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## **Moving Cleveland Above the Trend: Benchmarking Regional Performance (Report)**

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**The George Gund Foundation**

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**MOVING CLEVELAND  
ABOVE THE TREND:  
BENCHMARKING  
REGIONAL  
PERFORMANCE**

**CENTER FOR  
ECONOMIC  
DEVELOPMENT**

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## INTRODUCTION

When analyzing economic development, we must consider both the factors that can be changed through policy and those that cannot. This report includes our model for understanding and predicting economic growth in U.S. mid-sized regional economies to analyze structural and policy-based factors among similar regional economies. Our research used a multi-stage process that involved collecting 43 variables on a variety of topics that are associated with regional growth, such as educational attainment, business composition, regional assets, and quality of life. In total, our mid-sized regional economies encompass 135 metro areas, and includes populations spanning from 352,823 to 3.9 million. We used factor analysis as a data-reduction technique to identify the influences in mid-sized regional economies. This statistical analysis found five structural and economic factors influencing mid-sized regional economies: 1) Innovation and Talent, 2) Entrepreneurship in High-Cost Areas, 3) New Residential Centers, 4) Retirement Destinations, and 5) Polarization. We then used regression analysis to determine the relationship between these factors and regional growth in employment, gross regional product (output), and per capita income.<sup>1</sup> This report outlines the primary takeaways of this analysis and describes how the five-county Cleveland metro areas (the Cleveland Region) can incorporate policies and programs similar to those in other regions in order to propel its metros forward.

## FINDING OUTPERFORMERS

Identifying outperforming metros gave us a glimpse into regions that exceeded the average performance of other metros through regional assets, innovation, or public policy.<sup>2</sup> Examining outperformers allowed us to detect metro areas that are similar in size and structure to those in Northeast Ohio but which *outperformed the model*.<sup>3</sup> The interesting trend of most of the outperformers was that their local assets included one of the following: a research university, a federal research hub (including military bases and federal installations), a state government (state capitol), or large anchor companies driving growth (Table 1). The San Jose, CA metro area was the only outperformer in all three output measures (employment, gross regional product, and per capita income), which is indicative of its regional assets, including Stanford University and the Silicon Valley employment epicenter. Substantial literature has identified that the presence of a large research university can contribute to overall regional prosperity, and our research concurs, noting the number of research-university-based hubs outpacing growth in employment and gross regional product. Metro areas with federal and state employees contribute to output and income by buffering the business cycle of industry. Also, large growing anchor companies can serve as research and development engines for a regional economy. Places like Orlando, FL (Disney); Beaumont, TX (Exxon Mobile); Hickory, NC (Google); and Fayetteville, AR (Walmart headquarters and JB Hunt) count these companies as regional economic drivers and assets.

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<sup>1</sup> For more information on the model specification and statistical results see Appendix A.

<sup>2</sup> For more information see Appendix B.

<sup>3</sup> The model reflects the trend of average performance measured by employment, GRP and per capita income based on factors of regional growth. Outperforming means that a region had better economic results than those with similar specific indicators, i.e. level of education, high-tech occupations, and many others.

**Table 1. Outperforming Metro Area by Regional Asset and Output Growth Measure**

Research University	Federal Hubs	State Capitols	Anchor Companies
<b>Grand Rapids, MI</b> (Emp)	<b>Charleston, SC</b> (PCI)	<b>Salem, OR</b> (Emp & GRP)	<b>Orlando, FL</b> (Emp)
<b>Provo, UT</b> (Emp & GRP)	<b>Augusta, GA</b> (PCI)		<b>Beaumont, TX</b> (PCI)
<b>Eugene, OR</b> (Emp & GRP)	<b>Wichita, KS</b> (GRP)		<b>Hickory, NC</b> (PCI)
<b>San Jose, CA</b> (Emp, GRP, & PCI)	<b>Fresno, CA</b> (GRP & PCI)		<b>Fayetteville, AR</b> (PCI)
<b>Greenville, SC</b> (Emp)			
<b>Stockton-Lodi, CA</b> (GRP & PCI)			

Note: PCI – growth in per capita income, Emp – growth in employment, GRP – growth in gross regional product

### EXAMPLES FOR NORTHEAST OHIO

It is important to find regions with similar local assets and strong public policies to learn how best to spur Northeast Ohio's growth. Some metro areas were discounted because their local assets were considerably different from those in Northeast Ohio, and many of these assets were structural in nature, as opposed to policy-based. For example, it is difficult to compare Cleveland's anchor companies to Disney, with over 75,000 employees in Orlando alone.<sup>4</sup> While public policy can attract new companies, attracting a mega-company is very unlikely. Moreover, some metro areas among over-performers are state capitals, and Cleveland will never become one. Therefore, we focused our analysis on the top-performing regions that shared similarities with Northeast Ohio: Grand Rapids, MI, Hickory-Lenoir-Morganton, NC, Augusta, GA, and Eugene, OR.

The Grand Rapids, MI metro area outperformed the model in employment change from 2013 to 2018, showing a 17% increase versus the 8% predicted by the model. Regional assets in the region include two major universities (Grand Valley State University and Michigan State University College of Human Medicine) and encompass a diversified economy with strengths in metals, plastics, healthcare, automotive, biopharmaceuticals, food processing, office furniture, medical devices, and production technology. Recent expansions of a vacuum manufacturer, Bissell, Inc., and an automotive manufacturer, Dicastal North America, have brought many new jobs to the area, triggering an increase in population. Also, Grand Rapids is a popular destination for millennials due to its employment growth and affordable cost of living. Finally, the Grand Rapid Promise Zone Scholarship ensures that all eligible students who live within the city of Grand Rapids and graduate from a public, private, or charter school within the city will have free access to the local community college degree programs.

<sup>4</sup> Cleveland has large companies like Cleveland Clinic, University Hospitals and Progressive Insurance and is home to the headquarters of Sherwin Williams, Parker Hannifin, Lincoln Electric, Swagelok and more, ranging in employment from several thousand to over 30,000.

Another metro area that has seen a spike in employment and output is Eugene, OR, with 13.8% growth in employment from 2013-2018 (compared to the model prediction of 8.3% for this metro) and an increase of 31.2% growth in GRP (20.6% predicted). This region has outperformed due to several regional assets, including the University of Oregon and local hospitals, in addition to building a bustling tech hub in downtown Eugene and across the metro area. This metro area is also home to many large headquarters like Nike and the educational software company Broderbund Software, both of which have brought many new jobs to the area. An additional selling point of the region is that Eugene is much more affordable compared to neighboring Portland and California, triggering some companies and startups to forego trendier locations and opt to build in Eugene instead. Consequently, the greater metro area has managed to attract large companies like Avago Technologies (a semiconductor manufacturer), Firstsource (a business process management company), and Winnebago Industries (a motorhome manufacturer).<sup>5</sup> Finally, the university has been working on attracting more international students and partnering with local companies to build out a new curriculum connecting students to tech industry careers upon graduation.<sup>6</sup> Being significantly smaller than Cleveland in absolute size, Eugene might be more comparable to the Akron MSA. However, being the third-largest city in Oregon, located within the Portland-Salem-Eugene megaregion, means it is more affordable while still having the attraction of the whole region which resembles Cleveland's regional size and the cost of living.

When looking at the per capita income outcome measure, we found two metro areas that had seen a substantial increase: Augusta, GA, and Hickory-Lenoir-Morganton, NC. Augusta, GA increased its per capita income by 11.6% due to the strong cybersecurity and military presence in the area. Fort Gordon has been a significant employer in the area, becoming a hub for cybersecurity by adding many high-paying jobs. According to Glassdoor, the average salary of a cybersecurity professional in Augusta is \$68,323 per year. Hickory-Lenoir-Morganton, NC did not see population or employment growth over the last five years, but they experienced a 14.3% increase in per capita income. This increase is mostly due to the Apple and Google data centers that have opened in the area. Although these data centers have not created many jobs, the jobs they did create were high-paying ones. More importantly, in terms of regional economic development, these data centers have attracted many new employers to the area, including pharmaceutical and farming equipment manufacturers, which added jobs and decreased unemployment in the area.

## FACTORS OF REGIONAL GROWTH

Every city has a combination of regional assets, some that can be changed with policy and some that cannot. For example, the Cleveland region has assets that include lake access, theatre and arts institutions, and a robust healthcare system. Still, the region is not a state capitol and does not host a large public research university. To better understand its assets and determine appropriate policy levers, we will now analyze some metro areas that have done exceptionally well in building an innovative and talent-driven economy similar to the Cleveland region. For this task, we identified two groups of metro areas to investigate, categorizing them as "Achievable" and "Aspirational." Achievable metro areas are similar to the Cleveland region, scored better on certain factors, and only slightly outpaced the Cleveland region. Therefore, these regions offer Cleveland the most efficient short-term strategies to

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<sup>5</sup> While Northeast Ohio has attracted new companies to the region, much of this has come in the healthcare and manufacturing industries which are pre-existing regional clusters.

<sup>6</sup> St. Clair, A. (2018, Feb 22) Can Eugene Sell Itself Without Selling Out? *Oregon Business*. Retrieved from <https://www.oregonbusiness.com/article/economy/item/16163-tuning-in>



achieve similar success. Meanwhile, Aspirational metros represent areas that significantly outscored Cleveland and may have different regional assets than the Cleveland region; yet those regional assets can be constructed through policies. Exploring how these aspirational metros performed is essential to create a long-term strategy of growth.

## INNOVATION AND TALENT

The regional assets in both Achievable and Aspirational metros are research universities with products of talent, research and development, and innovation. In today's economy, it is becoming more and more challenging to achieve a high-paying career without a college education. As we found with all of the metro areas that were top performers in Innovation and Talent, highly acclaimed universities are located in these areas, churning out top talent. Not only are universities producing top talent, but they also collaborate with employers in technological fields to construct curriculums with an emphasis on employer-identified skills to better prepare future employees. Building a technology sector in a local economy is imperative because technology is a major driver of innovation and productivity. Additionally, jobs are increasing in the technology sector, and these jobs tend to be high-paying, thereby advancing the regional economy. Moreover, having a high multiplier effect for additional services,<sup>7</sup> the industry itself employs a variety of occupations, some of which (e.g. computer support technician) require relatively little education for jobs at living wages or higher. As our model shows, *Innovation and Talent* is the leading factor in describing mid-sized metropolitan areas and their growth, and it is positively associated with all regional outputs (employment, gross regional product, and per capita income). For variables that drive the *Innovation and Talent* factor, see Appendix Table A2.

### Cleveland Metro's Current State

The Cleveland-Elyria metro area has made strides toward becoming a more innovative region as high-quality tech talent increases each year. According to CBRE's Scoring Tech Talent Report, between 2013 and 2018, Cleveland's tech talent pool increased by 17%, but the area has struggled to keep up with the number of potential new tech employees. Cleveland added 5,230 tech jobs between 2013 and 2018 but had 9,427 tech graduates that were looking to fill those positions. This unrealized opportunity, or mismatch, should incentivize new companies to come to the area and tap into the talent pool, thereby building the tech industry in Cleveland and spurring the Fourth Industrial Revolution in local manufacturing. BrandMuscle and Robots & Pencils are two tech-focused companies that have already taken advantage of this talent pool by building their headquarters in Cleveland. Along with these emerging tech companies, the booming healthcare industry has created partnerships with entrepreneurs and tech startups to innovate the industry and create more tech jobs. Although Cleveland has made significant progress toward building an innovation and technology industry within its economy, it is not yet a tech hub attracting people across the U.S. and the world. Large-scale machine-to-machine communication (M2M) and the internet of things (IoT) are still nascent in the region that has

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<sup>7</sup> Moretti, Enrico *The New Geography of Jobs*. Houghton Mifflin Harcourt, 2012 - Business & Economics – 294 p. Also Van Dijk, J. J. in his 2018's article "Robustness of econometrically estimated local multipliers across different methods and data," published in *Journal of Regional Science*, 58(2), 281-294, found that the traded-goods multiplier falls within the range of 1.17 to 1.93, which is substantially lower than the estimate of 2.6 obtained by Moretti (2012). However, IMPAN 2018 National Data Files estimate employment SAM multipliers for the Data Processing, Hosting, and Related Services industry at 5.1; Custom Computer Programming Services – 2.8; Computer Systems Design Services – 2.52; and Other Computer Related Services, Including Facilities Management Services – 3.76.

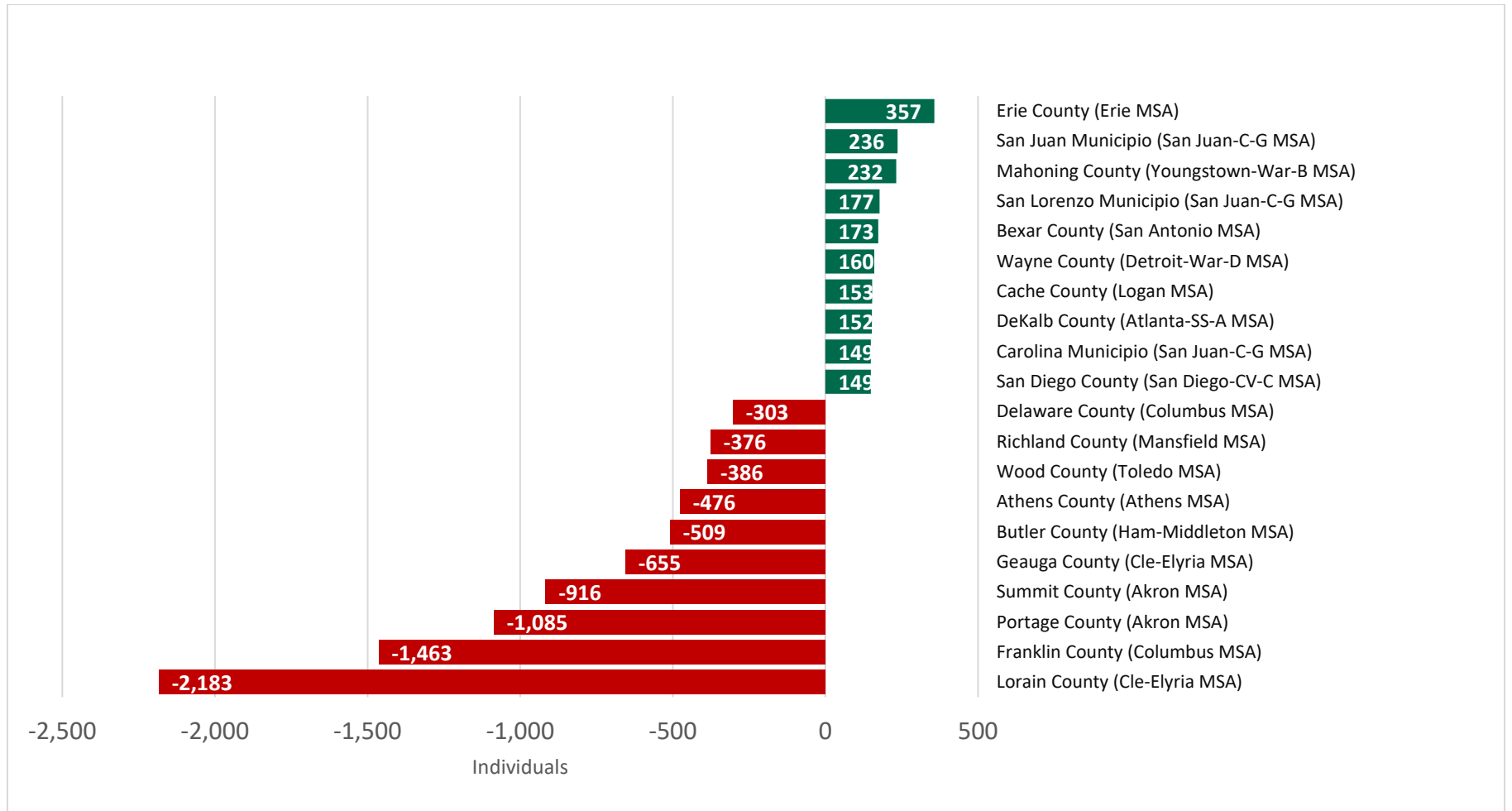
a strong prospective to thrive from Industry 4.0 where increased automation, improved communication and self-monitoring, and production of smart machines that can analyze and diagnose issues without the need for human intervention.

To attract and retain people in the Cleveland area, we must identify the pattern of movement for leaving and arriving to this area. Figure 1 displays the migration flows into and out of Cuyahoga County (the county in which Cleveland resides) in 2017<sup>8</sup>. Domestic migration was -11,056, meaning the county lost over 10,000 people to other counties. Notably, most people who left the county did not move far away; in fact, they tend to stay in the Cleveland metro area. However, this area loses a fair amount of its population to the Columbus metro area, as well as other areas across Northeast Ohio. While Columbus does have more regional assets, other areas across NEO are similar to Cleveland in practically every way. Therefore, learning from Columbus and other NEO areas can help us determine best practices for retaining employees. For example, Cleveland could build an innovation hub, in the Moretti sense, to serve as a regional asset and thus retain some of the talent currently leaving for nearby cities. Moreover, the broader innovation hub that utilizes not only higher skill, but lower skill people can present an opportunity for those that move to Cuyahoga County and need training. Notably, the population from San Juan, Puerto Rico are choosing to move to Cuyahoga County because of its large Puerto Rican population (Figure 1). This flow of people was exacerbated by its economic crisis and the slow recovery from multiple hurricanes. Many Puerto Ricans have family ties in the Cleveland area, and this makes the transition easier. This migration also presents an opportunity for lower skilled people to be trained and to expand the service industry in Cleveland as well as the general population.

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<sup>8</sup> Data collected from US Census ACS 2017 5-Year Estimates

**Figure 1. Net Domestic Migration Flows – Top 10 Into or Out of Cuyahoga County, 2017**



Although Cleveland does not perform as well as other leading metro areas in the Brain Gain category, we are comparable to other metros in high tech talent and STEM occupations. According to ACS 2018 5-Year Estimate data, compared to the other metro areas that are succeeding in Innovation and Talent, Cleveland is on pace with Aspirational metro regions, with around 11% share of STEM occupations and 0.2% high-tech jobs, compared to 11.7% share of STEM occupations and 0.3% high-tech jobs in Charlotte, NC. The major challenge in Cleveland is retaining its highly educated talent. Therefore, let's review high-performing metro areas to lay a framework for what Cleveland can do to attract and retain talent. Table 2 identifies the Innovation and Talent: Achievable and Aspirational Metro Areas.

**Table 2. Innovation and Talent: Achievable and Aspirational Metros**

Achievable	Aspirational
Columbus, OH	Minneapolis, MN
Cincinnati, OH	Charlotte, NC
Indianapolis, IN	
Kansas City, MO	
Pittsburgh, PA	

#### **Achievable Metro Areas**

Fortunately for Cleveland, many nearby metro areas are setting attainable examples of how to attract and retain high-quality tech talent to their areas. These metro areas include Columbus, OH; Cincinnati, OH; Indianapolis, IN; Kansas City, MO; and Pittsburgh, PA. All of these metro areas are home to thriving universities that foster and keep talent, as well as revitalization efforts to create a fun place to live and work.

As stated earlier, a significant driver for economic tech success includes a large research university, which most of these metro areas have. Cleveland, on the other hand, cannot compete with these highly acclaimed universities. For example, when looking at University R&D, Pittsburgh scores seventh out of 135, attracting an average of \$1.2 billion in research dollars from 2015 to 2017. This sizeable investment can be attributed to Carnegie Mellon and the University of Pittsburgh. Columbus, home to the Ohio State University, ranks 12<sup>th</sup> and attracts over \$833 million. Cleveland, on the other hand, ranks 43<sup>rd</sup>, attracting \$480 million. Research universities like Carnegie Mellon and The Ohio State University are much stronger economic drivers than universities like Case Western and Cleveland State University, making it difficult to compare these metro areas fairly.

Despite the difference in university funding, another driver of success in these metro areas is the strong connection between the universities and local tech companies. For example, the University of Cincinnati created the 1819 Innovation Hub and works with companies like Kroger to create a curriculum preparing tech graduates for the field. Also, in Pittsburgh, an Innovation District was created where Carnegie Mellon and the University of Pittsburgh partner with local entrepreneurs and tech startups to help their tech students network and conduct research with companies looking to hire. By creating strong partnerships between universities with ample tech talent and local tech companies, universities can build their curriculum around what employers are looking for, and students can network to find employment. As a result, these areas effectively eliminate brain drain and keep more qualified tech talent in the region.

Another strategy that many of these metro areas have implemented is supporting partnerships between educational institutions and local coding bootcamp programs. Initially, Indianapolis experienced considerable brain drain from their state universities due to a manufacturing-focused economy with little tech presence. To reverse this trend, the region created TechPoint, a nonprofit that connects students interested in the tech industry to tech internships, within existing smaller tech companies, and coding bootcamps. Columbus, on the other hand, has had trouble finding enough qualified talent. In an attempt to build a bigger talent pool, many tech companies have partnered with local coding bootcamps like We Can Code It and Tech Elevator to train second-career seekers who are looking to break into the tech field. Cleveland has seen an increase in coding bootcamps from nonprofit intermediaries such as We Can {Code} IT and Tech Elevator. Still, the region could benefit from improving its connections between local companies and these programs to funnel regional talent into employment.

University research and attraction draws students to a locality, but regional assets and employment opportunities must entice graduates to stay. Overall, millennials have higher college debt and fewer employment opportunities than previous generations, which makes their residency decision more reliant on wages than ever before. In 2019, the average wage for Ohioans was around \$50,000, compared to over \$87,000 for those in Ohio's technology industries.<sup>9</sup> Fostering a high-tech business environment in Cleveland not only helps retain graduates, but also creates wealth due to the subsequent higher spending capacity in the region.

### **Aspirational Metro Areas**

Minneapolis, MN and Charlotte, NC are two metro areas paving the way for innovation and attracting highly qualified talent. These two areas represent long-term strategies Cleveland can follow to guide its future economic success. Ultimately, Cleveland should continue to build a diversified economy which provides an opportunity for employment and entrepreneurship.

First, Cleveland should train, educate, and connect minorities and those living in poverty to higher-paying jobs. In Charlotte, the Carolina Fintech Hub's Workforce Investment Network program pays students to learn how to code and then guarantees them a high-paying job upon graduation with companies like Wells Fargo, Ernst and Young, and Bank of America. Most students who participated in this program were living in poverty, but the opportunity to learn a valuable skill enabled them to earn a living wage. Additionally, Minneapolis created ConnexMSP, an online platform connecting career readiness and college graduates to tech and other employers in the area. This organization primarily focuses on minority populations to combat inequities in the workforce and make employment opportunities available to all. By expanding their focus beyond college tech graduates to include opportunities for minorities and those living in poverty, the talent pool in these metro regions grows while also pulling individuals out of poverty and teaching them skills they likely lacked the resources to build.

Also, Minneapolis and Charlotte attracted many large, non-tech companies to the area that are building their technology teams. Charlotte is known for its financial services and banking industry, and that is why Bank of America and Wells Fargo topped the list for IT job postings in the area. Lowe's is another huge company that has chosen Charlotte as the location for its 23-story Global Technology Center, which will add 2,000 jobs and attract other tech companies to the area. Minneapolis has many large companies as well, including Target, Best Buy, and General Mills, which partner with local organizations

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<sup>9</sup> Kowalski, N. (2020, Feb 20) Top states for technology salaries and growth. *Dice*. Retrieved from <https://insights.dice.com/2020/02/20/top-states-technology-salaries-growth/>

to make connections with the tech talent pool. Many of these companies are attracted to the area because of the vast talent pool created by the regional universities and its relatively low cost of living, which is similar to Cleveland's.

The challenge in mirroring these Aspirational areas is making Cleveland attractive to large employers. The loss of its airport hub status in 2014 with United Airlines made it harder for our region to compete with places like Minneapolis and Charlotte, which are airport hubs for Delta and American Airlines, respectively. Site selectors and businesses look at cities that have easy connectivity, and a hub possesses quality for connectivity; moreover, airport hub cities have proven to be a draw for high-technology industries.<sup>10</sup> Overcoming the structural difference of connectivity and regaining an airport hub could significantly improve Cleveland's ability to recruit and attract businesses and national talent.

### ENTREPRENEURSHIP IN HIGH-COST AREAS

The second factor of regional growth is *Entrepreneurship in High-Cost Areas*, revealing that the drivers of entrepreneurship and small businesses tend to be located in East and West Coast cities, which have great assets, and also a high cost of living and expensive housing. These prices are a consequence of high demand for housing and growth in these particular regions. The relationship between economic assets, cost of living, and economic growth illustrates many discussions about how industry clusters of innovation become magnets for entrepreneurs and business owners because these areas support services and infrastructure (i.e., accountants, lawyers, and other entrepreneurial service providers) and these support services are accustomed to working with entrepreneurial firms.<sup>11</sup> For our model, *Entrepreneurship in High-Cost Areas* is positively associated with regional growth in employment, gross product, and per capita income. For variables that drive *Entrepreneurship in High-Cost Areas*, see Appendix Table A3.

Building an economy that has regional assets and a strong foundation in promoting small businesses and entrepreneurship is a recipe for success. Encouraging the regional growth of small business keeps earned dollars circulating locally. For example, the money spent at a local ice cream store by a customer will be circulated into local wages and the local supply chain, as opposed to large chain stores that may be importing goods from supply chains outside of the local economy. Also, small businesses create more job opportunities for local residents as they are very focused on serving and bettering their communities. Small businesses create a community where residents feel a sense of pride and ownership by knowing where their money is spent and that they are supporting their community, schools, and infrastructure. There are many reasons why creating a culture of entrepreneurship is extremely important for an economy, and the successes of the following metro areas illustrate those reasons (Table 3).

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<sup>10</sup> Button, K., & Lall, S. (1999). The economics of being an airport hub city. *Research in Transportation Economics*. 75-105. [https://doi.org/10.1016/S0739-8859\(99\)80005-5](https://doi.org/10.1016/S0739-8859(99)80005-5).

<sup>11</sup> Porter, M. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 14 (1), 15-34.

Austrian, Z. & Piazza, M. C. (2014). Barriers and Opportunities for Entrepreneurship in Older Industrial Regions (pp. 215-243) in William M. Bowen *The Road from the Rustbelt: From Preeminence to Decline to Prosperity*. Kalamazoo: W.E. Upjohn Institute for Employment Research.

**Table 3. Entrepreneurship in Achievable and Aspirational Metros**

Metro Area	Percentage of Employment in Small Firms (2016)	Percentage of Self-Employed (2017)
Cleveland, OH	16.4%	8.5%
<b>Achievable</b>		
Minneapolis, MN	15.1%	11.6%
<b>Aspirational</b>		
Eugene, OR	25.3%	13.7%
Colorado Springs, CO	25.5%	11.2%

Source: US Census Bureau, Longitudinal Employer-Household Dynamics & American Community Survey

#### **Current State of Cleveland's Metro Area**

Overall, the Cleveland metro area ranks 96<sup>th</sup> in *Entrepreneurship in High-Cost Areas*. This ranking reflects Cleveland's low cost of living and housing prices, as well as low self-employment and employment in small businesses. A second-tier city due to size, Cleveland has always marketed itself as a low-cost alternative to major markets that nonetheless offers the amenities of a larger city. However, the region has not experienced rapid growth in output measure and employment compared to its Achievable and Aspirational counterparts. Moreover, it has a lower percentage of small businesses and self-employment than these comparable metro areas.

Unfortunately, a longstanding risk-averse culture has dissuaded entrepreneurship in the region; individuals have traditionally preferred to work for an employer rather than be an employer. The Midwestern, overly cautious mentality regarding entrepreneurship has perpetuated a culture of encouraging larger companies and multinationals to locate in Cleveland, which is an asset as the region hosts over 500 national and international headquarters. However, the environment of large companies' presence has perpetuated a lack of support services to assist entrepreneurs and small businesses since large firms monopolized many of these support functions. In the last 15 years, a significant local effort has been made to encourage a more courageous culture, especially after the region experienced damaging recessionary effects from manufacturing offshoring and closures. In addition, these efforts have also focused on fostering a fertile support service environment for these entrepreneurs.

In 2015, Cleveland was ranked one of the top 50 entrepreneurial-friendly cities, coming in 34<sup>th</sup> on the list. Cleveland's success is due to the several organizations in the area, like LaunchHouse and JumpStart, that help entrepreneurs secure funding and network for success. In addition to these organizations' support, there is growing access to capital in the area and a low cost of living – factors that increase Cleveland's desirability for new business owners. Also, as previously mentioned, Cleveland contains plenty of talented graduates from local universities. Yet these graduates continue to leave because of lower wages offered for comparable tech jobs, a lack of job promotion, and few opportunities for young talent. The thin market in the tech area perpetuates this. If Cleveland were to promote more startups and attract new technology companies to the area, the competition would create higher salaries and more promotional opportunities, thus, attracting more workers.

### **Achievable & Aspirational Metro Areas**

Cleveland's Achievable and Aspirational metro areas are those that have both expensive housing and high entrepreneurship rates (employment in small firms and self-employment). The following analysis focuses on entrepreneurship since low housing costs are ubiquitous to many mid-sized Midwestern regions.

Minneapolis, MN, has been implementing some strategies that Cleveland can use to further its entrepreneurial initiatives. Minneapolis has seen extreme growth in startups, especially women-owned businesses, primarily due to the high-paying tech jobs and the low cost of living, both of which increase Minneapolis's ranking. Also, Minneapolis is home to the MN Cup—the largest statewide competition for startups in the country, supporting over 10,000 entrepreneurs. Across the state, this competition connects entrepreneurs to resources and supports necessary services to accelerate their businesses. Lastly, the metro area created Forge North, a strong coalition of entrepreneurs, investors, and support organizations coming together to connect and provide resources to help businesses thrive. If Cleveland can attract new tech companies to the area and become a tech hub, Minneapolis's strategies can easily be duplicated to create an entrepreneur-friendly environment.

Eugene, OR and Colorado Springs, CO are at the forefront of metro areas that are leading the way with startup growth and entrepreneurial spirit. Eugene, OR has seen a lot of startup growth, enjoying spillover from Portland and the San Francisco Bay area due to its lower cost of living. The same can be said for Colorado Springs and its ability to attract entrepreneurs from Denver and Boulder. Both Eugene and Colorado Springs are still quite expensive places to live, but their factor rankings remain very high due to their large share of small businesses. To compare, the Eugene and Colorado Springs metro economies are comprised of about 25% small firms whereas Cleveland's only has 16%. In terms of policies, these two metro areas have comprehensive plans to bolster local entrepreneurship and startup growth. In addition, Eugene's regional assets consist of the University of Oregon, which has conducted significant entrepreneurship programming by encouraging students to start businesses. The university provides entrepreneurship programs at local universities and colleges, while also fostering entrepreneurship events, organizations, co-working spaces, and accelerator programs to ensure that emerging entrepreneurs have the tools they need to be successful.

According to the Brookings Institution, Colorado Springs, CO has seen an influx in millennials moving to the area with over 25% of the population in this age bracket.<sup>12</sup> Historically, employment growth came from military employment in Fort Carson, Peterson Air Force Base, Schriever Air Force Base, Cheyenne Mountain, and the United States Air Force Academy, but many say that this new growth can be attributed to other sectors, such as tourism, software, healthcare, and a new Amazon fulfillment center.<sup>13</sup> Additionally, Colorado Springs is within two hours of Boulder, CO, home to the University of Colorado, and one hour from the University of Denver, which increases its talent pool. Combining the influx of young professionals to the existing highly educated and technically inclined talent pool creates a breeding zone for startups.

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<sup>12</sup>Frey, W. H., (2018). The millennial generation: A demographic bridge to America's diverse future. *Brookings Institution* <https://www.brookings.edu/research/millennials/>

<sup>13</sup> London, N. (2020, March 2). A booming job market and cheaper housing are luring millennials to Colorado Springs. *Colorado Public Radio News*. <https://www.cpr.org/2020/03/02/a-booming-job-market-and-cheaper-housing-are-luring-millennials-to-colorado-spring/>



All of these strategies are in Cleveland's grasp as long as our region can attract and retain educated talent, expand comprehensive entrepreneurial education at local universities, and provide resources and connections so that entrepreneurs can jump-start their businesses successfully.

## NEW RESIDENTIAL CENTERS

Unlike many places in the Midwest, regions across the U.S. have seen population growth, and, subsequently, they experienced a large amount of residential construction to house these new residents. Table 4 shows the population growth and share of the millennial population in comparable metro areas. Strikingly, comparable metros have positive population growth, while Cleveland lost population. The region also has the lowest proportion of millennials, who are now the largest consumers in the U.S. economy. The *New Residential Centers* factor is positively associated with employment and gross regional product and negatively associated with per capita income. The positive correlation between employment and gross regional product confirms that these places are growing economies. The negative association with per capita income appears in the metro areas, primarily in Texas, that also house immigrants and contain high-income inequality despite experiencing growth. For variables that drive the *Innovation and Talent* factor, see Appendix Table A3.

**Table 4. Population Growth and Share of Millennial Population**

Metro Area	Population Growth (2015-2017)	Percentage of Millennial Population (2017)
Charlotte, NC-SC	4.1%	20.8%
Colorado Springs, CO	3.7%	22.4%
Columbus, OH	2.8%	23.0%
Minneapolis-St. Paul, MN-WI	2.2%	21.9%
Indianapolis, IN	2.0%	21.4%
Kansas City, MO-KS	1.9%	21.0%
Cincinnati, OH-KY-IN	1.0%	19.9%
Cleveland, OH	-0.1%	18.6%

Source: Census Bureau, Population Estimates & American Community Survey

### Current State of Cleveland's Metro Area

Over the years, Cleveland has seen an increase in housing demand downtown as well as in adjacent booming neighborhoods. In 2016, downtown Cleveland's occupancy rate was 98%, with many waiting lists overflowing with eager home and apartment seekers. With this increase in demand, prices have skyrocketed, narrowing the population that can comfortably move there. The majority of people moving to downtown are either under 35 millennials, or over-55 baby boomers who have more disposable income now that their children have moved out. Eighteen new housing developments have been built between 2007 and 2016 to keep up with this demand, and ten other developments are planned. Most of these developments are targeted toward high-income people, leaving a gap in affordable housing options. Moreover, new prospects from many tech companies moving to permanent remote work may increase the demand for housing from coastal high-cost-of-living places. Gentrification has run rampant, and although new residential development has helped economic growth, the wage gap is increasing, and Cleveland needs new strategies to implement affordable housing developments.

### **Achievable Metro Areas**

Minneapolis, MN, Columbus, OH, and Cincinnati, OH are three metro areas that are slightly larger than Cleveland but are also experiencing economic growth and housing demand. All three are home to booming tech hubs and top-notch universities, churning out talent that is choosing to stay and attracting talent from other areas. This population surge has caused an extreme demand for housing that most metros, like Cleveland, Buffalo, NY and Ann Arbor, MI are struggling to meet. However, Minneapolis is handling this growth a little differently. Due to the increase in population and housing demand, housing prices began to increase dramatically, and Minneapolis knew it was time to make a change and bring more affordable housing units to the area. Recently, the City has ended single-family zoning, which allows for duplexes and triplexes to be built anywhere within the city. Also, in their comprehensive plan, the City allocated \$40 million to affordable housing development and set in place requirements for developers to include low-cost units in projects. Minneapolis is setting a precedent for other metro areas, including Cleveland, that are experiencing rapid growth and trying to keep up with housing demand. Although people want new housing, it is crucial that affordable housing is included in these developments.

### **Aspirational Metro Areas**

The metro areas of Charlotte, NC, Colorado Springs, CO, Indianapolis, IN and Kansas City, MO are Cleveland's Aspirational regions since these areas have fast-growing populations and a considerable increase in housing demand. These metro areas have been growing for quite some time yet continue to lag in housing development. Each of these metro areas has a different approach to remedy the low inventory of housing options. In Charlotte, NC – one of the fastest-growing cities in the country – more and more people are looking for homes. As the city has built new residential developments, prices have continued to increase with very few affordable options to find a home; studies have shown that the city is lacking 34,000 affordable housing units. In response, Charlotte has raised \$100 million for affordable housing projects to try and fill this gap. Colorado Springs, CO, on the other hand, is trying to cater to young tech professionals that are moving to the area by building luxury apartments and hotels. The choice to focus less on affordable options has created a larger poverty gap and has led to further gentrification in traditionally working-class neighborhoods. In similar metro areas, the option for more expensive residential developments is appealing since the housing demand has continued to increase. Still, if affordable housing options continue to be ignored, the affordable housing crisis happening across the country will continue to worsen. Cleveland should strive to build new residential developments while including affordable housing options and policies to avoid contributing to this worsening dilemma.

## **RETIREMENT DESTINATIONS**

The Census Bureau estimates that in 2017, there were approximately 73 million baby boomers, and by 2030 this generation will all be over 65. With a large number of people already or about to retire, many regions want to become an attractive retirement destination for baby boomers to spend their retirement income. Consequently, many regions are actively luring these individuals advertising their warm weather, organized social activities for seniors, and different recreational activities to enjoy. Retirement destinations, mostly located in Florida, have become consumer purchasing powerhouses with positive correlation to increases in per capita income (Appendix Table A5). The Cleveland region cannot compete with Florida's warm weather and sunny beaches, but how can colder climates attract retirees to expand economic growth?

While Cleveland's weather leaves much to be desired, it is home to world-renowned healthcare institutions like the Cleveland Clinic and a lively art and cultural scene that could be very attractive to

older populations. Moreover, the sense of community and social warmth are the distinctive characteristics of Midwesterners. If Cleveland leveraged these assets to attract older populations, it could potentially reap the benefits of an increase in per capita income. Pittsburgh, PA, is a prime example of a city with harsh winters that nonetheless ranks higher than Cleveland as a retirement destination. Similar to Cleveland, it has quality healthcare facilities and robust arts and recreational culture. However, according to the data, the difference between the two metro areas is retiring in place. As people get older in Pittsburgh, they may feel stronger ties to their social community and decide to stay, especially due to the low cost of living. If Cleveland can find ways to create more community amongst senior populations, it may influence them to retire in place, keeping their disposable income in the area.

Another metro area where many active older adults find themselves is Eugene, OR. Those attracted to Eugene want to be near the action, which is a college town known for its arts, culture, and abundant outdoor activities, like hiking and skiing. Its balance between the millennial and boomer populations, its lower cost of living when compared to Portland, OR, and the many opportunities for recreational activities make Eugene a great place to retire.

## POLARIZATION

*Polarization* is a regional economic factor that negatively affects the region's wellbeing. Polarization includes poverty, unemployment, income supports, and income inequality. Polarization drags down all three economic growth output measures: employment, gross regional product, and per capita income (Appendix Table 5). Now more than ever, reinforced by the COVID-19 pandemic, the conversation surrounding inequality has been brought to the forefront of regional discussions. The correlation between income inequality and healthcare inequality, and their disproportionate effect on minority workers and businesses, has triggered a strong movement to examine policies and seek solutions to alter this course. The income inequality variable has the most substantial influence on Polarization, followed by the poverty rate and income supports. The higher the polarization in a metro area, the lower economic results it demonstrates. Therefore, cities should work towards policies that would decrease income inequality to improve their overall economy.

Clearly, different racial and ethnic groups have experienced entrenched institutional racism and discrimination from federal, state, and local policies (i.e., policing, redlining, voting laws, access to credit, access to education, among others). These policies have created a system with unequal economic outcomes for African American and Latino populations, including, access to education, jobs, capital and credit, and control of their destinies. These policies have made it extremely difficult for people to pull themselves out of poverty, creating a perpetual cycle of disadvantage. The severe gaps between socioeconomically advantaged individuals and those living in poverty are not only destroying the quality of life for the latter, but are also causing economies to crumble. Policy changes must occur to reverse these systemic inequalities, or economies will never be able to reach their full potential.

According to the Brookings Institution, income inequality began increasing in 1975 when families in lower-income brackets saw a smaller income gain than those in higher income brackets.<sup>14</sup> This inequality was primarily created by structural changes in the labor market that have increasingly favored higher

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<sup>14</sup> Kearney, M.S. (2014, Jan 16). Income inequality in the United States. *Testimony to the Senate Joint Economic Committee*. Retrieved from <https://www.brookings.edu/testimonies/income-inequality-in-the-united-states/>

skilled and educated workers. Additionally, the achievement gap between schools has widened income inequality and intergenerational wealth; those that are poorer do not have as many educational resources for their children as their wealthier counterparts. If more focus is placed on closing these gaps and ensuring that every individual has equal access to education and jobs, economies will see growth and prosperity.

*Polarization* is a factor that plagues many cities across the country. Unfortunately, areas with many minority and female-owned businesses are typically impoverished, leading to a positive association with polarization. We should hold a more prominent conversation surrounding inclusion and fostering necessary programming to close these gaps while also helping the economy to grow.

Although polarization is seen in many metro areas across the U.S., some metro areas are experiencing it on a much smaller scale, Ogden-Clearfield, UT being one of those metro areas. Like Cleveland, Ogden had a booming economy in the early 1900s because the transcontinental rail line had a major stop in Ogden. However, starting in the 1950s, the construction of freeways and diesel engines caused the rail line to lose traffic flow, which led to a steep decline in Ogden's economy. However, Ogden had a different plan for turning around their economy. The City decided that instead of focusing on one primary industry, it would choose three stable industries to develop: aerospace, outdoor recreation, and advanced manufacturing. These industries have been relatively easy for many to begin their careers, helping this metro area build the highest percentage of people in the middle class compared to any large metro areas in the U.S, resulting in less income inequality.<sup>15</sup>

On the other hand, it is crucial to recognize that Ogden is not very diverse, like many other metro areas that ranked low in income inequality. Ogden, UT has a 13% Hispanic population and a 1% African American population. Meanwhile, the McAllen, TX metro area, which ranks the highest in income inequality, has an 85% Hispanic population. Cleveland, on the other hand, has a 6% Hispanic population and a 20% African American population, and ranks 95<sup>th</sup> in income inequality (out of 135). Unfortunately, because of structural racism, African American and Hispanic populations have been disproportionately affected by poverty and income inequality, and Ogden's lack of racial diversity could explain its low rank. We must investigate what is happening in each metro area and begin to break down racial inequity walls for populations and economies to prosper and increase the quality of life for all.

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<sup>15</sup> Weekend Edition. (2016, May 18). How Ogden, Utah has the lowest level of income inequality. *NPR*. Retrieved from <https://www.npr.org/2016/05/08/477223971/hanging-on-how-ogden-utah-has-the-lowest-income-inequality>

## APPENDIX A: METHODOLOGY & VARIABLES

The research team employed a multi-step methodological approach to identify the factors of regional growth for U.S. mid-sized metropolitan areas. First, the research team reviewed the literature on the essential factors of growth, including influences of the economy, demographic and social characteristics of residents, and quality of life assets. Examining the indicators offered in the literature, the research team collected over 80 variables. The research team then employed exploratory factor analysis to identify the major factors that drive the regional economy. Exploratory factor analysis is a statistical data reduction technique that uses shared variance between variables to group similarly behaving variables. Through dozens of iterations, we reduced the number of variables used in the regional model offered in this study to 43.

After identifying the factors of regional growth, we looked at the relationships between each factor and variables of regional growth. Most factors had a positive association with regional growth, indicating that as the value of the factor increased, so did the output measure (Table A1). For example, as *Innovation and Talent*, *Entrepreneurship in High-Cost Areas* and *New Residential Centers* increased, so did employment. However, there were four instances where the relationships were negative. *Polarization* includes variables of poverty, income inequality, and social assistance factors and is negatively associated with all three output measures of growth: GRP, employment, and per capita income. There was also a negative association between the *New Residential Centers* factor and per capita income.

**Table A1. Factor Associations to Regional Growth**

Employment	Gross Regional Product	Per Capita Income
Innovation & Talent	Innovation & Talent	Innovation & Talent
Entrepreneurship in High-Cost Areas	Entrepreneurship in High-Cost Areas	Entrepreneurship in High-Cost Areas
New Residential Centers	New Residential Centers	New Residential Centers (-)
		Retirement Destinations
Polarization (-)	Polarization (-)	Polarization (-)

**Table A2. Innovation and Talent Factor Variables**

Ranking	Innovation & Talent	
	Variable	Direction
1	Percentage of STEM Occupations	+
2	Percentage of Bachelor's Degree Attainment	+
3	Percentage of High-Tech Jobs	+
4	Patent Applications Per Employee	+
5	Brain Gain – New residents as a % of the population	+
6	Percentage of SBIR/STTR to total employment	+
7	Percentage of High-growth Firms	+
8	International Talent	+
9	Productivity in Service Sector	+
10	Venture Capital (\$) raised per employee	+
11	Industry R&D (\$) per employee	+
12	Traded Industries	-
13	Disconnected Youth	-
14	Internet Access	+
15	Bitcoin Accepting Businesses	+
16	Federal Expenditures	+
17	Coworking Spaces	+

Note: This factor explains 25.4% of variation in the model. Variables are ranked based on the magnitude of importance

**Table A3. Entrepreneurship in High-Cost Areas Factor Variables**

Ranking	Entrepreneurship in High-Cost Areas	
	Variable	Direction
1	Housing Unaffordability	+
2	Foreign born	+
3	Employment in Small Firms	+
4	Cost of doing business	+
5	Self-employment	+

Note: This factor explains 16.0% of variation in the model. Variables are ranked based on the magnitude of importance

**Table A4. New Residential Centers Factor Variables**

Ranking	New Residential Centers	
	Variable	Direction
1	Legacy of Place	-
2	Health Insurance Coverage	+
3	New Construction	+
4	City Poverty Ratio	-
5	Employment in Young Firms	+
6	Manufacturing	-

Note: This factor explains 11.1% of variation in the model. Variables are ranked based on the magnitude of importance

**Table A5. Retirement Destinations Factor Variables**

Ranking	Retirement Destinations	
	Variable	Direction
1	Senior Population	+
2	Share of Millennial Pop to Total Pop	-
3	Labor Force Participation Rate	-
4	Housing Vacancy Factor	+
5	Recreation Facilities	+

Note: This factor explains 8.4% of variation in the model. Variables are ranked based on the magnitude of importance

**Table A6. Polarization Factor Variables**

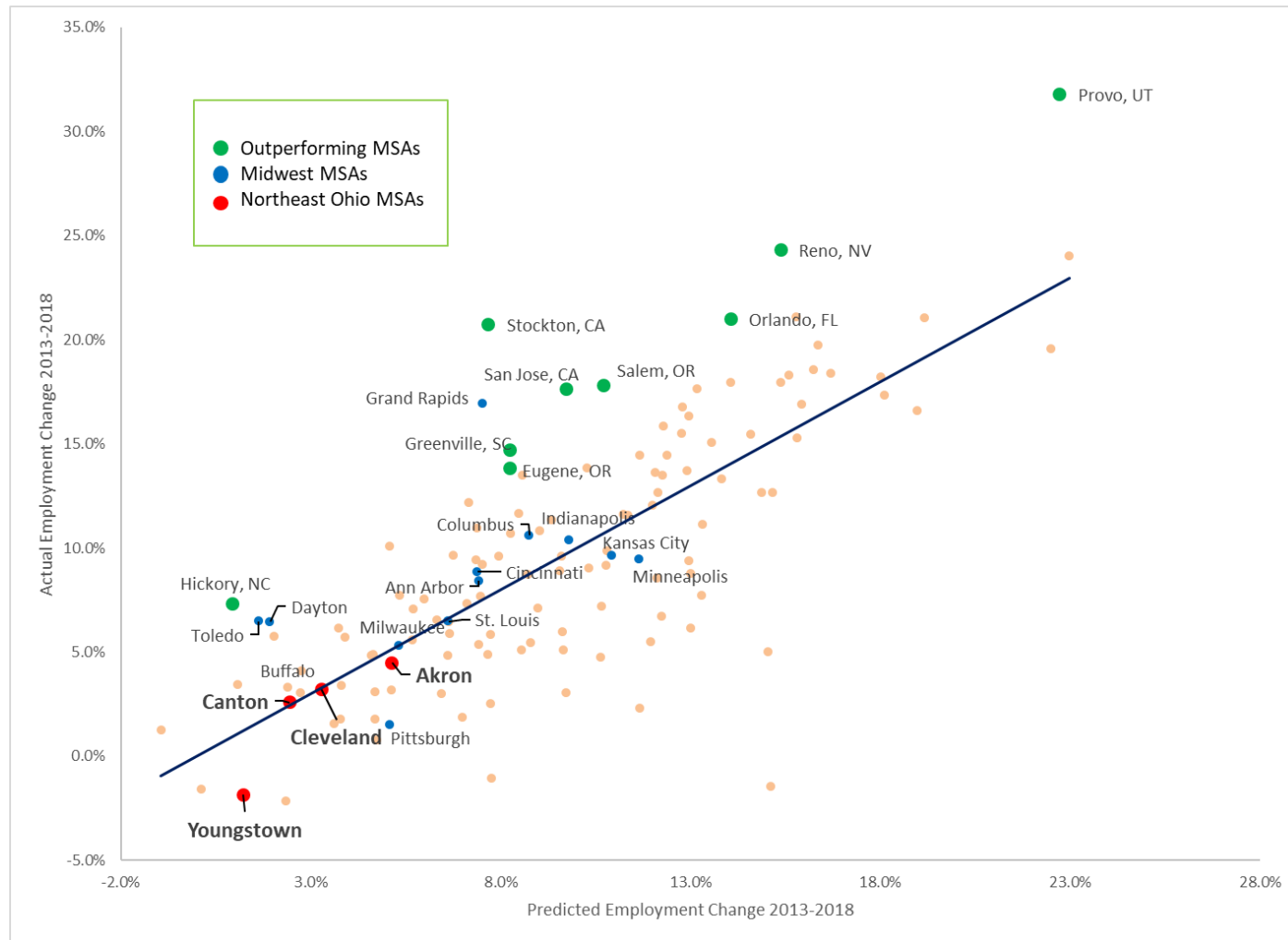
Ranking	Polarization	
	Variable	Direction
1	Income Inequality	+
2	Poverty	+
3	Income Supports	+
4	Female Business Ownership	+
5	Minority Business Ownership	+
6	Unemployment	+

Note: This factor explains 4.7% of variation in the model. Variables are ranked based on the magnitude of importance

## APPENDIX B: ECONOMIC TREND ANALYSIS

It is essential to identify outliers that outperform the model's trend and examine the outperforming regions to learn what role public policy and businesses had played in its success. To do so, we compared the predicted change from 2013 to 2018 (horizontal axis) to the actual change of this time (vertical axis) for three output variables (employment, gross regional product, and per capita income). The line in the center of the graph indicates a demarcation of metro areas that outperformed the model ("above-the-line") and those that underperformed the model ("below-the-line"). For most output measures, Northeast Ohio metro areas (Akron metro area, Canton metro area, Cleveland metro area) roughly performed as expected or were "on-the-line." However, the Youngstown metro area underperformed in most of the outcome measures, which is indicative of the economic challenges in that region.

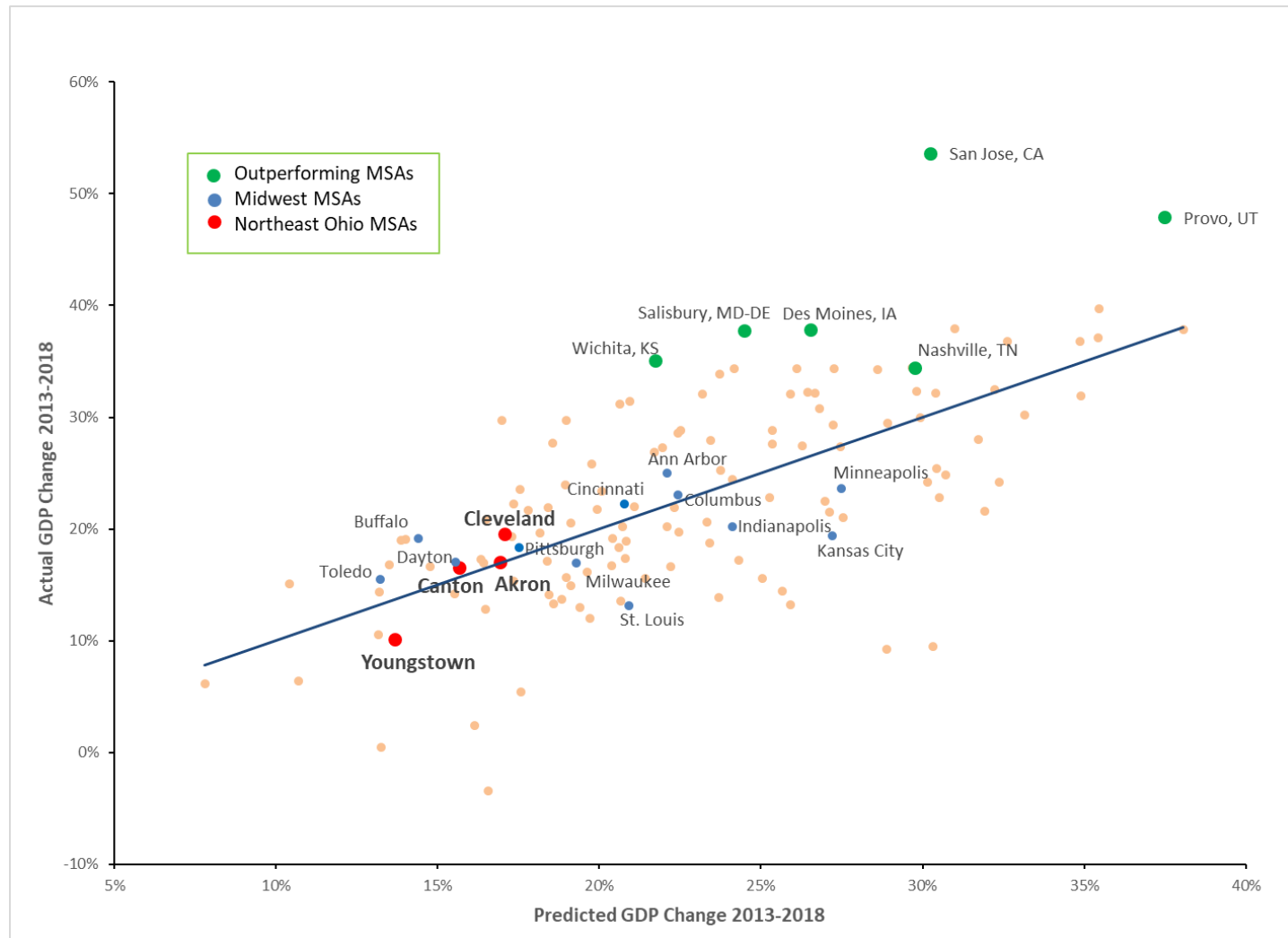
**Figure B1. Predicted Employment Change Versus Actual Employment Change**



Source: Moody's Analytics

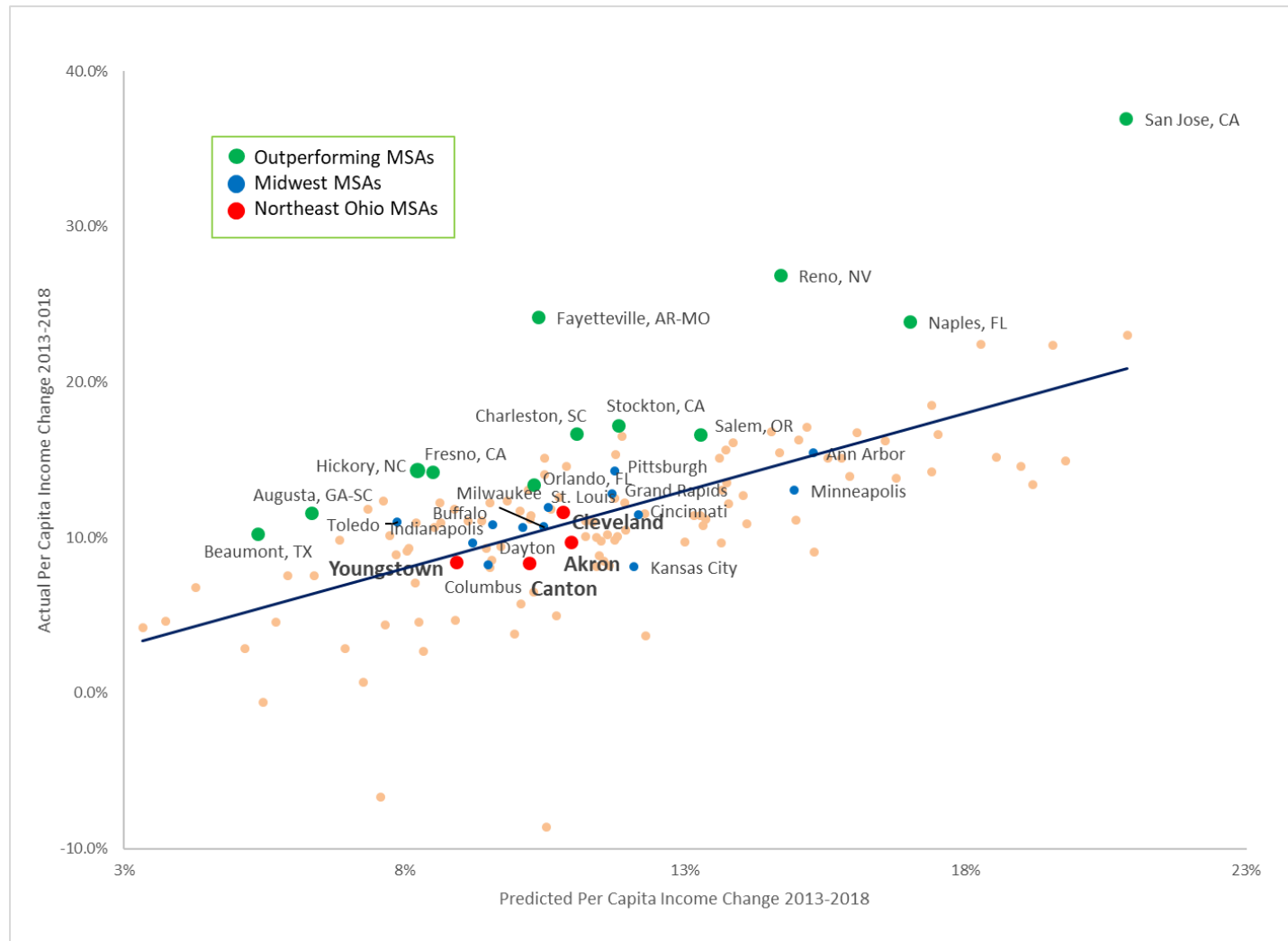


Figure B2. Predicted GRP Change Versus Actual GRP change



Source: Moody's Analytics

Figure B3. Predicted GRP Change Versus Actual GRP change



Source: Moody's Analytics