

# UNIVERSITY OF NORTH ALABAMA REGIONAL ECONOMIC UPDATE

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Institute for Innovation and Economic Development College of Business University of North Alabama One Harrison Plaza Florence, Alabama 35632

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#### **OVERVIEW**

This edition continues the review of major economic components between 2009 and 2018 to ascertain the economic direction of the Florence-Muscle Shoals MSA. Specifically, MSA occupational distribution and Journey to Work data are examined below. All data is derived from the Bureau of Economic Analysis and the Census Bureau and is analyzed at the MSA level. The occupational distribution is divided into three sectors – Primary, Secondary, and Tertiary. The Primary sector is comprised of industries related to extraction and collection of natural resources and is typically the smallest sector in developed economy. Next is the Secondary sector, which is composed of manufacturing and construction. Finally, the Tertiary sector is focused on individuals employed in fields interacting with people and serving customers and is typically the largest sector in a modern developed economy. Journey to Work provides insight into the ability of local residents to find local work. This edition concludes the major historical review for the MSA economy.

Comparable to the first edition, occupational distribution and journey to work data analyzed in this edition exhibits both positive and negative trends between 2009 and 2018. As expected, the Primary sector is the smallest sector of the MSA economy, averaging less than 0.5% of total MSA employment, and is stable across the time horizon included in this analysis. Wages in this sector are slightly below the MSA average. The Secondary sector accounts for approximately twenty-three percent (23%) of total MSA employment and exhibits wages above the MSA average for Construction and Installation/Maintenance/Repair industries and below average for Production industries. Employment in this sector is again generally stable across the time horizon. The Tertiary sector is the largest sector averaging seventy-six (76%) percent of total MSA employment with a slightly positive trend indicative of economic growth. However, when dividing the Tertiary sector into Upper and Lower Wage cohorts, the Lower Wage cohort is growing as a percentage of total Tertiary sector employment, indicating a slight negative trend between 2009 and 2018. Three of the four Journey to Work categories indicate additional positive trends for the MSA. The fourth category, workers driving two or more hours round trip, shows the percentage of MSA residents with a minimum two-hour drive time increasing. See specific sections below for details regarding each variable.

Keith D. Malone, Ph.D. Professor of Economics, College of Business University of North Alabama



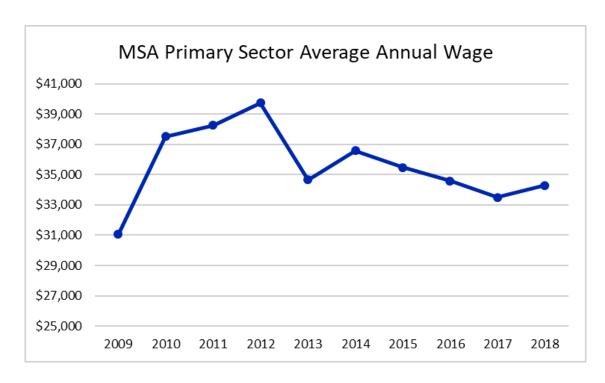
#### PRIMARY ECONOMIC SECTOR

As noted previously, Primary sector occupations are comprised of farming and the extraction and collection of natural resources. The Florence-Muscle Shoals MSA is similar to most urban/metropolitan areas in that the Primary sector is the smallest sector of the economy. In fact, the Primary sector represents less than one percent of total MSA employment. Total employment in this sector, related to farming, fishing and forestry, ranges from a low of 60 during 2014 to a high of 170 during 2011, and was 110 during 2017. Average employment for the Primary sector is 104 during the period from 2009 through 2017. Average annual wages in the Primary sector range from \$31,070 in 2009 to a high of \$39,750 during 2012. Wages fell by 12.8% during 2013 and wages remained lower through 2018 when the average annual wage was \$34,300. Thus, wages in 2018 are at the second lowest point since 2009, posting a \$790 gain over wages in 2017.

MSA Primary Sector Employment/Wages: 2009 - 2018

_	Employment	Average Hour- ly Wage	Average Annual Wage
2009	110	\$14.94	\$31,070
2010	140	\$18.03	\$37,510
2011	170	\$18.39	\$38,260
2012	100	\$19.11	\$39,750
2013	80	\$16.66	\$34,660
2014	60	\$17.58	\$36,580
2015	90	\$17.05	\$35,470
2016	80	\$16.62	\$34,580
2017	110	\$16.11	\$33,510
2018	110	\$16.49	\$34,300

Source: Bureau of Labor Statistics



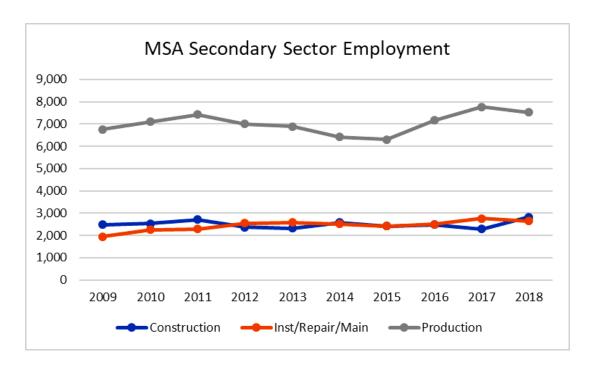
#### SECONDARY ECONOMIC SECTOR

The Secondary economic sector in the MSA is comprised of construction, production and installation/repair/maintenance industries. This sector represents approximately twenty-four percent (24%) of total MSA employment during 2018. Over the time period from 2009 to 2018, employment in this sector ranged from 11,180 to 13,000, representing an increase from 22.16% to 23.92% of total MSA employment. While 2018 represents the largest number of residents working in this sector, the associated percentage of total employment (23.92%) is slightly lower than the 24.19% recorded during 2011 when 12,410 employees worked in these fields. Production occupations comprise the vast majority of employment in this sector ranging from 55.73% in 2014 to 60.47% in 2017. As can be seen in the MSA Secondary Sector Employment chart, the balance of employment in this sector is split almost evenly between the construction and installation/repair/maintenance industries.

MSA Secondary Sector Employment/Wages: 2009 - 2018

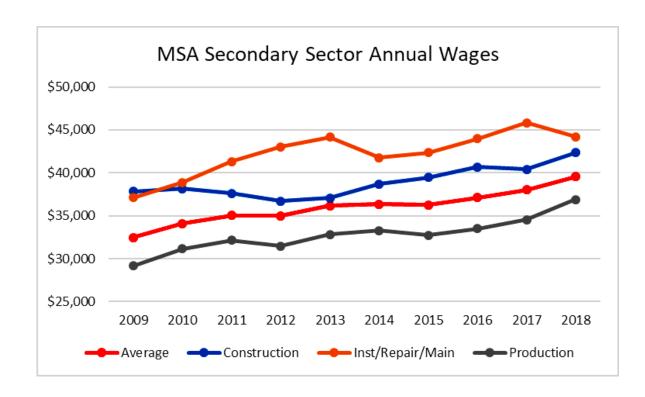
		Average	Average Annual
_	Employment	Hourly Wage	Wage
2009	11,180	\$15.60	\$32,457
2010	11,880	\$16.39	\$34,097
2011	12,410	\$16.83	\$35,013
2012	11,910	\$16.81	\$34,984
2013	11,780	\$17.38	\$36,143
2014	11,500	\$17.47	\$36,341
2015	11,140	\$17.43	\$36,261
2016	12,150	\$17.84	\$37,108
2017	12,800	\$18.27	\$37,999
2018	13,000	\$19.01	\$39,551

Source: Bureau of Labor Statistics, UNA



Average annual wages for the Secondary Sector in the MSA range from \$32,457 in 2009 to \$39,551 in 2018. Average wages in this sector are very similar to the economy-wide average annual wage for the MSA, remaining either slightly above or below average during most years between 2009 and 2018. However, the widest gap between this sector and the average occurs during 2018 when Secondary Sector wages are \$1,021 (2.65%) above the MSA average. Assessing industry wages within this sector provides an interesting picture. While Production occupations constitute approximately sixty percent (60%) of the employment in this sector, Production wages are the lowest of the three industries included in this sector. Production wages range from \$29,160 in 2009 to \$36,870 during 2018 and are, on average, 18.87% and 29.06% less than wages in the Construction and Installation/Repair/Maintenance sectors respectively. Average wages in the Production sector are also consistently below MSA annual wages for all occupations.

After beginning the period in 2009 with wages slightly below Construction, the wages for the Installation/Repair/ Maintenance industry are the highest of any sector subgroup from 2010 to 2018. Average annual wages for this industry range from \$37,090 in 2009 to a high of \$45,810 in 2017. Even with a slight decline during 2018, wages in this industry remain 11.7% above the sector average and 14.7% above the MSA average. The aftermath of the Great Recession contributed to downward pressure on Construction industry wages, beginning with minimal wage growth during 2010 and reduced wages 2011 and 2012. Construction wages began to increase again in 2013 and end the period at \$42,340 in 2018. Wages in this sector remain slightly lower than Installation/Repair/Maintenance wages; however, Construction wages are 10.12% above the MSA average and 15.1% above Production wages. Comparing wages with the primary sector, average annual wages in the Secondary sector are higher in six out of the last ten years. Specifically, Secondary sector annual wages were \$5,251 above the Primary sector during 2018. Furthermore, Installation/Repair/Maintenance wages are always higher than primary sector while Constructions wages are higher in eight out of the last ten years. Production wages have lagged behind Primary sector wages, only surpassing the Primary sector during 2017 and 20018.



#### **TERTIARY ECONOMIC SECTOR**

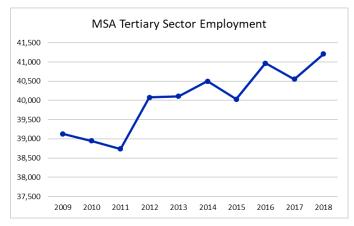
The Tertiary sector in the Florence-Muscle Shoals MSA constituted 75.8% (41,210 jobs) of total MSA employment during 2018. This sector is comprised of eighteen different industries ranging from Management and Healthcare related occupations to Food Service and Transportation. As such, wages within this sector have a much larger range than that shown in the Primary and Secondary sectors. Annual wages range from a high of \$98,050 for Management occupations to \$21,380 in the Food Preparation and Service industry. Given the wide variety of occupations, employment opportunities and wages, industries in this sector have been subdivided into upper, middle, and lower wage cohorts to facilitate discussion and future trends. Specifically, upper and lower classifications are discussed in this update.

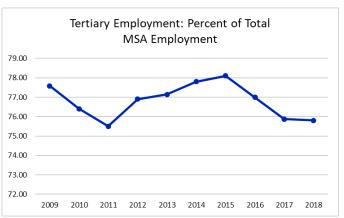
MSA Tertiary Sector Industries and 2018 Employment, Wages & Wage Cohort Designation

	Employment	2018 Average Annual Wage	Wage Cohort
Management	1,650	\$98,050	Upper
Business and Financial	1,140	\$62,170	Upper
Computer and Math	210	\$56,910	Upper
Architecture and Engineering	680	\$69,980	Upper
Life, Physical and Social Science	100	\$61,780	Upper
Community and Social Service	490	\$41,740	Middle
Legal*	160	\$87,260	Upper
Education, Training and Library	2,990	\$45,570	Middle
Arts, Design, Entertainment, Sports, and Media	310	\$37,590	Middle
Healthcare Practitioners and Technical	3,670	\$64,730	Upper
Healthcare Support	1,420	\$27,460	Lower
Protective Services	700	\$34,060	Middle
Food Preparation and Serving	6,080	\$21,380	Lower
Building and Grounds Cleaning and Maintenance	1,600	\$27,520	Lower
Personal Care and Service	1,230	\$20,910	Lower
Sales and Related Occupations	6,540	\$31,970	Middle
Office and Administrative Support	8,090	\$31,950	Lower
Transportation and Material Moving	4,150	\$30,650	Lower

<sup>\* -</sup> Legal is also considered in the Upper Wage Cohort; however, it is not included in this discussion as wages are not available for all years. Source: Bureau of Labor Statistics and UNA

As a whole, the Tertiary sector in the MSA has shown minimal growth between 2009 and 2018. Total employment in this sector increased by just 2,000 from 39,130 in 2009 to 41,210 in 2018. This represents an increase of 5.32% during the period and is well below the 16.27% employment increase in the Secondary sector. The Tertiary sector experienced a small decrease in employment between 2009 and 2011 and again during 2015 and 2017. While employment gains in other years offset the losses, providing a positive trend, examining Tertiary sector employment as a percentage of total MSA employment yields a conflicting result. During 2009, Tertiary sector employment accounted for 77.58% of total MSA employment. Despite reaching a highpoint of 78.1% during 2015, successive declines from 2016 through 2018 position Tertiary sector employment at only 75.8%. Whereas this is currently only a slightly negative trend, such a trend should be monitored as high levels of economic growth are more generally associated with the Tertiary sector as opposed to the Primary and Secondary sectors.





MSA Tertiary Sector Employment/Wages: 2009 - 2018

	Employment	Average Hourly Wage	Average Annual Wage
2009	39,130	\$15.75	\$32,766
2010	38,950	\$16.17	\$33,630
2011	38,740	\$16.13	\$33,543
2012	40,080	\$16.45	\$34,208
2013	40,110	\$16.86	\$35,066
2014	40,500	\$16.92	\$35,192
2015	40,030	\$17.29	\$35,967
2016	40,970	\$17.75	\$36,927
2017	40,550	\$18.37	\$38,221
2018	41,210	\$18.38	\$38,233

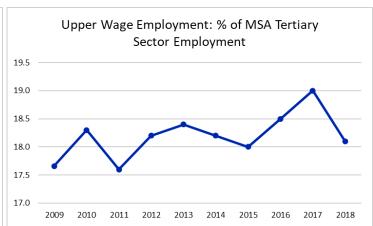
Source: Bureau of Labor Statistics and UNA

In conjunction with the variety of occupations included in the sector, it is unsurprising that average wages in this sector are very close to the overall average for all occupations in the MSA. However, average annual wages are slightly below the MSA average in eight of ten years included in this update. Average annual wages were \$32,766 during 2009 and increased to \$38,233 in 2018, an increase of 16.68%. Experiencing only a single decrease during 2011, wage growth in the Tertiary sector indicate a positive trend for the MSA. To gain a better understanding of the how different occupations included in this sector impact the MSA, the upper wage and lower wage cohorts are examined.

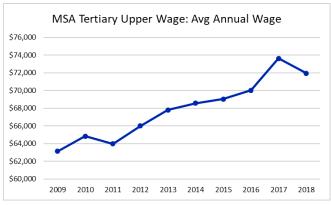
# **Upper Wage Cohort**

Employment in the Upper Wage category range from a low of 6,830 in 2011 to a high of 7,700 in 2017. With the slight decrease in 2018, employment in the Upper Wage category has increased by 7.8% since 2009. As a percentage of the overall Tertiary sector, employment in the Upper Wage cohort constitutes less than twenty percent (20%) of total tertiary employment. After increasing from 17.7% in 2009 to 19% in 2017, the Upper Wage employment percentage declined to 18.1% during 2018. Thus, there is a positive trend in both the Upper Wage employment and Upper Wage employment as a percentage of total MSA employment. The majority of this trend is driven by 5.3% average annual growth in Architecture and Engineering employment, along with 2.8% growth in the Business and Financial sector. Healthcare Practitioner and Technical employment also grew slightly at an average rate of 0.83% annually. Employment in the Computer and Math sector declined at an average annual rate of 2.5% while Management occupations and Life, Physical and Social Science employment declined on an average annual basis. As higher wages, technology and modern economic development are closely linked, the trend in Tertiary sector Upper Wage employment is suggestive of future economic growth for the MSA as long as expanding components of this sector outweigh contracting sectors. Regrettably, all industries included in this Upper Wage cohort experienced a decline in employment during 2018.





Wages for Management occupations are the highest in the Upper Wage Cohort and were \$98,050 during 2018. Wages for the remaining Upper Wage occupations are clustered in a narrow range \$59,610 and \$69,980. On an average basis, wages in this cohort have increased from \$63,143 in 2009 to \$71,937 in 2018 and are approximately 86.7% higher than average wages for "All" occupations in the MSA. Furthermore, average annual wages in this cohort are more than one-hundred percent (100%) higher than average wages in the Lower Wage cohort. Wage growth of 13.9% in this cohort of 13.9% during the period exemplifies an additional positive trend for the Tertiary sector and the MSA. Employees in the

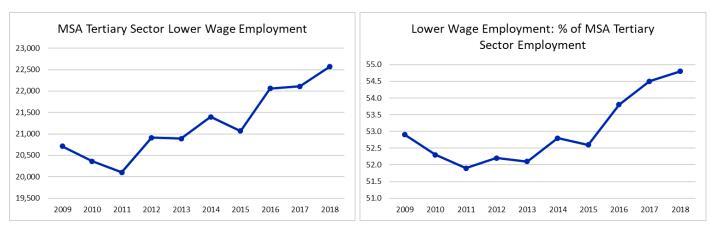


Life, Physical and Social Science sector enjoyed the largest annual growth in wages, averaging 2.88% annually from 2009 to 2018. Wage growth averaged only 1.26% in the Healthcare Practitioners and Technical sector. Finally, 2018 proved to be an interesting year in the Upper Wage sector with four of six industries experiencing a decrease in wages of at least one percent. Wages for Computer and Math employees grew only slightly during 2018 while wages for Life, Physical and Social Sciences grew at more than eighteen percent (18%) during 2018, offsetting wage deterioration of more than thirteen percent (13%) during 2016 and 2017.

### **Lower Wage Cohort**

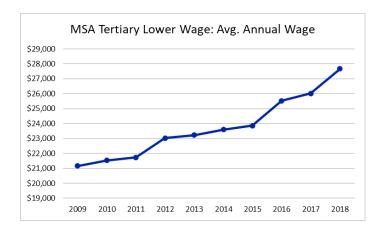
The Lower Wage cohort, in the Tertiary sector, represents 41.5% of total MSA employment and approximately 54.8% of total Tertiary sector employment during 2018. After decreasing slightly between 2009 and 2011, employment in this sector has increased by 2,470 at the end of 2018. Currently, employment in this sector is more than three times larger than employment in the Upper Wage sector. As a percentage of Tertiary employment, Lower Wage sector employment declined

from 2009 to 2011, experienced a mild increase from 2011 to 2015 and has increased briskly since 2015. Four of six industries included in the Lower Wage cohort experienced average annual growth between 2009 and 2018. Transportation and Material-moving outperformed other sectors growing at an average of 3.03% annually. Employment in Personal Care and Services and Food Preparation and Serving each grew in excess of two percent (2%) on average and Building and Grounds Cleaning and Maintenance grew at 1.56%. Average annual employment declined in the Office and Administrative Support and Healthcare Support sectors, each decreasing 0.54% and 0.26% respectively. Comparing trends in the Upper and Lower wage sectors indicates that the Lower Wage sector is growing faster than Upper Wage sector. While growth in the Tertiary sector is typically associated with stronger economic growth, current trends in the subsectors do not project robust growth for the MSA.



On a positive note, wages in the Lower Wage sector have increased significantly since 2009. While still below MSA average wages, average annual wages in this sector have increased by 30.7% since 2009 and are currently \$27,665. Wage growth in this sector has outpaced wage growth in the MSA increasing from only 40.6% of the MSA average annual wage in 2009 to 50.9% in 2018. Specifically, average annual wages in this sector increased from \$21,167 in 2009 to \$27,665 in 2018. This trend has as positive impact on employees working in this sector of the economy. Similar to the Upper Wage cohort, wages are closely grouped in this sector and range from \$20,910 in the Personal Care and Service industry to \$31,950 for Office and Administrative Support employees. Wages for Healthcare Support employees grew the fastest, on average, at 3.65% annually while wages of in the Person-

al Care and Service sector grew at an average annual rate of 1.08%. Finally, all industries experienced growth in 2018 when the minimum wage growth was 2.64% in the Lower Wage sector.



MSA Tertiary Sector Lower Wage Cohort Employment/Wages: 2009 - 2018

	Average Hourly Averag Employment Wage Annual W			
-	•			
2009	20,710	\$10.18	\$21,167	
2010	20,360	\$10.35	\$21,533	
2011	20,100	\$10.45	\$21,739	
2012	20,910	\$11.07	\$23,033	
2013	20,890	\$11.17	\$23,233	
2014	21,400	\$11.34	\$23,596	
2015	21,070	\$11.47	\$23,856	
2016	22,060	\$12.27	\$25,531	
2017	22,110	\$12.50	\$26,015	
2018	22,570	\$13.30	\$27,665	
Source: Bureau of Labor Statistics and UNA				

Source: Bureau of Labor Statistics and UNA

# **JOURNEY TO WORK**

In addition to the employment distribution within the MSA, residents who choose to travel outside the MSA to find employment is also an important factor in economic development. Working local is understood to have various positive impacts on the economy. Residents who work within the area obviously have a direct benefit of less time in traffic, lower cost of operating automobiles and employee health. A 2019 report for the MSA published by TRIP (National Transportation Research Group) estimates that traffic congestion costs the average driver in the MSA \$362 per year while vehicle operating costs are an additional \$716 per year. This brings total driving costs within the MSA to \$1,078.<sup>2</sup> Undoubtedly, residents who work outside the MSA experience even greater costs due to their journey to work. In addition to monetary costs, adult average health scores decline as the drive time to work increases. While these workers bring additional income into the area, some of that income is lost through these increased travel costs and decreased health scores. The MSA economy will further develop as local employment increases, keeping more of these residents working inside the MSA while reducing travel costs and improving the health of the workforce. Additionally, on an indirect basis, firms garner benefits relating to lower absenteeism and/or higher productivity while potential community benefits can be generated via additional social capital ranging from additional political power, pressure to deter crime, increased wage rates, etc.<sup>3</sup>

Examining Journey to Work trends in the MSA indicates a positive outlook for the local economy. Since 2009, the percentage of residents working inside the MSA has increased from 66.9% to 68.9%. This change translates to an additional 2,519 residents working inside the MSA during 2017 compared to 2009. Of this number, just under 2,000 are represented by additional workers residents living and working within the MSA, while residents working outside the MSA has declined by 579 during the period. While the percentage of residents working inside the MSA has increased and decreased between 2009 and 2017, the overall trend indicates a shift toward local working.

MSA Journey to Work, 5-year Estimates, Percentages

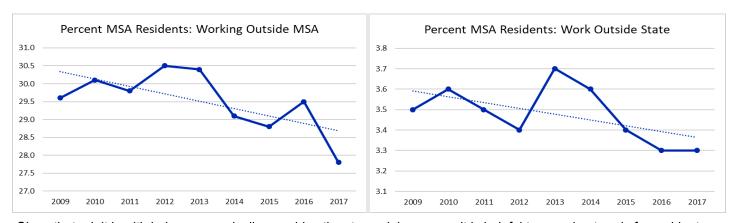
	Work Inside MSA	Work Outside MSA	Work Outside State	Travel Time 30 Min and Greater	Minimum 2 Hour Round Trip
2009	66.9	29.6	3.5	29.2	6.1
2010	66.3	30.1	3.6	30.9	7.9
2011	66.7	29.8	3.5	30.8	6.6
2012	66.1	30.5	3.4	31.0	8.0
2013	65.9	30.4	3.7	30.9	6.6
2014	67.3	29.1	3.6	30.0	8.2
2015	67.8	28.8	3.4	28.8	7.8
2016	67.1	29.5	3.3	30.0	8.9
2017	68.9	27.8	3.3	29.3	7.4

Source: Census Bureau, American Community Survey

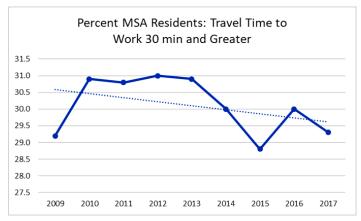
<sup>&</sup>lt;sup>2</sup> "Florence Transportation by the Numbers, TRIP, February 2019, available at <a href="https://tripnet.org/wp-content/uploads/2019/03/">https://tripnet.org/wp-content/uploads/2019/03/</a>
AL Florence Transportation by the Numbers TRIP Report February 2019.pdf

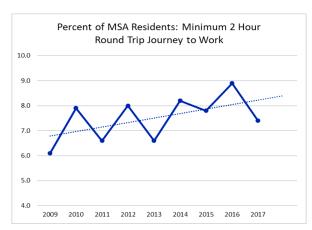
<sup>&</sup>lt;sup>3</sup> For additional information concerning potential indirect benefits see Immergulk (1998) "Neighborhood Economic Development and Local Working: The Effect of Nearby Jobs on Where Residents Work," *Economic Geography* 74(2).

Examining the Journey to Work table indicates 33.1% (29.6% outside the MSA and 3.5% outside the state) of residents worked outside the MSA during 2009. This figure reached a high of 34.1% (30.4% outside the MSA and 3.7% outside the state) in 2013 and by 2017 decreased to a low of 31.1% (68.9% outside the MSA and 3.3% outside the state). Overall, the trend for residents working outside the MSA and outside the state again forecasts a shift toward more local working. Considering only 2017 Journey to Work data, driving cost data discussed above can be applied to estimate the associated transportation cost should these residents work inside the MSA. Applying percentages from the table to local workforce, it is estimated that 18,993 (16,978 outside the MSA and 2,015 outside the state) residents worked outside the area during 2017. Utilizing the average annual TRIP estimate of \$1,078, these residents would incur a yearly transportation cost of \$20.47 million if they worked within the MSA. Clearly, working outside the area increases transportation costs and costs continue to increase as residents travel time to work increases. Accordingly, a shift toward local working reduces total transportation costs, providing residents with the opportunity to increase their spending and/or saving within the MSA. This additional spending/saving stimulates additional economic growth for the MSA.



Given that adult health index scores decline as drive time to work increases, it is helpful to examine trends for residents who drive at least thirty minutes to work and those who have a minimum two-hour round-trip drive time. Considering a minimum thirty-minute drive time first, we again observe a trend suggesting a shift toward local work. During 2009, 29.2% of MSA workers experienced at least a thirty-minute drive to work each day. The percentage of residents with this drive time increased to just under 31% in 2010 and remained generally steady until decreasing in 2014 and again in 2015 to a low of 28.8% for the period. Even though the trend is indicative of additional local work, given the lack of movement between 2010 and 2013 and the mixed results in 2014 through 2017, additional data is needed to determine if this is a genuine trend. Contrary to the trends discussed thus far, the trend associated with two-hour round-trip drive time shows a shift toward more residents enduring this drive. Similar to the thirty-minute drive time, this cohort experienced multiple upward and downward movements. Specifically, the percentage of residents with this drive time increased in four years and decreased in four years. After beginning the period at 6.1% (3,607 residents) during 2009, by 2016 8.9% (5,370 residents) residents were commuting a minimum of two hours per day. During 2017, the group size had decreased from 2016 to 7.4% (4,519 residents); however, this represents an increase of more than twenty percent (912 residents) since 2009. Expansion in this category is predicted to be associated with increased transportation costs and decreased health of residents who are making this daily drive to work. Again, given the variation in data from 2009 to 2017, additional data is needed to determine if this shift toward a longer drive time is valid.





#### **AUTHOR INFORMATION**

Dr. Keith D. Malone, Professor of Economics, Editor, Contributor Email: kdmalone@una.edu

Dr. Mark D. Foster, Associate Professor of Finance, Assistant Editor Email: mdfoster@una.edu

#### **CONTACT INFORMATION**

# Institute for Innovation and Economic Development

345 Keller Hall, UNA Box 5055, Florence, AL 35662 P: 256.765.4270

Website: www.una.edu/institute

#### Director

Dr. Douglas Barrett

# **Specialty Areas and Contacts**

Innovation and Entrepreneurship:

Economic and Community Development:

Corporate Consulting:

Mitch Hamm, jhamm1@una.edu

Steven Puckett, spuckett1@una.edu

Dr. Doug Barrett, jdbarrett@una.edu

Janyce Fadden, jfadden@una.edu

# **Leading Experts Available**

Dr. Doug Barrett: Director, IIED, jdbarrett@una.edu

Janyce Fadden: Director, Strategic Engagement, jfadden@una.edu

Sean Collin, Esq.: Director, Intellectual Property and Technology Management, scollin@una.edu

Mitch Hamm: Director, Innovation and Entrepreneurship, jhamm1@una.edu

Dr. Keith D. Malone: Professor of Economics, kdmalone@una.edu

Steven Puckett: Business and Community Outreach Director, spuckett1@una.edu

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In today's world the shift to complexity and need for rapid changes is all around us- in our corporations, institutions, and non-profit organizations. Finding ways to assist leaders to implement change and learn new ways of thinking, behaving and doing is what the offerings that Institute for Innovation and Economic Development provides. The chart highlights the areas of focus and the available programs.





TM Strategic Doing teaches people how to form collaborations quickly, move them toward measurable outcomes, and make adjustments along the way. In today's world, collaboration is essential to meet the complex challenges we face. Strategic Doing enables leaders to design and

guide new networks that generate innovative solutions. It is a new strategy discipline that is lean, agile, and fast—just what organizations, communities and regions need to survive and thrive. The Institute offers workshops and practitioner training to private and public sector organizations. As an affiliate of the Strategic Doing Institute the certified fellows can lead workshops, the 2.5 day practitioner training course and present keynote and half day introductory sessions.

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**Smart Start** allows people to form teams, develop ideas into products and teaches innovation skills in a facilitated 1.5 day training program. Focused for students in higher education, high school and for use in a company the tools used are based on the internationally successful Innovation Engineering.





**Innovation Engineering** is a groundbreaking program that provides a systematic approach to innovation. IE allows you to build systems that make it possible, practical and easy for everyone to innovate, everywhere, in everything they do. The fundamental concepts of the program include tools and methods for Creating, Communicating and Commercializing meaningfully unique ideas. Taught in as few as a couple of days to a full minor program there are many options available. Our certified black belt trainers can assist your team in using the tools to improve your organization's results.

**AEM Cube** is a cutting-edge management tool that identifies and aligns the strategic diversity within an organization so that performance is optimized. We help management identify how teams interact and how to get the greatest contribution from each individual, team and unit. This in turn maximizes both productivity and profit. Human Insight's exclusive suite of 3D tools visu-



alize where individuals contribute optimally to overall team and organization growth. The AEM-Cube is delivered as an online questionnaire form that provides you as an individual with a comprehensive report describing where you add value and what this means for you in a team and organizational setting. The acronym "AEM" is a derived from the methodologies three core dimensions - Attachment, Exploration and Managing contribution. The 'Cube' in the name refers to the fact that these three dimensions can be portrayed in a three-dimensional space. Our certified trainers can assist your team to understand the AEM Cube report and the actions that they can take to improve results.



**Strategic Foresight** uses six critical steps to develop the foresight you need to navigate in this rapidly changing environment: Framing, Scanning, Forecasting, Visioning, Planning, and Acting. Our facilitator can guide your team through the 6 steps and assist your team as they make decisions about your organization's future state.





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