OHIO UNIVERSITY | Voinovich School of Leadership and Public Service

RISE Ohio Task 6

Entrepreneurial Opportunity Assessment

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1. Project Description

As part of the RISE Ohio project, the Center for Economic Development and Community Resilience of the Ohio University Voinovich School of Leadership and Public Service performed an Entrepreneurial Opportunity Assessment of the RISE Ohio study region's recent and current entrepreneurial activity. The economy of the RISE Ohio region, like that of all economies, is always changing in response to numerous local, national, and global forces. Such economic realignments are inevitable and are neither inherently good nor bad. But their effects on current employers and employees are always significant and their examination can reveal future economic development opportunities. Assessing regional entrepreneurial activity can reveal and describe patterns of new business formation and growth that delineate emerging economic development opportunities.

1.1 Goal and Objectives

The purpose of this assessment was to identify, compile, and analyze a broad range of information on the RISE Ohio (the combined OMEGA/Buckeye Hills LDDs counties) entrepreneurial economy to delineate potential economic and public policy market priorities addressing opportunities to enhance the region as a location for the start and growth of new and younger small businesses. In doing so, the assessment pursued several objectives:

1. Understand existing small businesses and high growth/growth positioned companies
2. Identify economic and market-articulated forces affecting entrepreneurial entry and growth opportunities
3. Assess capital needs for sustainability, growth, expansion
4. Assess existing entrepreneurial infrastructure and support capacity, distinguishing ecosystem strengths and enhancements
5. Develop requisite ecosystem recommendations

1.2 Project Methodology

Entrepreneurial activity provides insights on emerging strategies to capitalize on regional advantage. Economic shifts in a region can be more volatile than the changes in that region's fundamental economic advantages. As one set of competitive business models declines others can emerge that capitalize on regional advantages in new ways. The earliest examples of novel business models are typically manifested among a region's new businesses, as the intimate perspective of numerous entrepreneurs enables them to espy nascent opportunities yet statistically unperceived. The success – or near-success – of these "early movers" often pioneers business pathways for others to follow and expand upon. In this regard, entrepreneurs are both early indicators and agents of regional economic development opportunities.

1.2.1 Tasks

This assessment examined recent and current economic changes and responsive entrepreneurial activity in the region to reveal information on both the level and types of entrepreneurial activity in the region and potential economic strategies to enhance entrepreneurial activity. The assessment involved several investigative phases:

- Current Business Population: An inventory of the region's current small business population describing industry, geographic, and scale distributions.

- Regional Business Formation: An examination of recent levels of entrepreneurial and business formation activity.

- High Growth Companies: An identification and differentiation of the regional population of high growth companies (HGCs), locally owned businesses that have grown to be among the largest in their industry sectors.

- Growth Capital Market: An analysis of the existing availability of early- stage capital for current and future growth companies in the RISE Ohio region.

- Regional Economic Shifts: Description of the current and recent state of the regional economy, including recent shifts in the nature of economic activities, and potential implications for future entrepreneurial activity.

- Entrepreneurial Ecosystem: An inventory and assessment of the region's current tangible and intangible entrepreneurial support resources.

1. 4 Project Implementation

The assessment was performed by the Center for Economic Development and Community Resilience under the direction of Brent Lane, Executive in Residence for Economic Strategies at the Voinovich School of Leadership and Public Service of Ohio University.

RISE Ohio's Small Business Population

The media, public, and public policy attention lavished on "entrepreneurship" can make that activity seem exotically distinct from more mundane business. But the reality is that entrepreneurial companies are simply businesses that are typically smaller and younger than the general business population. Recognizing that reality, assessments of entrepreneurial activity should begin by first examining the general population of businesses in a regional economy as a foundation for understanding the context from within which new businesses are started and from which they may emerge if they survive and grow. It is then useful to make comparisons between the two populations to distinguish characteristics or factors that may warrant specific public policy and economic development responses to support entrepreneurship.

Identifying the population of "small businesses" in any economy is surprisingly complex given the numerous differing interpretations of what qualifies – and is documented – qualify as a small business. Many small businesses exist in informal forms, often without any legal structure or other status – such as sole proprietorships, consultants, "gig workers", or other forms of self-declared "entrepreneurs - requiring information reporting such as to the Internal Revenue Service. For the purpose of this research the population was limited to those businesses with federal Employer Identification Numbers (EINs) meaning they are legally structured and have at least one paid employee. While doing so omits a large number of nascent businesses, it is a status which will eventually be acquired in the entrepreneurial development process.

But even a firmly established set of definitional parameters can be frustrated by the fluidity and dynamism of the small business populations of even the smallest economies. Businesses are constantly being started, changing names and legal status, merging with other companies, being acquired or sold, and , and closing for a variety of reasons. Thus the number of small businesses addressed in any study such as this inevitably must identify a fixed research cohort population that is only an ephemeral "snapshot" in a constantly streaming and changing small business motion picture.

2.1 Business Population Composition

This study found that as of June 2023, the eighteen county RISE Ohio study region contained a total of 35,520 businesses of any definition. (Table 1) This number includes everything from the branch plants and subsidiaries of multinational corporations to the locally owned businesses based in the region. By far the largest share of all RISE Ohio region businesses are classified as “Sole Locations”, meaning they are administratively and logistically based in the region rather than being part of a larger corporation entity. It is this category of ownership within which all of the region’s small businesses can be found as a subset. Of these, 29,727 were identified as “small businesses” for the purposes of this assessment., accounting for 83.7% of all businesses in the RISE Ohio region.

Table 1

RISE Ohio Business Population	Number	% of Total
All Businesses	35,520	100%
Small Businesses	29,727	83.7%

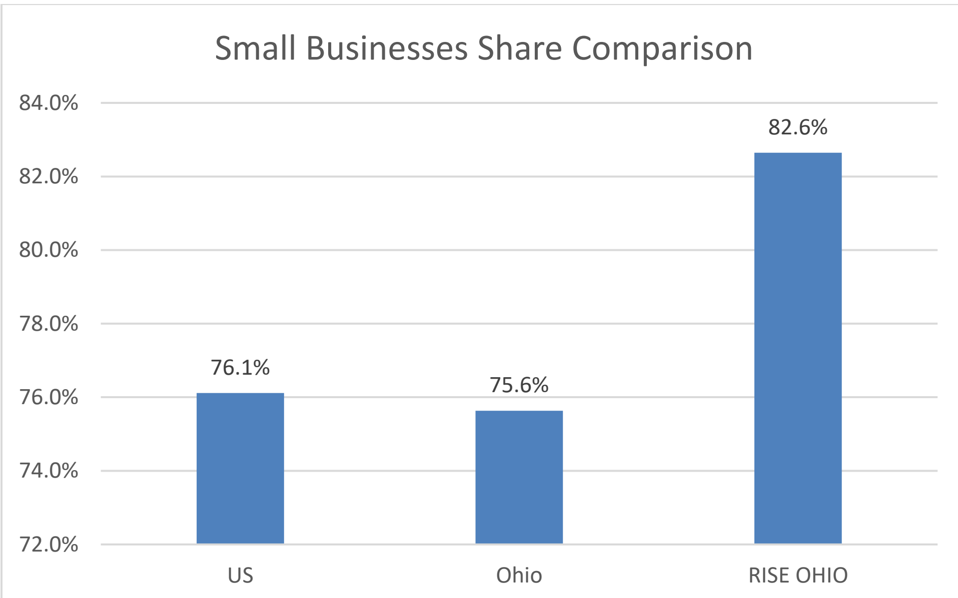
The share of all businesses that qualify as small businesses is significantly higher in the RISE Ohio region (82.6%) than the comparable shares in both the State of Ohio (75.6%) and the total United States (76.1%). (Table 2) While it is tempting to attribute this difference to some loose conclusion that the RISE Ohio region is more “entrepreneurial” than Ohio and the US, such a conclusion would be premature given the number of factors to be explored later in this assessment might contribute to such an outcome. Other factors investigated that could account for this phenomenon include industry, rates of business formation, and economic shifts.

Table 2

	All	Small	Small%
US	18,247,355	13,888,794	76.1%
Ohio	618,580	467,861	75.6%
RISE OHIO	35,520	29,355	82.6%

Nonetheless, the significantly higher share of small businesses in the RISE Ohio regional economy does demonstrate the relevance and importance of issues that affect small business in formulating public policy and economic development strategies in the region. (Figure 1)

Figure 1



2.1.1 Employment Size Distribution

Despite the SBA definition including businesses employing as many as 500 employees, it is important to recognize that the great majority (58%) of all RISE Ohio businesses employ fewer than 5 people (Figure 2). Nonetheless, there is a sizable percentage (20+%) of all businesses in the region that employ 10 people or more. Only a very few of all RISE Ohio businesses approach the upper size limits of the SBA definition of small businesses. Scarcely more than 1% of all businesses – including large corporations - in the region employ more than 100 people.

2.1.2 Revenue Size Distribution

Examining the distribution of all businesses in the RISE Ohio region by their reported annual revenues also illustrates the generally modest scale of these businesses. (Figure 3) The great majority of all RISE Ohio businesses (57%) had annual revenues of less than $500,000, with 75% of them having less than $1 million dollars in annual revenues. At the other end of the range, less than 4% of all firms had annual revenues exceeding $10 million.

Figure 2

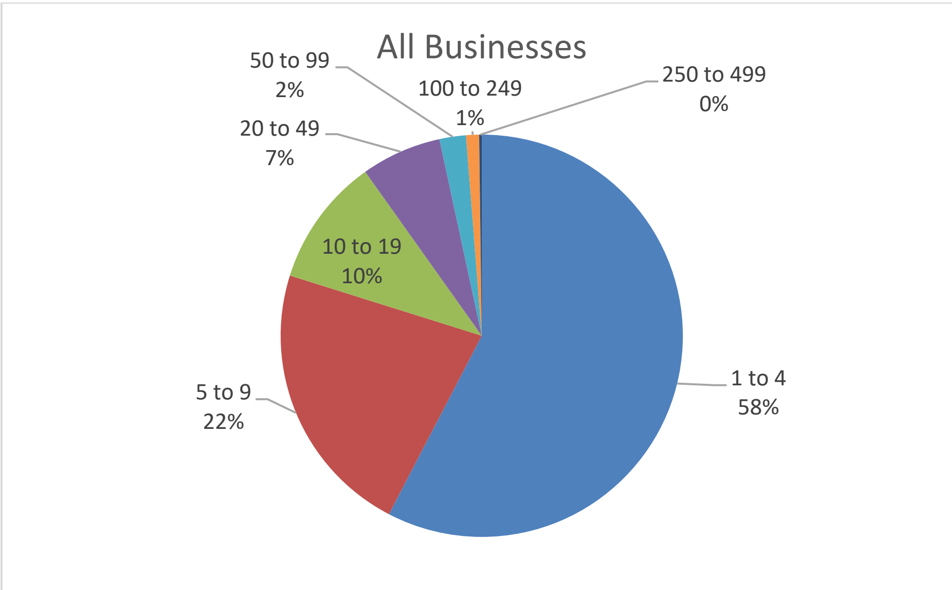
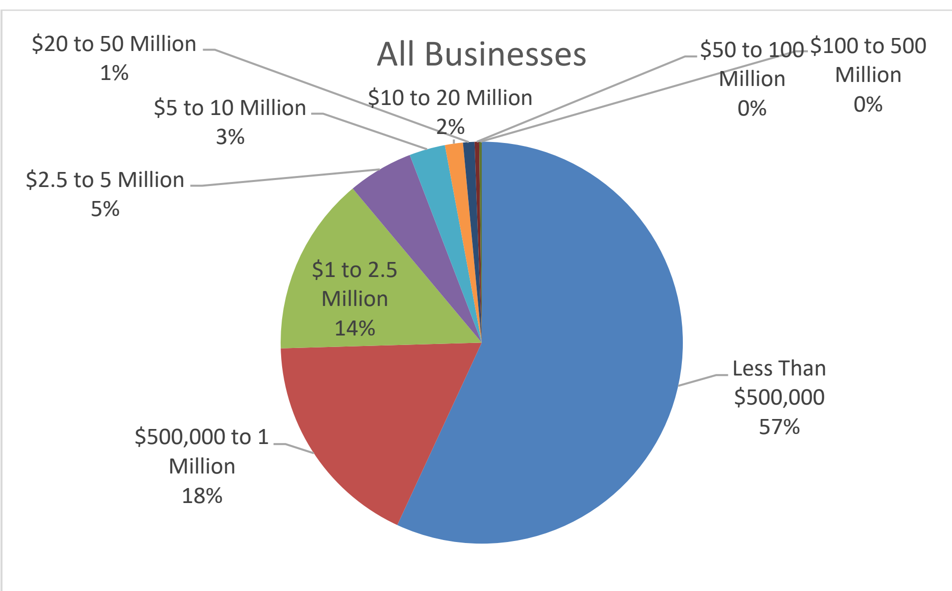


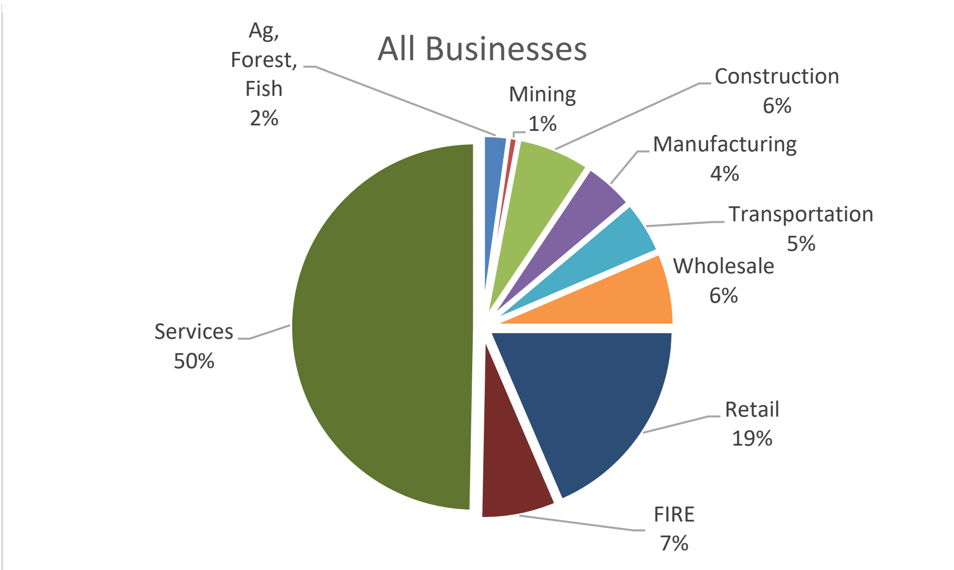
Figure 3



2.1.3 Industry Distribution

As illustrated in Figure 4, the greatest share (50%) of all RISE Ohio businesses are engaged in the service industry sector. The retail and wholesale sales sectors together accounted for 27%. The remaining largest shares of small businesses were in the finance, insurance, and real estate (FIRE) sector (7%), with the construction sector accounting for 6% of all RISE Ohio businesses.

Figure 4



2.1.4 Geographic Distribution

Examining the distribution of all businesses across the RISE Ohio region reveals an interesting combination of ubiquity and disparity. The “heat map” of all business locations in the region (Figure 5) illustrates the broad presence of businesses across the region. But this distribution is far from even.(Table 3) Two counties each are home to more than 10% of all regional businesses, including Tuscarawas (12%) and Columbiana (11%), while several counties – Harrison, Meigs, Monroe, and Noble – are home to only 2% of all businesses. These differences are not inherently significant as this disparity is reasonably the result of small populations and geographic area. But it does make clear the broad and varied range of business activity across the RISE Ohio region.

Figure 5

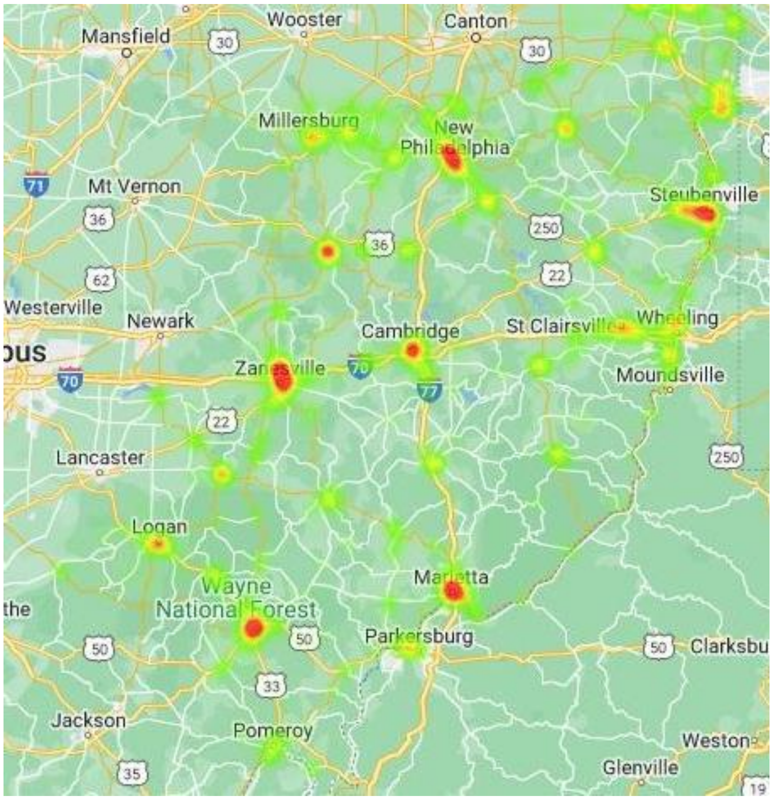


Table 3

County	#All Businesses	%Region
Athens	2,809	8%
Belmont	2,907	9%
Carroll	1,268	4%
Columbiana	3,635	11%
Coshocton	1,334	4%
Guernsey	1,614	5%
Harrison	644	2%
Hocking	1,203	4%
Holmes	2,284	7%
Jefferson	2,309	7%
Meigs	636	2%
Monroe	527	2%
Morgan	1,499	4%
Muskingum	2,746	8%
Noble	628	2%
Perry	1,782	5%
Tuscarawas	3,910	12%
Washington	2,077	6%

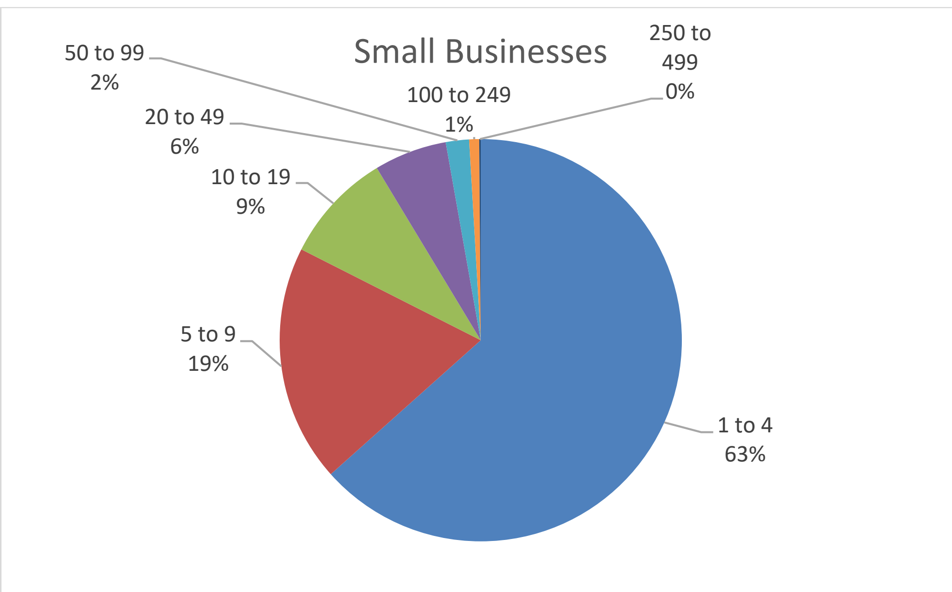
2.2 Small Business Population Composition

The US Small Business Administration defines a small businesses as “an independently owned for-profit enterprise that employs 500 or fewer persons.” Under this definition, the RISE Ohio region has a small business population of 29,727 businesses.

2.2.1 Employment Size Distribution

Examining this population finds that the great majority of RISE Ohio’s small businesses are indeed “small” by anyone’s definition. More than 63% of the region’s small businesses employ fewer than 5 people. (Figure 6). Nonetheless, there is also a significant percentage (18%) of small businesses in the region that employ a sizable (10+) number of people or more. A relative handful have even grown to have more than 100 employees, thus demonstrating the upside economic potential of entrepreneurial development in the RISE Ohio region.

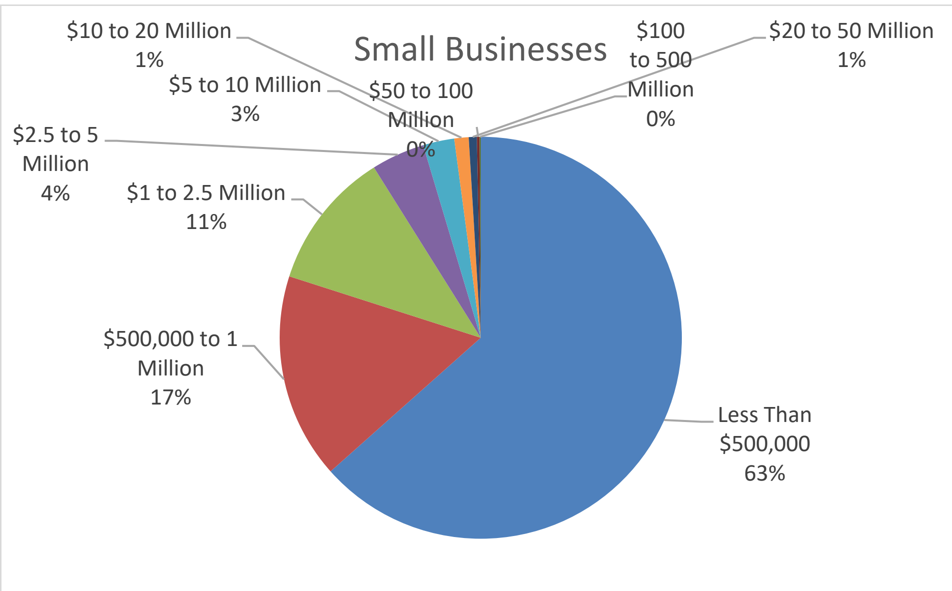
Figure 6



2.2.2 Revenue Size Distribution

Examining the distribution of the RISE Ohio region's small business by their reported annual revenues reflects a similar scale distribution. (Figure 7) A sizable majority of all RISE Ohio businesses (63%) had annual revenues of less than $500,000, with 80% of them having less than $1 million dollars in annual revenues. At the other end of the range, only approximately 2% of all firms had annual revenues exceeding $10 million.

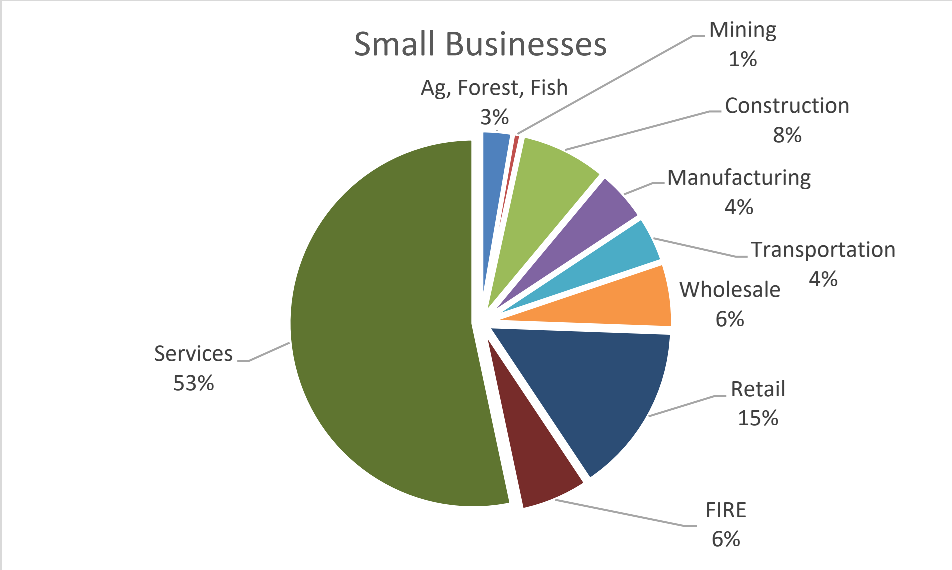
Figure 7



2.2.3 Industry Distribution

As illustrated in Figure 8, the majority (53%) of these region's small businesses are in the service industry sector. The retail and wholesale sales sectors together accounted for 21%. The remaining largest shares of small businesses were in the construction (8%) sector, the finance, insurance, and real estate (FIRE) sector (6%), with the manufacturing and transportation sectors accounting for 4% of all small businesses each.

Figure 8



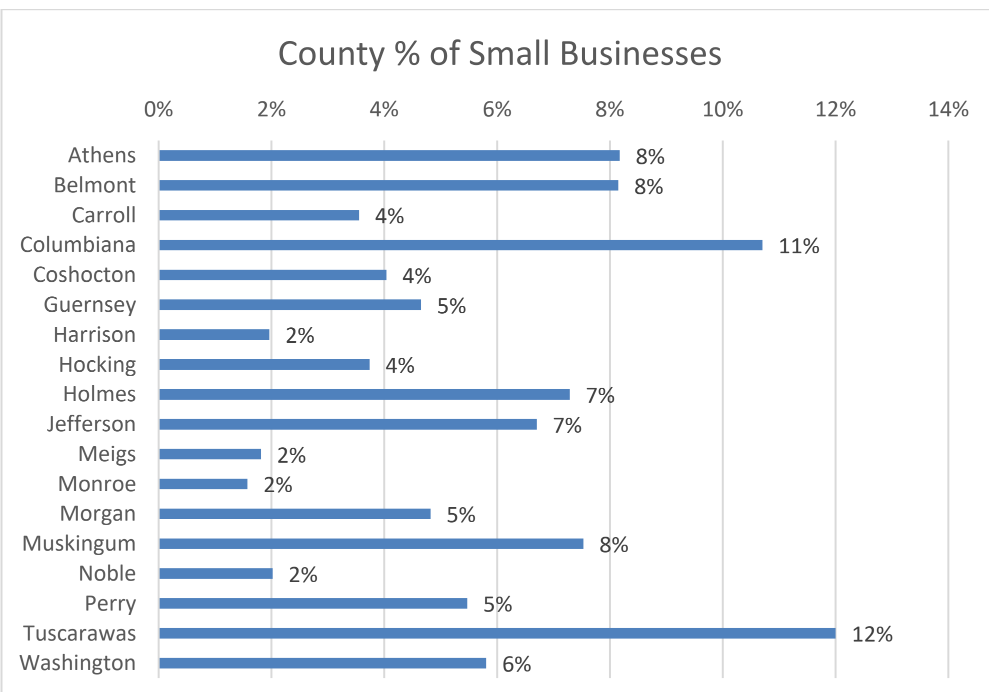
2.2.4 Geographic Distribution

Examining the distribution of small businesses across the RISE Ohio region reveals that it reflects the qualities of ubiquity and disparity demonstrated in the distribution of all businesses in the region. (Table 4) Once again, the two counties of Tuscarawas (12%) and Columbiana (11%) are differentiated as the locations of more than 10% of regional small businesses. And again, as with their share of all businesses, the counties of Harrison, Meigs, Monroe, and Noble are each home to only 2% of small businesses. These differences are especially stark when presented graphically. (Figure 9)

Table 4

County	#Small Businesses	%Region
Athens	2,140	8%
Belmont	2,133	8%
Carroll	930	4%
Columbiana	2,802	11%
Coshocton	1,057	4%
Guernsey	1,218	5%
Harrison	514	2%
Hocking	979	4%
Holmes	1,908	7%
Jefferson	1,755	7%
Meigs	475	2%
Monroe	412	2%
Morgan	1,262	5%
Muskingum	1,971	8%
Noble	529	2%
Perry	1,432	5%
Tuscarawas	3,142	12%
Washington	1,520	6%

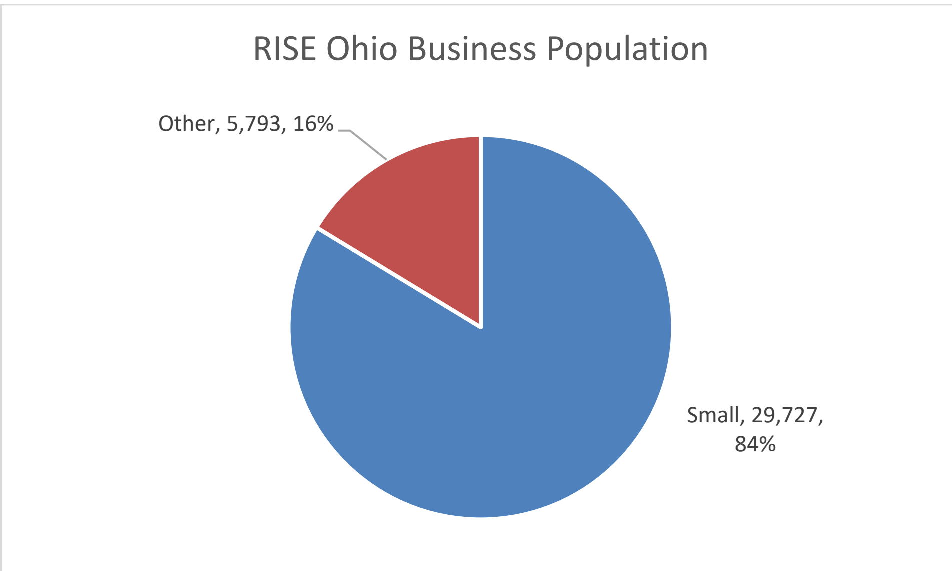
Figure 9



2.3 Small Business Population Analysis

Small businesses were found to constitute 84% of the total business population in the RISE Ohio region. (Figure 10) As such a large subset of the total population, it is inevitable that the characteristics of the region's small businesses would heavily affect the characteristics of the total business population, perhaps obscuring important differences between the small and non-small businesses of the region.

Figure 10



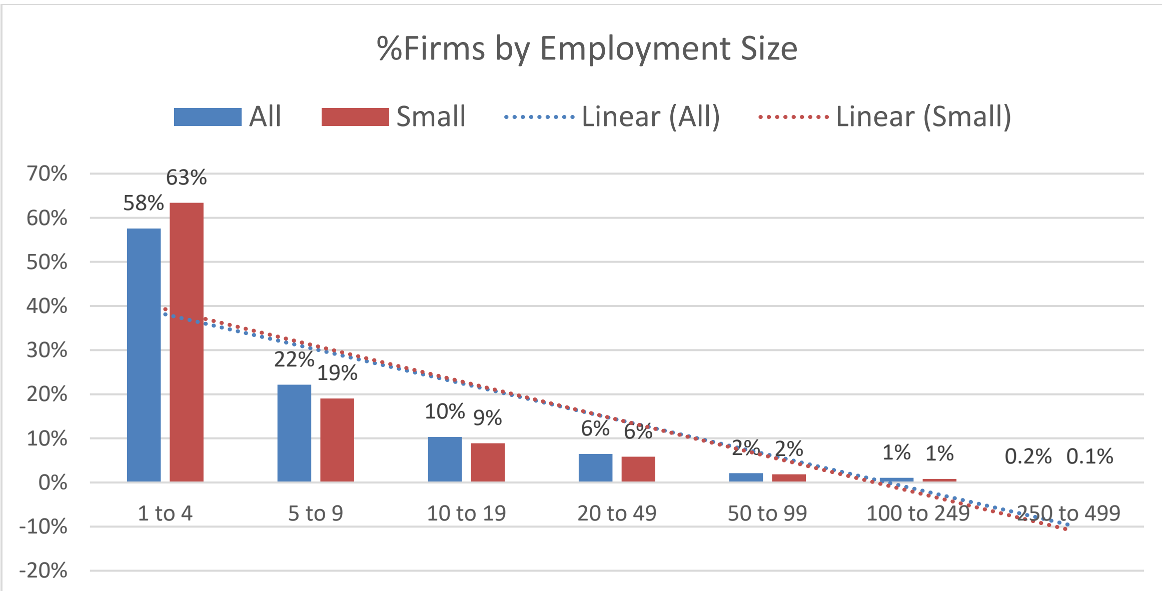
The apparent similarity of RISE Ohio's total and small business populations is better distinguished in direct comparison to each other. While in some cases such comparisons reinforce the similarities, while in others it enables a recognition of potentially significant differences.

2.3.1 Employment Size Distribution Comparison

Comparing the distribution of the RISE Ohio region's total and small business populations (Figure 11) reinforces the similarity of the two groups. While there is significant difference at the "1 to 4 employees" segment between the share of All Business (58%) versus Small Business (63%) such a difference is inherent – and therefore non-significant – given the definition of "small business". Is perhaps more significant that that difference decreases to nonexistence across larger employment range segments, dropping from a 5%

differential for “1 to 4”, to 3% for “5 to 9”, to 1% for “10 to 19”, to no difference for each segment thereafter. Thus the employment size share trendlines depicted begin with a slight gap for the smallest businesses and converges quickly as employment size increases.

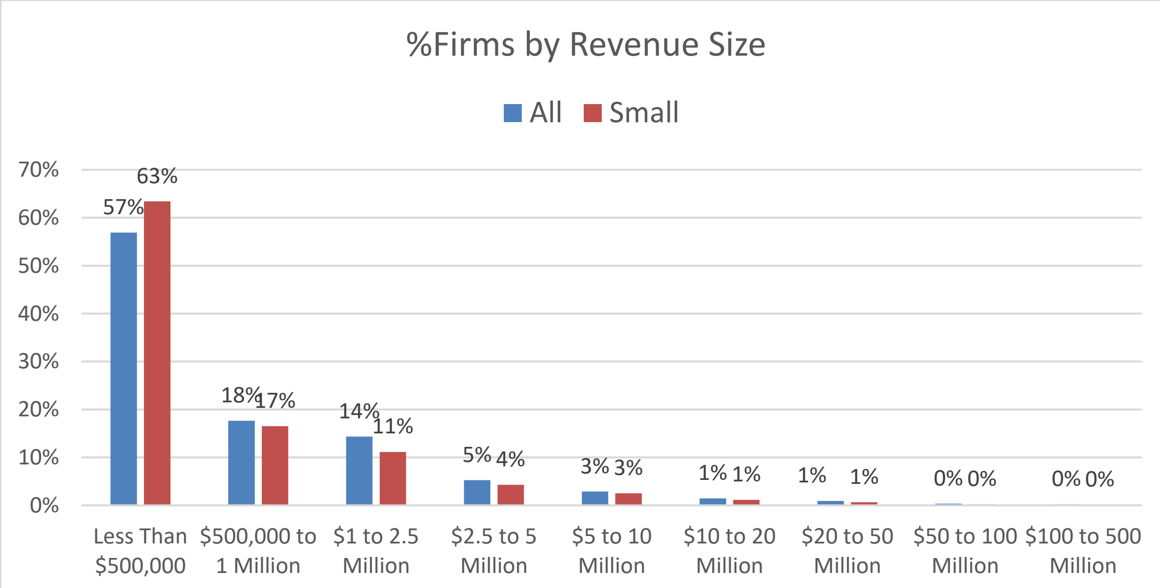
Figure 11



2.3.2 Revenue Size Distribution

A similar (though slightly different in an interesting way) convergence of differentials is demonstrated in the distribution of RISE Ohio businesses by their revenue sizes. (Figure 12) However, in the case the differentials start larger, the convergence is more gradual, and is not as linear as with employment. At the “Less than $500,000” annual revenue level, the differential between All Businesses and Small Businesses is 6% (57% v. 63%), and does not reach parity until the “$5 million to $9 million” range. Moreover, while the differential decreased to only 1% for “$500,000 to $1 million” segment, it ***increased*** to 3% for the “$1 million to $2.5 million” segment, before returning to the previous 1% differential for “$2.5 to $5 million” revenue segment and then to parity for larger revenue segments. This increasing disparity in that particular revenue size segment was suggestive of other findings addressed later in this report.

Figure 12



2.3.3 Industry Distribution

A comparison of the distribution of RISE Ohio's All and Small Businesses by industry sector provided an enlightening example of the value of using forms of graphical analysis for the same data. For example, Figure 13 shows the contrasting share of companies in major industry sectors for All and Small Businesses. In this graphic the differential in those share appear rather slight, being essentially the same percentage for most sectors. The exceptions are in Retail, where there are significant differences – 19% for All Businesses versus 15% for Small Businesses, and in retail - – 50% for All Businesses versus 53%.

What this form of presentation fails to capture, although it is embedded in the displayed statistics, is the more meaningful significance of the data: that Small Businesses dominate all sectors, and especially so in certain industries. That is better communicated in Figure 14 which displays the percentage of businesses in each industry sector that qualify as Small Businesses. This shows that not only do Small Businesses constitute 76% of All Businesses in the RISE Ohio region, but they are also especially dominant in several industry sectors, such as Ag, Forest, and Fish (93%), Construction (91%), Services (81%), and even Manufacturing (79%), a sector which might have been assumed to be the provenance of larger national or international corporations.

Figure 13

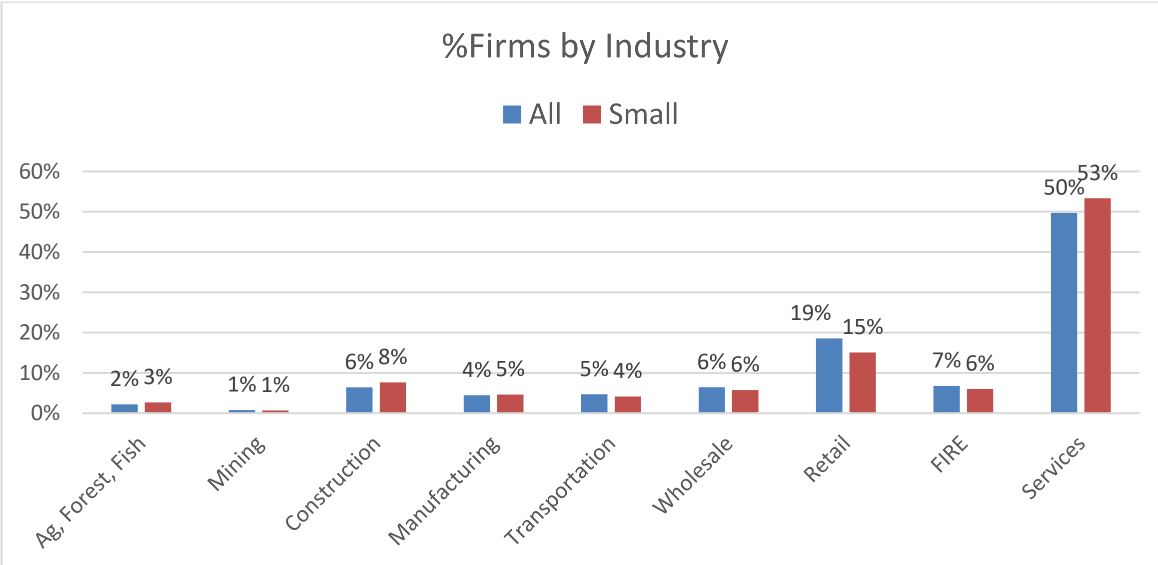
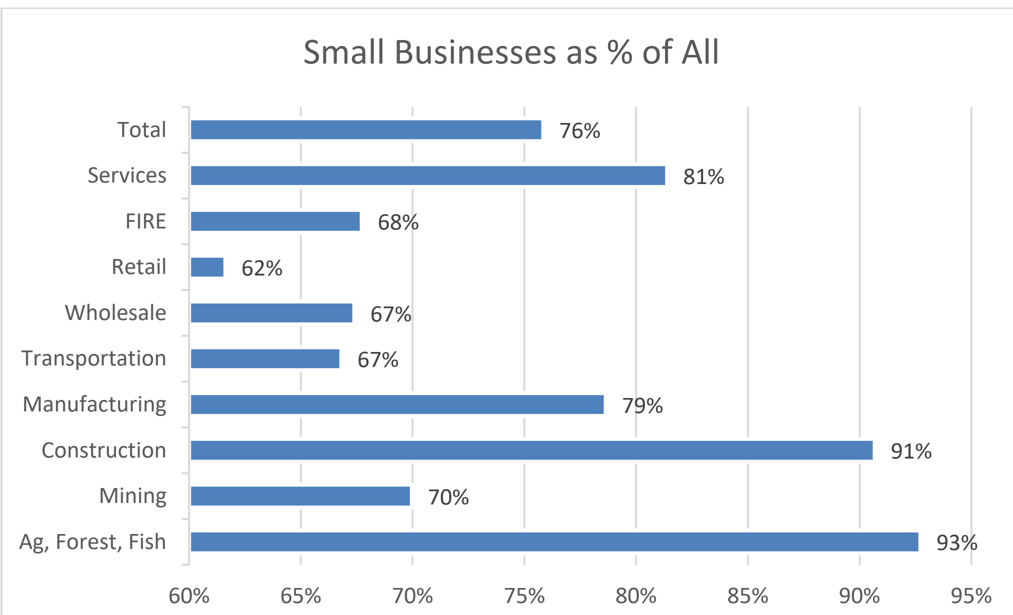


Figure 14



2.3.4 Geographic Distribution

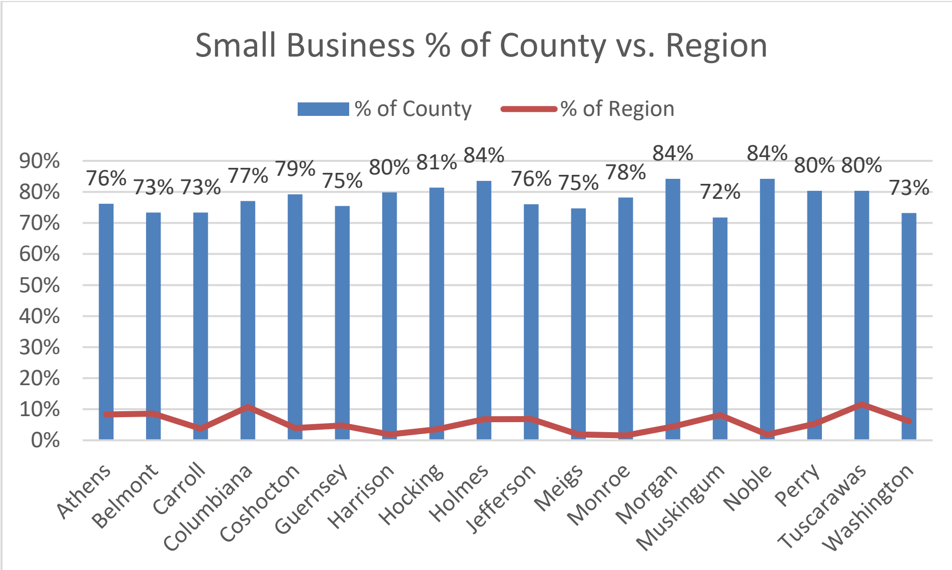
It is similarly useful to understand how important Small Businesses are to the economies of the individual counties in the RISE Ohio region by assessing the share of All Business in those counties are Small Businesses. This is communicated in Table 5 which, while it reiterates information contained in Table 2, includes the additional analysis of the percentage of all businesses in the counties are small businesses. Table 2 communicated the contribution of each county to the total Small Business population of the total RISE Ohio region, demonstrating the disproportionately large roles of Columbiana (11%) and Tuscarawas (12%) in that regard.

In contrast, Table 5 illustrates that while several counties constitute relatively small shares of the regional Small Business population, they are individually nonetheless disproportionately reliant on Small Businesses within their individual county economies. A few examples are highlighted in the Table 5: Harrison County (2% of the RISE Ohio Small Business population but with 80% of the county's businesses being Small Businesses, along with Hocking (4% versus 81%), Morgan (5% versus 84%), and Noble (2% versus 84%) counties. This relationship is further displayed in Figure 15.

Table 5

County	#Small Businesses	%Region	County % Small Businesses
Athens	2,140	8%	76%
Belmont	2,133	8%	73%
Carroll	930	4%	73%
Columbiana	2,802	11%	77%
Coshocton	1,057	4%	79%
Guernsey	1,218	5%	75%
Harrison	514	2%	80%
Hocking	979	4%	81%
Holmes	1,908	7%	84%
Jefferson	1,755	7%	76%
Meigs	475	2%	75%
Monroe	412	2%	78%
Morgan	1,262	5%	84%
Muskingum	1,971	8%	72%
Noble	529	2%	84%
Perry	1,432	5%	80%
Tuscarawas	3,142	12%	80%
Washington	1,520	6%	73%

Figure 15


Small Business % of County vs. Region
% of County
% of Region
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
76%
73%
73%
77%
79%
75%
80%
81%
84%
76%
75%
78%
84%
72%
84%
80%
80%
73%
Athens
Belmont
Carroll
Columbiana
Coshocton
Guernsey
Harrison
Hocking
Holmes
Jefferson
Meigs
Monroe
Morgan
Muskingum
Noble
Perry
Tuscarawas
Washington

3. RISE Ohio Entrepreneurial Activity

Entrepreneurship is an inherent activity in any economy. Indeed, research has found that the differential between economies with perceived high versus low levels of entrepreneurial activity is generally not great, often just a matter of a few percentage points. But where in an economy those relatively few additional new firms arise can have tremendous "downstream" significance as a subset of such local "startup" businesses may survive, mature, and expand into small businesses and even substantial "high growth companies" with disproportionately large economic roles.

The study of entrepreneurial activity in the United States has been facilitated in recent years by a data resource called "Business Formation Statistics" (BFS), a product of the U.S. Census Bureau developed by economists affiliated with Board of Governors of the Federal Reserve System. BFS data is distinguished from other, less substantive measures of entrepreneurial activity in that it includes only new businesses applying for Employer Identification Numbers (EINs) in the United States and are thus associated with new companies with employees (as opposed to self-employed or sole proprietorships). The BFS measures both business initiation activity and the cycle from initiation to realized business formation. The BFS thus gives an early look at business formation activity within the U.S. at a detailed state level and regional level.

3.1 Recent Regional Business Formation Activity

The RISE Ohio Small Business population analyzed in Section 2 originated through the cumulative effect of entrepreneurial business formation activity in the preceding years. That activity may have occurred in the immediately prior year, or in any of the many years before that. In this section we assess both recent and historic rates of new business formation, or "entrepreneurial", activity for the RISE Ohio region and the counties that comprise it.

The U.S. Census Bureau's Business Formation Statistics for the RISE Ohio region and its constituent 18 counties were analyzed to identify recent and historic rates of entrepreneurial activity at both the counties and regional levels. That analysis used BFS data only up to the 2019 calendar year to avoid distortions created by the extraordinary economic phenomenon of the COVID pandemic.

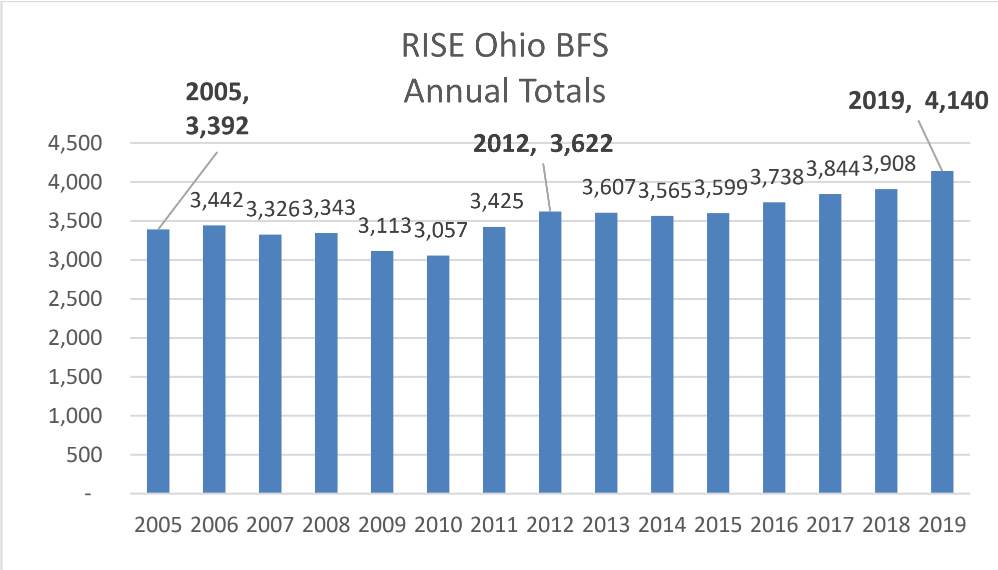
This analysis found that for 2019, there was a total of 4,140 new businesses applying for Employer Identification Numbers, and therefore being captured by in the BFS database for that year. This number was the highest annual figure for the five year period of 2015 to 2019 (Table 6). While this is suggestive of an increasing rate of entrepreneurial activity over that period, such a conclusion would be premature without considering other factors addressed later in this study.

Table 6

County	2015	2016	2017	2018	2019
Total	3,599	3,738	3,844	3,908	4,140

The recent (2019) level of RISE Ohio business formation can be better appreciated in the context of a longer, but still recent, time period. For example, across the 15 year time period of 2005 to 2019, the 2019 BFS rate of 4,140 annual business formations is the highest for the entire period. (Figure 16) In 2005, the BFS for the entire region was only 3,392, and it has grown significantly – if rather erratically – during the period. Approximately halfway through the period, after several years of decline, by 2012, the RISE Ohio BFS annual rate recovered and then rose to a new high of 3,622 annual business formations. From that year, the region’s BFS rose consistently to the apex 2019 value.

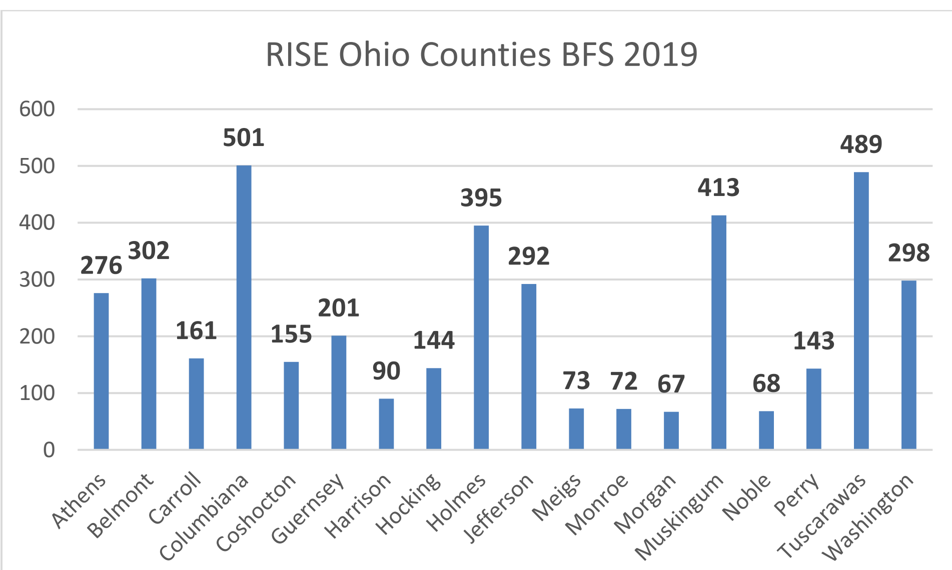
Figure 16



3.1.1 Geographic Distribution of Business Formation Activity

As with the case of the geographic distribution of All Businesses and Small Businesses in the RISE Ohio region, the distribution of business formations varied greatly from county to county across the region. (Figure 17) BFS rates in 2019 ranged from highs of 501 and 489 in Columbiana and Tuscarawas counties respectively, to the lowest BFS rates in Noble (68) and Morgan (67) counties.

Figure 17

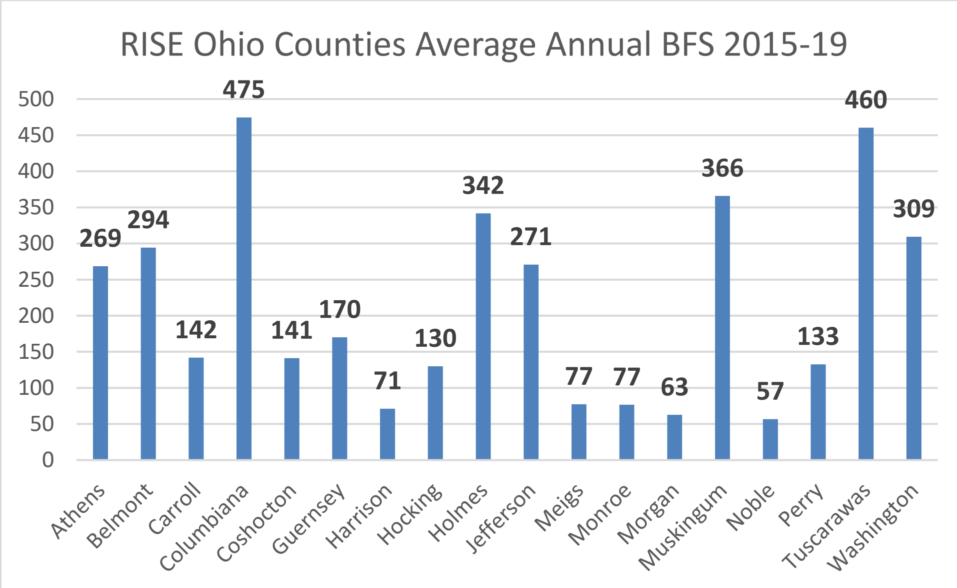


As shown in Table 7 there was significant variability in the annual BFS rates among the counties and within the individual counties for the 2015-2019 period. In such circumstances it is useful to calculate the average values for the period to provide a stabilized picture of RISE Ohio entrepreneurial activity. As displayed in Figure 18, for the 2015 to 2019 five year period, average annual BFS rates for the period ranged from highs of 475 and 460 in Columbiana and Tuscarawas counties respectively, to the lowest BFS rates in Noble (57) and Morgan (63) counties.

Table 7

County	2015	2016	2017	2018	2019	Avg.
Athens	262	225	299	281	276	268.6
Belmont	304	278	267	320	302	294.2
Carroll	137	116	140	155	161	141.8
Columbiana	472	454	470	476	501	474.6
Coshocton	126	148	129	148	155	141.2
Guernsey	128	168	181	172	201	170
Harrison	62	59	96	49	90	71.2
Hocking	102	132	146	126	144	130
Holmes	287	358	334	335	395	341.8
Jefferson	282	267	239	274	292	270.8
Meigs	77	78	88	71	73	77.4
Monroe	73	72	75	91	72	76.6
Morgan	54	71	59	62	67	62.6
Muskingum	333	337	382	364	413	365.8
Noble	53	59	38	66	68	56.8
Perry	144	113	114	149	143	132.6
Tuscarawas	431	460	465	457	489	460.4
Washington	272	343	322	312	298	309.4
Total	3,599	3,738	3,844	3,908	4,140	3,845.8

Figure 18



3.2 Population Trends and Entrepreneurship

However, even annualizing BFS rates can still present a significantly distorted portrayal of RISE Ohio entrepreneurial activity, especially at the individual county level due to disparities in county populations. While knowing the absolute rates of business formation at the regional and county levels is important for assessing the general scale of entrepreneurial activity, it provides few insights into the disparate levels of such activity geographically. More accurate insights into the rate of entrepreneurial activity is provided by adjusting the BFS for the populations of the individual counties.

Researchers have found a general correlation between a region's population growth and its level of entrepreneurial activity, the diversity of population at the county-level across the RISE Ohio region has a significant effect on their levels of business formation. Moreover, positive trend in population growth are likely to enhance a county's entrepreneurial prospects as new businesses start, and existing small businesses expand, to supply the increasing demand for products and services of a growing population of potential customers. However, it is important to note that such population-correlated growth tends to favor largely retail and service sectors, so called "non-traded" sectors, rather than growth by businesses in "traded" industry sectors that serve non-local

– meaning in this case “non-RISE Ohio” customers elsewhere in Ohio and the world.

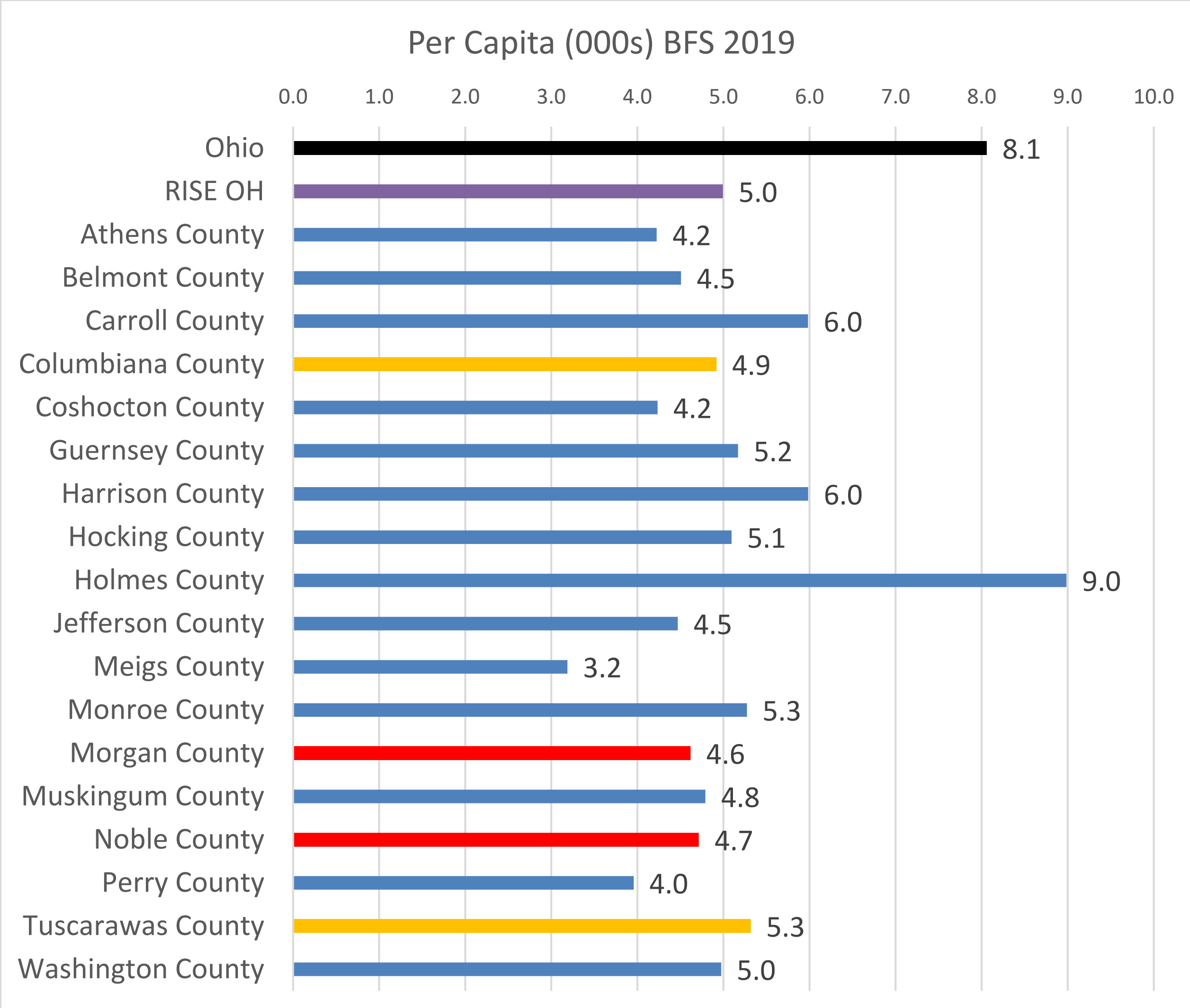
3.2.1 Population Adjusted County BFS Values

Adjusting the regional and county level BFS values for population provides a informatively different picture of the region’s entrepreneurial activity, and allows for meaningful comparisons not only at the county level within the RISE Ohio region, but between the region and the State of Ohio as well. For example, (Figure 19) calculations of per capita (per 1000 people) Business Formation Statistics (BFS) found that the RISE Ohio region as whole had an annual business formation rate of 5.0 BFS/1,000 population. This rate lagged disturbingly far behind that of the State of Ohio’s 8.1 business formations/1,000, suggesting that the RISE Ohio region – at least for the year 2019 – had a much lower level of entrepreneurial activity than Ohio as a whole.

This form of analysis also provided a more meaningful differentiation of business formation rates between the counties of the RISE Ohio region. Whereas in a previous section Columbiana and Tuscarawas counties were distinguished as the highest absolute BFS values in 2019, those same two counties were revealed as having merely average rates of BFS per 1,000 population, with Columbiana county (4.9) slightly below the RISE Ohio value (5.0), and Tuscarawas county (5.3) being slightly above that regional average. Similarly, this analysis provided a more nuanced depiction of entrepreneurial activity in the region’s two lowest absolute BFS value counties, Morgan and Noble. While both had a 2019 population adjusted BFS rate (4.6 and 4.7 respectively) below the RISE Ohio regional rate (5.0), they were no longer the lowest scoring counties in that regard. Instead, that dubious distinct was held by Meigs (3.2), Perry (4.0), Athens (4.2), and Coshocton (4.2) counties.

Meanwhile, the most remarkable finding revealed in the population adjusted analysis was the exceptional high rate of business formation in Holmes County (9.0), where the adjusted BFS value not only led the RISE Ohio region, but exceeded the rate for the State of Ohio (8.1) as well. In fact, Holmes County was the only RISE Ohio county that even approached – much less exceeded – the state value.

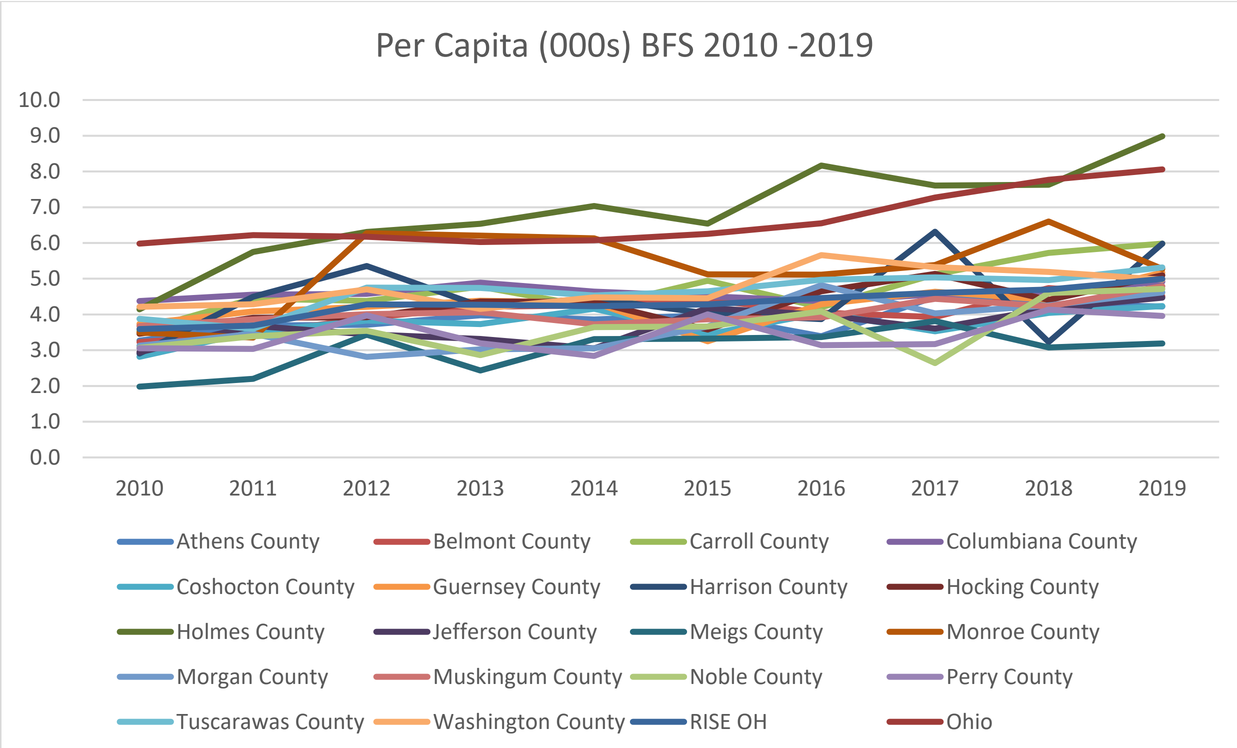
Figure 19



3.2.1 Population Adjusted County BFS Values Over Time

These values of regional and county level BFS rates adjusted for population are informative especially when examined over a multi-year time period. Displaying those rates as annual values for the period of 2010 to 2019 provides a colorful but difficult to discern and interpret picture. (Figure 20) While it is possible to distinguish a few outlier counties, most are closely grouped and hard to parse out.

Figure 20

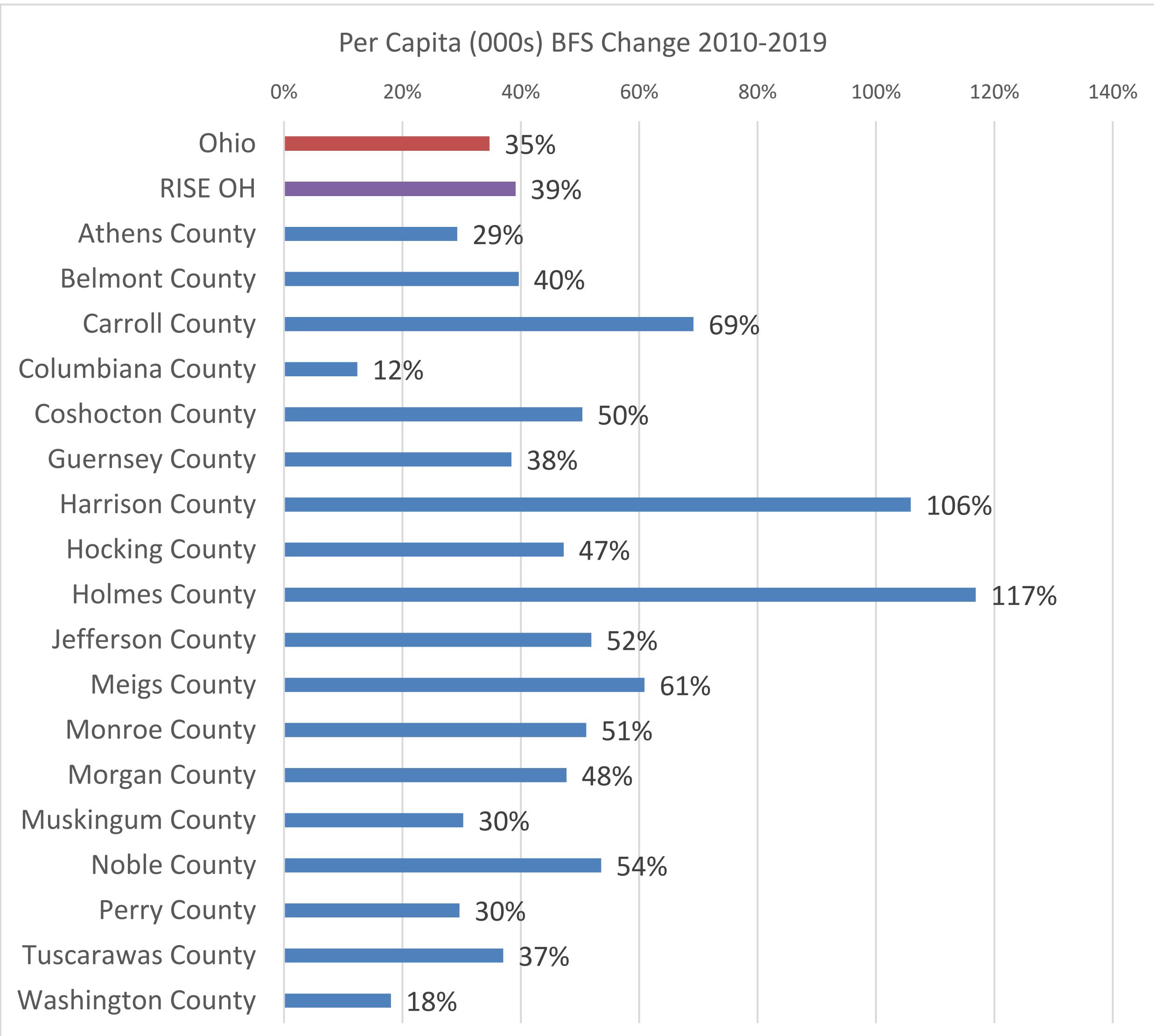


Instead, an examination of the counties' and region's change for the period allows for better isolation of individual performance. (Figure 21) This presentation sacrifices the annual granularity of data in favor of more coherently communicating relative longer-term entrepreneurial activity change for the period. And the result provides yet another understanding of the RISE Ohio region's entrepreneurial activity – that while, as was described in the previous section, the region lags the State of Ohio in the per capita (000s) rate of business formation, for the decade of 2010-2019 that rate has been increasing faster than the State.

This analysis reveals that the per capita (000s) BFS rate growth rate for the RISE Ohio region (39%) exceeded that of the State of Ohio (35%) by 4 percentage points. This is an encouraging differential as it suggests that while the region lags the State in its current rate of entrepreneurial activity, that gap is closing. Meanwhile, within the region itself there are several counties which are exhibiting even higher – some remarkably so – rates of growth in their per capita (000s) BFS rates. The leaders by far in that regard are Holmes

(117%) and Harrison (106%) counties. Another nine counties had growth rates exceeding the region as a whole – Belmont, Carroll, Coshocton, Hocking, Jefferson, Meigs, Monroe, Morgan, and Noble. But the most surprising revelation is that Columbiana County, which had been a leader in absolute BFS values, had the lowest rate of growth (12%) of the entire RISE Ohio region for the period. While this may be partially explained by its higher BFS base number at the start of period, it nonetheless indicates that the county's entrepreneurial activity growth is falling behind that of the rest of the region.

Figure 21



One interpretation of the RISE Ohio region's increasing rate of population adjusted business formation can be that a new generation of entrepreneurial firms is forming in the region from the re-utilization of resources and locational assets freed up by long-term economic realignment. This sustained increase suggests both an increasingly positive economic climate for entrepreneurial development in the region and the probable existence of a significant market of nascent ventures in the RISE Ohio region's "entrepreneurship pipeline".

Census data on new business formation inevitably undercounts entrepreneurship as it only identifies businesses that apply for governmental Employer Identification Numbers (EINs) for employment tax purposes. It therefore omits non-employer businesses, such as sole proprietorships, as well as potential ventures still at the ideation and evaluation stages of entrepreneurial development. While it is unknown what percentage of nascent firms mature to the formation stage, at which they might apply for an EIN and become statistically visible, encouraging more prospective entrepreneurs to begin that process and then accelerating their maturation could significantly increase the size and diversity of the RISE Ohio region's business population.

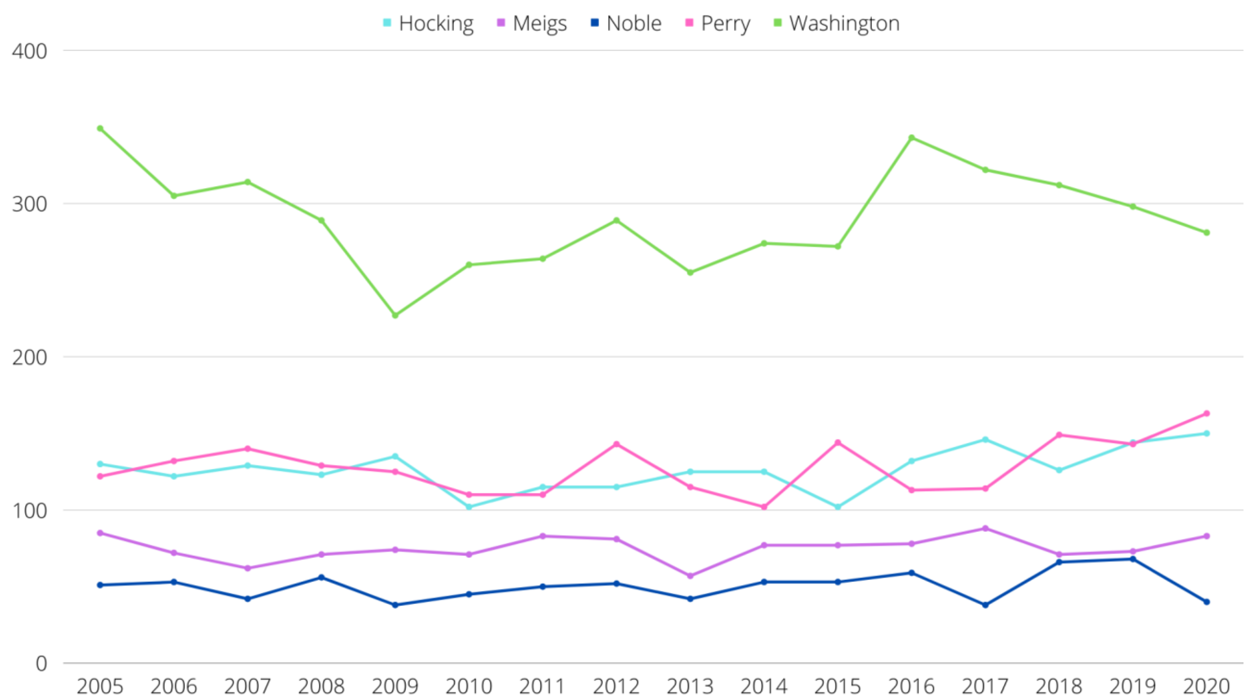
3.2.1 Population Adjusted LDD Region BFS Values Over Time

This can be encouraging news for economic development initiatives in the two Local Development Districts (LDDs) within the RISE Ohio region. For that reason, the business formation of the RISE Ohio region was also examined for the two county cohorts comprising the Buckeye Hills Regional Council and the Ohio Mid-Eastern Governments Association.

Buckeye Hills Regional Council:

For the five counties in this region, Washington County acts as an outlier, as has higher BFS numbers than any other county in the region. Washington County does not go below 200 for any given year at all between 2005 and 2020 and even gets as high as 350. No other county makes it above 170 for any given year. Both Meigs and Nobel counties consistently stay below 100 for the years addressed in this data, while Hocking and Perry's counties consistently stay above 100 and below 200. When looking at trends, Hocking, Washington, Perry and Nobel counties all see a substantial drop in numbers between the years 2008 and 2010, while Meigs numbers stayed the same over those three years.

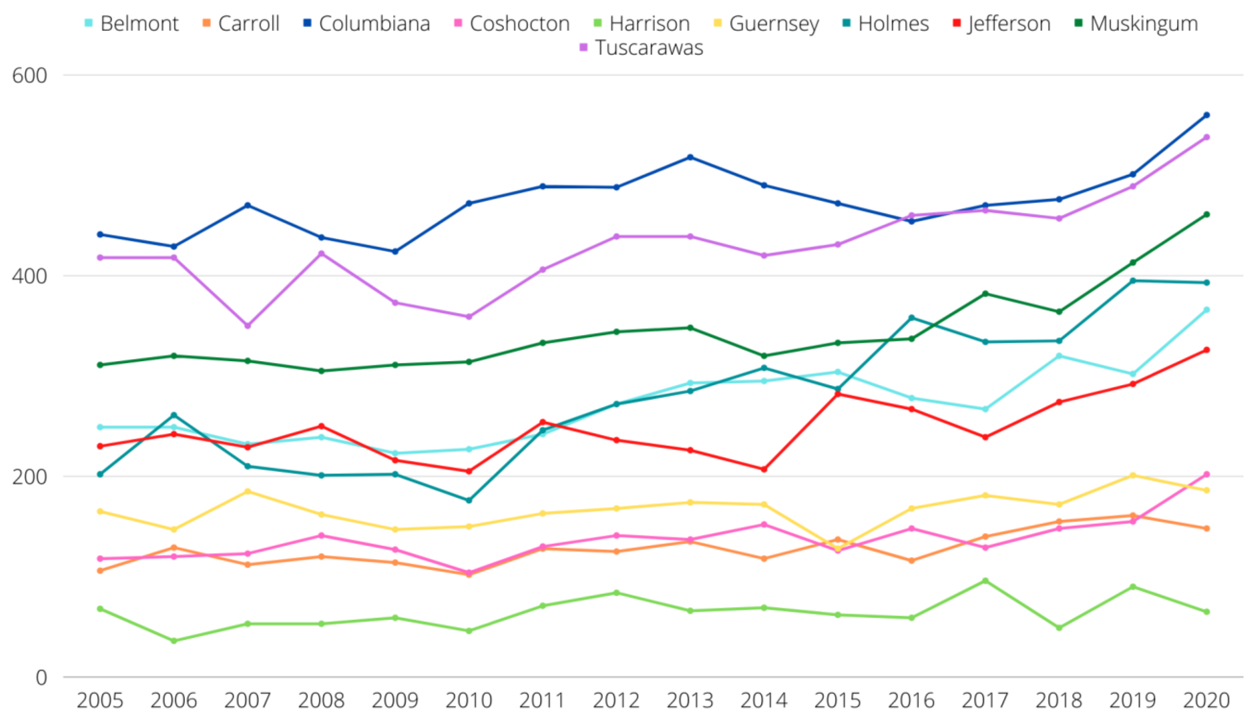
Over the entire 15 years, Washington County actually peaked in 2005 at 349 and has slowly seen consistently decreasing numbers ever since. However, Washington County did see a jump in numbers, along with all other counties, between the years 2014 and 2016. All counties except for Washington County also saw a quick increase between the years 2019 and 2020. Hocking, Nobel, and Perry counties also saw a substantial increase in numbers between 2016 and 2018. Included is a graph of the data.



Ohio Mid-Eastern Governments Association:

For these ten counties, Harrison County stands out as an outlier, as none of this county's BA numbers were able to get above 100 at all between 2005 and 2020. In comparison, not a single other county in this region how numbers that go below 100 in the years gathered. Both Columbiana County and Tuscarawas County have the highest and most similar numbers over the years- with both counties sitting within the 400s and 500s consistently.

The other counties in the region, with the exception of Harrison County, are also not far behind comparatively. Trend-wise, six of the ten counties in this region saw a substantial increase between the years 2016 and 2018, including another short jump from 2019 and 2020. Eight of the ten counties also saw a substantial jump between the years 2011 and 2013. Included is a graph of the data.



4. High Growth Companies

The high profile successes of publicly-traded companies, especially firms such as Facebook, Google, and Amazon, have created a public perception of high growth companies as being predominantly entrepreneurial startups originating in technology centers such as Silicon Valley. But this perception contrasts sharply with recent U.S. economic research which has consistently found, using ever more sophisticated and comprehensive data sources and analytical tools, that those companies achieving the greatest levels of growth – as opposed to rates of growth – are more mature companies across a broad range of industries and geographies.

Definitions of high growth companies vary widely depending on the priorities of the identifying entity. For investors in public companies, such as those traded on stock markets around the world, a “growth company” is a publicly-traded company whose business generates significant positive cash flows or earnings, which increase at significantly faster rates than the overall stock market. For venture capital investors that invest in privately-owned businesses, their targeted “growth company” is typically a young, or even new startup, entrepreneurial business in which the investors can effectively take control through majority ownership positions. Often these businesses will be active in a technology-driven industry sector in which the investors intend to drive the company to achieve rapid initial revenue growth enabling a profitable investment exit through an initial public offering to public stock market investors.

Unlike financial markets, which prioritize company growth as a driver of shareholder value regardless of company scale factors, economic researchers – especially those involved in economic development policy design – are most interested in the company growth as a source of economic outcomes such as income and employment. From that perspective, high growth companies are best defined in terms of their increased, sustained economic impacts.

Economic development efforts that enable HGCs can therefore exert considerable leverage on increased regional employment and economic activity. But such efforts need to recognize that HGCs typically deviate from popular perceptions of startup, technology-based entrepreneurial activity in that they are predominantly more established firms active across a variety of industry sectors.

It was from that orientation that, beginning in the 1980s, economic researchers began identifying a set of high growth companies – colorfully termed “gazelles” by researcher David Birch – that, while constituting a small percentage of all firms, contributed a majority share of net new employment. These earlier findings have been much refined as increasingly more precise sources of data on business activity have become available to researchers. The result has been an emerging consensus that while startup entrepreneurial firms exhibit the highest growth rates, whether in revenues or jobs, their volatility mediates their sustained net economic impacts as business failures offset many of that segment’s economic effects.

Instead, it has been established that the most impactful high growth firms are those that achieve significant growth after first becoming more firmly established. A 2011 U.S. Small Business Administration report, “Accelerating Job Creation in America: The Promise of High-impact Companies”, found that the firms with the greatest economic impacts, rather than being startups, instead had an overall average age of 19 years, with a median age of around 12 years. Such findings have been confirmed by numerous subsequent studies, which have further revealed that high growth companies consistently occur across both industry sectors and geographies at a fairly consistent rate of 2 to 3% of the total U.S. business population. This research has also found that the “growth trajectories” of high growth companies can vary from a short span of dramatic expansion to a “slow but steady” incremental pace of growth.

These observations appears to apply to high growth companies in Ohio as well. In their 2021 report, “Not All High-Growth Firms Are Alike: Capturing and Tagging Ohio’s Gazelles”, researchers Merissa C. Piazza and Edward (Ned) Hill found that among the 1.2% of all Ohio’s firms they classified as high growth., the “larger herd of gazelles grows consistently, while the other, much smaller pack experiences short, intense growth spurts."

4.1 RISE Ohio Business Population Identification

The RISE Ohio entrepreneurial assessment included an examination of the population of high growth companies (HGCs) in the study region. HGCs are independently owned local businesses - as opposed to subsidiaries of other companies - that have grown to be among the largest businesses in their industry sectors. National research has found that HGCs have disproportionately large positive effects on their regional economies. The successes of such firms can also be viewed as significant market indicators of regional economic advantages for future growth.

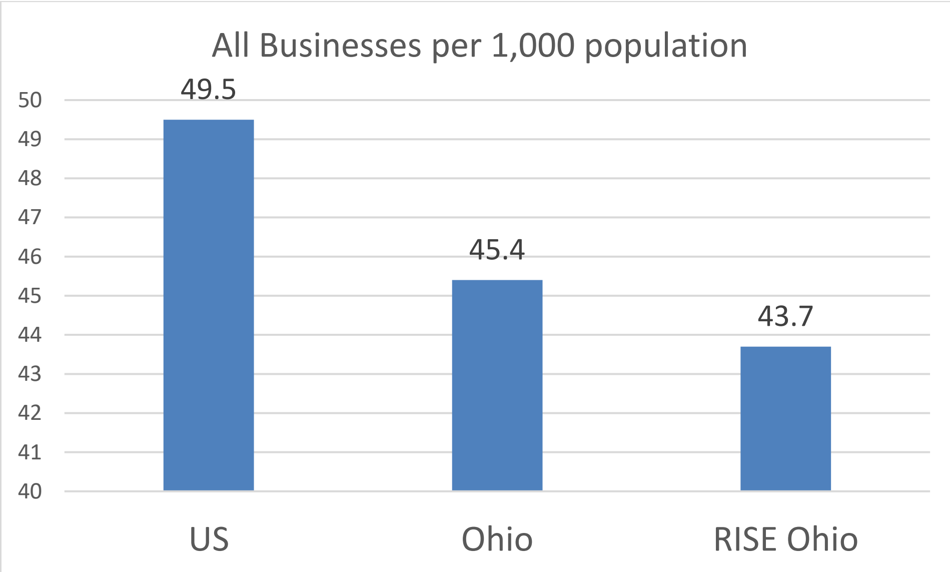
4.1.1 Comparative Business Populations

The existence of high growth companies in any regional economy is inherently a function, to some extent, of the size and nature of the region's total business population. In the case of the RISE Ohio region, its business population is comparatively small even in resident population-adjusted terms. For example, of the more than 535,000 businesses identified in Ohio, a total of 35,520 are located in the RISE Ohio region. While this is a sizable number of businesses, it is not particularly large given the region's population of 821,422. When adjusted for population, as shown in Table 8, the region's number of all businesses per 1,000 population (43.7) lags slightly behind those figures for the State of Ohio (45.4) and the United States (49.5). (Figure 22)

Table 8

	US	Ohio	RISE Ohio
2020 Population	331,449,281	11,799,448	821,422
Total Number of Businesses	16,421,602	535,873	35,520
Total Firms/1,000 pop	49.5	45.4	43.7

Figure 22



4.1.2 Locally Owned Businesses

The relative per capita number of businesses in the RISE Ohio region is offset by the region's disproportionately high percentage share of locally based businesses. Of the region's total of 35.520 businesses, 32,190 were identified as being locally based in the form of either a sole location or a headquarters. Sole locations are independent companies with only a single facility, as opposed to having subsidiary firms with additional facilities elsewhere. Conversely, headquarters have central administrative functions located in the study area while also having subsidiary operations that may or may not be located in the RISE Ohio region.

As shown in Table 9, the share of businesses in the region that are locally based is much higher (91%) than that value for both Ohio (73%) and the US (78%). This significant difference more than offset the comparatively fewer number of total RISE Ohio businesses, results in the region's higher ratio number of locally owned businesses given its population. When adjusted for population, the region's number of locally owned businesses per 1,000 population (39.2%) exceeds the figure for the State of Ohio (38.5), though it lags behind that of the United States (43.1).

Table 9

	US	Ohio	RISE Ohio
2020 Population	331,449,281	11,799,448	821,422
All Businesses	18,247,355	618,580	35,520
Locally Based Businesses	14,283,309	454,198	32,190
Local % of All Businesses	78.3%	73.4%	90.6%
Local Businesses/1,000 Pop.	43.1%	38.5%	39.2%

4.1.3 RISE Ohio Study High Growth Companies Identification

This research identified and analyzed HGCs in the eighteen Appalachian counties of the RISE OHI) region across a spectrum of attributes, including number, scale, industry, and geographic distribution. For the purposes of this assessment, the population of high growth companies in the RISE Ohio region were defined as locally owned businesses with annual revenues exceeding $2.5 million. This research, by identifying and characterizing the population of HGCs in the RISE Ohio region, may reveal new and more effective opportunities for economic development support of higher impact local business growth.

Despite the highly variable nature of definitions of high growth companies, the end result, regardless of their individual growth trajectories, is that such companies eventually become among the largest businesses (top 5% by revenues) in their industries. Moreover, they retain their status as independently owned rather than being a subsidiary of a larger, parent company. This provided three primary parameters for defining the RISE Ohio region's high growth company population:

Location:	Within the eighteen RISE Ohio counties
Ownership:	Independent location or Headquarters
Size:	Annual revenues >$2.5 million

These parameters (Table 10) were used to build a study population of qualifying HGCs through queries of proprietary commercial business information databases. The primary source employed in this study was the Data-Axle Reference Solutions collection of databases that provides information on more than 64 million U.S. businesses.

Table 10

Parameter	Description	# of Companies
Location	Based in the eighteen counties constituting the RISE Ohio study area	A total of 35,520 businesses of all types are located in the study region
Ownership	Independently owned and classified as either a sole location or a headquarters company	Of the total 35,520 businesses in the study area, **32,190** are classified as locally owned
Revenue Size	Annual revenues at a level placing the company in the top 5% of US firms (>$2.5 million)	Of the 32,190 locally owned businesses in the RISE Ohio study region, **1,999** are among the top 5% of US firms in annual revenues

4.1.4 High Growth Companies Population Occurrence

Given the RISE Ohio region's larger share of locally owned businesses, it is expected the region would also have a proportionately larger number of firms with annual revenues exceeding $2.5 million that would qualify them as High Growth Companies (HGCs). That is not an inevitable result, as it is possible for a region to provide fewer or more economic, financial or resource advantages that are especially supportive of company growth. The 1,999 companies identified as HGCs in the RISE Ohio region are 5.6% of the region's total business population of 35,520 businesses.(Table 11)

Table 11

RISE Ohio Business Population	Number	% of All
All Businesses	35,520	100%
Small Businesses	29,727	83.7%
High Growth Companies	1,999	5.6%

This percentage is well ahead of the comparable figures for both Ohio (4.9%) and the United States (5.1%). (Table 12) Moreover, when assessed on a population-adjusted basis, the RISE Ohio region also outperforms state and national results. (Table 13) At 3.2 high growth companies per 1,000 population the region outperforms the state (2.6) and the nation (2.8). The implications of this differential will be addressed later in the study.

Table 12

Area	Total Businesses	HGCs	%HGCs
US	18,247,355	923,644	5.1%
Ohio	618,580	30,253	4.9%
RISE Ohio	35,520	1,999	5.6%

Table 13

	US	Ohio	RISE Ohio
2020 Population	331,449,281	11,799,448	634,173
# of HGCs	923,644	30,253	1,999
HGCs/1,000 Pop.	2.8	2.6	3.2

While limited, because of the disproportionately large economic contributions research has found HGCs to make nationally, the characteristics of the RISE Ohio region's HGC population may be such that they nonetheless have a significant role in the region's industries, economies, and employment. These characteristics are examined in the next section. These RISE Ohio HGCs were found to play a large and important role in the region's economy due to characteristics that magnify their contributions.

Research on high growth companies has consistently found that the economic impacts of HGCs are primarily a result of their nature, rather than their number. Not only do HGCs exhibit a greater likelihood of continued expansion in conventional economic outcomes such as revenues and employment, their nature as locally owned, but typically non-local (i.e., national, or even global) in their markets, means that they make a greater economic contribution than other businesses of comparable scales. The greater extent to which they add value to the goods and services they produce further amplifies their economic impacts. In this section we report on this study's analysis of the characteristics of the RISE Ohio region's population of HGCs in that regard.

4.2 RISE Ohio High Growth Companies Characteristics

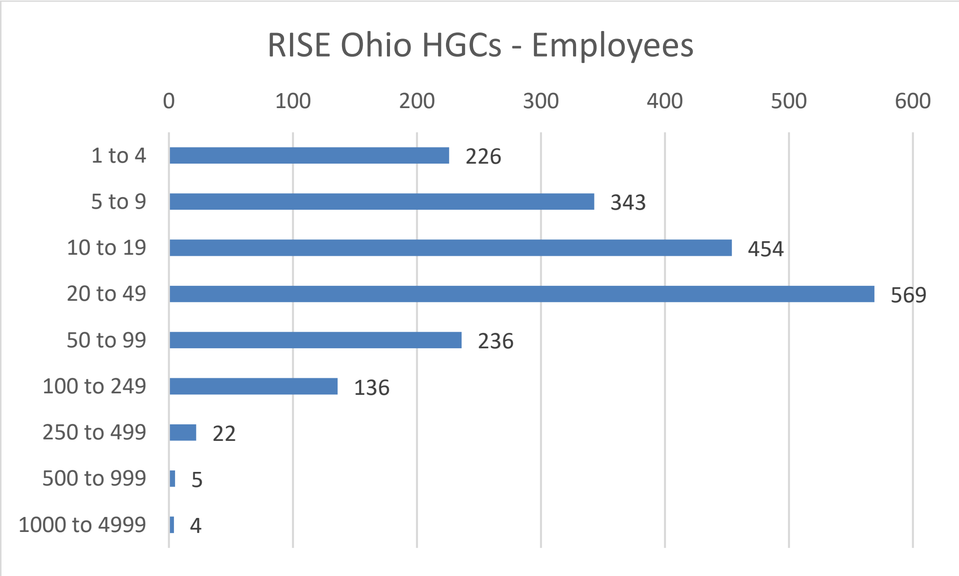
An interesting phenomenon that has been noted in national studies of high growth companies is their ubiquity across various parameters, and especially across industry sectors and disparate geographies. Whereas high growth companies are commonly recognized as occurring in "high tech" industry sectors or within certain geographic clusters, such Silicon Valley, they have instead proven to occur at fairly consistent levels throughout the US economy and states. It is this "ubiquity", as has been previously noted, that make high growth companies so potent as an economic development – or at least encouragement" – opportunity, as they can create disproportionate positive impacts seemingly everywhere. It is therefore helpful to examine the population of high growth companies in the RISE Ohio regio to see if that potential is being realized there.

4.2.1 Employment Size Distribution

Although the defining scale parameter of HGCs used in the study was based on companies' annual revenues, it is their employment that is of primary economic development interest. Therefore, the study population was analyzed to determine the association of employment with annual revenues.

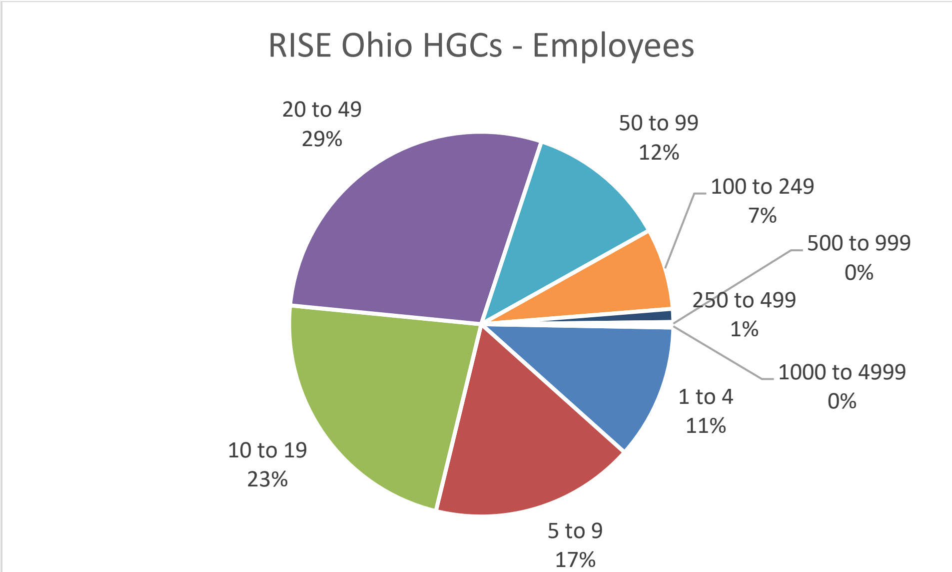
Examining the RISE Ohio high growth company population in terms of their employment provides an important contrast with the region's small business and overall business populations. The largest number (569) of RISE Ohio's high growth companies employ between 20 to 49 employees (Figure 23), with the second largest (454) employing between 10 to 19 employees. Interestingly, there are nearly an equivalent number of companies in the 1 to 4 employee range (226) to that of the companies employing 50 to 99 (236).

Figure 23



Looking at these segments as a share of the total RISE Ohio high growth company population, more than half (52%) employ between 10 and 49 workers. (Figure 24) Companies employing more than 50 workers accounted for approximately 21% of the total RISE Ohio high growth company population, while 28% of the companies had fewer than 10 employees.

Figure 24



4.2.4 Revenue Size Distribution

In contrast to the wide distribution of companies by employment size, the distribution of RISE Ohio high growth companies by revenues were far more concentrated in the lower revenue level segments. For example, of the 1,999 RISE Ohio high growth companies, the largest number by far (924) were in the lowest annual revenues segment of $2.5 to $5 million. (Figure 25) This segment comprised nearly half (47%) of the region's high growth companies. (Figure 26)

Figure 25

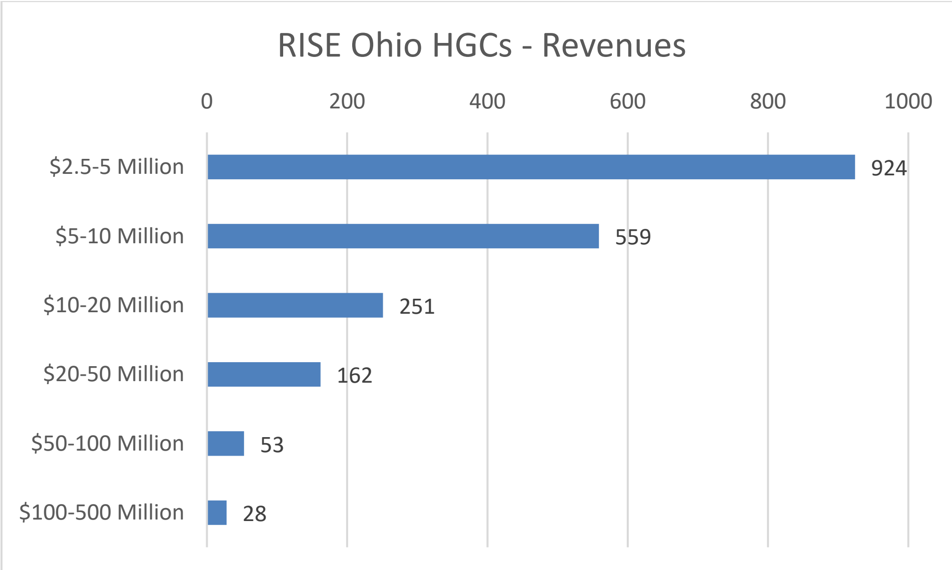
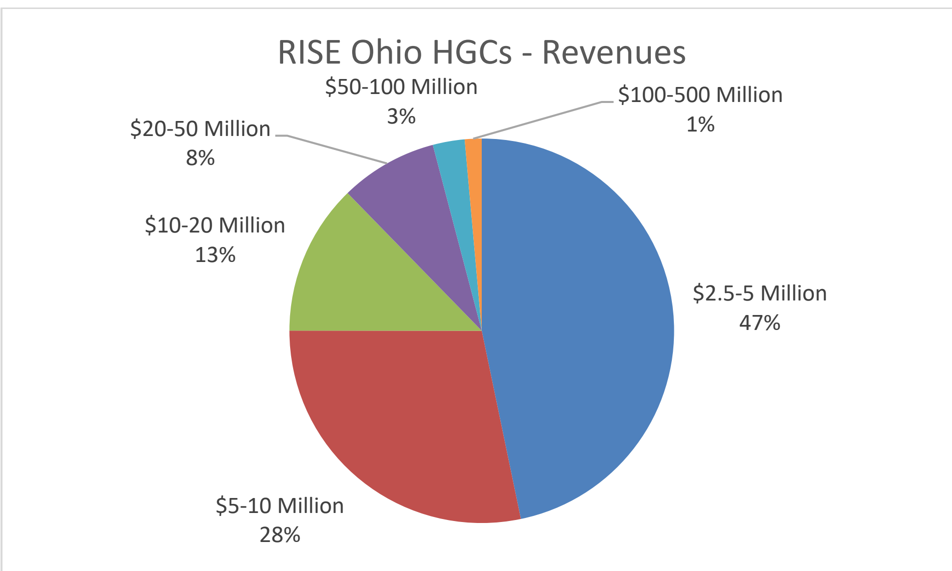


Figure 26



4.2.5 Industry Distribution

Research on high growth companies has found that perhaps their most unusual and unexpected nature is their consistent presence across industry sectors. Rather than being more common in certain high technology or innovation-based sectors as has often been presumed, it had been repeatedly shown that high growth companies are as likely to occur in “traditional industry” sectors as in technology sectors; just as frequently in service industries as in information or manufacturing ones. This ubiquitous nature provides for an analytical opportunity to compare the concentrations of HGCs in a region’s industry sectors to a super-regional or national benchmark concentrations as a means of identifying potential regional economic advantages.

The population of RISE Ohio HGCs was first analyzed to determine its distribution by industry. This was done using the North American Industry Classification System (NAICS), the standard used by Federal statistical agencies in classifying business establishments for the purpose of collecting, analyzing, and publishing statistical data related to the U.S. business economy. NAICS organizes establishments into industries according to the similarity in the processes used to produce goods or services. NAICS codes array the economy into 20 sectors, which are separated into 99 3-digit subsectors, which are divided into 311 4-digit industry groups, which are further subdivided into 709 5-digit industries, and finally disaggregated into 1057 6-digit U.S. industries.

The NAICS classification for each RISE Ohio HGC was identified down to the 6-digit, 4-digit, and 2-digit levels. The 6-digit level enabled the most precise examination of the type of business activities of the HGCs, while the 4- and 2-digit classifications were useful for assessing industry sector and subsector concentrations, especially for comparison to national or regional benchmarks.

An examination of the distribution of the RISE Ohio region’s high growth companies by industry sector (Figure 27) reveals that the greatest number of the population are engaged in trade, either in Wholesale Trade (570) or Retail Trade (358). Together these two sectors account for nearly half (47%) of the region’s high growth companies. Another significant number are engaged in Manufacturing (312), Healthcare (197) or Construction (136). (Figure 28)

Figure 27

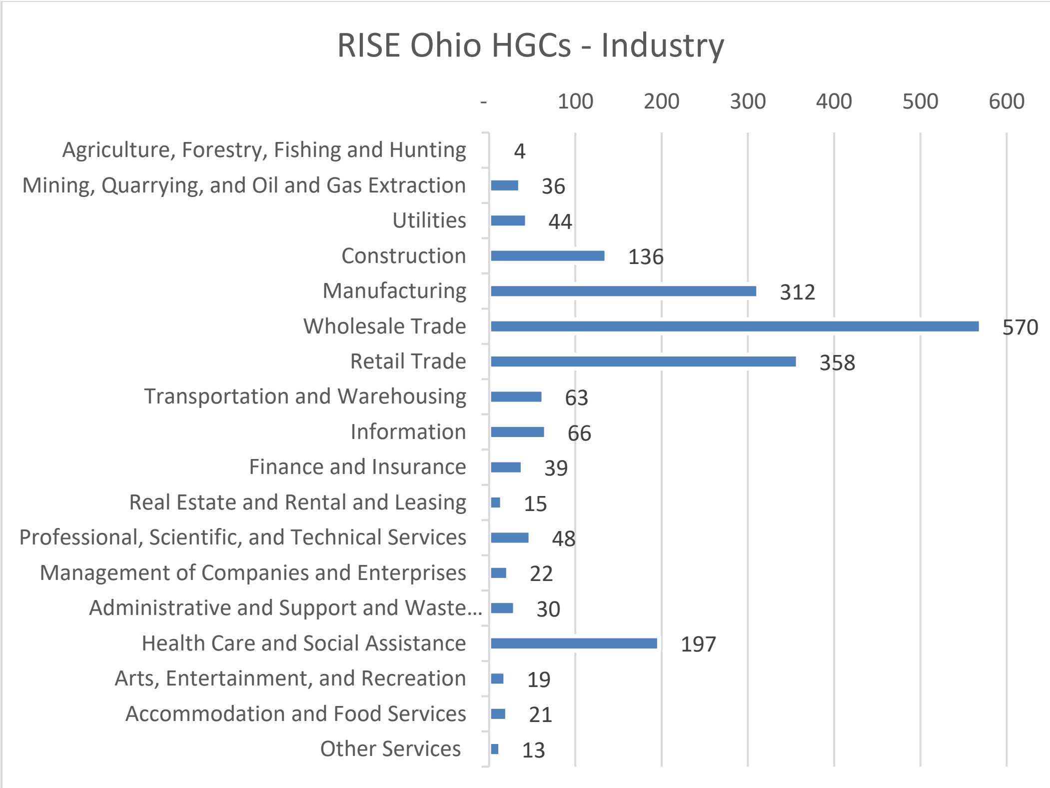
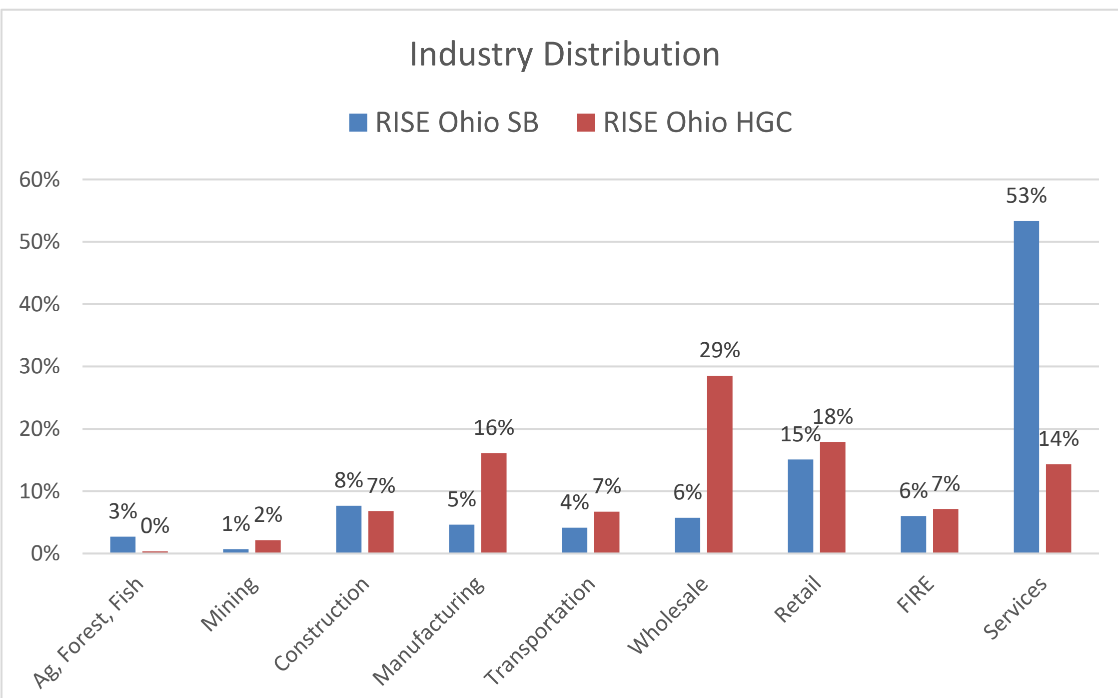


Figure 28



4.2.6 Geographic Distribution

An impressive aspect of the population of High Growth Companies in the RISE Ohio region is the broad distribution of those businesses across the region as illustrated in the heatmap (Figure 30) of their locations. As demonstrated by the heatmap, each of the RISE Ohio counties are home to several of the 1,999 identified companies. But even in this colorful display it is evident that their distribution is not nearly uniform, but rather is often tightly clustered geographically.

This paradoxical cluster dispersion is well demonstrated when examined when the locations of HGCs are delineated at the county level. The number of HGCs in a given county varies greatly from a high of 321 companies in Tuscarawas County to a low of 17 companies in Morgan County. (Figure 31) But this large range is expected given the differential population distribution of the region described in a previous section of this report

Figure 29

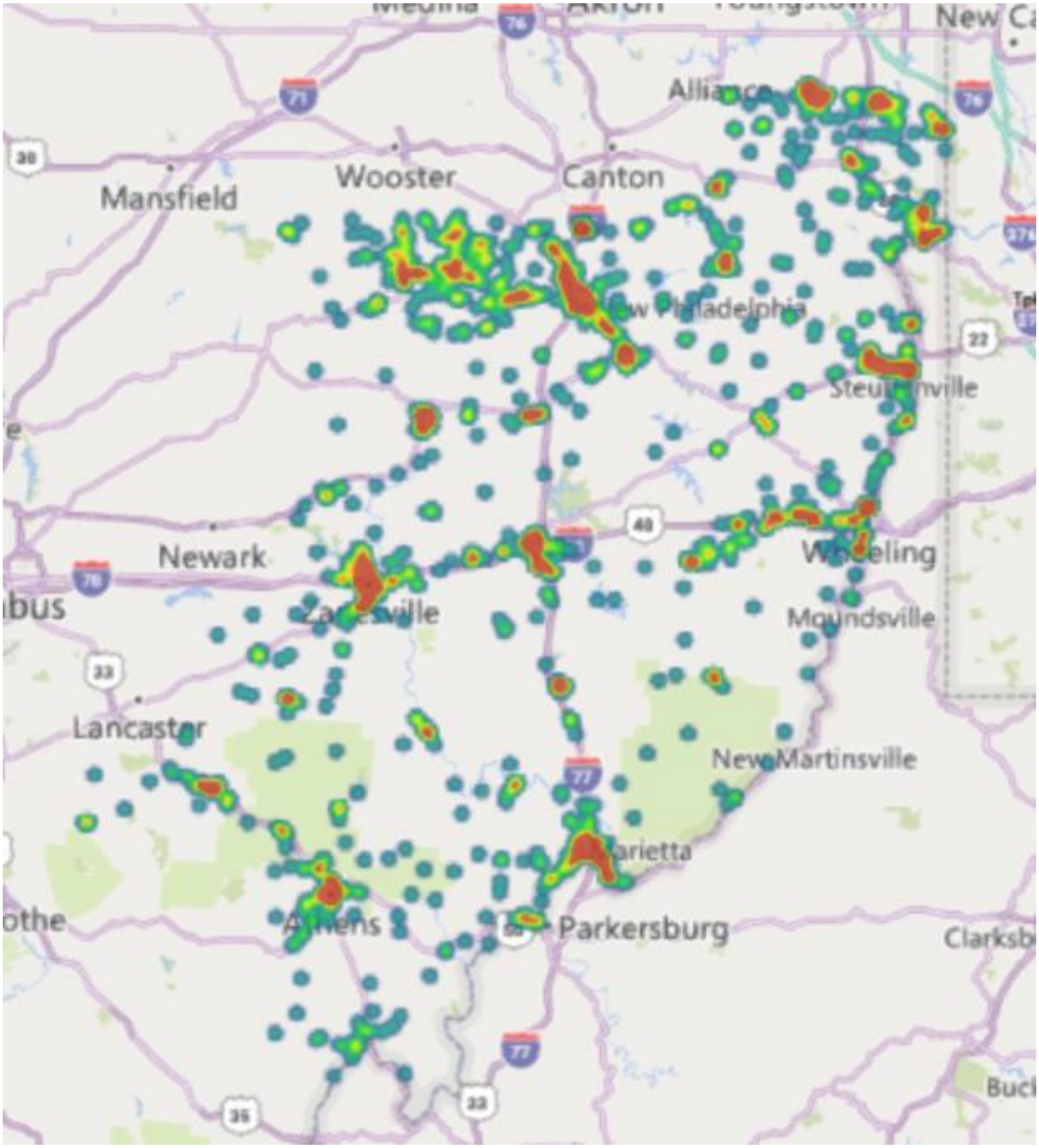
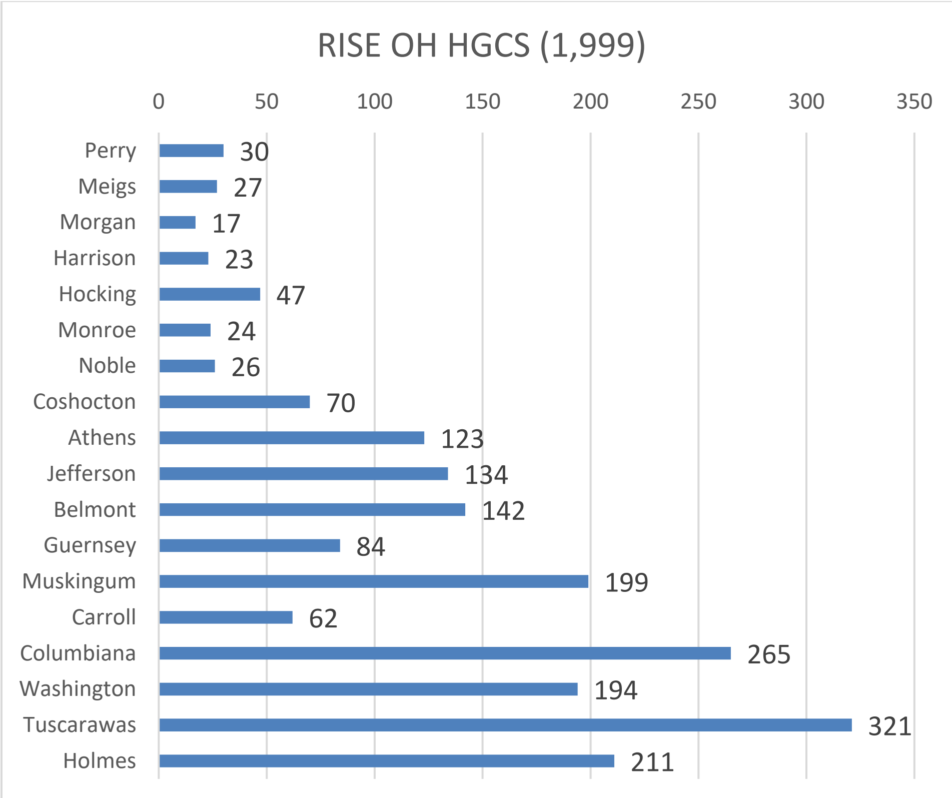
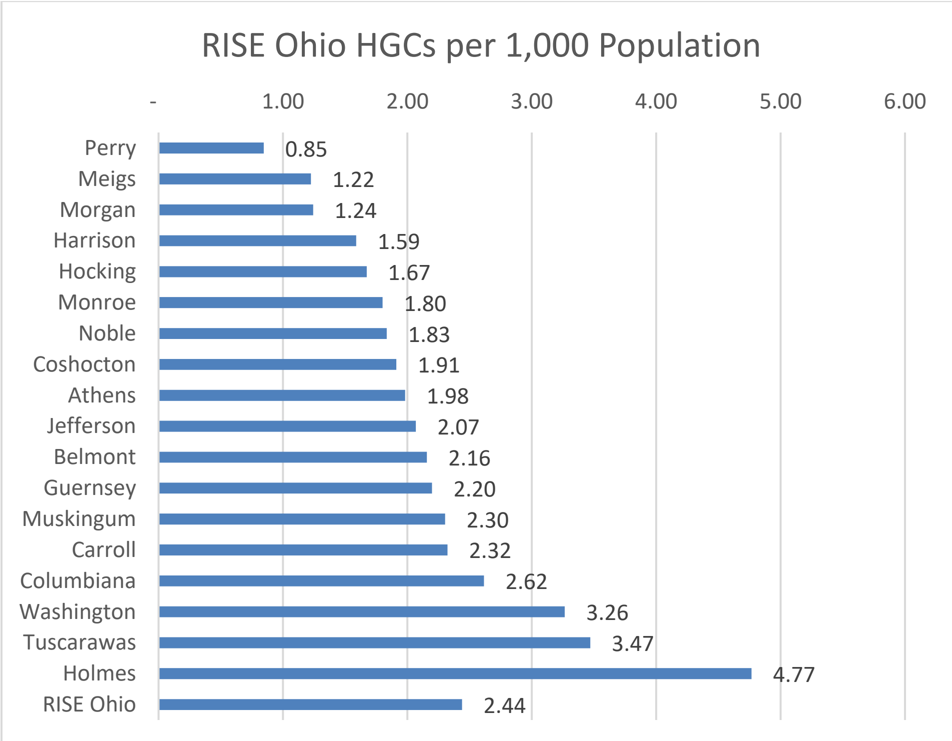

Alliance
Wooster
Canton
Mansfield
Newark
Lancaster
Steubenville
Wheeling
Moundsville
New Martinsville
Marietta
Parkersburg
Athens
Clarksb

Figure 30



It is therefore informative to factor in county populations in examining the locations of HGCs in the RISE Ohio region. When the number of such businesses is calculated on a population adjusted based – in this instance their occurrence per 1,000 in population, a potentially significant differentiation is recognizable. This analysis finds that for the total RISE Ohio region, there are approximately 2.4 high growth companies for every 1,000 people. (Figure 32) At the individual county level, this figure varies from a low of less than one high growth company per 1,000 people (0.85) in Perry County to an extraordinary high of nearly 4.8 companies (4.77) for every 1,000 people in Holmes County.

Figure 31



Comparing the ranks of the RISE Ohio counties for their total number of high growth companies versus the occurrence of these businesses on a population adjusted basis provides insights into the differential rate at which the counties "generate" high growth companies. As displayed in Table 14, most counties have similar rankings on these two factors.

But in some cases there are larger differences that could suggest either over- or under-achievement in high growth company activity. For example, Carroll County, which ranked only 11th in the number of high growth companies, by contrast ranked 5th in the number of these firms per 1,000 population. This suggests that the county is overachieving for reasons that could offer insights on how to better support growth companies.

Table 14

Rank in RISE Ohio Region		
County	**#HGCs**	**HGCs/1k Pop.**
Athens	8	10
Belmont	6	8
Carroll	11	5
Columbiana	2	4
Coshocton	10	11
Guernsey	9	7
Harrison	17	15
Hocking	12	14
Holmes	3	1
Jefferson	7	9
Meigs	14	17
Monroe	16	13
Morgan	18	16
Muskingum	4	6
Noble	15	12
Perry	13	18
Tuscarawas	1	2
Washington	5	3

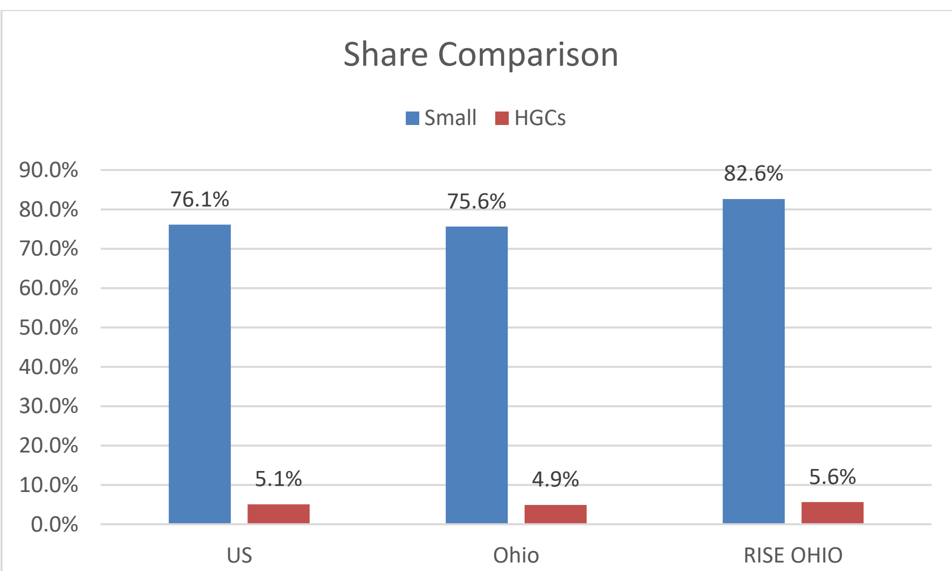
4.3 RISE Ohio HGC Economic Significance

Distinctive characteristics of the RISE Ohio's HGC population magnify their role in the region's economy. They have a disproportionately large effect on regional employment and their geographic distribution means that their economic contributions accrue throughout the region. They are relatively concentrated in industry sectors that have high levels of productivity, and they are engaged in extra regional trade that imports revenues that expand the RISE Ohio economy. Moreover, their high level of local ownership means that more of that money remains in the region, circulating among neighboring businesses and residents. A few of those characteristics are especially noteworthy as they amplify the role these companies play in the region's economy.

4.3.1 RISE Ohio has a Relatively Larger Share of High Growth Companies

A finding noted previously in this report is worth repeating due to the distinction it suggests for the RISE Ohio region. The 1,999 companies identified as HGCs in the RISE Ohio region are 5.6% of the region's total business population of 35,520 businesses. These percentage is well ahead of the comparable figures for both Ohio (4.9%) and the United States (5.1%). (Figure 33)

Figure 32



4.3.2 Scale Yields Economic Impacts

Individually and collectively, the 1,999 high growth companies of the RISE Ohio region are of a scale that yields significant economic impacts. Individually, with annual revenues of more than $12 million and 38+ employees, the average RISE Ohio high growth company is considerably larger than the minimum scale parameters used in their definition. Collectively, RISE Ohio's 1,999 high growth companies account for more than $24 billion in annual revenues to the region, and contribute nearly 78,000 jobs. (Table 15)

Table 15

#HGCs	Total Revenues	Total Employment	Avg. Rev.	Avg. Emp.
1,999	$24,224,948,000	75,971	$12,155,017	38.1

4.3.3 Disproportionate Employment Contribution

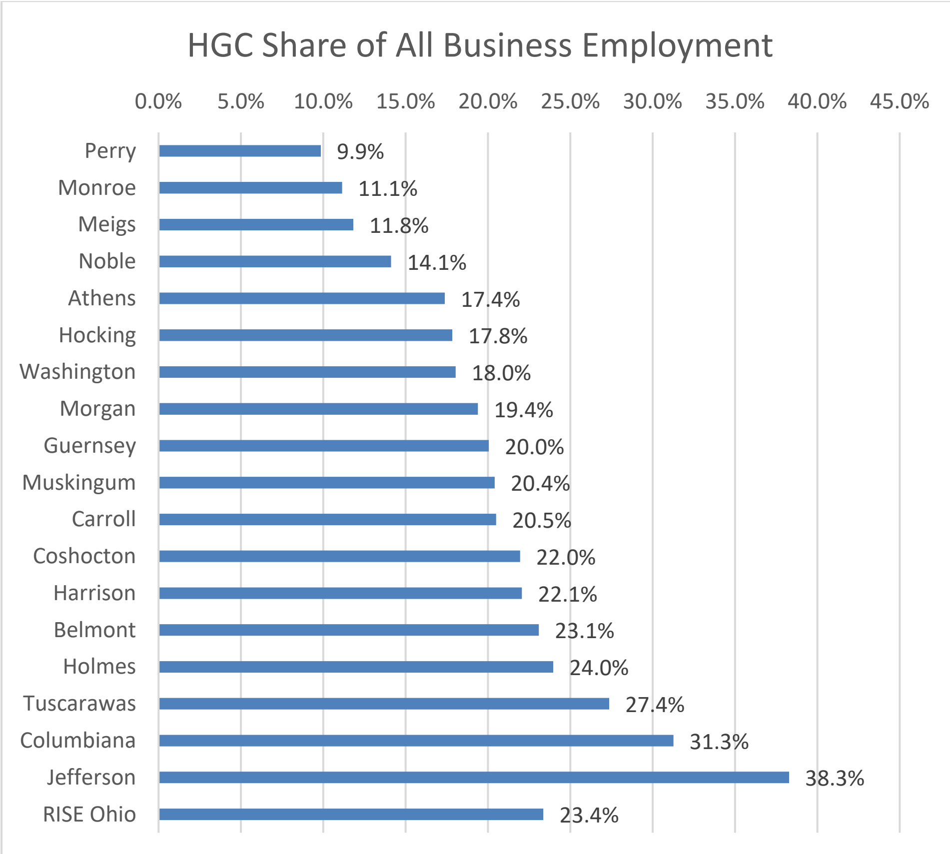
The most important aspect of high growth companies is likely their disproportionately large contributions to regional employment. That is certainly the case in the RISE Ohio region where the 1,999 companies qualified as high growth companies, which represented only 5.6% of all RISE Ohio businesses, accounted for 76,196 jobs – more than 23% - of the region's total business employment. As with most other characteristics of the region's high growth companies, their relative employment contributions varied substantially from county to county. (Table 16)

Table 16

County	All Business Emp	HGC Emp	%HGC
Athens	20,527	3,567	17.4%
Belmont	24,545	5,667	23.1%
Carroll	8,482	1,738	20.5%
Columbiana	35,715	11,166	31.3%
Coshocton	12,894	2,831	22.0%
Guernsey	16,632	3,334	20.0%
Harrison	4,306	950	22.1%
Hocking	8,547	1,524	17.8%
Holmes	29,186	6,993	24.0%
Jefferson	23,467	8,983	38.3%
Meigs	4,583	542	11.8%
Monroe	4,290	478	11.1%
Morgan	3,770	731	19.4%
Muskingum	41,131	8,394	20.4%
Noble	3,343	472	14.1%
Perry	8,545	842	9.9%
Tuscarawas	45,563	12,465	27.4%
Washington	30,602	5,519	18.0%
RISE Ohio	326,128	76,196	23.4%

The extent to which some RISE Ohio counties depend on employment by their high growth companies is remarkable. (Figure 34) For example, Jefferson County gets 38% of its business employment from high growth companies located in the county, while Columbiana County gets 31% of its business employment from them. But at the other end of the scale, several RISE Ohio counties are experiencing much smaller shares of high growth company employment. Three counties – Perry (9.9%), Monroe (11.1%), and Meigs (11.8%) – are below or only slightly above 10% as the percentage of county business employment from high growth firms.

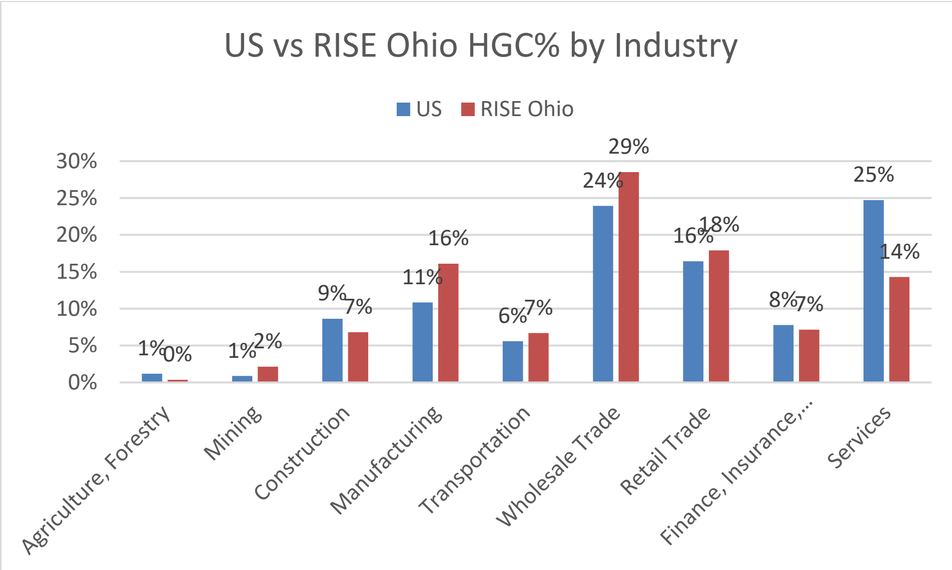
Figure 33



4.3.4 Industry Sector Competitive Strengths & Weaknesses

An analysis of the relative share of RISE Ohio's high growth companies versus the United State by industry sector may have identified areas of competitive strengths for the region to leverage in its economic development strategies. (Figure 35) There are several industry sectors in which the RISE Ohio region has a larger share of high growth companies than does the nation. Examples of this include manufacturing (16% vs 11%), Wholesale Trade (29% vs 24%), and Retail Trade (18% vs 16%).

Figure 34



Unfortunately, a similar comparison of the percentage of high growth companies as a share all businesses within specific industry sectors suggest that RISE Ohio is underperforming in the generation of high growth companies relative to the US across all industry sectors. This is evident in the analysis, summarized in Table 17, of the percentage of high growth companies in the total business populations of industry sectors. In each sector RISE Ohio has a lower share than the US of businesses that have achieved high growth company levels. Some of these disparities are especially stark – such as in mining, construction, and wholesale trade - while in others the differential is not as great. In fact, RISE Ohio is nearly comparable in the generation of high growth firms in especially important sectors such as manufacturing, transportation, and finance, insurance, and real estate (FIRE).

Table 17

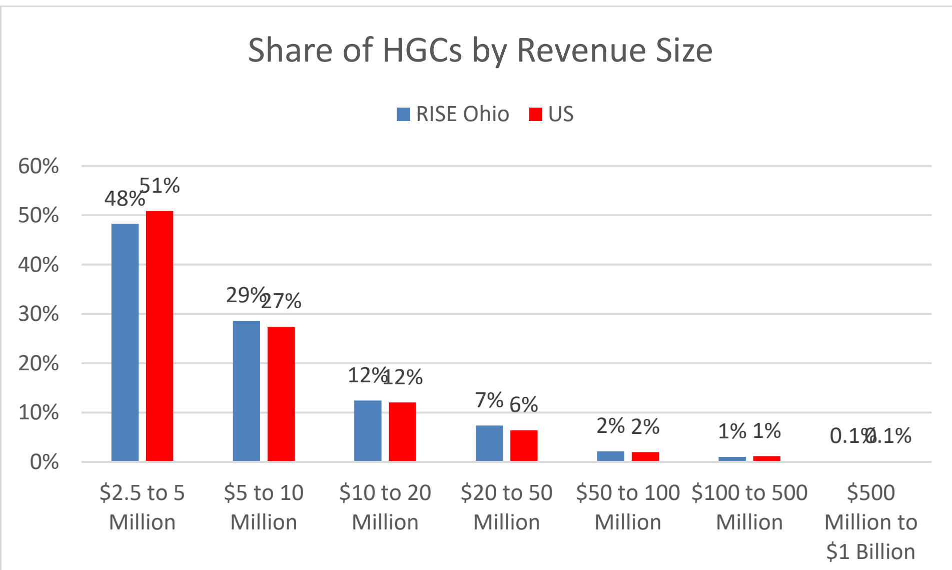
Industry Sector	HGCs		All Firms		HGC Share	
	US	RISE Ohio	US	RISE Ohio	US%	RISE Ohio%
Agric. & Forestry	2,809	7	572,771	865	2.8%	0.8%
Mining	3,629	43	50,021	303	23.5%	14.2%
Construction	32,471	136	1,143,527	2509	10.1%	5.4%
Manufacturing	55,290	322	664,359	1751	21.9%	18.4%
Transportation	26,044	134	734,492	1841	10.2%	7.3%
Wholesale Trade	184,456	570	986,666	2530	32.5%	22.5%
Retail Trade	56,488	358	3,289,550	7273	6.7%	4.9%
FIRE	34,407	143	1,920,004	2646	5.4%	5.4%
Services	99,667	286	10,574,566	19477	3.1%	1.5%

4.3.5 RISE Ohio HGCs Differ From Entrepreneurial Assumptions

Overall, the RISE Ohio region's high growth companies are locally owned, successful businesses that differ from popular perceptions of entrepreneurs as startups in new technologies. Nationally. Research has found that high growth companies are more often mature companies that grew slowly for years before entering a period of rapid growth. It is reasonable to assume this to be the case in the RISE Ohio population as well. It is certainly consistent with the national research that, rather than being concentrated in a narrow range of technology industry sectors, the RISE Ohio region's high growth companies are instead engaged across a variety of industry sectors in the region.

The capability of the RISE Ohio region to support the growth of its resident HGCs is evidenced by the comparability of the share distribution of companies by revenue level between the region and the US benchmark. (Figure 36) The share of HGCs by revenue category are nearly identical for the US and the RISE Ohio region across all categories with a small but notable exception. The region has a slightly smaller share of companies with annual revenues of $2.5 to $5 million (48% vs 51%), but a nearly equal larger share for companies with annual revenues of $5 million to $10 million (29% vs 27%). This is a small difference, but one that still includes a significant number of companies. More importantly, it could indicate that the region is relatively more successful in transitioning companies up the growth curve in the lower levels of revenues. If so, that is a positive trend to build into regional entrepreneurial strategies.

Figure 35



4.3.6 HGC Productivity Increases Impact

The competitiveness of high growth companies is commonly attributable to their higher levels of productivity achieved through enhanced operational efficiencies, high levels of value-added goods or services, or a combination of both. A common measure of productivity is revenue per employee - calculated as a company's total revenue divided by its current number of employees. Revenue per employee is a meaningful analytical tool because it measures how efficiently a particular firm utilizes its employees. Ideally, a company wants the highest ratio of revenue per employee possible because a higher ratio indicates greater productivity. Revenue per employee also suggests that a company is using its resources—in this case, its investment in human capital—wisely by employing highly productive workers.

High growth companies typically have higher ratios of revenues to employees than their industry peers, providing a competitive advantage that increases as the companies grow due to magnification through economies of scale capture. However, this factor can vary considerably by industry sector depending on the labor intensiveness of the sector. Across the United States business population, smaller businesses generates about $100,000 in revenue per employee while for larger companies, that figure is usually closer to $200,000. The nation’s largest corporations, such as Fortune 500 companies, average $300,000 per employee.

Measured against those benchmarks, the RISE Ohio high growth companies demonstrate the significantly higher levels of productivity expected of high growth companies. (Table 18) Revenue per employee figures for the region’s high growth companies range from $184,797 for the $2.5-5 million annual revenues cohort to a high of over $1 million per employee for high growth companies with annual revenues of $50 to $100 million.

Table 18

Revenues Category	#HGC	Revenues	Employees	Avg Rev	Avg Emp	Rev/Emp
$2.5-5 Million	857	$3,300,846,000	17,862	$3,572,344	19	$184,797
$5-10 Million	508	$3,832,958,000	16,876	$6,856,812	30	$227,125
$10-20 Million	221	$3,478,617,000	12,623	$13,859,032	50	$275,578
$20-50 Million	131	$4,884,911,000	12,234	$30,153,772	76	$399,290
$50-100 Million	38	$3,653,910,000	3,379	$68,941,698	64	$1,081,358
$100-500 Million	18	$5,102,127,000	10,909	$182,218,821	390	$467,699
All	**1,999**	$24,253,369,000	73,883	$12,267,764	37	$328,267

4.3.7 HGCs in Traded vs Non-traded Industries

Another factor contributing to the greater economic impact of HGCs is the predominance of their activity in traded vs non-traded market sectors. Non-Traded sectors consist of goods and services transactions contained within the regional economy. Companies active in non-traded sectors can grow by increasing their market share within that region, but their growth potential is effectively limited by the size and value of the regional market. In contrast, companies active in Traded sectors serve customers beyond their resident region, with their market prospects – and therefore their growth potential – expanded beyond the size of the local economy.

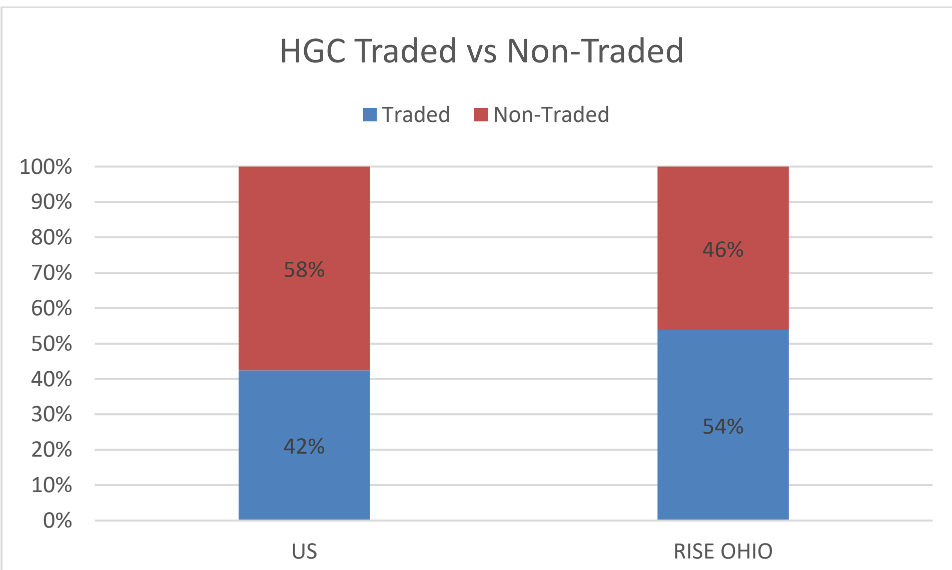
Table 19

	HGCs	
Market Status	**US**	**RISE Ohio**
Traded	42%	54%
Non-Traded	58%	46%

Most high growth companies achieve their growth by serving Traded sectors where the potential for market expansion is much greater. Correspondingly, the extent to which a region's population of companies serve Traded sectors typically determines the growth of that region's economy as the revenues generated from external markets are imported into the region. This effect is accentuated by the higher productivity, and consequently higher revenues per employee, that characterize most high growth companies.

Analysis of the RISE Ohio high growth company population found that, (Table 19) based on their industry classifications, a majority of those companies (54%) were engaged in Traded market sectors. Not only is this a much higher percentage than that of the total population of businesses in the region (14%), but it was a significantly higher share than that of the US population of HGCs (42%). Thus, while the RISE Ohio region lags behind the United States in terms of the share of high growth companies in its economy, its resident high growth companies are nonetheless likely more impactful due their higher levels of Traded sector activity. (Figure 37)

Figure 36



4.3.8 Economic Diversification

The presence and expansion of high growth companies serve to diversify local economies both in terms of industry, scale, and locations. Their distinctive combination of geographic and industrial distribution provides a mechanism for high growth companies' economic benefit to be broadly shared across the RISE Ohio region. The breadth of industrial sectors represented provides the opportunities to capitalize on a diversity of local economic resources. Each county in the RISE Ohio offers a distinct set of location and growth factors suited to different industries and business models.

Moreover, because the local ownership nature of high growth companies means that siting and growth decisions reflect not just business inputs but the desires of the owners as well. Those owners are as likely to choose a community in which to start and growth their companies based on individual and family preferences provided basic business prerequisites are satisfied. For such reasons, high growth companies' locations are influenced by quality of life considerations that are highly selective and may favor RISE Ohio locations that other types of businesses and industry might not consider.

5. Capital Access

The study assessed the existing availability of private capital for current and future growth companies in the RISE Ohio region. It is very common that discussions of regional growth companies' capital needs begin with concerns over the disparity of venture capital distribution across the U.S. While it is true that historically just five U.S. metropolitan areas account for more than 80 percent of total U.S. venture capital investment, this perspective, by over-emphasizing the importance of only one form of growth capital, fails to address the availability of far more relevant other forms of growth capital. The study's assessment of the RISE Ohio region's HGC population characteristics found that the characteristics of most of these companies were best aligned with "growth capital" investors active in stages well beyond those of the venture capital market.

5.1 HGCs Capital Structure and Growth Capital Needs

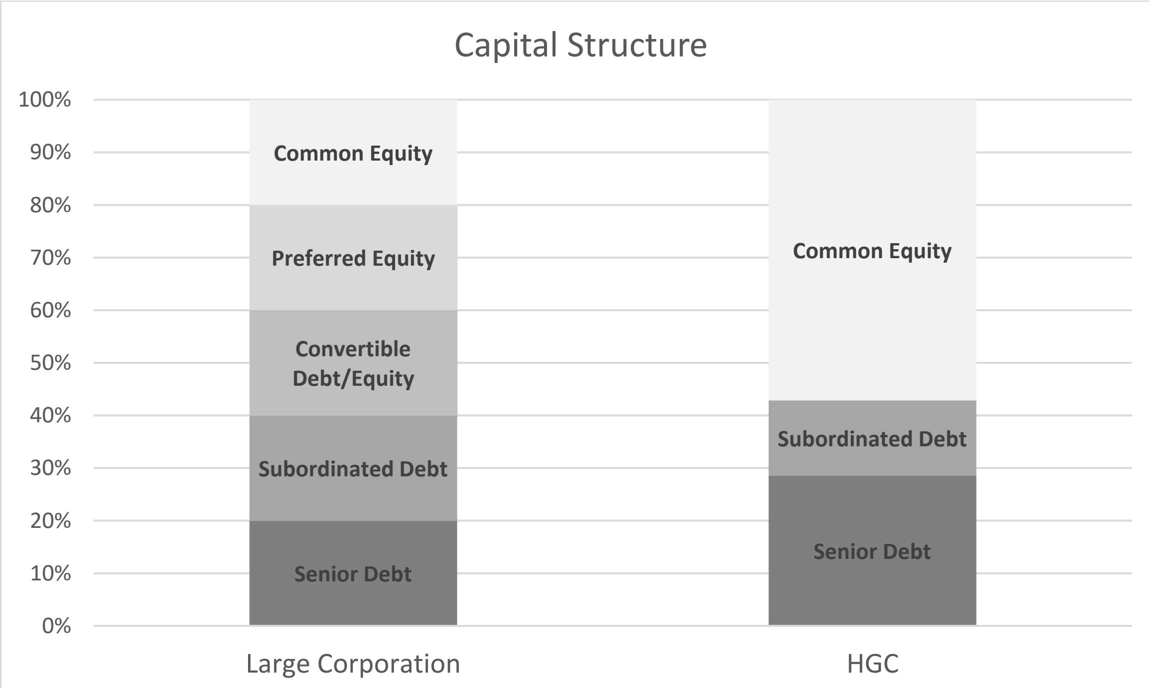
The type and amount of growth capital required to support the further development and expansion of high growth companies is highly individualistic. Often growth-positioned companies face the need to optimize their capital structure prior to undertaking expansion strategies. Capital structure is the particular combination of debt and equity used by a company to finance its overall operations and growth. Capital structure therefore can be a mixture of a company's long-term debt, short-term debt, common stock, and preferred stock. (Table 20)

Table 20

Capital Structure Elements	
Senior Debt	Collateralized, lower risk loans with priority on the repayment list if a company goes bankrupt. Commonly from commercial lenders, banks, etc.
Subordinated Debt	A class of loans that ranks below senior debt with regard to claims on assets. For this reason, this block of the capital structure is more risky than senior borrowings with commensurately higher interest rate payments.
Mezzanine Debt/Equity	Subordinated debt that blends equity and debt features lent at higher interest rates than traditional debt providers, and usually reserve the right to trade some of their debt for equity.
Preferred Equity	Preferred equity has both debt and equity characteristics in the form of fixed dividends (debt) and future earnings potential (equity).
Common Equity	Common equity is the junior-most block of the capital structure and therefore represents ownership in an business after all other obligations have been paid off. For this reason, it comes with the highest risk and the highest potential returns of any tier in the capital structure.

For a large corporation, such as a publicly traded company, its capital structure typically consists of an often complex, combination of senior debt, subordinated debt, hybrid securities, preferred equity, and common equity. In contrast, the capital structure of high growth companies, especially the smaller or younger ones, are typically much simpler. (Figure 38) High growth companies are, with very few exceptions, closely held privately owned companies. These are companies which do not offer or trade company stock to the general public on the stock market exchanges, but rather the company's stock is offered, owned, and traded or exchanged privately, if at all. The great majority of high growth companies would have a relatively small number of shareholders or company members with a limited introduction of outside investors since their founding.

Figure 37



The relative simplicity of high growth companies capital structure is a result of its development history and of necessity, rather than of strategic preference. A consequence is that that the capital structure a high growth company used in its earlier stages of development may be inappropriate for both its current, larger level of activity and/or its targeted future activity. Often this is a consequence of an inability to access a border range of capital sources in the company's earlier, more uncertain stages of development. But as the company matures and succeeds, as in the case of high growth companies, it comes to be viewed by investors as more viable and more secure – and therefore a lower risk - making previously unavailable capital sources attainable. RISE Ohio high growth companies require numerous sources of financing to support their growth objectives and working capital needs. Understanding the financial environment they face requires recognition of the relevant capital sources.

5.2 HGCs as Growth Capital Candidates

For example, although both venture capital and growth capital investors assume the risk involved while investing, these investment strategies vary greatly in factors such as risk profiles, cash flow perspectives, and growth targets. Venture capital investors generally target businesses at initial stages with less historical financials. Their portfolio companies therefore present higher risks - market, funding, technology - compared to more mature growth capital investment candidates typical among high growth companies. Venture capital backed companies have low revenue and usually negative cash flow in contrast with growth capital investment prospects where there are typically sustained revenues and positive cash flows.

As documented the 2011 report “Accelerating Job Creation in America: The Promise of High-impact Companies”, the largest cohort of U.S. high growth companies had an average age of 19 years after four years of growth, meaning that the typical age of firms poised for growth – and therefore in need of capital to support expansion, as 15 years. By this point they have survived the high risks inherent in entrepreneurial startups targeted by venture capitalists, therefore the risk involved in high growth companies investment is minimized, while the potential for the return on investment remains relatively high.

This scenario closely matches the strategic trajectories undertaken by many high growth companies. They are relatively mature and larger businesses positioned to pursue large future growth prospects or for business operation expansion or for acquisition or entering a new market. Given the lower risk involved, the existing owners of such firms are unwilling to relinquish control to outside investors.

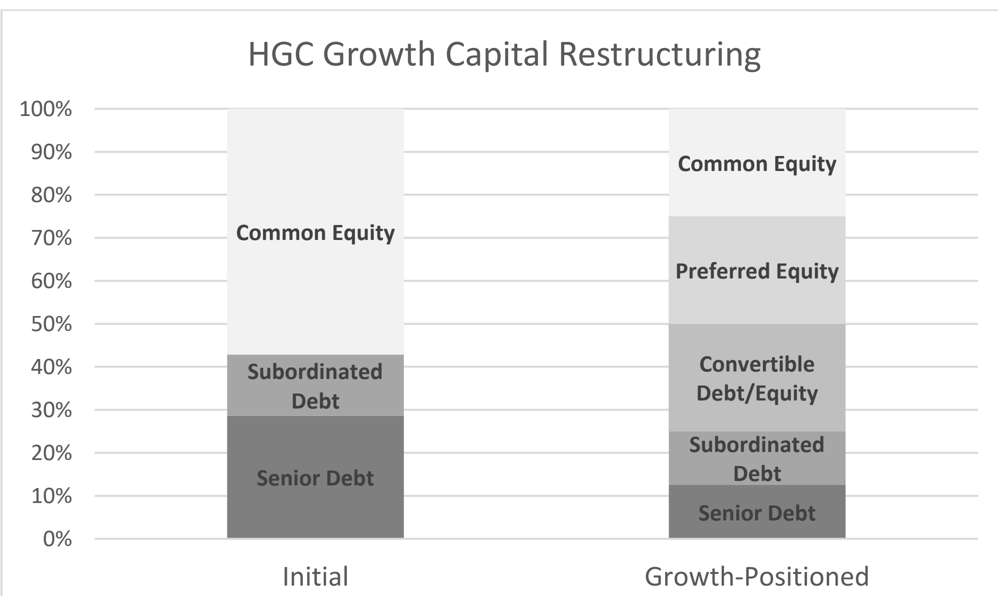
As an asset class, Growth Capital is a type of investment – and usually a minority investment rather than the majority ownership position usually taken by venture capitalists - in relatively mature companies that are looking for capital to expand or restructure operations, enter new markets, or finance a significant acquisition, but are unwilling to sacrifice a controlling interest in the business in return for the investment. Such companies nonetheless require growth capital because, while as established businesses they are able to generate revenues and profits, they are unable to generate sufficient cash internally to fund their growth strategies.

Growth Capital is a segment of a private equity asset class that is very distinct and separate from venture capital or leveraged buyouts. It works to provide ventures like providing high returns with minimum risk. The risk of the capital loss is moderate as compared to other investment firms. The holding period is three to seven years, where the target for the internal rate of return is around 30-40 percent. The capital invested can be targeted to multiple 3 to 7 times. The investors keep evaluating the risk-adjusted return profile of various investment alternatives. The companies involved in investment are already operating in an established market with proven products. The risk involved is only of the execution and management risk.

5.2.1 HGC Growth Capital Restructuring

Investment in a high growth company which is intended to position the company for further growth typically involves a restructuring of its previous capital structure. Such restructuring seeks to both support the cost of expansion and enhance the company's financial robustness to undertake the additional risks entailed. This often involves Growth Capital in the form of equity and/o hybrid equity investment with the effect of reducing the company's debt to equity ratio. (Figure 39)

Figure 38



In such situations, growth capital is provided in the form of equity, or various hybrid securities that include interest payments, yielding a minority ownership position in the company. This form of investment is not available from commercial banks. Instead, such growth capital is provided by a variety of sources spanning a variety of both equity and debt sources, including private equity and late-stage venture capital funds, hedge funds, Business Development Companies (BDC), and mezzanine funds.

5.2.2 Estimated RISE Ohio Growth Capital Demand

An estimate of the demand for growth capital by RISE Ohio HGCs was constructed by composing investment scenarios for representative company profiles drawn from region's two strongest sectors – Wholesale Trade and Manufacturing. (Table 21) Company profiles were based on the average scale HGC scale characteristics and expansion strategy modalities for their respective industry sectors.

Table 21

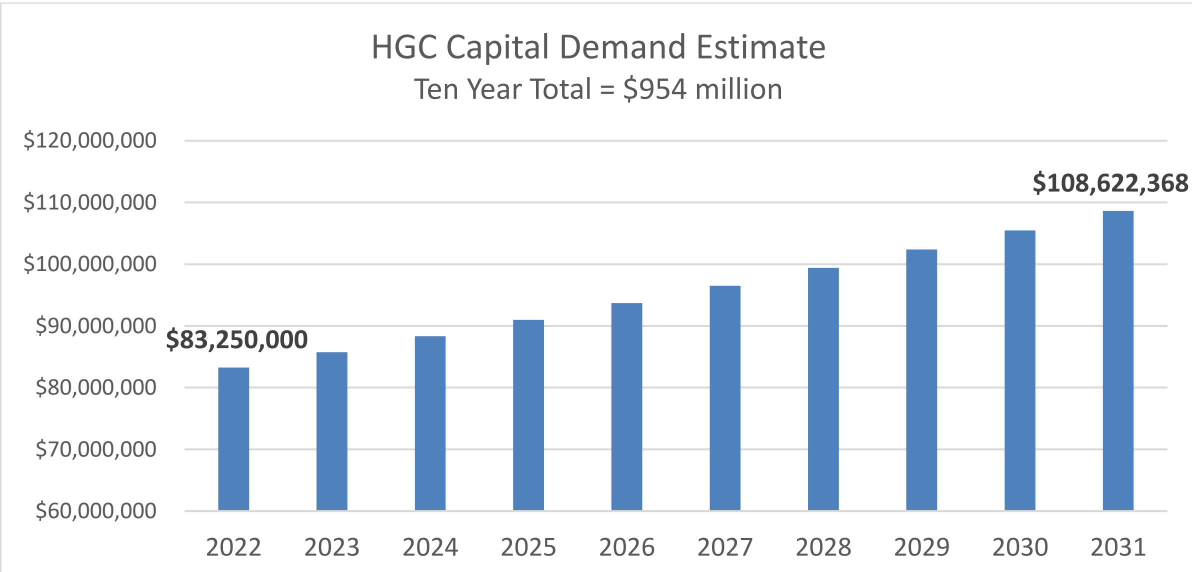
RISE Ohio Growth Capital Candidate Profiles		
Industry Sector	Wholesale Trade	Manufacturing
Annual Revenues	$26 million	$23 million
Employment	18	68
Growth Strategy	Facility expansion and distribution channel node acquisition	Production automation update and new product acquisition
Capital Sought	$15 million	$15 million

These profiles were used to develop a model estimating annual and aggregate decadal potential RISE Ohio high growth company growth capital demand. The model used the following assumptions:

- Average per company expansion capital requirement = $15 million
- 1% HGCs expanding annually = 555 HGCs x 1% = 5.5 annual average
- Annual inflationary index of 1.03
- Period of 10 years

This model produced a total annual growth capital demand of $83 million in 2022 and increasing on an inflation-adjusted basis to an annual amount of $109 million by 2031. The aggregate growth capital demand for the ten year period was $954 million. (Figure 40)

Figure 39



5.3 HGCs and the Growth Capital "Middle Market"

What are the likely sources to supply the nearly $1 billion in RISE Ohio high growth companies growth capital demand estimated over the next ten years? In parlance of business finance the annual revenues of most high growth companies would barely qualify them as "middle market" firms. The National Center for the Middle Market at The Ohio State University Fisher College of Business, a leading center for research and education, defines the U.S. middle market as companies with annual revenues between $10 million and $1 billion. Companies with slightly lower annual revenues - $5 million to $50 million - are often described as "Lower Middle Market" companies. This definition closely mirrors this study's definitional parameters of high growth companies. Following this financial market typology, the great majority (94%) of the RISE Ohio region's high growth companies could be designated as lower middle market investment candidates.

The similarity between HGCs and the “middle market” designation extends to their economic significance as well. As the National Center for the Middle Market describes them, at the national, state, and local levels, in every corner of the country, it is middle market companies that are creating new jobs and driving economic growth in their regions and communities. Middle market companies also play important roles in every industry. This diverse segment reaches across all industries and encompasses publicly and privately held companies, family-owned businesses, partnerships, and sole proprietorships. While the middle market represents just 3% of all U.S. companies, it accounts for a third of U.S. private sector gross domestic product (GDP) and jobs. This is approximately the same significance researchers have ascribed to the economic role of high growth companies such as those identified in the RISE Ohio region.

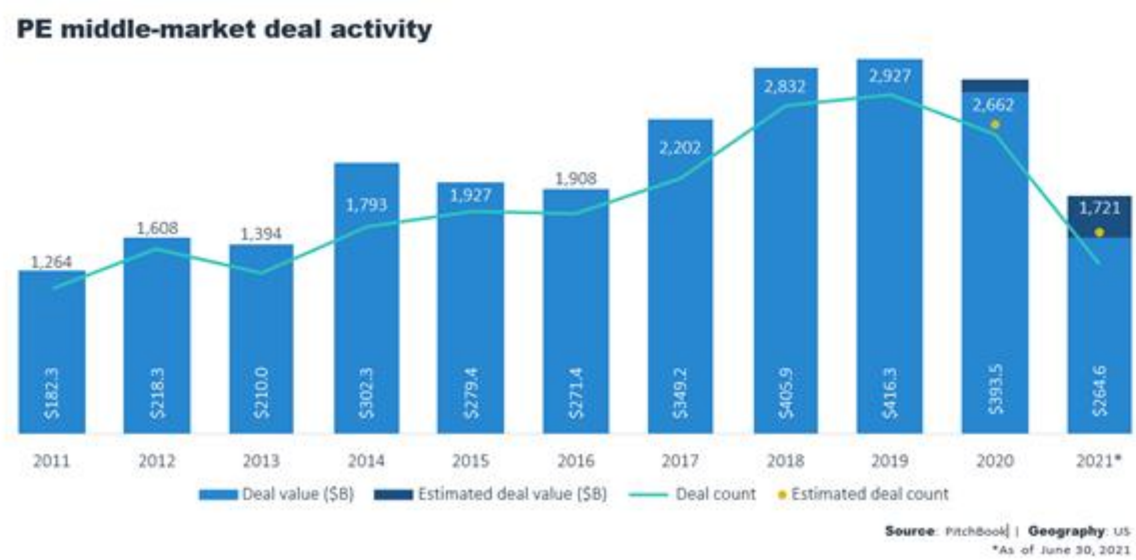
5.3.1 U.S. Middle Market Capital Sources

The National Center for the Middle Market estimates that the nearly 200,000 U.S. middle market businesses represent one-third of U.S. private sector GDP and employ approximately 44.5 million people. Like high growth companies, these middle market businesses are diverse in form and function. They range from private and public, family owned, and sole proprietorships, are geographically diverse, and span almost all industries. The Center reported that these businesses outperformed through the financial crisis (2007–2010 period) by adding 2.2 million jobs across major industry sectors and U.S. geographies, demonstrating their importance to the overall health of the U.S. economy.

Such a large, fecund, and dynamic population of companies have attracted a proportionately large and responsive financial capital market response. A significant portion of the U.S. private equity industry - institutional lenders, non- traditional debt capital sources, debt/ equity fund managers, private equity funds, private debt funds - has evolved to serve the growth capital requirements of middle market companies through a diverse and creative portfolio of financial vehicles.

For example, PitchBook Data, Inc., a financial research company covering private capital markets, reported that just the first 6 months of 2021, private equity investors had completed 1,721 investments in the U.S. middle market with a combined value of $264.6 billion. This positioned 2021 to be the most active year on record in that market. (Figure 41)

Figure 40



However, it should be noted that most of that middle market investment took the form of company acquisitions as opposed to growth capital investment. Moreover, the average investment size was over $150 million, indicating that capital in middle market investment flows primarily to companies much larger than the typical RISE Ohio high growth company. This calls into question the level of investment interest for RISE Ohio's high growth companies given their much smaller scale of current operations, growth plans, and requisite investment need.

Nonetheless, the Lower Middle Market, comprising companies with annual revenues between $5 million and $50 million - encompassing most RISE Ohio high growth companies - continues to attract the attention of a number of private equity firms and boutique investment banks proficient in the segment. The challenge for RISE Ohio high growth companies seeking growth capital from these entities will be distinguishing themselves sufficiently to garner the attention of non-regional investors.

Investment in closely-held, private-owned companies often entails that investors have significant participation in their portfolio to provide both guidance and oversight. Accordingly, lower middle market investors tend to favor companies located in their region to enable efficient interactions. To achieve geographic diversification, investments may be “syndicated” through co-investment with a local fund charged with the majority of portfolio company engagement. A paucity of private equity firms with a presence, or even investment activity, in the RISE Ohio region may hinder the competitiveness of its HGCs in securing growth capital.

5.3.2 Economic Development Growth Capital Sources

Recognition of the economic importance of entrepreneurship and small businesses has led to numerous public policy responses intended to increase access to capital. But, with a few exceptions, nearly all such programs emphasize alternative lending strategies for individual and small businesses unable to qualify for conventional sources of credit. The examples below illustrate such programs:

Appalachian Growth Capital (AGC)

Another potential source of economic development motivated growth capital could be Ohio’s Community Development Financial Institutions (CDFIs). CDFIs are U.S. Department of Treasury certified organizations with the explicit mission to lend capital at affordable rates and terms in under-served markets. CDFIs primarily provide access to credit and specialized loan products for people that may not qualify for a typical bank loan, but they also finance affordable housing, small businesses, nonprofit organizations, and commercial real estate.

Ohio has a network of eleven CDFIs serving statewide or regional markets. One such fund, the Appalachian Growth Capital fund, specifically serves a geographic market that includes the RISE Ohio region. Appalachian Growth Capital (AGC) is a Community Development Financial Institution (CDFI) that partners with local and regional banks as well as secondary lenders to support businesses in the 32 county Appalachian Ohio region. Like the OVRDC GAP revolving loan fund, AGC provides flexibly-termed debt to help businesses that have a hard time qualifying for conventional lending.

InvestOhio

In contrast with the above described alternative lending programs, InvestOhio is intended explicitly to encourage equity investments in qualifying companies. Launched by the State of Ohio in 2011, InvestOhio provides a non-refundable personal income tax credit to equity investors in Ohio small businesses. To qualify for the credit, eligible small businesses in which the investments are made must be Ohio-based and have a maximum of $10 million in annual sales. This make the InvestOhio program relevant for many RISE Ohio HGCS as 309 of the total 555 had annual revenues between $5 and $10 million.

Opportunity Zone Funds

Another potential source of growth capital is investment incented through the national Opportunity Zone program. Only recently implemented, the Opportunity Zone program provides tax incentives for investors in Qualified Opportunity Zone (QOZ) Funds that then invest in a variety of private sector activities located in economically distressed communities designated as “Qualified Opportunity Zones” (QOZ).

Opportunitydb.doc, a website that tracks Qualified Opportunity Zone (QOZ) Funds nationally, reports that in 2021 there were 12 QOZ Funds with an investment objective that specifically identify Ohio as a target market. (Table 22) Consistent with the experience of most Opportunity Zone investment nationally, the primary targets of these funds are real estate rather than the growth capital required by RISE Ohio HGCs.

Table 22

Fund Name	Investment Target	Fund Size
CBUS Opportunity Zone Fund III	Real Estate	$50M
Cleveland Opportunity Zone Fund Premium Listing	Real Estate	$50M
Nest Opportunity Fund Premium Listing	Real Estate	$50M
Accredited Capital	Real Estate	$25M
Alpha Opportunity Zone Fund I	Real Estate	$250M
CLE OZ Fund	Real Estate	$20M
Community Outcome Fund	Business, Real Estate	$500M
Decennial Opportunity Zone Fund I LLC	Real Estate	$500M
Kunst QOZF	Real Estate	$10M
LNWA OZ Fund I, LLC	Real Estate	TBD
Milhaus QOZ Fund II	Real Estate	$78M
Woodforest CEI-Boulos Opportunity Fund	Real Estate	$22M

5.3.3 RISE Ohio HGC Growth Capital Findings

An assessment of the current availability and activity of both private equity middle market investment and the various economic development-oriented sources of growth capital raises concerns about their relevance and sufficiency to meet the estimated $954 million in RISE Ohio high growth company growth capital demand from 2022 to 2031. While the middle market investment industry is growing in both the amount of capital deployed and the number of deals closed, such investment appears to increasingly favor companies in the larger end of the middle market spectrum as evidenced by the record high median deal investment amounts of recent years. So, although there remains much interest by smaller private equity firms in the lower middle market segment that would include most RISE Ohio high growth companies, the scarcity of private equity firms serving the RISE Ohio market may make it difficult for high growth companies from the region to successfully compete for the attention needed to initiate and consummate investments.

To date, economic development policy driven initiatives that seek to enhance capital access for small businesses largely do not address either the types or amount of growth capital required by RISE Ohio high growth companies. There are numerous national, state, and local alternative lending programs that offer variations on revolving loan funds. But these do not offer the forms of equity and near-equity growth capital sought by high growth companies as they realign their capital structures for expansion. In Ohio there are efforts to increase the availability of equity capital, but these have focused on the seed venture capital needs of startup and earlier stage technology businesses and are therefore inappropriate or inadequate to high growth companies growth capital requirements. The Opportunity Zone programs at the state and national levels hold some promise as they are theoretically capable of providing appropriate forms of capital in sufficient amounts. But the investment emphasis of nearly all existing Qualified Opportunity Zone funds are in the real estate sector rather than the business finance sector of HGCs. In remains to be see where this trend will hold.

The Ohio Capital Fund (OCF) perhaps offers a model by increasing the supply of growth capital for high growth companies in the RISE Ohio and elsewhere in Ohio. That fund was established to increase the amount of private investment capital available for seed- and early-stage Ohio-based business enterprises by serving as a “fund of funds” investing state-directed capital into a portfolio of venture capital funds that have targeted Ohio early stage companies as part of their investment strategy. As of June 2021, the OCF – along with its partner funds - had invested nearly $1.4 billion in less than 15 years. During 2021 there have been discussions on expanding the OCF to similarly include smaller private equity funds targeting Growth Capital investment in Ohio. Such an initiative could bring welcome attention and growth capital to the likely under-recognized opportunities offered by RISE Ohio high growth companies.

6. Regional Economic Shifts

In recent decades the economy of Ohio has experienced a realignment that was inevitable given the transformative forces of automation and globalization that were reshaping economies across the US and around the world. The element of the study described the current and recent state of the regional economy, including recent shifts in the nature of economic activities, and potential implications for future entrepreneurial activity. The central research performed was an industry sector comparative analysis to examine what changes in the RISE Ohio region's economic composition might portend for the region's entrepreneurs.

While economic realignments are commonly described as examples of "creative destruction", that reference is inaccurate and can lead to misleading assumptions and policy reactions. As defined by the originator of the term, Joseph Schumpeter, creative destruction refers to the "incessant product and process innovation mechanism by which new production units replace outdated ones"[1]. In simpler terms, creative destruction describes the intentional elimination or alteration of established business practices in favor of innovative alternative ones. Either way, the application of the phrase to a region's economy can incorrectly imply a status of inevitability that can seem to leave little room for constructive policy responses.

Any economic realignment experienced in the RISE Ohio region has had very real but not universally positive or negative effects. There is a tendency in economic policy to focus solely on the negative results of change which can obscure newly revealed and nascent opportunities. To paraphrase Nietzsche, "what doesn't kill your economy may reveal its strengths". Paradoxically, when strengths are revealed the risk is not that economic development efforts might fail, but that they may not optimally capitalize on the opportunities at hand. Economic development is hard and significant successes can be rare. When genuine opportunities present themselves, it is imperative to maximize their potential benefits, which is difficult if one's economic development focus is mistargeted.

Recognizing economic strengths is therefore key to appropriate economic strategies and may help identify the most promising sectors for future entrepreneurial activities. In this section the assessment combined that prior analysis with information on the region's population of high growth companies to better the identify economic trends with potential implications for future entrepreneurial activity in the RISE Ohio region.

6.1 Industry Sector Shift Share Analysis

Industry sector comparative analyses are a powerful technique for revealing regional past and current economic strengths. As described in an earlier section of the RISE Ohio report, researchers performed a shift-share analysis to decompose regional employment growth into three components: national growth effect, industrial mix effect, and regional competitiveness effect. That analysis was performed separately for the two Local Development Districts (LDDs) – Buckeye Hills and OMEGA – that together comprised the RISE Ohio region for this assessment. By decomposing growth into the three readily interpreted components, the shift-share analysis helps analyze whether a specific sector in the region experienced a faster or slower growth rate in employment compared to the national level and whether the differences in growth rate are due to regional competitive advantages or disadvantages.

6.1.1 OMEGA LDD Positive Industry Sectors

According to the analysis the OMEGA LDD region's mining, manufacturing, and transportation sectors grew beyond the national trend suggesting that the region has comparative advantages in these sectors.

> **Mining:** From 2010 to 2019 mining employment in the OMEGA region increased by almost 3% per year, from 3,161 jobs in 2010 to 4,008 jobs in 2019, a rate that greatly exceeded the total US mining sector's employment growth of only 0.6% per year in that period.
>
> **Manufacturing:** From 2010 to 2019 manufacturing employment in the OMEGA region grew by 1.4% annually, from 30,339 jobs in 2010 to 34,061 jobs in 2019, also significantly US annual growth (0.8%).

Transportation: From 2010 to 2019 transportation employment in the OMEGA region also grew faster than the US sectors, with an average annual growth rate of 5.9%, from 5,234 jobs in 2010 to 8,027 jobs in 2019, compared to 3.3% per year at the national level.

The shift-share analysis for the OMEGA region thus showed that the region has competitive advantages in Mining, Manufacturing, and Transportation sectors which not only experienced positive regional employment growth but also performed better in the area than elsewhere.

6.1.2 Buckeye Hills LDD Positive Industry Sectors

An application of shift-share analysis to the Buckeye Hills LDD region found more limited positive prospects for that portion of the RISE Ohio region. According to the shift-share analysis for the Buckeye Hills region, only the region's construction sector grew beyond the national trend and likely exhibits comparative advantages in construction.

Construction: From 2010 to 2019 the Buckeye Hills construction sector grew faster than the average national employment trend. This is especially significant as US construction employment had itself increased by 2.5% per year during the period. Yet in the Buckeye Hills region, construction employment grew even faster, by 28%, from 2,463 jobs in 2010 to 3,150 jobs in 2019. The positive regional competitive effect shows the construction sector’s employment in the Buckeye Hills region grew even faster than elsewhere.

Thus the shift-share analysis for the Buckeye Hills region found that the region has competitive advantages in the construction sector. Construction in the region not only experienced positive regional employment growth but also performed better in the region than elsewhere.

6.2 High Growth Companies Sector Analysis

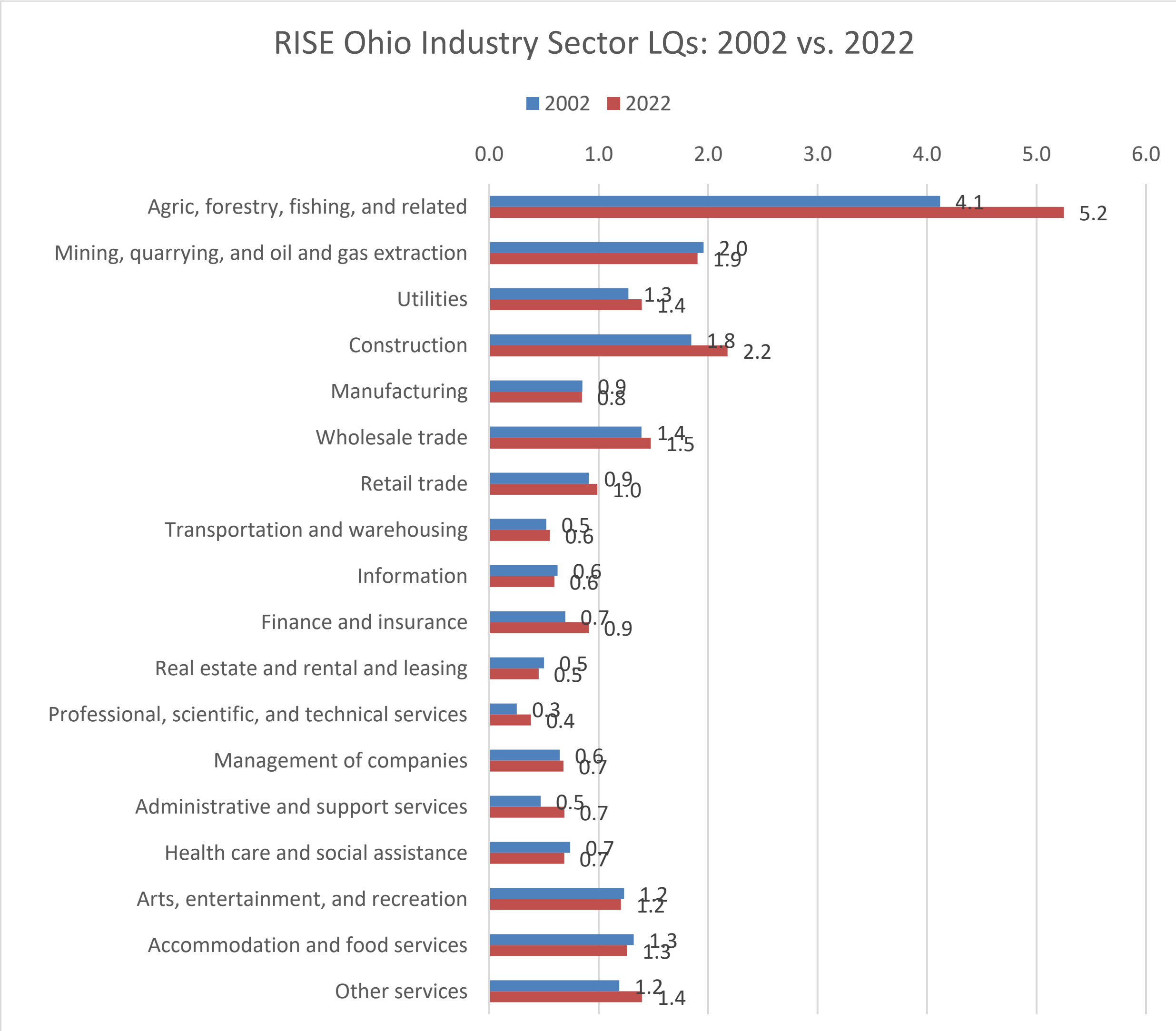
The findings of the industry sector shift-share analysis were incorporated into a subsequent economic change analysis that focused on the industry sector and time period specific to the high growth companies identified in the RISE Ohio region. This analysis examined fewer industry sectors over a longer period – 2002 to 2022 – to reflect the development cycle during which the majority of those high growth companies were founded and developed. Specifically, the analysis examined changes in the Location Quotients (LQs) to identify persistent regional advantages for the industry sectors comprising the RISE Ohio high growth companies population. Through this analysis the distributions of the RISE Ohio region's existing high growth companies provided precedents that, when combined with regional economic changes over their development period, can inform an understanding of the area's potential emerging entrepreneurial market.

6.2.1 Location Quotient Change Analysis

A location quotient (LQ) is an analytical statistic that measures a region's industrial specialization relative to a larger geographic unit (usually the nation). An LQ is computed as an industry's share of a regional total for some economic statistic (earnings, GDP by metropolitan area, employment, etc.) divided by the industry's share of the national total for the same statistic. For example, an LQ of 1.0 in manufacturing means that the region and the nation are equally specialized in manufacturing; while an LQ of 1.8 means that the region has a higher concentration in manufacturing than the nation.

As with the industry sector shift-share analysis of the previous section, analysis of changes in LQ values over time illuminates changes in a region's industrial concentrations over time, revealing competitive advantages to be capitalized upon through economic development strategies. Analysis of the RISE Ohio region's industry sectors found that in 2002, of the total of 18 industry sectors examined, the region had eight sectors with LQs greater than 1.0. (Figure 42) In 2022, those same eight industry sectors still had LQs greater than 1.0, but this was not indicative of a static economy. Rather, the LQ values for each of those sectors had increased or decreased, and significantly so in several instances.

Figure 41



6.2.2 Location Quotient Change Analysis in Entrepreneurial Context

In this assessment's application, that analysis was performed to describe changes in the RISE Ohio region's industry sectors that typified entrepreneurial activity in the region. Therefore, the LQ changes were also assessed in the context of 1) the total RISE Ohio regional employment change, and the 2022 totals, for the industry sectors, and 2) the number of high growth companies in the corresponding industry sectors. Moreover, while the LQ changes themselves are informative about regional economic trends, the employment and high growth company total provide calibrations of economic significance for prioritizing potential public policy and/or economic development responses.

Table 23

Industry	2002-2022 LQ Change	2002-2022 Emp Chg. %	2022 Employment	2022 HGCs
Agric, forestry, fishing, and related	113%	38%	8,507	4
Mining, quarrying, and oil and gas	-5%	-24%	1,779	36
Utilities	12%	4%	25,521	44
Construction	33%	-22%	45,450	136
Manufacturing	0%	-15%	8,832	312
Wholesale trade	8%	-12%	44,445	570
Retail trade	8%	79%	17,493	358
Transportation and warehousing	3%	-15%	3,302	63
Information	-3%	21%	11,925	66
Finance and insurance	21%	110%	16,600	39
Real estate and rental and leasing	-5%	9%	11,133	15
Professional, sci & technical services	13%	90%	1,736	48
Management of companies	3%	10%	13,664	22
Administrative and support services	22%	74%	5,180	30
Health care and social assistance	-5%	-3%	4,716	197
Arts, entertainment, and recreation	-3%	2%	27,404	19
Accommodation and food services	-6%	-9%	22,591	21
Other services	21%	-7%	52,110	13

The results of this analysis are shown in Table 23 which lists the LQ change for each examined sector from 2002 to 2022, along with the change in employment for that period, and the 2022 totals of employment and high growth companies population. These results show that of the 18 industry sectors, 11 had increased LQ values for the 2002 to 2022 period, indicating that the RISE Ohio may have experienced an increase in competitive advantages relative to those sectors. However, such a conclusion is conditioned by examining the change in employment for those sectors in the RISE Ohio region. Of the 11 sectors for which the RISE Ohio region experienced LQ increases, only 7 of those sectors actually increased their total employment over the 2002 to 2022 period.

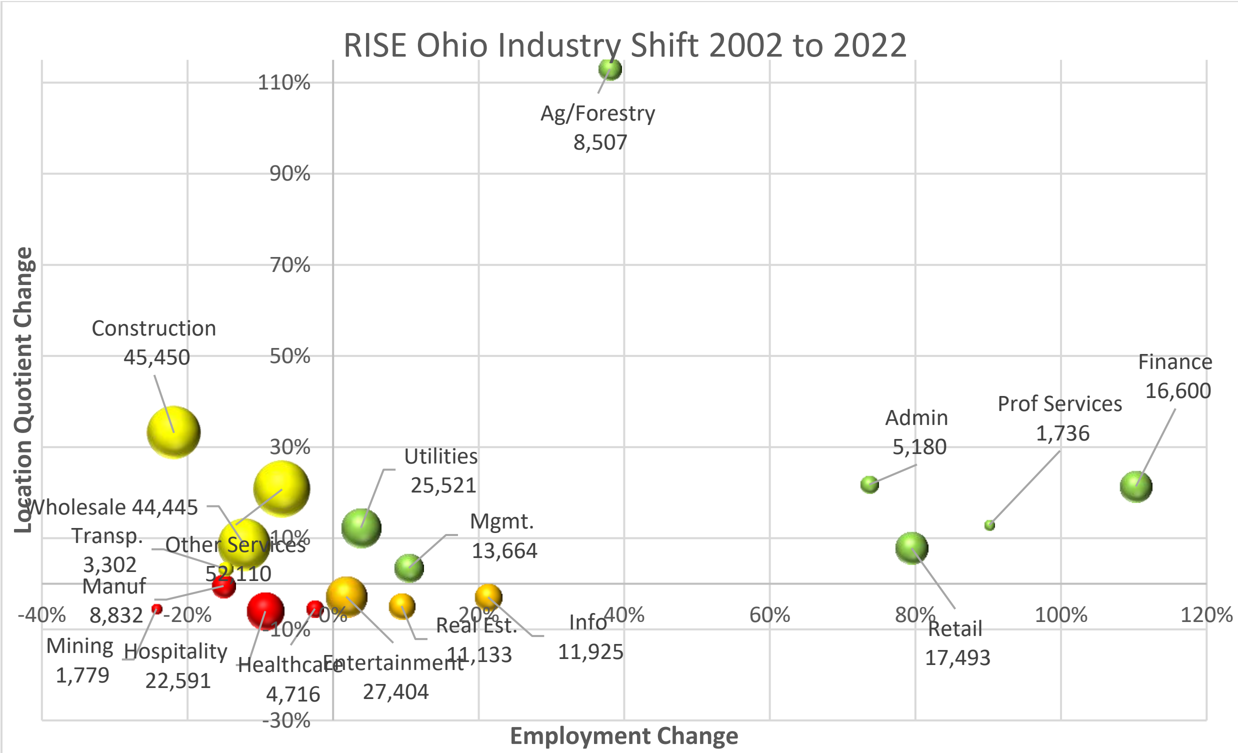
6.2.3 Differentiating RISE Ohio's Industry Sectors

There were seven (out of a total of 18) RISE Ohio regional industry sectors that exhibited improved gains in both LQ value and employment growth in the 2002-2022 period. as compared to those sectors' long-term 2001-2019 values. By these measures, these seven sectors constitute the most "positive" industry sectors, and it is expected that the region's economic strengths in those positive industry sectors will offer bases for future entrepreneurial development, with new ventures capitalizing on the underlying regional advantages.

But as a principal object of the entrepreneurial assessment was to identify potential for future entrepreneurial activity in the RISE Ohio region, neither increases in LQ values nor employment alone were sufficient. But it is possible to "drill down" with further analysis to provide more definition of the relationship between sectoral changes in LQ values and total employment was examined further by assessing the combination of those changes to identify RSE Ohio's most "positive" industry sectors.

Those effect combinations were illustrated in the form of "bubble charts" in which the LQ changes were displayed as "bubbles" proportioned to represent total RISE Ohio regional employment in the industry sector were positioned on a grid in which the X-axis position represents industry sector employment change over the period and the Y-axis position indicates change in the Location Quotient (LQ) value for the industry sector.

Figure 42



The result is a graphical depiction of industry sectors over four quadrants where their position indicates trends and prospects for entrepreneurial development. (Figure 43) This graphic provides a clear representation of the relative positions and "trajectories" of economic activity and significance for the 18 industry sectors examined for the RISE Ohio region.

As described in Table 24, the positions and size of the industry sector "bubbles" distinguish the economic prospects of those sectors based on the trends of their development over the 2002 to 2022 period. These can categorized into four sets based on those prospects:

Advancing: Administration, agriculture/forestry, finance, management, professional/technical services, retail, and utilities:

The positions of these sectors in the Top Right Quadrant indicate that these RISE Ohio industries experienced increases in both their LQ values since 2002 and their total employment in the region. This combination indicates not only that the RISE Ohio has demonstrated growing competitive advantages in those sectors but has also reaped the economic benefits of those advantages in the form of job growth. Moreover, this combination, and its more established stage of development, may indicate those industries as likely to yield the region's next cohort of high growth companies as small businesses and entrepreneurial ventures in those industries mature.

Emerging – Entertainment, information, and real estate:

The positions of these sectors in the Bottom Right Quadrant indicate that while these RISE Ohio industries experienced decreases their LQ values since 2002, they have increased their total employment in the region. This is suggestive of industries which, while not yet positive RISE Ohio sectors, remain promising areas of future entrepreneurial growth if regional competitive advantages can be enhanced.

Retreating - Construction, other services, transportation,, and wholesale trade:

The positions of these sectors in the Top Left Quadrant indicate these RISE Ohio industries experienced increases in their LQ values but decreases in their total employment in the region. This is a contradictory combination for identifying economic growth opportunities and, instead, suggests those sectors are contracting at a slower rate than their national sector cohorts.

Declining - Healthcare, hospitality, manufacturing, and mining:

The positions of these sectors in the Bottom Left Quadrant indicate these RISE Ohio industries experienced decreases in both their LQ values and in their total employment in the region. This is indicative of sectors that are contracting even faster than their national peers in industries that themselves are decreasing in employment nationally.

Table 24

Retreating (Top-Left)	Advancing (Top-Right)
Contains industry sectors that are more concentrated in the region, but which decreased in employment during the period. These indicate continuing regional strengths but suggest the need for innovative business models to better utilize advantages.	Contains industry sectors that are more concentrated in the region and are growing. These sectors are strengths that distinguish the region and are actively yielding new business activity. Such sectors indicate the opportunity for economic strategies that facilitate and enhance business awareness and utilization of regional competitive advantages.
Declining (Bottom-Left)	**Emerging (Bottom-Right)**
Contains sectors that are both under-represented in the region and are also underperforming US employment in those sectors. This likely indicates a lack of distinctive historic regional competitive advantages which in the case of essential industries, such as health, constitute a necessity that must be addressed by remedies such as workforce training, education, and other human resources development strategies.	Contains sectors that are currently under-represented in the region but are growing, often quickly. Such sectors are interpreted as "emerging" strengths for the region that may constitute bear- and long-term future economic development opportunities.

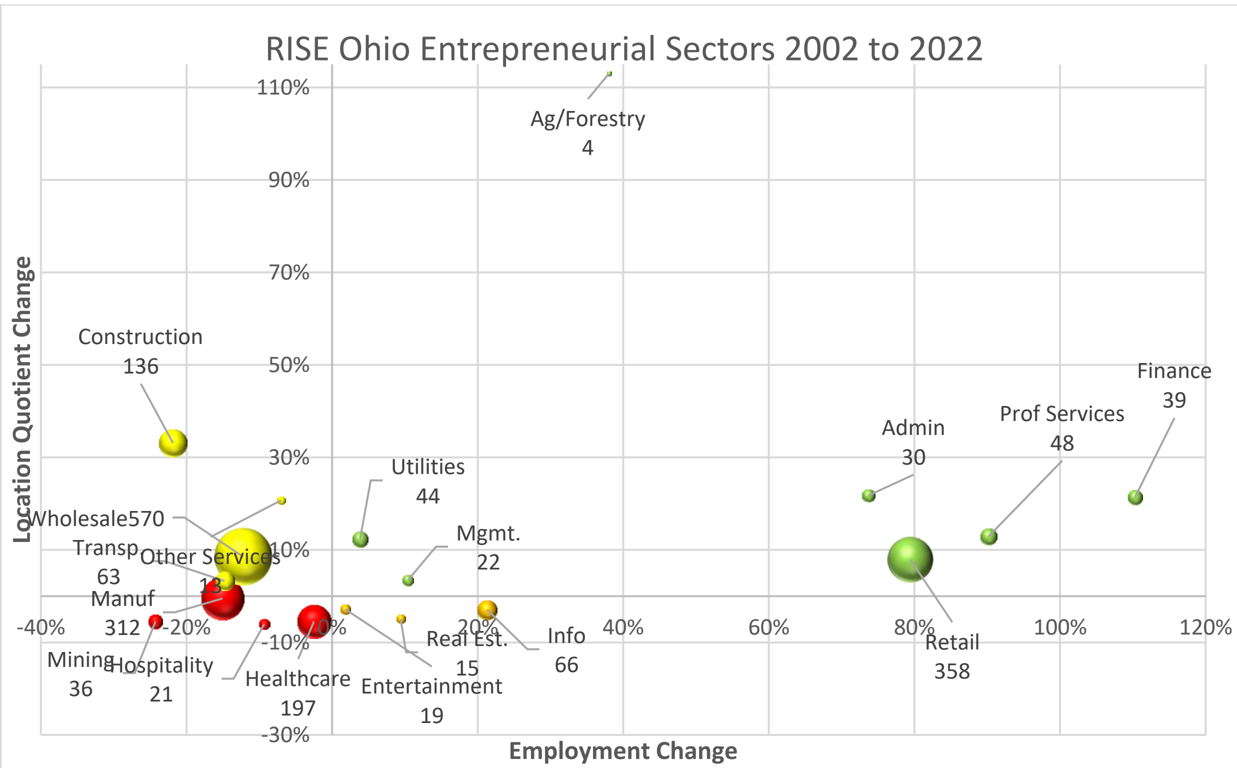
LQ Value Change

Employment Change (%)

6.3 RISE Ohio Entrepreneurial Sectors Status

The classification of industry sectors into four economic prospect categories was applied to the population of RISE Ohio high growth companies. (Figure 44) In this graphic, the size of the industry bubble represents the number of Rise Ohio high growth companies in that sector instead of the total regional employment. However, their relative position in the graph continues to correspond with the economic trajectory for each sector.

Figure 43

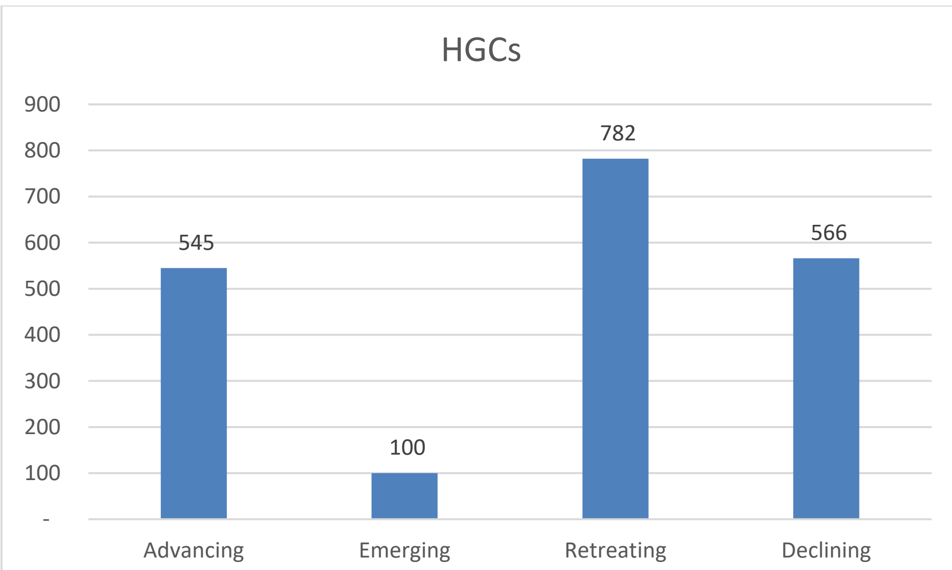


Using this taxonomy to assess the distribution of high growth companies across the industry sector economic prospects (Table 25) identified significant aspects of that distribution.

6.3.1 Sector Distribution and Composition Shift

The existing population of RISE Ohio high growth companies is primarily concentrated in the region's Retreating (782 companies) and Declining (566) categories, including industries such as construction. (Figure 45). These include industries such as Construction, Transportation, Wholesale trade, Mining, and Manufacturing. This finding does not preclude entrepreneurial starts and successes in the industries in those categories, but the RISE Ohio is expected to experience a gradual shift in entrepreneurial activity, and the development of future high growth companies, influenced by regional economic forces and evolving competitive advantages.

Figure 44



In such an eventuality, the industrial composition of the RISE Ohio entrepreneurial and high growth company populations will shift more toward those industries in the Advancing and Emerging industry sectors. These include industries such as Finance and Insurance, Professional and Technical services, Entertainment, Information, and Real Estate.

Table 25

Industry Status	Avg. Revenues	Avg. Employee	Rev/Emp	HGCs
Advancing				
Admin. services	$5,280,667	43.2	$122,332	30
Agric & forestry	$3,337,000	20.5	$162,780	4
Finance/Insurance	$8,994,795	19.9	$452,058	39
Management	$1,406,636	38.3	$36,709	22
Prof/Tech services	$10,436,354	57	$183,027	48
Retail trade	$10,667,564	31.5	$338,833	358
Utilities	$15,605,250	28.4	$548,866	44
Subtotal	$10,201,972	33.5	$324,764	545
Emerging				
Entertainment	$10,884,553	104.3	$104,384	19
Information	$6,114,409	27.3	$224,320	66
Real estate	$5,027,333	34.7	$145,019	15
Subtotal	$6,857,675	43.0	$189,637	100
Retreating				
Construction	$6,480,154	35	$185,186	136
Other services	$6,884,769	69.2	$99,447	13
Transportation	$6,132,222	34	$180,528	63
Wholesale trade	$17,456,056	13.8	$1,261,084	570
Subtotal	$14,459,188	20.0	$967,608	782
Declining				
Health care	$10,884,553	104.3	$104,384	197
Hospitality	$4,458,762	89.9	$49,594	21
Mining	$7,041,306	32	$219,850	36
Manufacturing	$13,774,369	48	$286,775	312
Subtotal	$11,994,666	68.1	$210,236	566
TOTAL	**$12,213,702**	**38.5**	**$537,693**	**1,993**

7. Entrepreneurial Ecosystem

The Kauffman Foundation, which has for decades been a leading proponent of encouraging entrepreneurship, describes entrepreneurial ecosystems as “driving local economic vibrancy and national economic growth by building fertile environments for new and growing companies to thrive.” Yet the term “entrepreneurial ecosystem” itself is of recent origin and despite its broad adoption in public policy and economic development circles, remains ambiguously and variously defined.

Most uses of the term encompass a blend of social, economic, cultural, and political elements that interact in ways that enable and support new business starts and development. Effectively this assessment as already described several aspects comprising the RISE Ohio region’s entrepreneurial ecosystem. This section will specifically address the tangible and programmatic elements of the region’s public policy and economic development initiatives intended to encourage and support entrepreneurship.

7.1 Entrepreneurial Development Emphases

An emphasis on entrepreneurial development began emerging in U.S states in the 1980s and within a decade became a codified element of most states’ economic development programs, albeit to varying extents, by the mid-1990s. Typically these codified efforts incorporated a combination of federal, state, and local initiatives, and typically evolved from pre-existing small business development programs, such as those of the US. Small Business Administration (SBA).

Even in the earliest days of these initiatives, it was common for such strategies to distinguish and prioritize entrepreneurship based on technologically-oriented “innovative start-ups”. In doing so this emphasis inevitably focused on a narrow set of “high-tech” industries and the earliest stages of the business development process. This approach as proven problematic when, as both national research on entrepreneurship and high growth companies and the experience of the RISE Ohio region described in this assessment have demonstrated, new business starts and high growth companies occur across a broad range of industries and often the greatest growth is achieved at relatively mature stages of business development.

7.2 Entrepreneurial Development Programmatic Assistance

The list of small business and entrepreneurial development assistance programs potentially available in the RISE Ohio region is very lengthy. And collectively the constitute an important element of the region's entrepreneurial ecosystem. But in assessing their contribution in that regard, such programs' existence is secondary to their accessibility and utilization. Therefore, in performing this section of the assessment, emphasis was placed on those programs most readily identifiable to inquiring potential entrepreneurs. The following examples are representative of those entrepreneurial development programs that were most expeditiously perceptible to model entrepreneurs using standard internet search strategies. It is inevitable – and even to an extent, strategically intentional – that numerous existing programs were omitted if they proved overly difficult to identify in such scenarios.

7.2.1 State small business assistance

A leading example of federal/state entrepreneurial development assistance is the Small Business Development Center (SBDCs) program of the US Small Business Administration. SBDCs are staffed facilities that provide counseling and training to small businesses. Most states have incorporated the SBDC into their own entrepreneurial assistance efforts, typically with multiple locations throughout their state. In Ohio, the Ohio Small Business Development Centers provide business counseling and assistance at nearly two dozen locations across the state. These include multiple locations in the RISE Ohio region, including:

- Ohio SBDC at Ohio University, Athens
- Ohio SBDC at Ohio University, Marietta
- Ohio SBDC at Ohio University, Cambridge
- Ohio SBDC at Kent State University, New Philadelphia

Another representative, prominent example is the Ohio Third Frontier Program. The program was created in 2002 to provide entrepreneurial development assistance emphasizing support for creating innovative “technology-based products, companies, industries and jobs.” Ohio Third Frontier’s stated mission is to work with innovative startup companies and technology entrepreneurs through a state-wide network of resources that “helps take advanced ideas and turn them into new technology businesses.”

Ohio Third Frontier is explicit in its exclusive emphasis on assistance to entrepreneurs engaged in technology and tech-enabled products and services. The program has specified its focus in certain technology industry areas, including Advanced Manufacturing, Advanced Materials, Biomedical/Life Sciences, Energy, Sensors, and Software/Information Technology.

Ohio Third Frontier’s current principal involvement in the RISE Ohio region is through its support and collaboration with TechGROWTH Ohio, located in the city of Athens in Athens County, which in 2022 was awarded $3.67 million as a Third Frontier Entrepreneurial Services Provider to help startup and early-stage technology companies.

7.2.2 Local entrepreneurial assistance

Much of the RISE Ohio entrepreneurial ecosystem comprises a wide variety of assistance principally offered local governments and other entities. In many cases this support is incorporated as integral elements of their economic development programs and/or organizations. This assessment identified numerous examples through information provided by local development district organizations, and county- or municipal-level sources. Generally such organizations offered facilitated access to an array of federal and state assistance programs. This assessment identified some representative examples of such programs, but emphasized examples of more targeted local assistance.

Athens County

Athens County is home to TechGROWTH Ohio, a venture development organization serving rural Southeast Ohio by providing services, capital and talent to early-stage technology companies with high-growth potential. TechGROWTH

Ohio helps companies identify and address opportunities and gaps to accelerate commercialization and prepare entrepreneurs for resource acquisition necessary for their next stage of growth and development.

Belmont County

Belmont County Department of Development Community Improvement Corporation offers support and assistance for those looking to start, improve, or move a business. It provides connections with numerous business assistance resources and grants including Ohio Manufacturing Connect, the Edison Program, the 1st Stop Business Connection, and the International Trade Assistance Center. It also offered a small business support program for those needed monetary relief due to the COVID-19 pandemic

Carroll County

Carroll County offered a program called Carroll County CARES, which is a support program designed to help small businesses impacted by COVID-19. It was a $150,000 grant program and rewarded up to $10,000 to qualified small businesses.

Columbiana County

The Small Business Relief Program provided small businesses in Columbiana County with monetary relief from business interruption costs caused by COVID-19. Businesses can apply for up to $10,000

Coshocton County

Tuscarawas Economic Development Corporation offers support for entrepreneurs and startups. Coshocton Port Authority offers an entrepreneur center for those looking to open a business or receive business advice. The Coshocton Port Authority works alongside the Small Business Development Center and the Coshocton "3 for 3" initiative with the intention of nurturing startup businesses and increasing their likelihood of success and growth by providing essential services, counseling and location assistance.

Harrison County

Harrison County offers Economic Development and Local Business Assistance including a Revolving Loan Fund, Community Grants, Loans, Bonds, and Tax Credits.

Hocking County

Hocking County is home to Cultivate, a resource for grassroots support to help small businesses, partnering with the Hocking Hills Chamber of Commerce.

Holmes County

Holmes County Economic Development Council works directly with local businesses to provide gap financing, obtain tax incentives, and request strategic grant funds. Furthermore, HCEDC also maintains collaborative relationships with an array of business specialists offering a variety of services such as the Service Corps of Retired Executives (SCORE).

Jefferson County

Jefferson County Port Authority offers business incentives and financing opportunities, including JobsOhio Incentive Programs, U.S. EPA Revolving Loan Fund, Ohio New Market Tax Credits, and a Ohio Enterprise Zone program.

Meigs County

Meigs County Economic Development Office partnered with the Appalachian Partnership for Economic Growth to support entrepreneurship in the county with the resources such as ACEnet (located in nearby Athens) to provide sector-specific services to start-ups and expanding businesses.

Morgan County

Morgan County community leaders have partnered with Rural Action to develop a fund to support small businesses in response to the COVID-19 Pandemic. Applicants will not only possibly receive grant funds, but will also have the opportunity to be connected to small business resources for more support.

Muskingum County

The Zanesville Muskingum County Port Authority offers incentives and savings to encourage people to start businesses in the county, including job creation tax credits, research and development investment tax credits, revolving loan funds, and the Innovation Ohio Loan Fund.

Tuscarawas County

Tuscarawas County Economic Development Corporation offers economic development resources and works with several local, regional, and state-wide economic development organizations including a business resource network, the community improvement corporation of Tuscarawas County, the Eastern Ohio Development Alliance, and the Newcomerstown Community Improvement Corporation.

Washington County

Washington County is home to numerous assistance program among which the most distinctive is the Leveraging Innovation Gateways and Hubs Toward Sustainability (LIGHTS) program established by Ohio University in 2016 to support Appalachian entrepreneurs during their first year of operation. The LIGHTS sponsors local organizations and partner communities to empower local residents through experiential learning & education activities, entrepreneurship and small business assistance, and early-stage product research and design help.

7.3 Entrepreneurial Business Assistance Facilities

The RISE Ohio entrepreneurial ecosystem includes tangible infrastructure elements through which forms of small business and entrepreneurial development assistance is provided either to tenant businesses and individual entrepreneurs in business incubators and/or co-working facilities.

7.3.1 Business Incubators

The National Business Incubation Association (NBIA) defines business incubators as a catalyst tool for either regional or national economic development. NBIA categorizes its members' incubators by the following five incubator types: academic institutions; non-profit development corporations; for-profit property development ventures; venture capital firms, and a combination.

By this definition the State of Ohio was an early adopter of the concept of business incubators. In fact, one of the first such facilities was created in the RISE Ohio region in Athens. Today Ohio's business incubators are primarily located in the Columbus area, with a few located in other metropolitan areas such as Cleveland and Toledo. Nonetheless, there are several existing and developing business incubators in the RISE Ohio region.

RISE Ohio Incubators

Building Bridges to Careers – Marietta, Washington County

Building Bridges to Careers (BB2C) was founded in 2012 with the goal of creating a career readiness continuum. BB2C Epicenter was opened in 2017 and is Washington County's first small business incubator and makerspace. They offer support for economic development, entrepreneurship, and career-connected learning.

Ohio University Innovation Center – Athens, Athens County

The Ohio University Innovation Center, established in 1983 as one of the first US business incubators, provides resources and guidance to startup companies located in Athens and the surrounding region. From its 36,000 square foot facility, the Innovation Center supports clients with a considerable range of resources via a virtual or onsite client membership.

Southern Perry Incubation Center for Entrepreneurs (SPICE) - New Straitsville, Perry County

The Southern Perry Incubation Center for Entrepreneurs (SPICE) is a private non-profit founded in 2000 to provide incubation facilities and entrepreneurial support services that target and assist low to moderate income individuals.

Coshocton Collaborative – Coshocton, Coshocton County

The Coshocton Collaborative is a developing entrepreneurial development initiative business incubator offering both business incubation and co-working facilities. The collaborative will feature maker space, business incubator and co-working facility while also providing office space for the Coshocton Port Authority and others.

Tolloty Technology Incubator – New Philadelphia, Tuscarawas County

The Tolloty Technology Incubator is a 27,000 square foot facility supporting entrepreneurial efforts with dedicated business incubator space for start-up companies linked to high-tech research, development and intellectual property enterprises. The Incubator is focused upon energy efficiency with LEED Certification and uses of alternative energy and conservation practices.

7.3.2 Coworking Spaces

Coworking is an arrangement in which workers for different companies share an office space. It allows cost savings and convenience through the use of common infrastructures, such as equipment, utilities and receptionist and custodial services, and in some cases refreshments and parcel acceptance services. It is attractive to independent contractors, independent scientists, remote workers, digital nomads, and people who travel frequently.

Most coworking spaces charge membership dues.

RISE Ohio Co-Working Spaces

While there are a variety of examples of co-working capabilities, there are few readily identifiable dedicated co-working facilities in the RISE Ohio region. Two examples of existing and developing dedicated spaces illustrate the opportunity.

<u>IncSwell – Marietta, Washington County</u>

IncSwell is a co-working space that offers membership options for daily, monthly, and annual usage. Amenities they offer include high speed internet, printing, conference rooms, outdoor seating, kitchenettes and 24 hour managed access. They also offer incubator and accelerator programs to entrepreneurs and businesses.

<u>Anthen Armory – Athens, Athens County</u>

The City of Athens is currently redeveloping the Athens Armory to serve as co-working and small office space, as well as event space and corporate offices. Built in 1915, the Athens Armory is a 15,000-square-foot building of which at least 11,300 square feet will be co-working space.

8. Conclusions

RISE Ohio has a comparative small total business population

Assessing regional entrepreneurship activity begins by examining the total business population of which entrepreneurial businesses are a subset. Of the more than 535,000 businesses identified in Ohio, a total of 35,520 are located in the RISE Ohio region. While this is a sizable number of businesses, it is not particularly large given the region's population of 821,422. On resident population-adjusted terms, the RISE Ohio region's business population is comparatively small even. The region's number of all businesses per 1,000 population (43.7) lags slightly behind those figures for the State of Ohio (45.4) and the United States (49.5).

Small businesses – and therefore entrepreneurial development - matters

The relative per capita number of businesses in the RISE Ohio region is offset by the region's disproportionately high percentage share of small businesses. This study found that as of June 2023, the eighteen county RISE Ohio study region contained a total of 35,520 businesses of any definition. Of these, 29,727 were identified as "small businesses" for the purposes of this assessment., accounting for 83.7% of all businesses in the RISE Ohio region. The share of all businesses that qualify as small businesses is significantly higher in the RISE Ohio region (82.6%) than the comparable shares in both the State of Ohio (75.6%) and the total United States (76.1%).

While it is tempting to attribute this difference to RISE Ohio region being more "entrepreneurial" than Ohio and the US, the study found instead that a number of other factors, including industry distribution, rates of business formation, and economic shifts, also contributed to this. Nonetheless, the significantly higher share of small businesses in the RISE Ohio regional economy did demonstrate the relevance and importance of issues that affect small business in formulating public policy and economic development strategies in the region.

Entrepreneurship is everywhere, but not equally so

Entrepreneurial activity is ubiquitous across the RISE Ohio region, but is not uniformly distributed. The number of businesses in any given county inevitably is partially a function of that county's population so differences in the number of small businesses per county is not inherently meaningful. But the region also exhibits a wide variance in share of each county's total businesses that are small businesses. Such disparities are not attributable to population size and growth differences but instead likely reflect a combination of industry composition and disparate rates of business formation and

Industries vary widely in small business share

The effect of industry composition in explaining differing RISE Ohio region counties' small business proportions was evidenced by the differences among the industry sectors themselves. The share of small businesses by industry sectors in the region varied widely. While the small businesses accounted for 76% of all businesses in the region, that value ranged from a low of 62% in the retail sales industry sector to highs of 91% in construction and 93% in the agriculture/forestry sector. Therefore, the industrial composition of individual RISE Ohio county economies strongly influenced the relative role of their small businesses.

Business formation lags but is improving

U.S. Census Bureau "Business Formation Statistics" data found that a total of 4,140 new businesses formed in the RISE Ohio region in 2019. This number was the highest annual figure across the 15 year time period of 2005 to 2019. Moreover, this rate had grown significantly – if rather erratically – during the period. Approximately halfway through the period, after several years of decline, by 2012, the RISE Ohio BFS annual rate recovered and then rose to a new high of 3,622 annual business formations. From that year, the region's BFS rose consistently to the apex 2019 value.

Over the entire 15 year time period of 2005 to 2019, the annual rate of business rate for the RISE Ohio region increased by 22%. In contrast, that same rate of increase for all of the State of Ohio was nearly double – 41.4% - that of the RISE Ohio region. This difference is indicative the RISE Ohio region lags behind the state in its rate of entrepreneurial activity. But when these figures were adjusted for population, the rate at which business formation in increasing for the RISE Ohio region (39%) exceeded that of the State of Ohio (35%) by 4 percentage points. This is an encouraging differential as it suggests that while the region lags the State in its current rate of entrepreneurial activity, that gap is closing.

Business formation is booming in some counties…but only some

Across the RISE Ohio region there are several counties exhibiting even higher – some remarkably so – rates of business formation growth as adjusted for their per capita (000s) rates. The leaders by far in that regard are Holmes (117%) and Harrison (106%) counties. Another nine counties had growth rates exceeding the region as a whole – Belmont, Carroll, Coshocton, Hocking, Jefferson, Meigs, Monroe, Morgan, and Noble. But the most surprising revelation is that Columbiana County, which had been a leader in absolute business formation values, had the lowest rate of growth (12%) of the entire RISE Ohio region for the period. While this may be partially explained by its higher base number at the start of the period, it nonetheless indicates that the county's entrepreneurial activity growth is falling behind that of the rest of the region.

High growth companies differ from popular assumptions

The economic impacts of entrepreneurial business is greatly amplified by the small minority of those businesses that succeed and become high growth companies, among the largest in their industry sectors. This study found 1,999 RISE Ohio businesses qualified as high growth companies. Consistent with national studies, the region's high growth companies differ from popular portrayals of technology-based startups promulgated by the high profile successes of firms such as Facebook, Google, and Amazon. Instead, they are more mature companies that grew slowly for years before entering a period of rapid growth. And rather than being concentrated in a narrow range of technology industry sectors, RISE Ohio high growth companies are engaged across a variety of industry sectors in the region. Rather than being more common in certain high technology or innovation-based sectors, RISE Ohio high growth companies were as likely occur in “traditional industry” sectors as in technology sectors, just as frequently in service industries as in information or manufacturing ones.

The region overperforms in high growth companies occurrence

Given the RISE Ohio region’s larger share of locally owned businesses, it is expected the region would also have a proportionately larger number of firms with annual revenues exceeding $2.5 million that would qualify them as high growth companies. That is not an inevitable result, as it is possible for a region to provide fewer or more economic, financial or resource advantages that are especially supportive of company growth.

The 1,999 companies identified as HGCs in the RISE Ohio region are 5.6% of the region’s total business population of 35,520 businesses. These percentage is well ahead of the comparable figures for both Ohio (4.9%) and the United States (5.1%). Moreover, when assessed on a population-adjusted basis, the RISE Ohio region also outperforms state and national results. At 3.2 high growth companies per 1,000 population the region outperforms the state (2.6) and the nation (2.8). The implications of this differential will be addressed later in the study.

Some counties stand out as high growth company locations

An impressive aspect of the population of high growth companies in the RISE Ohio region is the broad distribution of those businesses across the region. Each of the RISE Ohio counties are home to several of the 1,999 identified companies. However, their distribution is not nearly uniform, but rather is often tightly clustered geographically. But this outcome is expected given the differential population distribution of the region described in a previous section of this report. Adjusting for population identified some counties as standouts. For example, Carroll County, which ranked only 11th in the number of high growth companies, by contrast ranked 5th in the number of these firms per 1,000 population. This suggests that some RISE Ohio counties are overachieving for reasons that could offer insights on how to better support growth company development.

High growth companies regional economic impacts

The most important aspect of high growth companies is likely their disproportionately large contributions to regional employment. That is certainly the case in the RISE Ohio region where the 1,999 companies qualified as high growth companies, which represented only 5.6% of all RISE Ohio businesses, accounted for 76,196 jobs – more than 23% - of the region's total business employment. As with most other characteristics of the region's high growth companies, their relative employment contributions varied substantially from county to county.

RISE Ohio growth capital is a concern

The current availability and activity of growth capital raises concerns about their relevance and sufficiency to meet RISE Ohio high growth company growth capital demand. Economic development policy driven initiatives that seek to enhance capital access for small businesses largely do not address either the types or amount of growth capital required by RISE Ohio high growth companies. A scarcity of private equity firms serving the RISE Ohio market may make it difficult for high growth companies from the region to successfully compete for the attention needed to initiate and consummate investments.

Regional economic shifts suggest future entrepreneurial growth sectors

Analysis of long-term changes in the RISE Ohio region's economy characterized the growth prospects of the region's industry sectors. RISE Ohio region is expected to experience a gradual shift in entrepreneurial activity, and the development of future high growth companies, influenced by regional economic forces and evolving competitive advantages. In such an eventuality, the industrial composition of the RISE Ohio entrepreneurial and high growth company populations will shift more toward those industries in the Advancing and Emerging industry sectors. These include industries such as Finance and Insurance, Professional and Technical services, Entertainment, Information, and Real Estate.

Regional entrepreneurial ecosystem requires attention

The RISE Ohio region has a representative cross-section of elements of a regional entrepreneurial ecosystem, with a few outstanding examples with demonstrated impacts. These can provide models for both scaling up existing initiatives to achieve higher scale, and for regional replication to achieve greater scale. This study was performed during a period in which communities across the RISE Ohio have undertaken a variety of new entrepreneurial and economic development projects that may address such opportunities. It is intended that this assessment be a resource to inform those efforts.

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