
Prepared For

Meramec Regional Planning Commission



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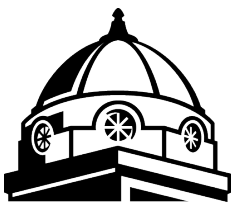
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Executive Summary

In recent years, a new strategy of economic development has become more and more important: encouraging the start-up of local companies. This strategy of “growing your own” businesses has proven to be an effective approach for many communities and can be used as a complement to the strategy of business recruitment.

The Economic and Business Engagement Center at Southeast Missouri State University with the support of the Economic Development Administration, a unit of the United States Department of Commerce, has undertaken a program to facilitate economic development through entrepreneurship. The Institute is conducting a series of regional entrepreneurship assessments to help rural communities identify specific actions they can take to improve their entrepreneurial ecosystems.

The main goal of this regional entrepreneurship assessment and strategy report is to identify and analyze key factors related to fostering a strong entrepreneurial ecosystem in the Meramec Regional Planning Commission eight county region. The term “entrepreneurial ecosystem” describes an environment that has a mix of technical support, capital, networks, training, and regulatory requirements which support emerging entrepreneurs.

The research is developed around the Delta Regional Authority’s Small Business Entrepreneurship policy framework. According to this framework, entrepreneurial ecosystems are driven by five factors:

- (1) Developing a Pipeline of Educated and Skilled Entrepreneurs
- (2) Cultivating Technology Exchange and Innovation
- (3) Improving Access to Capital
- (4) Promoting Awareness and Building Networks
- (5) Optimizing the Regulatory Environment (Stapleton, 2012)

Key outcomes from the assessment shows the region needs to invest in the below areas:

- Study the feasibility of a co-working space
- Continue investing in improvements to broadband access
- Foster a strong network of entrepreneurship mentoring/coaching programs
- Develop guide for small business startups and market throughout the region
- Develop new and existing amenities to keep and attract young professionals

While the Meramec region shows promise on several fronts, it is important to understand that both private and public entities must help support continued economic and entrepreneurial development efforts. Without the combined effort and ownership from all stakeholders, public and private, attempts at improving the entrepreneurial ecosystem will likely prove difficult and ineffective. Effective entrepreneurship development efforts are more likely to succeed when they are focused on the entrepreneurs, leverage existing assets, led by few but impacting many, driven by collaboration, and inclusive of all stakeholders.

Meramec Regional Map



Part I. Introduction & Purpose

Economic development is a critical issue in Missouri. Many communities are seeking to improve their local economy by adding new jobs and increasing income. In the past, economic development was done largely by recruiting companies to locate in the region. The new businesses brought jobs and good wages to residents. However, with changes in the global economy, recruitment alone is not sufficient to address the economic needs of most communities. One promising approach to economic development is improving the support system for entrepreneurs. If the ecosystem is improved, then more businesses will start and those startups will be more successful.

Analyzing the entrepreneurial ecosystem is important for several reasons. For one, it has now become evident that young, small growth-firms are responsible for the vast majority of net new jobs in the country (Haltiwanger et al., 2013). Additionally, it is clear that the old economic development model of focusing solely on recruiting large firms is less likely to be effective in today's economic environment. This is particularly true for rural economies (Macke et al., 2014).

- ✓ **The first objective of this report is to provide a better understanding of the entrepreneurial ecosystem in the Meramec region.** This is achieved through a data driven process in which key factors related to the entrepreneurial ecosystem are identified.
- ✓ **The second objective is to develop actionable recommendations based on the findings from the first objective.** These recommendations will help guide the region's efforts towards fostering long-term economic and entrepreneurial development initiatives.

The research conducted for this report is focused on the geographical region of Meramec Regional Commission. The region is comprised of eight counties: **Crawford, Dent, Gasconade, Maries, Osage, Phelps, Pulaski, and Washington**. These eight counties are collectively referred to as the "Meramec Region".

The report has five parts.

- Part I.** Provides a brief description of the methodology, including data tools used in the study to analyze the drivers of entrepreneurship.
- Part II.** The regional profile and opportunities for entrepreneurs has been developed to help the reader get a broad overview of the current economic and entrepreneurial climate in the Meramec region.
- Part III.** Each of the drivers are explained based on how they can support and foster long-term entrepreneurial success for the region. Each driver **analyzes the status of its strengths and weaknesses within the Meramec Region. Area entrepreneur perspectives are included in this analysis.** For example, in analyzing the driver called "Developing a Pipeline of Educated and Skilled Entrepreneurs", it is considered whether the level of educational attainment is supportive of a strong entrepreneurial ecosystem.
- Part IV.** **The fourth section presents outcomes from the analysis that are summarized and presented with recommendations based on the analysis.**
- Part V.** Detailed data, sources, and cluster explanations are provided for the most in depth understanding.

Methodology

The method used in this analysis gathers information from a number of sources both quantitative and qualitative. Each source provides another perspective on the strengths and challenges of the Meramec region's entrepreneurial ecosystem. The secondary data sources are objective and provided by federal and private data systems, including:

- The National Establishment Time Series (NETS)
- Industry cluster analysis
- Occupational workforce analysis
- U.S. Census Bureau

For detailed explanations of each data tool, see Appendix 1. Data trends are compared to a Missouri average and a "rural Missouri" average to provide a comparative view of the region's position (See Appendix IV for details on the definition of "rural Missouri").

However, stakeholders in the region, including most importantly entrepreneurs, have significant knowledge and direct experience with the ecosystem. So the analysis uses several tools to gather their perceptions of the strengths and challenges of the ecosystem, including:

- Focus group consisting of staff from the regional planning council, city and county public officials, entrepreneurs, and economic developers
- Online survey of stakeholders in the region gathering their impressions of economic and entrepreneurial development. The results of the survey are reported at the end of Part 1: Economic Profile of the Meramec Region.
- Intensive interviews of entrepreneurs to learn their stories of growing a business in the region, the challenges that they face, and their suggestions for improving the entrepreneurial ecosystem.

The reflections on each driver are based on the information obtained from these sources. Every effort was made to ensure an accurate interpretation of the information gathered. However, a scientific sampling approach was not used and therefore there is no guarantee that the comments received from stakeholders are representative of all stakeholders within the region. Furthermore, it is possible that some comments from stakeholders were misconstrued. However, the interviewers relied on repeated confirmation of a comment or suggestion by multiple parties to ensure that the idea was widely held among stakeholders.

Policy Framework

The Small Business and Entrepreneurship Policy Framework (Stapleton, 2012) is a strategic development tool created by the Delta Regional Authority as a roadmap for creating and fostering entrepreneurial ecosystems in local communities. **The five key drivers of the framework are:** (1) Developing a Pipeline of Educated and Skilled Entrepreneurs; (2) Cultivating Technology Exchange and Innovation; (3) Improving Access to Capital; (4) Promoting Awareness and Building Networks; and (5) Optimizing the Regulatory Environment.

Using the framework as a strategic roadmap helps keep the focus on relevant issues facing today's entrepreneurial ecosystems. The long-term goals are to help spur job growth through entrepreneurial activity, foster an innovative business environment, and create long-term regional competitive strengths.

Each component of the framework provides insight into what is currently happening in the Meramec region as well as ideas for new initiatives that could help foster the entrepreneurial ecosystem.

For the framework to have its intended impact it is important to understand that it must interact with broader economic development policies. Furthermore, for the recommendations to be successfully implemented, a diverse group of stakeholders must work toward common goals and mutually beneficial relationships must be established. Stakeholders include entrepreneurs and innovators, existing businesses (both large and small), elected officials and policy makers (local, state, and federal), educational institutions, social networks, and community advocates.

Each driver explained below:

Developing a Pipeline of Educated and Skilled Entrepreneurs

A high level of focus on providing education and training for potential and existing entrepreneurs has been a proven way to advance the entrepreneurial ecosystem. The educational component should exist on all levels of formal and informal education, from the elementary school classroom, to college majors and minors, to publicly available support programs, to local networking groups. Providing resources for individuals to learn and apply the knowledge and skills necessary to succeed as an entrepreneur is a key component of creating an entrepreneurial ecosystem that can create new jobs, attract new industries, and spur economic growth.

Cultivating Technology Exchange and Innovation

To help foster an innovative economy a region must understand and invest in technological advances and opportunities. This can happen through collaboration among educational institutions, companies, public policy makers, and entrepreneurs. This exchange of new knowledge and ideas is a key factor in creating the optimal circumstances for economic growth among small and medium sized establishments. The entrepreneurial ecosystem benefits in many ways from a high level of technology exchange and innovation, among which is the ability to attract and grow new competitive industries that will meet future market demands.

Improving Access to Capital

A region's ability to provide the needed funding for new ventures, as well as growing companies, is essential to a healthy entrepreneurial ecosystem. Access to traditional bank financing is just one way to help entrepreneurs develop and grow. Attracting investors, whether they are angel investors or private investor, venture capitalists, or larger companies looking for new ideas, is also an important factor in ensuring the right type of funding can be accessed by entrepreneurs. Additionally, rural regions can

benefit greatly from establishing gap financing tools such as revolving loan funds, intermediary lending programs, micro-loans, etc.

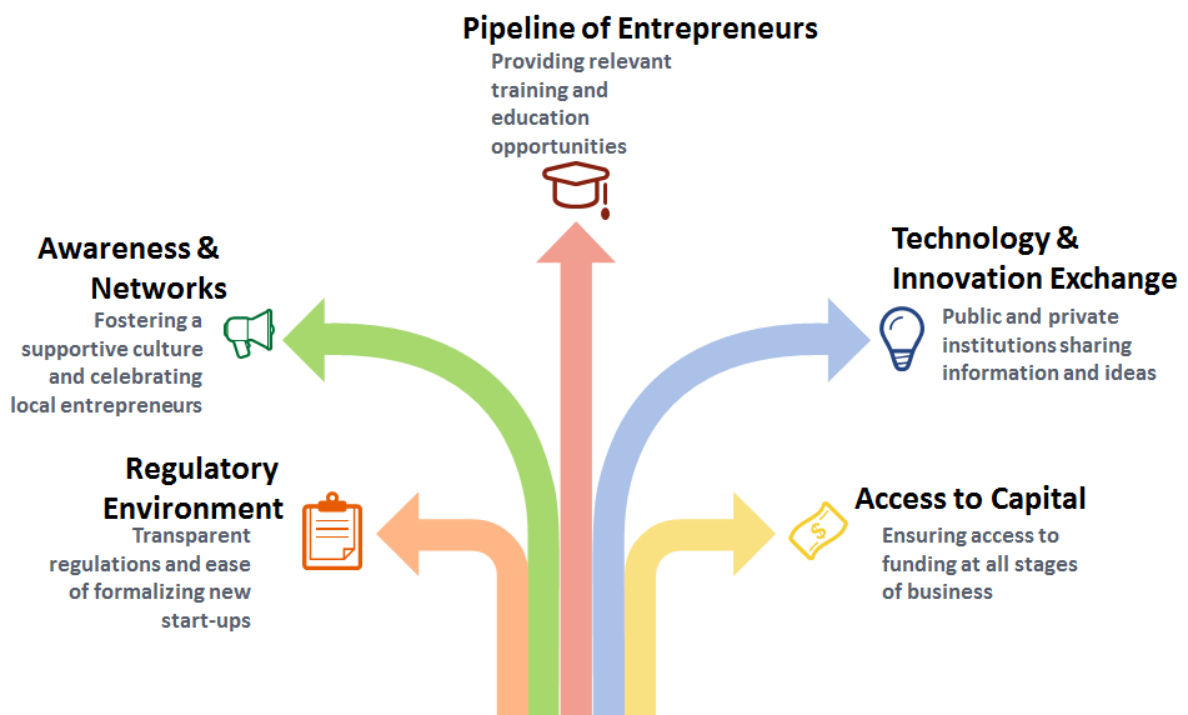
Promoting Awareness and Building Networks

Promoting an entrepreneurial culture where entrepreneurs are valued and the community is willing to support local establishments is another key aspect of a successful entrepreneurial ecosystem. This may be achieved through developing local networking opportunities, creating mentorship programs, informing the public about the social and economic impact of entrepreneurship, and engaging entrepreneurs to address the region’s greatest opportunities.

Optimizing the Regulatory Environment

Helping entrepreneurs navigate and succeed within legal boundaries is the final key driver of a strong entrepreneurial ecosystem. This means that entrepreneurs should have easy access to information and help with understanding regulations and policies that affect their businesses. It also means that public officials should investigate the potential barriers that exist for entrepreneurs to thrive. A dialogue must be cultivated where both entrepreneurs and policy makers can meet and understand each other’s needs and wants.

The next section examines the strengths and weaknesses of the Meramec region with respect to each of these drivers. This examination will help define impactful and actionable recommendations for the improvement of the entrepreneurial ecosystem.



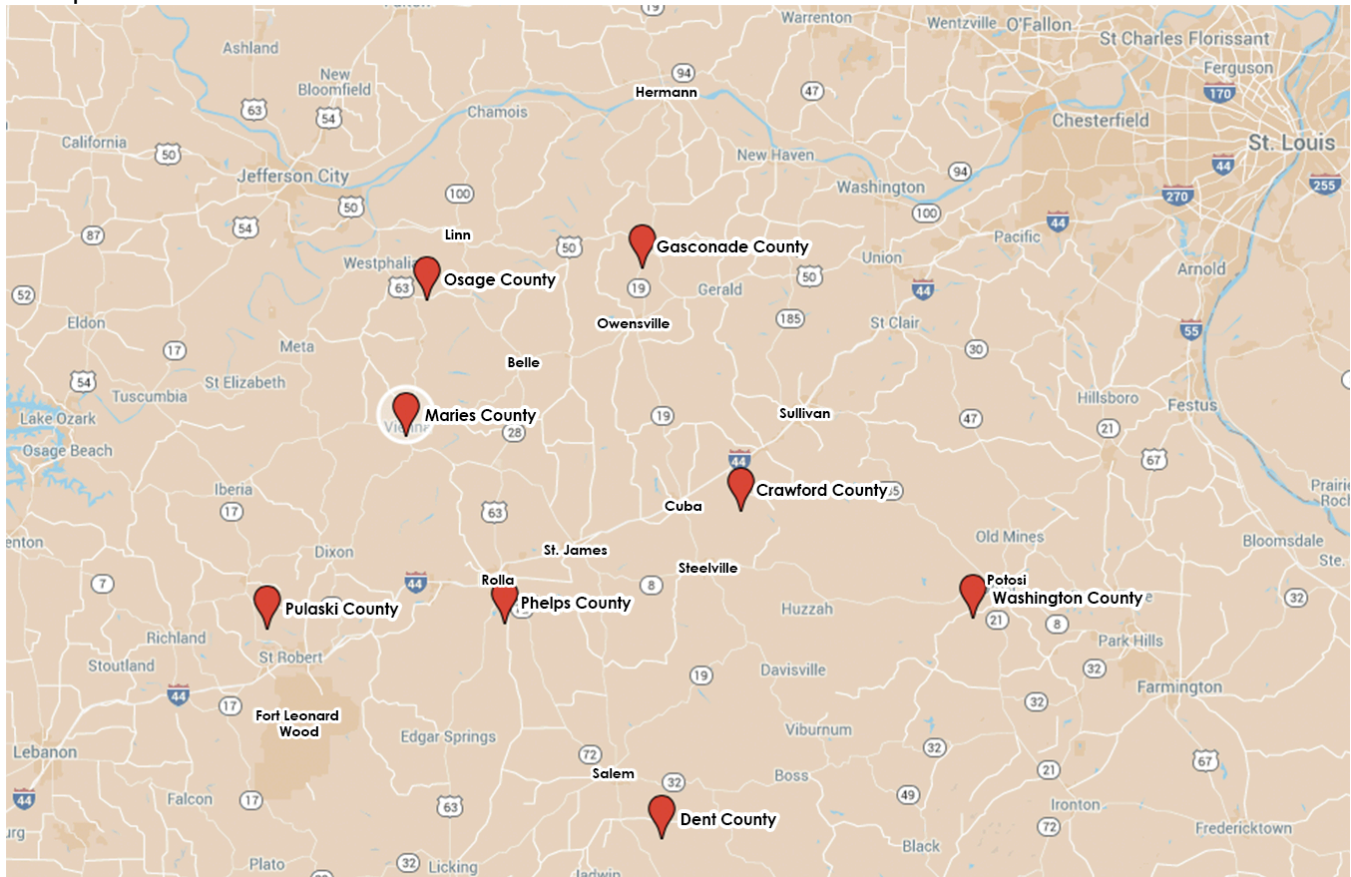
Source: Transforming Community Economies, Dr. James Stapleton (2012)

Part II. Economic Profile of the Region

Location Overview

Large Scenic Region with Major Educational and Military Institutions

The Meramec region consists of eight counties located in the southeast-central parts of Missouri. The area covers over 5,131 square miles and includes 37 municipalities. The region, comprised of Crawford, Dent, Gasconade, Maries, Osage, Phelps, Pulaski and Washington counties, is marked with gently rolling hills, deep valleys and plateaus. Numerous rivers and streams traverse the region, creating a natural draw for outdoor enthusiasts. Many of the small towns still have major manufacturing plants. An abundance of wineries dot the countryside, making it a popular draw for tourists (Meramec Regional Planning Commission). The closest major city is St. Louis, about an hour-and-a-half north-east of the region. Two important institutions in the region are the Missouri University of Science and Technology with approximately 9,000 students located in Rolla (Phelps County) and a major military base, Fort Leonard Wood (Pulaski County) both of which offer many opportunities for businesses and entrepreneurs.



Interstate and River Access

The region has quick access to interstates and highways including Interstate 44 which runs through Cuba, St. James, Rolla, and near Fort Leonard Wood (from west to east). Highway 63 is an important north-south corridor running through the region. Finally, Highway 50 is crucial to the region's northern counties of Osage and Gasconade as it provides access to Jefferson City, the state capital. The Missouri, river provides a route for river transport and other rivers such as Gasconade, Bourbeuse and Meramec rivers run through the region providing an attraction for those interested in outdoor recreation.

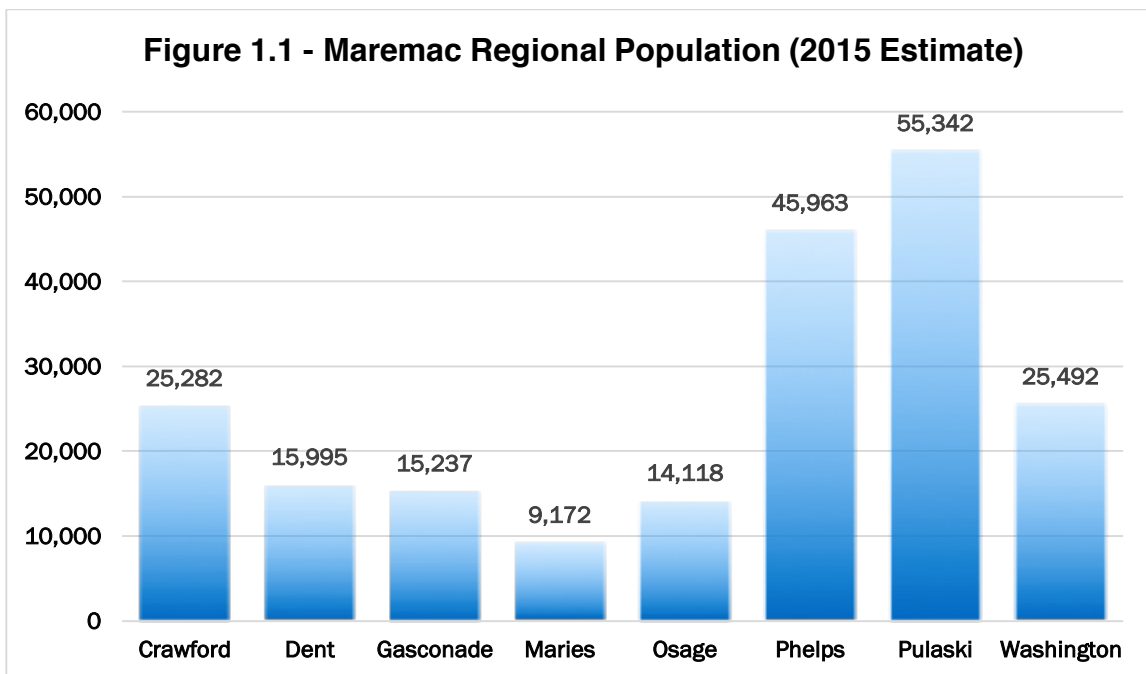
Small Town Quality of Life

The Meramec region is unique in a number of ways; one being the opportunity to live in a tourist destination location with a military base. The region also provides the opportunity to live a quiet, small-town lifestyle escaping the hustle and bustle of the big city yet still having many cultural and educational opportunities. A crucial education institution is Missouri University of Science and Technology which has recently been rated third-best engineering college by USA Today and second in value-added at a public university according to Brookings Institute (April 2015).

Furthermore, Columbia College, Drury University, Lincoln University, Southwest Baptist University and Webster University have each established education centers in the region. State Technical College of Missouri, East Central College and Rolla Technical Institute offer many vocational opportunities and associate-degree options.

Demographic Dynamics

The Meramec region’s demographic profile is an important element in the regional entrepreneurship assessment. Developing and implementing new strategic initiatives cannot be done without consideration of the people living in the region. Understanding population trends, age dynamics, economic factors, and educational attainment differences between counties will help ensure that recommendations are relevant on both regional and local levels.



Source: Business Analyst Online, ESRI, 2015

Figure 1.1 shows that in 2015 there were approximately 206,606 residents living in the Meramec region. The top three largest cities in the region are Rolla (population approximately 20,000 in Phelps County), Sullivan (population 7,034). Phelps and Pulaski Counties which are neighboring counties and home to Missouri University of Science and Technology and Fort Leonard Wood, respectively, account for nearly one-half of the population in the region.

Increasing Population

Population trends, as shown in *Table 1.1*, are important to consider as well because they indicate the foundation of a region's economic well-being. A growing population shows increased human resources and indicates that residents consider the region is a good place in which to live.

From 2000 to 2015 the Meramec region grew by 15%. This is a significant growth when compared to both rural Missouri and Missouri population trends. Population trends in the individual counties varied: Pulaski and Phelps County experienced significant growth while Gasconade declined in population size.

Crawford County barely surpasses Washington in county population by about 200 less residents. Crawford County's population has increased by over 2,400 since 2000. The largest city in the County is Sullivan with over 7,000 residents.

Dent County has steadily increased population since 2000 by 1,000 residents. Salem City hosts over the County seat and currently serves as the largest city in the County. Projected population for 2020 is over 16,000 residents if the increasing trend maintains itself.

Gasconade County population has held steady since 2000. A loss of about 100 residents reflects in data records. The largest city is Owensville with over 2,600 residents living in the city and over 15,200 in the County.

Maries County has the smallest demographics in the region with about 9,172 total population in 2015. There has been a small, steady increase in population since 2000. The city of Belle is the largest city in Maries County with over 1,530 residents.

Osage County consists of six cities totaling 14,118 residents for the county in 2015. Between 2000 and 2010 the county experienced an increase in residents of over 818 residents. The County continues to steadily increase with a projected population of 14,230 by 2020.

Phelps County hosts the largest city in the region, Rolla with over 19,000 residents alone residing in the city. The County is home to 45,963 residents recorded in 2015 and population is projected to continually increase. From 2000 to 2015 population increased by over 6,000.

Pulaski County is the largest County in the region and home to Fort Leonard Wood which is home to over 13,600 residents. The County's population has seen a steady increase since 2000 with reports of population of 41,165 residents and over 55,300 residents reported in 2015. Projected County population for 2020 is expected to reach over 58,000.

Washington County total population reported in 2015 was 25,492 which is a steady increase from 2000. The largest city in Washington is Potosi with over 2,600 residents. The County is projected to increase population into 2020.

Residents Moving Into The Region

Table 1.1 also contains a column labeled "Average Annual Net Internal Migration Rate". The internal migration rate measures the change in people moving in and out of the region (changes in the population from births and deaths are excluded from this data). A positive value means that more people moved to the region from other regions in the U.S. than those who moved out of the region. The data is based on the average annual net internal migration per 10,000 residents between 2000 and 2012.

**Table 1.1 - Meramec RPC - Population Trends
(2000 Census and 2015 BAO ESRI estimate)**

Source: U.S. Census Bureau, 2000, Business Analyst Online, ESRI, 2015, and statsamerica, 2000-2012

	2000	2015	Change	Percent Change	Average Annual Net Internal Migration Rate (per 10,000 residents)
Meramec RPC	179,370	206,606	27,236	15.1%	9.4
Crawford County	22,804	25,282	2,478	10.8%	22.3
Dent County	14,927	15,995	1,068	7.1%	16.2
Gasconade County	15,342	15,237	-105	-0.6%	2.0
Maries	8,903	9,172	269	3.0%	-17.9
Osage	13,060	14,118	1,058	8.1%	-2.2
Phelps	39,825	45,963	6,138	15.4%	0.2
Pulaski	41,165	55,342	14,182	34.4%	21.7
Washington	23,344	25,492	2,148	9.2%	4.4
Rural Missouri	1,478,083	1,585,059	269	7.2%	2.5
Missouri	5,595,211	6,092,320	1,058	8.9%	1.8

The average annual net internal migration rate for the Meramec region is 9.4, meaning that more people have been moving into the region than moving out, (more precisely, the number of people moving into the region each year is nearly 1 % (or 94/10,000) of the current population). This is very favorable and implies that people find this to be an attractive region in which to live. Likely, many people move into the region because of Fort Leonard Wood, while others are attracted by the small-town lifestyle and scenic setting with recreational opportunities. The largest positive rates are for Crawford and Pulaski Counties, while only Maries and Osage County rates are negative. This slight decrease represents an opportunity for both counties to evaluate job opportunities, housing and other amenities and consider how to attract people to relocate in the county.

In addition to the total population, it is also relevant to look at age dynamics. *Table 1.2* shows that the region has a relatively young population. The proportion of residents in the age range 15-34 is higher than the state average. Of course, this is largely due to Missouri University of Science and Technology and other educational institutions that bring young students into the region. Nevertheless, it is favorable for the future to have a high proportion of young adults and also creates energy around entrepreneurial endeavors. The share of adults over 65 is significantly less than rural Missouri and less even than the state as a whole.

Table 1.2 - Meramec RPC - Population Age Dynamics (2015)

Source: Business Analyst Online, ESRI, 2015

	0 to 14	15 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65+
Meramec RPC	18.6%	17.1%	13.5%	11.3%	12.6%	12.1%	14.6%
Rural Missouri	19.1%	13.8%	11.4%	11.6%	14.5%	12.8%	16.9%
Missouri	19.0%	13.5%	13.2%	12.1%	13.4%	13.2%	15.6%

Income and Education Profile

Economic dynamics are important because they often affect the opportunities found in the entrepreneurial ecosystem. For example, in an area where residents have high income levels, it is more likely that they also have higher levels of disposable income and entrepreneurs can succeed by offering goods or services. In addition, when residents have high income levels there might be more opportunities to find private investors.

Income and Poverty

The data in *Figure 1.2* shows that median household income is a bit higher than rural Missouri. However, per capita income is a bit lower for the region when compared to rural Missouri and Missouri as a whole.

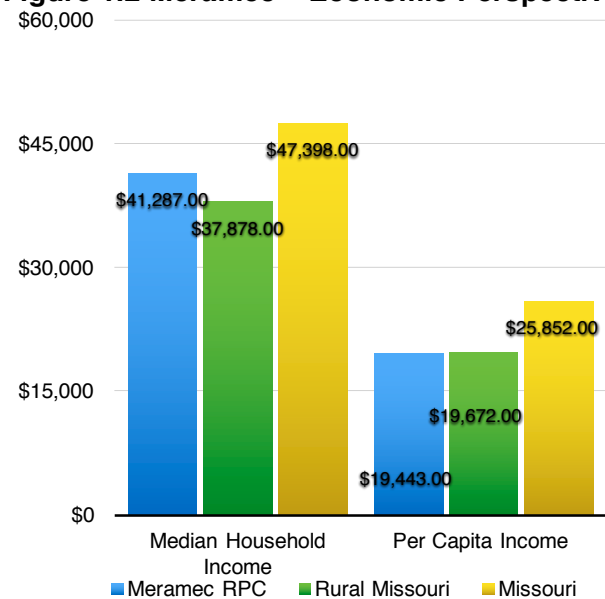
Beyond income and population dynamics, it is also important to consider poverty rates. A region's poverty rate is expected to have a negative relationship with its level of entrepreneurial activity and innovation. The causality in this relationship is likely circular. A higher poverty rate can be the cause of less innovation if low income levels discourage the development of new firms and the expansion of existing ones while encouraging would-be entrepreneurs to move out of the area. At the same time, weak levels of innovative activity can cause less job growth and contribute to a higher poverty rate. The average regional poverty rate is 17.9%, slightly less than other rural Missouri Regions.

Table 1.3 - Meramec RPC - Economic Perspective

	Poverty Rate (3-year average 2010-2012)
Meramec RPC	17.9%
Rural Missouri	19.4%
Missouri	15.8%

Source: Business Analyst Online, ESRI and statsamerica.org

Figure 1.2 Meramec – Economic Perspective



In summary, both income levels and poverty rates are comparable to those found across rural Missouri and do not indicate either a strength or a weakness for the Meramec region.

Education

The educational attainment data in *Table 1.4* indicates a level of education are above Rural Missouri. However, the levels of bachelor's, master's, or professional degrees are modest when compared to the state as a whole. More than 27% of people state-wide have earned a bachelor's degree, while less than 19% of Meramec region residents have a bachelor's degree. There is considerable variation in the region with Phelps and Pulaski County leading the way in college completion and advanced degrees. The

importance of educational attainment will be discussed in more detail in the “Developing a Pipeline of Educated and Skilled Entrepreneurs” section.

Table 1.4 - Meramec RPC - Educational Attainment, percentage of persons age 25+ (2015)

Source: ESRI

	High school or GED	Some college or associate degree	Bachelor’s degree	Master’s or professional degree
Meramec RPC	37.6%	28.8%	11.5%	7.3%
Crawford County	39.7%	26.7%	9.3%	4.8%
Dent County	38.5%	28.6%	7.3%	4.8%
Gasconade County	43.9%	25.8%	11.7%	4.6%
Maries County	41.8%	25.3%	11.5%	6.0%
Osage County	48.2%	25.7%	11.5%	4.6%
Phelps County	33.6%	26.5%	15.8%	12.7%
Pulaski County	31.3%	37.7%	13.8%	8.5%
Washington County	40.6%	24.8%	5.3%	3.8%
Rural Missouri	40.2%	28.4%	10.3%	5.8%
Missouri	31.5%	30.4%	17.1%	10.2%

Employment Dynamics

Unemployment

Another aspect of the economic landscape is the region’s unemployment rate. The unemployment rate indicates the strength of the labor market. The data in *Table 1.5* shows a 3-year unemployment average of 6.6% between 2013 and 2015 for the Meramec region. This is a bit higher than the Missouri average but lower than the rural Missouri average. The data gives an idea of how stable the region is with respect to ensuring employment.

Table 1.5 - Meramec RPC - Unemployment Rate

Source: statsamerica.org 2010-2012, Bureau of Labor Statistics 2015

	Unemp. Rate 2013	Unemp. Rate 2014	Unemp. Rate 2015	3-year Average Unemp. Rate	Ave. unemp. Rate, Dec. 2016 – Feb. 2017
Meramec RPC	7.5%	6.8%	5.5%	6.6%	5.2%
Crawford County	8.5%	8.0%	6.0%	7.5%	5.7%
Dent County	7.5%	6.8%	5.8%	6.7%	5.5%
Gasconade County	6.3%	5.3%	4.2%	5.3%	5%
Maries County	6.6%	6.2%	5.2%	6.0%	5.2%
Osage County	5.0%	4.7%	3.7%	4.5%	3.4%
Phelps County	7.0%	6.5%	5.3%	6.3%	4.6%
Pulaski County	7.9%	7.3%	5.8%	7.0%	5.3%
Washington County	9.7%	8.6%	6.6%	8.3%	6.9%
Rural Missouri	7.7%	7.0%	5.8%	6.9%	5.6%
Missouri	6.6%	6.2%	5.3%	6.0%	5.0%

Source: youreconomy.org, National Establishment Time Series, 2002-2013

The rates in individual counties vary quite a bit. Crawford and Washington counties historically have fairly high unemployment rates. A positive trend is that all counties have shown strong reduction in the unemployment rate from year to year. In the case of fostering an entrepreneurial economy it plays a key role in providing the best circumstances for new business development to take place. Furthermore, having low unemployment rate gives prospective entrepreneurs an opportunity to leave the labor market to test out a business idea, knowing there are plenty of opportunities to re-enter the labor market should their idea fail.

Using the 3-year average helps provide a broader picture of general economic trends and stability. It is also helpful to look at the 3-year average in the context of more current unemployment data. According to the Bureau of Labor Statistics, the average unemployment rate from December 2016 to February 2017 shows that the region is still following along with the overall trend in the state.

Job Growth in the Meramec Region

Job trends (*Table 1.6*) show that total employment in the region grew between 2002 and 2013. With the large increase in the population it is not surprising that the region had created a number of additional jobs. All of the job growth came from small and medium sized establishments with fewer than 500 employees.

Establishment Size	2002	2013	2002-2013 Change
Total	72,115	80,127	8,012
Self-employed	2,967	3,355	388
2 to 9	16,573	21,132	4,559
10 to 99	29,333	31,211	1,878
100 to 499	14,842	16,229	1,387
500+	8,400	8,200	-200

Small Firms Lead Growth

While overall job numbers increased in the Meramec region from 2002 to 2013, it is important to consider from where the jobs are coming. Notice that the two largest categories of job creation are those firms from 2-9 employees and from 10-99 employees. Together those categories account for two-thirds of the job creation in 2013. Indeed, this range of companies from 2-99 employees constitutes the “sweet spot” for job creation. Assisting small companies in their expansion is crucial to effective economic development policy since these companies are prolific job creators.

The Meramec region is also fortunate in not experiencing a large decrease in employment in companies with greater than 500 employees. Many other midwestern regions have lost large manufacturing plants that has resulted in major economic dislocation. Instead employment in firms in the Meramec region with greater than 500 employees has remained fairly steady.

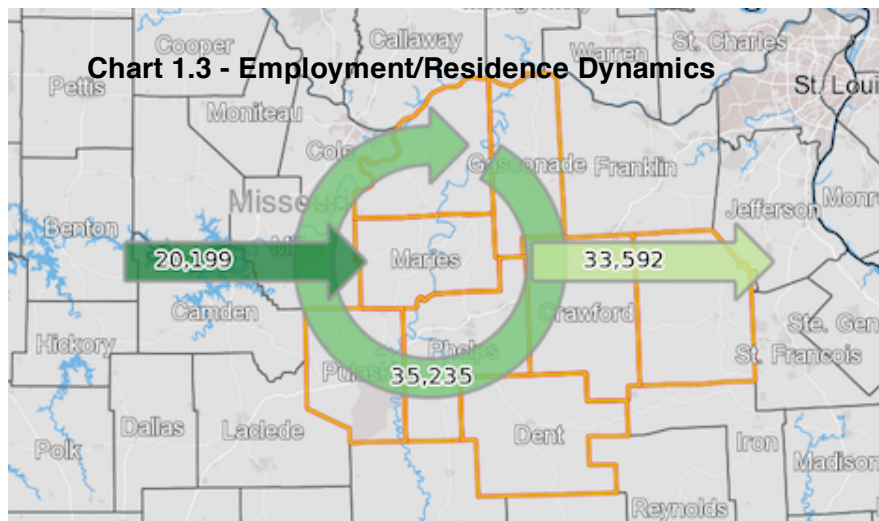
Economic development investments should include meaningful support for these entrepreneurs and establishments. This also indicates that the traditional approach to job creation, large business attraction, is less effective and more attention should be placed on strategies that focus on helping new, small businesses start and existing businesses grow.

Another factor to consider is that economic benefits created by military installations contribute billions of dollars each year to state economies. The amount of opportunity in regards to job creation and job growth are limitless. Installations support housing, health care, childcare, private contracting, supplies, construction and information technology.

Commuting Patterns

It is helpful to consider the inflow and outflow of workers based on where they live and work. It is not uncommon for people to live in one region and work in another (i.e. commuters). Analyzing the dynamics for how people behave in terms of residence and place of work can help identify if a region is attractive to live in, work in, or both. The data in *Chart 1.3* breaks down the dynamics of where people live and work into three categories. While Census doesn't define where commuters traveling into the region are traveling from, we can only assume they come from the counties immediately surrounding the region, including St. Louis, Jefferson City or Columbia.

- *Chart 1.3* shows **35,235 both live and work within in the Meramec region.**
- *Chart 1.3* findings show that nearly as many workers (33,592) commute (outside their home region) than work in the region in which they reside (35,235). In other words, commuting is critical to the region.
- Commuters traveling from outside of the region (20,199) pull in money commuting into the region for work and thus provide economic stimulus.
- Those that commute into a region might contribute to the local economy through their labor, but they end up extracting money out of the region back to where they live and spend most of their earnings.
- The high rate of commuting across region lines suggests that economic development in one region brings positive impacts to other regions by providing job opportunities for its residents.



Source: U.S. Census Bureau

Industry Cluster Dynamics

Industry clusters are groups of similar and related firms in a defined geographic area that share common markets, technologies, worker skill needs, and which are often linked by buyer-seller relationships. For example, the wine industry in California is an industry cluster because of the concentration of vineyards, wineries, and companies that supply grape stock, grape harvesting equipment, irrigation equipment, etc. Having a cluster, such as the wine cluster in California, provides companies with a competitive advantage compared to companies located outside the state (for example, wineries in Missouri).

The Harvard Business School under the leadership of Michael Porter has designed a way to measure the concentration of companies in particular sectors. **The Harvard approach breaks industries into 71 unique categories. Industry cluster performance is ranked by using five key performance metrics and “weighting” each according to importance:**

- **Earnings**, considered “important”, identify how important is it that industries have high earnings per worker
- **Growth**, considered “very important”, identify how important is it that industries have high overall job growth
- **Regional Competitiveness**, considered “very important”, identify how important is it that regional job growth exceeds the national average job growth for an industry
- **Regional Specialization** considered “very important”, identify how important is it that regional job concentration is higher than the national average job for an industry
- **GRP**, considered “not important”, identify how important is it that industries make a high contribution to overall gross regional product

The data in *Table 1.7* provides an overview of high employment industries rated by score. The score compares performance of the clusters to each other. Clusters ranked higher than 42 are above average for the region, while clusters ranked lower than 42 are below average. Top clusters must have a score of at least 50.

The cluster analysis reveals an interesting mix between goods-producing and service-producing sectors. For example, there is the presence of a strong Chemical Cluster (approximately 550 jobs) and significant Metal Manufacturing (375 jobs). The upstream chemical industry consists of cyclic crude, and wood chemical manufacturing. However, the service jobs dominate. For example, Education and Knowledge Creation employs more than 3,200 people, many in well-paying positions and indicating the importance of the region’s universities and technical colleges. Several of the clusters indicated are for non-traded sectors, that is they serve the local economy only and do not bring in money from outside the region. The high employment levels of local community organizations and retail sales suggest that the region is effective in re-circulating dollars within the community and thus, gaining a higher multiplier on economic activity. The largest Industry is local community and civic organizations employing over 4,000 individuals. This cluster is made up of child and youth services, individual, family, elderly and disability services, religious organizations civic and social organizations, business and civic organizations, etc.

The industries reflected below are what would typically be expected in many rural regions. The upside is that they provide a strong foundation for future economic and entrepreneurial development strategies. For example, a solid foundation of educational services is an important component of fostering a strong entrepreneurial ecosystem.

Table 1.7 - Meramec RPC - Top Regional Industry Clusters (2015)

Source: EMSI

Industry	Score	Jobs
Upstream Chemical Products	93	201
Local Community and Civic Organizations	71	4,053
Downstream Chemical Products	59	343
Upstream Metal Manufacturing	55	375
Education and Knowledge Creation	53	3,242
Footwear Manufacturing	51	254

These clusters represent the most likely candidates for strong regional economic impact and long-term competitive strengths. This is important because it helps identify areas where the region should invest in promoting and developing the entrepreneurial business environment. A full overview of all industry cluster data is provided in *appendix IV*.

The Meramec region is well-diversified with nearly 300 mostly small to mid-size manufacturing companies. Meramec is also home to large distribution centers and major health care facilities. *Table 1.8* reflects the top private companies in the region based on employment size.

Table 1.8 Top Private Sector Companies in the Meramec Region

Source: 2010 Missouri Directory of Manufacturers

Company	Industry	Employment Size
Phelps County Regional Medical Center	General medical & surgical hospital	1,575
Wal-Mart Distribution Center	Warehousing and storage	1,175
Ace Mfg. & Parts Co.	Mechanical power transmission equipment	1,200
Great Circle	Educational & support services	750
El Sevier Distribution	Book publishing	625
Quaker Window Products	Metal window and door manufacturing	500
LSC Communications	Commercial printing	500

Occupation Dynamics

Another way to examine jobs in the region is to look at the particular occupations that are growing most rapidly. This is provided by occupational workforce data that is based on job titles and job duties. Occupational data also suggests which skills and knowledge are available in the region, which is important from a workforce development perspective.

As you can see in *Table 1.9* the Meramec region has experienced a strong increase in demand for military occupations. The increase in real estate agents suggest the in-migration into the region and the growing demand for housing. The other categories, such a personal care aides and food service workers, are based on national trends, specifically the aging of the population and the increase in restaurant meals. A detailed overview of all occupation clusters and definitions for all regional counties is provided in *Appendix VII*.

Occupation	2002	2015	2002-2015 Change
Military Occupations	11,140	12,458	1,318
Combined Food Preparation and Serving Workers, Including Fast Food	1,297	1,634	337
Managers, All Other	884	884	322
Personal Care Aides	631	1,640	1,009
Real Estate Sales Agents	757	1,088	331

According to Missouri’s Military Infrastructure Base Realignment and Closure Preparatory Assessment, “The operation of Fort Leonard Wood supported approximately 36,400 direct and indirect jobs in the state of Missouri.” There’s no doubt that the base contributes to occupation growth and the potential for new business and entrepreneurship.

Additionally, it is important to note that portions of the Meramec region is considered a retirement region. While they do have the army base and a major university in Rolla, the rest of the region includes a large aging population. There are 48 assisted, residential, and skilled living facilities in the region with nearly 3,000 beds, which helps explain the large numbers in industry and occupation data behind personal care aides and local community and civic organizations.

Stakeholders’ Perspectives on Economic Development

Up to this point in *Part 1*. Economic Profile of the Meramec Region, a data-intensive investigation of the regional economy has been provided. Although this provides useful, objective information, it is also important to consider the perspective of stakeholders in the region, including public officials, economic developers, business owners, community leaders, and entrepreneurs. Stakeholders have valuable knowledge of the economy that needs to be incorporated into the analysis. Although some elements of the regional economy can be expressed quantitatively (such as the increase in population), other elements, although not easily put into numbers, are very important for the economic growth of the region. Examples of the latter include the attitude of residents toward entrepreneurs and the support available to entrepreneurs starting a business. This qualitative information in this section complements and helps to understand the data-based analysis.

In order to gather information from stakeholders, an online survey was administered to selected regional leaders with knowledge of the economy. An effort was made to obtain a geographical distribution throughout the region. Responses were gathered from 79 people. Interestingly, nearly 65% of those surveyed had started a business at some point in their career. The questions asked stakeholders to rate the region’s performance in terms of educational institutions, businesses, and local government. Suggestions for improving the economy and entrepreneurial climate were also sought from stakeholders. The questionnaire, a complete list of responses, and other information about the survey is available in Appendix II.

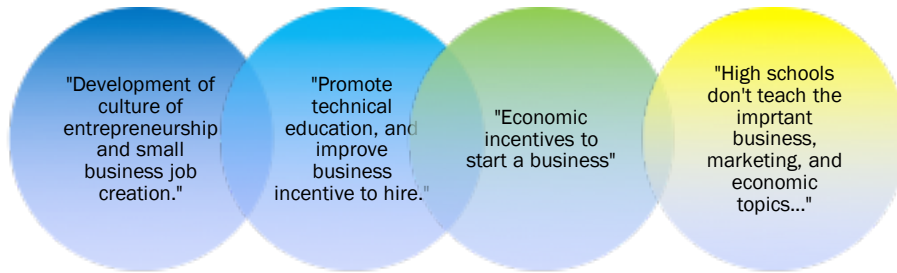


Table 1.10 – Meramec RPC - Ratings of the Performance

Source: 2016 Regional Survey

	Average Rating by Stakeholders
The region's overall quality of life.	3.04
The availability of top managers in the region.	2.12
The availability of information technology professionals in the region.	2.24
The overall quality of the region's community and technical colleges.	2.83
The overall quality of the region's 4-year colleges and universities	3.05
The availability of regional college and university internship programs.	2.03
The quality of technical assistance offered by regional colleges and universities to businesses.	2.38
The quality of collaboration between businesses and regional college/universities.	2.13
State and local governmental regulations that support small businesses.	1.96
The effectiveness of regional programs to help start-up businesses.	1.76
The effectiveness of regional programs to train entrepreneurs	1.76
The availability of risk capital from angel investors in the region.	1.66
The availability of capital from banks in the region.	2.40

Quality of Life

Table 1.10 provides the average ratings that stakeholders gave to the performance of the region on selected key characteristics. Stakeholders scored each item on a scale of 1 (poor), 2 (fair), 3 (good), or 4 (excellent). The rating for overall Quality of Life is 3.04 (in other words, it exceeds 3, a rating of Good). This is a positive indication that key stakeholders believe that the region offers a high quality-of-life to residents. There were a couple weaknesses suggested by stakeholders that pertain to the Availability of Top Managers and IT Professionals (average scores of 2.12 and 2.24 respectively). Experienced managers and IT professionals are often in short supply in rural regions. The Meramec region has strong technical colleges and the well-respected Missouri University of Science and Technology. Possibly more could be done to encourage graduates of those institutions to remain in the region.

Educational Institutions

Stakeholders had high opinions of the institutions of higher education in the region. The overall rating for community and technical colleges approached three and the rating for four-year colleges and universities exceeded three (or “Good”). Obviously, these institutions provide a major competitive advantage to the region in creating a strong workforce and in providing for a higher quality of life for residents.

However, there is clearly a sentiment that the educational institutions are not sufficiently involved with

local businesses through internships and technical assistance. In fact, Collaboration between Businesses and Colleges/Universities was rated slightly above two (or “Fair”).

Themes from Stakeholders

In the open-ended comments, five themes emerged. First, respondents had mixed impressions about the regional attitudes toward entrepreneurs. Several respondents indicated that local residents did not respect entrepreneurs and that there was a strong resistance to those entrepreneurs who did something new. One person commented, “We need to develop a welcoming supportive environment for young entrepreneurs to keep them in our region.” In contrast, the overall ratings (see *Table 1.11*) suggest a generally positive view of the business sector. The consensus is that business leaders interact frequently and share information and resources, although their willingness to invest in new projects is rather low. Residents of the region also recognize and celebrate the growth and success of businesses.

Statement	Avg. Rating
"People from different industry and economic sectors frequently interact in the region."	2.49
"The region celebrates the growth of companies, not just the absolute size of companies."	2.61
"Business leaders proactively share information and resources when possible"	2.56
"Successful business people in the region actively invest in economic development projects and start-up ventures."	2.27

(1=very false, 2=mostly false, 3=mostly true, and 4=very true)

Second, respondents indicated that technical assistance to entrepreneurs could be improved. Several methods were suggested, including establishing a mentorship program so that beginning, or prospective, entrepreneurs could learn from experienced entrepreneurs. A need for better coordination among service providers who work with entrepreneurs was also noted. It seems that the region may benefit from more flexibility and coordination among service providers, including providing more services online. These comments were supported by the ratings given to programs to assist start-up companies (1.76) and to train entrepreneurs (1.76), both low scores. There may be a real opportunity to introduce effective programs to assist entrepreneurs in the region through training and business counseling. Regarding the financing of start-ups, the stakeholders are not aware of programs to provide risk capital to entrepreneurs, but they do consider local banks to be effective in lending to small businesses.

Another issue raised by respondents to the survey is the need to improve the local workforce. Several people reported difficulty in finding educated and hard-working employees. Others cited the need for improved business training at the high school level and expanded technical training.

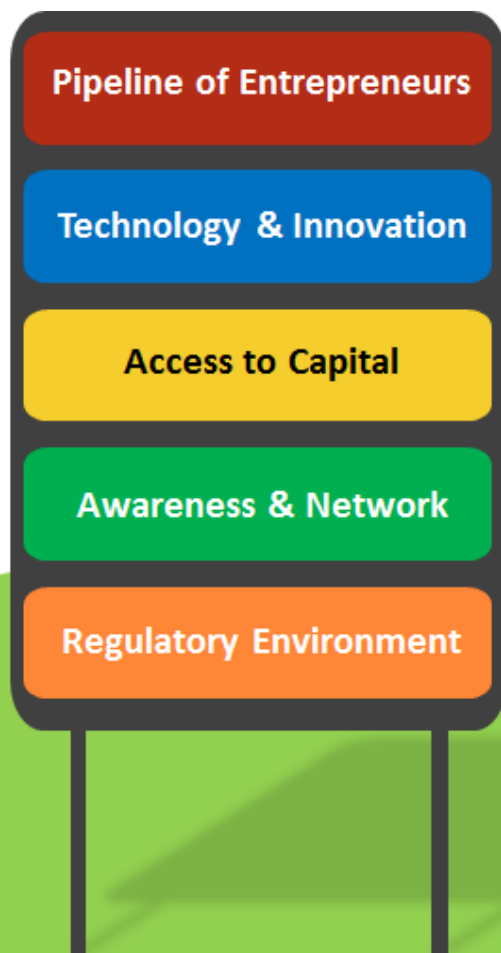
Additionally, the perception of a need for better networks and collaboration between the private sector, public sector, and the non-profit sector is to be considered. One person reported that the private sector is not very involved with local economic developers and local governments in formulating economic development policy for the region. Others thought that it would be beneficial to improve the networking systems among small business owners, business leaders, and community organizations.

The themes identified by stakeholders, such as improving attitudes and services for entrepreneurs, upgrading the workforce, improving networks of communication between the private and public sectors, and enhancing roadways provide an excellent preview of topics that will be discussed in more depth in *Part 2: Examining the Five Drivers of Entrepreneurship in the Meramec Region*.

Summary – Economic Profile of the Meramec Region

Geographic Location	The Meramec region consists of eight counties located in southeast-central Missouri. The region covers over 5,131 square miles and includes 37 municipalities. The region, comprised of Crawford, Dent, Gasconade, Maries, Osage, Phelps, Pulaski and Washington counties, is marked with gently rolling hills, deep valleys and plateaus.
Attractions	The region’s access to Interstate 44 and three river corridors brings logistical and tourist advantages.
Quality of Life	The Meramec region offers a small-town quality of life in a scenic setting that is attractive to many residents.
Population Demographics	From 2000 to 2015, population in the Meramec region grew by 15% led by growth in Pulaski and Phelps Counties. This is significant growth when compared to both rural Missouri and Missouri population trends. More people migrated into the region than moved out of the region which suggests it is a desirable place to live.
Age Dynamics	The region has a relatively young population. The proportion of residents in the age range 15-34 is higher than the state average.
Income Levels and Poverty	Both income levels and poverty rates are comparable (or slightly better) to those found across rural Missouri and do not indicate either a strength or a weakness for the Meramec region.
Unemployment	Unemployment is slightly higher than Missouri overall, but has been declining the past three years in a pattern consistent with the state overall.
Job Trends	Jobs have increased in the Meramec region substantially led by the growth of small and medium-size firms. Two-thirds of jobs generated in the region are in firms with from 2 to 99 employees. This size establishment constitutes the “sweet spot” for job creation in the region. Unlike many rural regions in the Midwest, there was not a factory closing or other event causing job losses in large establishments (over 500 employees).
Commuter Patterns	Commuting is a major factor in the region with slightly fewer people leaving their home region to work than working in the region where they reside. Therefore, a new economic development project in the region is likely to benefit residents of other counties who find work there. Commuting to Jefferson City from the northern part of the region, Gasconade and Osage Counties, is an important source of income.
Industry	There are clusters of important industries in the region, including chemicals, metal-working, and education and knowledge creation.
Stakeholders’ Perspectives	A survey of stakeholders (community leaders, public officials, business owners, economic developers, entrepreneurs) indicates that they consider the quality of life in the region to be high. They also have high respect for the regional community colleges, technical colleges, and four-year universities.
Stakeholders’ Concerns	A major concern of stakeholders is the technical assistance and training available to entrepreneurs. There is a realization that economic progress depends on a welcoming environment for entrepreneurs.
Issues Identified by Stakeholders	Other important issues identified by stakeholders are the need for a trained workforce, improved networks among the private and public sector, and improved transportation infrastructure, i.e., roads and bridges in the region.

The Five Drivers of Entrepreneurship



Source: Transforming Community Economies, Delta Regional Authority, Dr. James Stapleton (2012)

The Small Business and Entrepreneurship Policy Framework (Stapleton, 2012) is a strategic development tool created by the Delta Regional Authority as a roadmap for creating and fostering entrepreneurial ecosystems in local communities. **The five key drivers of the framework are:**

1. Developing a Pipeline of Educated and Skilled Entrepreneurs
2. Cultivating Technology Exchange and Innovation
3. Improving Access to Capital
4. Promoting Awareness and Building Networks
5. Optimizing the Regulatory Environment

Using the framework as a strategic roadmap helps keep the focus on relevant issues facing today's entrepreneurial ecosystems. The long-term goals are to help spur job growth through entrepreneurial activity, foster an innovative business environment, and create long-term regional competitive strengths. Each component of the framework provides insight into what is currently happening in the Meramec region, as well as ideas for new initiatives that could help foster the entrepreneurial ecosystem.

For the framework to have its intended impact it is important to understand that it must interact with broader economic development policies. Furthermore, for the recommendations to be successfully implemented, a diverse group of stakeholders must work toward common goals and mutually beneficial relationships must be established. Stakeholders include entrepreneurs and innovators, existing businesses (both large and small), elected officials and policy makers (local, state, and federal), educational institutions, social networks, and community advocates.

Explanation of each driver can be found in the introduction and purpose of this report.

Part III. Examining the Five Drivers of Entrepreneurship

A. Developing a Pipeline of Educated and Skilled Entrepreneurs

In this part of the report, each of the five drivers of entrepreneurship, as presented in Part 1, Introduction and Overview, is examined for its current status in the Meramec region. This helps to identify the assets that the region has that can be capitalized on for further entrepreneurial success. Furthermore, the gaps in the entrepreneurial support system are also important to identify since they may lead to specific actions that the region can take to improve its entrepreneurial ecosystem.

Perhaps the most critical determinant of a region's economic success is the quantity and quality of its entrepreneurs. For the Meramec region to have a vibrant economy, it must have a supply of entrepreneurs that are able to build a sufficient number of companies to provide employment opportunities and wealth for residents throughout the region. The focus on a "pipeline" of entrepreneurs recognizes that there is a range of entrepreneurial talent in a region. Some entrepreneurs are well-established and successful having started one or more companies. Other prospective or potential entrepreneurs may have an idea and conducted some research, but have not made the commitment to start a firm.

Young people in school also may be potential entrepreneurs if they are exposed to successful entrepreneurs and taught the essential skills of starting a business. Ideally, a region will be supporting the full range of entrepreneurs by meeting the varying needs of each group. For example, established entrepreneurs may need specialized marketing assistance, while prospective entrepreneurs may need to learn how to properly do the accounting for their enterprise.

Therefore, the current entrepreneurial talent in the region and also the extent to which entrepreneurs are getting their training and counseling needs met will be discussed in this section. As Stapleton (p.4) states, "the aim is not only to strengthen the capacity and desire of more individuals to start their own enterprises, but also to develop an entrepreneurial culture in society—more individuals thinking and acting entrepreneurially."

Entrepreneurial Talent in the Meramec Region

To learn more about entrepreneurial talent in the region and to gather suggestions from entrepreneurs on how to improve the ecosystem, in-depth interviews were conducted with five entrepreneurs and two small business advisors/trainers in the region. Four of the entrepreneurs started their companies in 2010 and one company started approximately 30 years ago and is solidly established and very innovative.

Based on interviews with the entrepreneurs, the survey results, and the focus group findings, the following assets and challenges were identified for the Meramec region in this driver.

Assets of the Meramec Region in Developing a Pipeline of Educated and Skilled Entrepreneurs

- There is a strong cadre of entrepreneurs in the Meramec region. Those interviewed are innovative and creative in their businesses and are locating support resources within the region.
- The Meramec region has strong institutions of higher learning that are vital to training the workforce. Perhaps the most outstanding example is Missouri University of Science and Technology located in Rolla. Missouri S & T has recently been ranked as the 3rd best Engineering School in the country by College Factual/USA Today and the 2nd highest value-added public university by the Brookings Institute. Additionally, Columbia College, Drury University, Lincoln University, Southwest Baptist University and Webster University have established education centers in the region. State Technical College of Missouri, East Central College Ozark Technical College and Rolla Technical Institute/Center offer many vocational opportunities and associate degree options. Technical and applied training is critically important in providing the skilled workers that companies need.
- Missouri S&T hosts an active Small Business and Technology Development Center (SBTDC) and an Office of Technology Transfer and Economic Development (TTED). These organizations offer many services to entrepreneurs and those considering starting a business, including 1) one-on-one business counseling, 2) training including the Kauffman Foundation's Fast Trac[®] program, 3) a procurement technical assistance control (PTAC) which offers assistance with selling to government agencies, and 4) assistance with commercializing new technologies. These centers are open to the public, although primarily focused on the university community.
- The Kaleidoscope Discovery Center offers a range of engineering, science, technology, environment arts and math (ESTEAM) and driven exercises for kids ages 5-14.
- Several school districts in the region (including Owensville, Rolla, Hermann and Sullivan) have incorporated special STEM (science, technology, engineering, and math) curriculum into their schools from K-12.
- Furthermore, there are other organizations that provide advice and guidance to entrepreneurs, including the chambers of commerce, the University of Missouri Extension office, Lunch and Learn (sponsored by the SBTDC in Rolla), and the Naturally Meramec Consortium.
- Social entrepreneur Dr. Sean Seibert has led many entrepreneurial endeavors in the mid-Missouri region. In April 2014, an Entrepreneurship Summit was held at Fulton, MO. As an outcome of that Summit, Fulton went on to develop the ShowMe Innovation Center (showmeininnovation.org), which provides mentoring, technical assistance, and start-up capital to entrepreneurs. Since 2014, Seibert has conducted seven, five-week training programs for entrepreneurs in Cuba, Bourbon, and other communities. These programs have led to the expansion of many businesses and the start-up of others. In fact, Seibert has identified 115 success stories resulting from this training and networking experience. For example, through the program, a shoe store in one community significantly expanded its sales by becoming an Amazon merchant and selling discontinued products on that site. The spirit of entrepreneurship has been enhanced in the participating communities. One related impact is that Rural Sourcing (www.ruralsourcing.com), a medical billing and coding company, is opening a facility in Cuba which will create local jobs.

- Dr. Seibert has also held events for youth to encourage them to think and act entrepreneurially. For example, in December 2014, he organized an Ideas and Innovation Event in Cuba, attended by 325 high school students, in which prototypes were designed on Minecraft.

Challenges of the Region in Developing a Pipeline of Educated and Skilled Entrepreneurs

- Even though stakeholders and entrepreneurs were positive on the quality of local educational institutions, they would like greater partnership between educational institutions (high schools, technical colleges, and four-year colleges) and the local business sector. This might entail increased internship opportunities for students to work in local businesses. This might be an opportunity for local educators to expand training and technical assistance offerings to the business sector.
- During the course of the interviews, several entrepreneurs indicated that mentorship from more experienced entrepreneurs was not available to them and would have been beneficial as they started or expanded their businesses. Several economic developers and technical assistance providers in the region echoed their support for a mentorship program.
- Although the region has many training opportunities for entrepreneurs, most are focused in the Rolla/Missouri S&T area. It is certainly sensible to support the innovations and entrepreneurial talent from the university community. However, the training programs of Seibert suggest that less-populated parts of the region also have nascent entrepreneurs. It may be desirable to add additional training opportunities to counties other than Phelps. Development of an incubator could be that collaborative mentorship opportunity for new entrepreneurs. In addition, the expansion of Seibert's five-week training program to more communities or the expansion of outreach programs from Rolla/Missouri S&T to other parts of the region are two possible ways of accomplishing this.
- Stakeholders in the focus group identified Youth Entrepreneurship as a priority goal. They recommended that entrepreneurship be incorporated into the school curriculum. Such an effort would support a source of entrepreneurial talent that is often overlooked, the youth and future leaders of the community. Furthermore, other communities with youth entrepreneurship programs have discovered that the programs also encourage young people to stay in the community or to return after college.

Education Levels and Young Residents

Two factors that are crucial to this driver Developing a Pipeline of Skilled and Educated Entrepreneurs are the education levels of the population and the extent to which young people can be retained or attracted to the region. In this section, secondary data is explored.

Educational Attainment

While access to educational services goes a long way in supporting an educated population, it is also important to look at the actual levels of educational attainment in the population. Research has suggested that higher educational attainment levels are unlikely to lead to more entrepreneurs in total. However, it does improve the success rate and economic impact of the entrepreneurs and lead to more high-growth entrepreneurs (Markley and Low, 2012).

Educational attainment has been analyzed from 2010 to 2015 for each county (*Table 2.3*). Using the 2010 to 2015 timeframe identifies trends in educational levels are rising over time.

Overall, the Meramec region has a higher rate of college educated adults than rural Missouri, although it lags the state as a whole.

Table 2.3 – Meramec RPC – Adult Population with some College or an Associate Degree				
<small>Source: U.S. Census 2010-2013</small>				
	25-64 with some college or an associate degree		25-64 with a bachelor's degree or higher	
	2010	2015	2010	2015
Meramec RPC	30%	30%	20%	20%
Crawford County	28%	29%	12%	12%
Dent County	30%	28%	12%	13%
Gasconade County	30%	30%	16%	15%
Maries County	11%	27%	16%	14%
Osage County	29%	27%	15%	19%
Phelps County	29%	28%	26%	30%
Pulaski County	38%	37%	20%	26%
Washington County	22%	28%	7%	8%

In the counties with declines in the percentage of adults with higher education, this could be a sign of a coming “brain drain”. This means that the many educated members of the workforce are moving away to areas that have more professional jobs from which they can choose.

Young Adult Population Trends

For the Meramec region to be able to invest in its workforce and entrepreneurs there must be a pool of human resources to educate and train. These should preferably be young adults who stay in the region or who relocate to the region from other areas of the country.

Data in *Table 2.4* examines the annual change in the young adult population between 1997 and 2012. This data defines a “young adult” as a person between the ages 25 and 44. This is often the first age group to move away when a region can no longer offer attractive amenities and opportunities.

Table 2.4 - Meramec - Young Adult Population TrendsSource: statsamerica.org 1997-2012

	Average Annual Percent Change in Young Adult Population, 1997-2012
Meramec RPC	0.1%
Crawford County	-0.4%
Dent County	-1.0%
Gasconade County	-1.8%
Maries County	-1.2%
Osage County	-0.7%
Phelps County	-0.3%
Pulaski County	1.3%
Washington County	-0.5%
Rural Missouri	-0.6%
Missouri	-0.5%
U.S.	0.2%

The findings are relatively favorable for the Meramec region. It has slightly gained young people (by .1% average per year) over the 15-year period. This suggests that the region is retaining young people, while Missouri, as a whole, loses young people to other states. It is important to keep in mind that historic data proved young adults were those who were starting new businesses. The Kauffman Index recently sited change in the data composition of new entrepreneurs with an increase of adults ages 35-64 opening new businesses because they saw market opportunities. These findings are great for the Meramec region considering the retirement community pockets discussed in the population age dynamics overview.

The challenges related to attracting and retaining young adults is widespread across the nation. In fact, a 2014 study showed that 73% of counties in the U.S. consider “the inability to attract and retain a young workforce” a major challenge (NACo, 2014).

Summary

Developing a Pipeline of Educated and Skilled Entrepreneurs

Strengths	Challenges
<ul style="list-style-type: none">• Strong cadre of entrepreneurs in the region• Strong institutes of higher learning that are vital to training the workforce• Active Small Business Technology and Development Centers along with other civic business organizations• Several counties implementing STEM in K-12 education curriculum• High rate of college educated adults• Retention of young adult population	<ul style="list-style-type: none">• Partnering of all education institutes and local businesses• Available/willing mentors for entrepreneurs• Training opportunities limited to few parts of the region
Opportunities	
<ul style="list-style-type: none">• Invest in developing and promoting regional internship programs to help connect students with regional employers• Reach out to young adults and identify what makes them want to live and work in the region and what makes them want to move. This will help provide better guidelines for investing in amenities and resources relevant to young adults• Identify ways to partner education institutes and local business to amplify entrepreneurship endeavors• Expand entrepreneurship training opportunities and resources throughout entire region• Instigate a formal study for a business incubator or co-working space to be located within the region	

Development Resources

Developing a Pipeline of Educated and Skilled Entrepreneurs

Regional Education & Workforce Development Resources		
Name	Address	Phone
Columbia College	2303 N Bishop Rolla, MO 65402	(573) 341-3350
Crawford County University Extension Center	202 Main Street Steeleville, MO 65565	(573) 775-2135
Dent County University Extension Center	112 E Fifth Street Salem, MO 65560	(573) 729-3196
Drury University	1034 S Bishop Ave Rolla, MO 65401	(573) 368-4959
East Central College	Hwy 50 & Prairie Dell Road Union, MO 63084	(636) 583-5193
Gasconade County University Extension Center	1106 Hwy 28 Owensville, MO 65066	(573) 437-2165
Lincoln University	Building 499 Ft. Leonard Wood, MO 65473	(573) 329-5160
State Technical College of Missouri	#1 Technology Drive Linn, MO 65051	(573) 897-3603
Maries County University Extension Center	PO Box 116 Vienna, MO 65582	(573) 442-3359
Metro Business College	1202 E Highway 72 Rolla, MO 65401	(573) 364-8464
Mineral Area College	5270 Flat River Road Park Hills, MO 63601	(573) 431-4593
Missouri University of Science and Technology	206 Parker Hall Rolla, MO 65401	(573) 341-4111
Osage County University Extension Center	106 E Main St Linn, MO 65051	(573) 897-3648
Phelps County University Extension Center	200 N Main Rolla, MO 65401	(573) 364-3147
Pulaski County University Extension Center	301 Historic 66 E Waynesville, MO 65583	(573) 774-6177
Rolla Technical Center & Rolla Technical Institute	1304 E 10 th St Rolla, MO 65401	(573) 458-0150
Southwest Baptist University	501 S Grand Salem, MO 65560	(573) 729-7071
UniTec Career Center	Bonne Terre, MO 63628	(573) 358-3011
Washington County University Extension Center	102 N Missouri Potosi, MO 63664	(573) 438-2671
Waynesville Technical Academy	810 Roosevelt Waynesville, MO 65583	(573) 774-6106
Webster University Annex	11030 Kingshighway Rolla, MO 65401	(573) 368-4569

B. Cultivating Technology Exchange and Innovation

Innovation is often cited as a key ingredient to economic growth. Although the focus of innovation is often on major scientific breakthroughs, technology industries like biotechnology, or major IT companies like Google, innovation actually takes many forms. In nearly all industries, it is vital to innovate to command higher prices, reduce costs, or add value to production. Many innovations take place through incremental improvements in production, distribution, or marketing that result in an economic advantage for a company.

In examining this driver “Cultivating Technology Exchange and Innovation”, the skills and infrastructure of the region with regard to information technology is examined. To what extent does the region have trained technology professionals, especially in information technology? Does the region have high speed broadband to facilitate rapid communication and diffusion of information?

Following that discussion, the available platforms within the region to encourage knowledge and idea sharing are examined. These platforms may be incubators, co-working spaces, industry organizations, conferences, networking groups, industry clusters, etc. To what extent does the Meramec region have venues or platforms for the sharing of information among entrepreneurs and other key participants in the local economy? Additionally, the assessment of this driver is based on stakeholder and entrepreneur feedback from the survey and focus groups and from analysis of secondary data.

Skills and Infrastructure

One approach to identifying the foundation of “tech-based” jobs is to look at the occupations that typically require a high level of technical skill and expertise. The first step is to look at occupations that are primarily driven by technical computer skills. *Table 3.1* shows that the Meramec region had a slight increase in computer-related occupations from 2002-2015. Many modern small businesses and entrepreneurial endeavors require access to professionals with certain information technology skills. However, within the Meramec region, the numbers of information technology professionals is marginal.

The perception of stakeholders in the Meramec region is that the numbers are not sufficient. In fact, 21% of stakeholders evaluated the availability of IT professionals in the region as “poor” or “fair”. Only 5% rated it “excellent”.

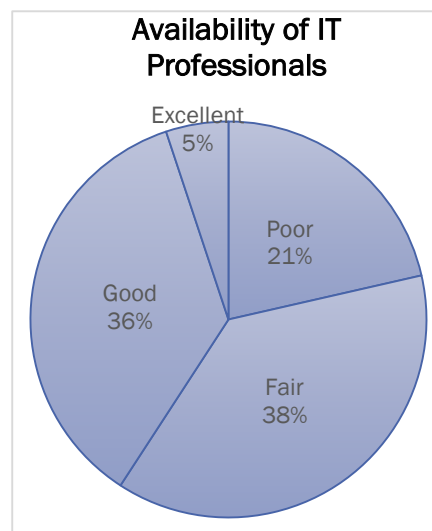


Table 3.1 - Meramec RPC - Computer Driven Occupations (2016)

Source: EMSI

Occupation	2002	2015	Change
Computer and Information Systems Managers	48	46	-2
Computer and Information Research Scientists	<10	<10	n/a
Computer Systems Analysts	60	67	7
Information Security Analysts	<10	<10	n/a
Computer Programmers	60	61	1
Software Developers, Applications	46	48	2
Software Developers, Systems Software	20	19	-1
Web Developers	21	43	22
Database Administrators	18	18	0
Network and Computer Systems Administrators	66	63	-3
Computer Network Architects	18	12	-6
Computer User Support Specialists	170	192	22
Computer Network Support Specialists	29	30	1

The next step is to look at a broader range of occupations within the tech-based knowledge cluster. This occupation cluster identifies multiple job categories that tend to be valuable for technology exchange and innovation. These occupations include medical practitioners and scientists, mathematics, statistics, data and accounting, information technology, natural sciences, engineering, and postsecondary education. To make it easier to get an overview of the available skills and knowledge, these occupation clusters have also been combined into a “technology-based knowledge” occupations cluster. **The region has over 3,500 jobs in the broad tech-based occupations category (Table 3.2).** This is roughly 4% of the regional base.

Furthermore, this total understates the number of technically-skilled people in the region. The strong technology programs of Missouri S&T involve a cadre of professors, university staff, private sector companies, and students who are engaged in information technology, engineering, and science. Not all of these positions are included in *Table 3.2*, yet these positions comprise an important asset for technology exchange and innovation as discussed more on the following page.

Table 3.2 – Meramec RPC - Tech-based Knowledge Occupation Cluster

Source: EMSI

Occupation	2002	2015	Change
Technology-Based Knowledge Clusters	3,297	3,532	7.1%
Medical Practitioners and Scientists	573	669	17%
Mathematics, Statistics, Data and Accounting	911	933	2.4%
Information Technology (IT)	744	807	8.4%
Natural Sciences and Environmental Mngmt.	326	362	11%
Engineering and Related Services	502	480	-4.3%
Post-secondary Education & Knowledge Creation	241	281	17%

Broadband

Perhaps the most important resource that can help foster technology and innovative activities is high-speed internet access (or “broadband density”). Internet accessibility is generally considered important in fostering entrepreneurship and innovation because it provides access to information, knowledge, ideas, broad communication, and e-commerce, as well as serving as the most effective and efficient marketing tool for low budget entrepreneurs. Research also suggests that average self-employment income increases when access to broadband internet is improved (Low et al., 2005).

During the focus group and in interviews with entrepreneurs, key issues related to technology exchange and innovation were discussed. The focus group identified a priority need for investments in improving access to high speed Internet throughout the region. Emphasis was placed on finding ways to bring high-speed Internet to rural areas in the region.

Table 3.3 – Meramec Region – Residential Fixed 25 Mbps/3 Mbps Broadband Deployment (2016 Broadband Progress Report)

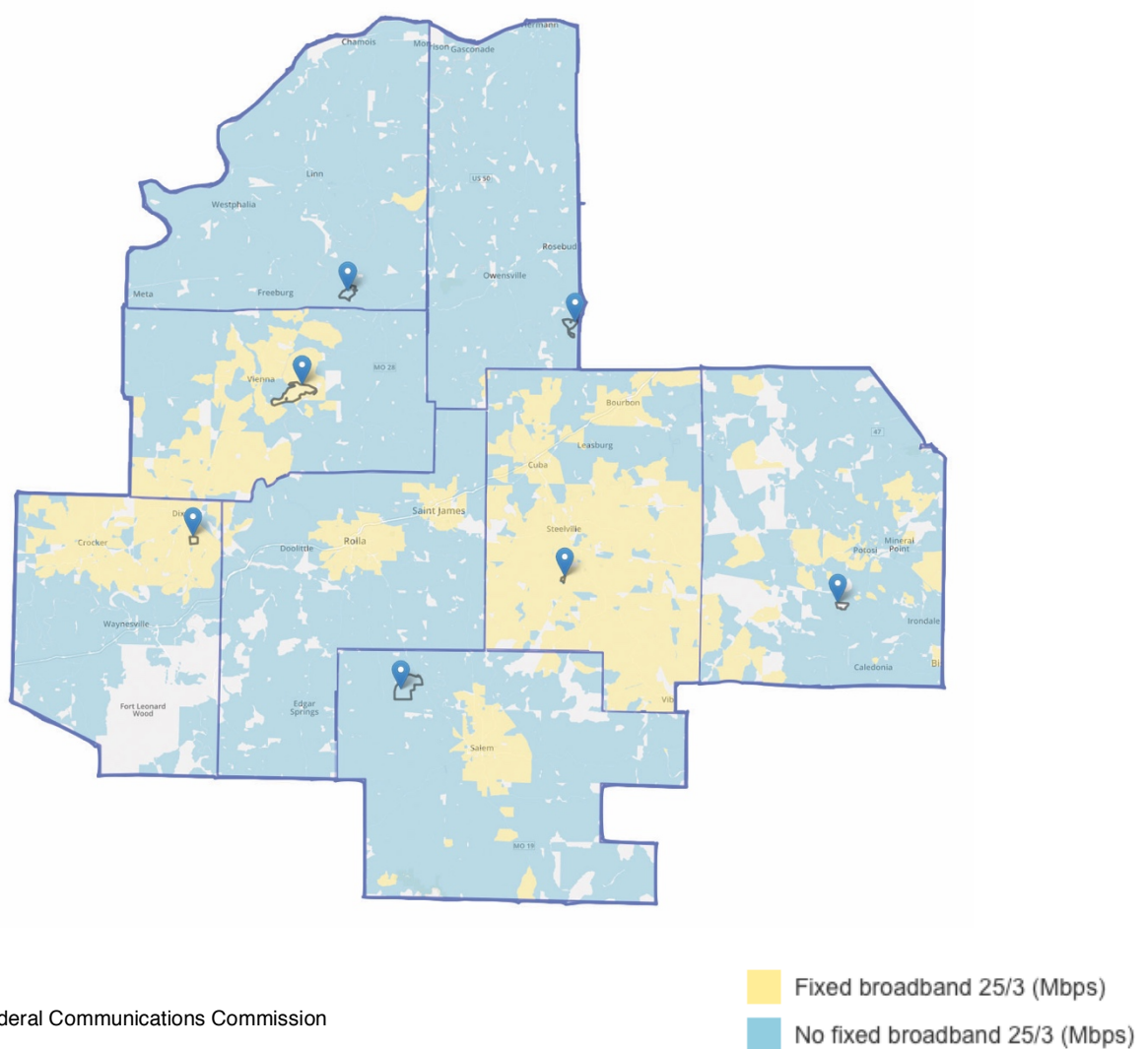
Source: fcc.gov

County	Total Pop without Access	% Urban Pop without access	% Rural Pop without Access
Crawford	5,910	0.7%	32.7%
Dent	7,319	0%	66.8%
Gasconade	14,211	99.8%	99.8%
Maries	6,167	0%	69.7%
Osage	13,713	0%	99.7%
Phelps	15,134	0%	73.6%
Pulaski	45,673	100%	67%
Washington	22,024	87.5%	86.5%

Table 3.3 provides a better understanding of the availability of broadband in the region. As the Table makes clear, many residents, especially in rural areas, do not have access to high-speed broadband. A regional visual representation is provided in Chart 3.1. It should be noted that in areas that have access to high-speed broadband, the data does not show how many are actually utilizing this option. For example, 100% of the population in Dent County’s urban population has the option of paying for high-speed broadband, but some may choose to pay for lower speed or no Internet at all.

While low broadband density is common for many rural regions, more efforts must be devoted to investing in improvements to the internet infrastructure. Failure to do so will leave the Meramec region at a serious disadvantage moving forward.

Chart 3.1 Meramec Region Residential Broadband



Platforms for Diffusing Innovation

As discussed in Part 2, Economic Profile, the Meramec region has a number of strong institutions of higher education, including Missouri University of Science and Technology located in Rolla. Missouri S&T was recently ranked as the third best Engineering School in the country by College Factual/USA Today and the second highest value-added public university by the Brookings Institute. Additionally, Columbia College, Drury College, Lincoln University, Southwest Baptist University and Webster University have established education centers in the region. State Technical College of Missouri, East Central College Ozark Technical Community College and Rolla Technical Institute/Center offer many vocational opportunities and associate degree options.

As *Table 3.4* indicates, there are 3,240 jobs related to Education and Knowledge Creation cluster. The cluster provides valuable training for the workforce and provides opportunities for residents to improve their skills. The cluster, especially through Missouri S&T, also provides a platform for the diffusion of technology and innovation.

Table 3.4 – Meramec RPC – Education and Knowledge Creation
Source: EMSI

Industry	Jobs	Score
Colleges, Universities, and Professional Schools (State Government)	2,119	55
Colleges, Universities, and Professional Schools (Local Government)	753	59
Colleges, Universities, and Professional Schools	208	32
Professional and Management Development Training	55	36
Educational Support Services	47	37
All Other Miscellaneous Schools and Instruction	26	33
Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)	16	39
Exam Preparation and Tutoring	16	32

Missouri S & T has an excellent platform of technology diffusion and economic development services. The Office of Technology Transfer and Economic Development at Missouri S&T serves as the focal point for technology commercialization, entrepreneurship, and economic development at Missouri S&T (<http://ecodevo.mst.edu>). This office includes a Small Business and Technology Development Center (SBTDC) that provides business counseling and training to prospective entrepreneurs, especially those associated with the university. The Missouri Procurement Technical Assistance Centers (PTAC) assists businesses, including small, disadvantaged and women-owned firms, in obtaining federal, state, and local government contracts. Through the Office of Technology Transfer and Economic Development, there are services provided to accelerate the commercialization of technologies developed at the university into viable products and businesses.

For example, Mo Sci, an advanced materials company, recently licensed wound care technology from Missouri S&T. The cotton candy-like glass fiber material helps speed the healing of venous stasis wounds (<http://ecodevo.mst.edu/info/article-wound-care-technology/>), Brewer Science is a leader in the microelectronics industry with offices across the world. Dr. Terry Brewer’s discovery of anti-reflective coatings resulted in a revolution in the global microelectronics industry and ushered in today’s high-speed, lightweight electronic devices. Brewer Science has grown to be a global leader in developing and manufacturing advanced materials and equipment for the reliable fabrication of cutting-edge microdevices used in electronics such as tablet computers, smartphones, digital cameras, televisions, and LED lighting (www.brewerscience.com).

Missouri S&T is also developing physical spaces for the support of entrepreneurs. The Technology Development Center was completed in September 2010 as the first building in the newly designated research park called Innovation Park at Missouri S&T. The facility provides Class A office suites and shared office space for a variety of clients, particularly technology-oriented tenants. The building is about 22,000 gross square feet with roughly 18,000 square feet of leasable space. Garmin International Inc is one of the companies that have located operations in the Technology Development Center (http://news.mst.edu/2012/12/garmin_to_open_facility_in_st/). Missouri S&T has plans for a business and technology incubator as a separate building within the Innovation Park. A feasibility study, economic

impact study, the design of the building with architect's renderings, and other preparatory work for the incubator has been completed.

In addition, the university has a student business incubator in which students can access free space for potential business ventures. Participants in the incubator are also members of a student entrepreneurial organization called the Technical Innovators and Entrepreneurs Society (TIES). TIES offers business competitions, a speaker series, and other support services for student entrepreneurs.

In addition, there is another resource for technology and innovation diffusion. Missouri Enterprise has an office in the Technology Development Center. Missouri Enterprise seeks to “affordably and efficiently deliver manufacturing, engineering and business services that will help companies in a very broad range of industry segments succeed in this intensely competitive global economy.” (missourienterprise.org). Missouri Enterprise focuses their consultation with manufacturing companies in the region. The organization also provides a co-working space in Rolla with the use of specialized equipment.

It is important to recognize that, in addition to Missouri S&T, other institutions play a role in disseminating new technologies and innovations. Columbia College, Drury University, Lincoln University, Southwest Baptist University and Webster University are all active in providing advanced training to residents. Furthermore, the technical and community colleges, such as State Technical College of Missouri at Linn, East Central College, Ozark Technical College and Rolla Technical Institute/Center, are often overlooked. Yet, these colleges provide the technical training so that companies can utilize the new technologies in their businesses, thus playing a vital part in the implementation of the new technologies.

For example, State Technical College of Missouri at Linn offers 35 programs. In the Industrial Technology area, the programs are Advanced Manufacturing Technology (Automation and Robotics Technology), Electric Power Generation Technology, Electrical Distribution Systems, Electronics Engineering Technology, Electronics Engineering (Biomedical Engineering Technology), Heating, Ventilation, and Air Conditioning Technology, Industrial Electricity (Automated Controls Technician), Industrial Technology (Construction), Nuclear Technology (Radiation Protection), Nuclear Technology (Reactor Operations), Precision Machining Technology, and Welding Technology.

In spite of the many university programs just outlined, the perception of the stakeholders in the survey was not particularly positive toward university outreach. In fact, 52% of respondents rated the quality of technical assistance from educational institutions as “poor” or “fair”, while only 48% rated it as “good” or “excellent.” This may be due to the fact that the majority of technical assistance emanates from Missouri S&T and is confined to a relatively small geographical area focused on the university community and businesses within Rolla. Therefore, stakeholders living in other counties may not participate in, or even be aware of, the entrepreneurial efforts of Missouri S&T.

It is suggested that the programs at Missouri S&T and Phelps County consider how they might link to entrepreneurs elsewhere in the region. As Seibert and others have demonstrated, there is significant entrepreneurial spirit in the more rural parts of the region. There is another university-related resource that is very advantageous for technology transfer. The University of Missouri Technology Park at Fort Leonard Wood is the first technology park in the nation to be located on an active Army post. The park encourages technology transfer from the University of Missouri and partnerships with the US Army. Current tenants in the Technology Park include Battelle, Booz, Allen Hamilton, Honeywell, and Missouri S&T among many others (<https://www.umsystem.edu/ums/aa/umrpi/technologypark/about>).

Finally, the need for technical training and skill development is not confined to college-age people or adults. Youth in high school or middle school also can benefit from programs that emphasize Science, Technology, Engineering, and Math (STEM). As mentioned in the previous section, school districts in the region (including Owensville, Rolla, Hermann and Sullivan) have incorporated special STEM (science, technology, engineering, and math) curriculum into their schools from K-12. The schools are to be commended for these efforts.

Summary

Cultivating Technology Exchange and Innovation

Strengths	Challenges
<ul style="list-style-type: none">• Slight increase in computer-related occupations from 2002-2015• Education and knowledge cluster in region is high giving opportunity to provide training and opportunities for residents to improve skills• Excellent platform of technology diffusion and economic development services offered• Strong resources for technology and innovation diffusion through higher education systems	<ul style="list-style-type: none">• There is great need for investments in improving access to high speed internet throughout the region• The available number of computer professionals is marginal• Availability of IT professionals is viewed as “poor” or “fair” by survey participants• Quality of technical assistance from education institutes rated as “poor” or “fair” by survey participants
Opportunities	
<ul style="list-style-type: none">• Leverage increase in technology and innovation based industries to promote more tech-focused job development region wide• Invest in stronger broadband access in low access counties• Review statewide and regional plans to identify potential support and collaboration for broadband deployment initiatives• Partner with educational institutes throughout entire region around technical assistance opportunities	

Development Resources

Cultivating Technology Exchange and Innovation

Regional Network Resources		
Name	URL	Phone
Missouri University of Science & Technology Transfer and Economic Development Incubator	Ecodevo.mst.edu/info/sbtdc/	(573) 341-6579
Missouri Enterprise Equipment Shared Space	www.missourienterprise.org/	(800) 956-2682

C. Improving Access to Capital

A challenge facing new start-ups and small firms is how to finance their ventures. The requirements that must be met to borrow money for risky investments, like financing a start-up, are more difficult to meet today than they were in the past. But considering the fact that small growth firms create the most jobs in the country, the importance of ensuring access to capital has never been more relevant. In this section, feedback from stakeholders and entrepreneurs obtained through the survey, focus group, and personal interviews is reviewed to highlight regional issues related to this entrepreneurial driver. Additionally, quantitative data from secondary data suggests the extent to which the financial sector is faring well in the region's entrepreneurial ecosystem.

Available Capital

Generally, entrepreneurs who were interviewed for this study reported that local banks were easy to work with, supportive of entrepreneurs, and willing to lend to new businesses. This support from local banks may be partially due to the fact that most banks in the region are community-owned, rather than being part of national bank holding companies. Therefore, they may be more community-minded and also may desire the higher returns available from business loans. A list of banks in the region is provided at the end of this section.

The belief in the importance of local banks is provided through feedback in the survey of stakeholders. In fact, 84% of those surveyed consider banks to be important or very important if the region wants to foster innovation. A slight minority of stakeholders (47%) responding to the survey considered the availability of loans from banks to be excellent or good.

However, bank loans were not the only financing mechanism that local entrepreneurs have utilized. Entrepreneurs reported receiving financing or assistance in obtaining funding from the University of Missouri Extension, Small Business Administration through guaranteed USDA Business and Industry Agriculture grants, and revolving funds through the Meramec Regional Planning Commission. It seems that the funding from the Meramec Regional Planning Commission, in particular, has enabled a number of entrepreneurs to get started, while bank loans may have been difficult for them to obtain without. A listing of capital resources is provided at the end of this section.

There are occasions in most communities when entrepreneurs have an opportunity that has potential but is too risky for conventional bank loans or requires taking an equity interest in the business. In these cases, having angel investors or other equity sources of capital is valuable. However, stakeholders recognized that capital from investors or angel investors is something the region lacks. More than 86% rated the availability of capital from investors or angel investors as "poor" or "fair. While there might be some entrepreneurs and small businesses that have benefited from private investors, these appear to be few. A network of angel investors Ozark Angel Investors operates from Rolla and there is access to investor groups in Columbia and St. Louis. It may be that stakeholders are not aware of these resources and/or that the angel network does not extend outside the Missouri S&T area. Additionally, there may be other private investors within the region, but these are difficult to identify and tend only to invest within their primary network and community boundaries.

An issue that surfaced in the focus group and personal interviews with entrepreneurs is that many entrepreneurs and small business owners are not aware of the financing options available to them, especially those that involved public financing or gap financing. It may be beneficial to have this information in a packet that is available on a website or other location easily accessible by entrepreneurs. More access to the information may spur further use of these instruments and help businesses to expand.

The Financial Sector in the Region

Analyzing market factors related to accessing capital in the region can provide a better understanding of the challenges faced by economic developers, business owners, and entrepreneurs. This is done by analysis of secondary data related to industry and occupation clusters in the financial sector.

Business and Financial Services Cluster

The most relevant industry cluster to look at for this driver is the Business and Financial Services. The overall score of the cluster is 39 (out of 100) points. This is actually a high score indicating that this is a strong cluster within the region. [Note: The average score is 42 (out of 100) points. This is not a benchmark against other regions; it only compares the relative performance of the clusters to each other.] The highest score within the cluster is 41 for Commercial Banking.

Considering the Meramec region’s business and financial services cluster (Table 4.1), the data show over half the industries jobs are in commercial banking. That sector is strong with a score of 41, supporting the feedback from stakeholders and entrepreneurs on the availability of loans from local banks and their importance to the local economy.

Table 4.1- Meramec RPC -Local Financial Services Industry Cluster (2016)		
Source: EMSI		
Industry	Jobs	Score
Commercial Banking	1,109	41
Credit Unions	95	39
Insurance Agencies and Brokerages	476	36
Third Party Administration of Insurance and Pension Funds	41	36
Tax Preparation Services	77	34
Total	1,799	39

In looking at the occupations related to financial services (Table 4.2), it is apparent that financial services occupations are growing within the Meramec region. In fact, the increase is more than 300 jobs from 2002-2015. A growing capacity for financial services bodes well for entrepreneurs and existing businesses. Especially important are individuals with knowledge and experience in small business financing.

Table 4.2 - Meramec RPC - Financial Services Occupation Cluster

Source: Economic Modeling 2016

Occupations	2002	2015	Change
Financial Managers	163	203	40
Accountants and Auditors	424	398	-26
Budget Analysts	30	33	3
Credit Analysts	5	12	n/a
Financial Analysts	53	57	4
Personal Financial Analysts	148	322	174
Financial Examiners	13	15	2
Credit Counselors	5	5	n/a
Loan Officers	192	225	33
Tax Preparers	58	57	-1
Financial Specialists, All Other	53	48	-5
Securities, Commodities, and Financial Services Sales Agents	129	194	65
Total	1,263	1,565	302

Perhaps most notably, there has been a large increase in the number of loan officers and financial managers. The increase in financial managers and loan officers could bode well for entrepreneurs and business owners looking to expand. To summarize, the secondary data reveals a strong and growing financial services sector within the Meramec region.

Summary

Access to Capital

Strengths	Challenges
<ul style="list-style-type: none">• Interviewees reported that local banks are easy to work with, supportive of entrepreneurs and willing to lend to new business• Majority of banks in region are community-owned• Regional stakeholders consider banks to be “important” or “very important” in fostering innovation• 47% of stakeholders responding to the survey considered the availability of loans from banks to be “excellent” or “good”• Many opportunities for capital available in regions outside of banking industry alone• Strong commercial banking industry brings many opportunities to the region• Increase in more than 300 jobs in financial services	<ul style="list-style-type: none">• More than 80% of stakeholders rated the availability of capital from investors or angel investors as “poor” or “fair”• No venture capital identified• Available financing/capital resources
Opportunities	
<ul style="list-style-type: none">• Develop guide and plan of action for marketing available funding resources• Evaluate the feasibility of creating venture capital fund	

Development Resources

Access to Capital

Regional Alternative Access to Capital			
Name	Type	Contact	Phone
United States Department of Agriculture (USDA)	Business Loan	Ray Mowery	(417) 967-2028
The USDA provides technical assistance and financial backing for rural businesses and cooperatives to create quality jobs in rural areas. Entrepreneurs can benefit from assistance of land purchases, startup costs, purchase of equipment, machinery, or supplies. http://www.usda.gov/wps/portal/usda/usdahome?navid=GRANTS_LOANS			
Missouri Department of Economic Development	Small Business Loans	Governor Office Building	(573) 526-0748
Many development programs and loans are offered through the Missouri Department of Economic Development such as small business loans, tax credits, and industrial building loans. https://ded.mo.gov/Programs.aspx			
Small Business Administration (through Meramec Regional Development Corp.)	Certified Development Company/504 Loan	Maria Kardon	(573) 265-2993
For profit small businesses qualify for assistance with purchase of land or buildings, street improvements, utilities, new construction, long term equipment or machinery. https://www.sba.gov/loans-grants/see-what-sba-offers/sba-loan-programs/real-estate-equipment-loans-cdc-504/cdc-504-loan-program-eligibility			
Meramec Regional Development Corporation	Revolving Loan Programs	Maria Kardon	(573) 265-2993
Small businesses in Crawford, Dent, Gasconade, Maries, Phelps, Pulaski, and Washington counties qualify for funds to create or retain employment. http://www.missourimeramecregion.org/financial.html			
Missouri Agricultural and Small Business Development Authority		Kelsey Temmen	(573) 751-2372
Grants of up to \$7,500 for reimbursement of expenses associated with urban and non-traditional agriculture to assist in development of small agribusinesses, production infrastructure, direct distribution of venues and workforce development. http://agriculture.mo.gov/abd/financial/			
Ozark Angel Investor Group	Private Investment	Keith Strassner	(573) 341-6579
Investments of typically, \$5K - \$15K for high risk, high potential seed and early stage business ventures that generate economic activity and growing the economy of Phelps County by facilitating entrepreneurial activity. http://ecodevo.mst.edu/media/center/ecodevo/documents/Ozark%20Angel%20Investors_Q&A_General_2013-04-11_v1.1.pdf			
Missouri Linked Deposit	Private Investment	Missouri Linked Deposit Program	(573) 751-2372
The Missouri Linked Deposit Program partners with lending institutions to provide low-interest loans to help create and retain jobs. By reducing the interest rate on certain loans that borrowers can use to improve their businesses the program helps qualified lenders from Missouri better serve Missouri-based companies and agricultural operations. https://www.treasurer.mo.gov/content/low-interest-loans			

*See full listing of regional banks in the appendix

D. Promoting Awareness and Building Networks

This approach to entrepreneurial ecosystem development must be grounded in a belief that the region can “**grow our own**”, rather than trying to attract businesses and jobs from elsewhere. This is achieved by developing an entrepreneurial culture where local companies and business leaders are celebrated, residents are aware and proud of local businesses, and both public and private entities support entrepreneurial endeavors. Another important aspect is the availability of networks, mentoring, and professional assistance to entrepreneurs and small businesses. Research suggests that financial investments, such as the ones discussed in the “Access to Capital” section, work best when there is a corresponding investment in support services and human capital (Scruggs, 2010).

In this section, the culture of the region is considered with regard to attitudes toward entrepreneurship. Attitudes may seem “soft” and unimportant, however, it is clear that communities with positive attitudes toward entrepreneurs enjoy more start-ups and faster growing firms (Feld, 2012). Next, we consider the networks existing in the region and the potential for expanding those networks to strengthen entrepreneurs.

Cultural Attitudes Towards Entrepreneurship

One way to measure attitudes is to consider how open and active the region is with respect to interactions and collaboration. Stakeholders responded to several survey questions related to local culture. For example, respondents were asked to rate how true or false the following statements are: “New residents can easily integrate into the regional business community”, “People from different industry and economic sectors frequently interact in the region”, and “Regional residents actively participate in community development organizations and projects”. On each of the three statements, stakeholders were about evenly divided as to whether the statement is true or false. In fact, 49% felt that it is “mostly true” or “very true” that new residents can easily integrate into the business community. Having an open business community is a critical aspect of building strong networks.

A slight majority of stakeholders (54%) disagreed with the statement that residents actively participate in community development organizations and projects. Support for community wide projects by residents is a great way to foster unity and community pride. Stakeholders also narrowly agreed that people from different industry and economic sector frequently interact, this was seen as “mostly true” or “very true” by 52%. These responses suggest that more venues for residents, businesses, and government to interact and share information might be beneficial to communication and provide residents and entrepreneurs with a better sense of support from the community. Furthermore, several open comments on the survey reinforced this point. The comments perceived a lack of involvement of the private sector in economic development and the need for greater collaboration between larger businesses and entrepreneurs and among the providers of technical assistance to entrepreneurs.

Other questions asked stakeholders to indicate how important other businesses and entrepreneurial networks are to the region’s ability to innovate. The results clearly show that other businesses are considered an important aspect of the region’s ability to innovate. In fact, 80% of stakeholders indicated that other businesses are “important” or “very important”. Entrepreneurial networks were considered “important” or “very important” by 81% of respondents. **This suggests that stakeholders, both**

business owners and non-business owners alike, recognize the importance of collaboration among businesses and a strong entrepreneurial network.

A strong entrepreneurial network is important because national surveys have shown entrepreneurs tend to rank fellow entrepreneurs as their greatest resource. Entrepreneurs tend to benefit more from conversation and information-sharing with their peers, that is other entrepreneurs, than from any other persons (Macke, Markley, and Fulwider).

Through the focus group and entrepreneur interviews, stakeholders suggested several ways to increase awareness and support for entrepreneurs. They suggested hosting an Entrepreneurship Conference bringing together entrepreneurs, larger businesses, and the public sector. Such an event might be particularly beneficial since there is a perceived need to improve collaboration and interaction among groups. Another idea that stakeholders suggested, which is done by the SBTDC in Rolla, is to give an award to the Entrepreneur of the Year (or similar designation). This award idea could perhaps be implemented in other parts of the region. Both the conference and award have the effect of raising the profile of entrepreneurs and connecting them to other entrepreneurs and resources in the region.

Active Networks in the Region

Networks enable organizations to disseminate information, share opportunities and best practices, bring individuals together for shared cause and advocacy, and facilitate development of partnerships. Even if these networks are not directly about entrepreneurship or even economic development, they often lead to new opportunities and approaches to community problems. Stakeholders in the focus group identified a number of effective organizations in the region, including economic development groups, such as Cuba Development Group, Rolla Community Development Corporation, City of Hermann, City of Salem, Pulaski County Growth Alliance, Rolla Regional Economic Development Commission, etc. Chambers of Commerce provide training to businesses and, in some cases, offer programs for business retention and attraction. They also serve as an excellent venue for businesspeople to network with each other. There are Chambers in Gasconade, Hermann, Cuba, Maries County, Owensville, Rolla, Waynesville-St. Robert, and other towns in the region.

There are downtown business associations or revitalization organizations in Waynesville, Rolla, St. James, and other towns. Of course, the downtown frequently has small independent businesses that are started by local residents so the success of the downtown encourages startups. Finally, the Meramec Regional Planning Council provides a venue for addressing regional issues as well as an important resource for grant opportunities and planning issues.

Arts and cultural organizations have an active presence in the region. Arts are too often overlooked in discussion of community and economic development. However, arts have a major economic impact on the region and, by contributing to the quality of life, make the region a more desirable place to live. Stakeholders in the focus group identified arts festivals in many towns, murals in Cuba, theatre at Missouri S&T, community theatre in Rolla, Meramec Music Theatre in Steelville, the Steelville Arts Council, and many other organizations and events. Museums are an attraction and place of community pride, including the Day Lark Jonas Museum in Steelville, History Museum in Cuba, Meramec Agricultural Museum in St. James, and Meramec Spring Museum in St. James. Furthermore, wineries dot the landscape, including St. James Winery and Three Squirrels Winery. St. James is now home to a successful brewpub called the Public House Brewery that also has a location in Rolla. Clearly, the scenic landscape, recreational opportunities, and cultural assets make the Meramec region an attractive place for tourists as well as residents.

The Meramec region has two networks that are especially relevant to entrepreneurs. The Naturally Meramec Consortium, organized by the Meramec Regional Planning Commission, is a group of local agriculture, tourism, and culinary businesses working to grow by collectively marketing and by purchasing each other's products. The Consortium has identified more than 800 agricultural or tourism-related businesses in the region so this initiative has tremendous potential. In July 2016, the Consortium sponsored a "speed-dating" night in which buyers and sellers were able to meet, talk and connect their locally produced products and services. This is an excellent example of a networking event that can expand the markets and opportunities for entrepreneurs.

The Pulaski County Entrepreneurship Club is an excellent network opportunity for entrepreneurs. Participation is free for meetings in which entrepreneurs share ideas and issues with one another. There is no one who can identify with the joys and struggles of starting a business more than another entrepreneur. This is a promising format for building networks and might be adapted elsewhere in the region. As mentioned in the Technology Exchange and Innovation section, there is also an Entrepreneurship club for students at Missouri S&T called the Technical Innovators and Entrepreneurs Society. (TIES).

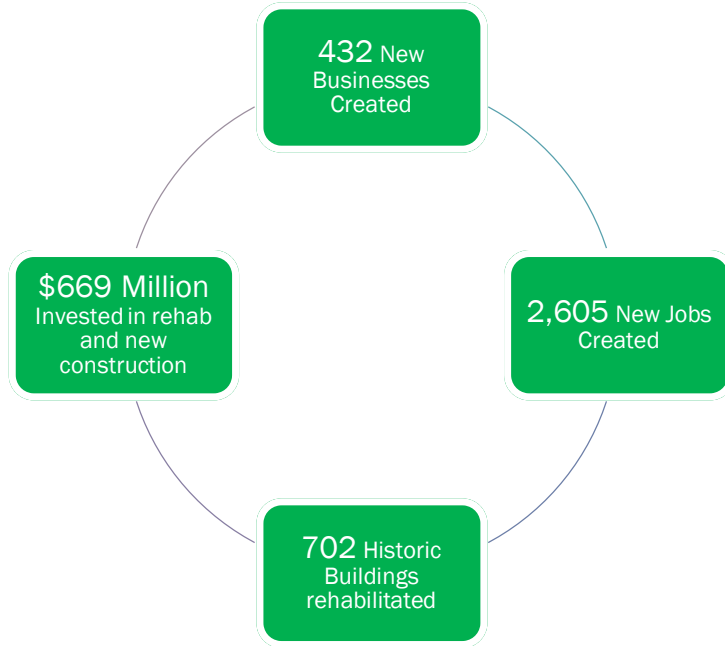
A final suggestion from the focus group was to consider the possibility of establishing an business incubator, co-working space, or other physical space in which entrepreneurs could meet. We recommend that, after conversations among stakeholder, a formal feasibility analysis be completed for an incubator or co-working space in the region. An incubator could provide space to address several key recommendations, including a mentoring program, enhanced training opportunities for entrepreneurs, and a venue for entrepreneurs to connect.

Secondary Data Analysis

Identifying relevant data for this driver is challenging because of the informal nature of "awareness" and "networks". However, some data indicators can be discussed in the context of ensuring the right input for developing strong networks and promoting awareness about the importance of entrepreneurs and entrepreneurial activity.

One measurable source of data in the state of Missouri based around networks is participation in the Missouri Main Street Program. Currently, **178 communities in the state of Missouri participate in the program** with great success. The program organization involves building a governing framework that **includes a diverse representation of business** and property owners, bankers, citizens, historians, public officials, chambers of commerce, and other preservation organizations.

Over the past six years communities that participate in the Main Street Tier System and regularly report their economic statistics have reported the following:



The opportunity to include local businesses and organizations that create and develop a project who rally around community betterment is a great platform for networking. Kudos to communities in the region currently participating in the program; Sullivan, Salem, and St. James.

Summary

Promoting Awareness and Building Networks

Strengths	Challenges
<ul style="list-style-type: none"> Stakeholders recognize the importance of collaboration among businesses and strong entrepreneurial work Three communities participate in the Missouri Main Street Connection program Stakeholders view have a positive view for new residents integrating into the business community 	<ul style="list-style-type: none"> Stakeholders do not believe that residents actively participate in community development organizations and projects Access to entrepreneurial coaches, including small business technology development centers, SCORE chapters, industry experts, and training programs Majority of communities in the region do not participate in main street programs
Opportunities	
<ul style="list-style-type: none"> Host entrepreneurship conference bringing together entrepreneurs, larger businesses, and the public sector Implement “Entrepreneur of the Year” award in each county of the region to raise the profile of entrepreneurs and connecting them to other entrepreneurs and resources Develop young entrepreneur’s organization Invest in improving networks and coaching programs for entrepreneur’s region wide Promote regional collaboration and promotion of available resources such as training programs, support organizations, events, networks, etc. 	

Development Resources

Promoting Awareness and Building Networks

Regional Network Resources			
Name	Type	Contact	Phone
Cuba Chamber of Commerce	Chamber	Doug Easler	(573) 885-2531
Dixon Area Chamber of Commerce	Chamber	Tommy Nichols	(573) 759-7776
Hermann Chamber of Commerce	Chamber	Bill Fischer	(573) 486-2313
Missouri Enterprise	Business Optimization Services	Dusty Cruse	(573) 329-8505
Owensville Chamber of Commerce	Chamber	Robert Niebreugge	(573) 437-4270
Pulaski County Growth Alliance	Community Growth		(573) 336-2123
Rolla Area Chamber of Commerce	Chamber	Barry White	(573) 364-3577
Rolla Regional Economic Commission	Economic Commission	Cyndra Lorey	(573) 201-3772
St. James Chamber of Commerce	Chamber	Deb Parton	(573) 265-3899
Salem Chamber of Commerce	Chamber	Tabatha Utley	(573) 729-6900
Steelville Chamber of Commerce	Chamber	Peggy Cardoni	(573) 775-5533
Sullivan Chamber of Commerce	Chamber	Jane Epperson	(573) 468-3314
Vienna Chamber of Commerce	Chamber	Vivian Honse	(573) 422-3549
Washington County Chamber of Commerce	Chamber	Kris Richards	(573) 438-4517
Waynesville-St. Robert Chamber of Commerce	Chamber	Rhonda Cortesini	(573) 336-5121
Sustainable Ozarks Partnership	FLW Optimization	Kent Thomas	(573) 329-8502
Gasconade Valley Enterprise Zone	Economic Commission	Bonnie Prigge	(573) 265-2993

E. Optimizing the Regulatory Environment

Entrepreneurs and small businesses do not operate in a separate market away from local, state, and federal policy makers. **Economic development efforts must ensure that the regulatory burdens placed on small businesses do not adversely affect their ability to compete and grow.** While there must be some requirements related to running a business of any size, small businesses often lack the resources and knowledge to navigate complex tax codes, registration processes, and other industry specific requirements. Therefore, it is important to provide the necessary support mechanism and transparency regarding regulations affecting small businesses.

In this section, the perceptions of small business owners toward the regulatory climate are analyzed. Assessing the regulatory environment in a fair way is challenging. Some regulations are made at the federal level, others at the state level, and some at the local level. Local governments often must enforce regulations not of their own making. Whether additional paperwork or other requirements on business are a burden or necessity often depends on one's perspective. To a local government official who must ensure compliance with a local ordinance or state regulation, requiring additional paperwork might be viewed as essential. However, to a first-time entrepreneur dealing with the complexities of a new business, additional paperwork is likely to be perceived as a burden.

However, by providing clarity of procedures and access to accurate information, local government reinforces the idea that a community is open for business. Local government can take care to ensure that entrepreneurs can easily traverse start-up processes, thereby increasing customer satisfaction and encouraging compliance. First-generation or first-time entrepreneurs are particularly subject to becoming confused or frustrated because they are not familiar with common business processes (Stapleton, 2012).

Perceptions about the Regulatory Environment

Stakeholders in the survey responded to several questions about the regulatory environment. The rating was done on a scale where 1 = "poor", 2 = "fair", 3 = "good", and 4 = "excellent". One question asked stakeholders to rate the performance of "state and local governmental regulations that support small businesses". The response was that 33% said "poor", 48% said "fair", 16% said "good", and only 1% said it "excellent". This suggests an overall negative view of the impact of state and local government regulations

The next question asked about the "effectiveness of government-sponsored growth incentives (tax breaks, seed funding, etc.)". This was rated even lower than the first question. Only 12% said "good" and only 1% rated it "excellent". This suggests that stakeholders do not believe these incentives are effective in promoting job growth and/or that the incentives tend to favor larger companies over small businesses.

A third question asked about "the level of taxation on small businesses". Not surprisingly few considered this "excellent" as well, while 85% said it was "poor" or "fair". The biggest challenge with this issue is that most taxes, with the exception of property taxes, are set at the national or state level. Current and former business owners generally rated all of these questions lower than non-business owners. The fact that business owners are more directly influenced by these issues likely explains the difference in perception.

However, the entrepreneurs who were interviewed for the report were not as negative about local government as the survey findings. Entrepreneurs reported a mixed record with local government. One entrepreneur highly praised a county health department for their service. Another entrepreneur mentioned that county governments were inconsistent in their regulations, but reasonable to work with. And another entrepreneur found it difficult to work with a particular municipality.

Although it is not clear that local government is at fault here, we suggest an active approach by local governments in building relationships with entrepreneurs. A Kauffman Foundation report from March 2015 stresses the importance of an active local government approach, “If local governments wish to encourage entrepreneurship, it requires that those officials connect to entrepreneurs at the individual level and to entrepreneurs’ networks at the local level.” (Kauffman, 2015).

Obviously, the region cannot control the regulations or enforcement actions of federal and state agencies. However, it may be possible to streamline operations to be more responsive to the needs of entrepreneurs when it comes to local concerns, such as business licenses and building permits. Our recommendation is that local governments hold listening sessions to which they invite business owners, entrepreneurs, economic developers, and other leaders to discuss local regulations and processes and determine ways to make those processes more efficient for business. The focus should be on making regulations, licenses, and business requirements transparent and easily accessible. Many problems with the regulatory environment can often be eased or solved by improving communication.

Regulatory Environment in the State of Missouri

At the federal and state level, laws are created that influence small businesses and entrepreneurs’ capacity to do business in the marketplace. Some markets are easy to enter and require little formal investment other than knowledge, experience and a desire to do business. Dog-walking, babysitting, online blogging, etc. are examples of markets with relatively easy market entry. They may not provide the biggest opportunities for making large profits, but for some they can serve as extra income or as a flexible job. On the other hand, some markets are harder to enter because of additional regulations or restrictions required when opening a business. These requirements are generally considered licenses. Licensing requirements often include a minimum number of years of education, initial and/or yearly fees, passing one or more exams, and continuous education and training to stay licensed.

While licenses are put in place in large part to protect the consumer from scams and unfairly low-quality services, it is also true that licenses can slow or block entrepreneurial activity and thus job creation. Recent research shows that in the 1970s, roughly 10 percent of jobs required the individual to have a license, but by 2008 this had increased to almost 30 percent (Kleiner, 2014). As the Kaufmann Foundation recently pointed out, more licensing requirements likely result in fewer entrepreneurs starting businesses in those markets. This allows incumbent firms to charge higher prices, which may be good for them, but bad for overall business creation. Some professions in Missouri that require licenses include barbers, real estate salespersons, manicurists, funeral directors, etc.

"We need a big round of deregulation on the Federal level." - 2016 Regional Survey Quote

To help evaluate the conditions in Missouri for how licensing requirements affect entrepreneurs, Thumbtack and the Kauffman Foundation have collaborated on a Small Business Friendliness Survey that identifies “how unfriendly or friendly your state or local government are with regards to licensing forms, requirements and fees?”. The survey has been conducted for three years, starting in 2012 and draws its conclusion from over 200 small business owners throughout Missouri. In 2015, the state as a whole was graded a “B”, the best grade since the survey began in 2012. A “B” still

indicates room more improvement on fostering a business environment that is friendly to small businesses and entrepreneurs. The grading scale follows the standard academic scale from A to F.

The survey seems to indicate that the regulatory environment is not perceived in a very positive light when it comes to the burden of licensing. In 2015 the grade was “B-“, a small improvement from the “C+” in 2014. The reason this is brought up, despite the fact that individual regions have little power to change licensing laws, is that information and support can be developed and provided to help ensure that any would-be entrepreneur has the best odds of navigating any barriers to entry. The goal should not only be focused on trying to change the regulations, but also on how to accommodate and provide helpful services towards decreasing the barriers to entry based on licensing requirements. One of the tools that should be available for regional entrepreneurs is an information package that highlights key information about regulatory issues. This should also include relevant information about regional resources that can help entrepreneurs and small businesses navigate regulatory requirements.

For further information about specific licensing requirements in Missouri go to CareerOneStop’s webpage at www.careeronestop.org/explorecareers. Click on the “Licensed Occupations” link and search for the specific licenses in Missouri. The Missouri Career Center located in Warrenton also provides assistance for requirements specific to job training in the Region.

Additional Regulatory Factors

Besides surveying how friendly or unfriendly the state is with respect to licensing issues, the Small Business Friendliness survey also asks small business owners a series of questions related to the regulatory environment in the state. Table 6.1 highlights eleven areas where state and local government regulations affect small businesses. Note, this survey is statewide, not specific to the region.

This survey reflects the state’s overall regulatory environment and as such may not reflect exactly how small business owners in the Meramec region feel. But, it does say something about what individual regions must consider when they want to improve their own regulatory environment and develop successful economic and entrepreneurial development efforts. Overall, the survey indicates that small business friendliness is not doing too well in Missouri. Only two areas received A level grades, Health & Safety and Tax Code related regulations. The worst grade was related to training and networking programs. As discussed in the “Promoting Awareness and Building Networks” and “Developing a Pipeline of Educated and Skilled Entrepreneurs” drivers, these areas are also very important for the Meramec region.

It is also important to point out that this survey deals with the perception of these areas. This is important because a negative perception does not always mean that something is actually wrong. Very often negative views are based on lack of or limited information about an issue. On the other hand, negative perceptions can also help guide policy makers towards specific issues that small business owners would like to see changed or improved. In addition, it could mean that more education and communication on specific issues is needed throughout Missouri.

While Missouri did not receive a top grade by small business owners, it should not go unnoticed that **the state’s economic development agency was named the best in the nation** (Office of Missouri Governor, 2015 AEDI/Pollina Corporate). The honor was given due to the economic development agency’s “efforts on marketing of the state to employers, efforts for attracting new business and assisting existing state employers”. Over 30 factors were used in the selection process to rank all 50 states. Missouri was also ranked 9th on the Pollina Corporate Top 10 Pro-Business States in 2015, adding credibility to the state’s overall strong business and regulatory environment.

Table 6.1 - Missouri Small Business Friendliness Survey

Source: <http://www.thumbtack.com/mo/#/2015/10>

	Survey Question	Grade				
		2012	2013	2014	2015	2016
Overall friendliness	In general, how would you rate your state's support of small business owners?	B-	C	C	B	B-
Ease of starting a business	How difficult or easy do you think it is to start a business in your state?	B	B-	C	A-	B+
Ease of hiring	How difficult or easy is it to hire a new employ at your business?	C+	B	C-	C+	C-
Regulations	How unfriendly or friendly is your state or local government with regard to business regulations generally?	C+	C+	B-	B	C+
Health & safety	How unfriendly or friendly is your state or local government with regard to health and safety regulations?	C-	B	B	A-	C+
Employment, labor & hiring	How unfriendly or friendly is your state or local government with regard to employment, labor & hiring regulations?	C+	C	C-	B	C+
Tax code	How unfriendly or friendly is your state or local government with regard to tax code and tax-related regulations?	B-	B-	C+	B+	C+
Licensing	How unfriendly or friendly is your state or local government with regard to licensing forms, requirements and fees?	C+	B-	C+	B-	B
Environmental	How unfriendly or friendly is your state or local government with regard to environmental regulations?	C-	C+	A	B	C
Zoning	How unfriendly or friendly is your state or local government with regard to zoning or land use regulations?	C-	B	A-	B-	C+
Training & networking programs	Does your state or local government offer helpful training or networking programs for small business owners?	N/A	D+	F	F	B

Summary

Optimizing the Regulatory Environment

Strengths	Challenges
<ul style="list-style-type: none">• Community-focused music and arts events are strong in the region, which helps promote common community goals and bring in additional tax revenue• Focus group identified the importance of ensuring region-wide collaboration at the local government level.• Missouri’s Economic Development Agency named best in the nation in 2015	<ul style="list-style-type: none">• Regional survey indicated a mostly negative view of state and local government regulations that support small businesses
Opportunities	
<ul style="list-style-type: none">• Develop regional “small business friendliness survey” to identify exact areas of concern for small businesses• Arrange annual focus group meeting with entrepreneurs to have face-to-face discussions about regulatory challenges• Identify regulations that are specific to the region’s cities or counties that may be stifling to entrepreneurial activity – help create uniform regulations throughout the region	

Development Resources

Optimizing the Regulatory Environment

State and Federal Legislators			
Name	Type	Address	Phone
Claire McCaskill	Senator	28 N. 8th St., Ste. 500, Columbia, MO	(573) 442-7130
Roy Blunt	Senator	1001 Cherry Street, Suite 104, Columbia, MO	(573) 442-8151
Justin Alferman	MO House of Representative, District 61	201 West Capital Ave, Room 106-A, Jefferson City, MO	(573) 751-6668
Keith Frederick	MO House of Representative, District 121	201 West Capital Ave, Room 411B, Jefferson City MO	(573) 751-3834
Tom Hurst	MO House of Representative, District 62	201 West Capital Ave, Room 412A, Jefferson City MO	(573) 751-1344
Steve Lynch	MO House of Representative, District 122	201 West Capital Ave, Room 313-1, Jefferson City MO	(573) 751-1446
Ben Harris	MO House of Representative, District 118	201 West Capital Ave, Room 109A, Jefferson City, MO	(573) 751-2398
Robert Ross	MO House of Representative, District 142	201 West Capital Ave, Room 114A, Jefferson City, MO	(573) 751-1490
Nate Tate	MO House of Representative, District 119	201 West Capital Ave, Room 115F, Jefferson City, MO	(573) 751-0549
Jeff Pogue	MO House of Representative, District 143	201 West Capital Ave, Room 400CC, Jefferson City, MO	(573) 751-2264
Jason Chipman	MO House of Representative, District 120	201 West Capital Ave, Room 415B, Jefferson City, MO	(573) 751-4085
Paul Fitzwater	MO House of Representative, District 144	201 West Capital Ave, Room 110B, Jefferson City, MO	(573) 751-2112
Jason Smith	8 th Congressional District	830A S Bishop Rolla, MO	(573) 364-2455
Vicki Hartzler	4 th Congressional District	219 North Adams Street Lebanon, MO	(417) 532-5582
Blaine Luetkemeyer	3 rd Congressional District	2117 Missouri Boulevard Jefferson City, MO	(573) 635-7232

Part IV. Summary & Recommendations

Summary

The following three pages summarize the strengths, challenges, and opportunities in the region. Each section is intended to give a brief, but focused, overview of the main outcomes of the analysis.

Regional Strengths

The region's main strengths include:

- A strong cadre of entrepreneurs.
- Many strong institutes of higher learning that are vital to training the workforce exist within the eight-county region.
- Active Small Business Technology and Development Centers along with other civic business organizations exist.
- Several counties that are implementing K-12 STEM curriculum which will ultimately strengthen workforce development.
- A slight increase in computer-related occupations from 2002-2015.
- A strong education and knowledge cluster in the region giving opportunities to provide training for residents to improve skills.
- An excellent platform of technology diffusion and economic development services are offered.
- Many strong resources for technology and innovation diffusion through higher education systems.
- Supportive locally owned banks that are easy to work with, supportive of entrepreneurs and willing to lend to new business, according to interviewees.
- Community-owned banks, typically giving entrepreneurs a better chance for procuring loans.
- Regional stakeholders that recognize the need for innovation and consider banks to be "important" or "very important" in fostering innovation.
- 47% of stakeholders considering the availability of loans from banks to be "excellent" or "good".
- There are many opportunities for capital available in region outside of banking industry alone.
- Strong commercial banking bringing many opportunities to the region.
- An increase in more than 300 jobs in the financial services industry leaving opportunity for growth regionally.
- Stakeholders recognizing the importance of collaboration among business and strong entrepreneurs.
- Three communities participate in the Missouri Main Street Connection program.
- Stakeholders that have a positive view for new residents integrating into the business community.
- Community-focused music and arts events that are strong in the region, which helps promote common community goals and bring in additional tax revenue.
- Focus group identified the importance of ensuring region-wide collaboration at the local government level.
- Missouri's Economic Development Agency named best in the nation in 2014.

Regional Challenges

The Meramec region also experienced some challenges that may affect the region's entrepreneurs and stakeholders abilities to thrive and succeed. These are areas where both public and private entities can come together and help make investments to improve the area's foundation for fostering entrepreneurship. None of these things can be fixed overnight and priorities must be made to determine which to deal with first, but the goal should be to make long-term investments in high-impact initiatives.

The region's main challenges include:

- Developing a partnership between all education institutes and local businesses.
- A lack of active mentors for new entrepreneurs to consult.
- A lack of training opportunities in a few parts of the region.
- Few investments in improving access to high speed internet throughout the region.
- A limited number of computer professionals.
- Limited availability of IT professionals.
- Quality of technical assistance from education institutes rated as "poor" or "fair" by stakeholders.
- More than 80% of stakeholders rated the availability of capital from investors or angel investors as "poor" or "fair".
- No venture capital identified in the region.
- Little to no available financing/capital resources.
- The perception that stakeholders do not believe that residents actively participate in community development organizations.
- Access to entrepreneurial coaches, including small business development and technology centers, SCORE chapters, industry experts, and training programs is seen as limited.
- A majority of communities in the region do not participate in main street programs.
- The regional survey indicated a mostly negative view of state and local government regulations that support small businesses.

Regional Opportunities

Based on the existing resources and trends in the region, there are several opportunities that can help foster a stronger entrepreneurial ecosystem. These regional opportunities require collaboration and commitment from stakeholders throughout the region.

The region's main opportunities include:

- Investing in developing and promoting regional internship programs to help connect students with regional employers
- Reaching out to young adults and identify what makes them want to live and work in the region and what makes them want to move. This will help provide better guidelines for investing in amenities and resources relevant to young adults
- Identifying ways to partner education institutes and local business to amplify entrepreneurship endeavors
- Expanding entrepreneurship training opportunities and resources throughout the entire region
- Leveraging increase in technology and innovation based industries to promote more tech-focused job development
- Investing in stronger broadband access in low access counties.
- Reviewing statewide and regional plans to identify potential support and collaboration for broadband deployment initiatives
- Partnering with educational institutes throughout entire region around technical assistance opportunities
- Developing guide and plan of action for marketing available funding resources
- Evaluating the feasibility of creating venture capital fund
- Hosting entrepreneurship conference bringing together entrepreneurs, larger businesses, and the public sector
- Implementing "Entrepreneur of the Year" award in each county of the region to raise the profile of entrepreneurs and connecting them to other entrepreneurs and resources
- Developing young entrepreneur's organization
- Investing in improving networks and coaching programs for entrepreneurs region wide
- Promoting cross-county collaboration and promotion of available resources such as training programs, support organizations, events, networks, etc.
- Developing regional "small business friendliness survey" to identify exact areas of concern for small businesses
- Arranging annual focus group meeting with entrepreneurs to have face-to-face discussions about regulatory challenges
- Identifying regulations that are specific to the region's cities or counties that may be stifling to entrepreneurial activity – help create uniform regulation throughout the region

Recommendations

The following pages provide detailed recommendations for improving the Meramec region's entrepreneurial ecosystem. Examples and links are then given for each recommendation.

Developing a Pipeline of Educated and Skilled Entrepreneurs

RECOMMENDATION Invest in Young Adults

Young adults play a key role in long-term economic and entrepreneurial development. The next generation of entrepreneurs should be encouraged to invest in their own communities. It is important to consider what amenities and programs can make a rural region attractive to young adults, without trying to compete directly with large metropolitan areas. Relevant amenities that help foster a vibrant community range from movie theaters to recreational facilities and a focus on the arts.

Example: Survey

Source: www.engagementscholarship.org/upload/conferences/2013/presentations/P1LightPerceptionsof.pdf

Develop a survey to gauge the specific needs and desires of young adults within the region. This should also include the next generation of young adults and identify what would make them more likely to stay in the region long-term.

Example: Investing in the Health and Well-Being of Young Adults

Source: <http://www.rwjf.org/content/dam/farm/reports/reports/2014/rwjf416341>

How to engage and invest in young adults well-being is important to retention, recruitment and attraction. Trends from a national perspective are included in the above listed source and provide ideas that may be helpful in guiding conversations about what investments in the Meramec region can be made.

RECOMMENDATION
Explore Development of Incubator Feasibility Study

Explore the feasibility of an incubator in the region. Based on the prevalence of manufacturing and agriculture opportunities, the region could benefit from investigating the possibility of developing incubator space for the agri-businesses and manufacturers. There are many advantages of having an incubator in the region to assist in meeting fast changing demands, provide industry specific solutions, serve a wider range of entrepreneurs, and promote collaboration.

An ag-tech and manufacturing incubator provides access to tools and machines, as well as networking opportunities for regional ag-industry professionals, investors, and business leaders. The focus should be on fostering ag-tech and manufacturing start-ups.

Educational institutions can also benefit by bringing students in and providing them with training in the latest technology and tools. This type of incubator is also a good investment in cultivating technology exchange and innovation.

Example: Mo-Kan Creative Accelerator Feasibility Analysis

Source: 1-816-233-3144

This region assessed the feasibility of a similar project that provides a road map of what it will take to develop an incubator with optimal chances of success. Contact can be made with Mo-Kan to request a copy of their study.

Example: TechShop

Source: www.techshop.com

The most prominent example of a manufacturing-focused incubator is the TechShop concept. TechShop is a maker-space where members get access to high-quality machines and tools. Members can use the machines and tools to develop prototypes and scale-models.

RECOMMENDATION
Develop Internship Programs for Advanced Manufacturing and Agriculture Sectors

Explore development of implementing an ag-tech and manufacturing focused internship program to help support the growing number of ag-related jobs and advanced manufacturing business. Real-life work experiences is vital to help youth understand the importance of their future and validity of goals. Ag focused and advanced manufacturing internships will build lasting recruiting relationships with each industry leader and students in the workforce.

Example: Texas Agricultural Cooperative Council

Source: <http://texas.coop/career/2016-Proposed%20Intern%20Program.pdf>

The attached example is a great source to develop internship programs from. From the possibility of a possible stipend, funding, selection process and additional benefit ideas.

Example: Advanced Manufacturing Technician Program – St. Charles, MO

Source:

https://dhe.mo.gov/academic/programrequests/documents/StateTech_AASAutomationandRobotics_C0Machining_C0Electrical.pdf

RECOMMENDATION

Expand Entrepreneurial Trainings

Invest in expanding entrepreneurial trainings, both formal and informal. Exposing the ideas and concepts of entrepreneurship to the community can be a powerful way to encourage potential future entrepreneurs to explore their ideas. Entrepreneurial education should cover both theoretical concepts and practical experience. Trainings should include a wide range of activities, such as student-run clubs, small business internship programs, annual entrepreneurship events, mentoring programs, etc.

Example: Adopt an Innovator

Source: Dr. Sean Siebert (sean@ruralmo.com)

The program is entrepreneurial, motivational, encouraging, high-energy, and a lot of fun! People have used the program to find a new career, to start a new company, to expand an existing business, to perform better at their current position, to problem-solve current organizational issues, to create more personal income, and to find a better place in life.

Cultivating Technology Exchange and Innovation

RECOMMENDATION Retain and Attract IT Professionals

There are two main ways to help retain and attract IT professionals to the region. The first is to invest in retaining residents with IT skills and education. The best way to accomplish this is to ensure enough IT-related jobs are available. Often easier said than done. The second way is to provide IT training and education to residents, particularly those that are un/undereducated.

Example: LaunchCode

Source: www.launchcode.org

LaunchCode is a program first launched in St. Louis that provides free coding lessons to anyone in the city. The purpose is to help un/undereducated individuals with new skills needed by more and more companies. LaunchCode not only helps people get new tech-skills, but they also help connect them with companies in need of those skills. It works as a match-making service that ensures both sides get what they need. The program is currently in the process of expanding to new cities, including rural areas.

Example: Onshore Outsourcing

Source: <http://onshoreoutsourcing.com>

Onshore Outsourcing is an information technology service company based on a rural outsourcing workforce development model. This concept focuses on utilizing low cost, quality IT support services by locating their offices in rural areas. This allows Onshore Outsourcing to hire and train individuals in rural communities, while staying cost competitive against offshore outsourcing. This helps create jobs, train IT skills, and promote economic development.

RECOMMENDATION Expand Broadband Access

Access to high speed internet is a key component of participating in the modern economy and allowing regional entrepreneurs to succeed on a national and global scale. Small businesses can gain access to bigger markets and increase their profitability, while new entrepreneurs can become part of the market much faster by doing better market research, finding suppliers and buyers, and developing partnerships beyond local boundaries.

Example: Kennett City Light Gas and Water

Source: www.clgw.net/it.php

Kennett, Missouri invested in a municipally owned and controlled fiber network, City Light Gas and Water (CLGW) that provides fiber internet access to over 1,000 residential homes and businesses. Kennett's CLGW also provides free wi-fi access points at public parks and at the Kennett Airport.

Example: PANGAEA

Source: www.pangaea.us

In 2002 Tryon, NC a small city of less than 2,000 decided that high-quality internet access to residents, schools, and businesses was a city priority. Without the support of private internet providers, the city took action and applied for state grants to create a state of the art fiber-optic network. To ensure that schools, residents, and businesses had access to the high-speed internet at affordable rates, a 501 (c)3 nonprofit organization was created to manage the network.

RECOMMENDATION
Increase Opportunities for Tech-focused Education

There are several ways tech-based education and training can be offered in the region. The traditional route is to add more tech-focused curriculum in the school system. While this is an important aspect of tech-focused education it is not the only option available.

Developing tech-focused education outside of formal educational settings can be achieved in many ways. Online resources are growing at a fast pace and helping local businesses take advantage of these would be a great step in the right direction. Offering tech-focused workshops is another option that can help educate people across the region about new technological developments such as 3D printing, virtual reality, nano technology, etc. A third option is to create free coding courses across the region and invite anyone to participate.

The overall idea is that technological developments, and the opportunities that come along with those, are happening at a faster rate than ever before. Therefore, communities must adopt new ways to help educate residents about these technologies.

Example: coder_girl

Source: <https://www.launchcode.org/codergirl>

CoderGirl is a LaunchCode Education program that is designed to engage and educate women in the technology community in St. Louis. It is a year-long tech training program consisting of two 6-month cycles: a learning cycle and a project cycle. CoderGirl provides a space for women of all skill levels to learn to code in a supportive community of like-minded individuals.

Example: After School Coding Programs

Source: <https://hourofcode.com/ca/how-to/afterschool>

The basics of computer science helps nurture creativity and problem-solving skills, and prepare students for future careers.

Improving Access to Capital

RECOMMENDATION Formal Investor Group

Identify high net worth individuals and successful business residents and approach them about forming a formal investor group(s). This could be an extension to the established angel investor group adding venture capital groups. Private investors should be the main driving force behind the investments, but public entities can provide support and networks to ensure information about new funding opportunities reach all potential entrepreneurs and small businesses.

Example: 1ST50K

Source: www.1st50k.org

1ST50K is a grant based business plan competition in Cape Girardeau, MO. The competition is held four times a year where winning start-up teams can receive up to \$50,000 in non dilutive grant money. This approach combines access to funding, education/trainig, and networking

RECOMMENDATION Capital Resources Inventory List

Develop a detailed capital resources inventory list. This should identify all relevant resources for investment capital including seed money, angel investors, venture capital groups, revolving loan funds, micro lending programs, SBA offices, traditional banks, and any others that can be identified. The list should be made readily available to any entrepreneurs or small business owners.

Example: Fox Cities Regional Partnership

Source: www.foxcitiesregionalpartnership.com/financial-resources/

Fox Cities Regional Partnership in Wisconsin provides an example of what such a resource list could look like. Their list includes an overview of all the financial resources available in the region.

RECOMMENDATION Entrepreneurship Training Supported by Local Banks

While there is great evidence in the Meramec region that local banks are very supportive, one of the challenges often experienced by entrepreneurs and small businesses is the opportunity to connect with regional banks. At the same time, regional banks may often not be well connected into the entrepreneurial ecosystem. This creates a disconnect between those that need to borrow money to start and grow their business and the banks that should be supporting regional business development.

Example: Ignition Pitch Competition

Source: <http://www.columbiaredi.com>

The Regional Economic Development, Inc. in Boone County, MO hosts an annual pitch competition where top three placement winners take home a significant amount of start-up money. They also have a high school category where students can win start-up cash. The competition provides an opportunity for entrepreneurs to pitch their idea to a group of experienced business professionals. Beyond the chance of winning seed capital to start or grow their business, there is also tremendous value in the direct feedback each entrepreneur gets about their idea. The main focus should be to ensure that financial experts and local banking representatives both support and participate in the pitch competition.

Example: Latino Business Resource Center

Source: <http://www.kutztownsbdc.org/lbrc/>

The Latino Business Resource Center, a part of the SBDC at Kutztown University in Pennsylvania, provides a great example of a program focusing in on a specific issue. They offered an 8-week long training program where local bankers participated in each session. At the end of the program each entrepreneur presented their idea to a panel of judges, including the bankers, and the most well-developed ideas were offered funding opportunities on the spot.

The program exemplifies the importance of connection entrepreneurs and bankers in an environment that emphasizes collaboration and opportunities for both sides. While this program was specifically developed for the Hispanic community, there is no reason it cannot be used for any entrepreneurial community.

Promoting Awareness and Building Networks

RECOMMENDATION Youth Entrepreneurship Organization

An entrepreneurship organization for youth or young professionals is a way to help encourage entrepreneurial thinking in young adults and provide a platform to build a stronger network of entrepreneurs and supporters. A young entrepreneurship organization should be focused on identifying future entrepreneurs, business leaders, and technical people. The goal is to help them test their ideas, practice business development, and get them connected with experienced mentors.

Example: Effingham CEO

Source: <http://midlandinstitute.com>

The Midland Institute for Entrepreneurship's "Creating Entrepreneurial Opportunities" (CEO) is a program developed in Effingham, IL. The program is funded by business investors and is open to high school juniors and seniors. It serves both private and public schools and it utilizes the region's own businesses as classrooms. One of the most impressive aspects of the program is that every participating student is connected with a mentor from the local business community.

RECOMMENDATION Expand Downtown Main Street Programs

Creating strong networks and a sense of community is important to the overall region's ability to connect across cities and counties. The existing downtown organizations are important assets in this effort. More communities should consider joining this group and the different communities must collaborate on creating vibrant downtown communities across the region.

Example: Old Town Cape

Source: www.oldtowncape.org

The Old Town Cape group in Cape Girardeau provides a great example of an organization that has more comprehensive efforts to grow downtown businesses. Their dedicated focus on bringing small business, local tourism, and liveliness to the downtown area of Cape Girardeau resulted in them winning the 2015 Great American Main Street Award.

RECOMMENDATION
Regional Collaboration and Entrepreneurship Networks

One of the most important efforts towards building a stronger entrepreneurial ecosystem is collaboration. Supporting local entrepreneurs with local resources is important, but to elevate the region as a whole it is necessary to collaborate across county borders. This includes sharing experience, knowledge, and resources between the region's economic developers, business leaders, educational institutions, entrepreneurship support organizations, etc.

Example: St. Joseph Small Business Resource Center

Source: www.stjosephsmallbusiness.com

The Small Business Resource Center is an extension of the St. Joseph Chamber of Commerce. While this is not a perfect example of an entrepreneurship network, it is a good starting point for thinking about how a region can foster networks more focused on the small business owners and aspiring entrepreneurs. Using the chamber as the main platform can be a very valuable resource, because an existing network of business owners and community leaders are already engaged in the chamber.

Optimizing the Regulatory Environment

RECOMMENDATION Small Business Friendliness Survey

By conducting an annual survey to gauge small business owner's perception of the regulatory environment will help track the general attitude and perception of how well public institutions are supported. The survey will also help identify what areas of the regulatory environment small business feel need to be improved most. Results should be presented to community leaders and policy makers on an annual basis.

Example: Small Business Friendliness Survey

Source: <https://www.thumbtack.com/blog/2016-methodology/>

The above link will help guide the questions and format of your survey. Using the same structure will create benchmark results of the region's regulatory environment against Missouri and other states.

RECOMMENDATION Regional Regulations

In extension to the survey an extensive review of licenses and regulations specific to the region should be conducted. The goal should be to identify what, if any, regulations might be outdated or unfair towards fostering an entrepreneurial ecosystem. Review streamlining business start up process.

Example: U.S. Small Business Administration

Source: <https://www.sba.gov/starting-business/how-start-business/10-steps-starting-business>

The above link is a resource developed with a "one-stop-shop" concept providing all the information needed for individuals to consider when starting their businesses. This type of resource could be helpful to develop on a regional level identifying specific county-to-county regulations to consider when starting and considering new business locations.

RECOMMENDATION Annual Focus Group

Regional entrepreneurs and small businesses should be invited to participate in an annual focus group where they can address concerns and challenges they face in doing business. This should be an opportunity for policy makers, practitioners, entrepreneurs, and other stakeholders to learn from each other and find new ways to support the entrepreneurial ecosystem.

Part V. Appendices

Appendix I - Methodology

Six different data driven tools are used to analyze the entrepreneurial and innovative activities that support the entrepreneurial ecosystem in the region. These data tools include: (1) a regional survey; (2) an interactive focus group; (3) the National Establishment Time Series (NETS); (4) industry clusters; (5) occupation clusters; (6) U.S. Census data. **Throughout the analysis these tools will be used to highlight key factors related to strengths and challenges faced by the Meramec region's entrepreneurial ecosystem.** The survey and focus group data tools are primarily subjective in that they capture individual views and attitudes towards various factors related to the entrepreneurial ecosystem. In contrast, the remaining four tools are objective in that they capture measurable variables related to economic dynamics.

The research takes the findings from the data tools and applies them to the policy framework (Stapleton, 2012). The policy framework is comprised of five key drivers related to developing and fostering a strong, competitive entrepreneurial ecosystem. The five drivers are:

Policy Framework

Developing a Pipeline of Educated and Skilled Entrepreneurs

Cultivating Technology Exchange and Innovation

Improving Access to Capital

Promoting Awareness and Building Networks

Optimizing the Regulatory Environment

Data Tools

1. Survey

Surveys were sent out to regional stakeholders to learn more about their attitudes, perceptions, and priorities concerning the region's strengths and weaknesses in supporting entrepreneurs. Stakeholders include policy makers, business owners, former business owners, and economic developers. Participants were asked dozens of questions from which responses were collected and analyzed. For example,

participants were asked to rate the regional importance of various entities including regional universities, banks, business suppliers, etc.

The report will highlight differences in opinions between respondents, particularly those who have started their own business and those who have not. This will help highlight a number of disconnects between the attitudes, perceptions, and priorities of the different types of regional stakeholders.

2. Focus Group

In order to get more detailed conversational feedback from regional stakeholders, an interactive focus group session was conducted. This session began with a presentation of a portion of the data analysis. After this, the focus group was conducted utilizing a game called *Up and Out: Entrepreneurship Edition* to help facilitate and guide an interactive conversation. The game provides participants with dozens of examples of ways participants could potentially make improvements to the region's entrepreneurial ecosystem. By the end of the game, participants narrowed down the potential implementation strategies to a short list of the ones they felt would be the most important to invest in.

Interviews were conducted with local entrepreneurs on an individual basis to understand their experiences and perspectives. Specifically, they explained in-depth:

- Their experience in starting a business
- The assistance they received within the region
- Their suggestions on how the support for entrepreneurs could be improved
- Their sense of the entrepreneurial spirit and culture within the region

3. National Establishment Time Series

The National Establishment Time Series (NETS) data provides detailed insights into job dynamics in the region. The main question to look at when using this data is, “**where are most new and existing jobs concentrated?**”. To answer this question the data shows the number of jobs broken down by establishment size. The size breakdown is as follows: self-employed, 2 to 9 employees, 10 to 99 employees, 100 to 499 employees, and 500 plus employees. **The data covers the time period from 2002 to 2013.**

When discussing this data it is important to understand the definition of an establishment. **An establishment is considered a business unit that provides goods or services at a single physical location.** This means that if a company has two or more locations in the region, each location and corresponding jobs are counted separately. Additionally, the data looks at jobs rather than just full-time employees, so it includes part-time employees, undocumented workers, and people working more than one job. This way the data captures a more detailed overview of actual job dynamics.

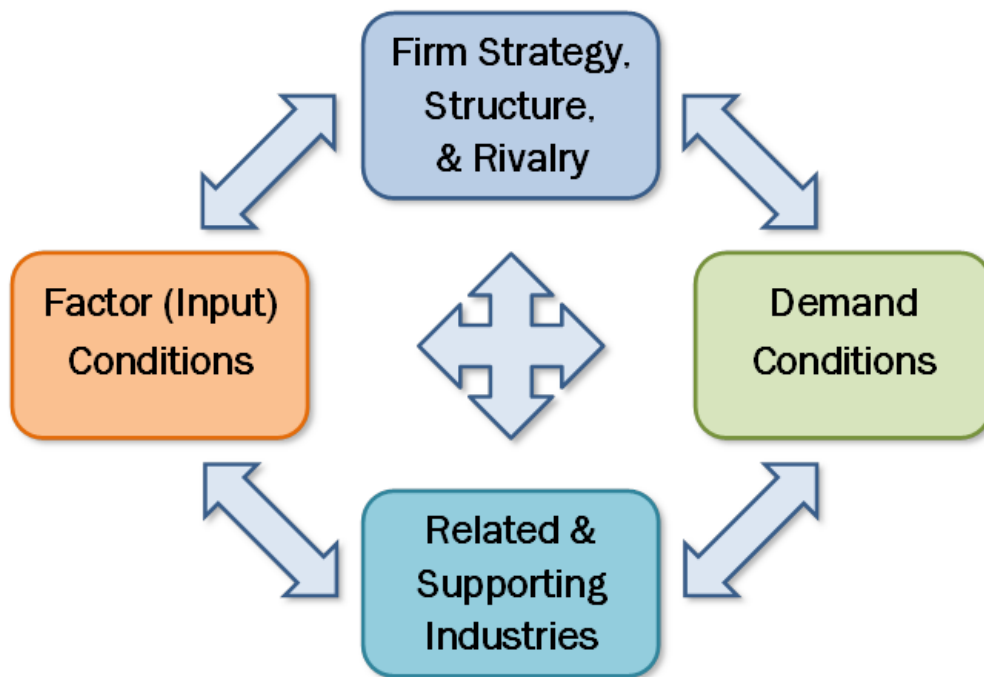
Using this data helps identify how well the region is doing with respect to fostering small and medium sized establishments. **Showing that new jobs come from small and medium sized establishments is vital to understanding the importance of investing in the entrepreneurial ecosystem.** Full data sets have been provided in appendix III.

4. Industry Cluster

Industry cluster analysis recognizes that industries in related sectors tend to cluster together geographically. A cluster will include the core industries that produce related or similar goods. Upstream industries include suppliers of inputs to the core industries. A cluster will also include support industries

that offer various specialized services to the core industries. Finally, a cluster will include downstream industries, which are the ultimate customers of the core industries. These typically include wholesale and retail establishments.

A key advantage of using industry clusters for analysis, instead of standard industry breakdowns based on traditional NAICS codes, is industry clusters can help identify existing and potential areas of competitive advantage for the region. Based on “Porter’s diamond”, **the competitive advantage derives from four factors:**



1) Factor or input conditions – Talent attraction, access to skilled labor pools, access to specialized suppliers, educational institutes with expert faculty, supportive infrastructure, etc.

2) Demand conditions – Higher than average home-market demand leading to faster and better innovations and product improvements that can be transferred to other markets.

3) Related and supporting industries – Close relationships between interrelated non-competing industries or suppliers in related industries, where the firms in the core cluster can gather unique know-how, have direct access to unique resources, and benefit from established supplier and customer channels.

4) Firm strategy, structure and rivalry – Management practices favored in a specific region, laws and regulations unique to the state or nation, public and private investment practices and efforts to support certain industries, and the culture of competition and cooperation that may lead to new and innovative relationships and business practices.

Every cluster in a region will have unique characteristics, but these four conditions will be important to all clusters and the ultimate ability of its component firms to compete in the national and global economy.

Industry cluster performance is ranked by using five key performance metrics and “weighting” each according to importance:

- Earnings (“important”) - how important is it that industries have high earnings per worker?
- Growth (“very important”) - How important is it that industries have high overall job growth?
- Regional Competitiveness (“very important”) - How important is it that regional job growth exceeds the national average job growth for an industry?
- Regional Specialization (“very important”) - How important is it that regional job concentration is higher than the national average job?
- GRP (“not important”) - How important is it that industries make a high contribution to overall gross regional?

Each unique cluster consists of industries broken down by six digit NAICS codes. The clusters in this analysis are defined according to the methodology of Harvard Business. This methodology breaks possible industry clusters into 71 unique categories.

A detailed data overview of each county’s industry clusters is provided in appendix IV.

5. Occupations

Occupational workforce data analysis can work as a standalone tool or as an extension to the Industry Cluster analysis. In this report it is used in the latter way. Occupational data is an approach that looks at the specific knowledge, skills and abilities of regional employees in certain job types. This is a helpful way to compare what jobs (and presumably knowledge, skills and abilities) are prevalent in a region to what industry clusters are strong. The optimal result is one where a region has a set up core industry clusters backed up by strong occupational data that can support the companies in those industry clusters.

Occupational data takes multiple sources into consideration when calculating the employment numbers. These sources include the Bureau of Labor Statistics’ Quarterly Census of Earnings and Wages (QCEW) Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors. The data set is derived from the Economic Modeling Intl, Inc (EMSI) software.

Using the occupational data also provides an opportunity to create and analyze occupational clusters. This is done by combining employment data from occupation types that tend to require similar knowledge, skills, education. This is helpful when trying to compare Industry Cluster data with what specific occupations are prevalent in a region. For example, a region with a strong technology based industry cluster would be expected to also have a strong base of tech-focused occupations. Conversely, if a region wishes to create more tech-driven companies it would be help to look at what tech-occupations are already prevalent and which are missing to achieve this goal.

6.Census

Census data is the procedure of systematically acquiring and recording information about the members of a given population. It is a regularly occurring and official count of a particular population. A census can be contrasted with sampling in which information is obtained only from a subset of a population, typically main population estimates are updated by such intercensal estimates. An intercensal estimate is an estimate of population between official census dates with both of the census counts being known.

Census counts are necessary to adjust to adjust samples to be representative of a population by weighting them as common in opinion polling.

Using census data helps give an understanding of the specific region dynamics as provided specifically by local residents. Various data points from the U.S. Census source are used throughout the report to highlight key economic factors.

Appendix II - Survey Template & Feedback

Survey Demographics	
Male	59.3%
Female	40.6%
30 or younger	3.3%
31-40	15.4%
41-50	18.7%
51 or older	62.6%
Business owner	52.7%
Employee	37.3%
Unemployed	0%
Retired	9.8%
Have started a business at some point	64.8%
Have not started a business at some point	35.1%
Less than high school	1%
Graduated from high school	8.8%
Some college	23.1%
Bachelor's degree	42.9%
Master's degree or higher	24.2%

In what County do you work?	
Crawford	1%
Dent	25.3%
Gasconade	27.25%
Maries	1%
Osage	1%
Phelps	8.8%
Pulaski	6.6%
Washington	17.6%
Other	11%

How long have you lived in the region?

Less than a year	0%
2-5	7.7%
6-9	9.9%
10 or more	75.8%
None of the above (I don't live in the region)	6.6%

Please rate the region's current performance on each factor. (1 = poor, 2= fair, 3= good, 4= excellent)

	Average	# of answers	1	2	3	4
The region's overall quality of life.	3.04	79	3.8%	16.4%	51.9%	27.8%
The overall quality of the region's community and technical colleges.	2.83	78	5.1%	24.3%	52.5%	17.9%
The overall quality of the region's 4-year colleges and universities.	3.05	79	2.53%	16.4%	54.4%	26.5%
The availability of regional college and university internship programs.	2.03	78	29.4%	41.0%	26.9%	2.56%
The quality of technical assistance offered by regional colleges and universities to businesses.	2.38	78	21.7%	30.7%	34.6%	12.8%
The quality of collaboration between businesses and regional college/universities.	2.13	77	15.5%	58.4%	23.3%	2.60%
The availability of top managers in the region.	2.12	76	18.4%	51.3%	30.2%	0.0%
The availability of information technology professionals in the region.	2.24	79	21.5%	37.9%	35.4%	5.06%
The availability of risk capital from investors in the region.	1.91	76	31.5%	46.0%	22.3%	0.0%
The availability of risk capital from angel investors in the region.	1.66	73	47.9%	38.3%	13.7%	0.0%
The availability of capital from banks in the region.	2.40	77	14.2%	38.9%	38.9%	7.79%

Please rate the region's current performance on each factor. (1 = poor, 2= fair, 3= good, 4= excellent)

	Average	# of answers	1	2	3	4
State and local governmental regulations that support small businesses	1.86	78	33.3%	48.7%	16.6%	1.28%
The level of taxation on small businesses	1.87	78	28.2%	57.6%	12.8%	1.28%
The effectiveness of government-sponsored growth incentives (tax breaks, seed funding, etc.)	1.81	78	34.6%	51.2%	12.8%	1.28%
The effectiveness of regional programs to help start-up businesses	1.86	78	30.7%	55.1%	11.5%	2.56%
The effectiveness of regional programs to train entrepreneurs	1.94	78	26.9%	57.6%	10.2%	5.13%

Overall, how important are each of the following entities to your region's ability to innovate? (1= not important at all, 2=somewhat important, 3=important, 4=very important)

	Average	# of answers	1	2	3	4
Universities and 4-Year Colleges	3.07	74	4.05%	13.5%	54.0%	28.3%
Community/Technical Colleges	3.16	74	2.70%	17.5%	40.5%	39.1%
Other businesses in your region	3.08	74	5.41%	9.46%	56.7%	28.3%
Regional Business Suppliers	2.82	74	8.11%	22.9%	74.3%	21.6%
Banks	3.22	74	4.05%	10.8%	44.5%	40.5%
Venture Capital Firms	2.53	74	12.1%	33.7%	43.2%	10.8%
Angel Investors	2.69	74	5.4%	37.8%	39.1%	17.5%
Business Incubators	2.86	74	5.41%	22.9%	51.3%	20.2%
Industry or Cluster Associations	2.81	74	6.76%	25.6%	47.3%	20.2%
Entrepreneurial Networks	3.19	74	5.41%	13.5%	37.8%	43.2%
Small Business Technology and Development Centers	3.09	74	4.05%	16.2%	45.9%	33.7%

Please rate the following statements on how true or false they are in your region (1=very false, 2=mostly false, 3=mostly true, 4=very true)

	Average	# of responses	1	2	3	4
"New residents can easily integrate into the regional business community."	2.44	70	11.4	38.5	44.2	5.7
"The region is a welcoming, tolerant, and attractive place for people of diverse backgrounds."	2.59	70	12.8	28.5	45.7	12.8
"Leaders in the region are responsive to the needs of all the regional residents, irrespective of ethnicity, cultural heritage, gender, or lifestyle."	2.66	70	5.71	37.1	42.8	14.2
"The business culture in the region understands failure as part of the learning and innovation process."	2.34	70	15.7	37.1	44.2	2.86
"People from different industry and economic sectors frequently interact in the region."	2.49	70	11.4	35.7	45.7	7.14
"The region celebrates the growth of companies, not just the absolute size of companies."	2.61	70	7.14	32.8	51.4	8.5
"Artists and business-people frequently interact in the region."	2.51	70	10.0	40.0	38.5	11.4
"Local government institutions eagerly partner with the private sector to promote new business development."	2.50	70	11.4	35.7	44.2	8.57
"Business leaders in the region treat entrepreneurs, start-ups, and new companies as full partners in all aspects of industry cooperation."	2.53	70	7.14	37.1	51.4	4.29
"Business leaders proactively share information and resources when possible"	2.56	70	8.57	35.7	74.1	8.57
"Regional residents actively participate in community development organizations and projects"	2.43	70	8.57	44.2	42.8	4.29
"Successful business people in the region actively invest in economic development projects and start-up ventures."	2.27	70	17.1	42.8	35.7	4.29

Consider your entire regional business environment, please list and explain the most important regional issue(s) that should be addressed to improve your region's business climate and community

"small business and organizations working and communications with other"

"Not enough work force to draw upon. Finding the right help for a winery is very difficult. Don't like going outside the region."

"improved transportation...highways, bridges"

"For retail business - citizens shop out of town. New businesses do not seem as attracted to our area as there are not many things to do in the entertainment area."

"Need for housing to build a workforce. Small industries have problems finding employees. No place for them to live."

"Jobs of all kinds are needed."

"An improved and consistent networking system among business leaders and small business owners."

"Our festivals need more emphasis on history and all merchants rather than liquor alone. We have a good program in SCORE but I'm afraid it isn't being advertised enough. And of course, as the C of C and HRED are trying to do, we need more families, more good jobs and more children in our schools. And finally, when we market our town we should promote it as a two day or more destination. This will help lodging, rooms, food and all the merchants. We are seeing people climbing on the trolleys, being shuttled out of town and just partying but not taking time to shop. The trolleys ought to make stops in each of the business districts each day for visitors to shop if they want to. If the businesses don't survive, there won't be anything left for visitors to come for."

"Improve the transportation infrastructure - primarily roads and bridges."

"Availability of educated, willing to do hard work, individuals! "

"Increase the focus on Start-up Companies."

"In the starting of businesses in our area the hardest part is getting the banks to get behind and fund the business. This has hurt our area in getting new businesses to start in our area."

"As an outsider (did not grow up in the region) I can say that Gasconade county is click-ish and the only way we could open doors is to build relationships with those that did grow up in the area. Start-up money is a challenge, partnerships with cities, especially Owensville is a challenge, overall access to grant funds is a challenge, finding grant money already approved is a challenge, and doing something different is an uphill battle. Most are resistant to attempting something new and unless you row-crop or raise cattle, you aren't respected."

"Helping business reduce fixed costs like commercial utility and insurance rates. Helping expand intern program from regional colleges."

"We need a big round of de-regulation on the federal level."

“Developing avenues for funding to allow residents with business ideas to reach their goals without large amounts of financial stress. With the lack of industry, ie factories, etc, in the area, young people need to go outside the normal avenues of employment and create their own.”

“I believe we need to develop a welcoming supportive environment for young entrepreneurs to keep them in our region.”

“Expansion of city limits and infrastructure to support small business expansion.”

“Promote Technical Education, and improve business incentive to hire.”

“Business Incubators are needed; a regional economic development director that could be hired at MRPC that would assist smaller communities that cannot afford to hire one on their own; more grant writing assistance and researching of available business grant opportunities”

“Lower Federal Income Tax on small business in order to stimulate growth and encourage entrepreneurship.”

“at the city and county level, and to some extent, the state, are still courting big businesses for their industrial parks. They have to promote a more entrepreneur-friendly environment for small businesses. Lastly, there is not enough collaboration between all the organizations that provide services, programs, etc. that benefit small businesses. The region would be better served by having these groups work together with the services and funding they have for a higher impact.”

“Finding the types of businesses or industries that can benefit from the resources that we can offer from our region.”

“High poverty level hinders business growth.”

“Full time econ developer Business Incubator”

“ATTRACTING QUALITY EMPLOYERS”

“Decrease the level of negativity from our community residents towards new and potential business growth within our region.”

“The survey says it all.”

“education and job training”

“Local job opportunities are limited and in some cases shrinking. Regionally there are more opportunities, but 30 to 120 minutes travel time is required.”

“Need to bring more jobs to the region in areas of industry.”

“upkeep and upgrading of the highway system.”

“Our region is dying each year with fewer businesses. Our local government is in a status quo state of mind. We need trained people who can fill jobs.”

“Development of a culture of entrepreneurship and small business job creation.”

Appendix III - National Establishment Time Series

Meramec - Total Regional Jobs						
<small>Source: youreconomy.org, National Establishment Time Series 2002-2013</small>						
Establishment Size	2002	2003	2004	2005	2006	2007
Total	9,091	9,035	9,577	11,068	11,732	12,516
Self-employed	2,967	3,021	3,364	4,320	4,615	5,074
2 to 9	4,914	4,813	5,002	5,513	5,859	6,204
10 to 99	1,123	1,118	1,130	1,152	1,177	1,159
100 to 499	80	76	74	75	74	72
500+	7	7	7	8	7	7

Meramec - Total Regional Jobs (continued)						
<small>Source: youreconomy.org, National Establishment Time Series 2002-2013</small>						
Establishment Size	2008	2009	2010	2011	2012	2013
Total	13,287	12,140	14,284	13,504	12,562	11,458
Self-employed	5,408	4,723	6,026	5,132	4,087	3,355
2 to 9	6,643	6,217	7,062	7,157	7,421	6,771
10 to 99	1,155	1,121	1,117	1,124	1,132	1,233
100 to 499	74	73	73	85	97	94
500+	7	6	6	6	5	5

Meramec - Total Regional Jobs by Industry

Source: your economy.org, National Establishment Time Series 2002-2013

NAICS	2002	2003	2004	2005	2006	2007
Agriculture, Forestry, Fishing and Hunting	1,239	1,196	1,155	1,149	1,161	1,198
Mining, Quarrying, and Oil and Gas Extraction	299	287	271	278	262	258
Utilities	328	354	337	382	382	368
Construction	2,914	2,811	2,829	3,103	3,266	3,440
Manufacturing	7,444	7,466	7,351	7,535	7,811	7,895
Wholesale Trade	2,563	2,449	2,443	2,611	2,546	2,625
Retail Trade	9,197	8,615	8,840	8,871	9,169	9,107
Transportation and Warehousing	2,196	2,219	2,510	2,552	2,654	2,766
Information	902	881	905	913	957	915
Finance and Insurance	1,833	1,882	1,937	1,966	2,038	1,954
Real Estate and Rental and Leasing	1,385	1,425	1,456	1,374	1,481	1,384
Professional, Scientific, and Technical Services	1,809	1,761	1,785	2,056	2,177	2,253
Management of Companies and Enterprises	42	4	6	8	8	30
Admin. and Support and Waste Management	1,328	1,353	1,985	3,449	3,924	4,208
Educational Services	8,251	8,026	7,967	2,113	2,108	8,229
Health Care and Social Assistance	8,642	9,100	9,276	9,283	9,366	9,650
Arts, Entertainment, and Recreation	1295	1286	1320	1324	833	860
Accommodation and Food Services	6,194	5,823	5,949	5,945	6,112	5,993
Other Services (Except Public Administration)	6,466	6,492	4,725	4,955	5,090	4,863
Public Administration	7,782	7,810	8,227	9,240	9,319	9,563
Undefined	6	2	2	8	10	14
Total Jobs	72,115	71,242	71,276	75,115	76,674	77,573

Meramec - Total Regional Jobs by Industry (continued)

Source: your economy.org, National Establishment Time Series 2002-2013

NAICS	2008	2009	2010	2011	2012	2013
Agriculture, Forestry, Fishing and Hunting	1,239	1,180	1,297	1,366	1,639	1,529
Mining, Quarrying, and Oil and Gas Extraction	263	229	215	217	172	203
Utilities	443	424	437	438	435	451
Construction	3,614	3,335	3,510	3,404	3,406	3,107
Manufacturing	7,992	6,610	6,202	6,169	6,215	6,108
Wholesale Trade	2,617	2,595	2,690	2,553	2,448	2,301
Retail Trade	9,392	8,887	9,068	8,864	9,006	8,664
Transportation and Warehousing	2,795	2,493	2,481	2,661	2,438	2,357
Information	946	853	890	1,100	1,173	1,178
Finance and Insurance	1,939	1,801	1,893	1,944	1,976	1,885
Real Estate and Rental and Leasing	1,425	1,317	1,489	1,507	1,508	1,417
Professional, Scientific, and Technical Services	2,447	2,368	2,519	2,516	3,078	2,902
Management of Companies and Enterprises	32	32	38	41	42	39
Admin. and Support and Waste Management	4,741	4,898	5,824	5,063	2,849	3,089
Educational Services	8,518	8,789	8,718	9,421	10,107	10,352
Health Care and Social Assistance	9,816	9,499	9,727	9,729	9,751	9,939
Arts, Entertainment, and Recreation	851	742	894	917	885	873
Accommodation and Food Services	5,858	5,636	5,864	5,767	5,560	6,325
Other Services (Except Public Administration)	4,953	4,722	5,258	5,466	5,310	4,925
Public Administration	9,003	9,095	9,195	10,308	11,365	12,440
Undefined	21	7	8	9	31	43
Total Jobs	78,904	75,512	78,217	79,460	80,393	80,127

Meramec - Resident vs. Nonresident Establishment Jobs

Source: youreconomy.org, National Establishment Time Series, 2002-2013

Resident Jobs						
	1	2 to 9	10 to 99	100 to 499	500+	Total
2002	2,644	14,965	25,888	10,432	4,900	58,829
2003	2,697	14,724	25,339	9,919	5,270	57,949
2004	3,031	15,214	25,036	10,757	5,270	59,308
2005	3,990	16,245	25,038	11,282	5,320	61,875
2006	4,289	17,043	25,833	11,239	5,370	63,774
2007	4,756	17,780	25,802	10,979	5,370	64,687
2008	5,108	18,809	25,753	11,467	5,370	66,507
2009	5,719	19,158	24,795	11,177	4,470	65,319
2010	4,838	19,245	24,574	12,037	4,470	65,164
2011	3,803	19,490	24,655	13,253	3,970	65,171
2012	3,803	19,490	24,655	13,253	3,970	65,171
2013	3,100	18,928	25,263	12,698	4,100	64,089

Meramec - Resident vs. Nonresident Establishment Jobs

Source: youreconomy.org, National Establishment Time Series, 2002-2013

Nonresident Jobs						
	1	2 to 9	10 to 99	100 to 499	500+	Total
2002	16	579	3,136	4,299	1,600	9,630
2003	16	572	2,985	3,978	1,600	9,151
2004	22	614	2,867	4,918	1,600	10,021
2005	18	592	2,622	5,412	1,650	10,294
2006	19	617	2,774	5,382	1,700	10,492
2007	19	653	2,628	5,352	1,700	10,352
2008	17	622	2,671	5,473	1,700	10,483
2009	15	606	2,613	5,524	800	9,558
2010	13	594	2,540	5,210	800	9,157
2011	12	629	2,785	5,146	800	9,372
2012	12	638	2,605	5,179	800	9,234
2013	11	625	2,363	5,119	800	8,918

NAICS Code Definitions

An overview of each NAICS code name and description of sub-industries considered a part of the overall industry.

NAICS Name	Description
Agriculture, Forestry, Fishing and Hunting	<ul style="list-style-type: none"> • Crop Production (including grain, vegetable, fruit, tobacco, cotton, and sugar farming) • Animal Production and Aquaculture (including cattle, pig, poultry, and sheep production) • Forestry and Logging • Fishing, Hunting, and Trapping • Support Activities for Agriculture and Forestry
Mining, Quarrying, and Oil and Gas Extraction	<ul style="list-style-type: none"> • Oil and Gas Extraction • Mining (including coal, iron ore, silver, copper, lead, etc.) • Support Activities for Mining
Utilities	<ul style="list-style-type: none"> • Utilities (including electric power generation, natural gas, and water, sewage and other systems)
Construction	<ul style="list-style-type: none"> • Construction of buildings • Heavy and Civil Engineering Construction • Specialty Trade Contractors (including roofing, framing, electrical, plumbing, etc.)
Manufacturing	<ul style="list-style-type: none"> • Food manufacturing • Beverage and Tobacco Product Manufacturing • Textile Mills • Textile Product Mills • Apparel Manufacturing • Leather and Allied Product Manufacturing • Wood Product Manufacturing • Paper Manufacturing • Printing and Related Support Activities • Petroleum and Coal Products Manufacturing • Chemical Manufacturing • Plastic and Rubber Products Manufacturing • Nonmetallic Mineral Product Manufacturing • Primary Metal Manufacturing • Fabricated Metal Product Manufacturing • Machinery Manufacturing • Computer and Electronic Product Manufacturing • Electrical Equipment, Appliance and Component Manufacturing • Transportation Equipment Manufacturing • Furniture and Related Products Manufacturing • Miscellaneous Manufacturing

NAICS Name	Description
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Whole Sale	<ul style="list-style-type: none"> • Merchant Wholesalers, durable goods (including cars, furniture, commercial equipment, industrial machinery, etc.) • Merchant Wholesalers, nondurable goods (including paper, apparel, drugs, groceries, etc.) • Wholesale Electronic Markets and Agents and Brokers
Retail Trade	<ul style="list-style-type: none"> • Motor Vehicle and Parts Dealers • Furniture and Home Furnishing Stores • Electronic and Appliance Stores • Building Material and Garden Equipment and Supplies Dealers • Food and Beverage Stores • Health and Personal Care Stores • Gasoline Stores • Clothing and Clothing Accessories Stores • Sporting Goods, Hobby, Musical Instruments, and Book Stores • General Merchandise Stores • Miscellaneous Stores (including florists, office supplies, pet supplies, etc.) • Nonstore retailers (including electronic shopping, vending machines, etc.)
Transportation and Warehousing	<ul style="list-style-type: none"> • Air Transportation • Rail Transportation • Water Transportation • Truck Transportation • Transit and Ground Passenger Transportation • Pipeline Transportation • Scenic and Sightseeing Transportation • Support Activities for Transportation • Postal Service • Warehousing and Storage
Information	<ol style="list-style-type: none"> 1. Publishing Industries (Except Internet) 2. Motion Picture and Sound Recording Industries 3. Broadcasting (except Internet) 4. Telecommunications 5. Data Processing, Hosting, and Related Services 6. Other Information Services

NAICS Name	Description
Finance and Insurance	<ul style="list-style-type: none"> • Monetary Authorities-Central Bank • Credit Intermediation and Related Activities • Securities, Commodity Contracts, and Other Financial Investments and Related Activities • Insurance Carriers and Related Activities • Funds, Trusts, and Other Financial Vehicles
Real Estate and Rental and Leasing	<ul style="list-style-type: none"> • Real Estate • Rental and Leasing Services • Lessors of Nonfinancial Intangible Assets (except copyrighted works)
Professional, Scientific, and Technical Services	<ul style="list-style-type: none"> • Legal Services • Accounting, Tax Preparation, Bookkeeping, and Payroll Services • Architectural, Engineering, and Related Services • Specialized Design Services • Computer Systems Design and Related Services • Management, Scientific, and Technical Consulting Services • Scientific Research and Development Services • Advertising, Public Relations, and Related Services • Other Professional, Scientific, and Technical Services
Management of Companies and Enterprises	<ul style="list-style-type: none"> • Offices of Bank Holding Companies • Corporate, Subsidiary, and Regional Managing Offices
Administrative and Support and Waste Management and Remediation Services	<ul style="list-style-type: none"> • Administrative and Support Services (including office admin., facility admin., employment services, collection agencies, travel agencies, investigation services, etc.) • Waste Management and Remediation Services (including waste collection, waste treatment, waste landfill, materials recovery services, etc.)
Educational Services	<ul style="list-style-type: none"> • Elementary and Secondary Schools • Junior Colleges • Colleges, Universities, and Professional Schools, Business Schools and Computer and Management Training • Technical and Trade Schools • Other Schools and Instruction • Educational Support Services

NAICS Name	Description
Health Care and Social Assistance	<ul style="list-style-type: none"> • Ambulatory Health Care Services (including physicians, dentist, outpatient care centers, home health care services, and other health practitioner offices) • Hospitals • Nursing and Residential Care Facilities • Social Assistance (including child and youth services, family services, community food services, temporary shelters, child day care services, etc.)
Arts, Entertainment, and Recreation	<ul style="list-style-type: none"> • Performing Arts, Spectators Sports, and Related Industries • Museums, Historical Sites, and Similar Institutions • Amusement, Gambling, and Recreation Industries
Accommodation and Food Services	<ul style="list-style-type: none"> • Accommodation • Food Services and Drinking Places
Other Services (except public administration)	<ul style="list-style-type: none"> • Repair and Maintenance (including automobile, electronics, industrial machinery, etc. repair) • Personal and Laundry Services (including hair and nail salons, funeral homes, pet care, parking lots, etc.) • Religious, Grantmaking, Civic, Professional, and Similar Services • Private Households
Public Administration	<ul style="list-style-type: none"> • Executive, Legislative, and Other General Government Supports • Justice, Public Order, and Safety Activities • Administration of Human Resource Programs • Administration of Environmental Quality Programs • Administration of Housing Programs, Urban Planning, and Community Development • Administration of Economic Programs • Space Research and Technology • National Security and International Affairs

Appendix IV - Industry Clusters

Regional Industry Cluster Details

The region's highest ranked cluster is Upstream Chemical Products, with a score of 93 (out of 100) points. The average cluster score is 42 (out of 100) points. This is not a benchmark against other regions; it only compares the relative performance of the clusters to each other. Clusters ranked higher than 42 are above average for the region, while clusters ranked lower than 42 are below average. Top clusters must have a score of at least 50, while bottom clusters must have a score of 35 or less. These thresholds are determined by applying the average deviation (plus or minus 7) to the average cluster score 42.

Job numbers are estimated as 2016 1st quarter primarily using the Bureau of Labor Statistics Quarterly Census of Earning and Wages (QCEW) Employees, Non-QCEW Employees, Self-Employed, and Extended Proprietors.

Industry cluster performance score is ranked by using five key performance metrics and "weighting" each according to importance:

- Earnings ("important") - how important is it that industries have high earnings per worker?
- Growth ("very important") - How important is it that industries have high overall job growth?
- Regional Competitiveness ("very important") - How important is it that regional job growth exceeds the national average job growth for an industry?
- Regional Specialization ("very important") - How important is it that regional job concentration is higher than the national average job?
- GRP ("not important") - How important is it that industries make a high contribution to overall gross regional?

Upstream Chemical Products: 93			
Score: 93			
NAICS	Industry	Jobs	Score
325194	Cyclic Crude, Intermediate, and Gum and Wood Chemical Manufacturing	201	93

Downstream Chemical Products			
Score: 59			
NAICS	Industry	Jobs	Score
325510	Paint and Coating Manufacturing	286	60
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	58	53

Local Community and Civic Organizations			
Score: 71			
NAICS	Industry	Jobs	Score
624110	Child and Youth Services	18	35
624120	Services for the Elderly and Persons with Disabilities	2214	100
624190	Other Individual and Family Services	100	36
624210	Community Food Services	77	40
813110	Religious Organizations	1150	36
813311	Human Rights Organizations	109	38
813319	Other Social Advocacy Organizations	61	36
813410	Civic and Social Organizations	241	34
813910	Business Associations	40	38
813930	Labor Unions and Similar Labor Organizations	24	32
813990	Other Similar Organizations (except Business, Professional, Labor, and Political Organizations)	20	36

Local Retailing of Clothing and General Merchandise			
Score: 55			
NAICS	Industry	Jobs	Score
448120	Women's Clothing Stores	74	37
448140	Family Clothing Stores	28	31
448190	Other Clothing Stores	66	36
448210	Shoe Stores	18	36
448310	Jewelry Stores	38	35
451130	Sewing, Needlework, and Piece Goods Stores	79	38
452111	Department Stores (except Discount Department Stores)	86	24
452112	Discount Department Stores	157	16
452910	Warehouse Clubs and Supercenters	1,373	79
452990	All Other General Merchandise Stores	388	27
453310	Used Merchandise Stores	327	33

Upstream Metal Manufacturing			
Score: 55			
NAICS	Industry	Jobs	Score
331420	Copper Rolling, Drawing, Extruding, and Alloying	145	69
332119	Metal Crown, Closure, and Other Metal Stamping (except Automotive)	175	48
332618	Other Fabricated Wire Product Manufacturing	55	40

Electric Power Generation and Transmission			
Score: 54			
NAICS	Industry	Jobs	Score
221111	Hydroelectric Power Generation	21	53
221121	Electric Bulk Power Transmission and Control	20	54

State Government Services			
Score: 53			
NAICS	Industry	Jobs	Score
902999	State Government, Excluding Education and Hospitals	1,733	53

Education and Knowledge Creation			
Score: 53			
NAICS	Industry	Jobs	Score
541712	Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)	16	39
611310	Colleges, Universities, and Professional Schools	208	32
611430	Professional and Management Development Training	55	36
611691	Exam Preparation and Tutoring	16	32
611699	All other Miscellaneous Schools and Instruction	26	33
611710	Educational Support Services	47	37
902612	Colleges, Universities, and Professional Schools (State Government)	2119	55
903612	Colleges, Universities, and Professional Schools (Local Government)	753	59

Footwear			
Score: 51			
NAICS	Industry	Jobs	Score
316210	Footwear Manufacturing	254	51

Printing Services			
Score: 49			
NAICS	Industry	Jobs	Score
323111	Commercial Printing (except Screen and Books)	196	35
323113	Commercial Screen Printing	725	51
323117	Books Printing	338	55
323120	Support Activities for Printing	19	41

Lighting and Electrical Equipment			
Score:48			
NAICS	Industry	Jobs	Score
335311	Power, Distribution, and Specialty Transformer Manufacturing	190	48

Vulcanized and Fired Materials			
Score: 48			
NAICS	Industry	Jobs	Score
326212	Tire Retreading	73	48
327120	Clay Building Material and Refractories Manufacturing	67	47
327212	Other Pressed and Blown Glass and Glassware Manufacturing	77	48

Production Technology and Heavy Machinery			
Score: 46			
NAICS	Industry	Jobs	Score
332919	Other Metal Valve and Pip Fitting Manufacturing	64	45
333318	Other Commercial and Service Industry Machinery Manufacturing	34	39
333414	Heating Equipment (except Warm Air Furnaces) Manufacturing	91	45
333415	Air-Condition and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	34	45
333612	Speed Changer, Industrial High-Speed Drive, and Gear Manufacturing	100	51

Metal Mining			
Score: 45			
NAICS	Industry	Jobs	Score
213114	Support Activities for Metal Mining	24	45

Food Processing and Manufacturing			
Score: 45			
NAICS	Industry	Jobs	Score
311111	Dog and Cat Food Manufacturing	200	53
311119	Other Animal Food Manufacturing	19	40
312120	Breweries	65	46
312130	Wineries	229	38

Nonmetal Mining			
Score: 45			
NAICS	Industry	Jobs	Score
212312	Crushed and Broken Limestone Mining and Quarrying	166	46
212321	Construction Sand and Gravel Mining	42	41
212325	Clay and Ceramic and Refractory Minerals Mining	35	43

Leather and Related Products			
Score: 45			
NAICS	Industry	Jobs	Score
316998	All Other Leather Good and Allied Product Manufacturing	91	44

Metal Working Technology			
Score: 44			
NAICS	Industry	Jobs	Score
332812	Metal Coating, Engraving, and Allied Services to Manufacturers	29	39
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	193	45
33514	Special Die and Tool, Die Set, Jig, and Fixture Manufacturing	20	41

Local Utilities			
Score: 44			
NAICS	Industry	Jobs	Score
221122	Electric Power Distribution	164	51
454310	Fuel Dealers	81	39
517110	Wired Telecommunications Carriers	169	40

Oil and Gas Production and Transportation			
Score: 44			
NAICS	Industry	Jobs	Score
213111	Drilling Oil and Gas Wells	19	34
486910	Pipeline Transportation of Refined Petroleum Products	11	60

Furniture			
Score: 44			
NAICS	Industry	Jobs	Score
337110	Wood Kitchen Cabinet and Countertop Manufacturing	58	38
337122	Nonupholstered Wood Household Furniture Manufacturing	47	42
337215	Showcase, Partition, Shelving, and Locker Manufacturing	135	47

Communications Equipment and Services			
Score: 43			
NAICS	Industry	Jobs	Score
517210	Wireless Telecommunications Carriers (except Satellite)	21	43

Construction Products and Services			
Score: 42			
NAICS	Industry	Jobs	Score
221310	Water Supply and Irrigation Systems	37	51
237130	Power and Communication Line and Related Structures Construction	101	43
237990	Other Heavy and Civil Engineering Construction	78	37
327420	Gypsum Product Manufacturing	35	43

Plastics			
Score: 42			
NAICS	Industry	Jobs	Score
326160	Plastics Bottle Manufacturing	35	38
326199	All Other Plastics Product Manufacturing	348	42

Automotive			
Score: 42			
NAICS	Industry	Jobs	Score
336211	Motor Vehicle Body Manufacturing	57	42

Recreational and Small Electric Goods			
Score: 41			
NAICS	Industry	Jobs	Score
335210	Small Electrical Appliance Manufacturing	36	43
339920	Sporting and Athletic Goods Manufacturing	32	43
339930	Doll, Toy, and Game Manufacturing	23	37

Forestry			
Score: 41			
NAICS	Industry	Jobs	Score
113210	Forest Nurseries and Gathering of Forest Products	45	45
113310	Logging	363	40
115310	Support Activities for Forestry	42	38

Wood Products			
Score: 40			
NAICS	Industry	Jobs	Score
321113	Sawmills	299	39
321114	Wood Preservation	27	44
321214	Truss Manufacturing	102	41
321912	Cut Stock, Resawing Lumber, and Planing	16	36
321918	Other Millwork (including Flooring)	84	42
321920	Wood Container and Pallet Manufacturing	230	41

Apparel			
Score: 40			
NAICS	Industry	Jobs	Score
315240	Women's, Girls', and Infants' Cut and Sew Apparel Manufacturing	43	36
315280	Other Cut and Sew Apparel Manufacturing	67	43

Local Health Services			
Score:40			
NAICS	Industry	Jobs	Score
446110	Pharmacies and Drug Stores	265	39
532291	Home Health Equipment Rental	49	37
621111	Offices of Physicians (except Mental Health Specialists)	909	51
621210	Offices of Dentists	259	40
621310	Offices of Chiropractors	71	38
621320	Offices of Optometrists	49	40
621330	Offices of Mental Health Practitioners (except Physicians)	60	37
621340	Offices of Physical, Occupational and Speech Therapists, and Audiologists	146	40
621391	Offices of Podiatrists	19	39
621399	Offices of All Other Miscellaneous Health Practitioners	70	40
621420	Outpatient Mental Health and Substance Abuse Centers	179	39
621492	Kidney Dialysis Centers	27	38

621511	Medical Laboratories	14	35
621610	Home Health Care Services	298	33
621999	All Other Miscellaneous Ambulatory Health Care Services	22	39
622110	General Medical and Surgical Hospitals	347	43
622210	Psychiatric and Substance Abuse Hospitals	205	41
623110	Nursing Care Facilities (Skilled Nursing Facilities)	1,615	38
623210	Residential Intellectual and Developmental Disability Facilities	323	42
623311	Continuing Care Retirement Communities	80	30
623312	Assisted Living Facilities for the Elderly	184	40
623990	Other Residential Care Facilities	218	41
812210	Funeral Homes and Funeral Services	59	37
903622	Hospitals (Local Government)	1,383	35

Local Logistical Services			
Score: 40			
NAICS	Industry	Jobs	Score
484110	General Freight Trucking, Local	274	38
484122	General Freight Trucking, Long-Distance, Less Than Truckload	77	41
484210	Used Household and Office Goods Moving	127	38
484220	Specialized Freight (except Used Goods) Trucking, Local	307	46
485410	School and Employee Bus Transportation	58	34
485991	Special Needs Transportation	31	34
492110	Couriers and Express Delivery Services	302	40
492210	Local Messengers and Local Delivery	110	34
531130	Lessors of Miniwarehouses and Self-Storage Units	201	39
532111	Passenger Car Rental	41	37
532120	Truck, Utility Trailer, and RV (Recreational Vehicle) Rental and Leasing	16	36
562111	Solid Waste Collection	107	40
621910	Ambulance Services	43	37

Local Financial Services			
Score: 39			
NAICS	Industry	Jobs	Score
522110	Commercial Banking	1,109	41
522130	Credit Unions	95	39
524210	Insurance Agencies and Brokerages	476	36
524292	Third Party Administration of Insurance and Pension Funds	41	36
541213	Tax Preparation Services	77	34

Transportation and Logistics			
Score: 39			
NAICS	Industry	Jobs	Score
482110	Rail transportation	101	50
484121	General Freight Trucking, Long-Distance, Truckload	597	37
484230	Specialized Freight (except Used Goods) Trucking, Long-Distance	35	36
485210	Interurban and Rural Bus Transportation	32	36
488510	Freight Transportation Arrangement	22	39

Livestock Processing			
Score: 39			
NAICS	Industry	Jobs	Score
311611	Animal (except Poultry) Slaughtering	17	37
311615	Poultry Processing	36	35
424520	Livestock Merchant Wholesalers	80	41

Local Industrial Products and Services			
Score: 38			
NAICS	Industry	Jobs	Score
332710	Machine Shops	58	41
423930	Recyclable Material Merchant Wholesalers	62	34
423990	Other Miscellaneous Durable Goods Merchant Wholesalers	31	40
532210	Consumer Electronics and Appliances Rental	53	39
811219	Other Electronic and Precision Equipment Repair and Maintenance	15	41

Business Services			
Score: 38			
NAICS	Industry	Jobs	Score
485310	Taxi Service	70	34
485320	Limousine Service	26	33
518210	Data Processing, Hosting, and Related Services	14	35
541320	Landscape Architectural Services	32	39
541330	Engineering Services	214	41
541511	Custom Computer Programming Services	63	37
541512	Computer Systems Design Services	98	38
541611	Administrative Management and General Management Consulting Services	164	39
541614	Process, physical Distribution, and Logistics Consulting Services	13	46
541690	Other Scientific and Technical Consulting Services	48	36
541990	All Other Professional, Scientific, and Technical Services	329	33
551114	Corporate Subsidiary, and Regional Managing Offices	234	39
561210	Facilities Support Services	86	41

Local Motor Vehicle Products and Services: 37			
Score: 37			
NAICS	Industry	Jobs	Score
423120	Motor Vehicle Supplies and New Parts Merchant Wholesalers	26	36
423140	Motor Vehicle Parts (Used) Merchant Wholesalers	31	39
441110	New Car Dealers	577	38
441120	Used Car Dealers	221	37
441210	Recreational Vehicle Dealers	33	43
441222	Boat Dealers	12	36
441228	Motorcycle, ATV, and All Other Motor Vehicle Dealers	71	39
441310	Automotive Parts and Accessories Stores	212	36
441320	Tire Dealers	118	39
447110	Gasoline Stations with Convenience Stores	1,128	37
447190	Other Gasoline Stations	172	38
453930	Manufactured (Mobile) Home Dealers	22	39
488410	Motor Vehicle Towing	36	39
811111	General Automotive Repair	411	39
811113	Automotive Transmission Repair	14	36
811121	Automotive Body, Paint, and Interior Repair and Maintenance	198	34
811122	Automotive Glass Replacement Shops	62	38
811191	Automotive Oil Change and Lubrication Shops	48	35
811192	Car Washes	65	31
811198	All Other Automotive Repair and Maintenance	31	38

Financial Services			
Score: 37			
NAICS	Industry	Jobs	Score
522120	Savings Institutions	56	41
522291	Consumer Lending	75	38
522292	Real Estate Credit	28	42
522298	All Other Nondepository Credit Intermediation	25	37
522390	Other Activities Related to Credit Intermediation	37	40
523120	Securities Brokerage	127	43
523910	Miscellaneous Intermediation	50	33
523920	Portfolio Management	186	30
523930	Investment Advice	297	39
523991	Trust, Fiduciary, and Custody Activities	73	36

Trailers, Motor Homes, and Appliances			
Score: 37			
NAICS	Industry	Jobs	Score
336212	Truck Trailer Manufacturing	29	37

Local Household Goods and Services			
Score: 37			
NAICS	Industry	Jobs	Score
442110	Furniture Stores	82	35
442210	Floor Covering Stores	14	37
442299	All Other Home Furnishings Stores	15	35
443141	Household Appliance Stores	26	38
444130	Hardware Stores	34	37
444210	Outdoor Power Equipment Stores	14	41
444220	Nursery, Garden Center, and Farm Supply Stores	203	38
453110	Florists	70	34
561730	Landscaping Services	564	37
561740	Carpet and Upholstery Cleaning Services	42	36
811420	Reupholstery and Furniture Repair	29	35

Local Education and Training			
Score: 37			
NAICS	Industry	Jobs	Score
611110	Elementary and Secondary Schools	109	34
611519	Other Technical and Trade Schools	42	36
611610	Fine Arts Schools	30	32
624310	Vocational Rehabilitation Services	173	39
902611	Elementary and Secondary Schools (State Government)	57	37
903611	Elementary and Secondary Schools (Local Government)	4,569	37

Local Food and Beverage Processing and Distribution			
Score: 37			
NAICS	Industry	Jobs	Score
311811	Retail Bakeries	32	35
424410	General Line Grocery Merchant Wholesalers	317	42
424430	Dairy Product (except Dried or Canned) Merchant Wholesalers	15	38
424450	Confectionery Merchant Wholesalers	15	39
424490	Other Grocery and Related Products Merchant Wholesalers	138	40
424810	Beer and Ale Merchant Wholesalers	68	41
445110	Supermarkets and Other Grocery (except Convenience) Stores	1,003	34
445120	Convenience Stores	31	34
445310	Beer, Wine, and Liquor Stores	109	37
446191	Food (Health) Supplement Stores	47	34
453991	Tobacco Stores	183	35
454210	Vending Machine Operators	17	38
454390	Other Direct Selling Establishments	748	37
722330	Mobile Food Services	16	34

Insurance Services			
Score: 36			
NAICS	Industry	Jobs	Score
524126	Direct Property and Casualty Insurance Carriers	33	38
524127	Direct Title Insurance Carriers	13	39
524291	Claims Adjusting	77	35
524298	All Other Insurance Related Activities	20	36

Local Entertainment and Media			
Score: 36			
NAICS	Industry	Jobs	Score
443142	Electronics Stores	111	40
451110	Sporting Goods Stores	56	31
451120	Hobby, Toy, and Game Stores	36	34
451211	Book Stores	48	34
511110	Newspaper Publishers	151	37
512131	Motion Picture Theaters (except Drive-Ins)	58	33
515112	Radio Stations	73	37

Fishing and Fishing Products			
Score: 36			
NAICS	Industry	Jobs	Score
114111	Finfish Fishing	19	36

Marketing, Design, and Publishing			
Score: 36			
NAICS	Industry	Jobs	Score
511120	Periodical Publishers	61	36
541410	Interior Design Services	16	34
541430	Graphic Design Services	51	36
541613	Marketing Consulting Services	45	37
541810	Advertising Agencies	12	35
541850	Outdoor Advertising	11	35
541890	Other Services Related to Advertising	10	34
541910	Marketing Research and Public Opinion Polling	98	36

Distribution and Electronic Commerce

Score: 34

NAICS	Industry	Jobs	Score
236115	New Single-Family Housing Construction (except For-Sale Builders)	457	41
236117	New Housing For-Sale Builders	90	34
236118	Residential Remodelers	437	37
236220	Commercial and Institutional Building Construction	329	41
237110	Water and Sewer Line and Related Structures Construction	126	41
237210	Land Subdivision	31	35
237310	Highway, Street, and Bridge Construction	59	40
238110	Poured Concrete Foundation and Structure Contractors	117	34
238130	Framing Contractors	64	35
238140	Masonry Contractors	203	37
238150	Glass and Glazing Contractors	27	38
238160	Roofing Contractors	170	36
238170	Siding Contractors	55	34
238210	Electrical Contractors and Other Wiring Installation Contractors	225	33
238220	Plumbing, Heating, and Air-Conditioning Contractors	443	38
238290	Other Building Equipment Contractors	35	37
238310	Drywall and Insulation Contractors	176	36
238320	Painting and Wall Covering Contractors	160	34
238330	Flooring Contractors	75	28
238340	Tile and Terrazzo Contractors	81	36
238350	Finish Carpentry Contractors	162	32
238390	Other Building Finishing Contractors	45	36
238910	Site Preparation Contractors	609	38
238990	All Other Specialty Trade Contractors	348	31
327320	Ready-Mix Concrete Manufacturing	64	39
423390	Other Construction Material Merchant Wholesalers	26	41
423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	16	40
444110	Home Centers	306	31
444190	Other Building Material Dealers	173	43
531110	Lessors of Residential Buildings and Dwellings	700	35
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	271	37
531190	Lessors of Other Real Estate Property	48	34
531210	Offices of Real Estate Agents and Brokers	549	27
531311	Residential Property Managers	178	35
531312	Nonresidential Property Managers	51	36
531320	Offices of Real Estate Appraisers	59	34
531390	Other Activities Related to Real Estate	277	30
541191	Title Abstract and Settlement Offices	44	37
541370	Surveying and Mapping (except Geophysical) Services	33	39
562991	Septic Tank and Related Services	25	39

Local Real Estate, Construction, and Development

Score: 35

NAICS	Industry	Jobs	Score
236115	New Single-Family Housing Construction (except For-Sale Builders)	457	41
236117	New Housing For-Sale Builders	90	34
236118	Residential Remodelers	437	37
236220	Commercial and Institutional Building Construction	329	41
237110	Water and Sewer Line and Related Structures Construction	126	41
237210	Land Subdivision	31	35
237310	Highway, Street, and Bridge Construction	59	40
238110	Poured Concrete Foundation and Structure Contractors	117	34
238130	Framing Contractors	64	35
238140	Masonry Contractors	203	37
238150	Glass and Glazing Contractors	27	38
238160	Roofing Contractors	170	36
238170	Siding Contractors	55	34
238210	Electrical Contractors and Other Wiring Installation Contractors	225	33
238220	Plumbing, Heating, and Air-Conditioning Contractors	443	38
238290	Other Building Equipment Contractors	35	37
238310	Drywall and Insulation Contractors	176	36
238320	Painting and Wall Covering Contractors	160	34
238330	Flooring Contractors	75	28
238340	Tile and Terrazzo Contractors	81	36
238350	Finish Carpentry Contractors	162	32
238390	Other Building Finishing Contractors	45	36
238910	Site Preparation Contractors	609	38
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327320	Ready-Mix Concrete Manufacturing	64	39
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423720	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	16	40
444110	Home Centers	306	31
444190	Other Building Material Dealers	173	43
531110	Lessors of Residential Buildings and Dwellings	700	35
531120	Lessors of Nonresidential Buildings (except Miniwarehouses)	271	37
531190	Lessors of Other Real Estate Property	48	34
531210	Offices of Real Estate Agents and Brokers	549	27
531311	Residential Property Managers	178	35
531312	Nonresidential Property Managers	51	36
531320	Offices of Real Estate Appraisers	59	34
531390	Other Activities Related to Real Estate	277	30
541191	Title Abstract and Settlement Offices	44	37
541370	Surveying and Mapping (except Geophysical) Services	33	39
562991	Septic Tank and Related Services	25	39

Distribution and Electronic Commerce			
Score: 34			
NAICS	Industry	Jobs	Score
423440	Other Commercial Equipment Merchant Wholesalers	68	38
423610	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	68	42
423810	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	13	39
423820	Farm and Garden Machinery and Equipment Merchant Wholesalers	114	41
423850	Service Establishment Equipment and Supplies Merchant Wholesalers	12	37
423910	Sporting and Recreational Goods and Supplies Merchant Wholesalers	20	41
424710	Petroleum Bulk Stations and Terminals	27	37
424910	Farm Supplies Merchant Wholesalers	85	38
424990	Other Miscellaneous Nondurable Goods Merchant Wholesalers	26	36
425120	Wholesale Trade Agents and Brokers	70	39
454111	Electronic Shopping	97	36
454113	Mail-Order Houses	22	37
493110	General Warehousing and Storage	1,118	31
493120	Refrigerated Warehousing and Storage	28	38
493190	Other Warehousing and Storage	25	34
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	60	43
532490	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	80	44
561499	All Other Business Support Services	22	35

Agricultural Inputs and Services			
Score: 35			
NAICS	Industry	Jobs	Score
111000	Crop Production	2,335	71
112000	Animal Production and Aquaculture	2,911	6
115112	Soil Preparation, Planting, and Cultivating	55	35
115115	Farm Labor Contractors and Crew Leaders	85	34
115210	Support Activities for Animal Production	120	34

Performing Arts			
Score: 34			
NAICS	Industry	Jobs	Score
711130	Musical Groups and Artists	29	34
711320	Promoters of Performing Arts, Sports, and Similar Events without Facilities	11	36
711510	Independent Artists, Writers, and Performers	255	34

Local Commercial Services			
Score: 34			
NAICS	Industry	Jobs	Score
339950	Sign Manufacturing	47	36
453210	Office Supplies and Stationery Stores	48	35
541110	Offices of Lawyers	196	36
541211	Offices of Certified Public Accountants	64	38
541219	Other Accounting Services	153	34
541620	Environmental Consulting Services	36	35
541922	Commercial Photography	18	34
561110	Office Administrative Services	188	48
561320	Temporary Help Services	267	38
561410	Document Preparation Services	91	35
561431	Private Mail Centers	29	37
561491	Repossession Services	12	36
561492	Court Reporting and Stenotype Services	15	34
561621	Security Systems Services (except Locksmiths)	20	35
561710	Exterminating and Pest Control Services	27	36
561720	Janitorial Services	568	25
561790	Other Services to Buildings and Dwellings	88	32
561990	All Other Support Services	206	36
811212	Computer and Office Machine Repair and Maintenance	36	38
811310	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	126	27
811411	Home and Garden Equipment Repair and Maintenance	44	36
811412	Appliance Repair and Maintenance	42	38
812320	Drycleaning and Laundry Services (except Coin-Operated)	58	36

Hospitality and Tourism			
Score: 34			
NAICS	Industry	Jobs	Score
114210	Hunting and Trapping	20	38
532292	Recreational Goods Rental	26	32
711211	Sports Teams and Clubs	29	35
711212	Racetracks	24	31
711219	Other Spectator Sports	35	32
712190	Nature Parks and Other Similar Institutions	22	38
713120	Amusement Arcades	14	36
713990	All Other Amusement and Recreation Industries	47	34
721110	Hotels (except Casino Hotels) and Motels	843	32
721191	Bed-and-Breakfast Inns	43	32
721199	All Other Traveler Accommodation	42	35
721211	RV (Recreational Vehicle) Parks and Campgrounds	131	41
721214	Recreational and Vacation Camps (except Campgrounds)	55	35
721310	Rooming and Boarding Houses	122	36

Local Personal Services (Non-Medical)			
Score: 32			
NAICS	Industry	Jobs	Score
446120	Cosmetics, Beauty Supplies, and Perfume Stores	69	34
446199	All Other Health and Personal Care Stores	41	36
453910	Pet and Pet Supplies Stores	20	34
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	229	35
541921	Photography Studios, Portrait	85	33
541940	Veterinary Services	185	37
624410	Child Day Care Services	825	25
811490	Other Personal and Household Goods Repair and Maintenance	267	35
812111	Barber Shops	76	36
812112	Beauty Salons	530	33
812113	Nail Salons	48	35
812199	Other Personal Care Services	110	33
812310	Coin-Operated Laundries and Drycleaners	32	38
812910	Pet Care (except Veterinary) Services	86	35
812921	Photofinishing Laboratories (except One-Hour)	10	34
812990	All Other Personal Services	606	32

Local Government Services			
Score: 29			
NAICS	Industry	Jobs	Score
903999	Local Government, Excluding Education and Hospitals	2,689	29

Local Hospitality Establishments			
Score: 22			
NAICS	Industry	Jobs	Score
453220	Gift, Novelty, and Souvenir Stores	137	34
611620	Sports and Recreation Instruction	59	32
713910	Golf Courses and Country Clubs	87	34
713940	Fitness and Recreational Sports Centers	209	33
713950	Bowling Centers	50	34
722310	Food Service Contractors	787	21
722320	Caterers	105	38
722410	Drinking Places (Alcoholic Beverages)	187	32
722511	Full-Service Restaurants	1,823	17
722513	Limited-Service Restaurants	1,862	21
722514	Cafeterias, Grill Buffets, and Buffets	76	33
722515	Snack and Nonalcoholic Beverage Bars	100	33

Federal Government Services

Score: 13

NAICS	Industry	Jobs	Score
901149	US Postal Service	263	41
901199	Federal Government, Civilian, Excluding Postal Service	3,920	1
901200	Federal Government, Military	12,401	16

Appendix V – Occupation Clusters

Regional & County Level Occupation Clusters

The table below shows employment based on occupation type. The data compares employment numbers from 2002 and 2015. EMSI occupation employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry.

Meramec Occupation Details				
SOC	Description	2002	2015	Change
11-1011	Chief Executives	208	261	53
11-1021	General and Operations Managers	849	915	66
11-1031	Legislators	17	19	2
11-2011	Advertising and Promotions Managers	<10	<10	N/a
11-2021	Marketing Managers	32	39	7
11-2022	Sales Managers	110	120	10
11-2031	Public Relations and Fundraising Managers	<10	11	N/a
11-3011	Administrative Services Managers	69	81	12
11-3021	Computer and Information Systems Managers	48	46	(2)
11-3031	Financial Managers	163	203	40
11-3051	Industrial Production Managers	91	85	(6)
11-3061	Purchasing Managers	21	19	(2)
11-3071	Transportation, Storage, and Distribution Managers	60	74	14
11-3111	Compensation and Benefits Managers	<10	<10	N/a
11-3121	Human Resources Managers	39	52	13
11-3131	Training and Development Managers	<10	<10	N/a
11-9013	Farmers, Ranchers, and Other Agricultural Managers	5,883	4,716	(1,167)
11-9021	Construction Managers	398	252	(146)
11-9031	Education Administrators, Preschool and Childcare Center/Program	25	24	(1)
11-9032	Education Administrators, Elementary and Secondary School	154	159	5
11-9033	Education Administrators, Postsecondary	54	65	11
11-9039	Education Administrators, All Other	23	27	4
11-9041	Architectural and Engineering Managers	42	31	(11)
11-9051	Food Service Managers	188	201	13
11-9061	Funeral Service Managers	<10	<10	N/a
11-9071	Gaming Managers	<10	<10	N/a
11-9081	Lodging Managers	124	135	11
11-9111	Medical and Health Services Managers	112	135	23
11-9121	Natural Sciences Managers	21	24	3
11-9131	Postmasters and Mail Superintendents	22	19	(3)
11-9141	Property, Real Estate, and Community Association Managers	261	426	165
11-9151	Social and Community Service Managers	50	75	25

11-9161	Emergency Management Directors	<10	<10	N/a
11-9199	Managers, All Other	562	884	322
13-1011	Agents and Business Managers of Artists, Performers, and Athletes	11	12	1
13-1021	Buyers and Purchasing Agents, Farm Products	11	<10	N/a
13-1022	Wholesale and Retail Buyers, Except Farm Products	54	54	0
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	124	117	(7)
13-1031	Claims Adjusters, Examiners, and Investigators	71	73	2
13-1032	Insurance Appraisers, Auto Damage	<10	<10	N/a
13-1041	Compliance Officers	80	86	6
13-1051	Cost Estimators	88	88	0
13-1071	Human Resources Specialists	150	163	13
13-1074	Farm Labor Contractors	<10	<10	N/a
13-1075	Labor Relations Specialists	<10	<10	N/a
13-1081	Logisticians	41	38	(3)
13-1111	Management Analysts	223	251	28
13-1121	Meeting, Convention, and Event Planners	25	63	38
13-1131	Fundraisers	40	20	(20)
13-1141	Compensation, Benefits, and Job Analysis Specialists	14	12	(2)
13-1151	Training and Development Specialists	53	62	9
13-1161	Market Research Analysts and Marketing Specialists	84	107	23
13-1199	Business Operations Specialists, All Other	412	457	45
13-2011	Accountants and Auditors	424	398	(26)
13-2021	Appraisers and Assessors of Real Estate	118	145	27
13-2031	Budget Analysts	30	33	3
13-2041	Credit Analysts	<10	<10	N/a
13-2051	Financial Analysts	53	57	4
13-2052	Personal Financial Advisors	148	322	174
13-2053	Insurance Underwriters	<10	<10	N/a
13-2061	Financial Examiners	13	15	2
13-2071	Credit Counselors	<10	<10	N/a
13-2072	Loan Officers	192	225	33
13-2081	Tax Examiners and Collectors, and Revenue Agents	27	26	(1)
13-2082	Tax Preparers	58	57	(1)
13-2099	Financial Specialists, All Other	53	48	(5)
15-1111	Computer and Information Research Scientists	<10	<10	N/a
15-1121	Computer Systems Analysts	60	67	7
15-1122	Information Security Analysts	<10	<10	N/a
15-1131	Computer Programmers	60	61	1

Meramec Occupation Details				
SOC	Description	2002	2015	Change
15-2011	Actuaries	<10	<10	N/a
15-2021	Mathematicians	<10	<10	N/a
15-2031	Operations Research Analysts	10	15	5
15-2041	Statisticians	<10	12	N/a
15-2091	Mathematical Technicians	0	<10	N/a

15-2099	Mathematical Science Occupations, All Other	<10	<10	N/a
17-1011	Architects, Except Landscape and Naval	51	43	(8)
17-1012	Landscape Architects	16	16	0
17-1021	Cartographers and Photogrammetrists	<10	10	N/a
17-1022	Surveyors	10	10	0
17-2011	Aerospace Engineers	<10	<10	N/a
17-2021	Agricultural Engineers	<10	<10	N/a
17-2031	Biomedical Engineers	<10	<10	N/a
17-2041	Chemical Engineers	13	12	(1)
17-2051	Civil Engineers	71	81	10
17-2061	Computer Hardware Engineers	<10	<10	N/a
17-2071	Electrical Engineers	48	48	0
17-2072	Electronics Engineers, Except Computer	41	41	0
17-2081	Environmental Engineers	<10	<10	N/a
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	<10	<10	N/a
17-2112	Industrial Engineers	75	46	(29)
17-2121	Marine Engineers and Naval Architects	<10	<10	N/a
17-2131	Materials Engineers	<10	<10	N/a
17-2141	Mechanical Engineers	101	67	(34)
17-2151	Mining and Geological Engineers, Including Mining Safety Engineers	<10	<10	N/a
17-2161	Nuclear Engineers	<10	<10	N/a
17-2171	Petroleum Engineers	<10	<10	N/a
17-2199	Engineers, All Other	63	65	2
17-3011	Architectural and Civil Drafters	33	31	(2)
17-3012	Electrical and Electronics Drafters	<10	<10	N/a
17-3013	Mechanical Drafters	24	17	(7)
17-3019	Drafters, All Other	<10	<10	N/a
17-3021	Aerospace Engineering and Operations Technicians	<10	<10	N/a
17-3022	Civil Engineering Technicians	14	15	1
17-3023	Electrical and Electronics Engineering Technicians	53	62	9
17-3024	Electro-Mechanical Technicians	<10	<10	N/a
17-3025	Environmental Engineering Technicians	<10	<10	N/a
17-3026	Industrial Engineering Technicians	17	10	(7)
17-3027	Mechanical Engineering Technicians	26	14	(12)
17-3029	Engineering Technicians, Except Drafters, All Other	33	32	(1)
17-3031	Surveying and Mapping Technicians	26	25	(1)
19-1011	Animal Scientists	<10	<10	N/a
19-1012	Food Scientists and Technologists	<10	<10	N/a
19-1013	Soil and Plant Scientists	<10	<10	N/a
19-1021	Biochemists and Biophysicists	11	12	1
19-1022	Microbiologists	<10	<10	N/a
19-1023	Zoologists and Wildlife Biologists	<10	<10	N/a
19-1029	Biological Scientists, All Other	27	29	2
19-1031	Conservation Scientists	39	45	6
19-1032	Foresters	<10	<10	N/a
19-1041	Epidemiologists	<10	<10	N/a

19-1042	Medical Scientists, Except Epidemiologists	<10	<10	N/a
19-1099	Life Scientists, All Other	<10	<10	N/a
19-2011	Astronomers	<10	<10	N/a
19-2012	Physicists	<10	<10	N/a
19-2021	Atmospheric and Space Scientists	<10	<10	N/a
19-2031	Chemists	34	41	7
19-2032	Materials Scientists	<10	<10	N/a
19-2041	Environmental Scientists and Specialists, Including Health	22	23	1
19-2042	Geoscientists, Except Hydrologists and Geographers	13	10	(3)
19-2043	Hydrologists	<10	<10	N/a
19-2099	Physical Scientists, All Other	21	22	1
19-3011	Economists	<10	<10	N/a
19-3022	Survey Researchers	<10	<10	N/a
19-3031	Clinical, Counseling, and School Psychologists	72	97	25
19-3032	Industrial-Organizational Psychologists	<10	<10	N/a
19-3039	Psychologists, All Other	21	25	4
19-3041	Sociologists	<10	<10	N/a
19-3051	Urban and Regional Planners	<10	<10	N/a
19-3091	Anthropologists and Archeologists	<10	<10	N/a
19-3092	Geographers	<10	<10	N/a
19-3093	Historians	<10	<10	N/a
19-3094	Political Scientists	<10	<10	N/a
19-3099	Social Scientists and Related Workers, All Other	30	35	5
19-4011	Agricultural and Food Science Technicians	<10	<10	N/a
19-4021	Biological Technicians	14	14	0
19-4031	Chemical Technicians	17	18	1
19-4041	Geological and Petroleum Technicians	<10	<10	N/a
19-4051	Nuclear Technicians	<10	<10	N/a
19-4061	Social Science Research Assistants	<10	<10	N/a
19-4091	Environmental Science and Protection Technicians, Including Health	<10	<10	N/a
19-4092	Forensic Science Technicians	<10	<10	N/a
19-4093	Forest and Conservation Technicians	27	29	2
19-4099	Life, Physical, and Social Science Technicians, All Other	23	26	3
21-1011	Substance Abuse and Behavioral Disorder Counselors	54	80	26
21-1012	Educational, Guidance, School, and Vocational Counselors	150	185	35
21-1013	Marriage and Family Therapists	<10	12	N/a
21-1014	Mental Health Counselors	29	45	16
21-1015	Rehabilitation Counselors	43	77	34
21-1019	Counselors, All Other	<10	<10	N/a
21-1021	Child, Family, and School Social Workers	157	212	55
21-1022	Healthcare Social Workers	64	93	29
21-1023	Mental Health and Substance Abuse Social Workers	31	45	14
21-1029	Social Workers, All Other	39	46	7
21-1091	Health Educators	15	19	4
21-1092	Probation Officers and Correctional Treatment Specialists	80	89	9

21-1093	Social and Human Service Assistants	69	109	40
21-1094	Community Health Workers	14	22	8
21-1099	Community and Social Service Specialists, All Other	20	26	6
21-2011	Clergy	299	283	(16)
21-2021	Directors, Religious Activities and Education	62	71	9
21-2099	Religious Workers, All Other	54	54	0
23-1011	Lawyers	135	163	28
23-1012	Judicial Law Clerks	<10	<10	N/a
23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	<10	<10	N/a
23-1022	Arbitrators, Mediators, and Conciliators	<10	<10	N/a
23-1023	Judges, Magistrate Judges, and Magistrates	13	14	1
23-2011	Paralegals and Legal Assistants	53	50	(3)
23-2091	Court Reporters	21	23	2
23-2093	Title Examiners, Abstractors, and Searchers	19	25	6
23-2099	Legal Support Workers, All Other	26	28	2
25-1099	Postsecondary Teachers	647	817	170
25-2011	Preschool Teachers, Except Special Education	153	176	23
25-2012	Kindergarten Teachers, Except Special Education	74	77	3
25-2021	Elementary School Teachers, Except Special Education	738	760	22
25-2022	Middle School Teachers, Except Special and Career/Technical Education	373	383	10
25-2023	Career/Technical Education Teachers, Middle School	<10	<10	N/a
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	914	942	28
25-2032	Career/Technical Education Teachers, Secondary School	95	96	1
25-2051	Special Education Teachers, Preschool	<10	<10	N/a
25-2052	Special Education Teachers, Kindergarten and Elementary School	81	84	3
25-2053	Special Education Teachers, Middle School	55	56	1
25-2054	Special Education Teachers, Secondary School	59	58	(1)
25-2059	Special Education Teachers, All Other	<10	<10	N/a
25-3011	Adult Basic and Secondary Education and Literacy Teachers and Instructors	19	21	2
25-3021	Self-Enrichment Education Teachers	130	157	27
25-3098	Substitute Teachers	568	591	23
25-3099	Teachers and Instructors, All Other	212	263	51
25-4011	Archivists	<10	<10	N/a
25-4012	Curators	<10	<10	N/a
25-4013	Museum Technicians and Conservators	<10	<10	N/a
25-4021	Librarians	73	83	10
25-4031	Library Technicians	57	69	12
25-9011	Audio-Visual and Multimedia Collections Specialists	<10	<10	N/a
25-9021	Farm and Home Management Advisors	<10	<10	N/a
25-9031	Instructional Coordinators	45	54	9
25-9041	Teacher Assistants	539	583	44
25-9099	Education, Training, and Library Workers, All Other	38	45	7
27-1011	Art Directors	33	36	3

27-1012	Craft Artists	32	38	6
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	59	67	8
27-1014	Multimedia Artists and Animators	27	26	(1)
27-1019	Artists and Related Workers, All Other	12	13	1
27-1021	Commercial and Industrial Designers	16	17	1
27-1022	Fashion Designers	<10	10	N/a
27-1023	Floral Designers	73	64	(9)
27-1024	Graphic Designers	129	142	13
27-1025	Interior Designers	27	31	4
27-1026	Merchandise Displayers and Window Trimmers	26	22	(4)
27-1027	Set and Exhibit Designers	<10	<10	N/a
27-1029	Designers, All Other	<10	<10	N/a
27-2011	Actors	16	17	1
27-2012	Producers and Directors	18	16	(2)
27-2021	Athletes and Sports Competitors	<10	10	N/a
27-2022	Coaches and Scouts	105	123	18
27-2023	Umpires, Referees, and Other Sports Officials	17	19	2
27-2031	Dancers	<10	11	N/a
27-2032	Choreographers	<10	<10	N/a
27-2041	Music Directors and Composers	58	63	5
27-2042	Musicians and Singers	127	153	26
27-2099	Entertainers and Performers, Sports and Related Workers, All Other	39	40	1
27-3011	Radio and Television Announcers	27	37	10
27-3012	Public Address System and Other Announcers	13	13	0
27-3021	Broadcast News Analysts	<10	<10	N/a
27-3022	Reporters and Correspondents	25	21	(4)
27-3031	Public Relations Specialists	64	71	7
27-3041	Editors	40	58	18
27-3042	Technical Writers	10	<10	N/a
27-3043	Writers and Authors	97	115	18
27-3091	Interpreters and Translators	67	95	28
27-3099	Media and Communication Workers, All Other	<10	<10	N/a
27-4011	Audio and Video Equipment Technicians	20	21	1
27-4012	Broadcast Technicians	<10	<10	N/a
27-4013	Radio Operators	<10	<10	N/a
27-4014	Sound Engineering Technicians	<10	<10	N/a
27-4021	Photographers	216	265	49
27-4031	Camera Operators, Television, Video, and Motion Picture	<10	<10	N/a
27-4032	Film and Video Editors	<10	<10	N/a
27-4099	Media and Communication Equipment Workers, All Other	<10	<10	N/a
29-1011	Chiropractors	33	31	(2)
29-1021	Dentists, General	34	58	24
29-1022	Oral and Maxillofacial Surgeons	<10	<10	N/a
29-1023	Orthodontists	<10	<10	N/a
29-1024	Prosthodontists	0	<10	N/a
29-1029	Dentists, All Other Specialists	<10	<10	N/a
29-1031	Dietitians and Nutritionists	19	27	8

29-1041	Optometrists	20	16	(4)
29-1051	Pharmacists	92	117	25
29-1061	Anesthesiologists	25	37	12
29-1062	Family and General Practitioners	88	112	24
29-1063	Internists, General	<10	<10	N/a
29-1064	Obstetricians and Gynecologists	<10	<10	N/a
29-1065	Pediatricians, General	<10	<10	N/a
29-1066	Psychiatrists	<10	<10	N/a
29-1067	Surgeons	<10	11	N/a
29-1069	Physicians and Surgeons, All Other	150	172	22
29-1071	Physician Assistants	13	18	5
29-1081	Podiatrists	<10	<10	N/a
29-1122	Occupational Therapists	41	52	11
29-1123	Physical Therapists	59	73	14
29-1124	Radiation Therapists	<10	<10	N/a
29-1125	Recreational Therapists	<10	11	N/a
29-1126	Respiratory Therapists	29	38	9
29-1127	Speech-Language Pathologists	67	87	20
29-1128	Exercise Physiologists	<10	<10	N/a
29-1129	Therapists, All Other	14	26	12
29-1131	Veterinarians	32	41	9
29-1141	Registered Nurses	855	993	138
29-1151	Nurse Anesthetists	15	21	6
29-1161	Nurse Midwives	<10	<10	N/a
29-1171	Nurse Practitioners	25	40	15
29-1181	Audiologists	<10	<10	N/a
29-1199	Health Diagnosing and Treating Practitioners, All Other	21	32	11
29-2011	Medical and Clinical Laboratory Technologists	32	39	7
29-2012	Medical and Clinical Laboratory Technicians	45	58	13
29-2021	Dental Hygienists	50	62	12
29-2031	Cardiovascular Technologists and Technicians	<10	<10	N/a
29-2032	Diagnostic Medical Sonographers	<10	11	N/a
29-2033	Nuclear Medicine Technologists	<10	<10	N/a
29-2034	Radiologic Technologists	59	76	17
29-2035	Magnetic Resonance Imaging Technologists	<10	<10	N/a
29-2041	Emergency Medical Technicians and Paramedics	195	231	36
29-2051	Dietetic Technicians	<10	<10	N/a
29-2052	Pharmacy Technicians	110	150	40
29-2053	Psychiatric Technicians	43	46	3
29-2054	Respiratory Therapy Technicians	12	14	2
29-2055	Surgical Technologists	<10	14	N/a
29-2056	Veterinary Technologists and Technicians	20	27	7
29-2057	Ophthalmic Medical Technicians	<10	11	N/a
29-2061	Licensed Practical and Licensed Vocational Nurses	578	594	16
29-2071	Medical Records and Health Information Technicians	78	95	17
29-2081	Opticians, Dispensing	30	33	3
29-2091	Orthotists and Prosthetists	<10	<10	N/a

29-2092	Hearing Aid Specialists	<10	<10	N/a
29-2099	Health Technologists and Technicians, All Other	27	35	8
29-9011	Occupational Health and Safety Specialists	36	41	5
29-9012	Occupational Health and Safety Technicians	<10	<10	N/a
29-9091	Athletic Trainers	<10	13	N/a
29-9092	Genetic Counselors	0	<10	N/a
29-9099	Healthcare Practitioners and Technical Workers, All Other	18	21	3
31-1011	Home Health Aides	229	297	68
31-1013	Psychiatric Aides	22	21	(1)
31-1014	Nursing Assistants	1,286	1,381	95
31-1015	Orderlies	11	12	1
31-2011	Occupational Therapy Assistants	12	18	6
31-2012	Occupational Therapy Aides	<10	<10	N/a
31-2021	Physical Therapist Assistants	20	30	10
31-2022	Physical Therapist Aides	<10	11	N/a
31-9011	Massage Therapists	50	100	50
31-9091	Dental Assistants	95	120	25
31-9092	Medical Assistants	140	180	40
31-9093	Medical Equipment Preparers	11	12	1
31-9094	Medical Transcriptionists	17	39	22
31-9095	Pharmacy Aides	10	11	1
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	73	87	14
31-9097	Phlebotomists	13	12	(1)
31-9099	Healthcare Support Workers, All Other	39	42	3
33-1011	First-Line Supervisors of Correctional Officers	15	13	(2)
33-1012	First-Line Supervisors of Police and Detectives	58	69	11
33-1021	First-Line Supervisors of Fire Fighting and Prevention Workers	37	44	7
33-1099	First-Line Supervisors of Protective Service Workers, All Other	19	18	(1)
33-2011	Firefighters	163	188	25
33-2021	Fire Inspectors and Investigators	<10	<10	N/a
33-2022	Forest Fire Inspectors and Prevention Specialists	<10	<10	N/a
33-3011	Bailiffs	<10	<10	N/a
33-3012	Correctional Officers and Jailers	358	359	1
33-3021	Detectives and Criminal Investigators	50	52	2
33-3031	Fish and Game Wardens	<10	<10	N/a
33-3041	Parking Enforcement Workers	<10	<10	N/a
33-3051	Police and Sheriff's Patrol Officers	295	343	48
33-3052	Transit and Railroad Police	<10	<10	N/a
33-9011	Animal Control Workers	<10	<10	N/a
33-9021	Private Detectives and Investigators	17	17	0
33-9031	Gaming Surveillance Officers and Gaming Investigators	<10	<10	N/a
33-9032	Security Guards	171	134	(37)
33-9091	Crossing Guards	<10	<10	N/a
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	68	71	3
33-9093	Transportation Security Screeners	31	31	0

33-9099	Protective Service Workers, All Other	39	41	2
35-1011	Chefs and Head Cooks	52	67	15
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	444	514	70
35-2011	Cooks, Fast Food	236	247	11
35-2012	Cooks, Institution and Cafeteria	507	638	131
35-2013	Cooks, Private Household	<10	<10	N/a
35-2014	Cooks, Restaurant	389	450	61
35-2015	Cooks, Short Order	96	96	0
35-2019	Cooks, All Other	<10	10	N/a
35-2021	Food Preparation Workers	310	356	46
35-3011	Bartenders	199	183	(16)
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	1,297	1,634	337
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	106	121	15
35-3031	Waiters and Waitresses	951	1,018	67
35-3041	Food Servers, Nonrestaurant	163	190	27
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	184	204	20
35-9021	Dishwashers	194	203	9
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	92	100	8
35-9099	Food Preparation and Serving Related Workers, All Other	18	22	4
37-1011	First-Line Supervisors of Housekeeping and Janitorial Workers	139	139	0
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Grounds keeping Workers	45	62	17
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	1,084	1,258	174
37-2012	Maids and Housekeeping Cleaners	1,009	845	(164)
37-2019	Building Cleaning Workers, All Other	<10	<10	N/a
37-2021	Pest Control Workers	18	24	6
37-3011	Landscaping and Grounds keeping Workers	334	574	240
37-3012	Pesticide Handlers, Sprayers, and Applicators, Vegetation	<10	13	N/a
37-3013	Tree Trimmers and Pruners	20	42	22
37-3019	Grounds Maintenance Workers, All Other	<10	<10	N/a
39-1011	Gaming Supervisors	<10	<10	N/a
39-1012	Slot Supervisors	<10	<10	N/a
39-1021	First-Line Supervisors of Personal Service Workers	134	126	(8)
39-2011	Animal Trainers	163	138	(25)
39-2021	Nonfarm Animal Caretakers	387	430	43
39-3011	Gaming Dealers	<10	12	N/a
39-3012	Gaming and Sports Book Writers and Runners	<10	<10	N/a
39-3019	Gaming Service Workers, All Other	<10	<10	N/a
39-3021	Motion Picture Projectionists	<10	<10	N/a
39-3031	Ushers, Lobby Attendants, and Ticket Takers	27	27	0
39-3091	Amusement and Recreation Attendants	92	90	(2)

39-3092	Costume Attendants	<10	<10	N/a
39-3093	Locker Room, Coatroom, and Dressing Room Attendants	<10	<10	N/a
39-3099	Entertainment Attendants and Related Workers, All Other	10	14	4
39-4011	Embalmers	<10	<10	N/a
39-4021	Funeral Attendants	19	11	(8)
39-4031	Morticians, Undertakers, and Funeral Directors	33	17	(16)
39-5011	Barbers	61	56	(5)
39-5012	Hairdressers, Hairstylists, and Cosmetologists	390	494	104
39-5091	Makeup Artists, Theatrical and Performance	<10	<10	N/a
39-5092	Manicurists and Pedicurists	30	56	26
39-5093	Shampooers	<10	11	N/a
39-5094	Skincare Specialists	24	38	14
39-6011	Baggage Porters and Bellhops	<10	<10	N/a
39-6012	Concierges	<10	<10	N/a
39-7011	Tour Guides and Escorts	29	59	30
39-7012	Travel Guides	<10	<10	N/a
39-9011	Childcare Workers	1,380	954	(426)
39-9021	Personal Care Aides	631	1,640	1,009
39-9031	Fitness Trainers and Aerobics Instructors	84	99	15
39-9032	Recreation Workers	164	203	39
39-9041	Residential Advisors	46	86	40
39-9099	Personal Care and Service Workers, All Other	97	151	54
41-1011	First-Line Supervisors of Retail Sales Workers	1,426	1,349	(77)
41-1012	First-Line Supervisors of Non-Retail Sales Workers	313	324	11
41-2011	Cashiers	1,922	2,089	167
41-2012	Gaming Change Persons and Booth Cashiers	<10	<10	N/a
41-2021	Counter and Rental Clerks	152	139	(13)
41-2022	Parts Salespersons	151	153	2
41-2031	Retail Salespersons	1,958	1,997	39
41-3011	Advertising Sales Agents	50	40	(10)
41-3021	Insurance Sales Agents	361	413	52
41-3031	Securities, Commodities, and Financial Services Sales Agents	129	194	65
41-3041	Travel Agents	38	<10	N/a
41-3099	Sales Representatives, Services, All Other	201	219	18
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	51	57	6
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	450	448	(2)
41-9011	Demonstrators and Product Promoters	58	45	(13)
41-9012	Models	<10	<10	N/a
41-9021	Real Estate Brokers	201	289	88
41-9022	Real Estate Sales Agents	757	1,088	331
41-9031	Sales Engineers	<10	<10	N/a
41-9041	Telemarketers	56	26	(30)
41-9091	Door-to-Door Sales Workers, News and Street Vendors, and Related Workers	647	679	32
41-9099	Sales and Related Workers, All Other	85	101	16

43-1011	First-Line Supervisors of Office and Administrative Support Workers	428	448	20
43-2011	Switchboard Operators, Including Answering Service	53	43	(10)
43-2021	Telephone Operators	<10	<10	N/a
43-2099	Communications Equipment Operators, All Other	<10	<10	N/a
43-3011	Bill and Account Collectors	52	55	3
43-3021	Billing and Posting Clerks	150	173	23
43-3031	Bookkeeping, Accounting, and Auditing Clerks	800	762	(38)
43-3041	Gaming Cage Workers	<10	<10	N/a
43-3051	Payroll and Timekeeping Clerks	68	64	(4)
43-3061	Procurement Clerks	81	88	7
43-3071	Tellers	393	407	14
43-3099	Financial Clerks, All Other	13	13	0
43-4011	Brokerage Clerks	<10	<10	N/a
43-4021	Correspondence Clerks	<10	<10	N/a
43-4031	Court, Municipal, and License Clerks	125	144	19
43-4041	Credit Authorizers, Checkers, and Clerks	<10	<10	N/a
43-4051	Customer Service Representatives	627	640	13
43-4061	Eligibility Interviewers, Government Programs	90	100	10
43-4071	File Clerks	45	45	0
43-4081	Hotel, Motel, and Resort Desk Clerks	133	154	21
43-4111	Interviewers, Except Eligibility and Loan	87	147	60
43-4121	Library Assistants, Clerical	66	79	13
43-4131	Loan Interviewers and Clerks	83	94	11
43-4141	New Accounts Clerks	52	54	2
43-4151	Order Clerks	99	97	(2)
43-4161	Human Resources Assistants, Except Payroll and Timekeeping	85	88	3
43-4171	Receptionists and Information Clerks	266	301	35
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	22	20	(2)
43-4199	Information and Record Clerks, All Other	146	165	19
43-5011	Cargo and Freight Agents	12	15	3
43-5021	Couriers and Messengers	149	129	(20)
43-5031	Police, Fire, and Ambulance Dispatchers	58	64	6
43-5032	Dispatchers, Except Police, Fire, and Ambulance	109	112	3
43-5041	Meter Readers, Utilities	13	11	(2)
43-5051	Postal Service Clerks	55	45	(10)
43-5052	Postal Service Mail Carriers	189	156	(33)
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	28	19	(9)
43-5061	Production, Planning, and Expediting Clerks	122	114	(8)
43-5071	Shipping, Receiving, and Traffic Clerks	229	208	(21)
43-5081	Stock Clerks and Order Fillers	767	793	26
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	25	27	2
43-6011	Executive Secretaries and Executive Administrative Assistants	194	197	3
43-6012	Legal Secretaries	18	14	(4)

43-6013	Medical Secretaries	157	218	61
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	1,475	1,642	167
43-9011	Computer Operators	21	16	(5)
43-9021	Data Entry Keyers	44	45	1
43-9022	Word Processors and Typists	44	42	(2)
43-9031	Desktop Publishers	19	19	0
43-9041	Insurance Claims and Policy Processing Clerks	21	22	1
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	31	28	(3)
43-9061	Office Clerks, General	1,305	1,424	119
43-9071	Office Machine Operators, Except Computer	24	25	1
43-9081	Proofreaders and Copy Markers	10	11	1
43-9111	Statistical Assistants	<10	<10	N/a
43-9199	Office and Administrative Support Workers, All Other	130	149	19
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	51	67	16
45-2011	Agricultural Inspectors	30	36	6
45-2021	Animal Breeders	<10	<10	N/a
45-2041	Graders and Sorters, Agricultural Products	21	21	0
45-2091	Agricultural Equipment Operators	21	33	12
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	176	306	130
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	46	57	11
45-2099	Agricultural Workers, All Other	<10	<10	N/a
45-3011	Fishers and Related Fishing Workers	28	26	(2)
45-3021	Hunters and Trappers	13	13	0
45-4011	Forest and Conservation Workers	<10	18	N/a
45-4021	Fallers	35	51	16
45-4022	Logging Equipment Operators	138	202	64
45-4023	Log Graders and Scalers	13	12	(1)
45-4029	Logging Workers, All Other	14	22	8
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	451	315	(136)
47-2011	Boilermakers	<10	<10	N/a
47-2021	Brickmasons and Blockmasons	113	90	(23)
47-2022	Stonemasons	15	11	(4)
47-2031	Carpenters	954	933	(21)
47-2041	Carpet Installers	37	30	(7)
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	16	13	(3)
47-2043	Floor Sanders and Finishers	<10	<10	N/a
47-2044	Tile and Marble Setters	60	48	(12)
47-2051	Cement Masons and Concrete Finishers	106	73	(33)
47-2053	Terrazzo Workers and Finishers	<10	<10	N/a
47-2061	Construction Laborers	724	983	259
47-2071	Paving, Surfacing, and Tamping Equipment Operators	12	13	1
47-2072	Pile-Driver Operators	<10	<10	N/a
47-2073	Operating Engineers and Other Construction Equipment Operators	123	122	(1)

47-2081	Drywall and Ceiling Tile Installers	92	65	(27)
47-2082	Tapers	14	<10	N/a
47-2111	Electricians	217	202	(15)
47-2121	Glaziers	22	19	(3)
47-2131	Insulation Workers, Floor, Ceiling, and Wall	<10	<10	N/a
47-2132	Insulation Workers, Mechanical	<10	<10	N/a
47-2141	Painters, Construction and Maintenance	347	352	5
47-2142	Paperhangers	<10	<10	N/a
47-2151	Pipelayers	18	19	1
47-2152	Plumbers, Pipefitters, and Steamfitters	182	221	39
47-2161	Plasterers and Stucco Masons	15	11	(4)
47-2171	Reinforcing Iron and Rebar Workers	18	14	(4)
47-2181	Roofers	116	109	(7)
47-2211	Sheet Metal Workers	129	150	21
47-2221	Structural Iron and Steel Workers	27	23	(4)
47-2231	Solar Photovoltaic Installers	<10	<10	N/a
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	16	12	(4)
47-3012	Helpers--Carpenters	16	14	(2)
47-3013	Helpers--Electricians	12	<10	N/a
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	<10	<10	N/a
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	<10	11	N/a
47-3016	Helpers--Roofers	<10	<10	N/a
47-3019	Helpers, Construction Trades, All Other	<10	<10	N/a
47-4011	Construction and Building Inspectors	51	60	9
47-4021	Elevator Installers and Repairers	<10	<10	N/a
47-4031	Fence Erectors	15	15	0
47-4041	Hazardous Materials Removal Workers	<10	<10	N/a
47-4051	Highway Maintenance Workers	120	143	23
47-4061	Rail-Track Laying and Maintenance Equipment Operators	<10	<10	N/a
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	11	10	(1)
47-4091	Segmental Pavers	<10	<10	N/a
47-4099	Construction and Related Workers, All Other	14	13	(1)
47-5011	Derrick Operators, Oil and Gas	0	<10	N/a
47-5012	Rotary Drill Operators, Oil and Gas	<10	<10	N/a
47-5013	Service Unit Operators, Oil, Gas, and Mining	<10	<10	N/a
47-5021	Earth Drillers, Except Oil and Gas	<10	<10	N/a
47-5031	Explosives Workers, Ordnance Handling Experts, and Blasters	<10	<10	N/a
47-5041	Continuous Mining Machine Operators	<10	<10	N/a
47-5042	Mine Cutting and Channeling Machine Operators	<10	<10	N/a
47-5049	Mining Machine Operators, All Other	<10	<10	N/a
47-5051	Rock Splitters, Quarry	<10	11	N/a
47-5061	Roof Bolters, Mining	0	<10	N/a
47-5071	Roustabouts, Oil and Gas	<10	<10	N/a
47-5081	Helpers--Extraction Workers	<10	<10	N/a

47-5099	Extraction Workers, All Other	<10	<10	N/a
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	221	228	7
49-2011	Computer, Automated Teller, and Office Machine Repairers	45	56	11
49-2021	Radio, Cellular, and Tower Equipment Installers and Repairs	<10	<10	N/a
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	80	74	(6)
49-2091	Avionics Technicians	<10	<10	N/a
49-2092	Electric Motor, Power Tool, and Related Repairers	<10	<10	N/a
49-2093	Electrical and Electronics Installers and Repairers, Transportation Equipment	<10	<10	N/a
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	47	50	3
49-2095	Electrical and Electronics Repairers, Powerhouse, Substation, and Relay	<10	<10	N/a
49-2096	Electronic Equipment Installers and Repairers, Motor Vehicles	<10	<10	N/a
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	18	11	(7)
49-2098	Security and Fire Alarm Systems Installers	<10	<10	N/a
49-3011	Aircraft Mechanics and Service Technicians	71	80	9
49-3021	Automotive Body and Related Repairers	142	125	(17)
49-3022	Automotive Glass Installers and Repairers	18	17	(1)
49-3023	Automotive Service Technicians and Mechanics	684	678	(6)
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	117	127	10
49-3041	Farm Equipment Mechanics and Service Technicians	52	61	9
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	51	64	13
49-3043	Rail Car Repairers	<10	<10	N/a
49-3051	Motorboat Mechanics and Service Technicians	18	30	12
49-3052	Motorcycle Mechanics	14	20	6
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	18	30	12
49-3091	Bicycle Repairers	<10	<10	N/a
49-3092	Recreational Vehicle Service Technicians	<10	<10	N/a
49-3093	Tire Repairers and Changers	39	38	(1)
49-9011	Mechanical Door Repairers	<10	<10	N/a
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	15	15	0
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	114	127	13
49-9031	Home Appliance Repairers	38	46	8
49-9041	Industrial Machinery Mechanics	122	146	24
49-9043	Maintenance Workers, Machinery	45	47	2
49-9044	Millwrights	<10	<10	N/a
49-9045	Refractory Materials Repairers, Except Brickmasons	<10	<10	N/a
49-9051	Electrical Power-Line Installers and Repairers	104	96	(8)
49-9052	Telecommunications Line Installers and Repairers	74	65	(9)
49-9061	Camera and Photographic Equipment Repairers	<10	<10	N/a

49-9062	Medical Equipment Repairers	<10	10	N/a
49-9063	Musical Instrument Repairers and Tuners	19	21	2
49-9064	Watch Repairers	14	15	1
49-9069	Precision Instrument and Equipment Repairers, All Other	<10	<10	N/a
49-9071	Maintenance and Repair Workers, General	721	794	73
49-9081	Wind Turbine Service Technicians	<10	<10	N/a
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	23	14	(9)
49-9092	Commercial Divers	<10	<10	N/a
49-9093	Fabric Menders, Except Garment	<10	<10	N/a
49-9094	Locksmiths and Safe Repairers	<10	<10	N/a
49-9095	Manufactured Building and Mobile Home Installers	<10	<10	N/a
49-9096	Riggers	<10	<10	N/a
49-9097	Signal and Track Switch Repairers	<10	<10	N/a
49-9098	Helpers--Installation, Maintenance, and Repair Workers	25	24	(1)
49-9099	Installation, Maintenance, and Repair Workers, All Other	122	140	18
51-1011	First-Line Supervisors of Production and Operating Workers	377	353	(24)
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	<10	<10	N/a
51-2021	Coil Winders, Tapers, and Finishers	12	13	1
51-2022	Electrical and Electronic Equipment Assemblers	89	98	9
51-2023	Electromechanical Equipment Assemblers	13	<10	N/a
51-2031	Engine and Other Machine Assemblers	77	15	(62)
51-2041	Structural Metal Fabricators and Fitters	42	32	(10)
51-2091	Fiberglass Laminators and Fabricators	17	11	(6)
51-2092	Team Assemblers	606	448	(158)
51-2093	Timing Device Assemblers and Adjusters	<10	0	N/a
51-2099	Assemblers and Fabricators, All Other	146	134	(12)
51-3011	Bakers	37	56	19
51-3021	Butchers and Meat Cutters	66	70	4
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	19	26	7
51-3023	Slaughterers and Meat Packers	<10	<10	N/a
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	<10	<10	N/a
51-3092	Food Batchmakers	33	44	11
51-3093	Food Cooking Machine Operators and Tenders	<10	11	N/a
51-3099	Food Processing Workers, All Other	22	27	5
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	86	75	(11)
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	12	11	(1)
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	38	30	(8)
51-4022	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	<10	<10	N/a
51-4023	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	12	<10	N/a

51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	193	138	(55)
51-4032	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	<10	<10	N/a
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	36	20	(16)
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	35	19	(16)
51-4035	Milling and Planning Machine Setters, Operators, and Tenders, Metal and Plastic	<10	<10	N/a
51-4041	Machinists	150	100	(50)
51-4051	Metal-Refining Furnace Operators and Tenders	<10	<10	N/a
51-4052	Pourers and Casters, Metal	<10	<10	N/a
51-4061	Model Makers, Metal and Plastic	<10	<10	N/a
51-4062	Patternmakers, Metal and Plastic	<10	<10	N/a
51-4071	Foundry Mold and Coremakers	<10	<10	N/a
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	59	36	(23)
51-4081	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	96	61	(35)
51-4111	Tool and Die Makers	44	26	(18)
51-4121	Welders, Cutters, Solderers, and Brazers	246	254	8
51-4122	Welding, Soldering, and Brazing Machine Setters, Operators, and Tenders	36	24	(12)
51-4191	Heat Treating Equipment Setters, Operators, and Tenders, Metal and Plastic	15	13	(2)
51-4192	Layout Workers, Metal and Plastic	14	14	0
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	42	36	(6)
51-4194	Tool Grinders, Filers, and Sharpeners	<10	<10	N/a
51-4199	Metal Workers and Plastic Workers, All Other	30	25	(5)
51-5111	Prepress Technicians and Workers	48	46	(2)
51-5112	Printing Press Operators	395	424	29
51-5113	Print Binding and Finishing Workers	146	155	9
51-6011	Laundry and Dry-Cleaning Workers	187	122	(65)
51-6021	Pressers, Textile, Garment, and Related Materials	29	<10	N/a
51-6031	Sewing Machine Operators	94	125	31
51-6041	Shoe and Leather Workers and Repairers	65	113	48
51-6042	Shoe Machine Operators and Tenders	62	61	(1)
51-6051	Sewers, Hand	11	12	1
51-6052	Tailors, Dressmakers, and Custom Sewers	83	92	9
51-6061	Textile Bleaching and Dyeing Machine Operators and Tenders	0	0	0
51-6062	Textile Cutting Machine Setters, Operators, and Tenders	<10	<10	N/a
51-6063	Textile Knitting and Weaving Machine Setters, Operators, and Tenders	<10	<10	N/a
51-6064	Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	<10	<10	N/a
51-6091	Extruding and Forming Machine Setters, Operators, and Tenders, Synthetic and Glass Fibers	<10	<10	N/a

51-6092	Fabric and Apparel Patternmakers	<10	<10	N/a
51-6093	Upholsterers	53	61	8
51-6099	Textile, Apparel, and Furnishings Workers, All Other	18	24	6
51-7011	Cabinetmakers and Bench Carpenters	86	82	(4)
51-7021	Furniture Finishers	23	11	(12)
51-7031	Model Makers, Wood	<10	<10	N/a
51-7032	Patternmakers, Wood	<10	<10	N/a
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	205	188	(17)
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	145	165	20
51-7099	Woodworkers, All Other	19	22	3
51-8011	Nuclear Power Reactor Operators	<10	<10	N/a
51-8012	Power Distributors and Dispatchers	<10	<10	N/a
51-8013	Power Plant Operators	32	31	(1)
51-8021	Stationary Engineers and Boiler Operators	15	15	0
51-8031	Water and Wastewater Treatment Plant and System Operators	96	104	8
51-8091	Chemical Plant and System Operators	36	33	(3)
51-8092	Gas Plant Operators	<10	<10	N/a
51-8093	Petroleum Pump System Operators, Refinery Operators, and Gaugers	34	26	(8)
51-8099	Plant and System Operators, All Other	<10	<10	N/a
51-9011	Chemical Equipment Operators and Tenders	40	41	1
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	12	22	10
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	16	16	0
51-9022	Grinding and Polishing Workers, Hand	17	16	(1)
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	51	44	(7)
51-9031	Cutters and Trimmers, Hand	<10	<10	N/a
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	45	43	(2)
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	35	22	(13)
51-9051	Furnace, Kiln, Oven, Drier, and Kettle Operators and Tenders	17	19	2
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	259	259	0
51-9071	Jewelers and Precious Stone and Metal Workers	21	34	13
51-9081	Dental Laboratory Technicians	<10	<10	N/a
51-9082	Medical Appliance Technicians	<10	<10	N/a
51-9083	Ophthalmic Laboratory Technicians	<10	<10	N/a
51-9111	Packaging and Filling Machine Operators and Tenders	129	172	43
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	66	61	(5)
51-9122	Painters, Transportation Equipment	41	37	(4)
51-9123	Painting, Coating, and Decorating Workers	39	42	3
51-9141	Semiconductor Processors	<10	<10	N/a

51-9151	Photographic Process Workers and Processing Machine Operators	23	20	(3)
51-9191	Adhesive Bonding Machine Operators and Tenders	10	<10	N/a
51-9192	Cleaning, Washing, and Metal Pickling Equipment Operators and Tenders	<10	<10	N/a
51-9193	Cooling and Freezing Equipment Operators and Tenders	<10	<10	N/a
51-9194	Etchers and Engravers	<10	<10	N/a
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	30	33	3
51-9196	Paper Goods Machine Setters, Operators, and Tenders	12	<10	N/a
51-9197	Tire Builders	<10	<10	N/a
51-9198	Helpers--Production Workers	267	275	8
51-9199	Production Workers, All Other	137	158	21
53-1011	Aircraft Cargo Handling Supervisors	<10	<10	N/a
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	97	96	(1)
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	85	75	(10)
53-2011	Airline Pilots, Copilots, and Flight Engineers	11	15	4
53-2012	Commercial Pilots	<10	<10	N/a
53-2021	Air Traffic Controllers	22	24	2
53-2022	Airfield Operations Specialists	<10	<10	N/a
53-2031	Flight Attendants	<10	0	N/a
53-3011	Ambulance Drivers and Attendants, Except Emergency Medical Technicians	<10	<10	N/a
53-3021	Bus Drivers, Transit and Intercity	105	84	(21)
53-3022	Bus Drivers, School or Special Client	318	335	17
53-3031	Driver/Sales Workers	293	290	(3)
53-3032	Heavy and Tractor-Trailer Truck Drivers	1,742	1,563	(179)
53-3033	Light Truck or Delivery Services Drivers	417	451	34
53-3041	Taxi Drivers and Chauffeurs	120	138	18
53-3099	Motor Vehicle Operators, All Other	20	18	(2)
53-4011	Locomotive Engineers	17	18	1
53-4012	Locomotive Firers	<10	<10	N/a
53-4013	Rail Yard Engineers, Dinkey Operators, and Hostlers	<10	<10	N/a
53-4021	Railroad Brake, Signal, and Switch Operators	<10	<10	N/a
53-4031	Railroad Conductors and Yardmasters	19	19	0
53-4041	Subway and Streetcar Operators	<10	<10	N/a
53-4099	Rail Transportation Workers, All Other	<10	<10	N/a
53-5011	Sailors and Marine Oilers	<10	<10	N/a
53-5021	Captains, Mates, and Pilots of Water Vessels	<10	<10	N/a
53-5022	Motorboat Operators	<10	<10	N/a
53-5031	Ship Engineers	<10	<10	N/a
53-6011	Bridge and Lock Tenders	<10	<10	N/a
53-6021	Parking Lot Attendants	<10	10	N/a
53-6031	Automotive and Watercraft Service Attendants	26	20	(6)
53-6041	Traffic Technicians	<10	<10	N/a
53-6051	Transportation Inspectors	13	14	1
53-6061	Transportation Attendants, Except Flight Attendants	<10	<10	N/a

53-6099	Transportation Workers, All Other	<10	<10	N/a
53-7011	Conveyor Operators and Tenders	23	22	(1)
53-7021	Crane and Tower Operators	<10	<10	N/a
53-7031	Dredge Operators	<10	<10	N/a
53-7032	Excavating and Loading Machine and Dragline Operators	31	33	2
53-7033	Loading Machine Operators, Underground Mining	<10	<10	N/a
53-7041	Hoist and Winch Operators	<10	<10	N/a
53-7051	Industrial Truck and Tractor Operators	240	241	1
53-7061	Cleaners of Vehicles and Equipment	189	165	(24)
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	1,096	1,199	103
53-7063	Machine Feeders and Offbearers	173	195	22
53-7064	Packers and Packagers, Hand	177	152	(25)
53-7071	Gas Compressor and Gas Pumping Station Operators	<10	<10	N/a
53-7072	Pump Operators, Except Wellhead Pumpers	<10	<10	N/a
53-7073	Wellhead Pumpers	<10	<10	N/a
53-7081	Refuse and Recyclable Material Collectors	45	74	29
53-7111	Mine Shuttle Car Operators	0	0	0
53-7121	Tank Car, Truck, and Ship Loaders	<10	<10	N/a
53-7199	Material Moving Workers, All Other	<10	<10	N/a
55-9999	Military occupations	11,140	12,458	1,318
99-9999	Unclassified Occupation	53	103	50
		89,092	95,502	6,410

Appendix VI – Innovation Index

Tech-Based occupations sub-cluster definitions

Meramec RPC - Human Capital - Innovation Index						
Source: statsamerica.org						
	Human Capital	% of Adult Pop. w. some College or Associate's Degree (2012)	% of Adult Pop. w. Bachelor's Degree or Higher (2012)	% Change in Young Adult Pop. (1997-2012)	Ave. High-Tech Employment Share (1997-2012)	Tech-based Knowledge Occupation Share (2011)
Crawford	73.7	30.4%	13.5%	-0.4%	1.5%	11.9%
Dent	65.9	33.3%	11.5%	-1%	0.8%	9.7%
Gasconade	70.1	30.6%	17.4%	-1.8%	1%	12.2%
Maries	80.1	29.4%	18.2%	-1.2%	3.1%	11.8%
Osage	66.2	29.1%	15.8%	-0.7%	0.3%	10.5%
Phelps	76.6	27.7%	27.7%	-0.2%	1.3%	9%
Pulaski	91.4	39.7%	21.8%	1.3%	1.9%	10.9%
Washington		25.1%	8.8%	-0.5%	0.6%	9.5%
Rural MO	72.7	30.1%	16.3%	-0.6%	1.5%	10.5%
Missouri	93.4	31.8%	28.0%	-0.5%	3.7%	12.0%
U.S.	100	30.6%	30.2%	-0.2%	4.7%	12.2%

Meramec - Economic Dynamics - Innovation Index							
Source: statsamerica.org							
	Economic Dynamics	Ave. VC Invest. per \$10,000 GDP (2005-2012)	Broadband Density (2012)	Ave. Annual % Change in Broadband Providers (2000-2012)	Ave. Estab. Churn (1999-2009)	Ave. Small Estab. per 10,000 Workers (1997-2011)	Ave. Large Estab. per 10,000 Workers (1997-2011)
Crawford	76.6	\$0.00	500	11.6%	68.8%	452.1	0.00
Dent	78.5	\$0.00	500	11.6%	73.2%	480.1	0.19
Gasconade	78.8	\$0.00	500	14.2%	78.4%	476.5	0.31
Maries	67.1	\$0.00	300	15.6%	71.9%	277.6	0.00
Osage	76.9	\$0.00	300	11.6%	74.8%	396.6	0.63
Phelps	86.8	\$0.00	500	9.2%	78.6%	433.5	1.03
Pulaski	76.5	\$0.00	700	14.9%	74.8%	247.1	0.32
Washington		\$0.00	300	12.5%	84%	535.3	0.00
Rural MO	82.6	\$0.29	509	14.2%	73.8%	432.8	0.71
Missouri	91.0	\$3.69	700	19.3%	76.1%	367.1	1.15
U.S.	100	\$39.92	700	23.2%	76.4%	371.6	1.08

Meramec RPC - Productivity & Employment- Innovation Index

Source: statsamerica.org

	Productivity & Employment	% Change in High-tech Emp. Share (1997-2012)	Job Growth-to-Population Growth Ratio (1997-2011)*	GDP per Worker (2011)	% Change in GDP per Worker (1997-2011)	Ave. Patents per 1,000 Workers (1997-2011)
Crawford	88.2	7.3%	0.52	\$43,532	1.1%	0.15
Dent	89.6	6.5%	-0.55	\$49,233	0.9%	0.16
Gasconade	87.9	7.1%	0.38	\$48,005	0.4%	0.14
Maries	80.2	4%	1.95	\$31,264	-1.7%	0.13
Osage	69.3	-2.2%	0.03	\$39,755	0.3%	0.08
Phelps	105.2	4.9%	0.24	\$55,692	1.3%	0.50
Pulaski	83.5	6.9%	0.52	\$46,340	2.5%	0.03
Washington	74.8	-1.2%	-0.17	\$56,032	2.7%	0.07
Rural MO	83.5	4.3%	0.17	\$53,690	0.80%	0.10
Missouri	79.8	0.5%	0.28	\$62,193	0.60%	0.23
U.S.	100	-0.1%	0.49	\$74,540	1.10%	0.50

Meramec RPC - Economic Well-Being— Innovation Index

Source: statsamerica.org

	Economic Well-Being	Poverty Rate, 3-year Ave. (2010-2012)	Unemp. Rate, 3 year Ave. (2010-2012)	Ave. Net Internal Migration Rate/10,000 Residents (2000-2012)	%Change in Per Capita Personal Income (1997-2012)	%Change in Ave. Wage and Salary Earnings (1997-2011)	%Change in Ave. Proprietors Income (1997-2011)
Crawford	103.1	20.9%	10.8%	22.0	3.9%	3.5%	6.9%
Dent	78.5	20%	9.4%	16.2	3.3%	3.3%	1.7%
Gasconade	98.0	14.3%	8.8%	2.0	3.5%	2.7%	0.4%
Maries	99.5	16.4%	8.4%	-17.9	3.9%	2.7%	2.3%
Osage	99.7	10.9%	6.1%	-2.2	3.3%	3.2%	0.3%
Phelps	97.5	18.8%	8.2%	0.2	3.1%	3.5%	2.4%
Pulaski	110.8	14.6%	8.6%	21.7	4.6%	4.9%	2%
Washington	95.2	24.6%	12.4%	4.4	3.2%	3.1%	3.7%
Rural MO	100.3	19.4%	8.6%	2.5	3.7%	3.3%	1.6%
Missouri	98.5	15.8%	8.3%	1.9	3.4%	3.1%	1.4%
U.S.	100	15.7%	8.9%	0.0	3.6%	3.4%	0.9%

Appendix VII – Rural Counties and Regional Banks

Rural Counties in Missouri		
Adair County	Howard County	Phelps County
Atchison County	Howell County	Pike County
Audrain County	Iron County	Pulaski County
Barry County	Johnson County	Putnam County
Barton County	Knox County	Ralls County
Benton County	Laclede County	Randolph County
Butler County	Lawrence County	Reynolds County
Camden County	Lewis County	Ripley County
Carroll County	Linn County	St. Clair County
Carter County	Livingston County	Ste. Genevieve County
Cedar County	Macon County	St. Francois County
Chariton County	Madison County	Saline County
Clark County	Maries County	Schuyler County
Cooper County	Marion County	Scotland County
Crawford County	Mercer County	Scott County
Dade County	Miller County	Shannon County
Daviess County	Mississippi County	Shelby County
Dent County	Monroe County	Stoddard County
Douglas County	Montgomery County	Stone County
Dunklin County	Morgan County	Sullivan County
Gasconade County	New Madrid County	Taney County
Gentry County	Nodaway County	Texas County
Grundy County	Oregon County	Vernon County
Harrison County	Ozark County	Washington County
Henry County	Pemiscot County	Wayne County
Hickory County	Perry County	Worth County
Holt County	Pettis County	Wright County

Meramec Regional Bank Listing		
Bank Name	Address	Phone
Bank of Crocker	200 Ichord Ave Waynesville, MO 65583	573-774-6478
Bank of Iberia	201 Cash James Loop Waynesville, MO 65583	573-774-3110
Bank of Sullivan	700 N Franklin Street Cuba, MO 65453	573-885-1515
Belgrade State Bank	306 N Missouri Street Potosi, MO 63664	573-438-5200
Central Federal	210 W 10 Street Rolla, MO 65401	(573) 364-1024
Citizens Bank of Newburg	907 Old Rte 66 St Robert, MO 65584	573-336-2076
Community Bank of Dixon	101 W 2 nd Street Dixon, MO 65459	573-759-3399
Community Bank of Owensville	804 MO 28 Owensville, MO 65066	573-437-4444
Community Bank of St James	825 N Jefferson Street St James, MO 65559	573-265-4600
First Bank	208 E 1 st Street Hermann, MO 65041	573-486-2121
First Community National Bank	2323 N Bishop Ave Rolla, MO 65401	573-426-3262
First State Community Bank	308 W Lincoln Ave Owensville, MO 65066	573-437-2265
Hawthorn Bank	595 VFW Memorial Drive St Robert, MO 65884	573-336-3600
Infuze Credit Union	1300 Rte 66 Waynesville, MO 65583	573-774-3200
Legends Bank	202 N Main Street Bland, MO 65014	573-646-3600
Maries County Bank	1001 MO-28 Belle, MO 65013	573-859-3395
Mid America Bank	804 MO 28 Belle, MO 65013	573-859-3399
Mid America Bank & Trust Company	434 State Why Y St Robert, MO 65584	573-336-7777
Peoples Bank	101 E Pine Street Bourbon, MO 65441	573-732-5926
Peoples Community Bank	134 MO-72 Bunker, MO 63629	573-689-2222
Phelps County Bank	220 N Jefferson Street St James, MO 65559	573-265-3222
Progressive Ozark Bank	904 W Scenic Rivers Blvd Salem, MO 65560	573-729-4146
Riverways Federal Credit Union	1012 Forum Drive Rolla, Missouri 65401	(573) 308-3113
Security Bank of Pulaski County	110 N Lynn Street Waynesville, MO 65583	573-774-6417
The Missouri Bank	501 Market Street Hermann, MO 65041	573-486-3134
Town & Country Bank	188 E Pine Street Bourbon, MO 65441	573-732-4433
Unico Bank	114 S Oak Street Irondale, MO 63648	573-749-3315
US Bank	500 W 6 th Street Rolla, MO 65401	573-364-1677

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