

THE MOST ENTREPRENEURIAL
METROPOLITAN AREA?

Jared Konczal
Senior Analyst, Kauffman Foundation

November 2013

Ewing Marion
KAUFFMAN
Foundation

THE MOST ENTREPRENEURIAL
METROPOLITAN AREA?

Jared Konczal
Senior Analyst, Kauffman Foundation

November 2013

Ewing Marion
KAUFFMAN
Foundation

*The author thanks Jordan Bell-Masterson, Lacey Graverson, and Dane Stangler
of the Kauffman Foundation.*

© 2013 by the Ewing Marion Kauffman Foundation. All rights reserved.

THE MOST ENTREPRENEURIAL METROPOLITAN AREA?

INTRODUCTION

Research has established a link between young firms and job creation.¹ This has generated great levels of interest about entrepreneurship in local areas and questions about where are startups located in the United States. That is, what city is the most entrepreneurial? Is it Silicon Valley? New York? Boston? Seattle? Perhaps Austin? These cities are the common answers. In truth, up until now we haven't really known the answer, because the hard data were not available. Startup data were available for the U.S. states, but for cities, we had to use proxies like self-employment or data on small businesses. Data about startups at the local level did not have an empirical signature—there simply has not been data about firms and their age to this point. However, available to the public for the first time, federal government data now allows us to look at startups at the metropolitan area level.

In this paper, we identify forty metropolitan areas, each some of the largest of their type, with high startup densities, and discuss their trends over the past two decades. Some of the metros are the usual suspects, like parts of Silicon Valley and New York, but we wager there are many areas in the United States that many have overlooked. The measure we use makes it difficult to identify high-impact startups, or the popular high-tech sectoral focus. There is other work we point to for these sorts of analyses, mainly work with the Inc. 500 and recent work on startup density in the tech sectors.² For our purposes, though, this data gives us a broad picture of startups and a look at entrepreneurship at a level of granularity never before available.

- The United States has witnessed a significant downtrend in overall new firm formation after 2006, with a rebound not occurring until 2011.³ Across the U.S., our density measure follows a similar trend.⁴ None of our selected Metropolitan Statistical Areas (MSAs) escapes the downtrend. However, we see variations at the MSA-level for when the decline starts, in some cases beginning after 2004, and in others after 2005. We also see recoveries beginning at different times, and in some cases not at all.
- As a group, the largest MSAs fared slightly better than other MSA sizes; they have a slightly better recovery from the post-2006 downtrend.
- We see a clear relationship between startup density and the housing bubble in Florida MSAs. These MSAs appear to 'ride the wave' of the bubble, with huge increases in startup density during the peak of the bubble, and a sharp decline

¹ See Haltiwanger et al. (2013).

² For Inc. 500 data, see interactive charts and reports at www.kauffman.org/inc500. For tech density, see Hathaway (2013) and Stangler (2013).

³ See Reedy and Litan (2011) for a discussion, and for example, Hathaway et al. (2013) for presentation of the most recent 2011 data.

⁴ See Figure 20 in the Appendix.

after it pops. When we look at the size of startups, it is clear that the smallest size, that of one to four employees, is driving the startup bubble.

- We do not identify consistently standout MSAs without caveats. An MSA that is at the top of its cohort in one year frequently is overtaken by another the next, or there is another mitigating factor for its high ranking. Therefore, we do not use this analysis to rank MSAs—it's only a piece of the puzzle.

DATA OVERVIEW

The Office of Management and Budget (OMB) provides official definitions for MSAs in the United States. These MSAs comprise densely populated areas with close economic ties. For example, the MSA of Kansas City, KS-MO is made up of counties from both the urban core of the city and suburbs in Kansas and Missouri. This summer, MSA-level detail was added to the Census Bureau's Business Dynamics Statistics (BDS), a public-use dataset of non-farm, private-sector firms and establishments with paid employees from 1977–2011. In this paper, we match population estimates compiled by the Bureau of Economic Analysis (BEA) to BDS firm data to compute a weighted measure of startup activity at the MSA level.⁵

We will not discuss all 366 OMB-defined MSAs. For this paper, we are interested in comparing MSAs with relatively larger populations and high startup densities. To start, we categorize MSAs into different groups based on 2011 population estimates.⁶

- smaller than 250,000 (180)
- 250,000 to 500,000 (84)
- 500,001 to 1 million (51)
- greater than 1 million (51)

We do this to compare MSAs of a similar size rather than pitting large MSAs like Kansas City, MO-KS against smaller MSAs like Boulder, CO. An alternative approach would be to ignore MSA class sizes entirely and look at just an overall startup density measure. In fact, the highest overall startup per capita rates are disproportionately found in smaller MSAs. But this is not surprising since the smaller the population base, the more an additional firm affects the per capita measure. We want to look at MSAs of different types, not just smaller MSAs, and so we construct these MSA size categories. We further focus our efforts and select a subgroup of MSAs within each MSA size class.

First, we identify the top twenty-five largest MSAs in each size class based on 2011 population estimates. Second, we identify the top twenty-five MSAs in each size class based on the annual startup per capita rate from 1990 to 2011.⁷ For the purpose of this

⁵ Both the BDS and BEA data are based on 2009 OMB definitions of MSA geographies.

⁶ We use 2011 population estimates rather than more current estimates to match the last year of data availability of the BDS.

⁷ Based on sum total from 1990 to 2011. Using, instead, the average per capita startup rate for the same period would result in the same ranking in the same order, except for the smallest size class, which would reshuffle the order slightly and swap out two MSAs at the bottom of the rankings.

paper, we define this startup per capita rate as the number of Age 0 firms with one to forty-nine employees per 100,000 individuals.⁸

OVERVIEW OF SELECTED MSAs

Looking at the first and second lists together, we identify the largest MSAs in each size class with outsized startup densities. All told, forty MSAs appear in both tabulations, presented in Table 1. This list and analysis are not meant to represent an overall ranking of MSAs. The MSA size intervals we use are informed but could be easily changed to produce different compositions. We also could look at the top thirty or top ten in each group rather than top twenty-five. Using different cutoffs could change the MSAs in each group and therefore easily change the ‘ranking’ of the MSAs within the group.

Table 1—Most Populous and Highest Startup Density MSAs by size class

MSA	Size Class	1990–2011 Size one to forty-nine employees Age 0 Firms Per Capita Rank (within size class)	2011 Population Size Rank (within size class)
Barnstable Town, MA	smaller than 250,000	20	12
Bellingham, WA	smaller than 250,000	8	23
Lake Havasu City-Kingman, AZ	smaller than 250,000	24	25
Medford, OR	smaller than 250,000	16	21
Prescott, AZ	smaller than 250,000	7	17
Sioux Falls, SD	smaller than 250,000	23	5
Deltona-Daytona Beach-Ormond Beach, FL	250,000 to 500,000	10	1
Fayetteville-Springdale-Rogers, AR-MO	250,000 to 500,000	17	5
Port St. Lucie, FL	250,000 to 500,000	7	15
Reno-Sparks, NV	250,000 to 500,000	6	13
Santa Barbara-Santa Maria-Goleta, CA	250,000 to 500,000	25	16
Santa Rosa-Petaluma, CA	250,000 to 500,000	12	2
Spokane, WA	250,000 to 500,000	19	6
Springfield, MO	250,000 to 500,000	9	10
Albuquerque, NM	500,001 to 1 million	16	6
Bridgeport-Stamford-Norwalk, CT	500,001 to 1 million	9	5
Columbia, SC	500,001 to 1 million	23	19
Greensboro-High Point, NC	500,001 to 1 million	14	20
Knoxville, TN	500,001 to 1 million	24	23
Little Rock-North Little Rock-Conway, AR	500,001 to 1 million	11	21
North Port-Sarasota-Bradenton, FL	500,001 to 1 million	2	22
Omaha-Council Bluffs, NE-IA	500,001 to 1 million	20	7
Oxnard-Thousand Oaks-Ventura, CA	500,001 to 1 million	13	12
Tucson, AZ	500,001 to 1 million	25	1

⁸ We use per capita weighting instead of the ratio of startups to all firms. Given historical survival patterns of new firms and establishments over time—see, for example, <http://www.bls.gov/bdm/entrepreneurship/entrepreneurship.htm> and Stangler and Kedrosky (2010)—we naturally should expect a decrease in the share of startups as a total of all firms. Unless the number of new startups created each year increases indefinitely, the accumulation of surviving firms gradually will account for an increasing share of the economy.

Tulsa, OK	500,001 to 1 million	10	3
Atlanta-Sandy Springs-Marietta, GA	greater than 1 million	8	9
Dallas-Fort Worth-Arlington, TX	greater than 1 million	21	4
Denver-Aurora-Broomfield, CO	greater than 1 million	2	21
Los Angeles-Long Beach-Santa Ana, CA	greater than 1 million	17	2
Miami-Fort Lauderdale-Pompano Beach, FL	greater than 1 million	3	8
Minneapolis-St. Paul-Bloomington, MN-WI	greater than 1 million	23	16
New York-Northern New Jersey-Long Island, NY-NJ	greater than 1 million	12	1
Phoenix-Mesa-Glendale, AZ	greater than 1 million	20	14
Portland-Vancouver-Hillsboro, OR-WA	greater than 1 million	7	23
San Diego-Carlsbad-San Marcos, CA	greater than 1 million	18	17
San Francisco-Oakland-Fremont, CA	greater than 1 million	15	11
Seattle-Tacoma-Bellevue, WA	greater than 1 million	5	15
Tampa-St. Petersburg-Clearwater, FL	greater than 1 million	9	18
Washington-Arlington-Alexandria, DC-VA-MD-WV	greater than 1 million	25	7

The MSA of one of the popularly perceived cities of entrepreneurship, Boston, is not on this list. Boston-Cambridge-Quincy, MA-NH is part of the MSAs with 2011 populations above 1 million people, but it does not have as high a measure of startup density. It's just outside the top ten in terms of raw total of size one to forty-nine startups, but when you weight by population, it is number thirty within its size class. Other work has shown that the Boston area is home to a high density of high-tech startups,⁹ but on this more general measure, it does not stand out. While San Francisco-Oakland-Fremont, CA is on the list, the central core of Silicon Valley, found in San Jose-Sunnyvale-Santa Clara, CA is absent. San Jose-Sunnyvale-Santa Clara is within the top twenty-five of the per capita measure, but it has a smaller population than others in the greater than 1 million MSA class (thirty-first), and so is left out. Similar to the Boston area, the Silicon Valley area is home to a high density of high-tech startups,¹⁰ but not on this general measure. Both of these MSAs and others are included in charts in the Appendix, but we do not discuss them in the main body of this paper.

We notice some regional grouping. Washington state and California each have four MSAs on the list, and Florida has five. Florida's presence seems tied to the housing bubble leading up to the Great Recession. Research has elucidated the link between housing prices and job creation and destruction in young firms, particularly in Construction, Retail Trade, Finance, Insurance, Real Estate, and Services industries— young firms are more susceptible to housing price shocks.¹¹ Some Florida MSAs, in particular, appear to have small startups 'riding the wave' of the housing bubble, with per capita rates increasing when the housing market was healthy and decreasing when the bubble burst. We will show that the trend is driven mostly by startups of the smallest size class, one to four employees. One interpretation could be that it is this very specific small size of startups that are most susceptible to housing price shocks; or a corollary,

⁹ Hathaway (2013).

¹⁰ Ibid.

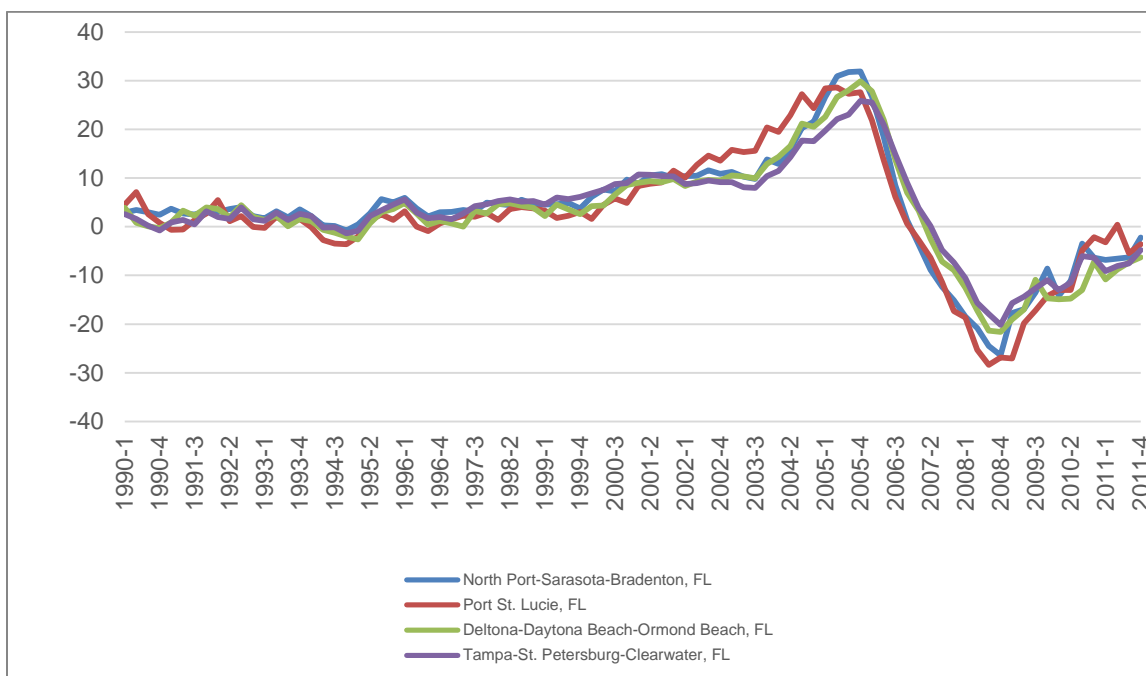
¹¹ Fort et al. (2013).

that firms that can grow quickly within their first year are largely immunized from the bubble.

We do not have industry data at the MSA level, but we conjecture many of these small Florida startups were found in housing-related industries. Whether this is true or not, startups in non-housing sectors would likely be affected as well, as research has demonstrated the reliance of startups on housing prices/home equity for financing.¹²

For these Florida MSAs, the per capita startup rate is highly correlated to the Federal Housing Finance Agency's (FHFA) housing price index.¹³ Later in this report, we will chart startup density over time. The spike and valley during the early- to mid-2000s in Figure 1 below will reappear on multiple occasions.

Figure 1—Quarterly House Price Index, Select Florida MSAs



Source: Federal Housing Finance Agency

We don't have as clear an answer for Washington state and California. Both California and Florida were hotspots of the housing bubble, but we do not see the same spikes in the startup per capita rate in California as we do in Florida. We will discuss some possibilities at the conclusion of this paper.

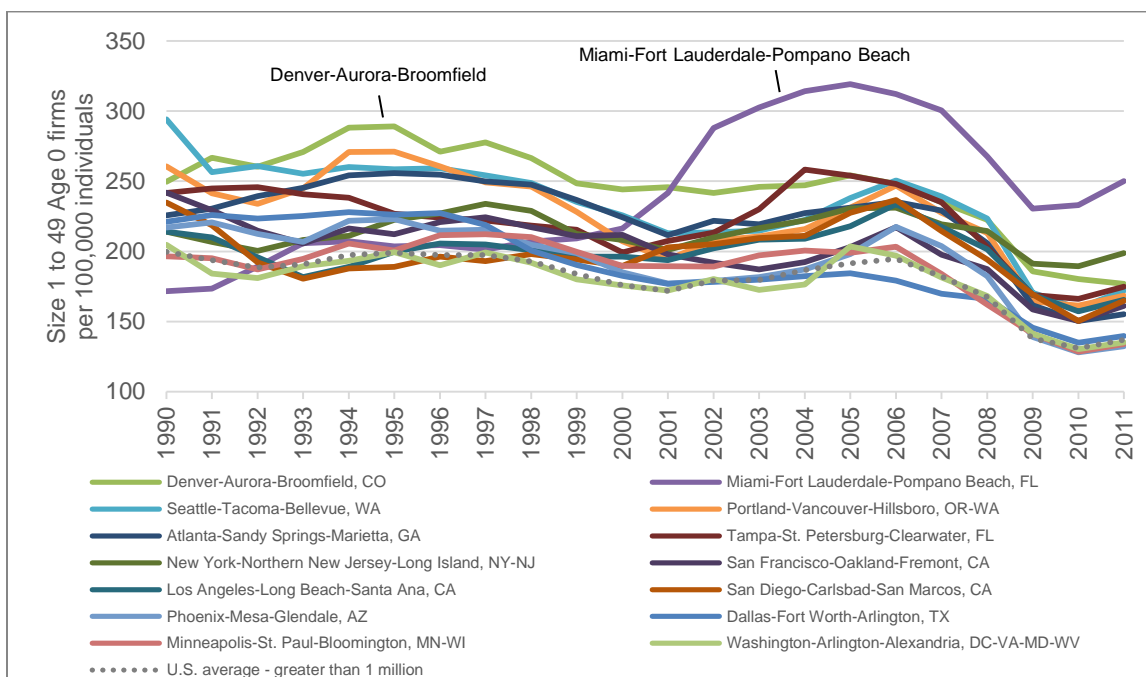
¹² Robb and Robinson (forthcoming).

¹³ Other data in this report are based on 2009 OMB MSA definitions. FHFA data in this chart are based on 2013 OMB MSA definitions, which makes some of the MSAs incomparable across years. The FHFA also divides some MSAs into MSA Divisions (MSADs) when the MSAs are sufficiently large. Therefore, data in other parts of this report are not 1:1 comparable to the FHFA data, and we do not include all MSAs in this FHFA chart.

In the subsequent sections of this paper, we group the MSAs by size and present our startup rate measure in two ways—the measure itself, and then as a ratio relative to the U.S. average for the MSA population size. We then present other data for the MSAs and discuss trends. We then offer commentary and discussion of the data. Our discussion focuses on MSAs with higher startup densities. For a contrasting look at MSAs with lower startup densities, see the additional charts in the Appendix for MSAs that made the list for having a large population but not a high startup density.

CHARTS AND TRENDS—MSAS GREATER THAN 1 MILLION POPULATION¹⁴

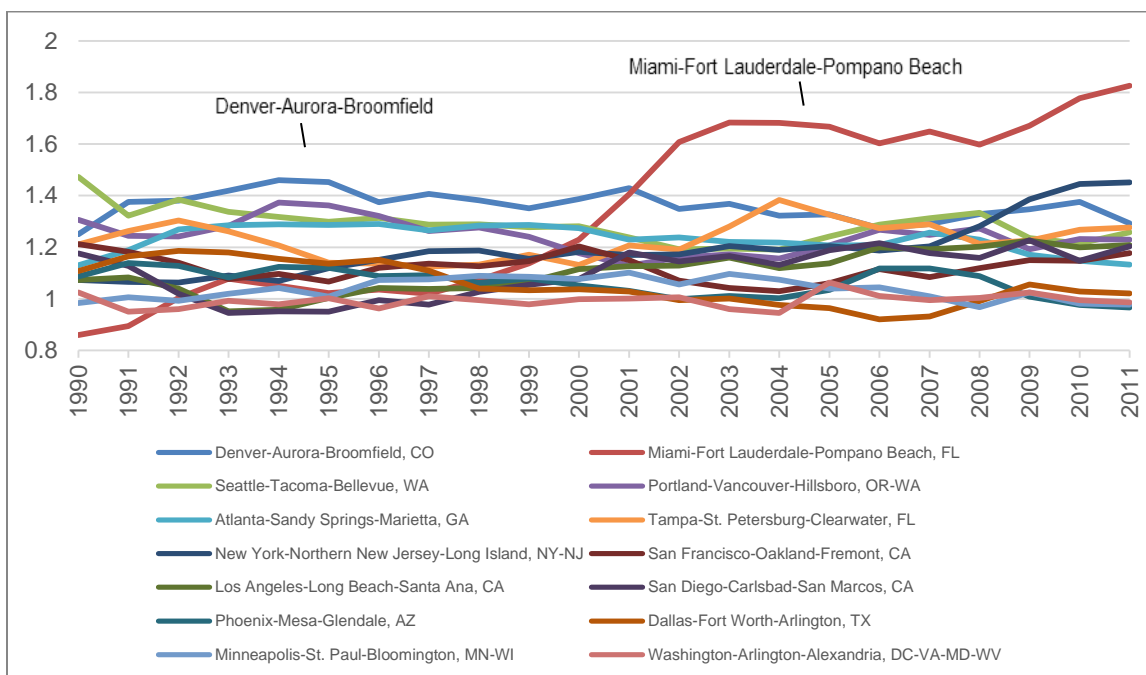
Figure 2—Per capita startup rate, size one to forty-nine



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

¹⁴ Out of the fifty MSAs in both the size ranking and per capita ranking for MSAs greater than 1 million in 2011 population, fourteen appear on both lists. Within the top twenty-five of their size class, their average per capita rank is thirteen and average size rank is twelve.

Figure 3—Per capita startup rate ratio to U.S. average for MSA population size

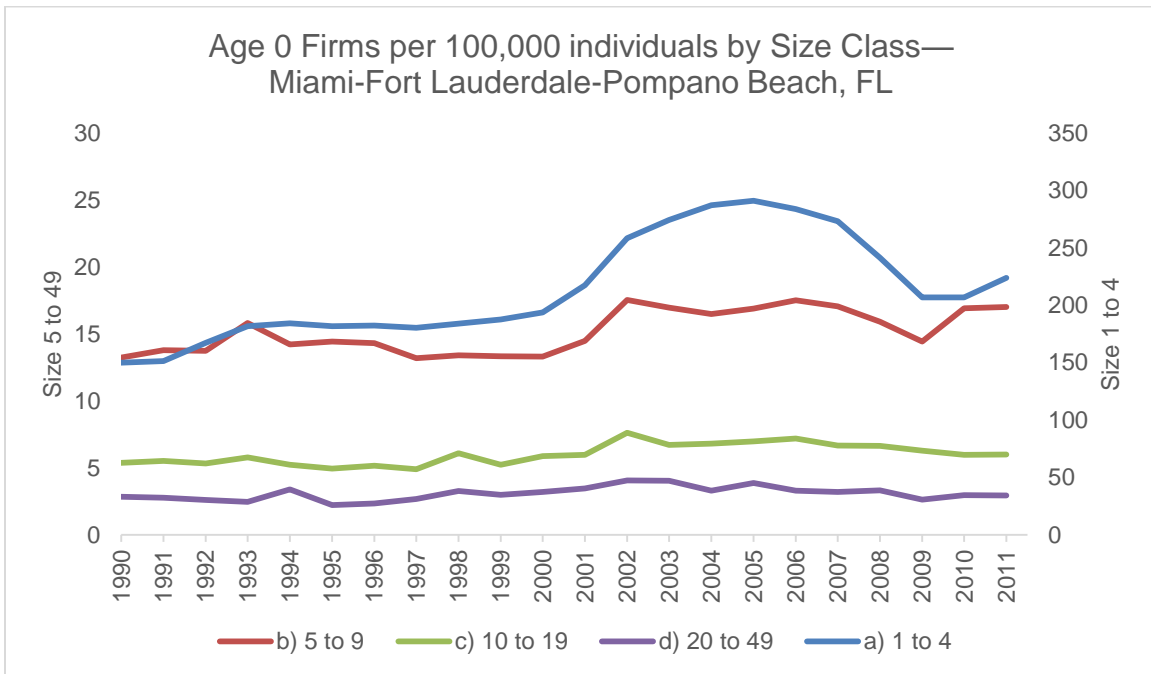


Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Denver-Aurora-Broomfield stands out across the period, and Miami-Fort Lauderdale-Pompano Beach really stands out in the last decade. We also see some gaps between MSAs in the cohort, with the top and bottom each year separated by a little more than one-hundred startups per capita on average. We see significant variances within the group, and, except in a few cases, a great deal of change in the yearly rankings within the cohort.

If we look a little more closely at Miami-Fort Lauderdale-Pompano Beach, we see it is firms of the smallest size class that are having an outsized impact.

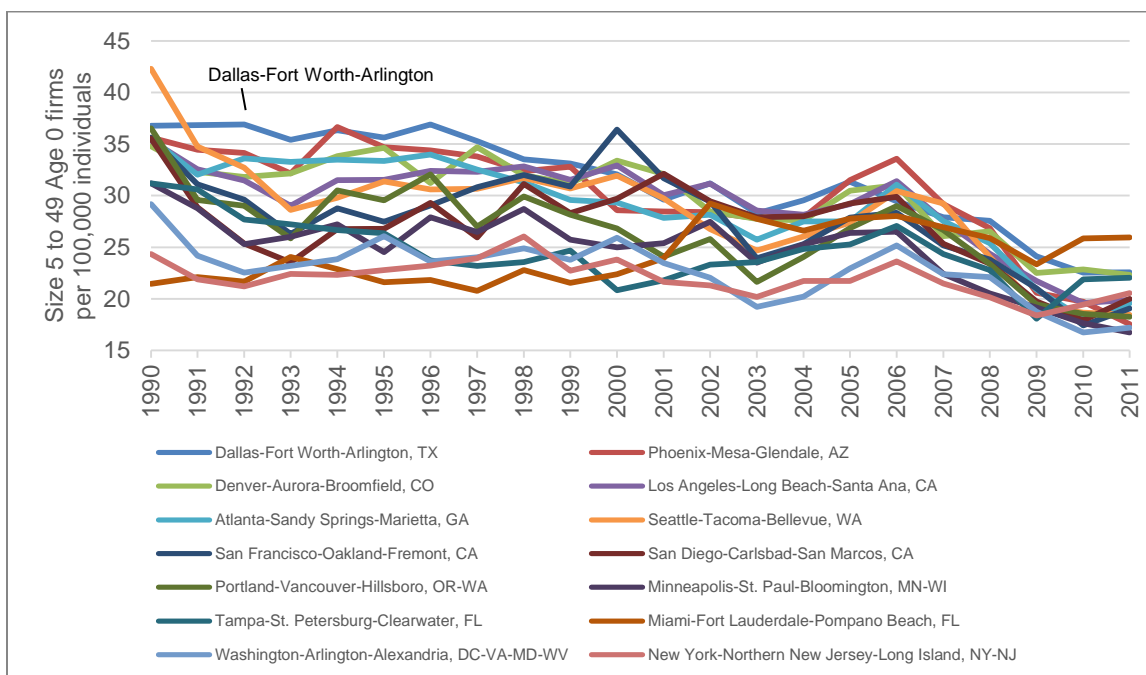
Figure 4—Miami-Fort Lauderdale-Pompano Beach startup composition



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

If we drop the smallest size class for all MSAs (Figure 4), in recent years, Miami-Ford Lauderdale-Pompano Beach is still outperforming the cohort, but not as drastically. There is a bit of a role reversal as well for some MSAs. While Dallas-Fort Worth-Arlington trends toward the bottom of the one to forty-nine size measure, it trends toward the top when you consider startups of size five to forty-nine employees.

Figure 5—Per capita startup rate, size five to forty-nine



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Compared to the National Downtrend

Nationally, the decline in startup density started after 2006 and rebounded in 2011. When we look at size one to forty-nine startups (Figure 2), we see that most MSAs in this cohort follow this recovery trend. We outline the exceptions.

Decline started after 2004:
Tampa-St. Petersburg-Clearwater, FL

Decline started after 2005:
Denver-Aurora-Broomfield, CO
Miami-Fort Lauderdale-Pompano Beach, FL
Dallas-Fort Worth-Arlington, TX
Washington-Arlington-Alexandria, DC-VA-MD-WV

Miami-Fort Lauderdale-Pompano Beach, FL rebounded a year earlier starting in 2010.

Denver-Aurora-Broomfield, CO has not rebounded as of 2011.

Looking at the rate for size five to forty-nine startups (Figure 5), a downtrend started after 2006 but the recovery is not as definitive across the cohort.

Table 2—Count of Percent Change

MSA	Above U.S. average count
Atlanta-Sandy Springs-Marietta, GA	10
Dallas-Fort Worth-Arlington, TX	8
Denver-Aurora-Broomfield, CO	13
Los Angeles-Long Beach-Santa Ana, CA	15
Miami-Fort Lauderdale-Pompano Beach, FL	14
Minneapolis-St. Paul-Bloomington, MN-WI	10
New York-Northern New Jersey-Long Island, NY-NJ	14
Phoenix-Mesa-Glendale, AZ	8
Portland-Vancouver-Hillsboro, OR-WA	9
San Diego-Carlsbad-San Marcos, CA	11
San Francisco-Oakland-Fremont, CA	10
Seattle-Tacoma-Bellevue, WA	10
Tampa-St. Petersburg-Clearwater, FL	11
Washington-Arlington-Alexandria, DC-VA-MD-WV	10

If we were to compare the year-to-year changes in these startup rates decennially, almost all MSAs would show significant long-term declines except for Miami-Fort Lauderdale-Pompano Beach. However, this obscures year-to-year changes.

Table 2 displays the count of times the annual percent change for each MSA is above the average for all MSAs of the same class size during our chosen time period of 1990-2011 (max value of twenty-one). It is not necessarily the case that these MSAs are seeing increases in this startup density measure, but simply that they are above average in this size class. That is, in years where the average is increasing, they could be outpacing the increase, and in years where the average is decreasing, they could be decreasing at a lesser rate.

Los Angeles-Long Beach-Santa Ana is above average the most frequently, followed by New York-Northern New Jersey-Long Island and Miami-Fort Lauderdale-Pompano Beach. Except for a couple of years, the Los Angeles-Long Beach-Santa Ana and New York-Northern New Jersey-Long Island have mostly been in the middle of the pack of this cohort, so we find it interesting that they stand out on the percent change measure. This is a theme we will revisit later—middle of the pack in the startup density measure, but consistently above the average of year-to-year changes.

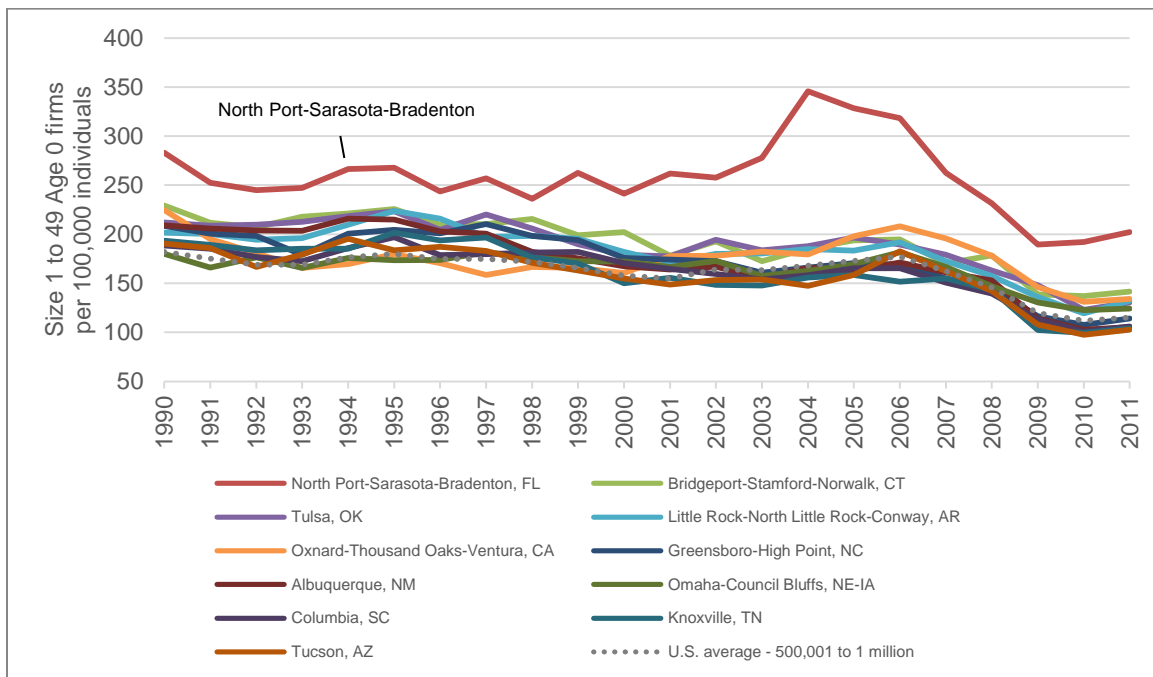
DISCUSSION—MSAs GREATER THAN 1 MILLION POPULATION

By construction of our sample, these MSAs are above average. However, even within this smaller group, there are some MSAs that trend toward the bottom or middle or top. But it is hard to identify the “most entrepreneurial” MSA. We have presented many different ways to look at these MSAs, and each tells a different story. Miami-Fort Lauderdale-Pompano Beach jumps out during the last decade, but this is linked to the housing bubble. Denver-Aurora-Broomfield is at or near the top most years, but it is the only MSA in this group that has not rebounded (as of these 2011 data) from the recent downtrend. Los Angeles-Long Beach-Santa Ana is year-to-year above average, but

never exceptional. Dallas-Fort Worth-Arlington has more medium-sized startups per capita for most of the period, but not nearly as many small startups as others. We do not offer an answer for which MSA is more entrepreneurial than the other. We instead highlight the variation from year-to-year and nuances behind the data. In many cases, we do not know why there is variation. However, we will show that these variations exist across all MSAs, and we discuss some possible explanations in our overall summary.

CHARTS AND TRENDS—MSAs 500,001 TO 1 MILLION POPULATION¹⁵

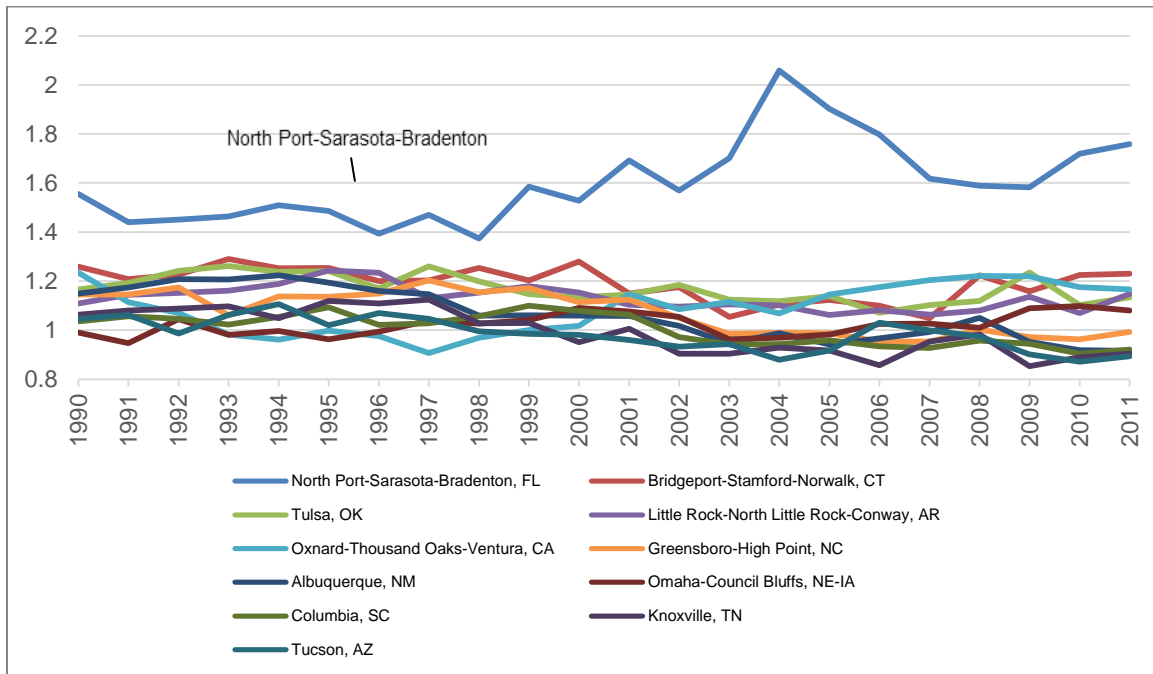
Figure 6—Per capita startup rate, size one to forty-nine



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

¹⁵ Out of the fifty MSAs in both the size ranking and per capita ranking for MSAs with 500,001 to 1 million in 2011 population, eleven appear on both lists. Within the top twenty-five of their size class, their average per capita rank is fifteen and average size rank is thirteen.

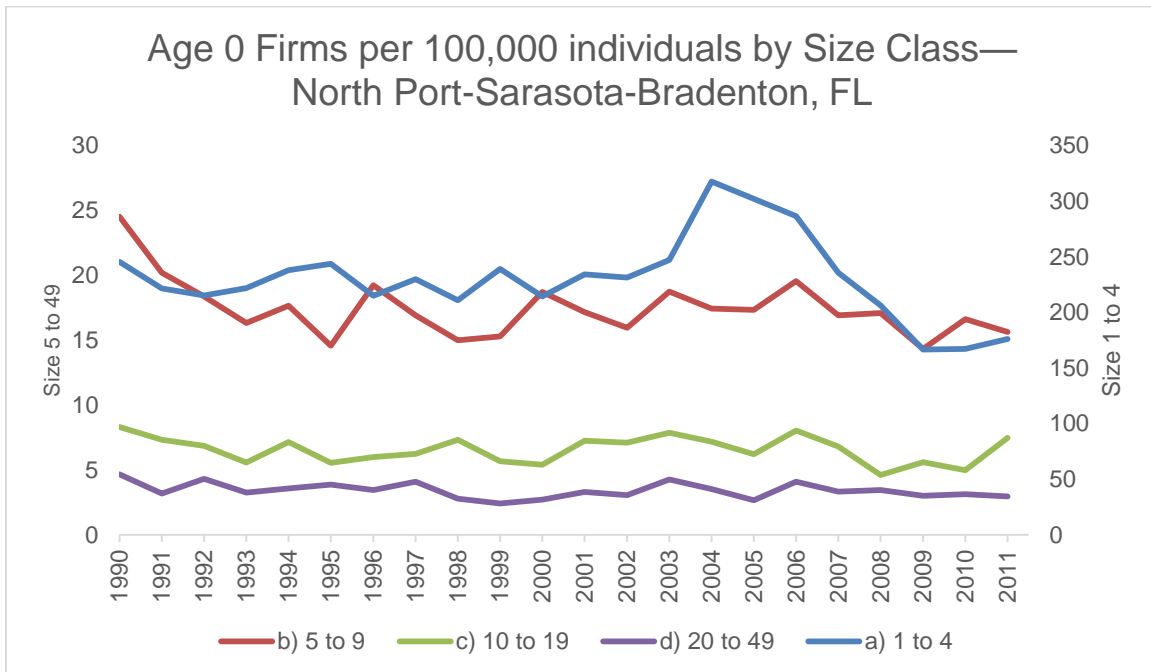
Figure 7—Per capita ratio to U.S. average for MSA population size



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

We see the same downtrend starting after 2006 for these MSAs, though most are above the national average. In this size class, North Port-Sarasota-Bradenton is a clear outlier. Except for this MSA, there is a little less spread between the yearly top and bottom of the MSAs in this cohort. If we take a closer look, we see a spike in size one to four firms during the 2000s.

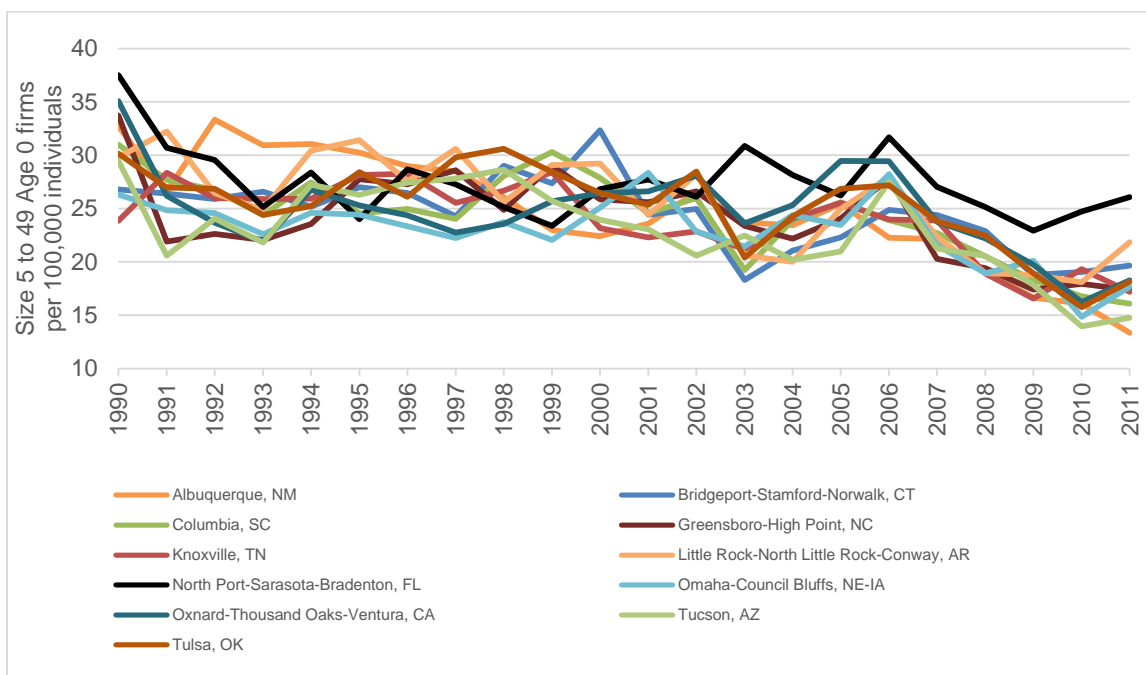
Figure 8—North Port-Sarasota-Bradenton startup composition



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Year-to-year changes are more variable in this MSA size class for startups with five to forty-nine employees than in the previous size class (Figure 9). This partially is due to the generally smaller raw number of size five to forty-nine startups. While the number of size five to forty-nine startups in the greater than 1 million population size MSAs were in the high hundreds and thousands, in this size class of 500,001 to 1 million population, there are only a couple hundred five to forty-nine sized startups in each MSA each year. As we decrease in population sample size, the year-to-year variances will become more pronounced. Nevertheless, again we see North Port-Sarasota-Bradenton at the top of the pack.

Figure 9—Per capita startup rate, size five to forty-nine



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Compared to the National Downtrend

Nationally, the decline in startup density started after 2006 and rebounded in 2011. When we look at size one to forty-nine startups (Figure 6), we see that most MSAs in this cohort follow this recovery trend. We again see some variation on when the downturn started and outline the exceptions.

Decline started after 2004:
North Port-Sarasota-Bradenton, FL

Decline started after 2005:
Tulsa, OK
Greensboro-High Point, NC
Columbia, SC
Knoxville, TN

North Port-Sarasota-Bradenton, FL rebounded starting in 2010 (a year earlier).

Additionally, if we look at size five to forty-nine startups per capita (Figure 9), recovery trajectories are mixed.

Table 3—Count of Percent Change

MSA	Above U.S. average count
Albuquerque, NM	8
Bridgeport-Stamford-Norwalk, CT	12
Columbia, SC	10
Greensboro-High Point, NC	10
Knoxville, TN	12
Little Rock-North Little Rock-Conway, AR	12
North Port-Sarasota-Bradenton, FL	10
Omaha-Council Bluffs, NE-IA	12
Oxnard-Thousand Oaks-Ventura, CA	10
Tucson, AZ	8
Tulsa, OK	12

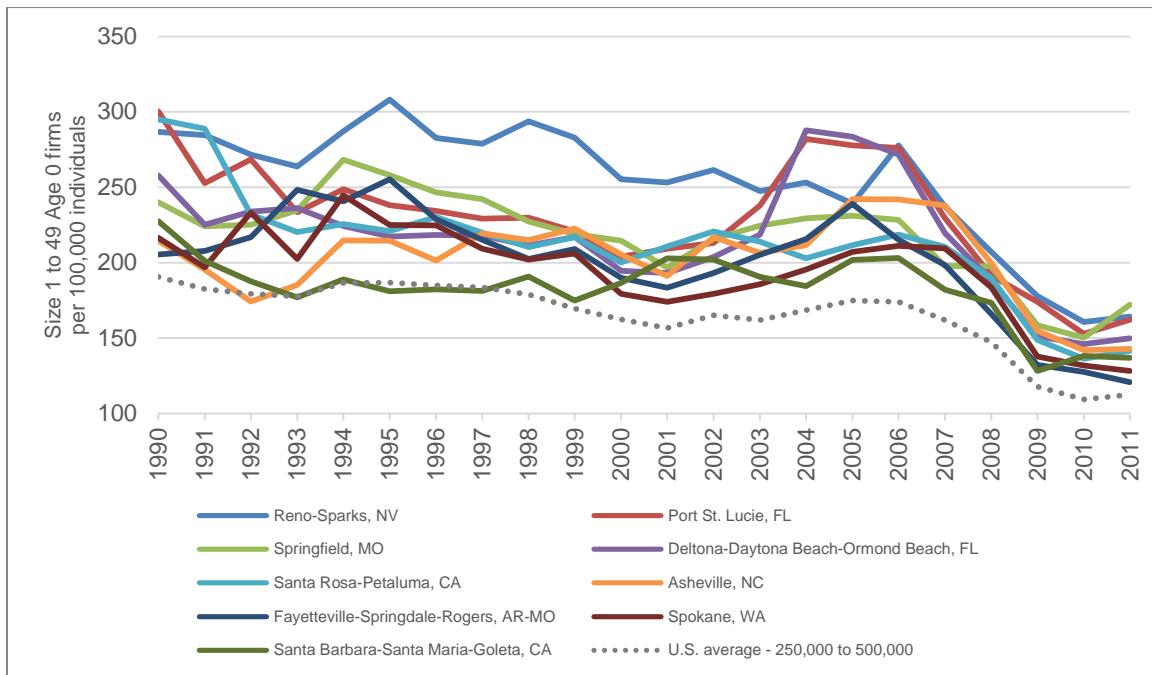
Table 3 shows the count of times the annual percent change for each MSA is above the average for all MSAs of the same class size (max value of twenty-one). Five MSAs are above average twelve times throughout this time period. We again see this concept of consistency without being a perennial standout in the cohort.

DISCUSSION—MSAs 500,001 TO 1 MILLION POPULATION

By construction of our sample, these MSAs are above average. These MSAs trend together and frequently swap ranks within the cohort each year. Except for North Port-Sarasota-Bradenton, no MSA stands out. We understand the spike and the housing bubble, but we don't have a detailed explanation for why North Port-Sarasota-Bradenton has a higher base level of the startup density measure. Relative to other MSAs, it has a large number of size one to four startups per capita, and in the five to forty-nine size density measure, trends above the rest of the cohort after the downturn. However, it is hard to assign it a label of the "most entrepreneurial" MSA—the housing bubble affects our view, and it experienced a different decline and recovery period than all other MSAs in the cohort. If we turn to other MSAs in the cohort, both Tulsa, OK and Bridgeport-Stamford-Norwalk, CT trend toward the top of the group, and they are both consistently above the year-to-year changes. Tulsa started its decline one year earlier than Bridgeport-Stamford-Norwalk, and Bridgeport-Stamford-Norwalk did not fall as far during the downturn, so it appears to have fared slightly better, but how much does this really matter? We again do not offer an answer for which MSA is more entrepreneurial than the other.

CHARTS AND TRENDS—MSAs 250,000 TO 500,000 POPULATION¹⁶

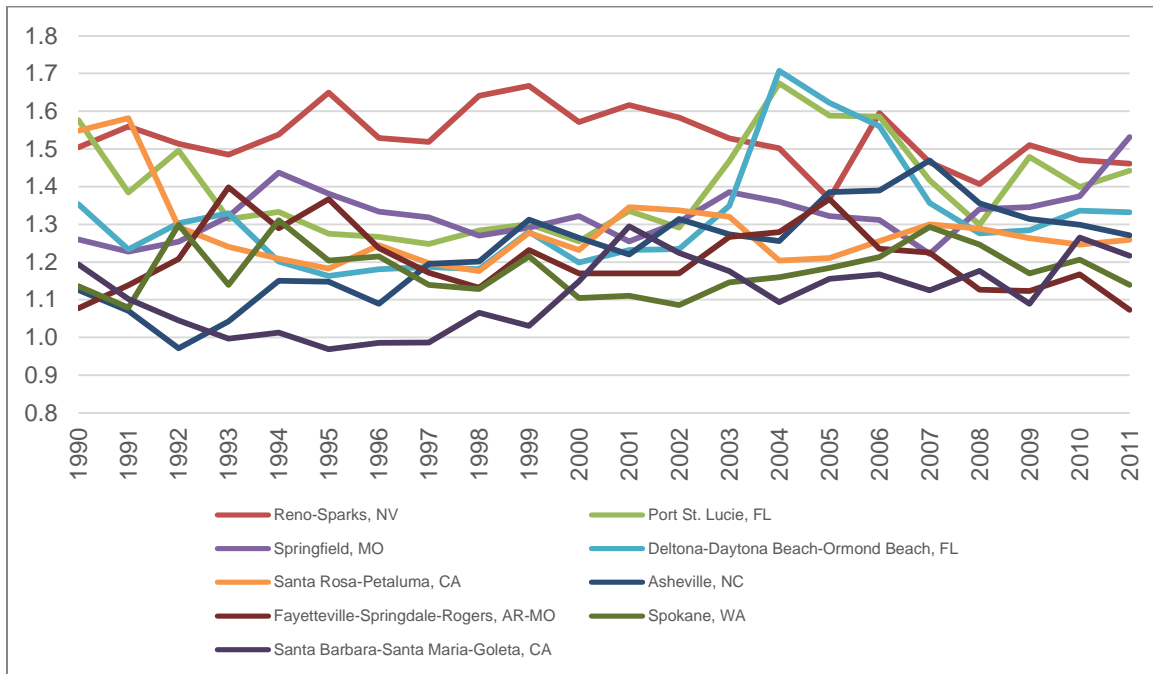
Figure 10—Per capita startup rate, size one to forty-nine



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

¹⁶ Out of the fifty MSAs in both the size ranking and per capita ranking for MSAs with 250,000 to 500,000 in 2011 population, eight appear on both lists. Within the top twenty-five of their size class, their average per capita rank is thirteen and average size rank is nine. The higher average size rank signals that this cohort contains MSAs from the initial set that are a little on the larger size compared to other cohorts.

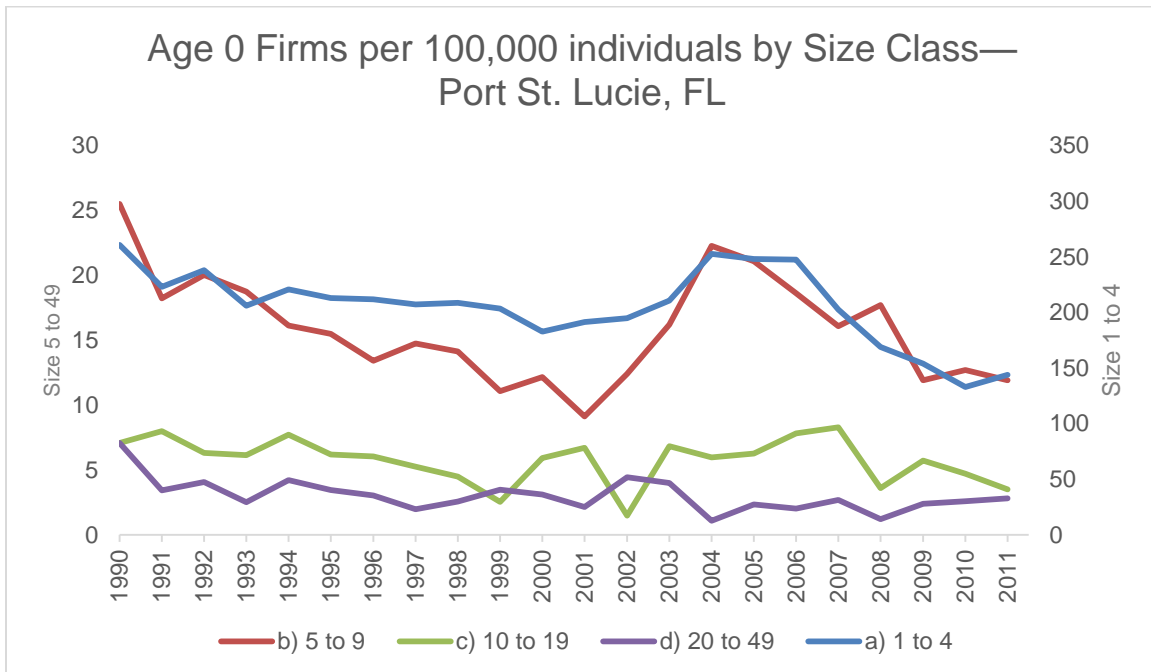
Figure 11—Per capita startup rate ratio to U.S. average for MSA population size



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

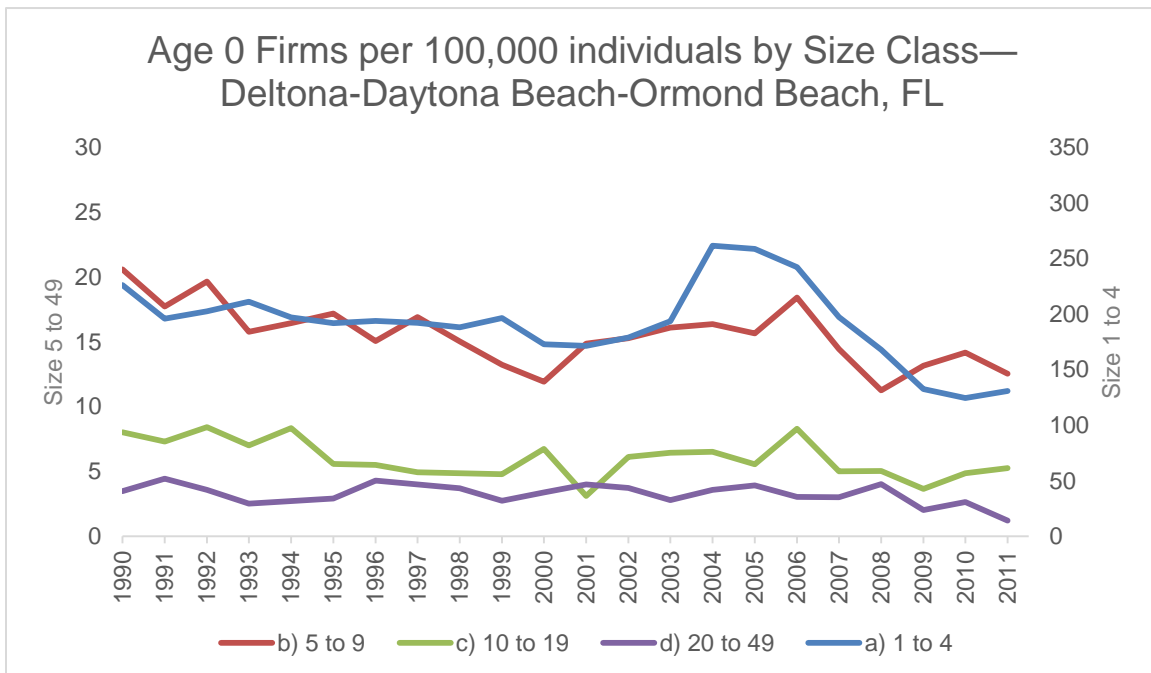
We again see the downtrend in the later 2000s and a spike in two Florida—this time Port St. Lucie and Deltona-Daytona Beach-Ormond Beach. In most other years, Reno-Sparks stands out on its own. If we look at the two Florida MSAs, a similar story about startup firm sizes emerges.

Figure 12—Port St. Lucie startup composition



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Figure 13—Deltona-Daytona Beach-Ormond Beach startup composition

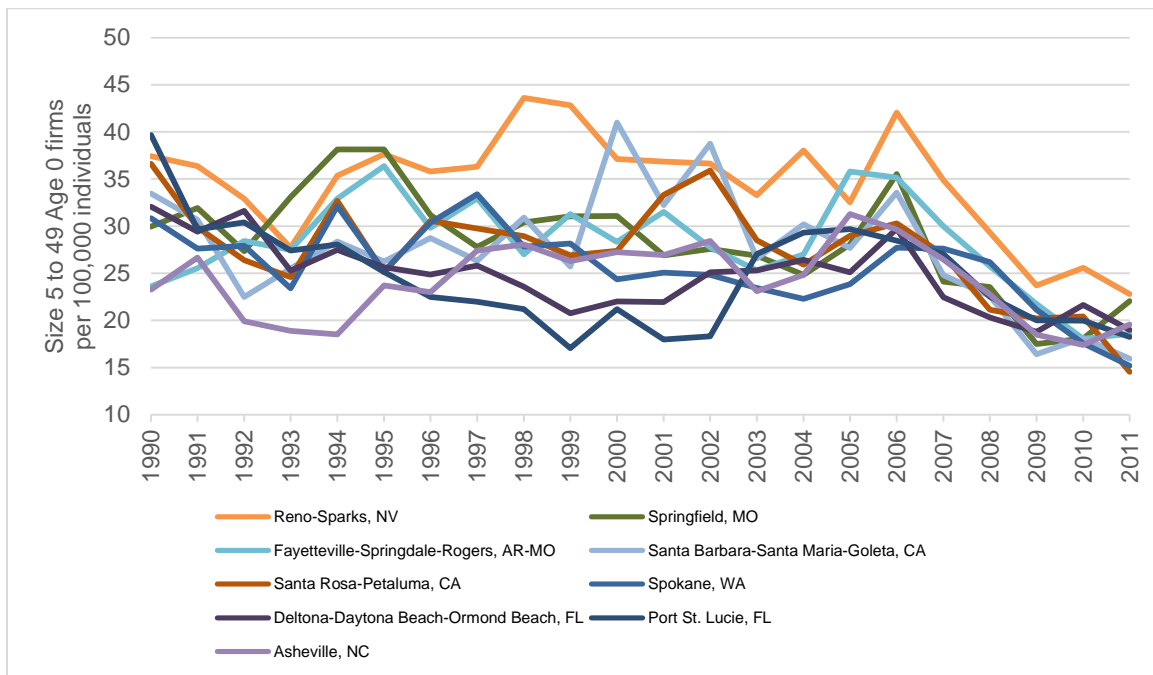


Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

In other MSAs, the one to four size class has been the driver for the top MSAs in their cohorts. Figures 12 and 13 show the same spikes in the 2000s as were present in other Florida MSAs. Additionally, for the first time we see a jump in the five to nine size category in Port St. Lucie. However, this increase is offset by sharper decreases in the ten to nineteen (in 2002) and twenty to forty-nine (in 2004 and onward) size categories.

If we consider just the five to forty-nine size classes (Figure 14), Reno-Sparks is still mostly leading the cohort. We clearly see how much the startup activity in the two Florida MSAs resulted from one to four size firms, as those two MSAs now trend toward the middle and bottom in the five to forty-nine composition.

Figure 14—Per capita startup rate, size five to forty-nine



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Compared to the National Downtrend

When we consider size one to forty-nine startups (Figure 10), this MSA cohort shows the greatest deviation from the national post-2006 downtrend and recovery starting in 2011. We outline the exceptions.

- Decline started after 2004:
- Port St. Lucie, FL
- Deltona-Daytona Beach-Ormond Beach, FL

Decline started after 2005:
 Springfield, MO
 Greensboro-High Point, NC
 Asheville, NC
 Fayetteville-Springdale-Rogers, AR-MO

Santa Barbara-Santa Maria-Goleta, CA rebounded starting in 2010 (a year earlier).

Fayetteville-Springdale-Rogers, AR-MO and Spokane, WA have not rebounded as of 2011.

We again see variation and even double-dips in recoveries among the size five to forty-nine startups (Figure 14).

Table 4—Count of Percent Change

MSA	Above U.S. average count
Asheville, NC	9
Deltona-Daytona Beach-Ormond Beach, FL	11
Fayetteville-Springdale-Rogers, AR-MO	10
Port St. Lucie, FL	9
Reno-Sparks, NV	8
Santa Barbara-Santa Maria-Goleta, CA	10
Santa Rosa-Petaluma, CA	8
Spokane, WA	11
Springfield, MO	11

Table 4 shows the count of times the annual percent change for each MSA is above the average for all MSAs of the same class size (max value of twenty-one). We already noted Deltona-Daytona Beach-Ormond Beach, but additionally Spokane, WA, and Springfield, MO, are above average percent change more than half of the time. Similar to other MSA classes, here are two MSAs that are in the middle and bottom of the cohort in our startup density measure, but look better when considering year-to-year changes.

DISCUSSION—MSAs 250,000 TO 500,000 POPULATION

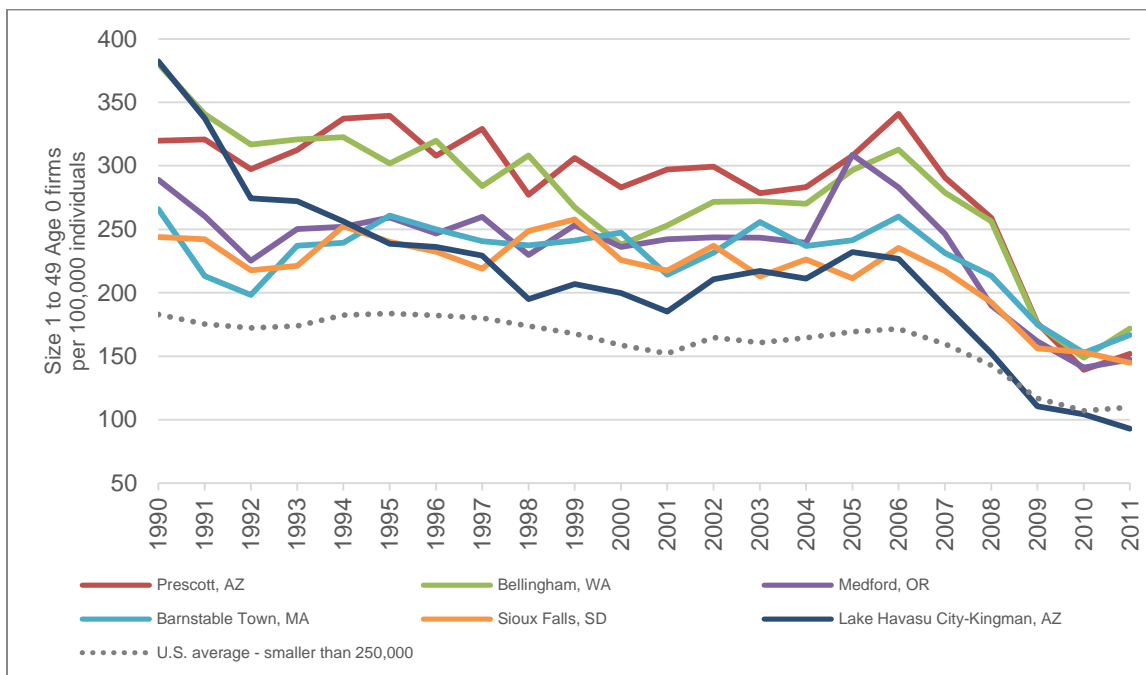
By construction of our sample, these MSAs are above average. We see trending together and swapping of ranks again, but this is the first cohort where we identify a non-Florida MSA as the most consistent standout on both the size one to forty-nine and five to forty-nine compositions—Reno-Sparks, NV. What is perplexing is that Reno, NV also experienced similar spikes in housing prices as the Florida MSAs,¹⁷ but its MSA does not show a spike in startup density during the same time period. In fact, the jump it experienced in 2006 is lagged behind its housing bubble, and perhaps it is unrelated to

¹⁷ Federal Housing Finance Agency Index (not shown).

housing and is simply a return to previous levels prior to the downturn. This highlights how different Florida MSAs are from the rest of our sample, and bolsters our concerns about labeling Florida MSAs as the “most entrepreneurial” because they seem to be disproportionately affected by the housing bubble. If we instead look for consistency, we note that of the three MSAs that are above the year-to-year changes the most, Springfield, MO experiences the strongest recovery of any MSA in this cohort. We again do not offer an answer for which MSA is more entrepreneurial than the other.

CHARTS AND TRENDS—MSAs SMALLER THAN 250,000 POPULATION¹⁸

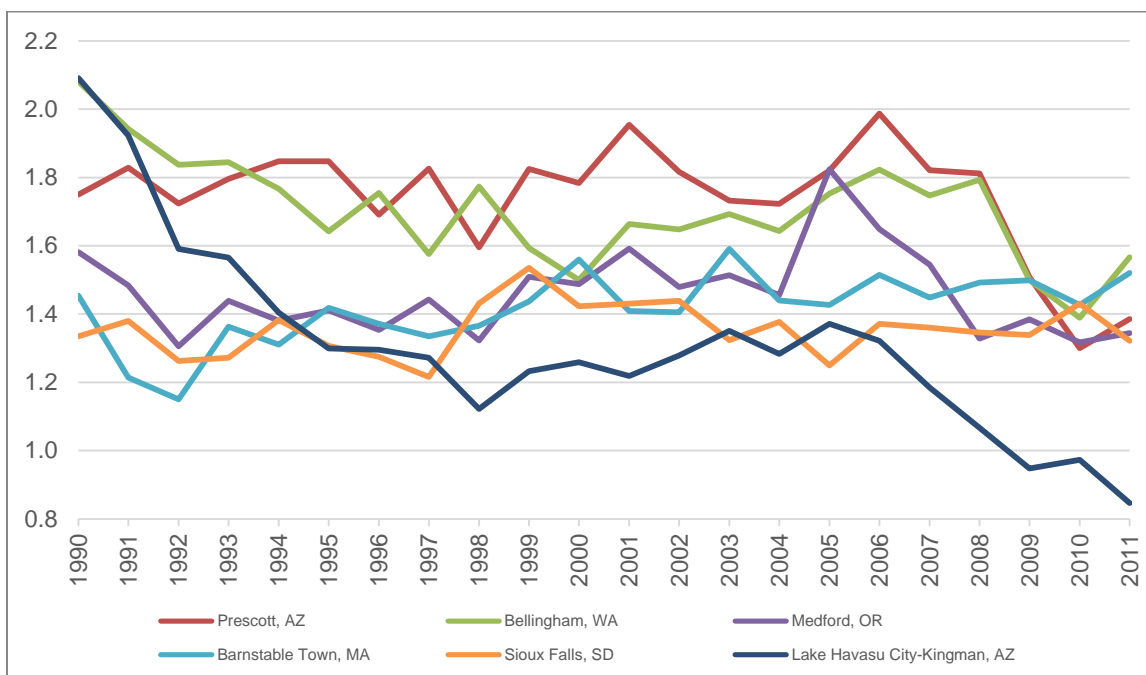
Figure 15—Per capita startup rate, size one to forty-nine



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author’s calculations

¹⁸ Out of the fifty MSAs in both the size ranking and per capita ranking for MSAs with 250,000 to 500,000 in 2011 population, six appear on both lists. Within the top twenty-five of their size class, their average per capita rank is sixteen and average size rank is seventeen. The lower average per capita and size ranks signal that this cohort contains MSAs from the initial set that are a little on the smaller size and have lower startup density compared to other cohorts.

Figure 16—Per capita startup rate ratio to U.S. average for MSA population size

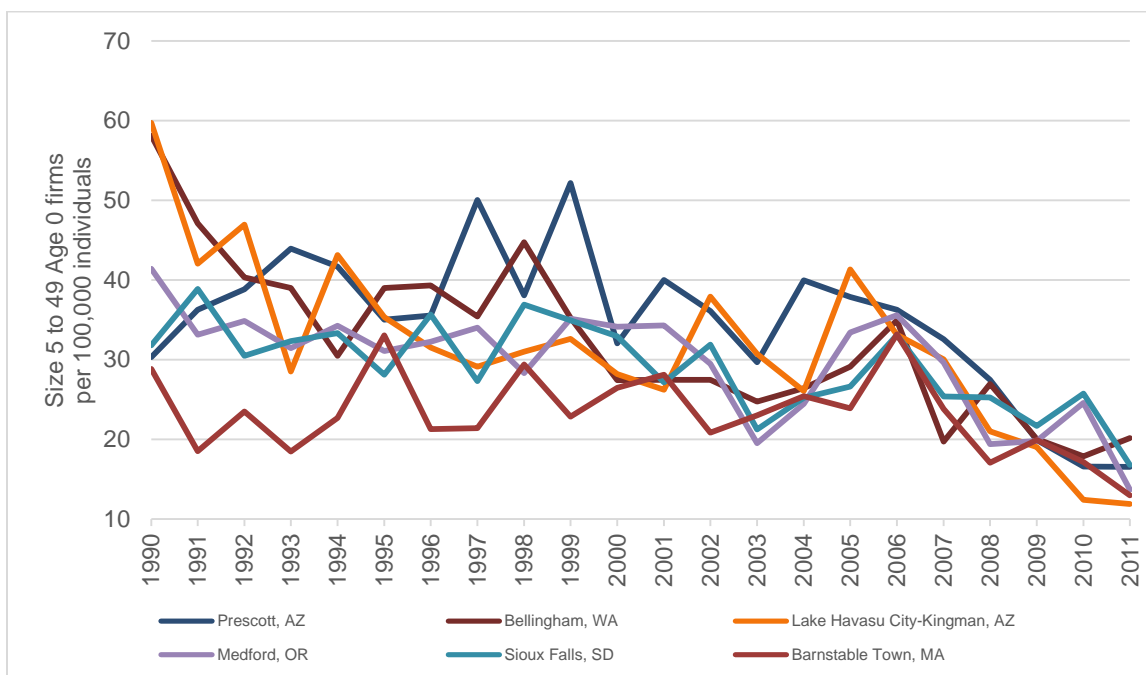


Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

We have footnoted the average per capita rank and average size rank of the MSA cohorts throughout this report. The reason we have tracked this is because we want to know if the MSAs in our cohorts, on average, are representative of the two lists we drew them from, the per capita measure and the other based on population. For the first time in this size class of MSAs smaller than 250,000 do we see that the average ranks are both above thirteen, meaning that we are drawing MSAs from the bottom of both initial lists. These MSAs are relatively smaller and have relatively less dense startup measures within their size class than the other three MSA size classes we have considered. However, the smaller than 250,000 size class has the greatest number of MSAs in the initial sample (180), so these six MSAs are still well above the average for the size class.

In this cohort, three MSAs show the mid-2000s spike we are accustomed to seeing in the other MSA cohorts. Again, we note this is driven primarily by size one to four employee firms (not shown). If we consider five to forty-nine employee firms, the mid-2000s spike disappears (Figure 17). Interestingly, this size cohort has the highest number of five to forty-nine employee firms per capita.

Figure 17—Per capita startup rate, size five to forty-nine



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Compared to the National Downtrend

Nationally, the decline in startup density started after 2006 and rebounded in 2011. When we look at size one to forty-nine startups (Figure 15), we see that most MSAs in this cohort follow this recovery trend. We outline the exceptions.

Decline started after 2005:
 Medford, OR
 Lake Havasu City-Kingman, AZ

Sioux Falls, SD and Lake Havasu City-Kingman, AZ have not rebounded as of 2011.

We again see variation and double-dips in recoveries among the size five to forty-nine startup density measure (Figure 17), though we note that this variation is partly due to smaller sample sizes in total startups for these smaller MSAs.

Table 5—Count of Percent Change

MSA	Above U.S. average count
Barnstable Town, MA	10
Bellingham, WA	9
Lake Havasu City-Kingman, AZ	6
Medford, OR	9
Prescott, AZ	10
Sioux Falls, SD	10

Table 5 shows the count of times the annual percent change for each MSA is above the average for all MSAs of the same class size (max value of twenty-one). No MSAs are above the year-to-year average change for more than half the time. The MSAs in this cohort are of a much higher baseline than the average for this MSA class size. Additionally, due to decreasing sample sizes in startups, the year-to-year variability will naturally increase. This means that these MSAs are more susceptible to greater deviations from the trend, particularly in periods of decline.

DISCUSSION—MSAs 250,000 TO 500,000 POPULATION

There are fewer MSAs to analyze in this cohort, but if we're aiming to identify the "most entrepreneurial" MSA in this size, we see two that trend at the top—Prescott, AZ and Bellingham, WA. Bellingham, WA has made it through the downtrend slightly better, but Prescott, AZ had mostly higher startup density measures in the preceding years. The answer of which is "better" is not clear.

POTENTIAL EXPLANATIONS FOR MSAs

We have demonstrated that MSAs of different location and size can have similar measures of startup density, and we suspect that many of these MSAs are not commonly thought of as significant breeding grounds of startup activity. The outlier Florida MSAs seem to have strong ties to the housing bubble, but aside from these cases we are left with a picture of differing levels of startup densities without a definitive explanation of why for each MSA. To do a case study of each MSA is beyond the scope of this report, but we hope that this work generates interest along these lines. We can, however, highlight some interesting research that potentially explains some of the variations among MSAs. None of these ideas fully explain the trend for each MSA, but we suspect they may contribute.

A recent working paper looks at the employment situation in young firms. It appears as though younger workers are more important to young firms than more established firms. Around 27 percent of employees in young firms (ages one to five) are between twenty-five and thirty-four years old, and 70 percent are under the age of forty-five. However, in established firms (ages twenty and over), 18 percent of employees are between twenty-five and thirty-four years old, and almost half are over the age of forty-five. Additionally, the authors find that an increase in the supply of young workers is linked to increased

firm creation.¹⁹ Perhaps the MSAs discussed in this report are home to greater supply of talented younger workers relative to others, and that the supply has increased over time, leading to increased startup creation rates.

Related to this idea is immigration. At the beginning of this paper, we noted that California, Florida, and Washington state have a number of MSAs discussed in this report. This is partly because these states are larger in both land mass and population, giving them more MSAs than other states. But not all large and populous states are as represented. All three of these states are home to a sizable portion of foreign-born individuals (California has the most), and all have experienced increases from 1999 to 2012.²⁰ This is interesting on two fronts. First, related to the research on young workers we just covered, foreign-born individuals skew younger than the native population. Second, a large body of research has found that immigrants disproportionately engage in entrepreneurial activity.²¹ While immigrants alone do not appear to be the sole factor (in the cited report, New Jersey had the biggest gains but only one MSA is on our list), it seems plausible this is a contributing factor.

That California has MSAs featured in this analysis is not surprising when you consider legal barriers to entrepreneurship. Famously, California does not enforce non-compete agreements and has fluid labor markets, which has been one of contributing factors to startup activity in the state.²² Entrepreneurs frequently have ties to established firms that they leave to form their own startup.²³ Perhaps this is a contributing factor for California MSAs.

We imagine that occupational licensing regulations, particularly when we consider all stripes of startups of any size one to forty-nine, may hinder startup activity, and that to the extent regions differ in their licensing requirements, they may see differences in startup trends. In a recent case study of the cosmetology industry, this was exactly the case—more intense regulation decreased entry (and exit) rates of practitioners. The overall level of practitioners was not affected and prices consumers paid did not differ, but new entrants were harmed.²⁴ We wonder about findings for other industries, particularly those that service a large number of startups.

¹⁹ Ouimet and Zartuskie (2013).

²⁰ <https://www.cbo.gov/publication/44134>.

²¹ See, for example, the Kauffman Foundation series on this topic at <http://www.kauffman.org/what-we-do/research/immigration-and-the-american-economy>.

²² See Alan Hyde, *Working in Silicon Valley*, New York: M. E. Sharpe Inc., 2003.

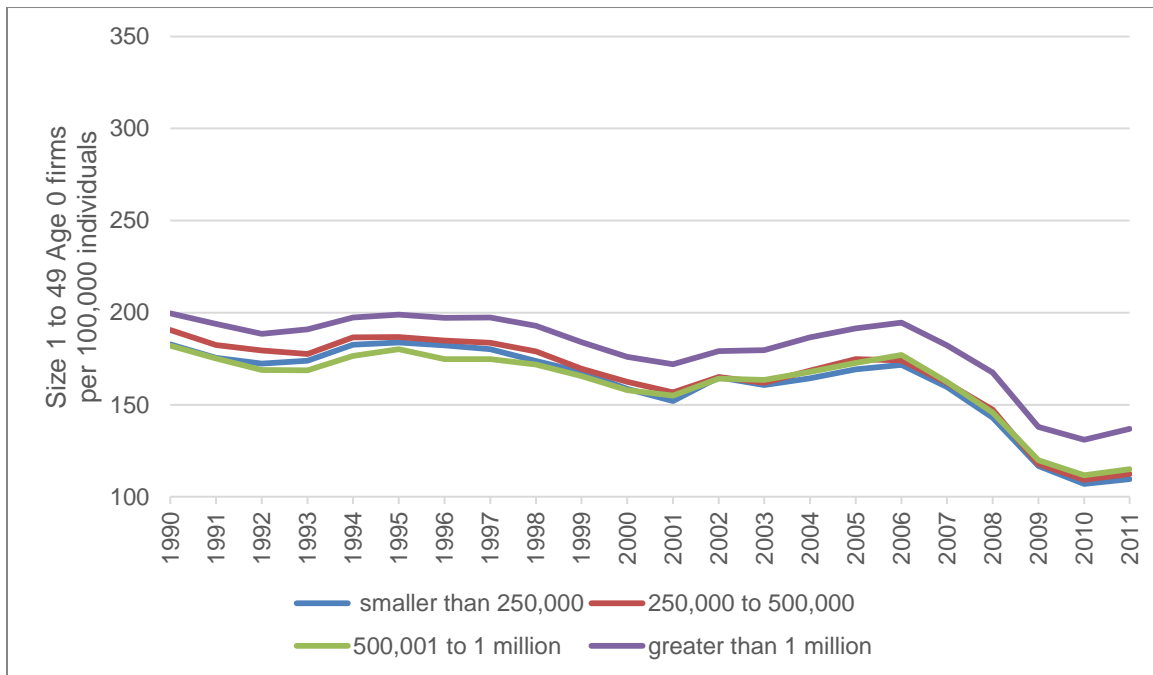
²³ See ecosystem mapping projects and research at <http://www.heikemayer.com/spinoff-regions.html>.

²⁴ See Zapletal (2013). See Kauffman Task Force (2012) for a larger discussion of occupational licensing.

CONCLUDING COMMENTARY

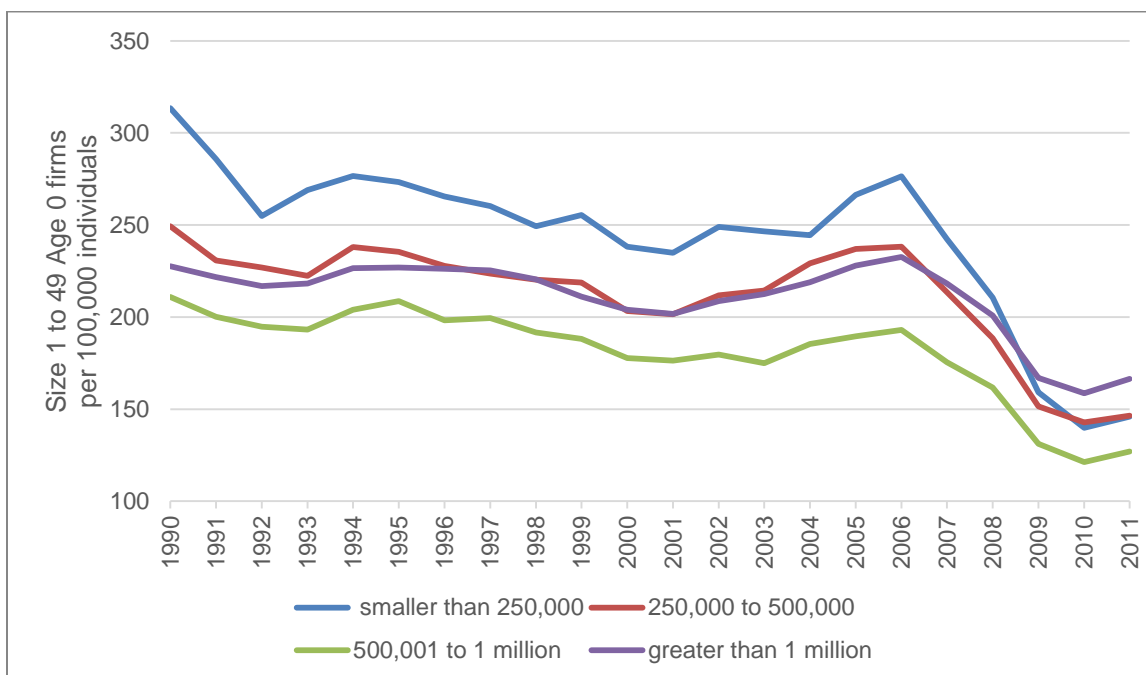
The cohort of MSAs of the largest size class, of populations greater than 1 million individuals, as a whole has traversed the 2006 downturn the best, and it has had the strongest recovery, though not by much, and no MSA size class has returned to prior levels as of these data (Figures 16 and 17).

Figure 18—All MSA averages by MSA size class



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations; author's calculations

Figure 19—Selected forty MSA averages by MSA size class



Note: See Table 1 for the list of selected MSAs in each size class.

Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

We saw throughout the size classes this trend of MSAs that were not at the top of the cohort each year, but were on year-to-year changes faring much better than others. We make this point deliberately, as consistency is perhaps undervalued in an environment where regions are competing to be called the best place for or home to the most startups.

We found some differences in how MSAs stack up based on different compositions of the one to forty-nine startup sizes, namely, that if you exclude the smallest size, one to four employees, annual trends and the within-cohort ranking can be very different. And, in particular, in the Florida MSAs that appear to have strong links to the housing bubble, size one to four startups were driving the related startup bubble. This reinforces the idea of nuanced interpretation of startup activity.

REFERENCES

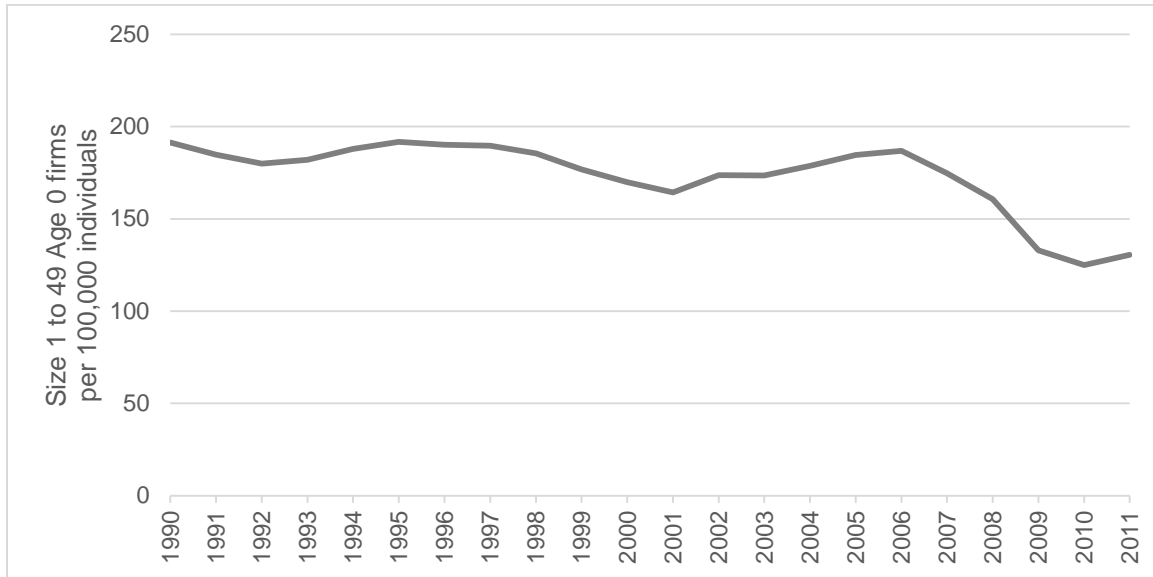
- Fort, Teresa C., John Haltiwanger, Ron S. Jarmin, and Javier Miranda (2013), "How Firms Respond to Business Cycles: The Role of Firm Age and Firm Size," *NBER Working Paper No. 19134*, <http://www.nber.org/papers/w19134>.
- Haltiwanger, John, Ron S. Jarmin, and Javier Miranda (2013), "Who Creates Jobs? Small versus Large versus Young," *The Review of Economics and Statistics*, Vol. 95, No. 2, pp. 347-361, http://www.mitpressjournals.org/doi/abs/10.1162/REST_a_00288.
- Hathaway, Ian (2013), "Tech Starts: High-Technology Business Formation and Job Creation in the United States," Kauffman Foundation, http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2013/08/bdstechstartsreport.pdf.
- Hathaway, Ian, Jordan Bell-Masterson, and Dane Stangler (2013), "The Return of Business Creation," Kauffman Foundation, http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2013/07/firmformationandeconomicgrowthjuly2013.pdf.
- Kauffman Task Force on Entrepreneurial Growth (2012), "A License to Grow: Ending State, Local and Some Federal Barriers to Innovation and Growth in Key Sectors of the U.S. Economy," Kauffman Foundation, http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2012/02/a_license_to_grow.
- Ouimet, Paige and Rebecca Zarutskie, "Who Works for Startups? The Relation between Firm Age, Employee Age, and Growth," *Finance and Economics Discussion Series Working Paper 2013-75*, <http://www.federalreserve.gov/pubs/feds/2013/201375/201375pap.pdf>.
- Reedy, E.J., and Robert Litan (2011), "Starting Smaller; Staying Smaller: America's Slow Leak in Job Creation," Kauffman Foundation, http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2011/07/job_leaks_starting_smaller_study.pdf.
- Robb, Alicia and David Robinson, "Capital Structure Decisions of New Firms," (forthcoming in *Review of Financial Studies*).
- Stangler, Dane, and Paul Kedrosky (2010), "Neutralism and Entrepreneurship: The Structural Dynamics of Startups, Young Firms, and Job Creation," Kauffman Foundation, http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2010/09/firmformationneutralism.pdf.

Stangler, Dane (2013), "Path-Dependent Startup Hubs – Comparing Metropolitan Performance: High-Tech and ICT Startup Density," Kauffman Foundation, http://www.kauffman.org/~media/kauffman_org/research%20reports%20and%20covers/2013/09/pathdependentstartuphubscomparingmetropolitanperformancehightechandictstartupdensity.pdf.

Zapletal, Marek (2013), "The Effects of Occupational Licensing: Evidence from Detailed Business-Level Data," http://sitemaker.umich.edu/zapletal/files/zapletal_jmp20131111.pdf

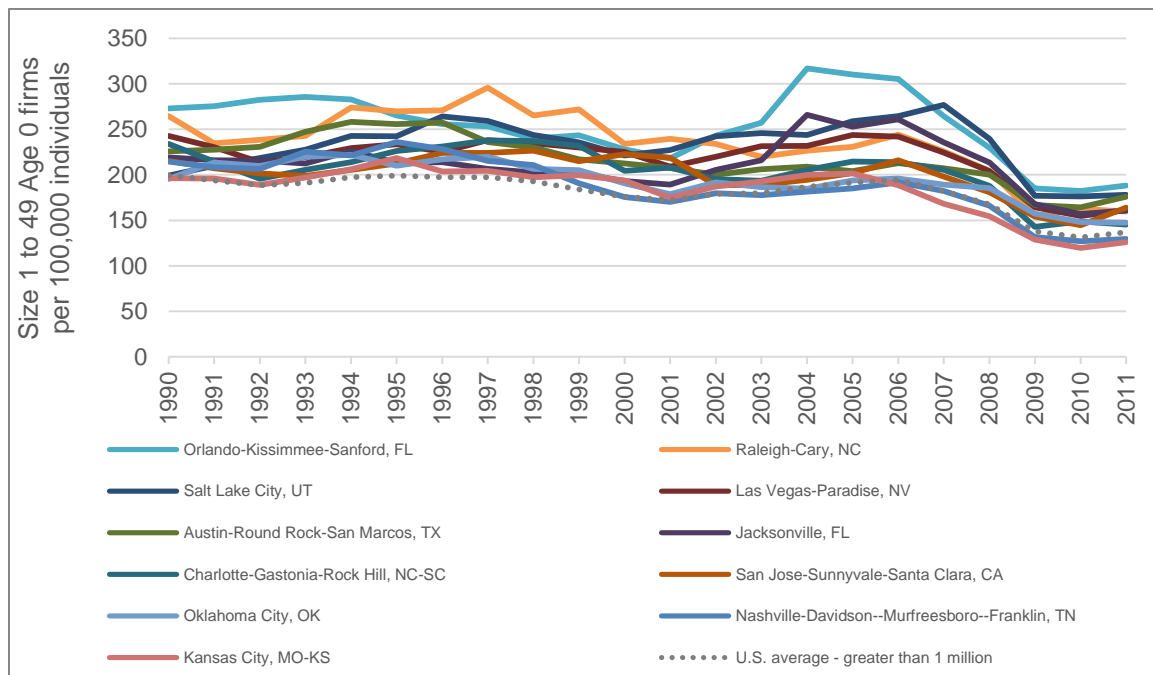
APPENDIX

Figure 20—U.S. average, Age 0 size one to forty-nine firms per 100,000 individuals



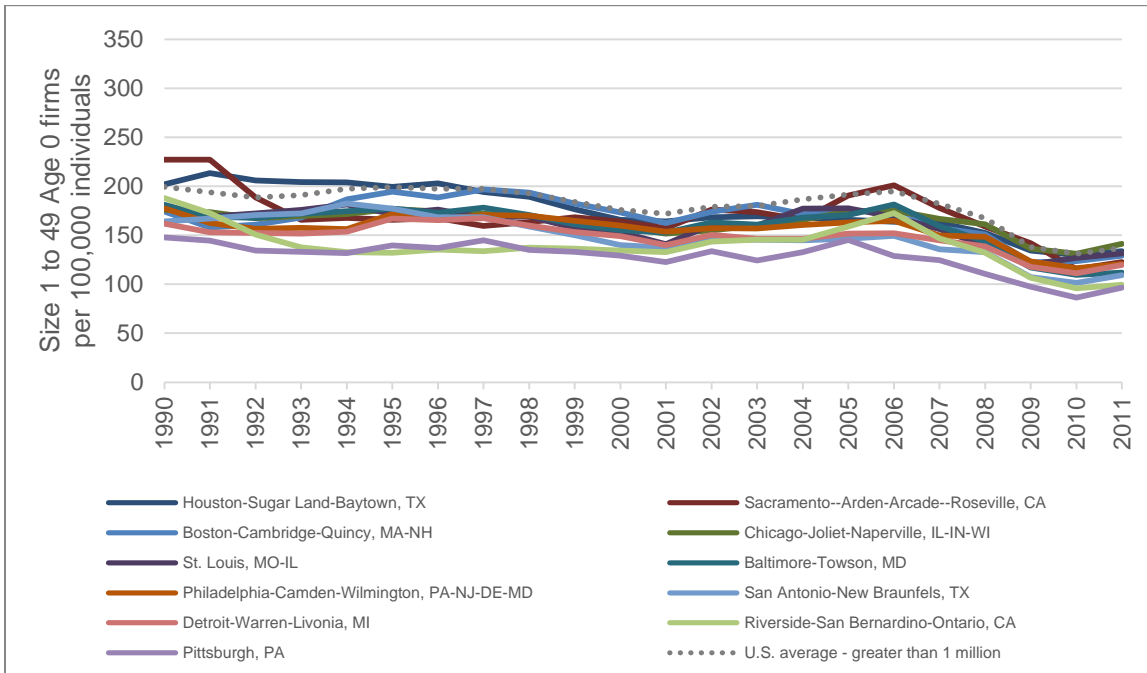
Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Figure 21—MSAs with higher startup density only (within size class), greater than 1 million population



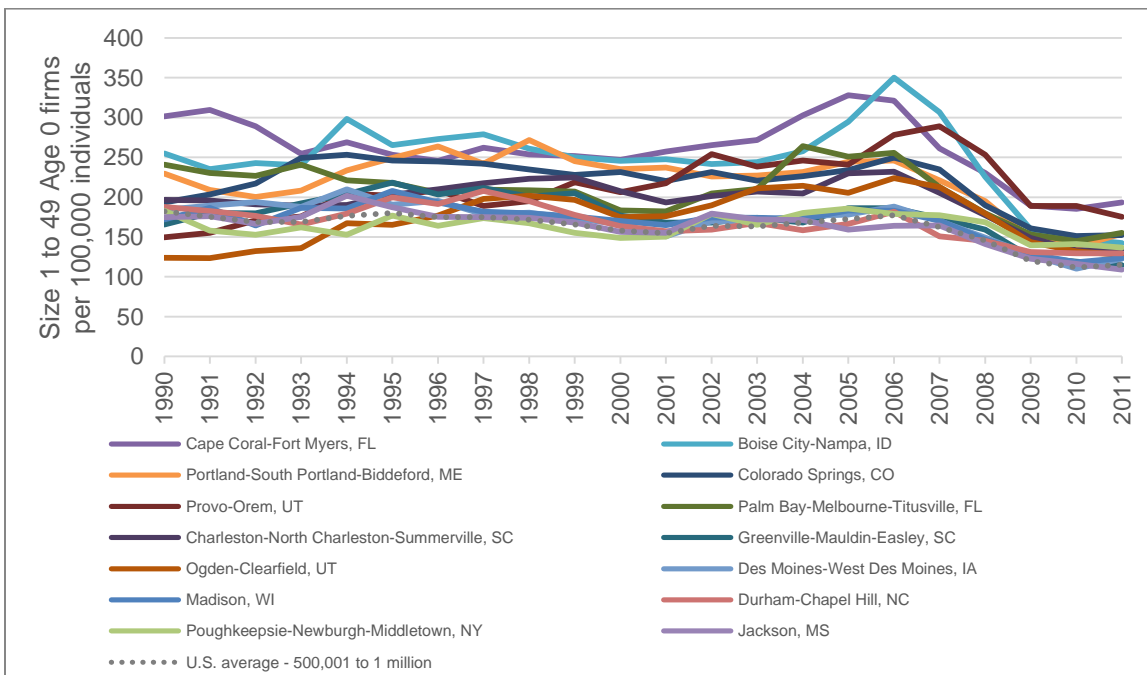
Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Figure 22—MSAs with large populations only (within size class), greater than 1 million population



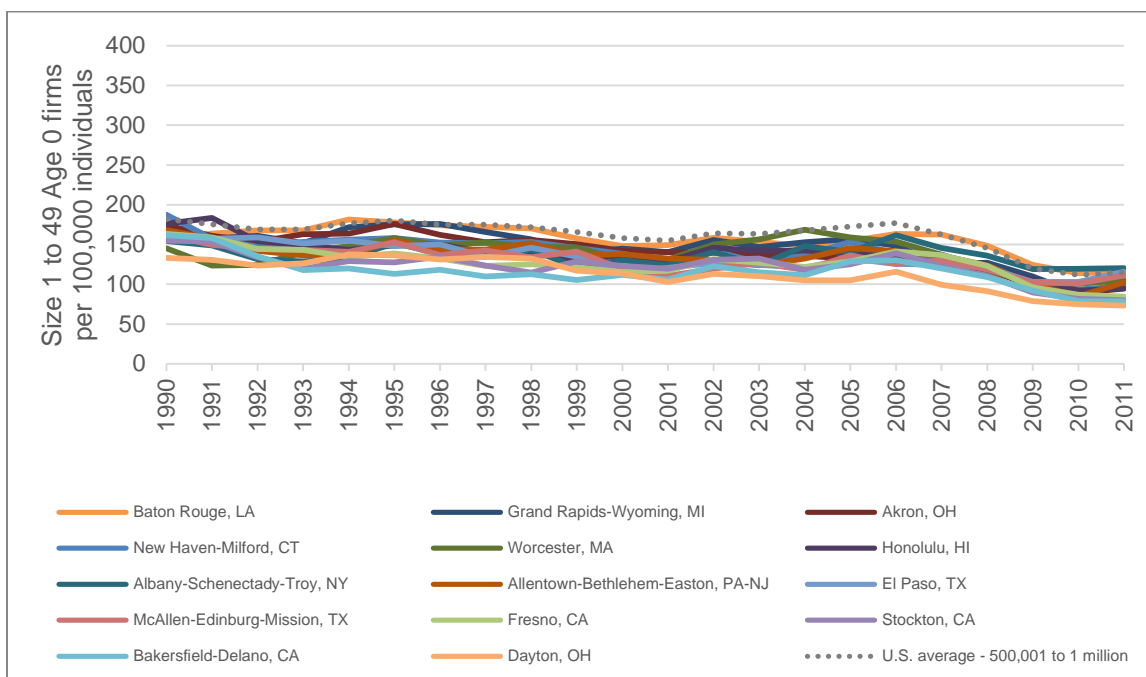
Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Figure 23—MSAs with higher startup density only (within size class), 500,001 to 1 million population



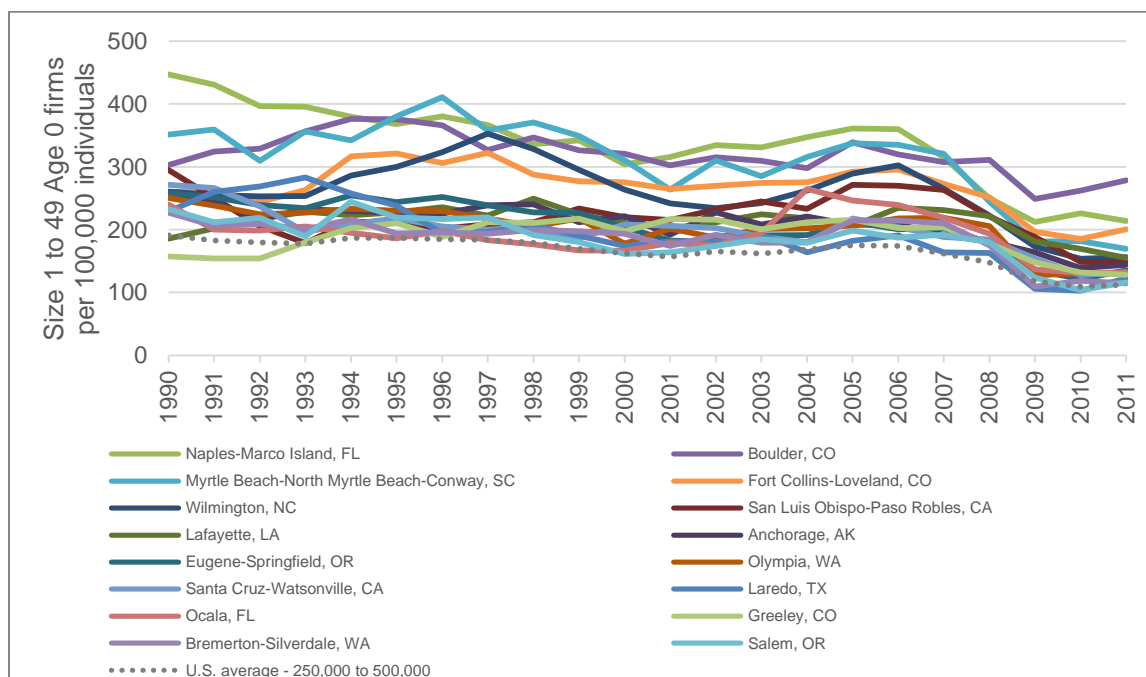
Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Figure 24—MSAs with large populations only (within size class), 500,001 to 1 million



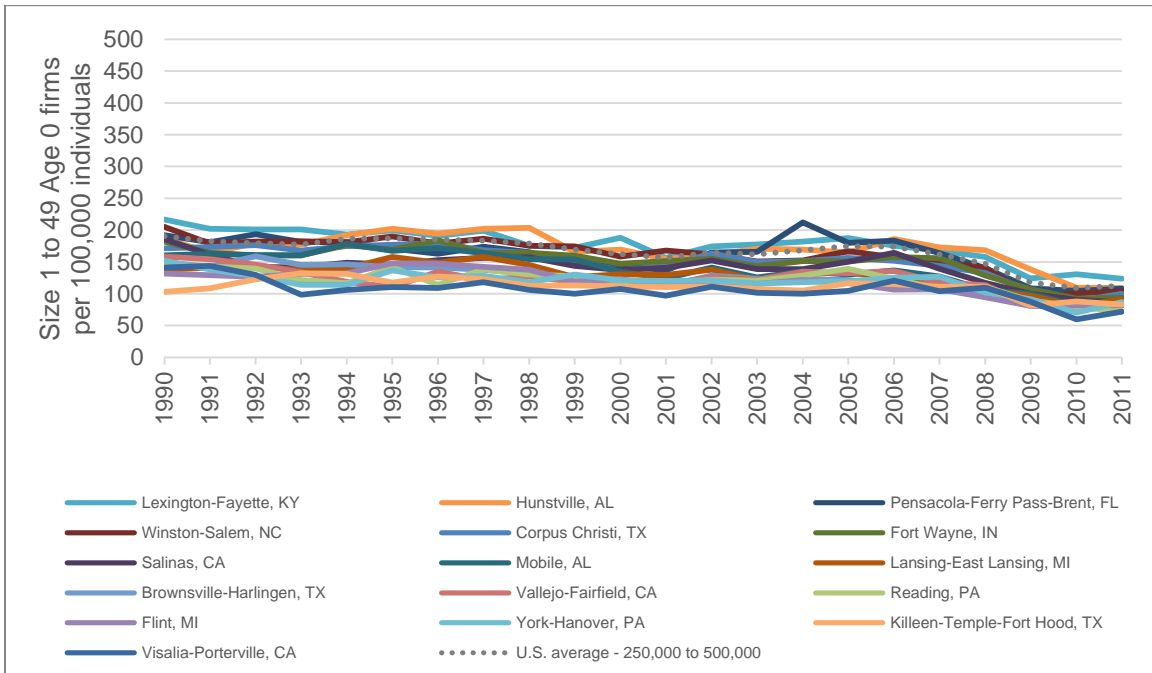
Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Figure 25—MSAs with higher startup density only (within size class), 250,000 to 500,000 population



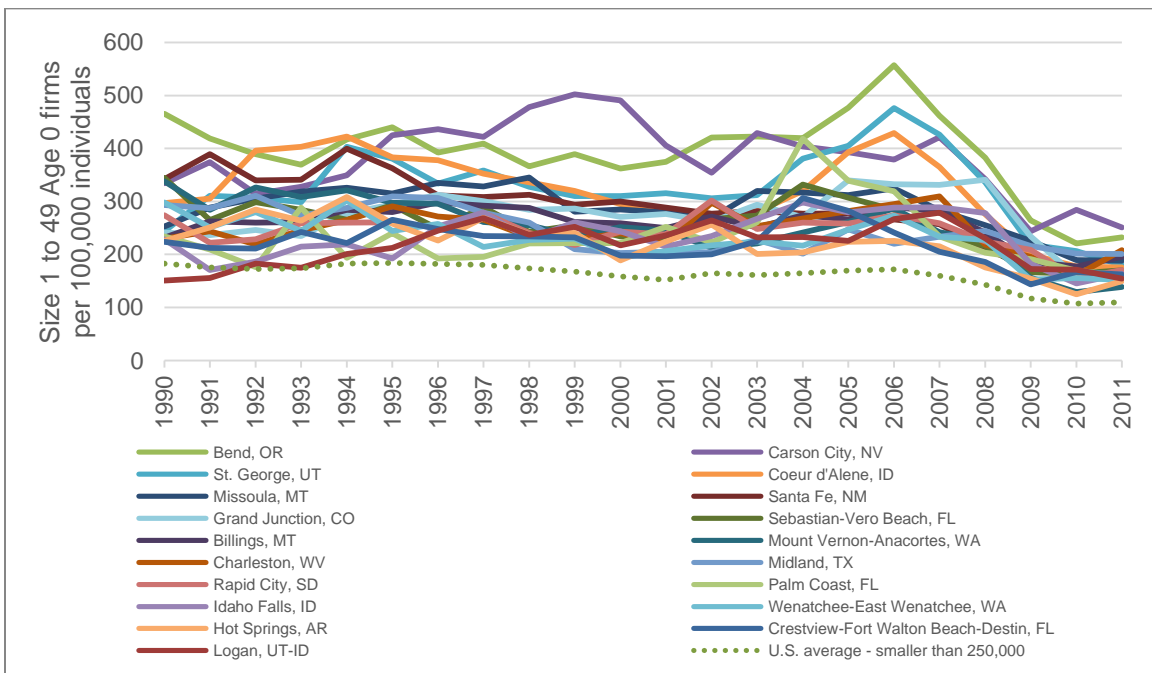
Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Figure 26—MSAs with large populations only (within size class), 250,000 to 500,000 population



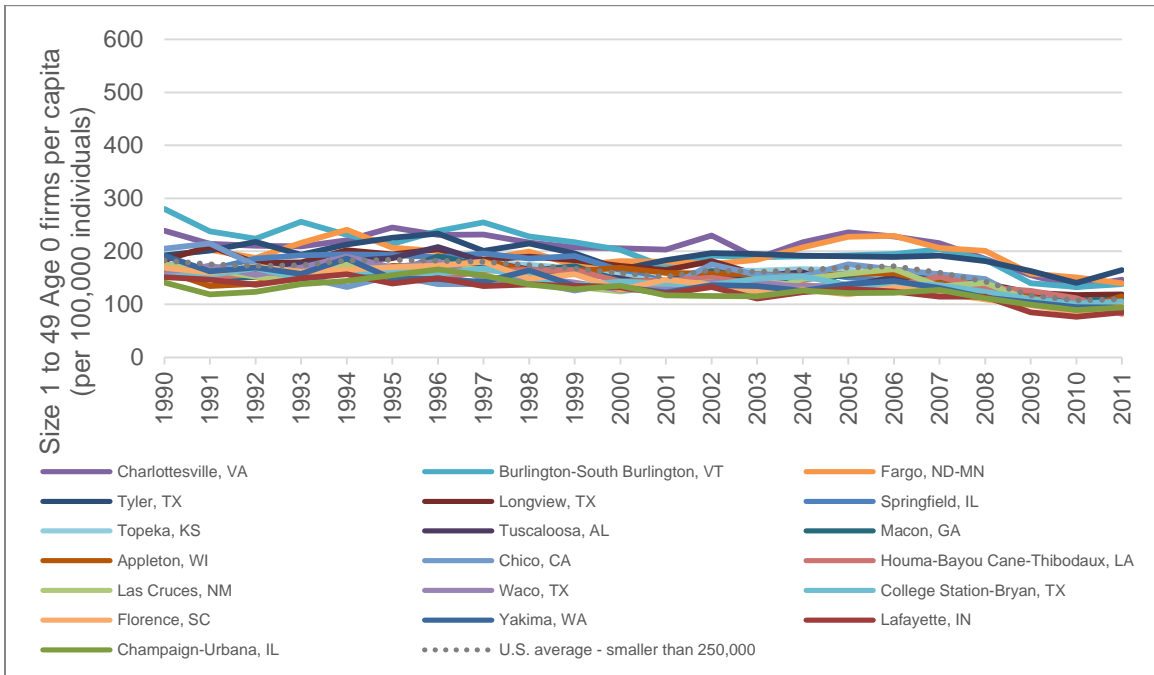
Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Figure 27—MSAs with higher startup density only (within size class), smaller than 250,000 population



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations

Figure 28—MSAs with large populations only (within size class), smaller than 250,000 population



Source: Business Dynamics Statistics, Census Bureau; Population Estimates, Bureau of Economic Analysis; author's calculations