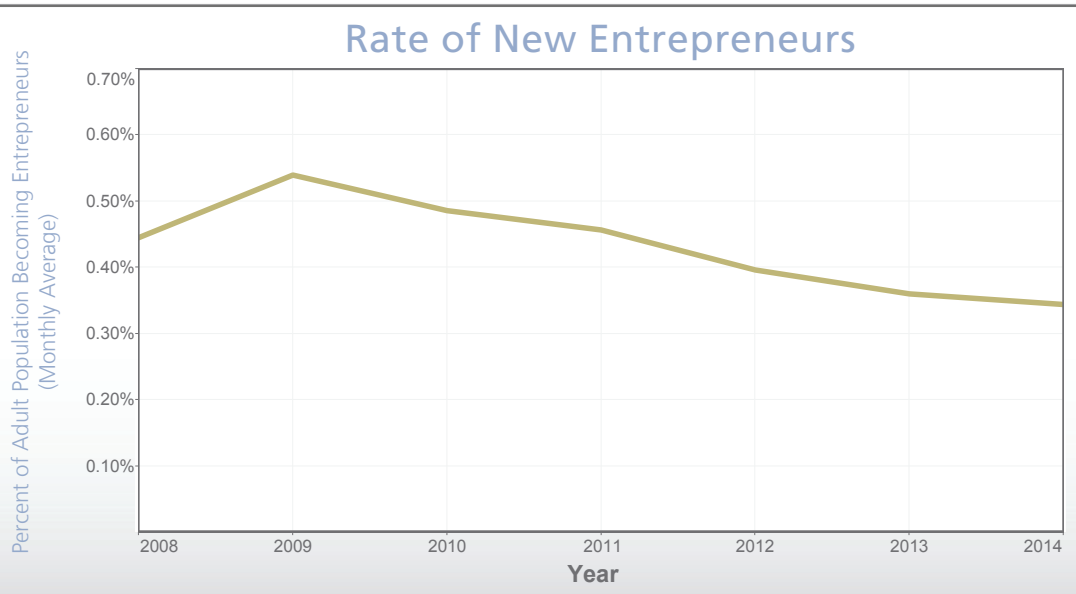
Metro: Phoenix-Mesa-Glendale | State: Arizona

Rate of New Entrepreneurs

2015 Component	2014 Component
0.34%	0.36%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

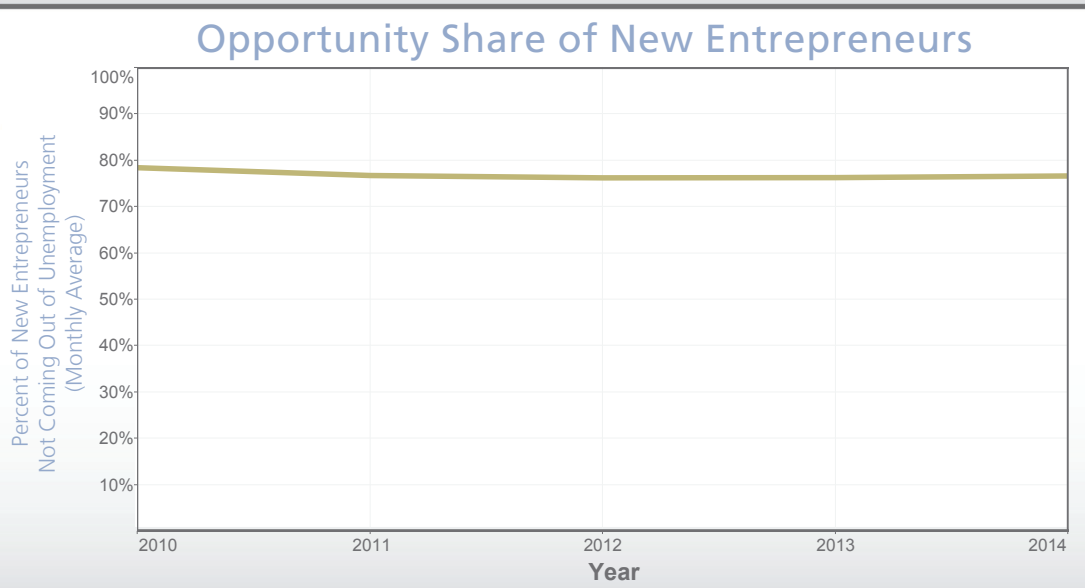


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
76.7%	76.3%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

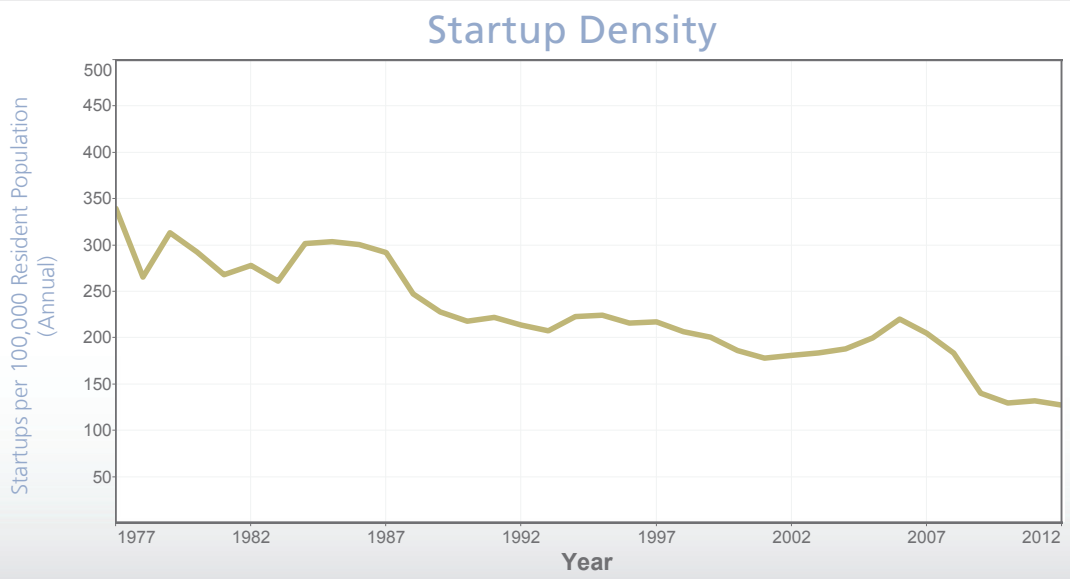


Startup Density

2015 Component	2014 Component
127.5	132.1

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
15	13

METRO PROFILE

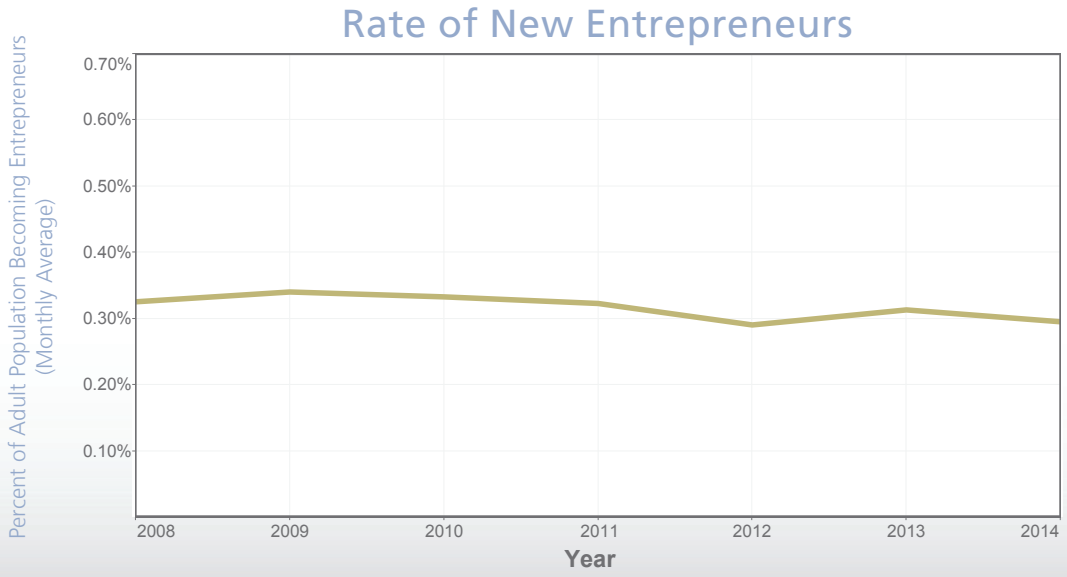
Metro: Dallas-Fort Worth-Arlington | State: Texas

Rate of New Entrepreneurs

2015 Component	2014 Component
0.30%	0.31%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

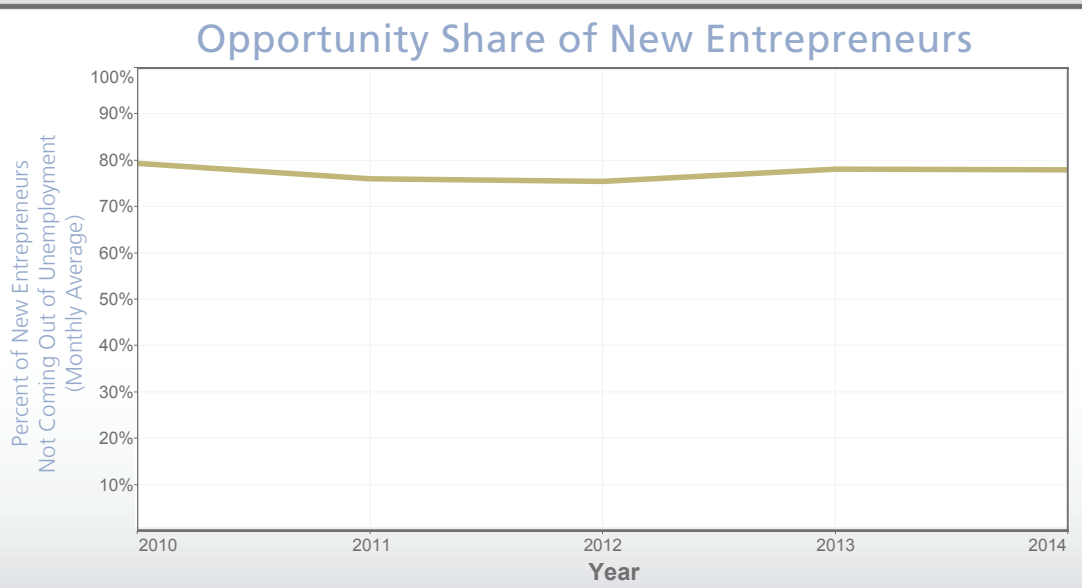


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
78.0%	78.1%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

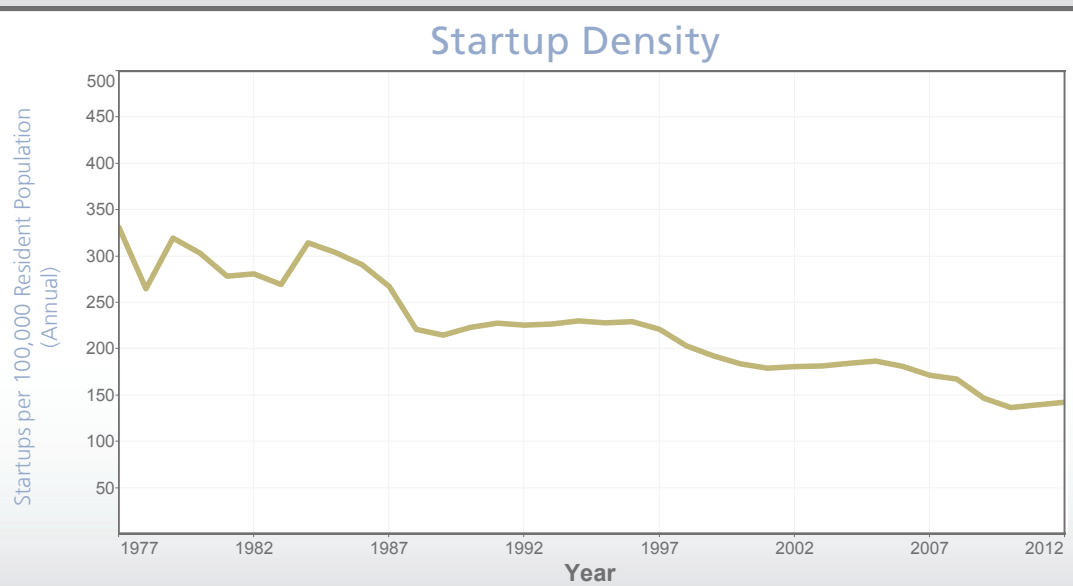


Startup Density

2015 Component	2014 Component
142.5	139.7

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
16	17

METRO PROFILE

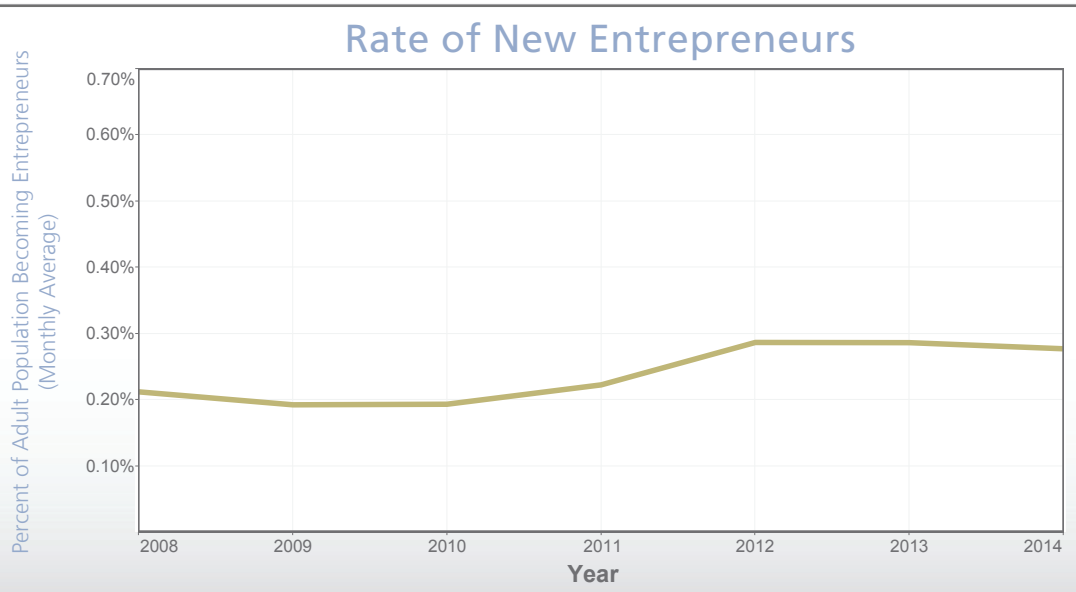
Metro: Seattle-Tacoma-Bellevue | State: Washington

Rate of New Entrepreneurs

2015 Component	2014 Component
0.28%	0.29%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

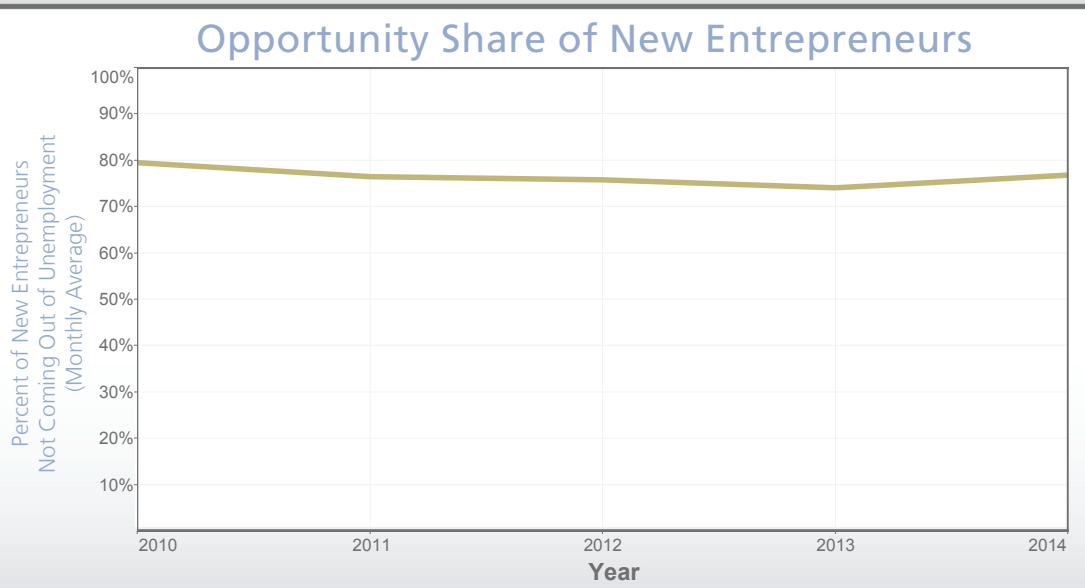


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
76.8%	74.1%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

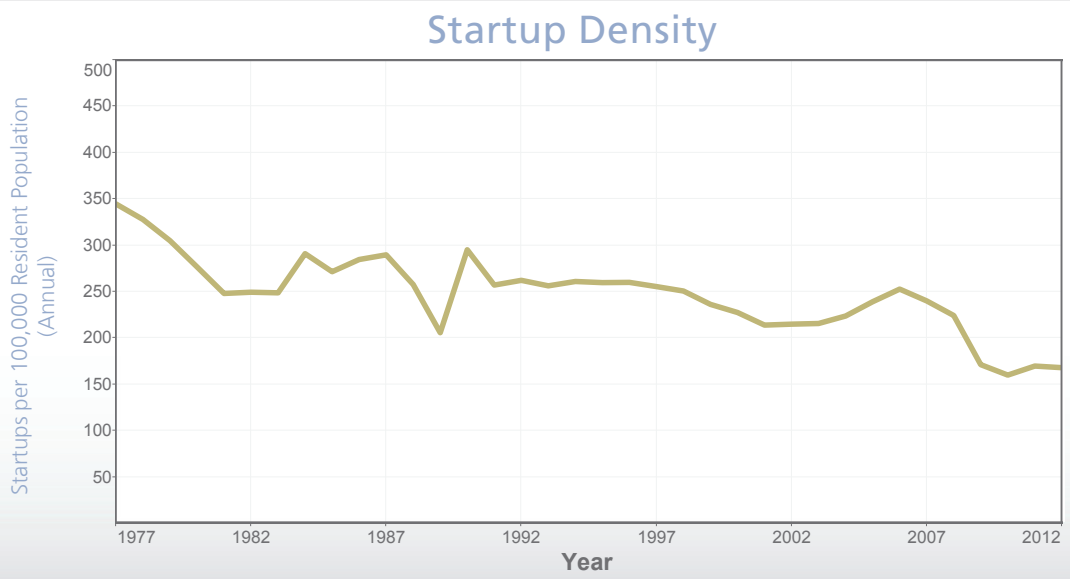


Startup Density

2015 Component	2014 Component
167.9	169.6

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



METRO PROFILE

Metro: Baltimore-Towson | State: Maryland

Startup Activity Rank

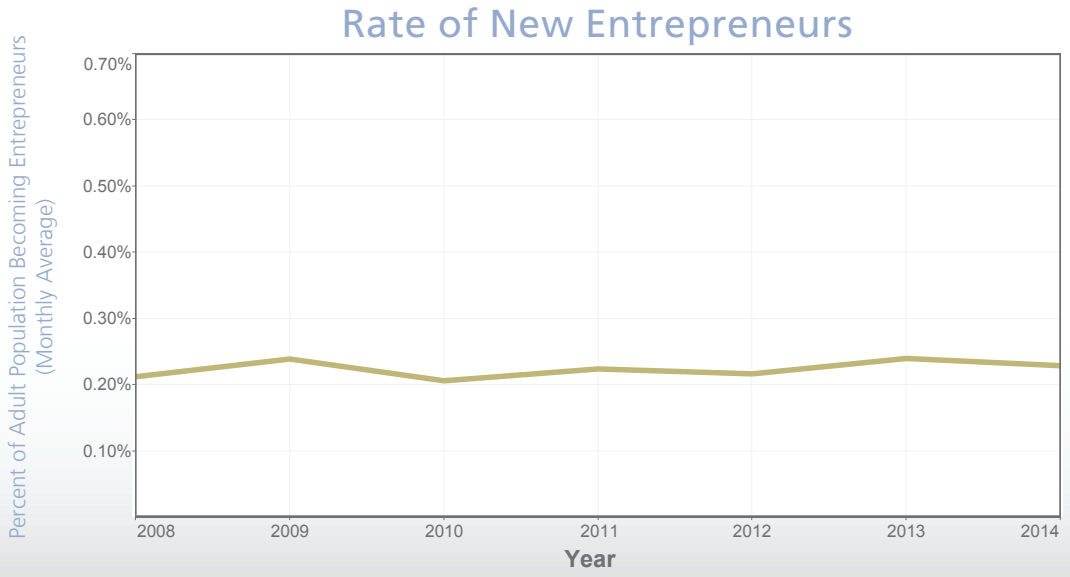
2015	2014
17	19

Rate of New Entrepreneurs

2015 Component	2014 Component
0.23%	0.24%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

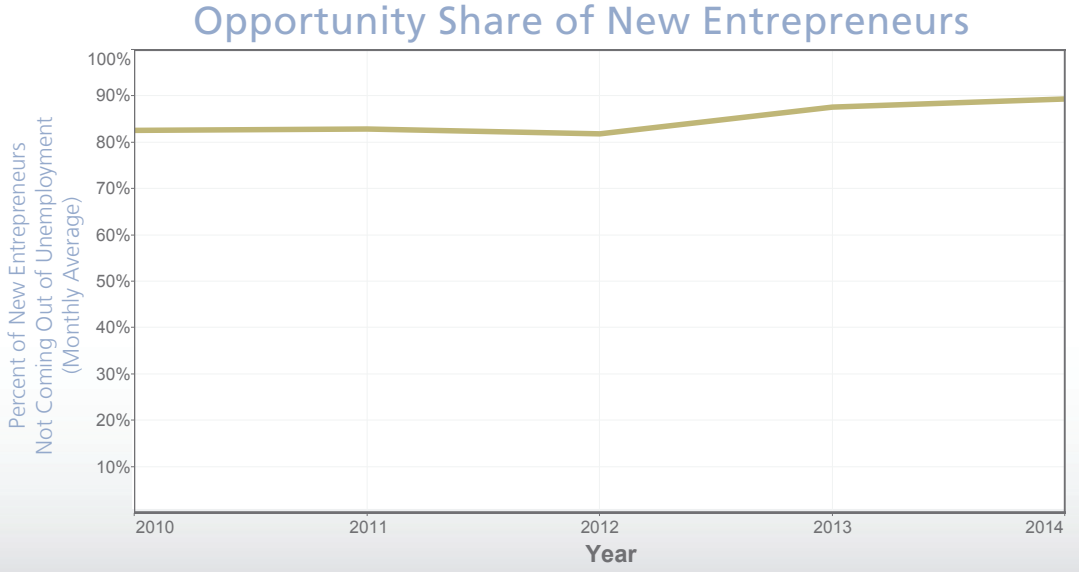


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
89.4%	87.6%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

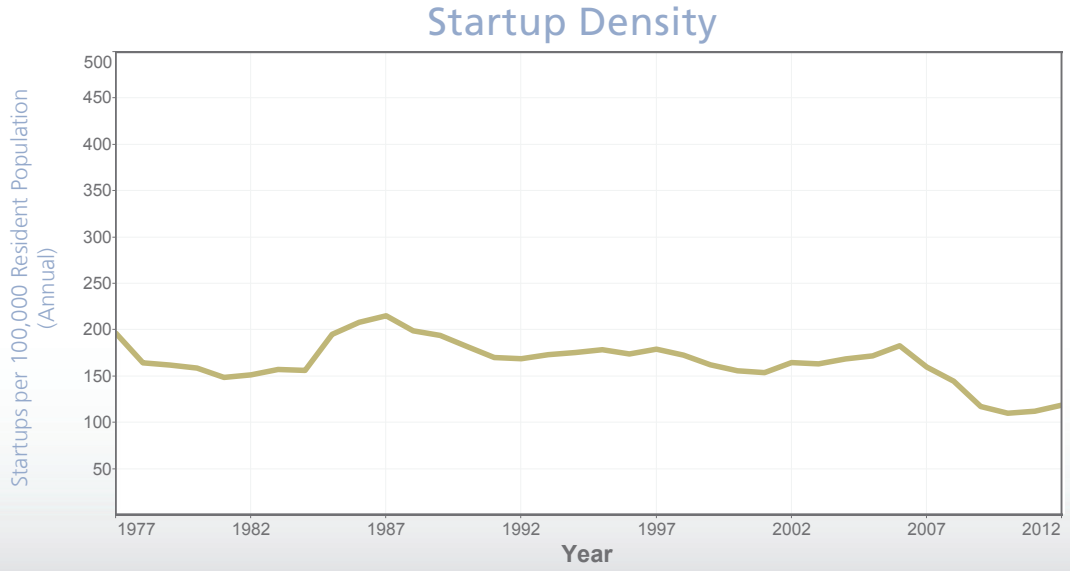


Startup Density

2015 Component	2014 Component
118.8	112.3

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
18	11

METRO PROFILE

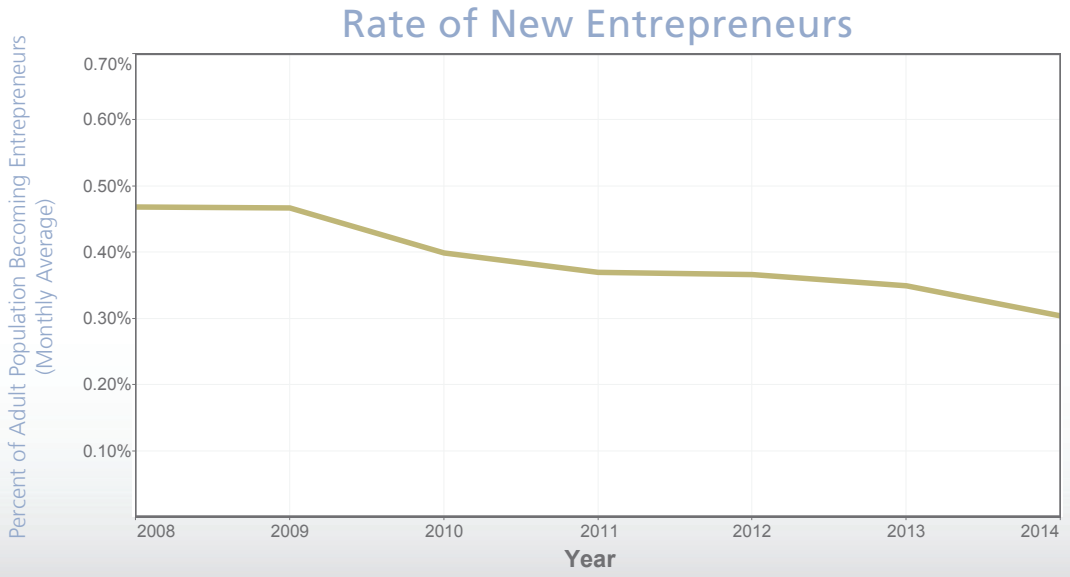
Metro: Riverside-San Bernardino-Ontario | State: California

Rate of New Entrepreneurs

2015 Component	2014 Component
0.30%	0.35%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

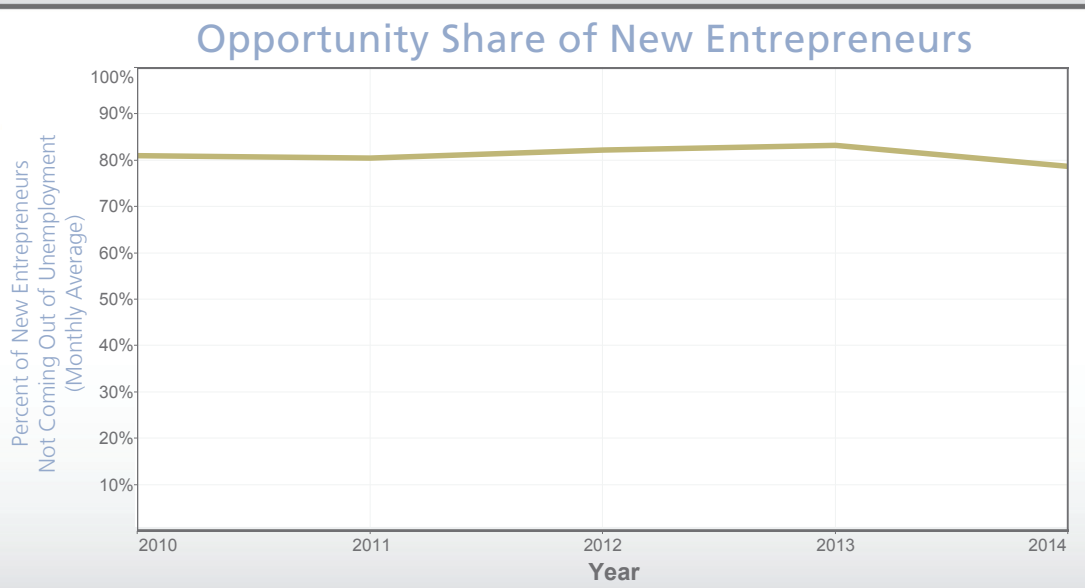


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
78.7%	83.3%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

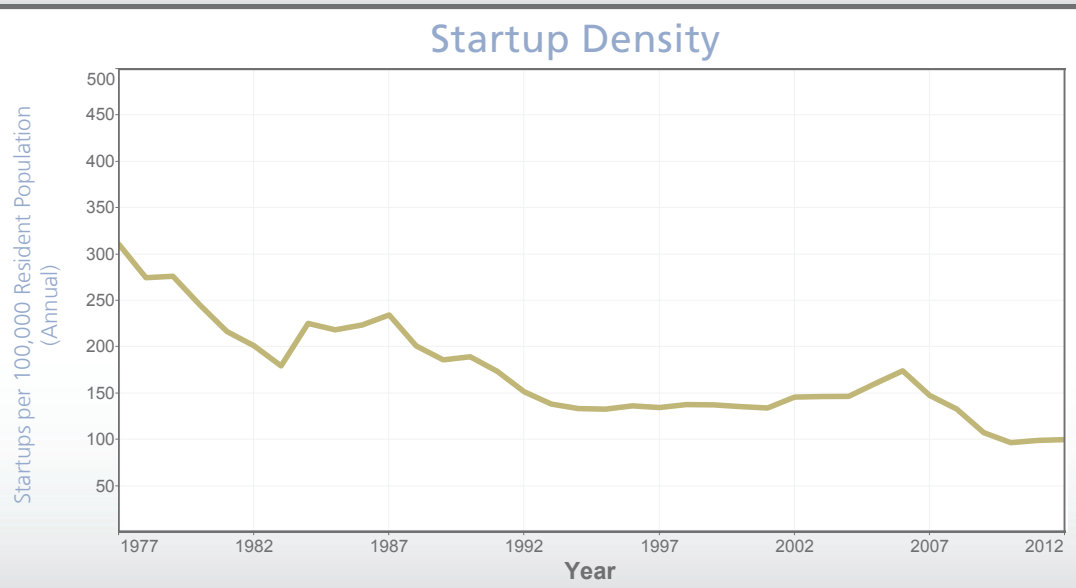


Startup Density

2015 Component	2014 Component
99.99	99.11

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank	
2015	2014
19	23

METRO PROFILE

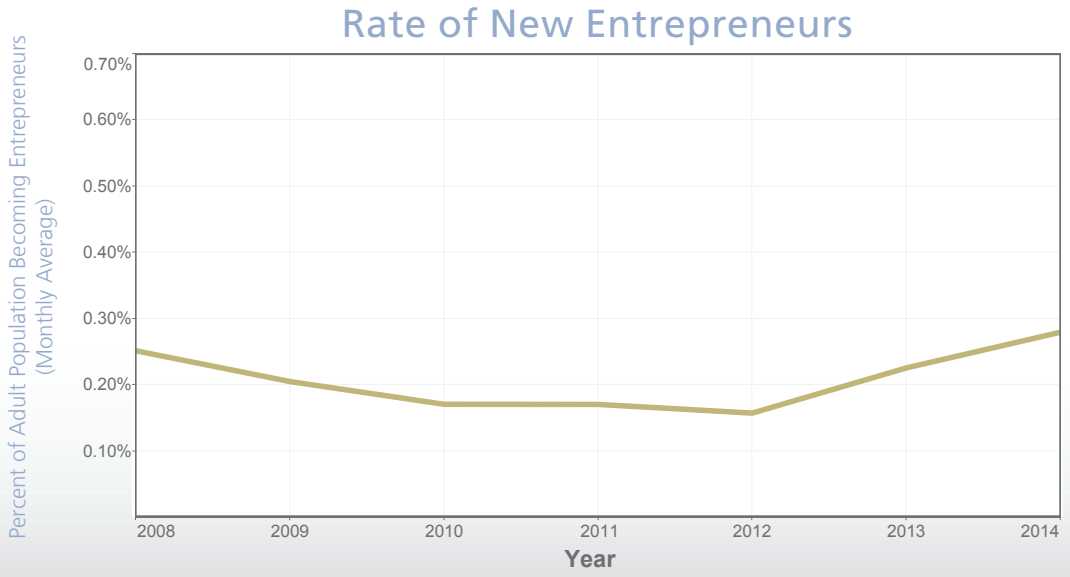
Metro: Virginia Beach-Norfolk-Newport News | State: Virginia-North Carolina

Rate of New Entrepreneurs

2015 Component	2014 Component
0.28%	0.23%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

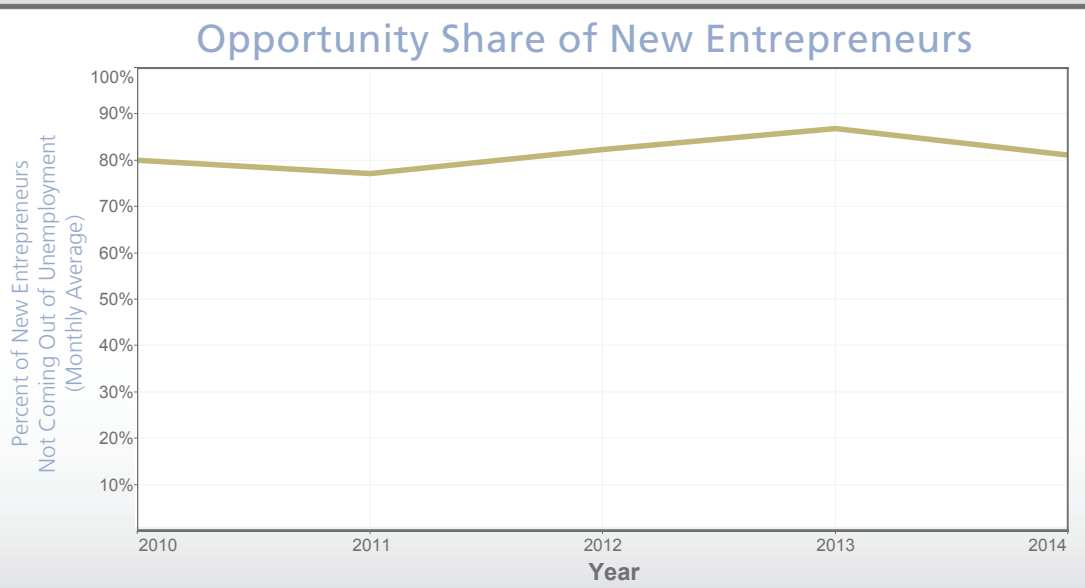


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
81.2%	86.9%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

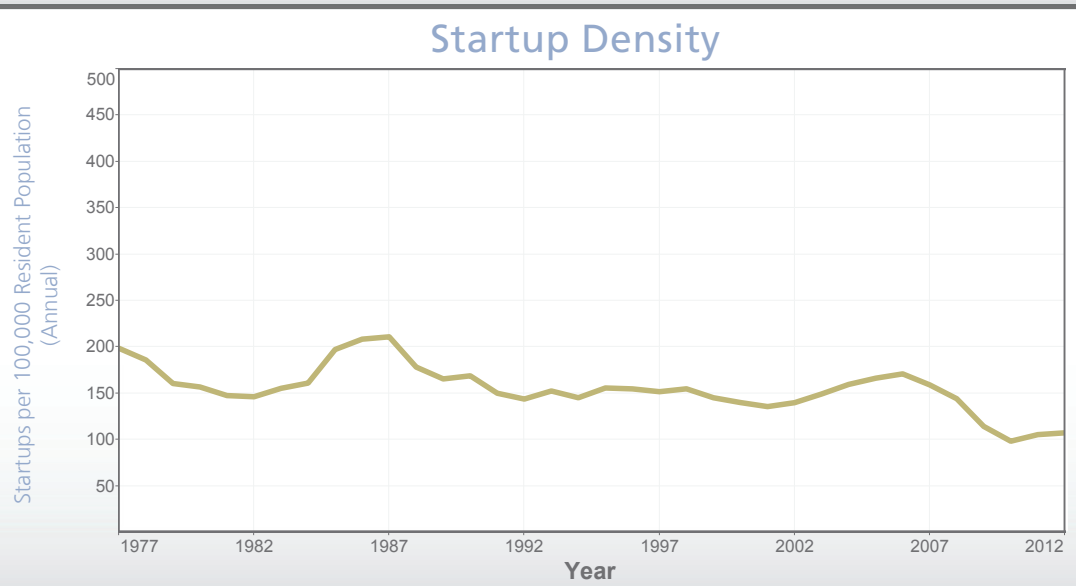


Startup Density

2015 Component	2014 Component
107.3	105.4

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
20	15

METRO PROFILE

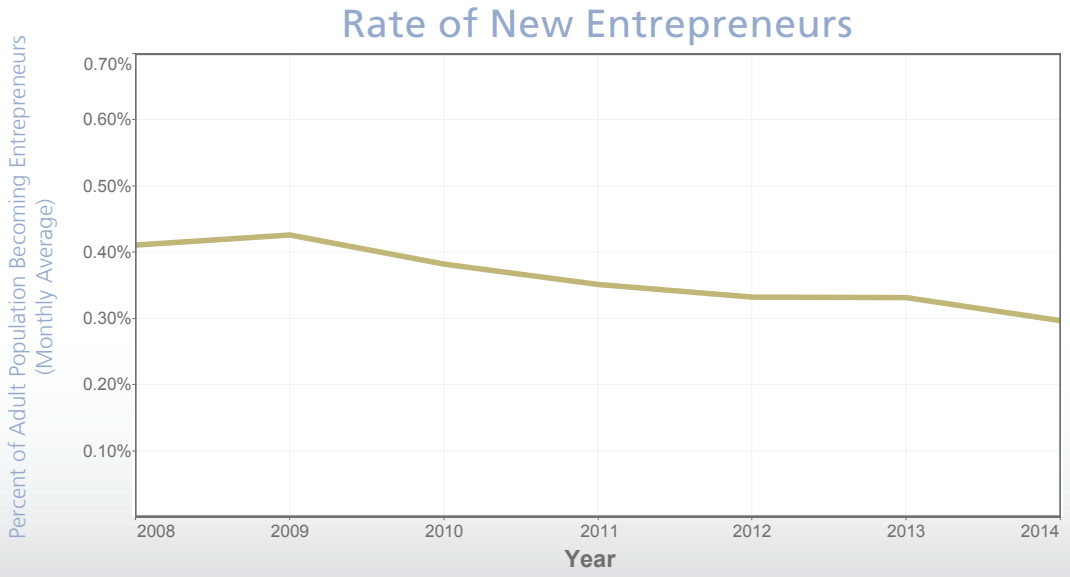
Metro: Tampa-St. Petersburg-Clearwater | State: Florida

Rate of New Entrepreneurs

2015 Component	2014 Component
0.30%	0.33%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

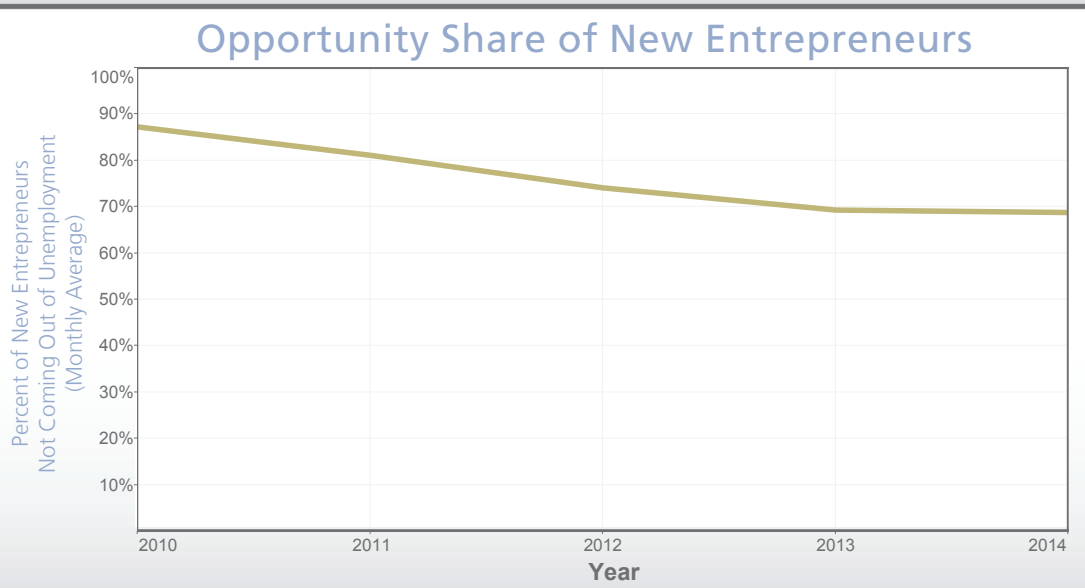


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
68.8%	69.3%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

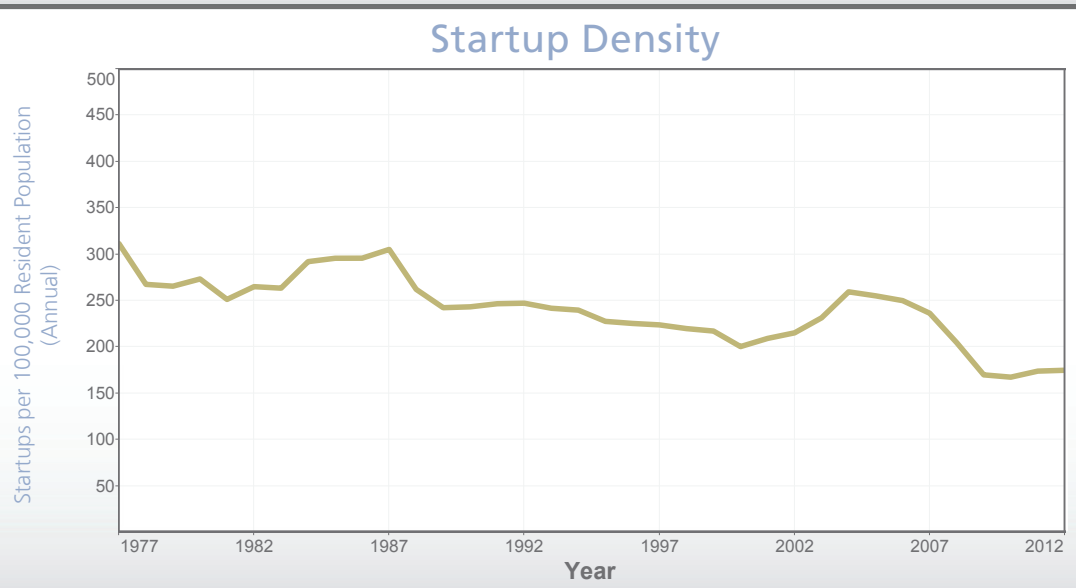


Startup Density

2015 Component	2014 Component
174.8	173.9

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
21	29

METRO PROFILE

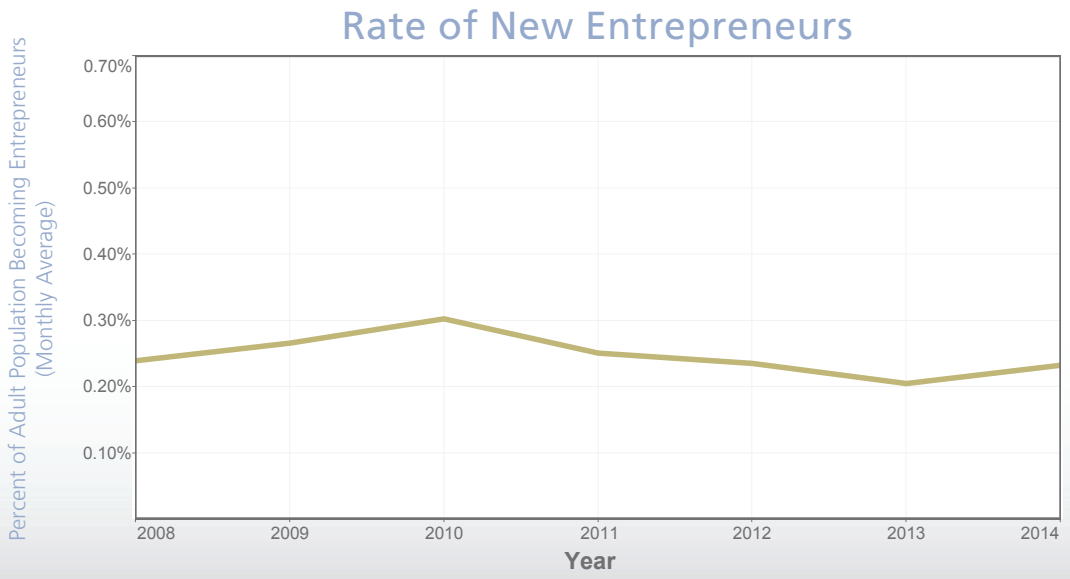
Metro: Chicago-Joliet-Naperville | State: Illinois-Indiana-Wisconsin

Rate of New Entrepreneurs

2015 Component	2014 Component
0.23%	0.21%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

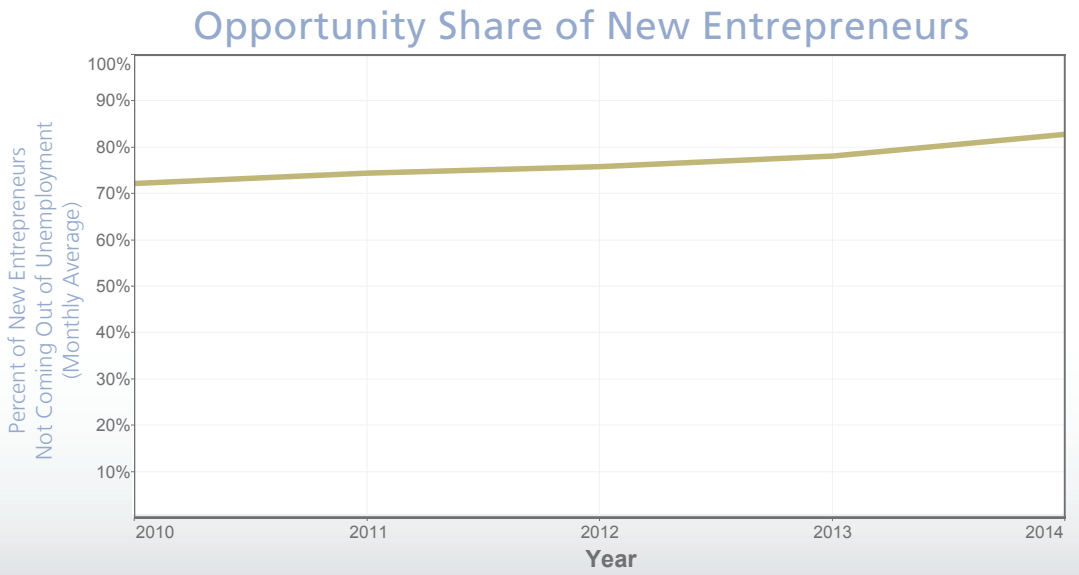


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
82.8%	78.1%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

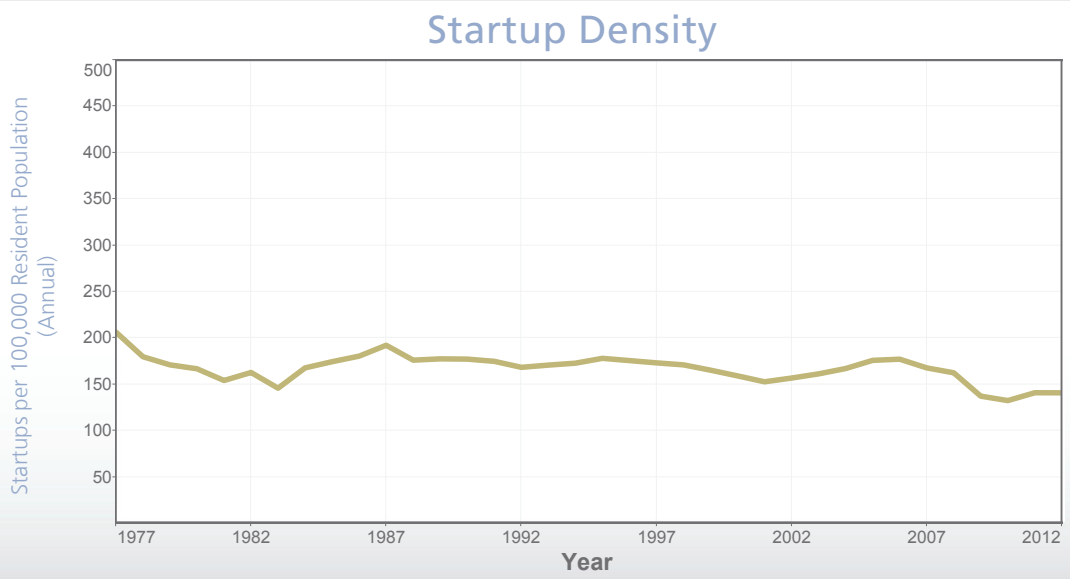


Startup Density

2015 Component	2014 Component
140.8	140.9

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
22	31

METRO PROFILE

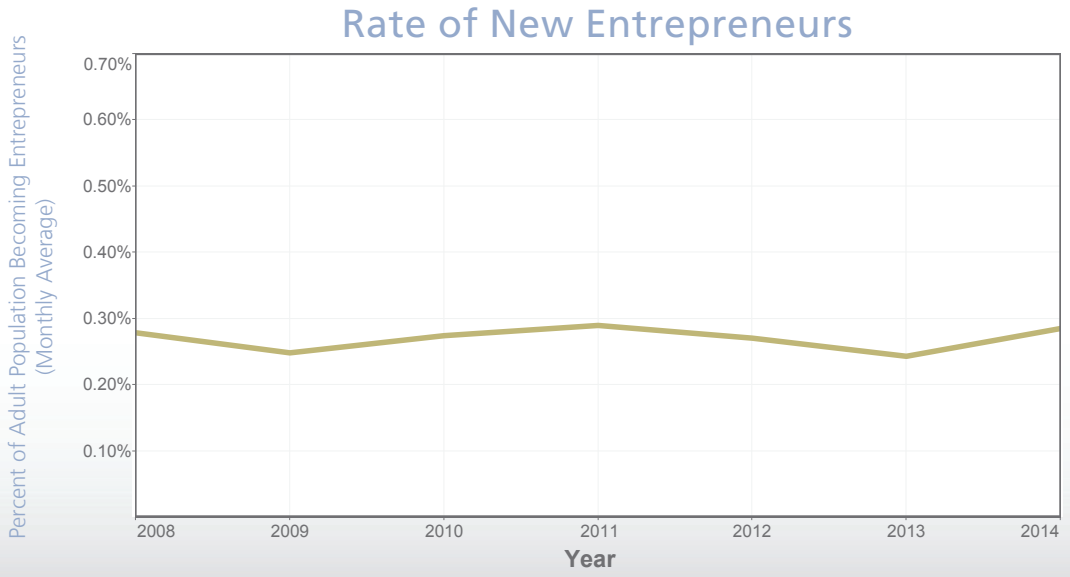
Metro: Boston-Cambridge-Quincy | State: Massachusetts-New Hampshire

Rate of New Entrepreneurs

2015 Component	2014 Component
0.29%	0.24%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

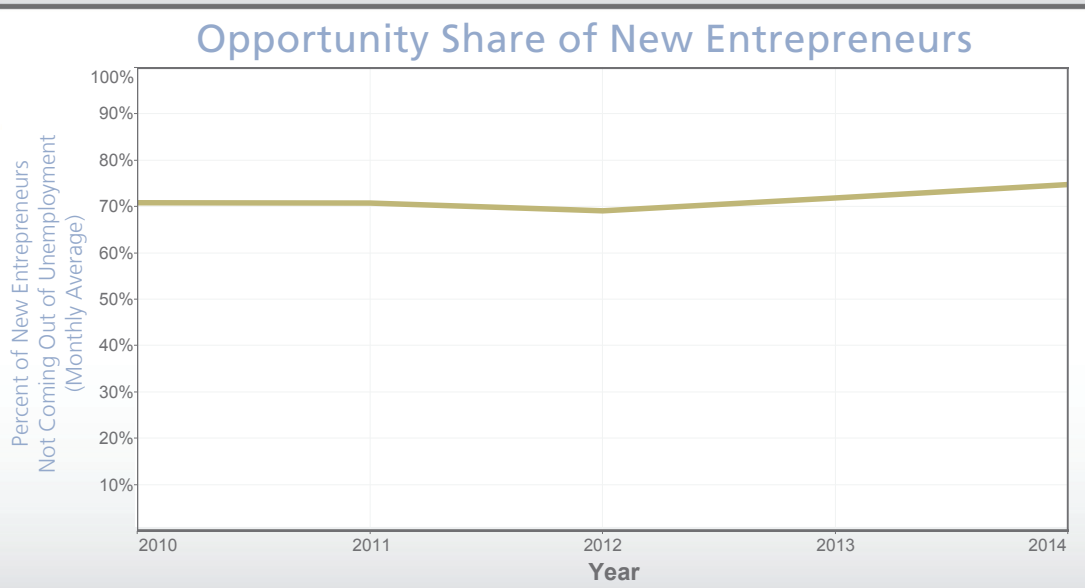


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
74.8%	71.9%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

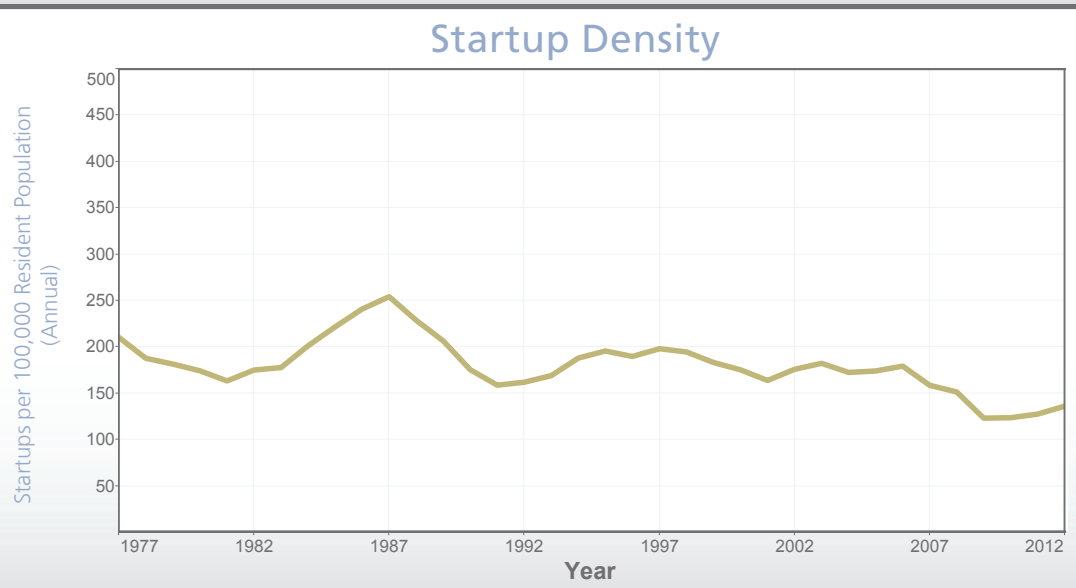


Startup Density

2015 Component	2014 Component
136.1	127.5

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank	
2015	2014
23	16

METRO PROFILE

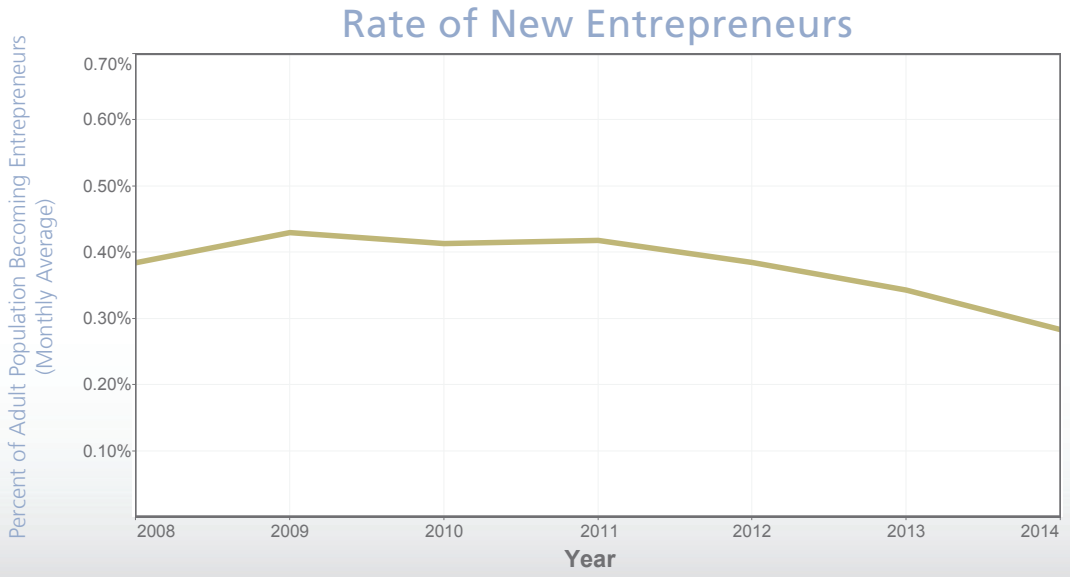
Metro: Sacramento-Arden-Arcade-Roseville | State: California

Rate of New Entrepreneurs

2015 Component	2014 Component
0.28%	0.34%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

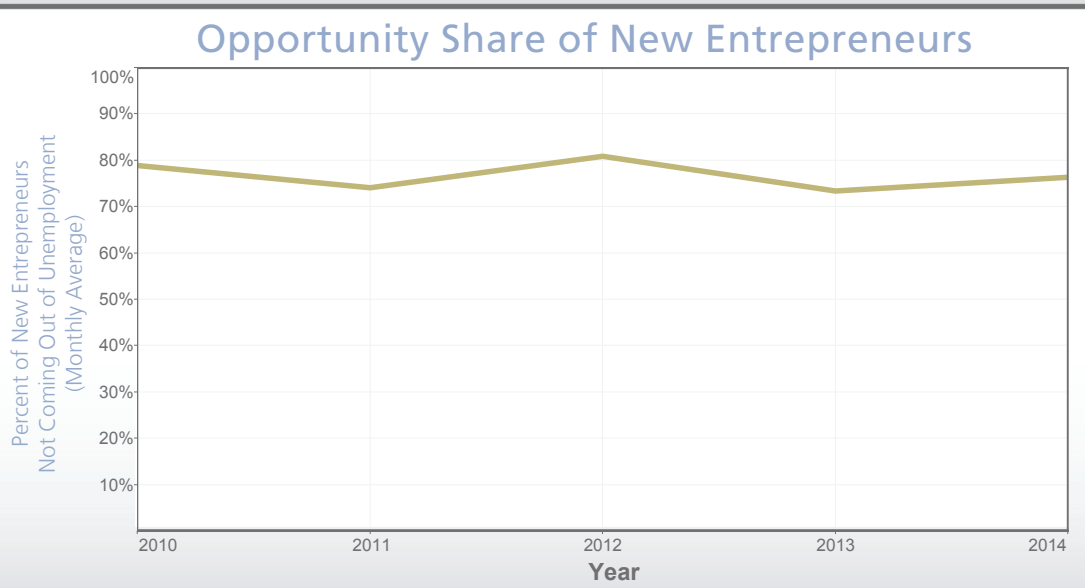


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
76.4%	73.4%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

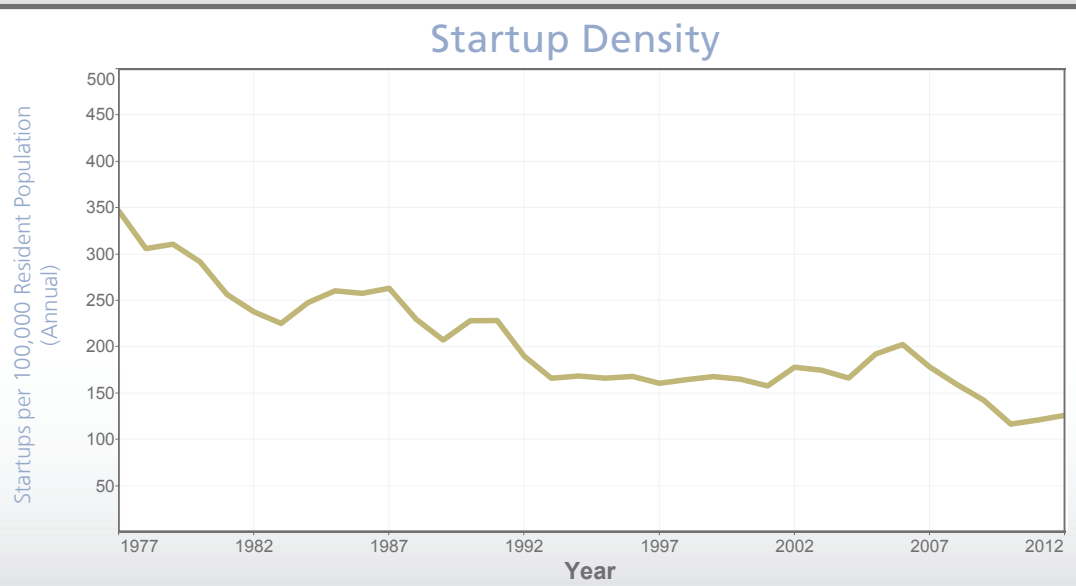


Startup Density

2015 Component	2014 Component
126.2	121.1

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
24	20

METRO PROFILE

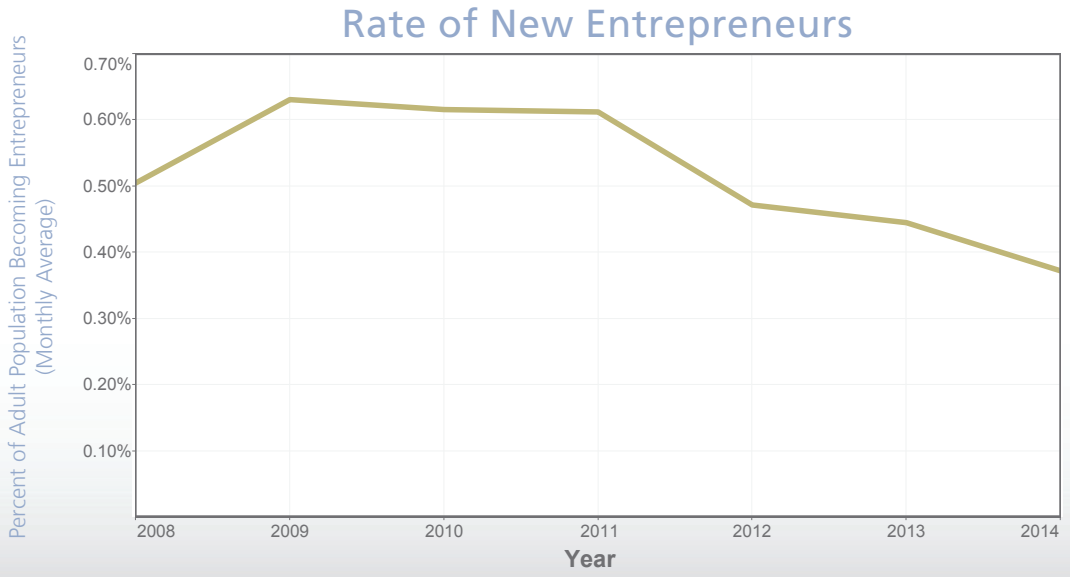
Metro: Nashville-Davidson-Murfreesboro-Franklin | State: Tennessee

Rate of New Entrepreneurs

2015 Component	2014 Component
0.37%	0.44%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

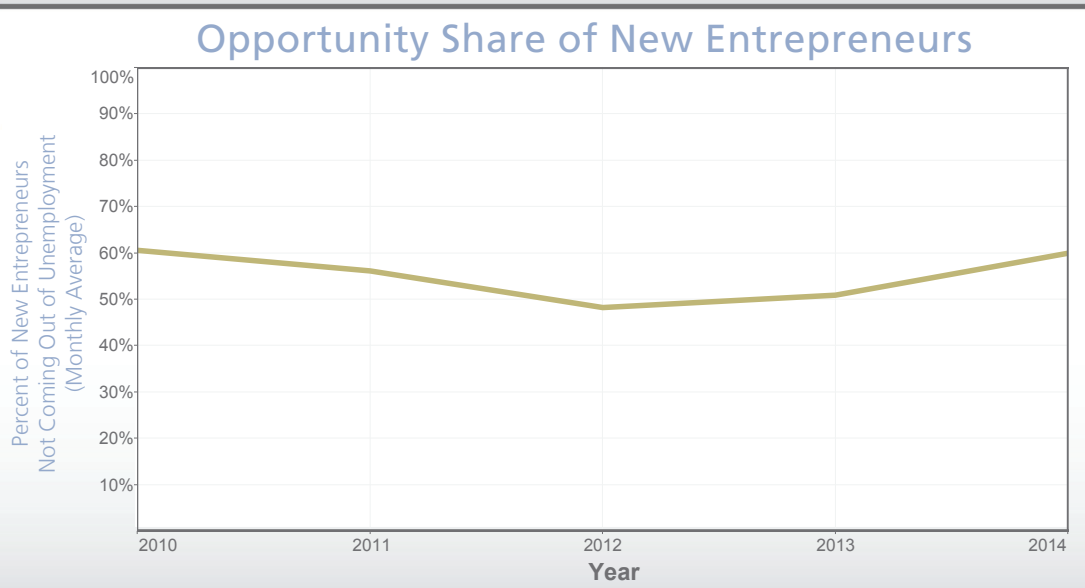


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
60.0%	50.9%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

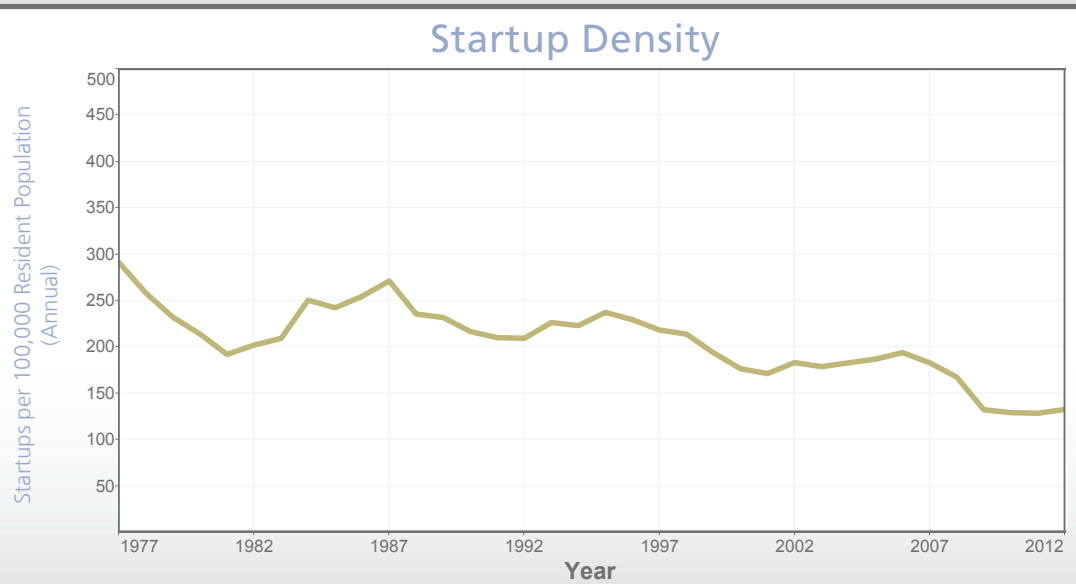


Startup Density

2015 Component	2014 Component
132.5	128.5

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
25	28

METRO PROFILE

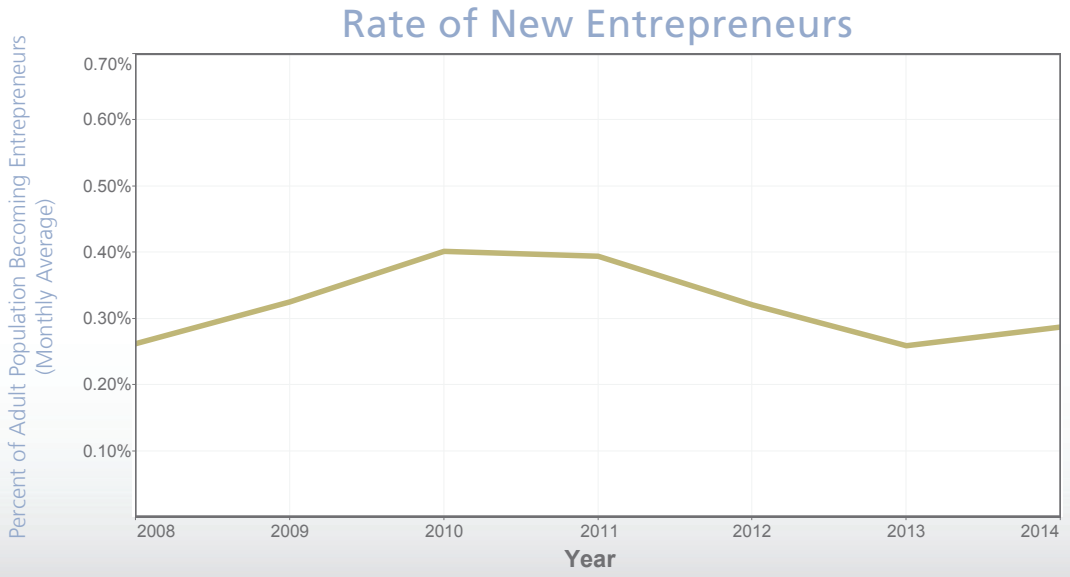
Metro: Charlotte-Gastonia-Rock Hill | State: North Carolina-South Carolina

Rate of New Entrepreneurs

2015 Component	2014 Component
0.29%	0.26%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

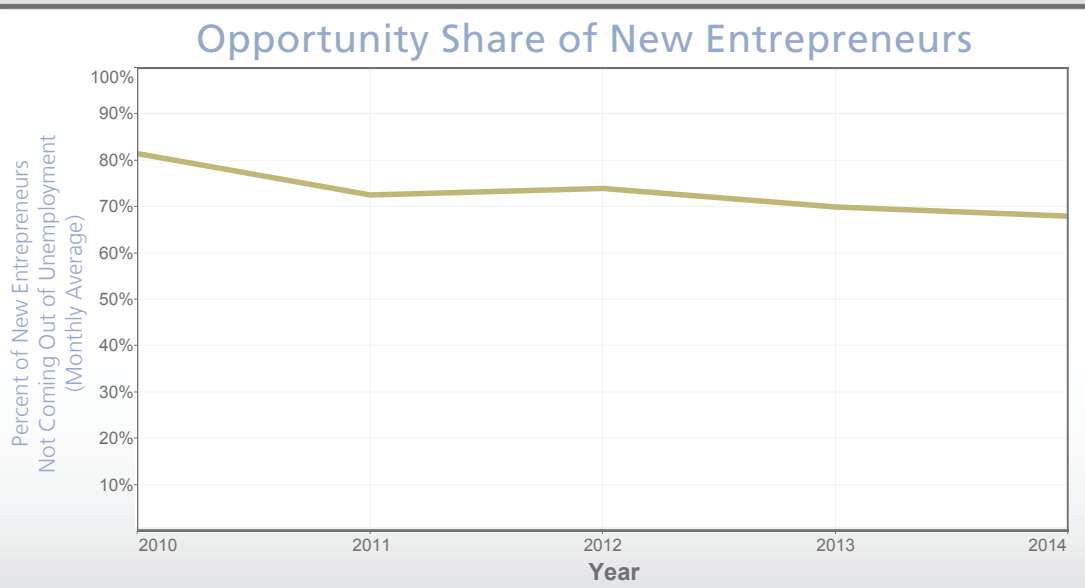


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
68.0%	70.0%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

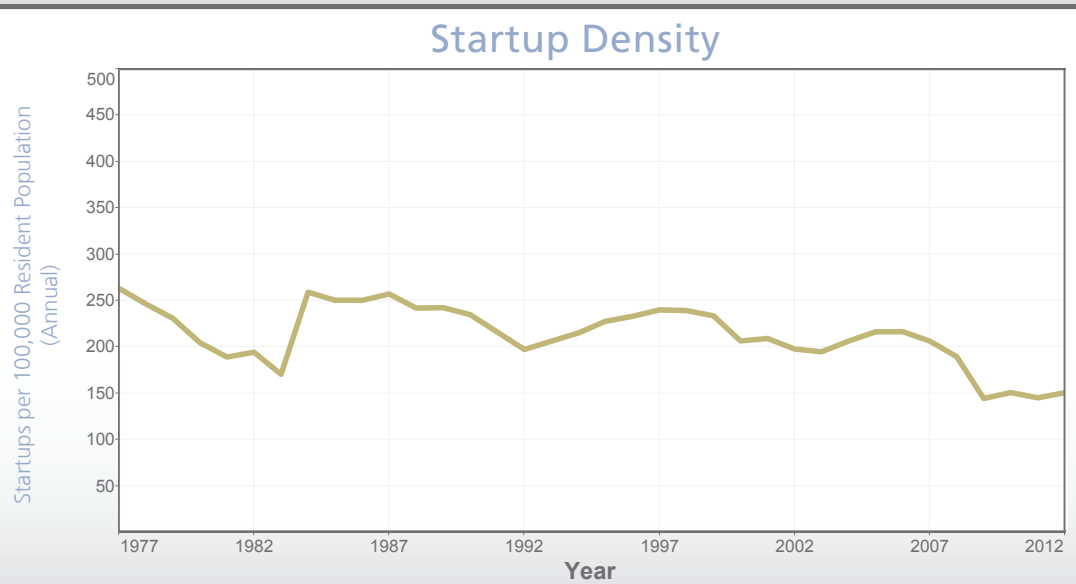


Startup Density

2015 Component	2014 Component
150.6	145.0

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
26	24

METRO PROFILE

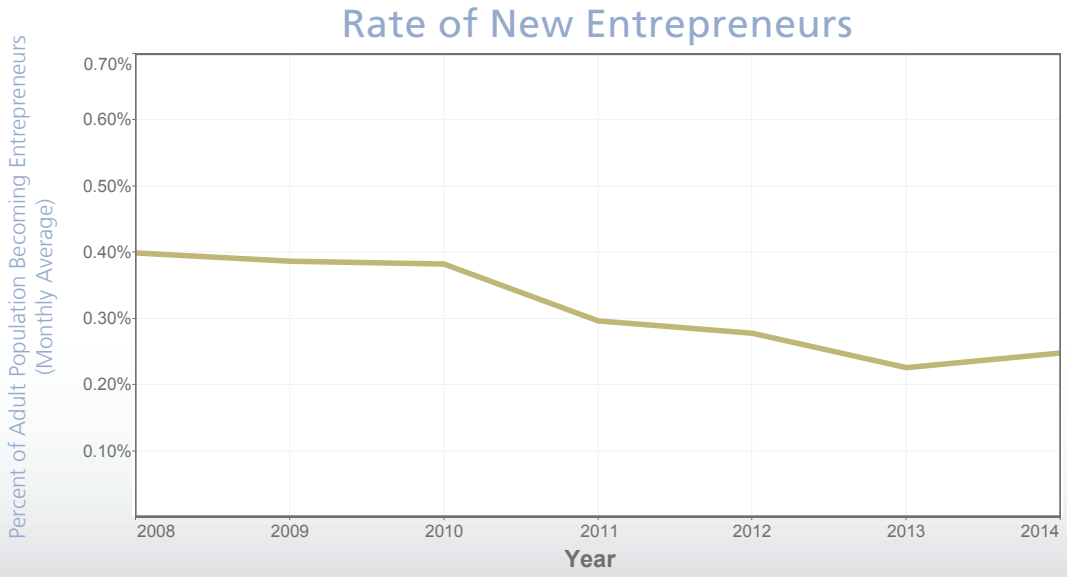
Metro: Portland-Vancouver-Hillsboro | State: Oregon-Washington

Rate of New Entrepreneurs

2015 Component	2014 Component
0.25%	0.23%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

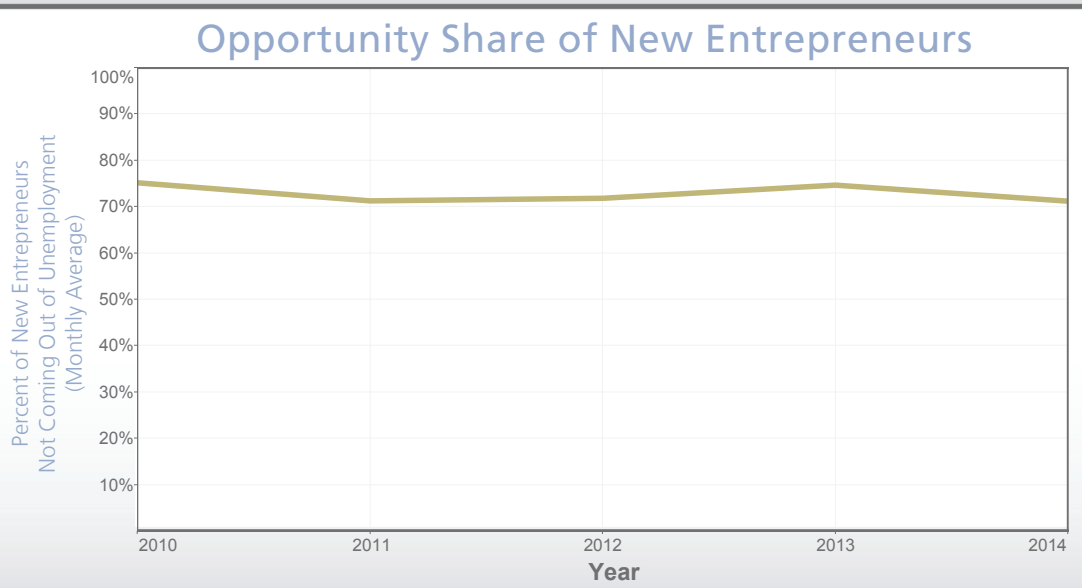


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
71.2%	74.7%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

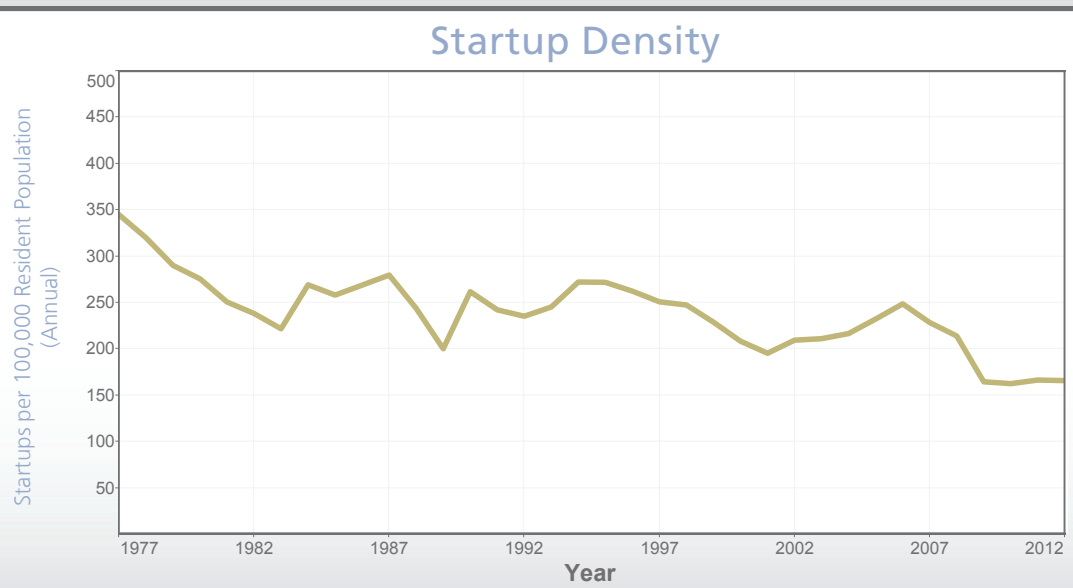


Startup Density

2015 Component	2014 Component
165.8	166.4

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
27	25

METRO PROFILE

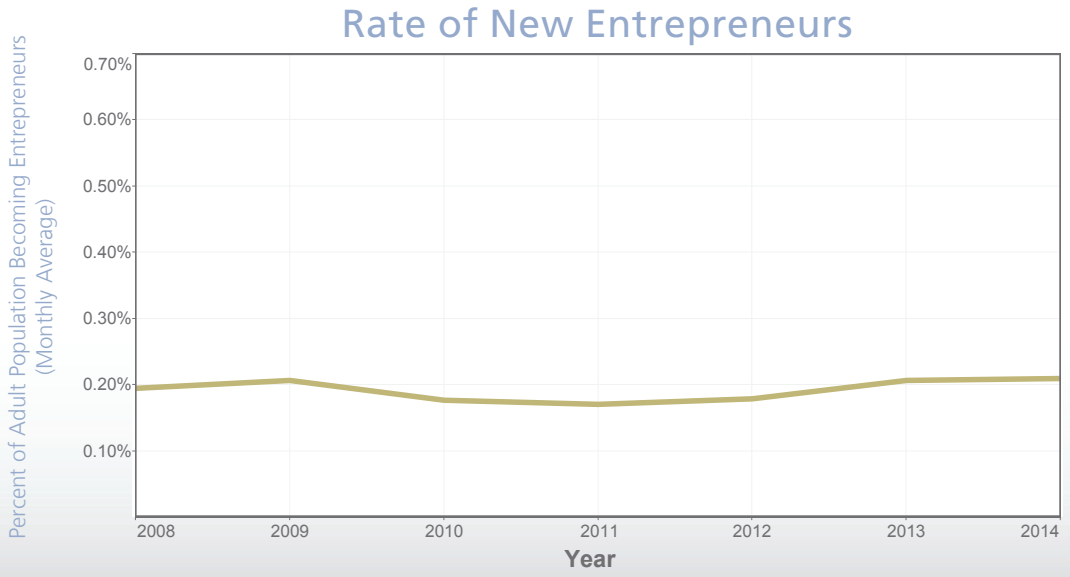
Metro: Jacksonville | State: Florida

Rate of New Entrepreneurs

2015 Component	2014 Component
0.21%	0.21%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

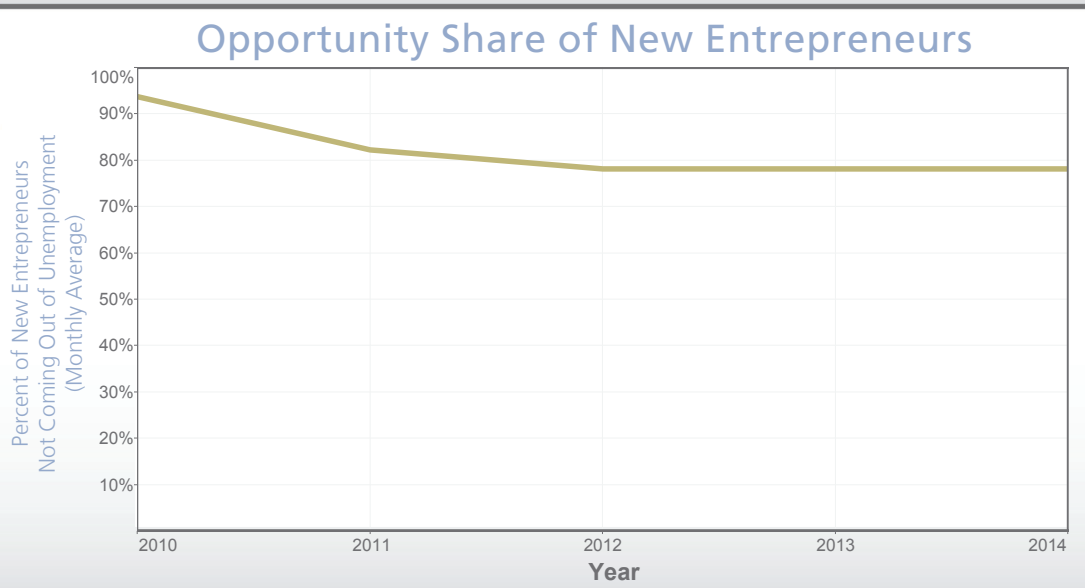


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
78.2%	78.2%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

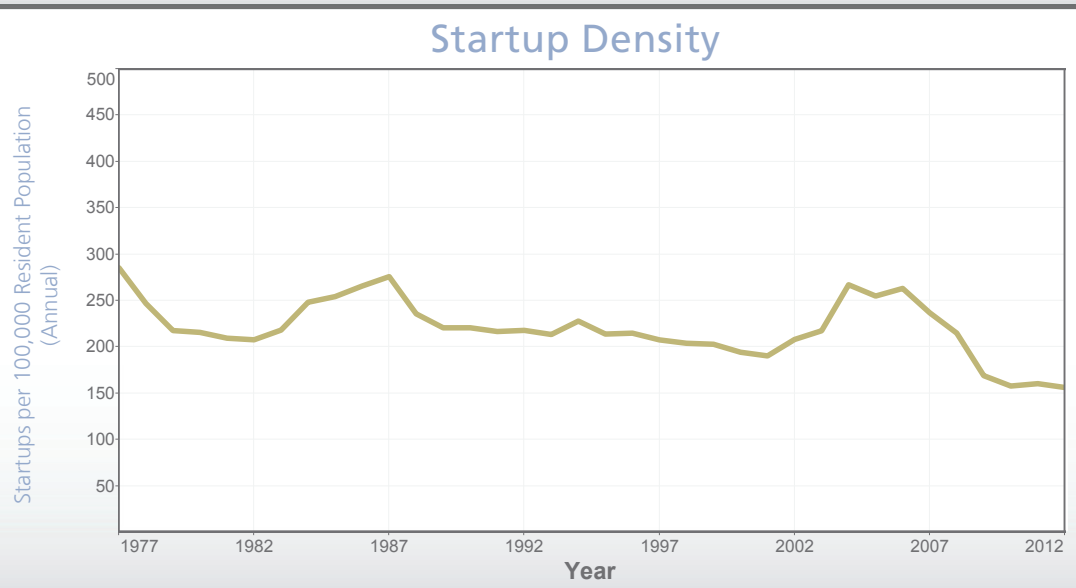


Startup Density

2015 Component	2014 Component
156.2	160.4

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
28	30

METRO PROFILE

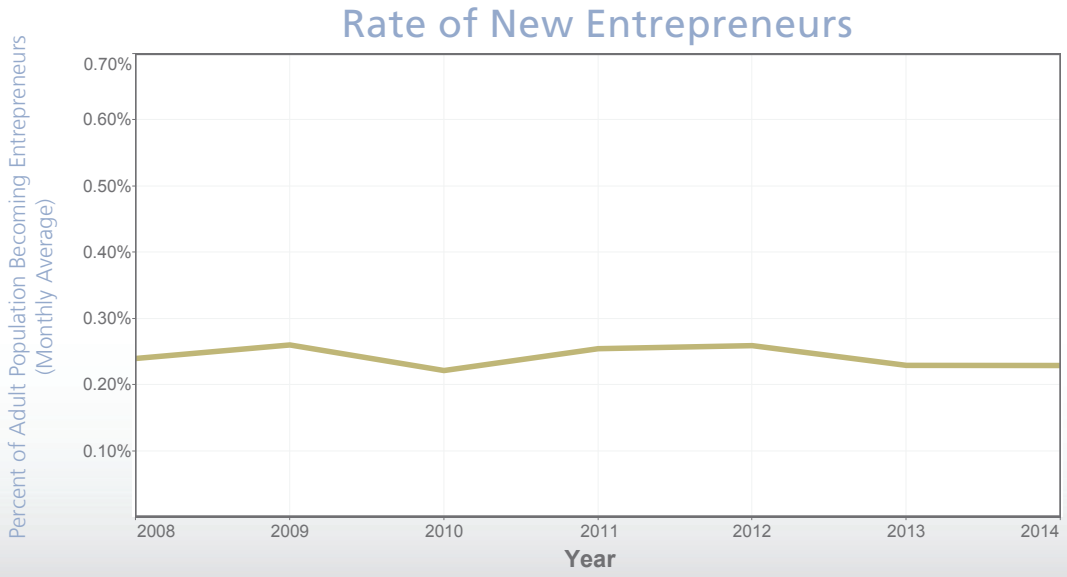
Metro: Indianapolis-Carmel | State: Indiana

Rate of New Entrepreneurs

2015 Component	2014 Component
0.23%	0.23%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

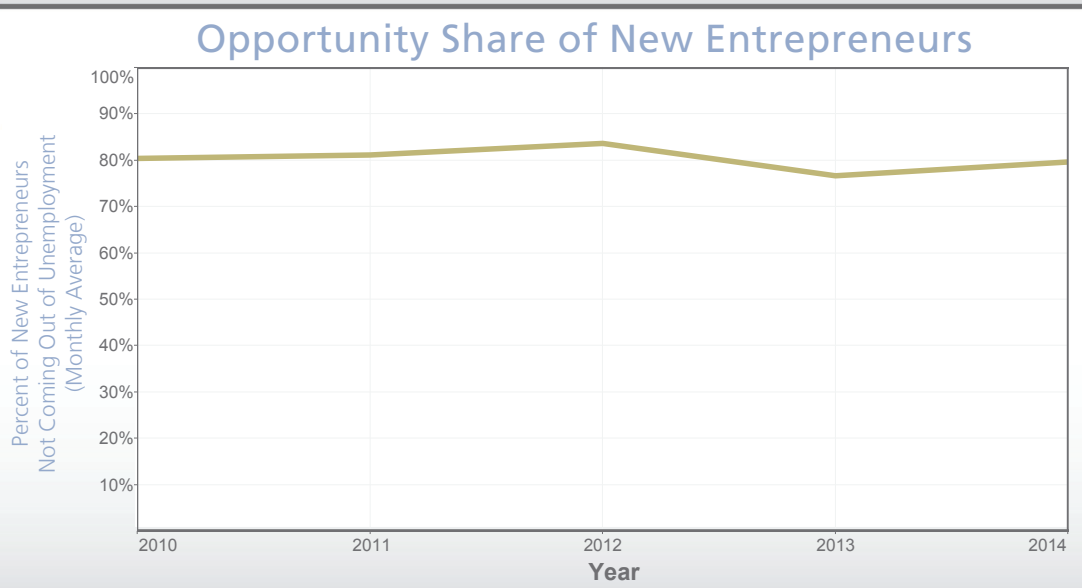


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
79.7%	76.7%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

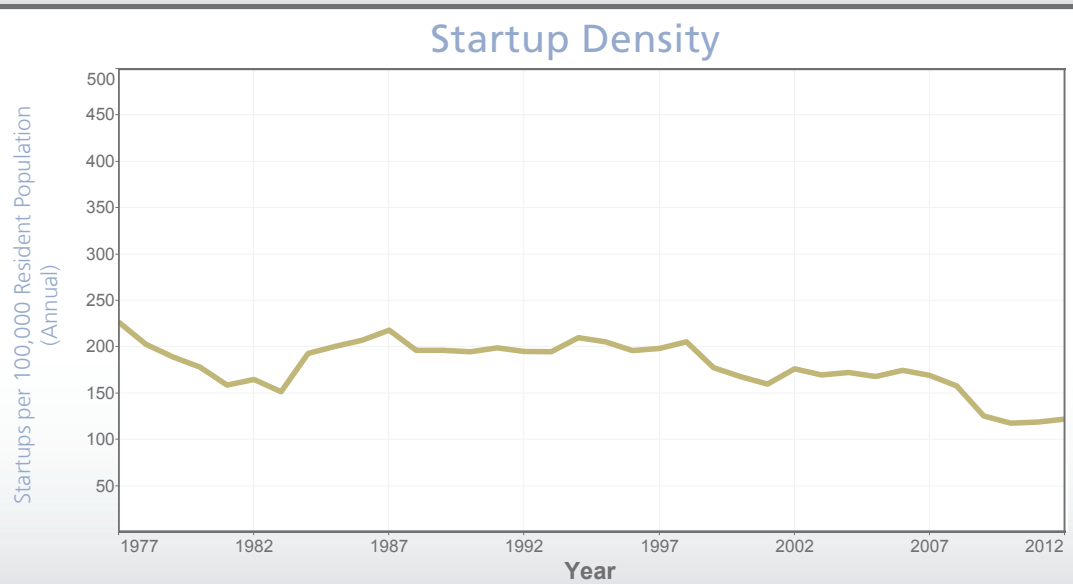


Startup Density

2015 Component	2014 Component
122.1	118.9

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
29	26

METRO PROFILE

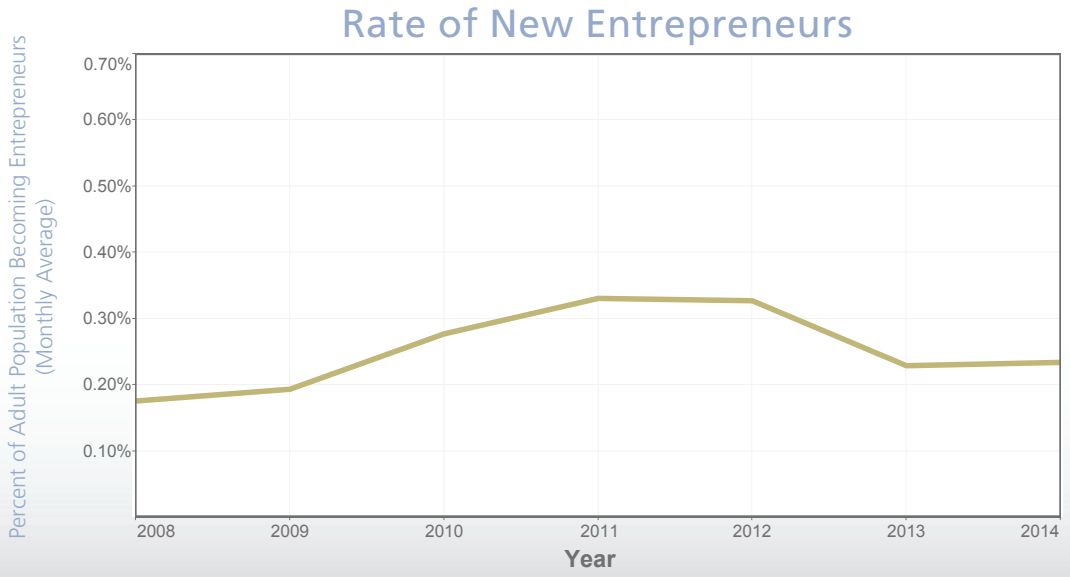
Metro: Kansas City | State: Missouri-Kansas

Rate of New Entrepreneurs

2015 Component	2014 Component
0.23%	0.23%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

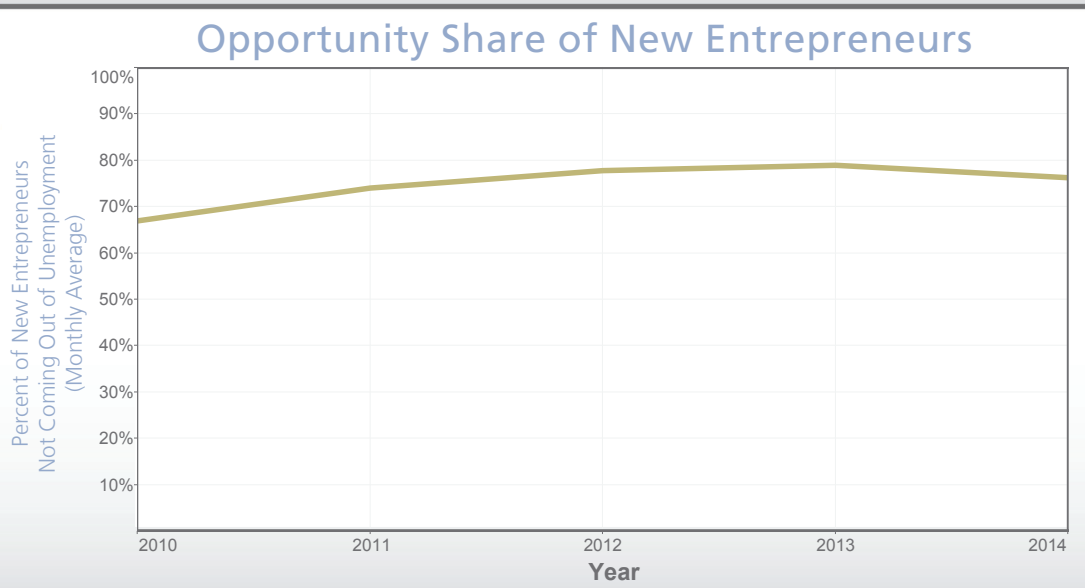


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
76.3%	79.0%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

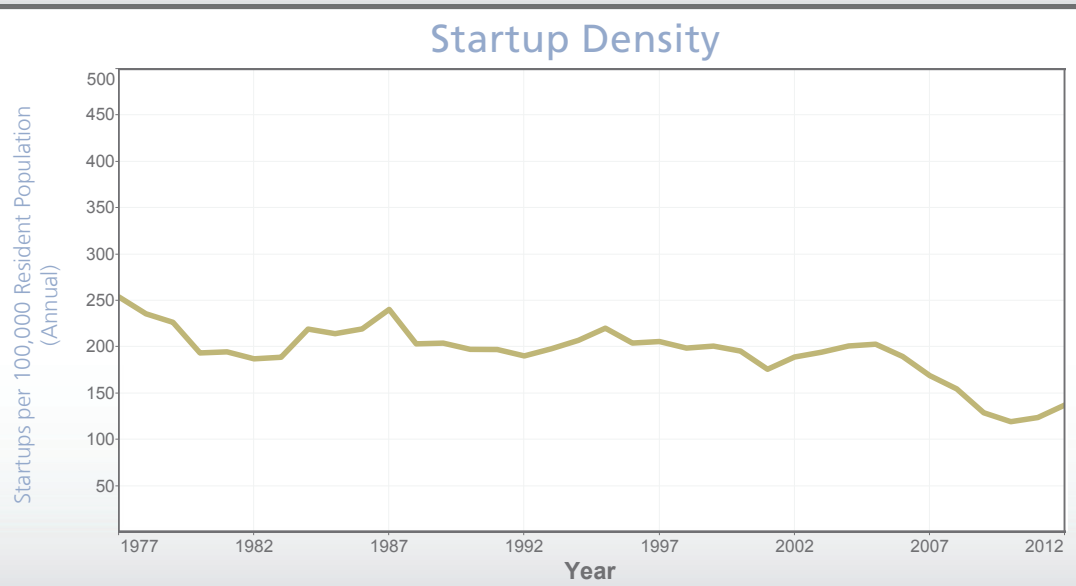


Startup Density

2015 Component	2014 Component
137.3	123.8

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
30	27

METRO PROFILE

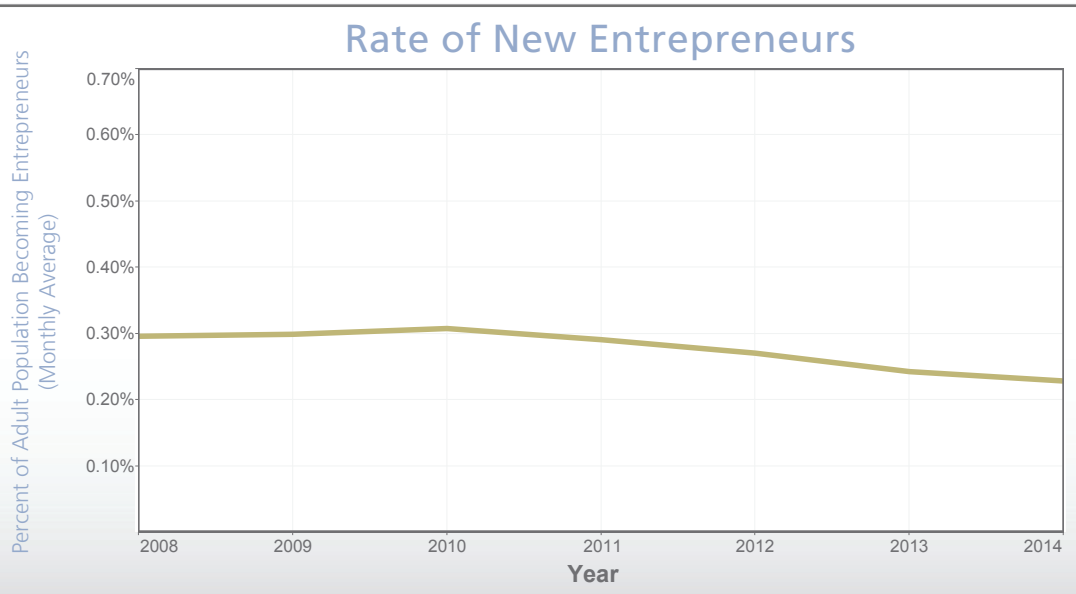
Metro: Washington-Arlington-Alexandria | State: District of Columbia-Virginia-Maryland-West Virginia

Rate of New Entrepreneurs

2015 Component	2014 Component
0.23%	0.24%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

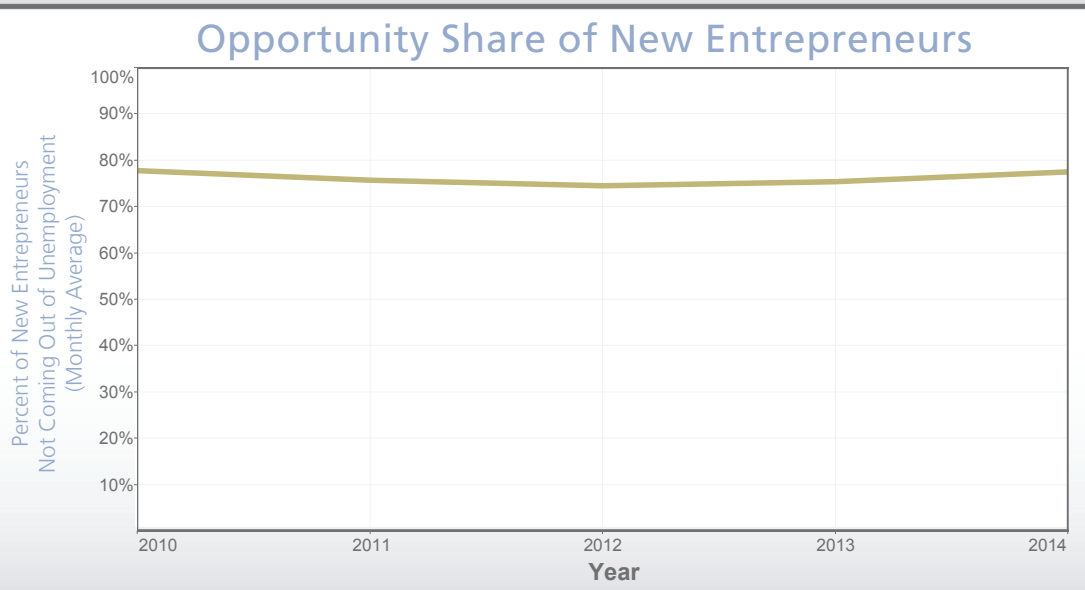


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
77.5%	75.4%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

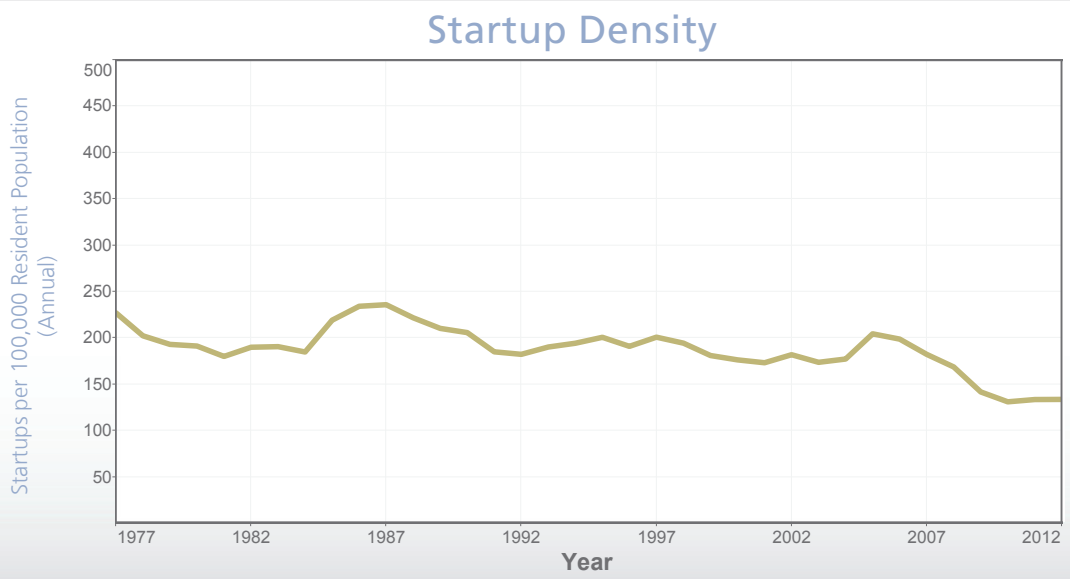


Startup Density

2015 Component	2014 Component
133.7	133.5

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



METRO PROFILE

Metro: Philadelphia-Camden-Wilmington | State: Pennsylvania-New Jersey-Delaware-Maryland

Startup Activity Rank

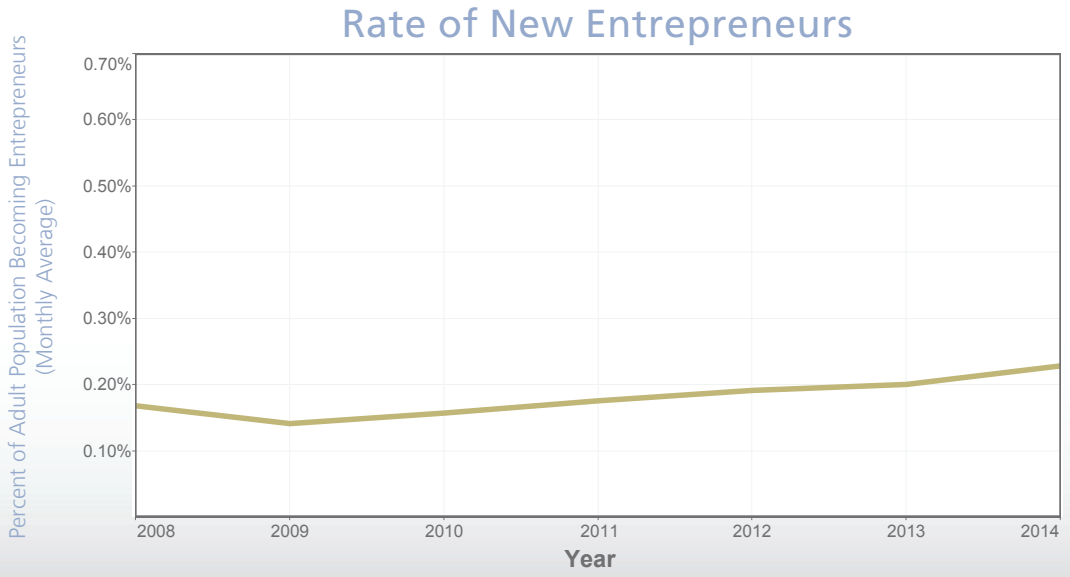
2015	2014
31	32

Rate of New Entrepreneurs

2015 Component	2014 Component
0.23%	0.20%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

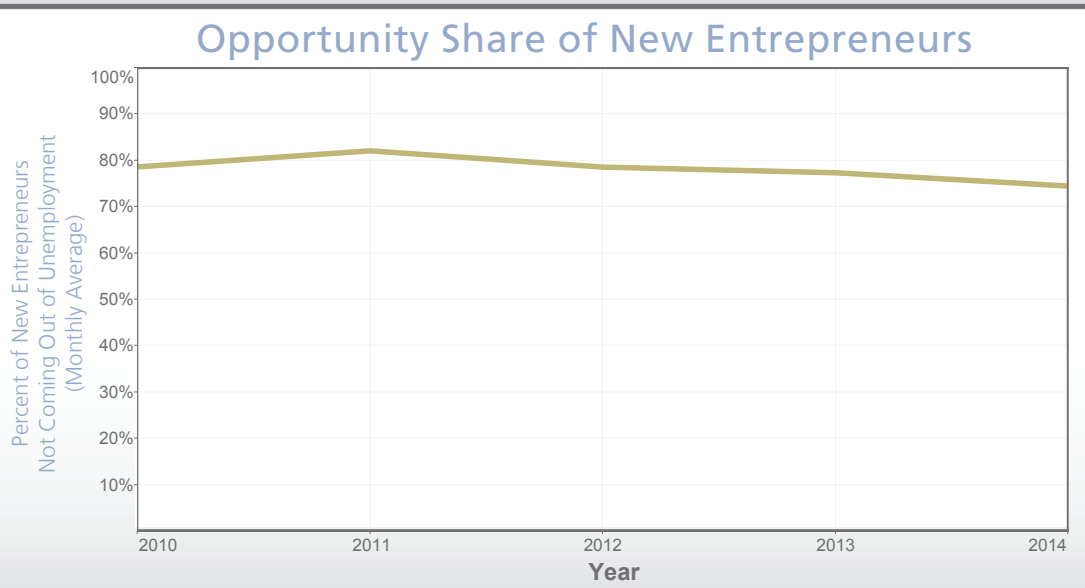


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
74.5%	77.3%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

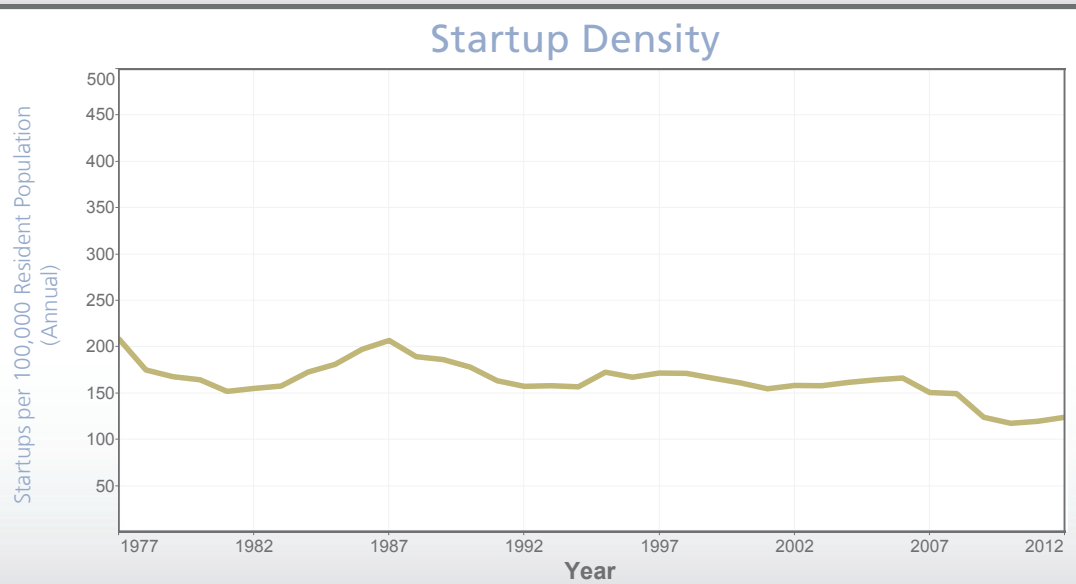


Startup Density

2015 Component	2014 Component
124.1	119.7

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank	
2015	2014
32	34

METRO PROFILE

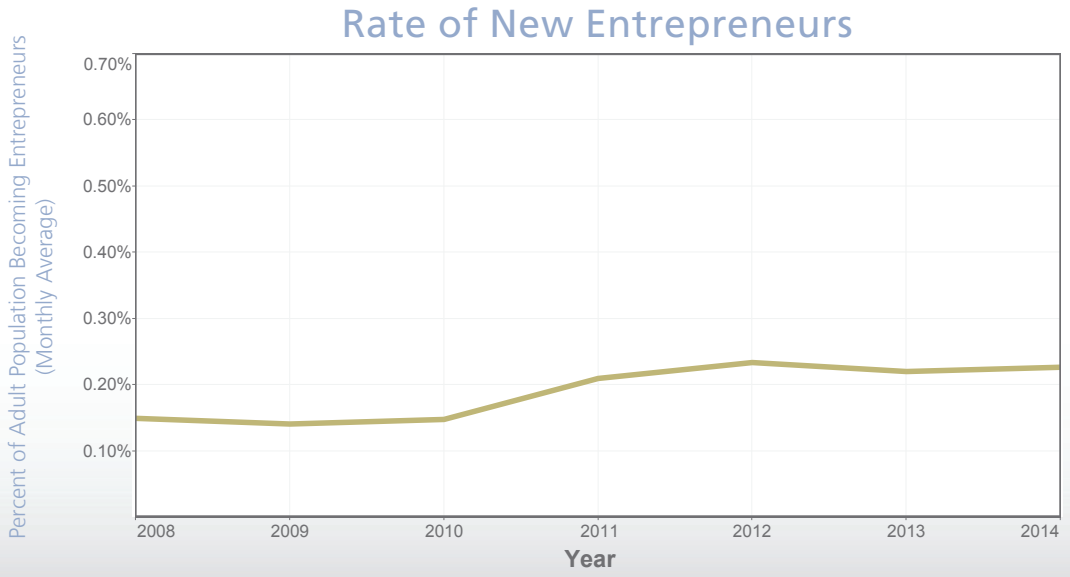
Metro: Cincinnati-Middletown | State: Ohio-Kentucky-Indiana

Rate of New Entrepreneurs

2015 Component	2014 Component
0.23%	0.22%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

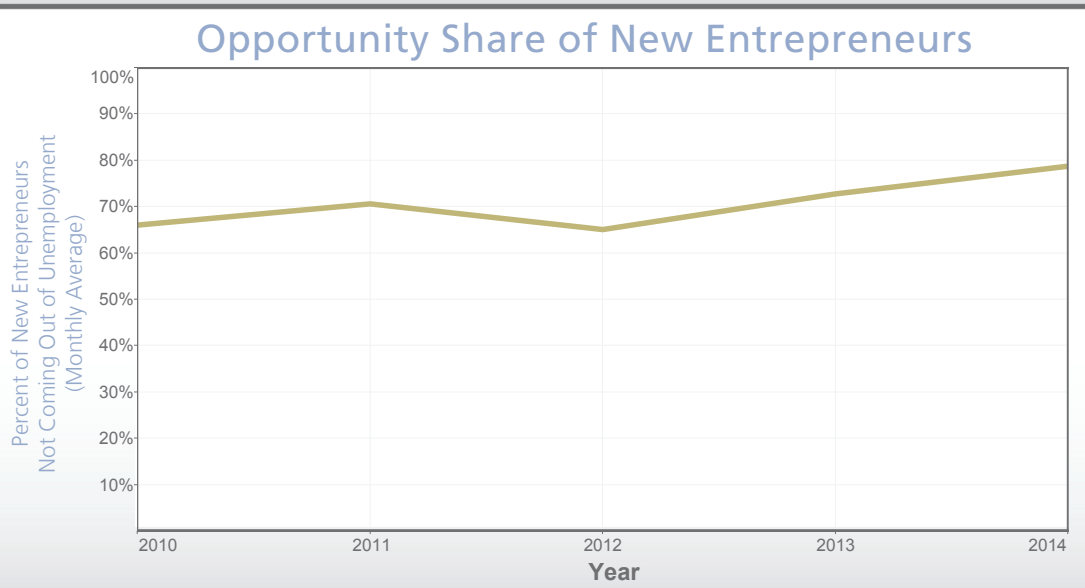


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
78.8%	72.8%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

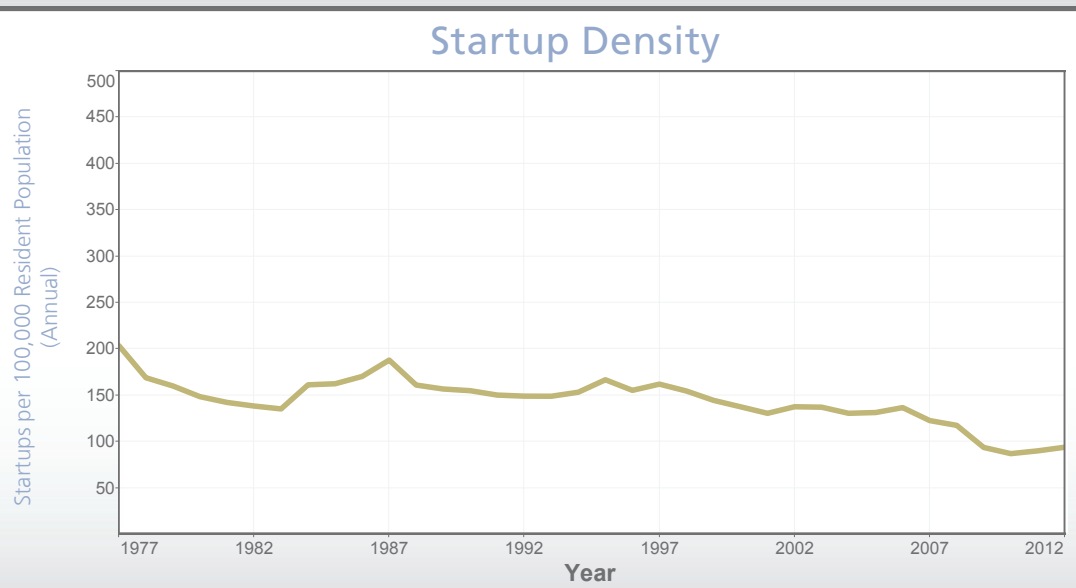


Startup Density

2015 Component	2014 Component
93.94	90.02

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
33	21

METRO PROFILE

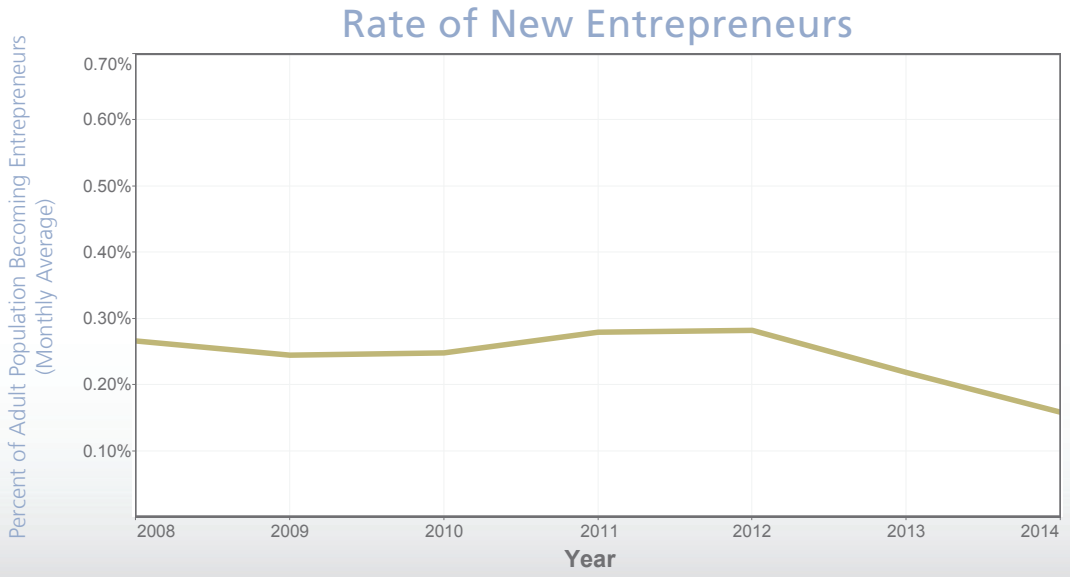
Metro: Orlando-Kissimmee-Sanford | State: Florida

Rate of New Entrepreneurs

2015 Component	2014 Component
0.16%	0.22%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

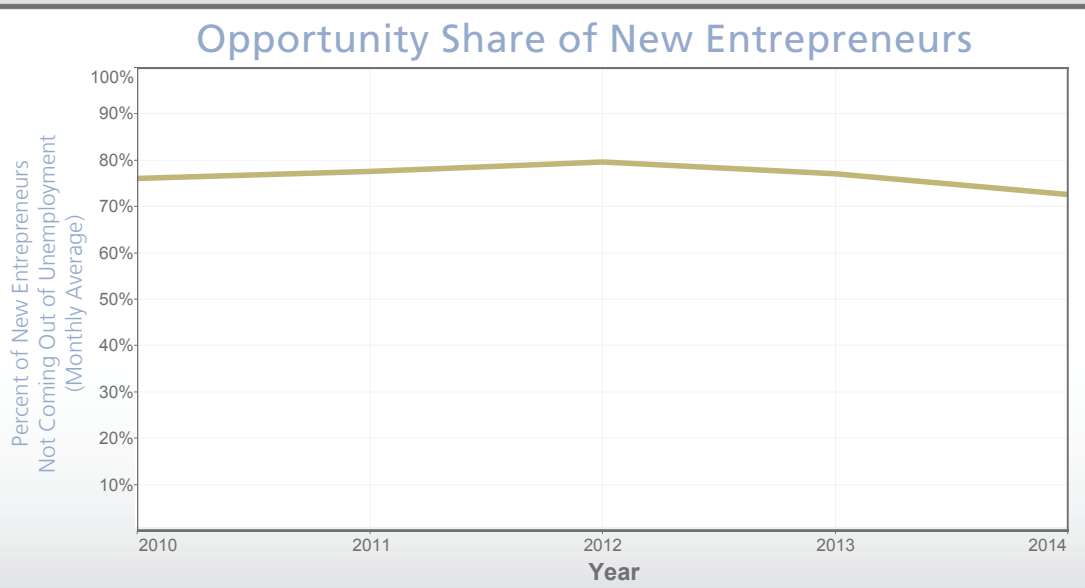


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
72.6%	77.1%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

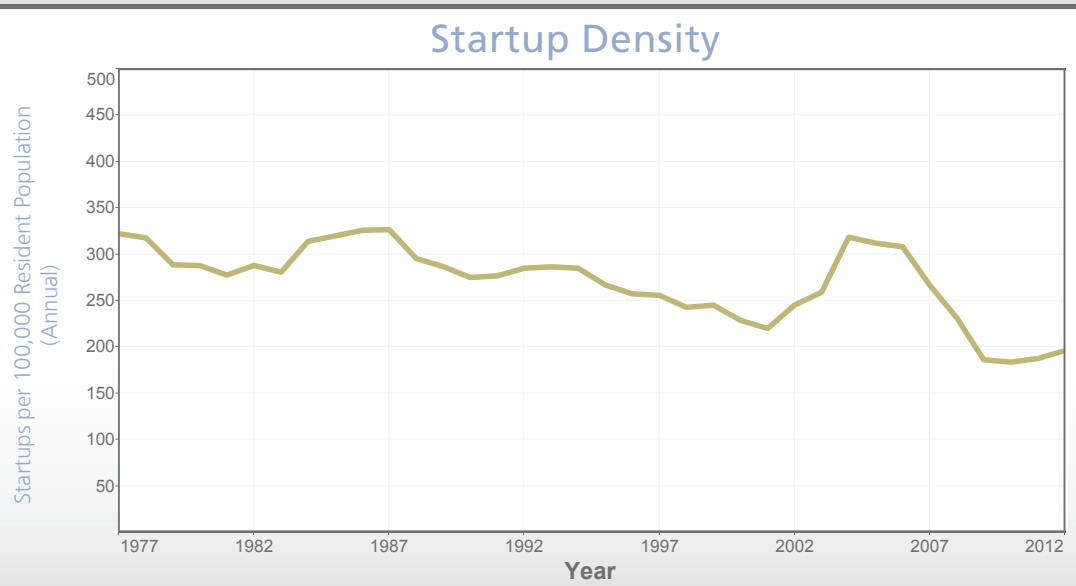


Startup Density

2015 Component	2014 Component
196.1	187.5

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
34	38

METRO PROFILE

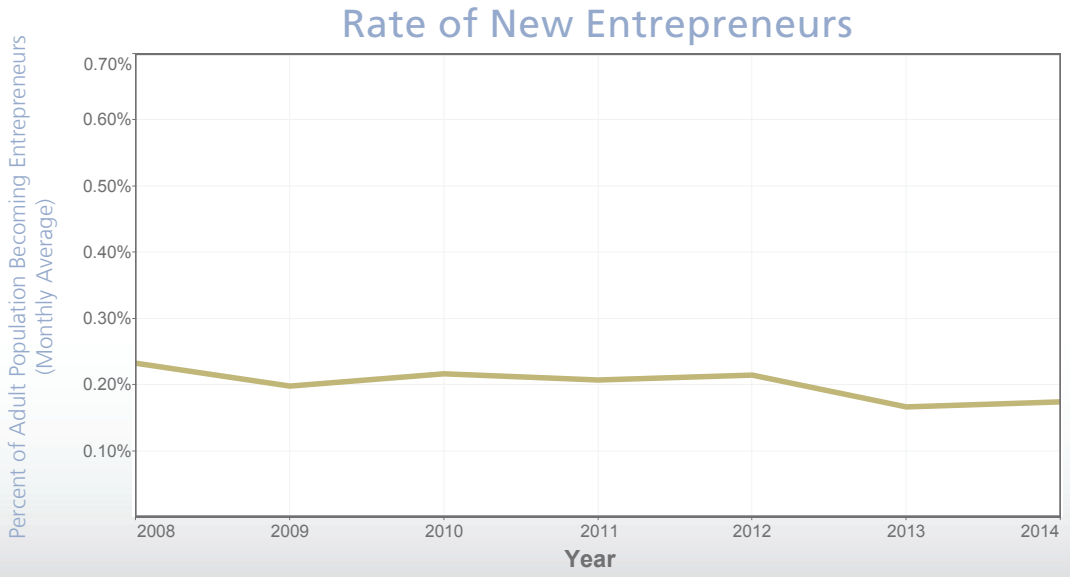
Metro: Providence-New Bedford-Fall River | State: Rhode Island-Massachusetts

Rate of New Entrepreneurs

2015 Component	2014 Component
0.17%	0.17%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

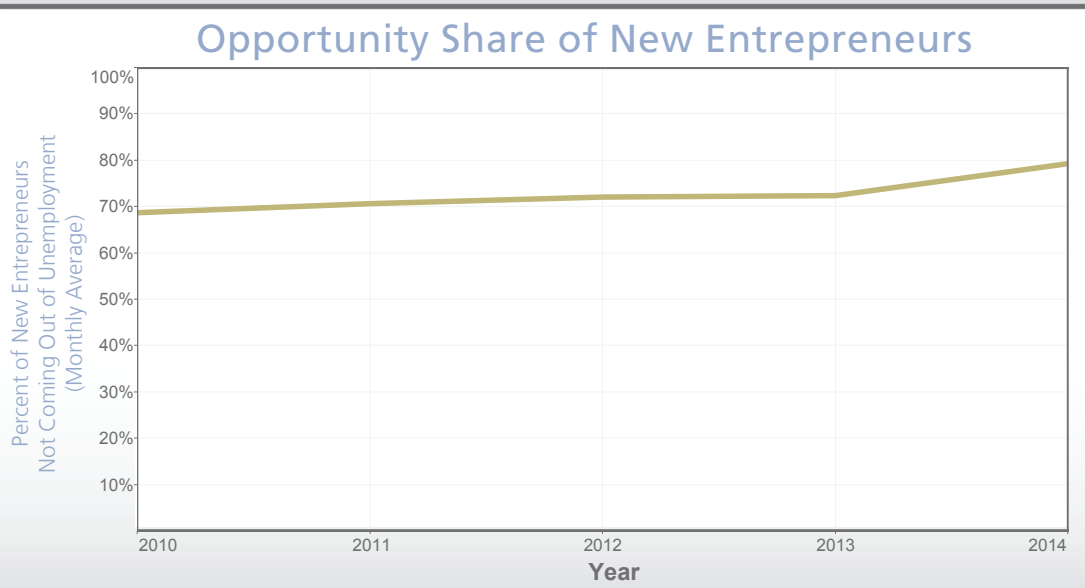


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
79.3%	72.4%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

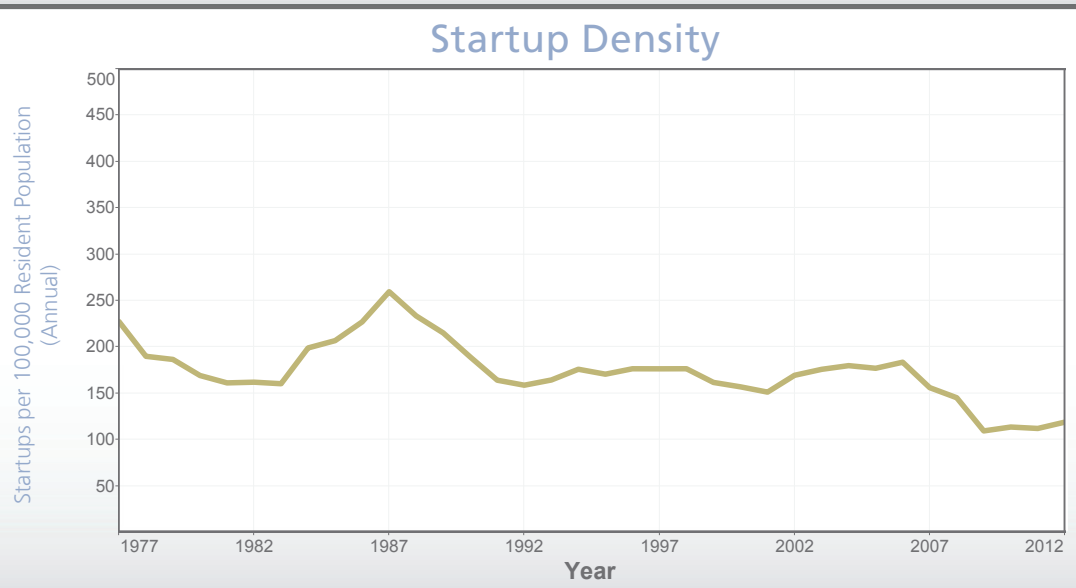


Startup Density

2015 Component	2014 Component
118.9	112.0

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
35	36

METRO PROFILE

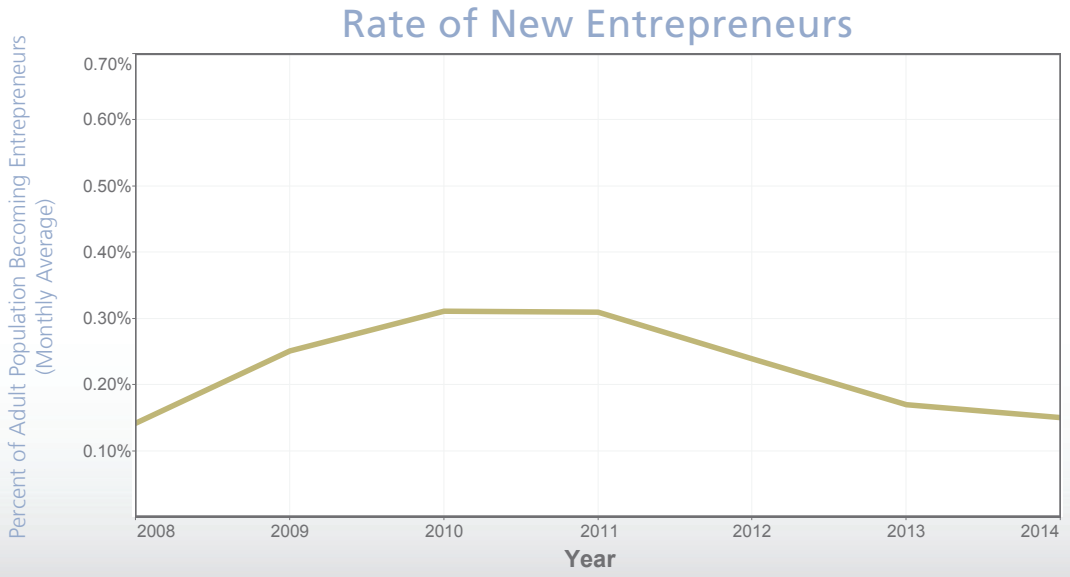
Metro: Cleveland-Elyria-Mentor | State: Ohio

Rate of New Entrepreneurs

2015 Component	2014 Component
0.15%	0.17%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

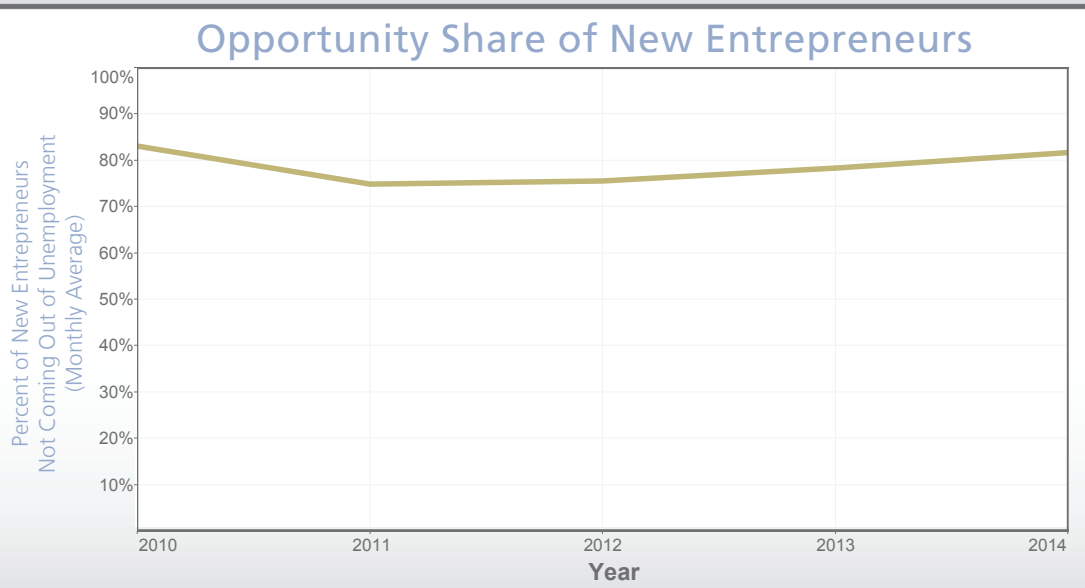


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
81.7%	78.4%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

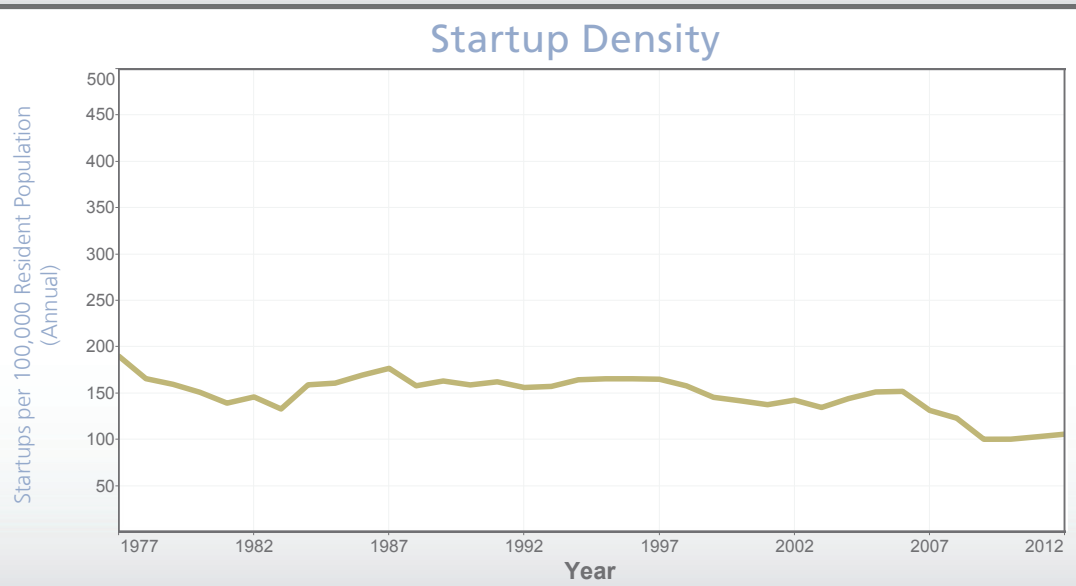


Startup Density

2015 Component	2014 Component
105.9	103.1

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
36	37

METRO PROFILE

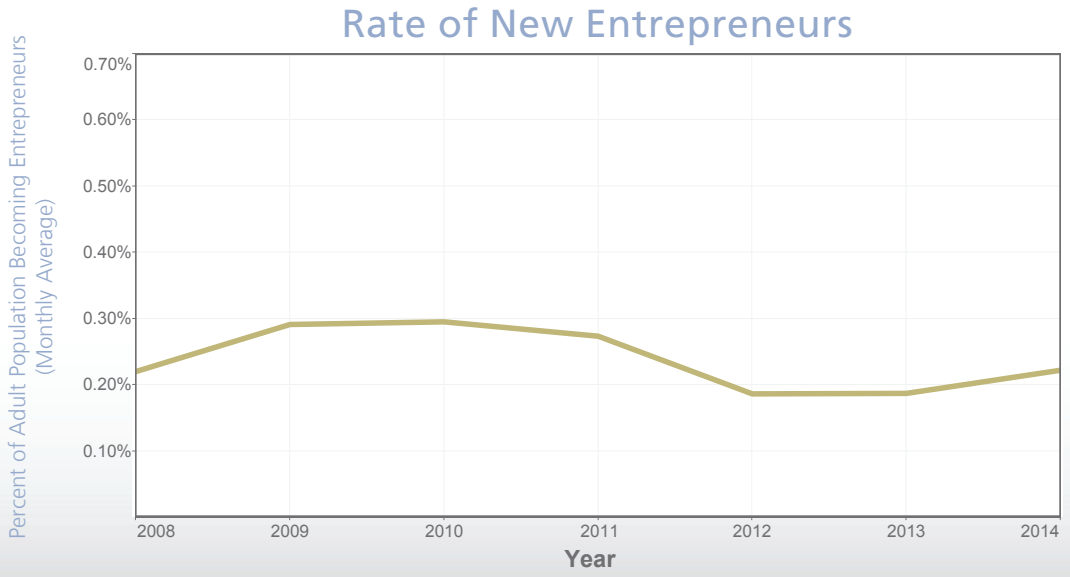
Metro: Detroit-Warren-Livonia | State: Michigan

Rate of New Entrepreneurs

2015 Component	2014 Component
0.22%	0.19%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

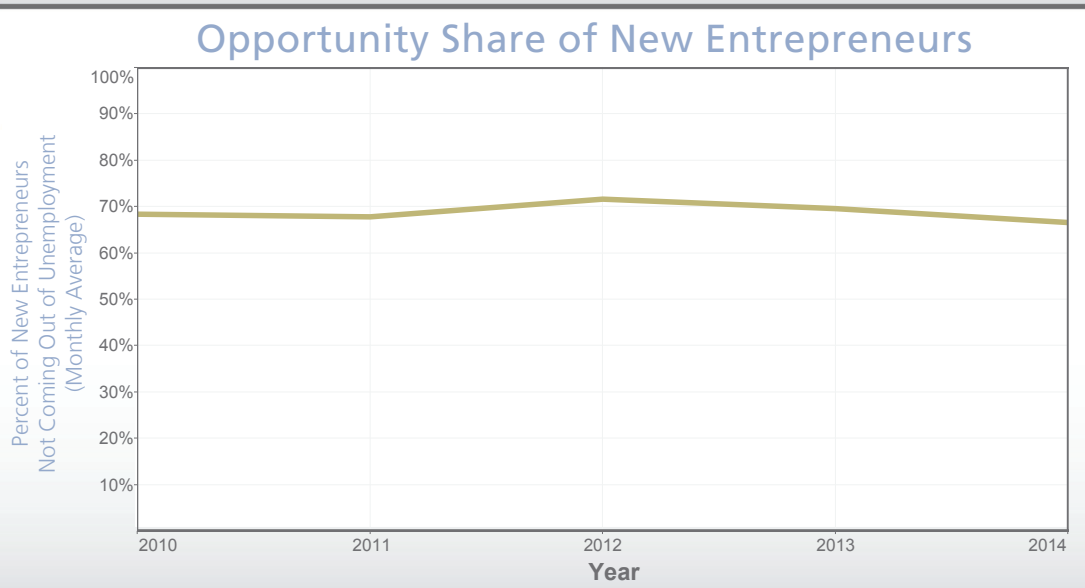


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
66.6%	69.6%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

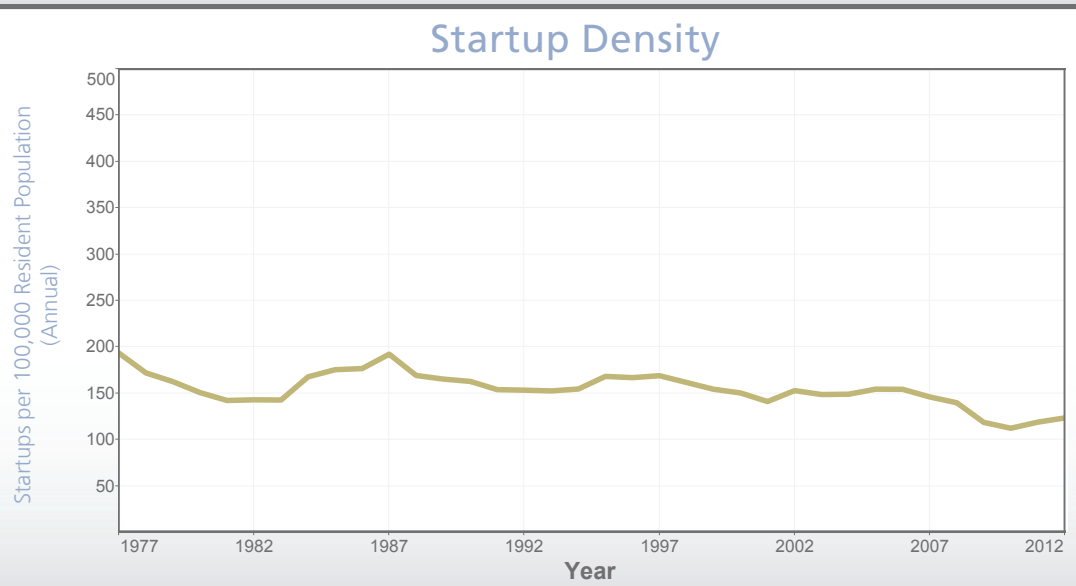


Startup Density

2015 Component	2014 Component
123.4	118.9

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
37	33

METRO PROFILE

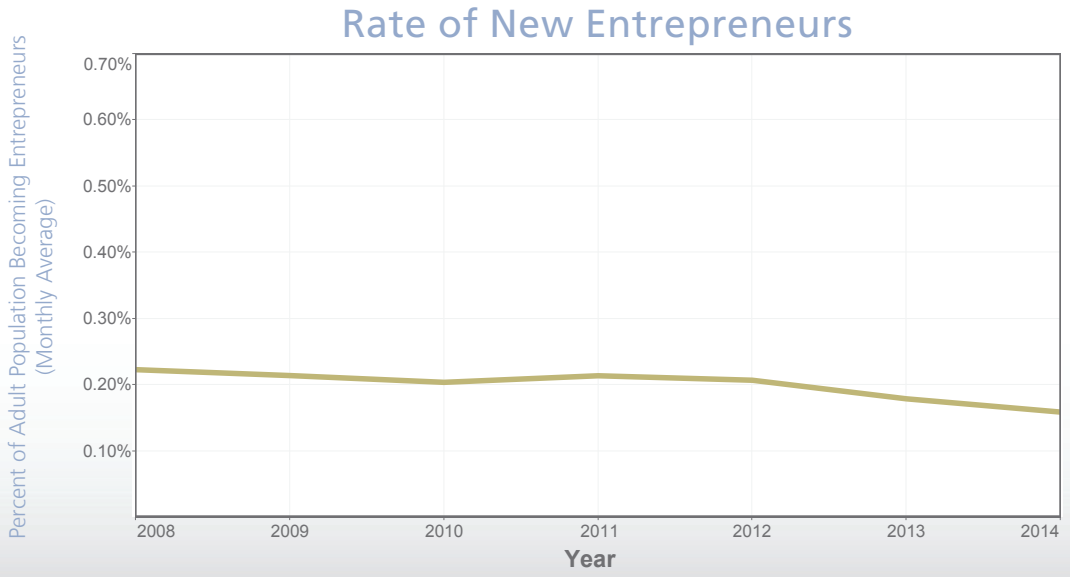
Metro: Minneapolis-St. Paul-Bloomington | State: Minnesota-Wisconsin

Rate of New Entrepreneurs

2015 Component	2014 Component
0.16%	0.18%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

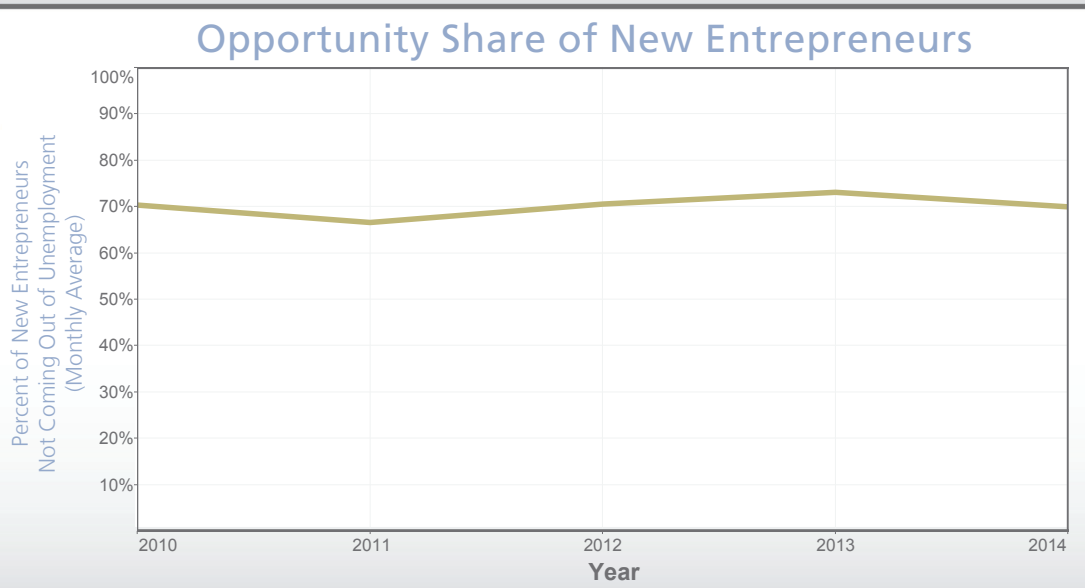


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
70.0%	73.1%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

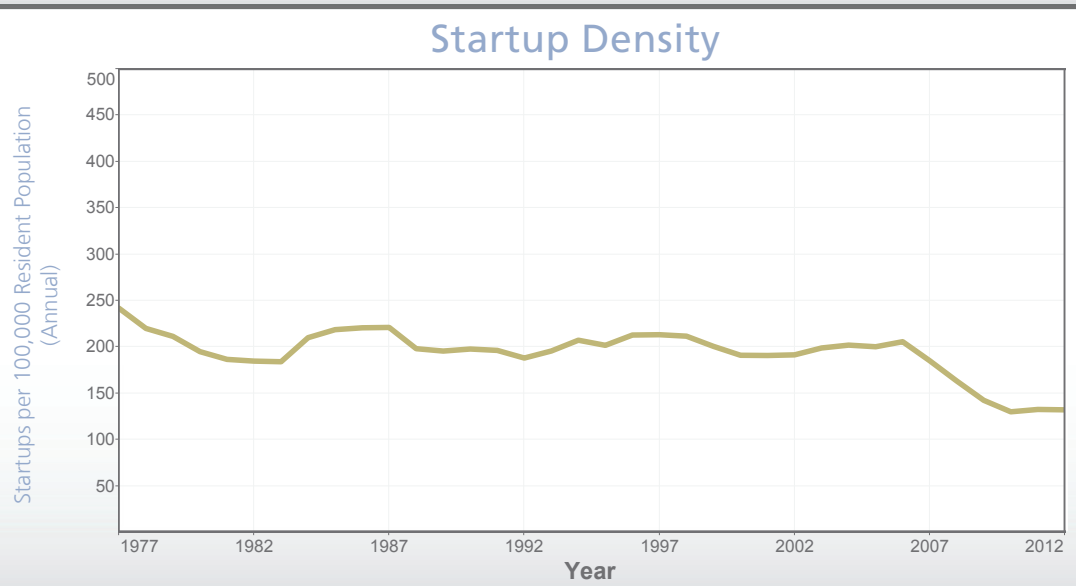


Startup Density

2015 Component	2014 Component
132.1	132.5

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
38	35

METRO PROFILE

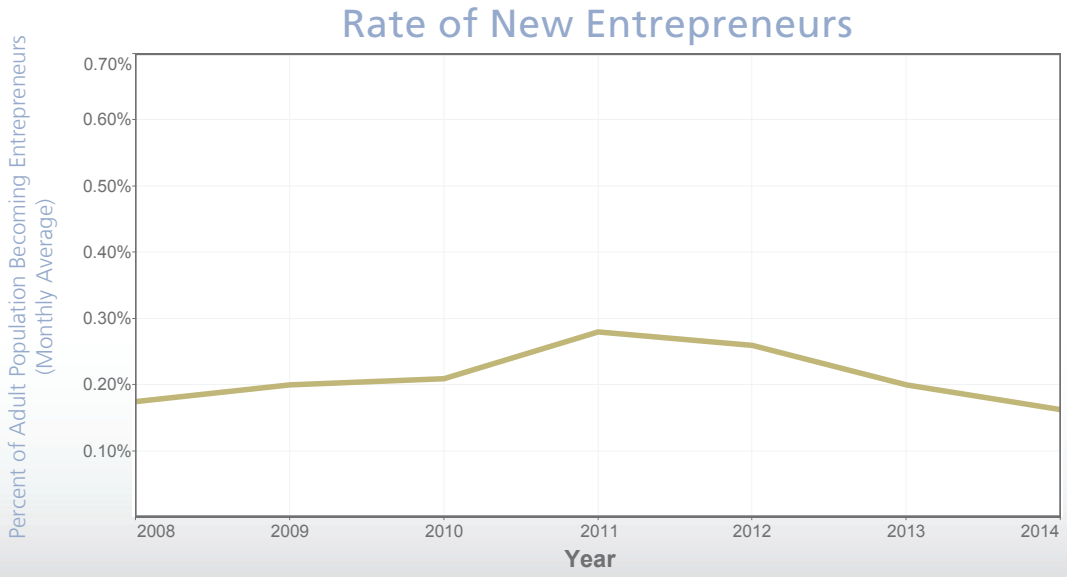
Metro: St. Louis | State: Missouri-Illinois

Rate of New Entrepreneurs

2015 Component	2014 Component
0.16%	0.20%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

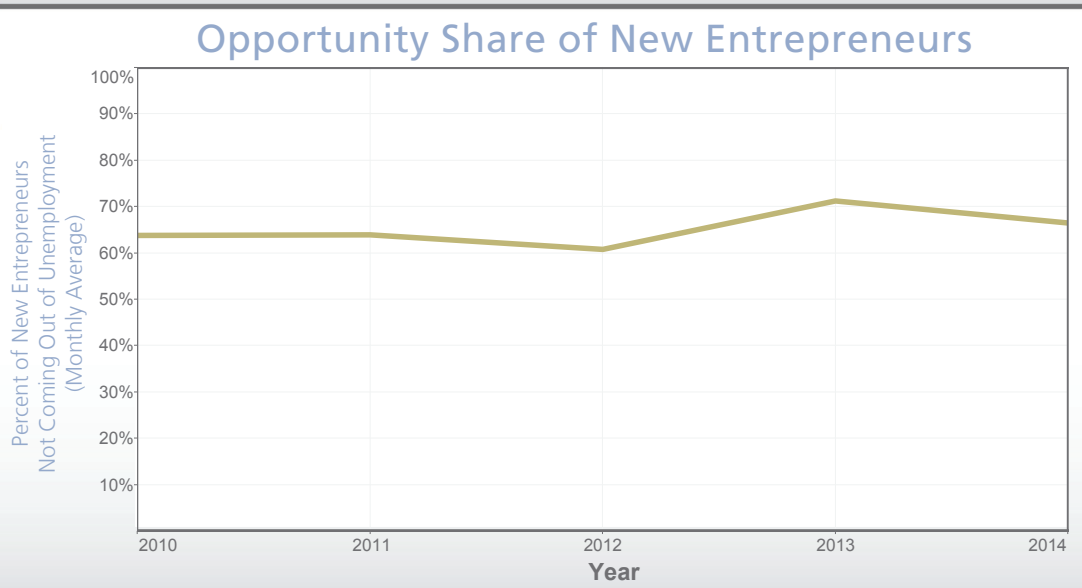


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
66.5%	71.3%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

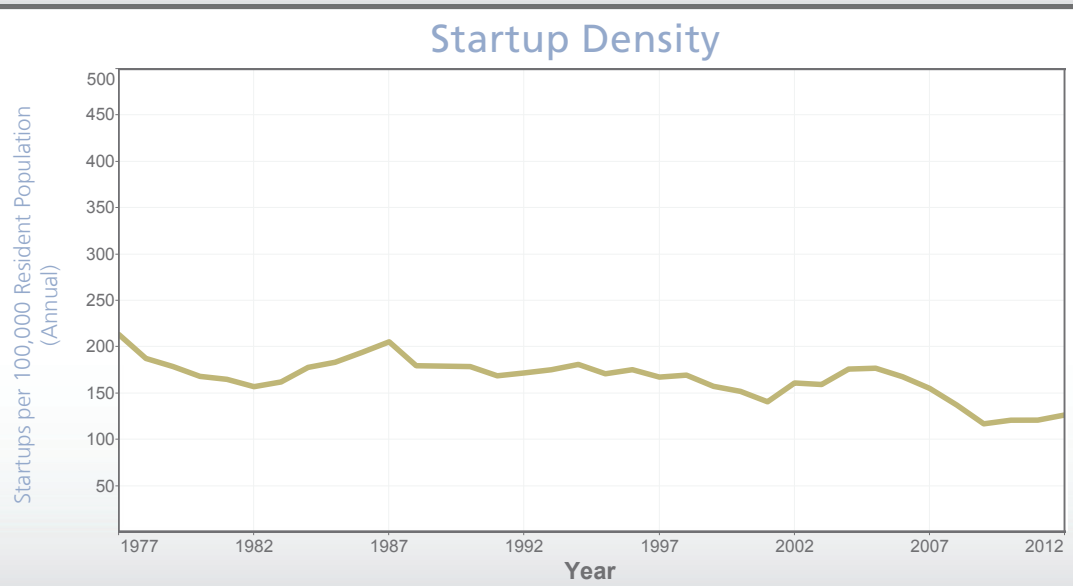


Startup Density

2015 Component	2014 Component
126.6	121.0

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
39	39

METRO PROFILE

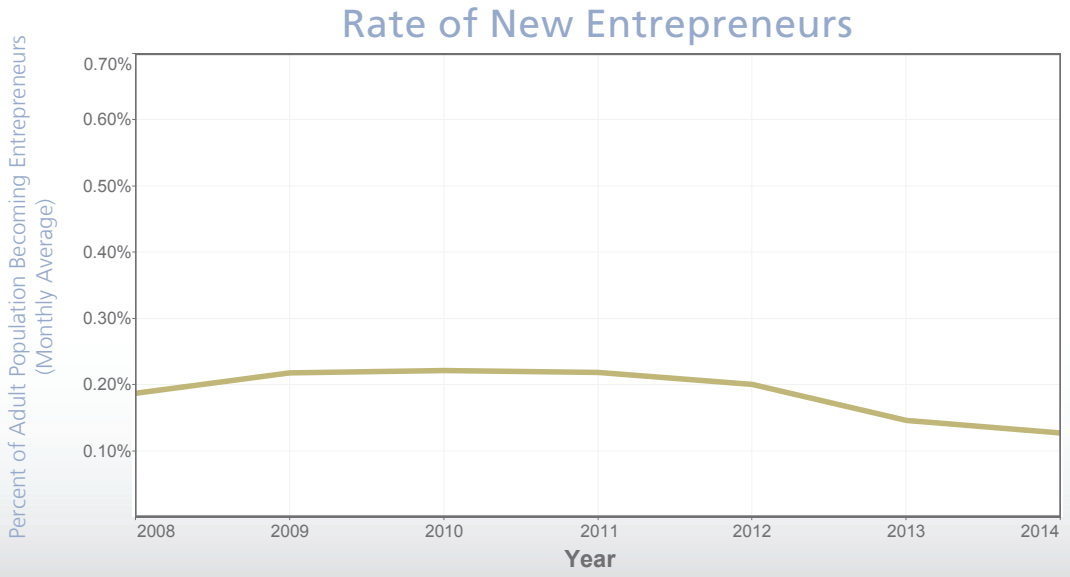
Metro: Milwaukee-Waukesha-West Allis | State: Wisconsin

Rate of New Entrepreneurs

2015 Component	2014 Component
0.13%	0.15%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

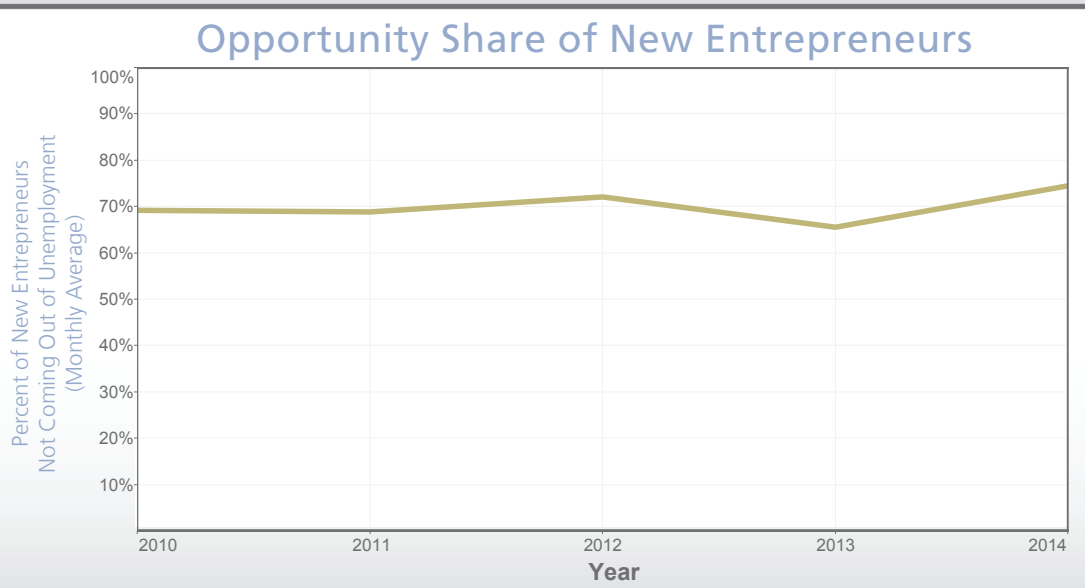


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
74.5%	65.6%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

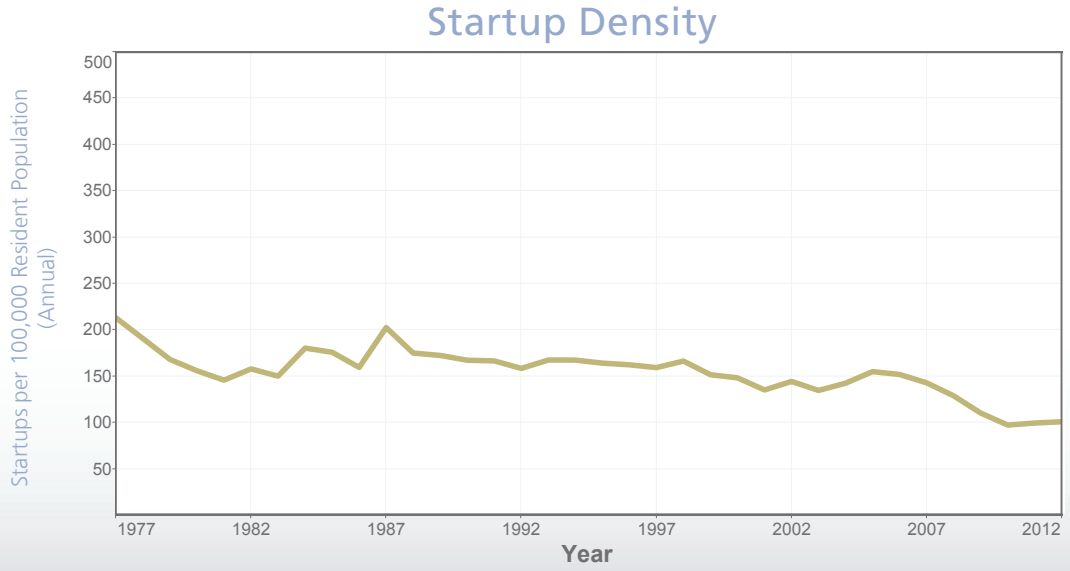


Startup Density

2015 Component	2014 Component
100.9	99.54

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Startup Activity Rank

2015	2014
40	40

METRO PROFILE

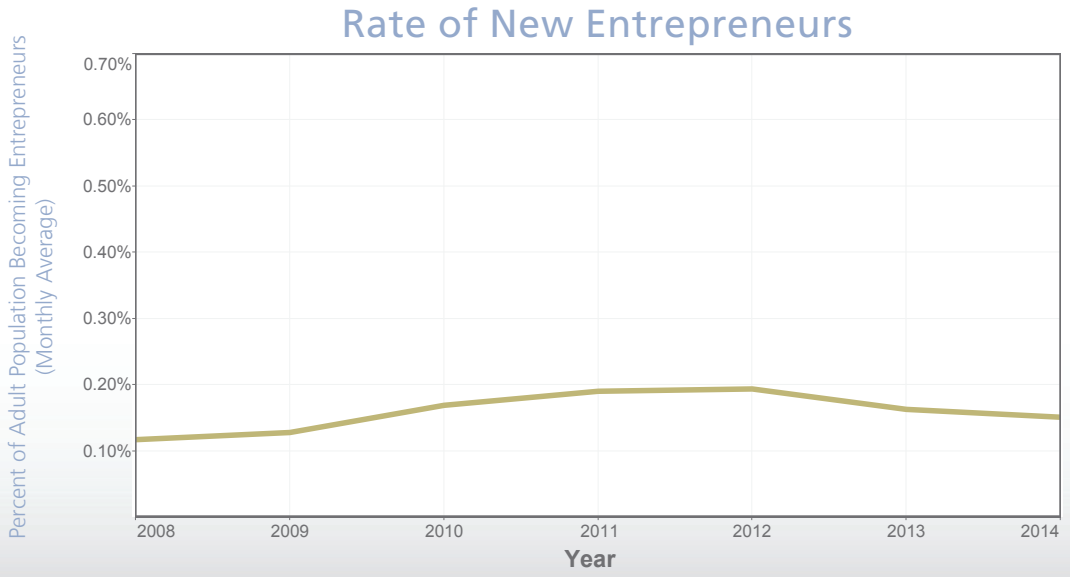
Metro: Pittsburgh | State: Pennsylvania

Rate of New Entrepreneurs

2015 Component	2014 Component
0.15%	0.16%

Early and broad measure of business ownership. Measures the percent of the adult population of an area that became entrepreneurs in a given month.

Source: Author calculations from CPS.
3-year moving average.

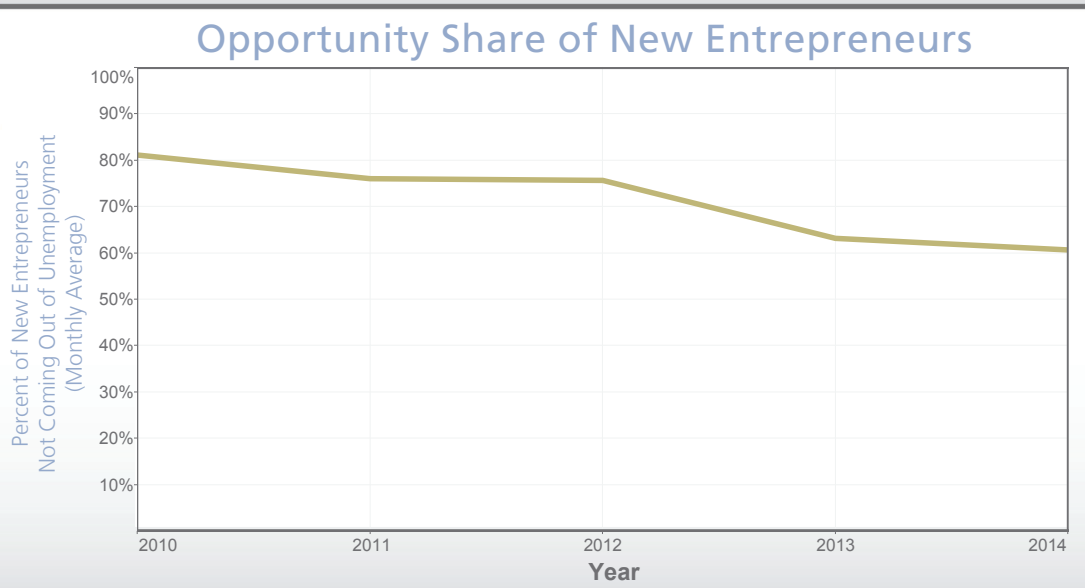


Opportunity Share of New Entrepreneurs

2015 Component	2014 Component
60.7%	63.2%

Broad indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities. Measures the percent of new entrepreneurs who were not unemployed before starting their businesses.

Source: Author calculations from CPS.
5-year moving average.

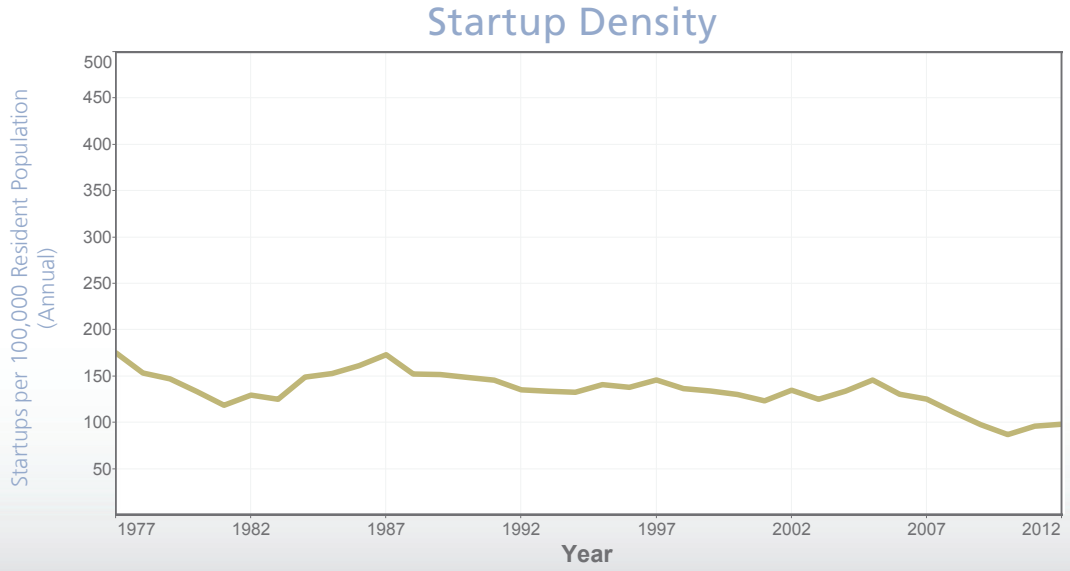


Startup Density

2015 Component	2014 Component
98.26	96.15

Number of startup firms per 100,000 resident population. Startup businesses here are defined as firms less than one-year old employing at least one person besides the owner.

Source: Author calculations from BDS and BEA.
Yearly measure.



Methodology and Framework

In this part of the report, we discuss the methodology and framework for the Kauffman Index: Startup Activity reports across all geographic levels: national, state, and metropolitan area.

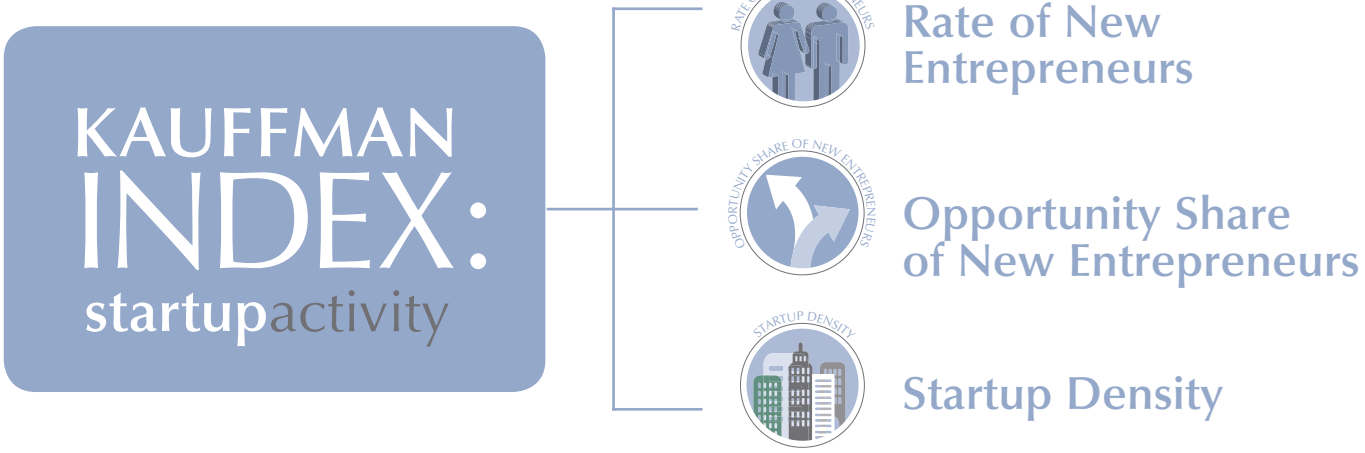
Definitions of Startup Activity Index Components

The Kauffman Index: Startup Activity is calculated based on three components: Rate of New Entrepreneurs, Opportunity Share of New Entrepreneurs, and Startup Density. In this section, we will share detailed definitions of each one of these components.

Component A: Rate of Entrepreneurs

Component A of the Kauffman Index: Startup Activity comes from the Current Population Survey (CPS) and is calculated by author Rob Fairlie. The CPS microdata capture all business owners, including those who own incorporated or unincorporated businesses, and those who are employers or non-employers. To create the Rate of New Entrepreneurs (formerly known as the Kauffman Index of Entrepreneurial Activity), all individuals who do not own a business as their main job are identified in the first survey month. By matching CPS files, it is then determined whether these individuals own a business as their main job with fifteen or more usual hours worked in the following survey month. Reducing the likelihood of reporting spurious changes in business ownership status from month to month, survey-takers ask individuals whether they currently have the same main job as reported in the previous month. If the answer is yes, the interviewer carries forward job information, including business ownership, from the previous month's survey. If the answer is no, the respondent is asked the full series of job-related questions. Survey-takers ask this question at the beginning of the job section to save time during the interview process and improve consistency in reporting.

The main job is defined as the one with the most hours worked. Individuals who start side businesses will,



Rate of New Entrepreneurs

- Early and broad measure of business ownership.
- Measures the percent of the U.S. adult population that became entrepreneurs, on average, in a given month.
- Includes entrepreneurs with incorporated or unincorporated businesses, with or without employees.
- Data based on the Current Population Survey, jointly produced by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics.
- What the number means:
  - For example, the Rate of New Entrepreneurs was 0.35 percent for Colorado in the 2015 Index. That means that, on average, 350 people out of 100,000 adults became entrepreneurs in Colorado in each month.

therefore, not be counted if they are working more hours on a wage/salary job. The requirement that business owners work fifteen or more hours per week in the second month is imposed to rule out part-time business owners and very small business activities. It may, therefore, result in an understatement of the percent of individuals creating any type of business.

The Rate of New Entrepreneurs also excludes individuals who owned a business and worked fewer than fifteen hours in the first survey month. Thus, the Rate of New Entrepreneurs does not capture business owners who increased their hours from less than fifteen per week in one month to fifteen or more hours per week in the second month. In addition, the Rate of New Entrepreneurs does not capture when these business owners changed from non-business owners to business owners with less than fifteen hours worked. These individuals are excluded from the sample but may have been at the earliest stages of starting a business. More information concerning the definition is provided in Fairlie (2006).

The Rate of New Entrepreneurs component of the Startup Activity Index also may overstate entrepreneurship rates in certain respects because of small changes in how individuals report their work status. Longstanding business owners who also have salaried positions may, for example, report that they are not business owners as their main jobs in a particular month because their wage/salary jobs had more hours in that month. If the individuals then switched to having more hours in business ownership the following month, it would appear that a new business had been created.

For the definition of the Rate of New Entrepreneurs discussed in this report, all observations from the CPS with allocated labor force status, class of worker, and hours worked variables are excluded. The Rate of New Entrepreneurs is substantially higher for allocated or imputed observations. These observations were included in the first Kauffman Index report (Fairlie 2005). See Fairlie (2006) for a complete discussion of the issues and comparisons between unadjusted and adjusted Rate of New Entrepreneurs.

The CPS sample was designed to produce national and state estimates of the unemployment rate and additional labor force characteristics of the civilian, non-institutional population ages sixteen and older. The total national sample size is drawn to ensure a high level of precision for the monthly national unemployment rate. For each of the fifty states and the District of Columbia, the sample also is designed to guarantee precise estimates of average annual unemployment rates, resulting in varying sample rates by state (Polivka 2000). Sampling weights provided by the CPS, which also adjust for non-response and post-stratification raking, are used for all national and state-level estimates. The CPS also can be used to calculate metropolitan area estimates, but only for the largest metropolitan areas in the United States. For example, the Bureau of Labor Statistics reports annual labor-force participation and unemployment rates for the largest fifty-four MSAs.[5] We focus on the forty largest MSAs in our analysis and calculate moving averages when needed to ensure adequate precision in all reported estimates.

Component B: Opportunity Share of New Entrepreneurs

Building from the same data used for component A, the Opportunity Share of New Entrepreneurs is defined as the

5. See http://www.bls.gov/opub/gp/pdf/gp13_27.pdf for Bureau of Labor Statistics use of the CPS at the metropolitan-area level.

Opportunity Share of New Entrepreneurs

- Proxy indicator of the percent of new entrepreneurs starting businesses because they saw market opportunities.
- Measures the percentage of new entrepreneurs who were not unemployed before starting their businesses (e.g., have been previously working for another organization or studying in school).
- This indicator is important for two reasons: 1) Entrepreneurs who were previously unemployed seem to be more likely to start businesses with lower growth potential, out of necessity. Thus, the Opportunity Share of New Entrepreneurs serves as a broad proxy for growth prospects. 2) This measure helps us understand changes in the Rate of New Entrepreneurs motivated by weak job markets, such as the one we had after the recent Great Recession. If the Rate of New Entrepreneurs goes up but the Opportunity Share of New Entrepreneurs is low, we can see that many new entrepreneurs are starting businesses coming out of unemployment, and arguably started their companies largely out of necessity.
- Data based on the Current Population Survey jointly produced by the U.S. Census Bureau and the U.S. Bureau of Labor Statistics.
- What the number means:
  - For example, the United States Opportunity Share of New Entrepreneurs was 79.57 percent in the 2015 Index. That means that approximately eight out of every ten new entrepreneurs in this year started their businesses coming out of another job, school, or other labor market states. Meanwhile, two out of ten started their businesses directly coming out of unemployment.

share of the new business owners that are coming out of wage and salary work, school, or other labor market statuses. Alternatively, individuals can start businesses coming out of unemployment. The initial labor market status is defined in the first survey month. Rate of New Entrepreneurs is measured in the second (or following) survey month.

Component C: Startup Density

The Startup Density component of the Kauffman Index: Startup Activity uses U.S. Census Bureau data from the Business Dynamics Statistics, and it measures the number of new employer firms normalized by the population of a given area. We define startups here as employer firms that are younger than one year old, and we divide the number of startups in a region by every 100,000 people living in the area to arrive at the Startup Density measure. Our definition here is largely based on the entrepreneurship density measure suggested by our Kauffman Foundation colleagues Stangler and Bell-Masterson (2015) in their *Measuring an Entrepreneurial Ecosystem* paper.

Calculating the Startup Activity Index

The Kauffman Index: Startup Activity provides a broad index measure of business startup activity in the United States. It is an equally weighted index of three normalized measures of startup activity. The three component measures of the Startup Activity Index are: i) the Rate of New Entrepreneurs among the U.S. adult population, ii) the Opportunity Share of New Entrepreneurs, which captures the percentage of new entrepreneurs primarily driven by "opportunity" vs. by "necessity," and iii) the Startup Density (new employer businesses less than one year old, normalized by population).

Each of these measures is normalized by subtracting the mean and dividing by the standard deviation for that measure (i.e., creating a z-score for each variable).[6] This creates a comparable scale for including the three measures in the Startup Activity Index. We use national annual estimates from 1996 to the latest year available (2014) to calculate the mean and standard deviation for each of the CPS-based components. Similarly, we use national annual numbers from 1994 to the latest year available (2012) to calculate the mean and standard deviation for the BDS-based component of the Index. The same normalization method is used for all three geographical levels—national, state, and metropolitan area—for comparability and consistency over time.

The components we use for the national level Startup Activity Index are all annual numbers. The Rate of New Entrepreneurs covers years from 1996 to the latest year available (2014). The Opportunity Share of New Entrepreneurs covers years from 1996 to the latest year available (2014). The Startup Density covers years from 1994 to the latest year available (2012).

The Rate of New Entrepreneurs and the Opportunity Share of New Entrepreneurs components of the state-level Startup Activity Index are calculated on three-year moving averages with the same yearly coverage as the national level numbers. The reason we do three-year moving averages on the sample-based CPS measures is to reduce

Startup Density

- Number of startup firms by total population.
- Startup businesses here are defined as employer firms less than one year old employing at least one person besides the owner. All industries are included on this measure.
- Measures the number of new employer startup businesses normalized by the population of an area. Because companies captured by this indicator have employees, they tend to be at a more advanced stage than are the companies in the Rate of New Entrepreneurs measure.
- Data based on the U.S. Census's Business Dynamics Statistics.
- What the number means:
  - For example, the 2015 Index Startup Density for the New York metropolitan area was 197.3 by 100,000 population. That means that, for every 100,000 people living in the New York metro area, there were 197.3 employer startup firms that were less than one year old in this year.

6. This is one of the normalization methods recommended by the OECD and the Joint Research Centre from the European Commission in the *Handbook on Constructing Composite Indicators* (2008).

sampling issues. Because these are three-year moving averages with annual estimates starting in 1996, the first year for which three-year moving averages are available is 1998. The Startup Density component of the Index is presented yearly, from 1994 to the latest year available (2012).

For the metropolitan-area level Startup Activity Index, we present the Rate of New Entrepreneurs component on a three-year moving average from 2008 to the latest year available (2014). Because these are three-year moving averages, annual estimates are first calculated in 2006. The Opportunity Share of New Entrepreneurs component of the Startup Activity Index is presented on five-year moving averages, starting in 2010 and going up to the latest year available (2014). Annual estimates used to calculate the moving average start in 2006. Again, the reason behind presenting moving averages is to reduce sampling issues. The Startup Density component of the Index is presented yearly, from 1994 to the latest year available (2012).

Data Sources and Component Measures

Data Sources

In this section, we discuss the underlying data sources used to calculate each of the components of the Startup Activity Index.

Rate of New Entrepreneurs and Opportunity Share of New Entrepreneurs

To calculate the Rate of New Entrepreneurs and the Opportunity Share of New Entrepreneurs, the underlying dataset used is the basic monthly files of the Current Population Survey. These surveys, conducted monthly by the U.S. Bureau of the Census and the Bureau of Labor Statistics, represent the entire U.S. population and contain observations for more than 130,000 people each month. By linking the CPS files over time, longitudinal data are created, allowing for the examination of the Rate of New Entrepreneurs. Combining the monthly files creates a sample size of roughly 700,000 adults ages twenty to sixty-four each year.

Households in the CPS are interviewed each month over a four-month period. Eight months later, they are re-interviewed in each month of a second four-month period. Thus, individuals who are interviewed in January, February, March, and April of one year are interviewed again in January, February, March, and April of the following year. The CPS rotation pattern makes it possible to match information on individuals monthly and, therefore, to create two-month panel data for up to 75 percent of all CPS respondents. To match these data, the household and individual identifiers provided by the CPS are used. False matches are removed by comparing race, sex, and age codes from the two months. After removing all non-unique matches, the underlying CPS data are checked extensively for coding errors and other problems.

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

Startup Density

We use two types of datasets to calculate Startup Density: a firm-level dataset and a population dataset.

For the firm-level dataset, we use the U.S. Census Business Dynamics Statistics (BDS), which is constructed using administrative payroll tax records from the Internal Revenue Service (IRS). The BDS data present, among other things, numbers of firms tabulated by age and by geography (national, state, and metropolitan area). We make use of that data to calculate the raw number of employer firms younger than one year old by different geographical levels. We then normalize this number by population to arrive at the Startup Density of an area. To calculate population, we use data from Bureau of Economic Analysis (BEA).

Matching BDS state and national numbers to BEA population data is a non-issue, because the definitions of the geographical areas are the same. However, this is slightly different for metropolitan areas. Because metropolitan area definitions may vary across datasets, we used the Office of Management and Budget (OMB) definitions for metropolitan areas from December 2009 to calculate Startup Density. This is the definition of metros used on the BDS dataset, and it means that, to calculate population using the BEA, we aggregated population data from the county level up to the metropolitan level.

We match the forty largest metropolitan areas in the United States by population using the OMB 2009 definition of metros and the BEA population data to their counterparts in the CPS dataset. This was the most appropriate aggregation method because neither the CPS nor the BDS dataset provides county-level data. To diminish issues of changing metro definitions, we only present the top forty metropolitan areas in the United

States—in which shifts in county composition are less likely to cause big shifts in total population or business activity—and only use CPS data for metros in the most recent years, from 2006 to the most recent year available (2014). The metropolitan area codes listed on the CPS have perfect matches to metropolitan area codes on BDS except for two metro areas: Boston-Cambridge-Quincy, MA-NH and Providence-New Bedford-Fall River, RI-MA.

Standard Errors and Confidence Intervals

Rate of New Entrepreneurs and Opportunity Share of New Entrepreneurs

The analysis of Rate of New Entrepreneurs by state includes confidence intervals that indicate confidence bands of approximately 0.15 percent around the Rate of New Entrepreneurs. While larger states have smaller confidence bands, the smallest states have larger confidence bands of approximately 0.20 percent. Oversampling in the CPS ensures that these small states have sample sizes of at least 5,000 observations and, therefore, provides a minimum level of precision.

The standard errors used to create the confidence intervals reported here may understate the true variability in the state estimates. Both stratification of the sample and the raking procedure (post-stratification) will reduce the variance of CPS estimates (Polivka 2000 and Train, Cahoon and Maken 1978). On the other hand, the CPS clustering (i.e., nearby houses on the same block and multiple household members) leads to a larger sampling variance than would have been obtained from simple random sampling. It appears as though the latter effect dominates in the CPS, and treating the CPS as random generally understates standard errors (Polivka 2000). National unemployment rate estimates indicate that treating the CPS as a random sample leads to an understatement of the variance of the unemployment rate by 23 percent. Another problem associated with the estimates reported here is that multiple observations (up to three) may occur for the same individual.

All of the reported confidence intervals should be considered approximate, as the actual confidence intervals may be slightly larger. The complete correction for the standard errors and confidence intervals involves obtaining confidential replicate weights from the BLS and employing sophisticated statistical procedures. Corrections for the possibility of multiple observations per person, which may create the largest bias in standard errors, are made using statistical survey procedures for all reported confidence intervals. It is important to note, however, that the estimates of the Rate of New Entrepreneurs are not subject to any of these problems. By using the sample weights provided by the CPS, all estimates of the Rate of New Entrepreneurs are correct.

Startup Density

Because the BDS is based on administrative data covering the overall employer business population, sampling concerns like standard errors and confidence intervals are irrelevant. Nonetheless, nonsampling errors could still occur. These could be caused, for example, by data entry issues with the IRS payroll tax records or by businesses submitting incorrect employment data to the IRS. However, these are probably randomly distributed and are unlikely to cause significant biases in the data.[7] Please see Jarmin and Miranda (2002) for a complete discussion of potential complications on the dataset caused by changes in the administrative data on which the BDS is based.

Advantages over Other Possible Measures of Entrepreneurship

The Kauffman Index: Startup Activity has several advantages over other possible measures of entrepreneurship based on household or business-level data. We chose to use two distinct datasets: one based on individuals (CPS) and another one based on businesses (BDS). This allows us to study both entrepreneurs and the startups they create. These datasets have complementary strengths that make this Index a robust measure of startup activity.

Rate of New Entrepreneurs and Opportunity Share of New Entrepreneurs

The Rate of New Entrepreneurs and Opportunity Share of New Entrepreneurs components of the Startup Activity Index are based on the CPS, and this dataset provides four prominent advantages as an early and broad measure of startup activity. First, the CPS data are available only a couple of months after the end of the year, whereas even relatively timely data such as the American Community Survey (ACS) take more than

7. Based on "Reliability of the Data" section of the Business Dynamics Statistics Overview page. http://www.census.gov/ces/dataproducts/bds/overview.html#reliability.

a year to be released. Second, these components of the Startup Activity Index include all types of business activities (employers, non-employers, unincorporated and incorporated businesses), but do not include small-scale side business activities such as consulting and casual businesses (because only the main job activity is recorded, and the individual must devote fifteen or more hours a week to working in the business). Third, the panel data created from matching consecutive months of the CPS allow for a dynamic measure of entrepreneurship, whereas most datasets only allow for a static measure of business ownership (e.g., ACS). Fourth, the CPS data include detailed information on demographic characteristics of the owner, whereas most business-level datasets contain no information on the owner (e.g., employer and non-employer data).

It is worth mentioning that the differences between the CPS components of the Kauffman Index also differ from another entrepreneurship measure that may, on a first glance, look similar: the Global Entrepreneurship Monitor's Total early-stage Entrepreneurial Activity (TEA). The TEA captures the percentage of the age eighteen to sixty-four population who currently are nascent entrepreneurs (i.e., individuals who are actively involved in setting up a business) or who are currently owner-managers of new businesses (i.e., businesses with no payments to owners or employees for more than forty-two months). The nascent entrepreneurs captured in the TEA who are still in the startup phase of business creation are not necessarily captured in the Kauffman Index Rate of New Entrepreneurs because they may not be working on the new business for fifteen hours or more per week. The CPS components of the Kauffman Index also differ from the TEA in that, because they are based on panel data, they capture entrepreneurship at the point in time when the business is created. In addition, the GEM measures in the United States use a much smaller sample, allowing for significant estimation challenges.

Startup Density

The Startup Density component of the Startup Activity Index, based on the BDS, presents four main advantages compared to other business-level datasets. First, it is based on administrative data covering the overall employer business population. As such, it has no potential sampling issues. Second, it has detailed coverage across all levels of geography, including metropolitan areas. Third, it provides firm-level data, rather than just establishment-level data. This is an important feature because new establishments may show another location of an existing firm, rather than an actual new business. Fourth, it provides detailed age breakdown of firms, allowing us to clearly identify new and young firms.

A dataset that is similar to the BDS data we use is the Business Employment Dynamics product from the Bureau of Labor Statistics. We chose not to use it for this report because of two distinct advantages we see the BDS having over the BED. First, the BDS tracks firm-level data, as opposed to the establishment-level data tracked by the BED. Second, the BDS has data available at the metropolitan level, while the BED does not.

Because the BED tracks establishments rather than firms, the numbers from the BDS are different than the ones on the BED. Nonetheless, the trends on the two datasets move largely in tandem, and usually point in the same direction.

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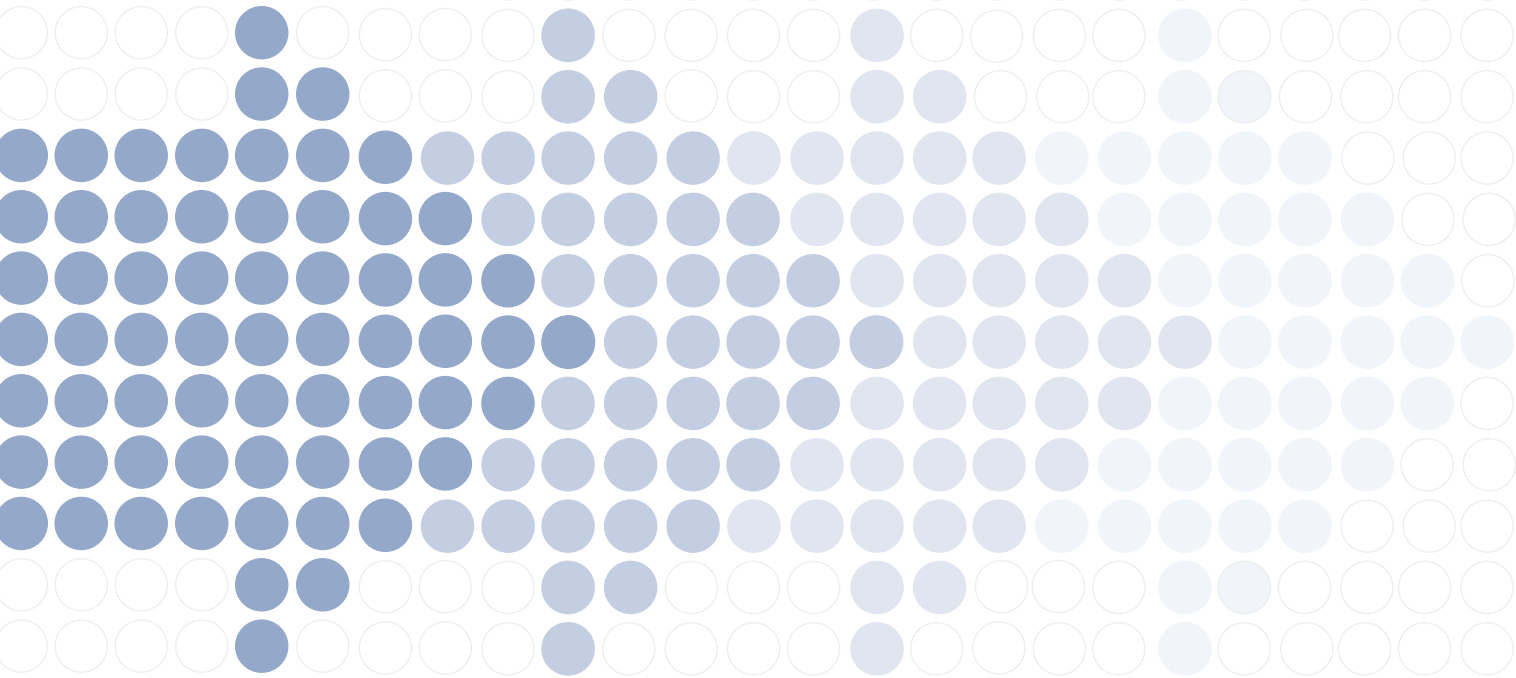

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