

# IMPACT GREATER FAYETTEVILLE

Regional Impact Analysis for Reduction of Personnel at Fort Bragg and Recommendations for Economic Diversification in Cumberland, Hoke, and Harnett Counties

May 2017

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SCHOOL OF BUSINESS  
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# IMPACT GREATER FAYETTEVILLE

## Regional Impact Analysis for Reduction of Personnel at Fort Bragg and Recommendations for Economic Diversification in Cumberland, Hoke, and Harnett Counties

### **Submitted to the City of Fayetteville**

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## Acknowledgements

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## Executive Summary

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The City of Fayetteville was awarded a grant from the Department of Defense Office of Economic Adjustment (OEA) to determine the prospective regional impact of troop reductions at Fort Bragg and to develop strategies to drive growth to offset military reductions. The counties included in the scope of the grant are Cumberland, Hoke, and Harnett. The grant was a result of a 2015 Army announcement of a planned reduction of 40,000 active duty U.S. military personnel over the next few years.

With a new administration, future changes in the level of military personnel are uncertain, but analysis indicates that the region's economic prosperity has already been impacted by reductions in military presence of approximately 10% at Fort Bragg from peak levels. As a result, the region's overall economic output has been declining since 2012, while economic activity in the state and the nation has, on average, been rising.

The City of Fayetteville contracted with Creative Economic Development Consulting and Fayetteville State University to assess potential impacts associated with a range of prospective scenarios with respect to Fort Bragg troop strength. The FSU/Creative EDC team gathered input from regional leaders, analyzed the regional economic landscape, developed alternative personnel change scenarios, used Economic Impact Analysis for Planning software (IMPLAN) to determine potential economic impacts, identified industries with highest potential for growth, compared peer cities and similar military installations, and created economic and workforce development strategies to leverage opportunities and mitigate risks associated with the region's high economic dependence on Fort Bragg.

The consulting team facilitated community input meetings, one in each county and in the City of Fayetteville, to hear the potential impacts a reduction at the base will have on the community. The communities of Hoke, Harnett, and Cumberland, and the city of Fayetteville are very different. However, Fort Bragg and the attendant population not only create unique opportunities and benefits, but also create unique challenges and uncertainties. The communities want to see strategies for infrastructure improvements, education and workforce development, small business and entrepreneur development, business recruitment, regional action, and transportation improvements.

The study team examined economic output data, population size and composition, employment levels, educational attainment of the workforce, income levels, veteran presence in the population and their characteristics, and the housing stock, to understand the current economic landscape of the region. The military is clearly the key economic

Each 100 active duty military jobs in the region support as many as 60 other jobs (including civilians at Fort Bragg); each active duty military job can support an average of as much as \$90,000 in labor income—representing soldier income plus income for a soldier's share of supported jobs.

driver for the region, accounting for approximately 31% of the total value of goods and services produced in the Fayetteville Metropolitan Statistical Area (consisting of Cumberland and Hoke Counties), although that figure has been declining at a rate of 2-4% per year in real terms. As a result, the region's overall economic output has been declining since 2012, while economic activity in the state and the nation has, on average, been rising. Aside from the military, the region is highly dependent upon public sector, education, and health care related jobs.

Another hurdle for economic growth has been the limited presence of innovation-driven industry— together with a below average proportion of the workforce that has the skills and education needed by the companies that are powering future growth. On the other hand, the data show that military veterans, educational institutions, transportation, location, and cost of living are some of the region's greatest assets. Population increases fuel workforce growth, and while the population in Harnett and Hoke Counties has continued to grow, Cumberland County's population growth has slightly declined.



There are two main purposes of this study: 1) to quantify the economic impact of potential changes in troop levels at Fort Bragg; and 2) to develop recommendations to offset potential negative economic impacts while building on current assets and prospective positive impacts. The consulting team developed two sets of scenarios for troop reductions. The scenarios show that a 3,000 troop reduction would result in a total loss of between 3,630-5,000 full-time and part-time jobs (including the loss of troops), \$450-\$618 million in sales, \$107-\$264 million in wages, and \$5-\$12 million in tax revenues. Troop reduction levels for 2,000 and 1,000 and the impact on major industries are also presented in this study. Positive impacts (reported in the appendix) in these same ranges would likely accrue if troop levels began to increase once again.

To mitigate potential negative economic impacts from a reduction of active duty personnel at Fort Bragg, the consulting team developed a set of recommendations to strengthen regional education, workforce, and economic development efforts. Basic economic development strategies will not significantly change with a reduction or increase of 1,000, 2,000, or even 3,000 active duty personnel at Fort Bragg. The core reasons companies move to and expand in this region will remain the same. Therefore, many of the recommendations focus on strengthening the efforts to recruit, retain, grow, and start up new businesses (military contracting or commercializing of military technology for example) and the talent needed to staff them.

We recommend the region increase its business recruitment efforts by collaborating at a higher level and focusing on the target sectors of logistics and warehousing, defense and security, advanced manufacturing, and business services.

The region can be more successful in attracting new and expanding companies if it builds on current economic development efforts to create cross-functional, regional collaboration to better meet the needs of targeted industry sectors. It is instructive to look at recent work in this field.

Key strategies include regional collaboration across economic development, workforce development, and education to align with target industry sectors.

For example, the Brookings-Rockefeller Project on State and Metropolitan Innovation (Expanding Growth and Opportunity: Findings from the Brookings-Rockefeller Project on State and Metropolitan Innovation, Brookings Institute, July, 2015), and the book, *The Smartest Places on Earth: Why Rustbelts Are the Emerging Hotspots of Global Innovation*, by Antoine van Agtmael and Fred Bakker (2016), are two illustrative studies that identify key factors that have enabled regions to shift growth trends from declining to accelerating. Best practice examples show that economic prosperity in areas experiencing slow growth can be enhanced by establishing focused collaboration between county governments, municipal governments, the business community, real estate developers, educational institutions, and non-profits to be responsive to target growth sector needs. Assets to be leveraged can include affordable, well-positioned site availability, a reservoir of entrepreneurial talent, and identification of business opportunities in which the target region has unique competitive advantages. Prospective strategies could include leveraging grants and other funding to create educational programs that address identified opportunities linked to specific growth industries, or work with developers to increase the inventory of available quality buildings and shovel-ready sites. In addition to traditional business development strategies, we recommend a focus on entrepreneurship and small business development to leverage exiting military personnel. The analysis also shows excess demand in specific industries that could support small business development.

The Fayetteville region has inherent assets that will sustain economic growth and prosperity. The key will be for regional leaders to leverage those assets with public investment, partnerships, and regional collaboration.

**Special Note:** Since the beginning of this study in early 2016, well-before the 2016 national elections, the researchers have been cognizant of the long-held local opinion that “Fort Bragg will never totally go away.” Even though the Department of Defense, Office of Economic Adjustment provided resources to Fayetteville and other communities to prepare for the impact of troop reductions, the projected scale of cuts to Fort Bragg plus the historical size, significance, and relative stability of the installation, provided reason to err on the side of optimism versus caution for many key players in the tri-county region. Now, with the new administration, this stance has only grown in that many regional stakeholders – including

elected officials – increasingly believe that, if anything, Fort Bragg will witness growth over the next few years. Considering the original charge from the funder and contractor, together with new political realities and defense spending increase probabilities, the research team has sought to present economic and workforce development strategies that will lend themselves to any scenario. The bottom line is that no matter what happens to the base, this region still needs to work across county-lines in developing aligned, improved, and diversified education, workforce, and economic development initiatives. This is also keeping in consideration the other long held belief: “When Fort Bragg gets a cold, Fayetteville gets the flu.”

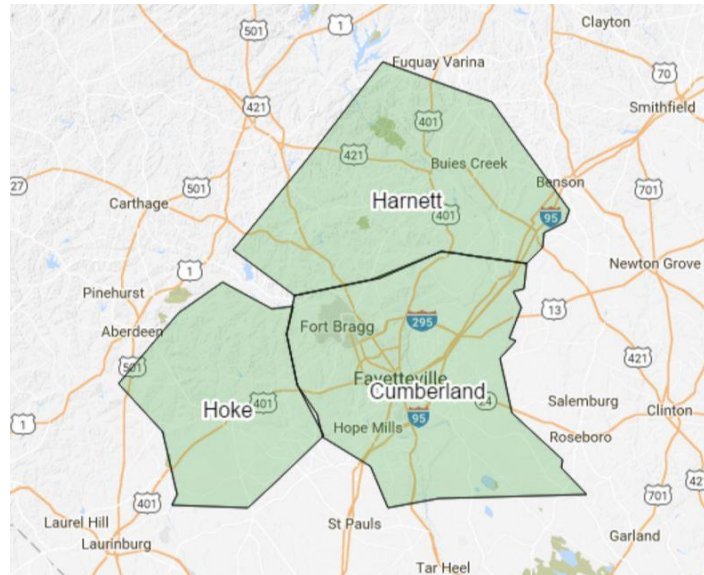


## Introduction

In 2015, the Army announced a planned reduction of 40,000 active duty U.S. military personnel over the next few years, in response to federal budget challenges and reduced U.S. roles in military conflicts around the world. Thousands more civilian jobs working for the Army were projected to be reduced as well. With a new administration, future changes in the level of military personnel at Fort Bragg are uncertain, but it should be recognized that Fort Bragg has already experienced reductions in troop strength from peak levels of approximately 10% (Table 3).

Recognizing that military installations can have a significant impact on their region's economy, the U.S. Congress allocated funds to the Department of Defense Office of Economic Adjustment (OEA) to help regions assess and mitigate economic risks associated with reductions in force at local military installations. The City of Fayetteville applied for, and was awarded, a grant from the OEA to determine the prospective regional impact of troop reductions at Fort Bragg and to develop strategies to drive growth to offset military reductions. This aligned closely with the City of Fayetteville's strategic plan. The

counties included in the scope of the grant award are Cumberland, Hoke, and Harnett (map at right). While specific future reductions in personnel at Fort Bragg have yet to be determined, the City of Fayetteville contracted with Creative Economic Development Consulting and Fayetteville State University to assess potential impacts associated with a range of prospective troop reduction scenarios—including reductions of 1,000, 2,000, and 3,000 active duty military personnel. With a total active duty force at Fort Bragg of approximately 50,000, and another 9,000 civilians, a reduction of 3,000 from the military payroll would represent an approximate 5% decline from current levels. The team also assessed potential impacts associated with troop increases (Appendix C) because of a potential change in defense spending.



To assess potential impacts of military personnel reductions and to help develop and prioritize mitigation strategies, the FSU/Creative EDC team used the following methodology:

1. Assembled and convened a Steering Committee consisting of key regional and community leaders to provide guidance and input to the study team on issues

addressed and conclusions reached. Steering committee members represented the four jurisdictions covered in this study, economic development, workforce development, real estate industry, military, education, and related agencies. The Steering Committee provided oversight throughout the study process through regular meetings and electronic communications. (see Appendix A for Steering Committee members).

2. Convened four community input sessions (one in each county and the city of Fayetteville) to gain input on the potential impacts changes in Fort Bragg troop strength could have on the community.
3. Reviewed previous background and related studies on regional economic issues and opportunities.
4. Compiled and analyzed published statistical data describing the current regional economic landscape.
5. Developed alternative personnel reduction and increase scenarios.
6. Used the IMPLAN econometric modelling tool to determine potential economic impacts associated with troop reduction and increase scenarios.
7. Identified industries with highest potential for growth.
8. Developed economic and workforce development strategies to leverage growth opportunities and mitigate risks associated with military personnel changes.

This study summarizes the research, analysis, and economic impacts, and makes recommendations to offset potential negative economic impacts while building on current regional assets.

## Steering Committee

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A 2012 report by the Association of Defense Communities notes that one of the most important factors for successfully addressing challenges associated with base realignments is to implement “robust sharing of information, aggressive and early engagement and creation of a strong, focused community voice, active cooperation in workforce development and retraining, and partnership...”(ADC BRAC Workshop: Using Lessons Learned to Address the Resource Challenges of Today, Association of Defense Communities, 2012). Thus, to help guide the assessment of impacts, challenges, and mitigating opportunities associated with potential reductions in personnel and contract dollars, the consulting team worked with the City of Fayetteville to establish a steering committee consisting of key regional and community leaders.

Steering Committee members represented the four jurisdictions covered in this study, economic development, workforce development, real estate industry, military, education, and related agencies. The consulting team relied on input from the Steering Committee to guide research and validate results. The Steering Committee provided oversight throughout the study process through regular meetings and electronic communications. A list of Steering Committee members and the consulting team is in Appendix A.

### Steering Committee Meeting Dates:

- September 8, 2016
- November 15, 2016
- January 4, 2017
- March 14, 2017

## Community Input Sessions & SWOT Analysis

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The consulting team facilitated four community input meetings, one in each county and one in the City of Fayetteville, to hear the qualitative impacts a reduction at the base will have on the community. The agenda for the meetings included a SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis, qualitative impact of Fort Bragg, workforce and economic development strategies, resources for diversification, and feedback on how this study could support their local work. The consulting team used the reported qualitative impacts of Fort Bragg to influence the data gathered and analyzed. For example, when participants mentioned vacant housing as an impact, we researched the housing market.

We used assets and opportunities as building blocks for the economic and workforce development strategies. The communities want to see strategies for infrastructure improvements, education and workforce development, small business and entrepreneur development, business recruitment, and transportation improvements. They noted that local, state, and federal, along with private resources, should be tapped for implementation.

We used an asset-based approach, built upon a SWOT Analysis, to create the workforce and economic development strategies.

The communities of Hoke, Harnett, Cumberland, and Fayetteville are very different. The small town feel of communities in Hoke and Harnett counties is juxtaposed to the amenities of the metropolitan area of Fayetteville. However, Fort Bragg and the attendant population create unique opportunities and benefits -- and create unique challenges and uncertainties. We found that Fort Bragg is central to almost everything in Fayetteville, understandably, while the counties see beyond the impacts of the base. This was proven by the economic modeling in this study, which showed that unless new military housing development in Harnett County is scaled back, small reductions at Fort Bragg will have minimal impacts to Hoke and Harnett counties.

**Table 1: Combined SWOT Analysis Summary**

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>•Affordable housing</li> <li>•Work ethic, military spouses</li> <li>•Proximity to Ft. Bragg, metros, RTP brain trust</li> <li>•Cape Fear River-recreation, water resource</li> <li>•Access to I-95, I-295, and highways</li> <li>•Small town attitude</li> <li>•Schools, Community College, Universities</li> <li>•State parks, recreation parks</li> <li>•Public infrastructure – planning department</li> <li>•Diverse population</li> <li>•Airport</li> <li>•Health care system</li> <li>•Diversity of jobs</li> <li>•Cost of living</li> </ul>	<ul style="list-style-type: none"> <li>•Identity/vision</li> <li>•Perception of community</li> <li>•Lack of connectivity</li> <li>•Infrastructure</li> <li>•Hotels</li> <li>•Housing options, transient community</li> <li>•Meeting space, convention space</li> <li>•Dependency on military</li> <li>•Attracting young workers</li> <li>•Low tax base proportional to population</li> <li>•Largest employers do not pay taxes, they are exempt (health care, university)</li> <li>•Recreation facilities</li> <li>•Out-commuters</li> <li>•No one knows what we have to offer</li> <li>•Airport facilities</li> <li>•Better connected partnerships</li> <li>•Poverty</li> </ul>	<ul style="list-style-type: none"> <li>•Create an identity</li> <li>•Lifestyle amenities</li> <li>•Marketing</li> <li>•Leveraging Ft. Bragg</li> <li>•Become a destination</li> <li>•Land management</li> <li>•Better organized communities to attract youth</li> <li>•Use river and spaces to create communities attract people</li> <li>•Leverage talent</li> <li>•Exiting military, graduating/graduate students</li> <li>•Could have a glut of affordable housing if military left</li> <li>•Agricultural products processing</li> <li>•Small businesses development</li> <li>•Regional strategy</li> <li>•Community college closing skills gap with exiting military</li> <li>•Improve water sewer capacity</li> <li>•Home-based entrepreneur</li> </ul>	<ul style="list-style-type: none"> <li>•Traffic</li> <li>•People against change</li> <li>•Complacency</li> <li>•Workforce flight</li> <li>•Poverty, crime</li> <li>•Overcrowded schools</li> <li>•Lack of connectivity</li> <li>•National attention to HB2</li> <li>•Pay scale for teachers in neighboring counties</li> <li>•Growth-management</li> <li>•Dependency on Ft. Bragg</li> <li>•Health disparity issues</li> <li>•Infrastructure lines designed to be a rural system</li> <li>•Funding for implementation</li> <li>•Coordination</li> </ul>

Source: Community Input Sessions

## SWOT Comments

### Harnett County

Harnett County strengths revolved around mainly traditional economic development assets such as transportation, education, health care, and the military base, as well as quality of life assets. It is interesting that the group did not mention Fort Bragg until well into the discussion, indicating it is not the leading asset. Several of the weaknesses relate to county-municipal relations as well as regional dynamics. Harnett County has a base of small businesses but wants more local jobs. The county is struggling with how to grow strategically. Due to residential growth, managing land use for economic development is a priority. The county is in a good position to attract talented workers and retain more young people due to proximity to the Raleigh metro area. They want to be a part of a regional growth strategy. Threats were wide ranging, from public health to infrastructure to state policy. Most of the threats to the economy are not related to the base; however, the threats such as lack of infrastructure, do impact economic diversification strategies.

### City of Fayetteville

Even though Fayetteville is often seen as dominating the regional economy, there is recognition of the value of the smaller communities around the city. Assets include transportation, workforce, and the health care system. Several of the weaknesses are related to impacts from the base, such as rental housing and low income levels attracting low-end retail. Representatives at the community input session discussed attachment to the base and the perception of being attached to the base as a weakness. The group discussed many opportunities to leverage the base while at the same time diversifying from the base. Many opportunities involve regional collaboration and marketing/branding. Many participants discussed planning fatigue and the threat of this process stalling due to that fatigue. They recognized the threats of complacency and negative attitudes.

### Cumberland County

Participants quickly identified physical assets and investments in infrastructure and the future as concrete strengths the region has as a foundation. They added a cooperative community with structures and organizations pursuing community goals, as well as leaders that are inclined to act. Fort Bragg is a strength that can be developed and focused in new ways. Especially promising are new programs and growth at Campbell University, including a new residency program which will bring hundreds of medical students to the region. Air and ground transportation assets support the economy and connect other assets. Themes of disconnection and mistrust may be addressed by communicating and convening – which may be easier than other resource-heavy solutions. Concern was expressed for the sometimes negative portrayal of Fayetteville “inside” Fort Bragg and a fear of the effects of this negative word-of-mouth. Several diverse sources of opportunities include significant higher education assets, under-utilized natural resources for recreation, and the Army and Fort Bragg. Entrepreneurship was mentioned several times as an emerging economic development strategy that needs more

support. Reductions at Fort Bragg dominated discussion of threats, including complex military reimbursement programs and funding streams, as well as the lack of control the community feels in dealing with Fort Bragg.

### Hoke County

Hoke County is a cohesive community with a good quality of life which has attracted housing developments to serve the Ft Bragg community. At the same time, there is a relatively lower level of public services provided by the county. There is a conflicting view of the low tax rate. There are unmet infrastructure needs at the local level due to the low tax rate, while at the same time the low tax rate attracts business and homeowners. There is interest in improving connectivity within the county and in recruiting commercial and industrial development from the outside. The group is wary of growth that depends on Fort Bragg, but also sees how the low-tax policy has contributed to the situation.

### Prior Economic Analyses

To help clarify the context of current stakeholder perceptions and to help inform the development of the study team's recommendations, a summary of prior regional economic development reports was compiled. Prior reports reviewed included BRAC Regional Task Force reports on impacts and opportunities associated with growth in Fort Bragg personnel, a 2012 report entitled *A Competitive Realities Report for Fayetteville and Cumberland County, North Carolina*, authored by Garner Economics, LLC, for the Fayetteville-Cumberland County Chamber of Commerce, *Fayetteville Cumberland County Economic Development Corporation Strategic Plan 2016-2017*, and regional growth plans. Most of these reports were written as the number of personnel assigned to Fort Bragg was increasing or expected to increase. Findings included identification of a number of strengths that could be leveraged to capitalize on the increasing military presence, as well as an identification of weaknesses that could hinder the region's ability to reach its full potential in growth and development.

Previously identified strengths that continue to be relevant include:

- Availability of multiple high-quality higher education options—at the community college/vocational training level as well as at the university level
- Central regional location, with close proximity to interstate highways and ready access to major southeastern metropolitan areas
- Good utility infrastructure, including adequate water and wastewater treatment capacity
- A strong, military-related labor pool of well-educated and highly capable veterans and spouses
- Population diversity
- Strong base of small manufacturers

However, as this report will show, some attributes that were strengths previously have changed. One example is that the region is no longer outpacing the state or the nation in GDP growth, per capita income growth, or employment growth.

Also, this study has found that many previously identified weaknesses in our region's economic profile remain, such as limited availability of skilled jobs in manufacturing, science and technology, professional services, and general business management relative to other metropolitan areas of the state. In addition, the region continues to have a below average proportion of its residents with a bachelor's degree or higher college degree, higher tax rates, high crime, low school quality, and low tourism appeal.

Prior studies also identified threats (factors that could reduce the region's economic well-being)—some of which have materialized—such as:

- Troop reductions
- Federal budget cuts and sequestration
- Large troop deployments
- Insufficient expansion in non-military sectors to offset high dependence on military incomes and expenditures

Growth potential has previously been recognized, but further work is needed to bring these opportunities to full fruition. Prior studies have focused on opportunities for growth in sectors in which there are clusters of expertise, such as defense and security, health care, education, and professional services. This study explores target clusters and sector growth opportunities further, with potential strategies identified to continue to increase regional prosperity.



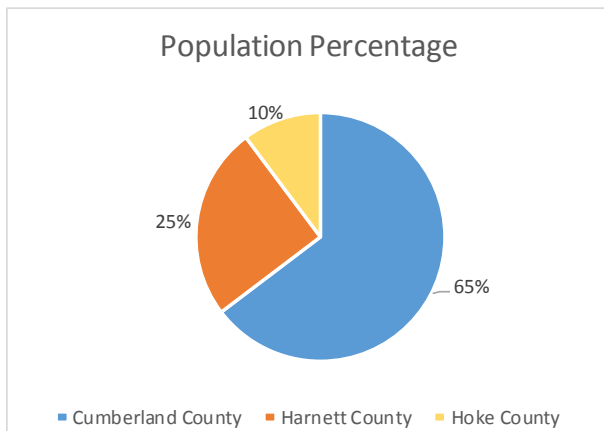
## Economic Landscape

To understand the potential impacts of personnel changes at Fort Bragg it is important to understand the current economic and demographic landscape of the region. The study team examined economic output data, population size and composition, employment levels, educational attainment of the workforce, income levels, veteran presence in the population and their characteristics, and the housing stock.

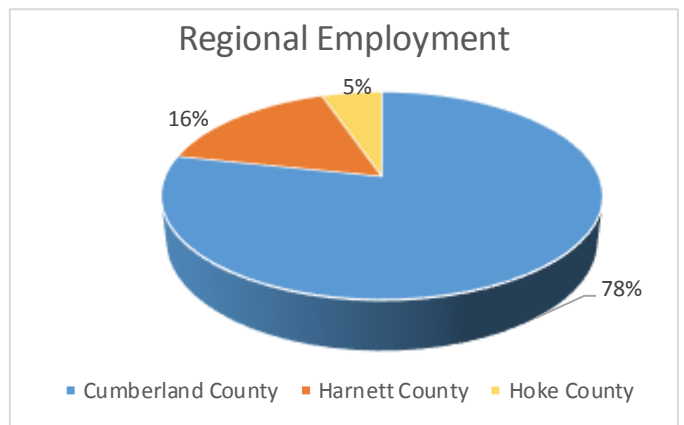
It should be noted that while much of the data is presented at a regional level, additional county and town-specific data is available in Appendix B. The economic landscape within the target three-county region is clearly dominated by activity occurring in Cumberland County. Cumberland County accounts for approximately 80% of the region’s non-military jobs, 85% of the region’s non-military wage income, and 65% of the region’s total population (Figures 1-3). Harnett County is the next largest factor in the target region, accounting for 14% of the region’s jobs and 25% of the region’s population. Over 90% of those who live in Cumberland County also work in Cumberland County, while only 30-40% of those who live in Harnett and Hoke Counties work in the county of their residence. A clear majority of the military personnel live in Fayetteville, followed by Spring Lake, Hope Mills, Raeford, and Lillington (see Figure 4). It is, therefore, no surprise that almost 80% of the region’s military personnel currently reside in Cumberland County, which includes Fayetteville and Hope Mills (see Figure 5).

### Key Regional Economic Data Driving Allocation of Economic Impact Assessment by County

**Figure 1: Population Percentage**

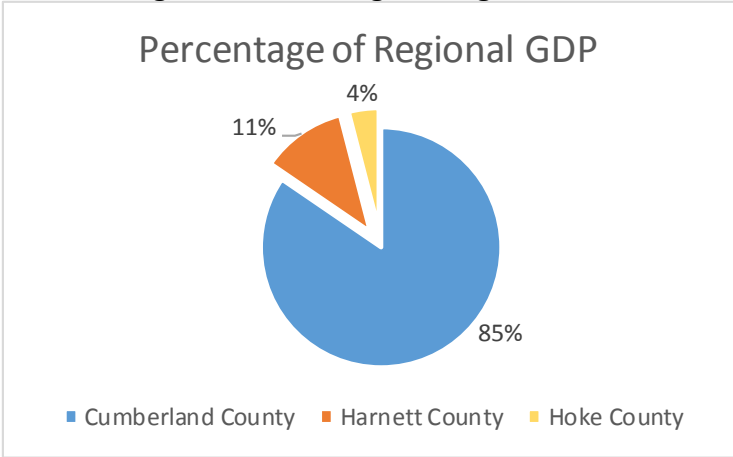


**Figure 2: Regional Employment**



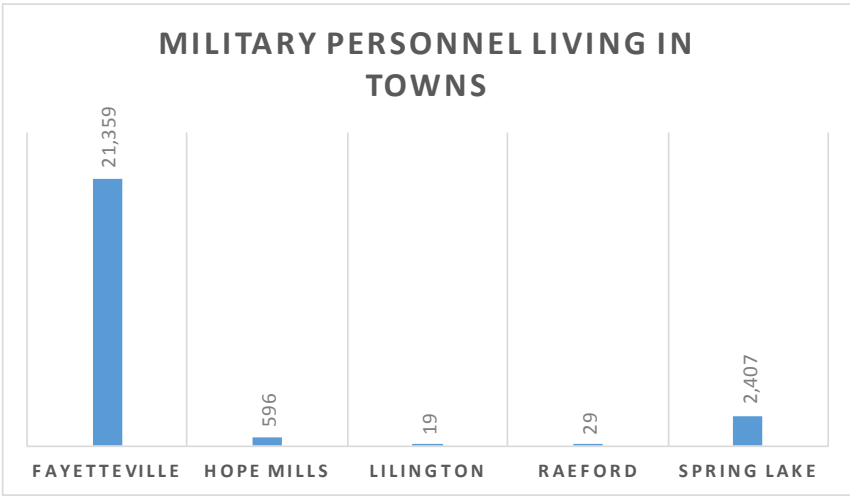
Source: U.S. Census Bureau and Bureau of Economic Analysis

**Figure 3: Percentage of Regional GDP**



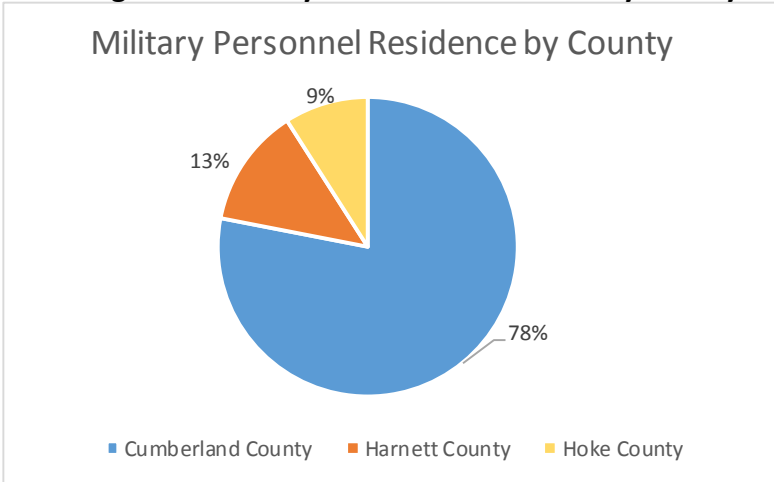
Source: U.S. Census Bureau and Bureau of Economic Analysis

**Figure 4: Military Personnel Living in Town**



Source: U.S. Census Bureau and Bureau of Economic Analysis

**Figure 5: Military Personnel Residence by County**



Source: U.S. Census Bureau and Bureau of Economic Analysis

According to the U.S. Bureau of Economic Analysis (2014), the military is clearly the key economic driver for the region, accounting for approximately 31% of the total value of goods and services produced in the Fayetteville Metropolitan Statistical Area, which consists of Cumberland and Hoke Counties (See Figure 6).

Industry employment data from the North Carolina Department of Commerce (which does not include active duty military) show that aside from the military, the region is highly dependent on public sector jobs (health care, public administration or government services, and education), which together account for over 50% of non-military wages in the study region. Retail trade and manufacturing are the largest private sector industries in the region, each accounting for about 11% of total regional wages (Table 2).

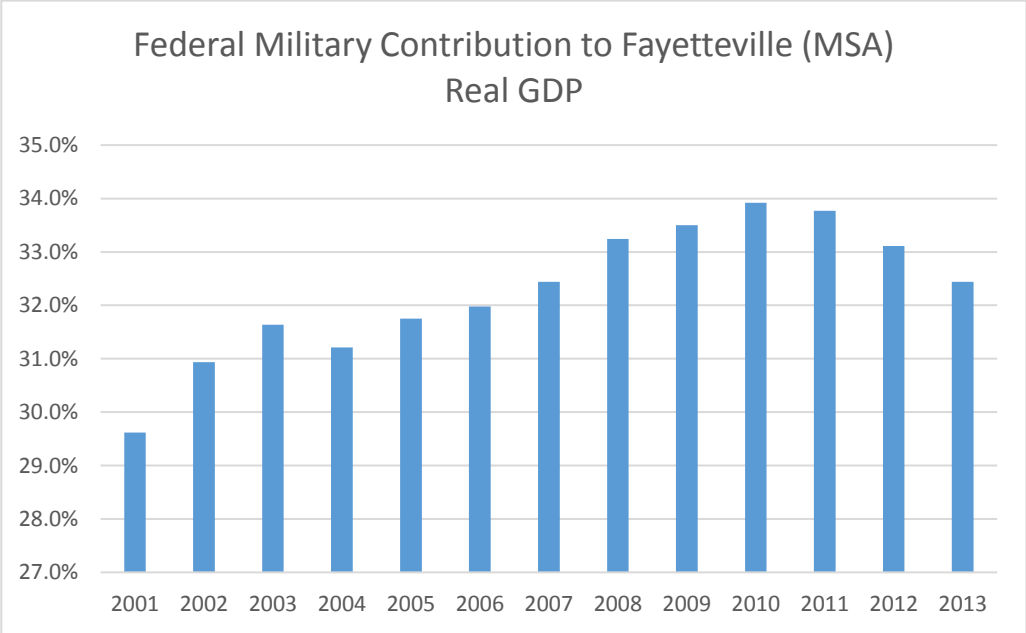
**Table 2: 2015 Employment by Industry in the Three-County Region**

		Wages by Industry	Industry Wages as % of Total	# of People Employed	Avg Weekly Wages	Weekly Wages Annualized
1	Health Care and Social Assistance	\$1,223,961,247	26%	26,793	\$732	\$38,046
2	Public Administration	\$ 838,650,342	18%	15,984	\$840	\$43,701
3	Retail Trade	\$526,729,255	11%	20,828	\$459	\$23,875
4	Manufacturing	\$499,882,437	11%	9,360	\$909	\$47,291
5	Educational Services	\$472,834,785	10%	12,505	\$727	\$37,812
6	Professional Scientific and Technical Services	\$314,278,314	7%	5,433	\$939	\$48,807
7	Construction	\$266,574,183	6%	6,014	\$826	\$42,957
8	Transportation and Warehousing	\$250,465,881	5%	5,855	\$742	\$38,578
9	Accommodation and Food Services	\$227,650,533	5%	16,535	\$243	\$12,641
10	Administrative and Support and Waste Management and Remediation Services	\$219,004,740	5%	7,470	\$499	\$25,968
11	Wholesale Trade	\$130,674,996	3%	2,677	\$903	\$46,955
12	Finance and Insurance	\$119,036,400	3%	2,420	\$887	\$46,104
13	Other Services (except Public Administration)	\$103,309,991	2%	3,524	\$492	\$25,603
14	Information	\$78,061,978	2%	1,771	\$932	\$48,466
15	Real Estate and Rental and Leasing	\$68,711,798	1%	1,972	\$591	\$30,714
16	Management of Companies and Enterprises	\$31,110,441	1%	565	\$1,054	\$54,787
17	Arts Entertainment and Recreation	\$26,999,811	1%	1,560	\$347	\$18,048
18	Utilities	\$26,589,722	1%	437	\$838	\$43,579
19	Agriculture Forestry Fishing and Hunting	\$17,944,002	0%	594	\$582	\$30,282
20	Mining	\$3,554,441	0%	56	\$1,221	\$63,472

Source: U.S. Bureau of Labor Statistics

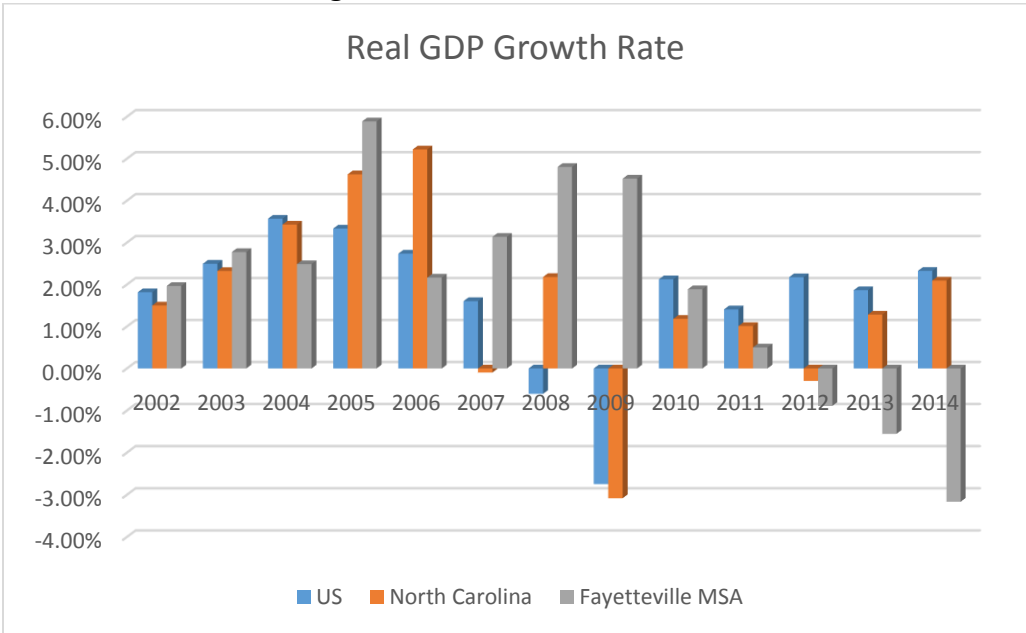
The military contribution to the area’s economy was a key growth driver over the period of 2005 - 2010, aided in part by the military’s base realignment process (Figure 6). The military’s share of the regional gross domestic product grew from 31% in 2004 to 34% in 2010, resulting in regional economic growth rates above state and national averages in 2005 and 2007-2009 (Figure 7).

**Figure 6: Federal Military Contribution to Fayetteville (MSA) Real GDP**



Source: Bureau of Economic Analysis

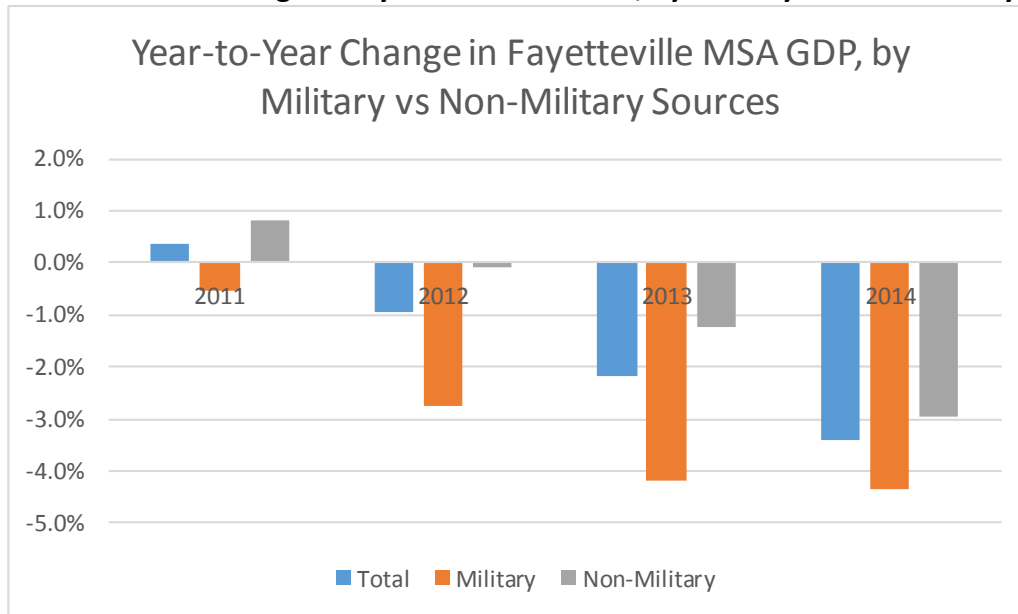
**Figure 7: Real GDP Growth Rate**



Source: Bureau of Economic Analysis

However, since a peak in the military’s economic contributions to the region in 2010, military activity has been declining at a rate of 2-4% per year in real terms (i.e. excluding the impact of inflation). Comparable declines can be seen in the reduced level of troops assigned to Fort Bragg since Fiscal Year 2013 (see Table 3). Thus, the region’s overall economic output has been declining since 2012, while economic activity in the state and the nation has, on average, been rising (Figure 8).

**Figure 8: Year-to-Year Change in Fayetteville MSA GDP, by Military vs. Non-Military Sources**



Source: Bureau of Economic Analysis

**Table 3: Fort Bragg Troop Strength Trends**

Fort Bragg Population ASIP COP Data (31 January 2016)	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Active Duty Army Military	44,436	45,437	45,290	45,051	44,954	44,702	42,532	41,716	40,877
Reserve Component Military (Assigned at Fort Bragg)	1,891	1,810	1,816	3,207	3,281	3,283	3,262	3,391	2,358
Other Military ( Air Force, Other Services)	785	818	751	2,936	2,862	2,998	3,002	3,002	3,010
Students-Military (incl PCS & TDY)	5,995	4,943	5,502	4,730	5,600	5,786	5,873	5,119	4,796
<b>Total Fort Bragg Military Population</b>	<b>53,107</b>	<b>53,008</b>	<b>53,359</b>	<b>55,924</b>	<b>56,697</b>	<b>56,769</b>	<b>54,669</b>	<b>53,228</b>	<b>51,041</b>
Civilian Employees (Assigned at Fort Bragg)	9,340	10,158	11,344	14,116	14,515	14,380	14,470	14,663	13,808
Contract Employees (Working at Fort Bragg)	6,688	6,984	5,472	5,481	5,496	6,342	5,888	5,552	6,054
Military Family Members (Active Duty Military)	80,723	80,572	81,106	85,004	86,179	86,289	83,097	80,907	69,797
<b>Total Fort Bragg Population</b>	<b>149,858</b>	<b>150,722</b>	<b>151,281</b>	<b>160,525</b>	<b>162,887</b>	<b>163,780</b>	<b>158,124</b>	<b>154,350</b>	<b>140,700</b>

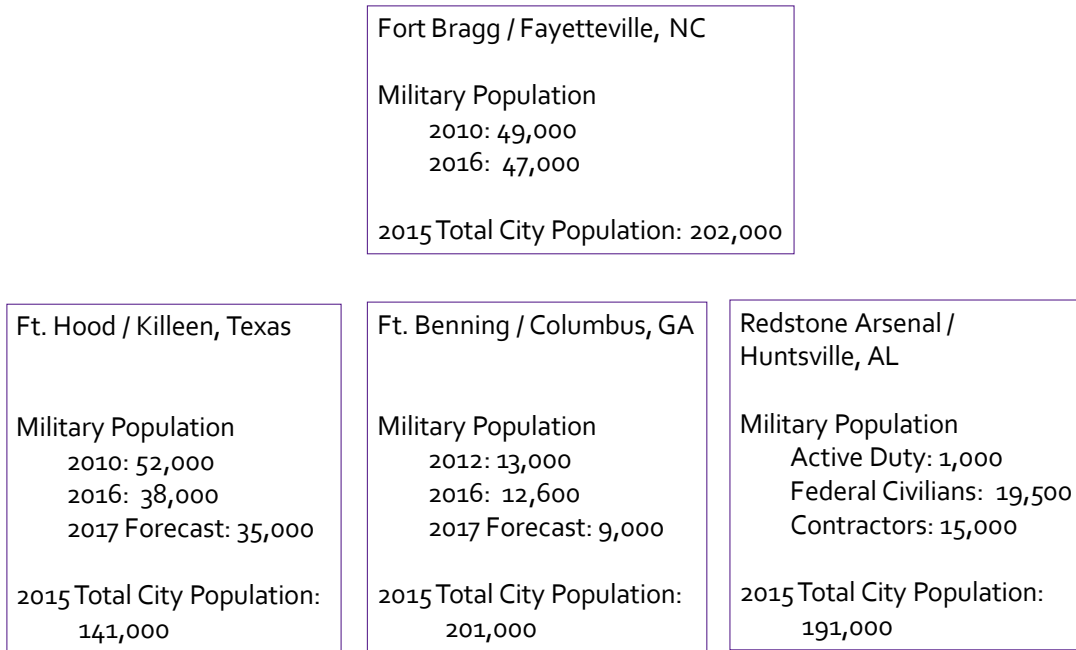
Source: Fort Bragg Public Relations, January 2017

Similar patterns can be observed even when comparing the Fayetteville area to other peer cities with large military installations (Figure 9). The ramp-up in military presence at Fort Bragg resulted in higher GDP growth than most comparable military metropolitan areas, but the

declines in military activity since 2011 at Fort Bragg have resulted in lower GDP growth in the Fayetteville area than in most other peer cities (Figure 10).

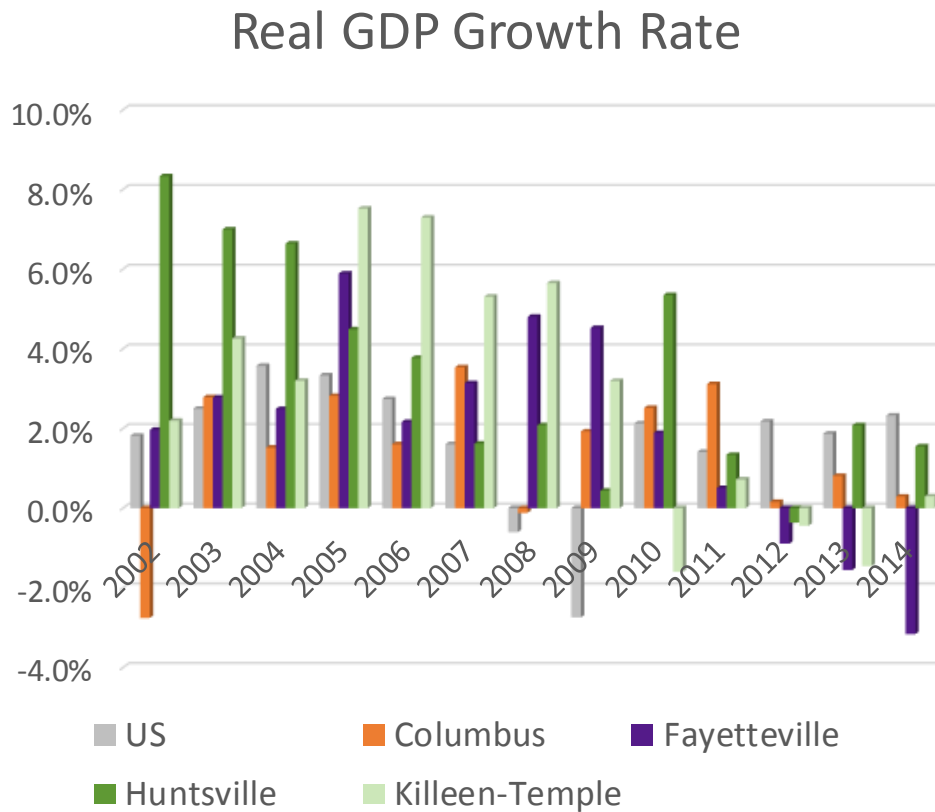
**Figure 9: Illustrative Benchmark Comparisons**

### Illustrative Benchmark Comparisons



*Source: Various articles, Installation websites, and U.S. Census*

**Figure 10: Real GDP Growth Rate by MSA**



Source: Bureau of Economic Analysis

**Table 4: Year-to-Year Population Growth, by County**

	2011	2012	2013	2014	2015
<b>Cumberland</b>	1.2%	-0.2%	1.0%	-0.2%	-0.6%
<b>Harnett</b>	3.0%	2.6%	2.4%	1.4%	1.0%
<b>Hoke</b>	4.2%	2.0%	1.3%	1.0%	2.0%
<b>Total 3 Counties</b>	1.9%	0.7%	1.4%	0.3%	0.1%
<b>State</b>	1.0%	1.0%	1.0%	1.0%	1.0%

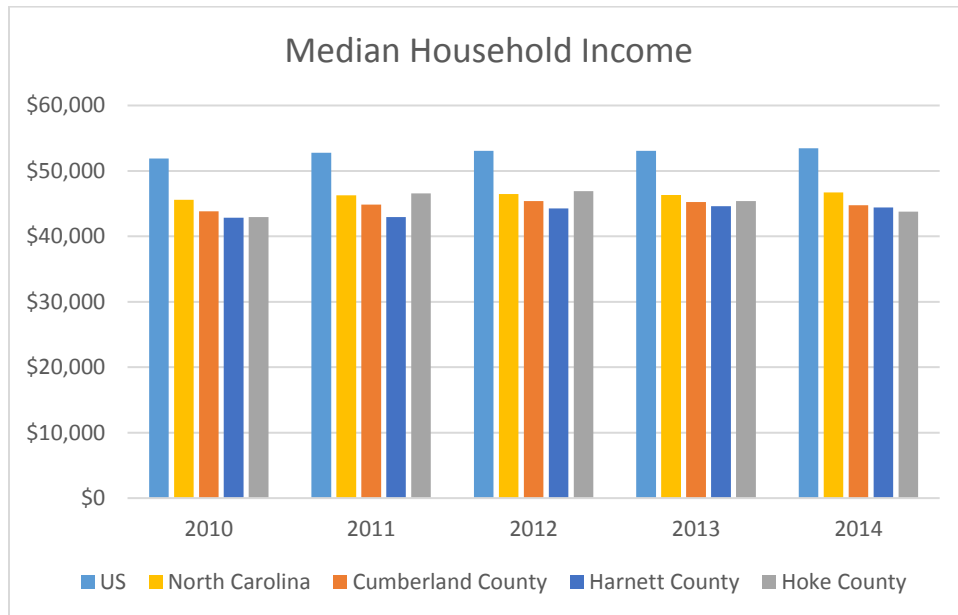
Source: U.S. Census Bureau

Concomitant with the declining military presence at Fort Bragg has been regional underperformance relative to state and national averages along several economic dimensions, including family incomes, unemployment rates, new business formation, and housing.

Each of the counties in the region has lower median household incomes than the state, which itself trails the nation on this metric (Figure 11). The differences are more pronounced on a per capita basis (Figure 12).

The impacts of reductions in military presence on population have been felt particularly hard in Cumberland County. While the population in Harnett and Hoke counties has continued to grow over the 2010-2015 period at or above state average growth rates of 1-2% per year, the population in Cumberland County has been declining slightly, in the range of -0.2 to -0.6% per year (Table 4).

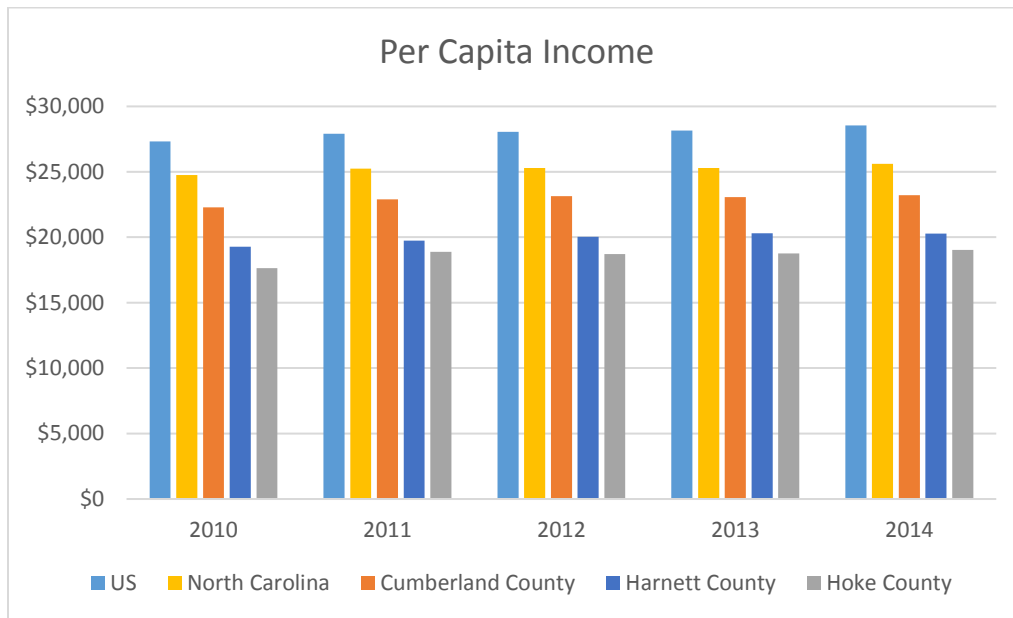
**Figure 11: Median Household Income**



Source: U.S. Census Bureau



**Figure 12: Per Capita Income**



Source: U.S. Census Bureau

As shown in Table 5, the target region has been experiencing some level of aggregate growth in jobs and income over the past several years, but the level of growth is below average for the state. Within the three-county region, Harnett and Hoke Counties have fared best with respect to wage and job growth, with Hoke County experiencing economic growth in 2015 at rates close to the state average.

**Table 5: Year-to-Year Growth in Jobs, Wages, and Establishments**


		2013	2014	2015
<b>3 County Region</b>	Employment (# jobs)	0.0%	-1.0%	0.1%
	Total Wages	1.0%	-1.4%	2.6%
	# of Establishments	-1.2%	0.6%	1.4%
<b>State</b>		<b>2013</b>	<b>2014</b>	<b>2015</b>
	Employment (# jobs)	1.8%	2.1%	2.6%
	Total Wages	3.4%	4.8%	6.2%
	# of Establishments	0.3%	0.8%	3.4%
<b>By County:</b>				
	Employment (# jobs)			
<b>Cumberland</b>		-0.2%	-0.6%	-0.2%
<b>Harnett</b>		0.1%	2.3%	2.4%
<b>Hoke</b>		42.8%	-32%	2.8%

Wages			
<b>Cumberland</b>	1.2%	-0.4%	1.9%
<b>Harnett</b>	3.8%	1.2%	2.8%
<b>Hoke</b>	30.7%	-17.1%	6.0%

Source: Bureau of Labor Statistics

Recent data indicates that while many other areas of the state are experiencing growing incomes, median family income in the Fayetteville MSA declined by almost 4% in 2016 (Table 6).

**Table 6: Median Family Income**

Median Family Income			
	Period	Level (000s)	YOY % Change
Asheville MSA	2016	\$57,900	3.58
Charlotte MSA	2016	\$67,000	-0.3
Durham MSA	2016	\$74,900	11.13
 Fayetteville MSA	2016	\$52,200	<b>-3.87</b>
Greensboro-High Point MSA	2016	\$57,200	5.93
Raleigh-Cary MSA	2016	\$76,600	-2.79
Winston-Salem MSA	2016	\$58,500	4.28

Source: Federal Reserve Bank of Richmond

Similarly, recent data in Table 7 indicates that area unemployment rates are among the highest in North Carolina metropolitan areas.

**Table 7: Labor Market Conditions**

Labor Market Conditions			
Unemployment Rate			
	October-16	September-16	October-15
<b>United States</b>	4.90	5.0	5.0
<b>Fifth District</b>	4.6	4.5	5.2
<b>North Carolina</b>	4.9	4.7	5.6
<b>Asheville MSA</b>	4.1	4.1	4.6

Charlotte MSA	4.7	4.7	5.3
Durham MSA	4.3	4.3	5.0
Fayetteville MSA	6.3	6.1	7.3
Greensboro-High Point MSA	5.0	5.1	5.9
Raleigh-Cary MSA	4.2	4.2	4.8
Wilmington MSA	4.8	4.8	5.5
Winston-Salem MSA	4.7	4.7	5.4

Source: Federal Reserve Bank of Richmond, data are seasonally adjusted

Associated with lower than average—and declining—incomes and higher than average unemployment rates are above average mortgage delinquency, home foreclosure, and repossessed property rates (Table 8). It must be noted, however, that these home mortgage issues are not near crisis levels.

**Table 8: Owner-Occupied Loan Statistics: North Carolina**

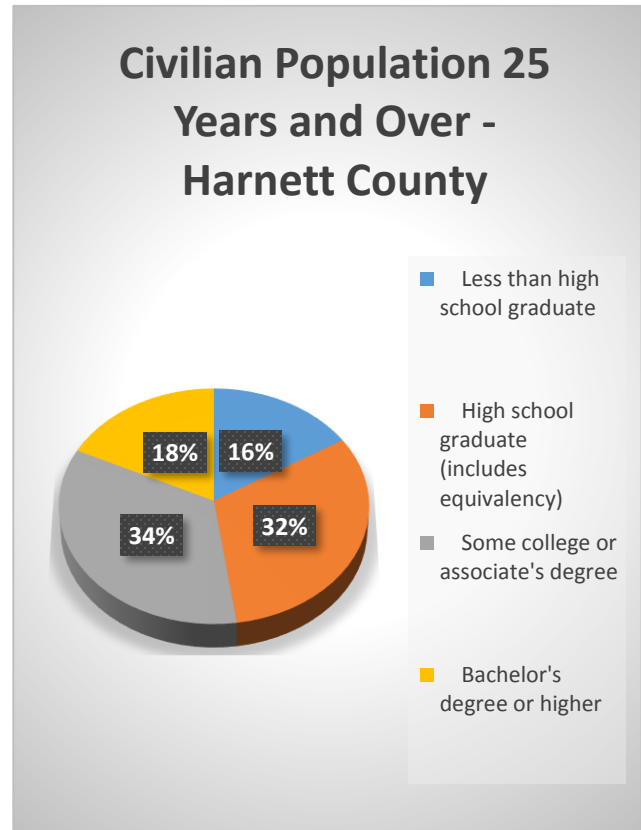
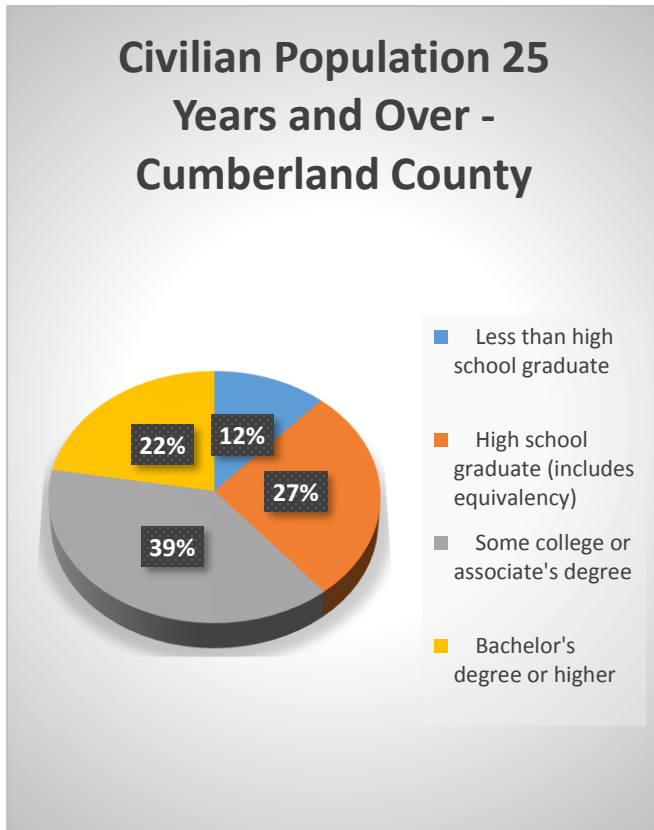
Owner-Occupied Loan Statistics: North Carolina						
Geographic Area	September 2015			September 2016		
	Percent 90+ Days Past Due	Percent in Foreclosure	Percent in REO	Percent 90+ Days Past Due	Percent in Foreclosure	Percent in REO
Asheville	1.00	0.71	0.39	0.86	0.45	0.34
Burlington	1.86	1.01	0.71	1.57	0.66	0.63
Charlotte-Gastonia	1.76	0.94	0.48	1.51	0.62	0.39
Durham	1.83	0.65	0.41	1.50	0.45	0.40
Fayetteville	3.38	1.32	0.90	2.74	0.97	1.16
Goldsboro	2.64	1.04	0.86	1.99	0.82	1.03
Greensboro	2.01	0.94	0.73	1.75	0.71	0.68
Greenville	1.98	1.00	0.62	1.65	0.75	0.68
Hickory-Lenoir	1.56	1.07	0.78	1.41	0.71	0.78
Jacksonville	3.22	1.73	1.43	2.53	1.60	1.88
Kill Devil Hills	1.09	0.72	0.40	1.00	0.52	0.44
Raleigh-Cary	1.44	0.61	0.30	1.21	0.43	0.26
Rocky Mount	3.16	1.51	1.12	3.04	1.20	1.22
Wilmington	1.36	0.86	0.58	1.18	0.61	0.60
Winston-Salem	1.85	0.93	0.64	1.72	0.71	0.67
North Carolina	1.90	0.93	0.60	1.62	0.67	0.59
Fifth District	1.80	1.14	0.76	1.56	0.80	0.73
United States	1.72	1.50	0.74	1.46	1.08	0.67

Note: FHA and VA loans as well as interest-only loans are included in the count of prime loans. Areas with fewer than 100 total loans will receive an N/A.

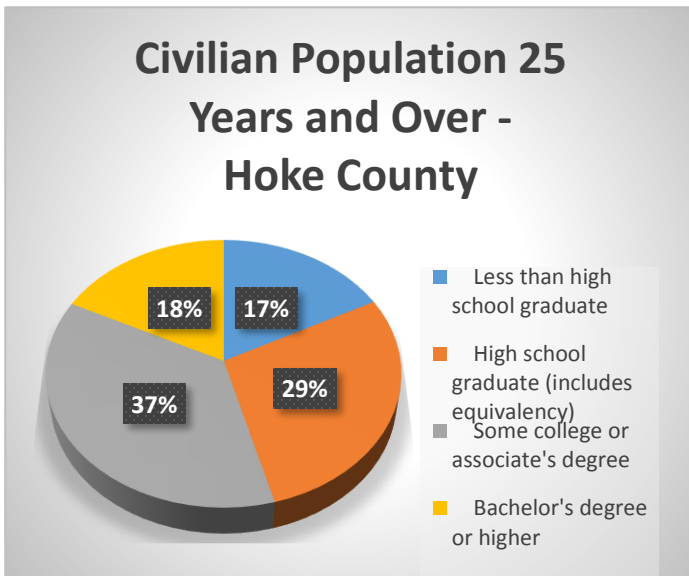
Source: Federal Reserve Bank of Richmond/McDash Analytics (September 2016)

One factor that often hinders creation of new, well-paying employment opportunities in an area is perceived lack of access to a skilled, or well-educated, labor pool. This region lags both the state and the nation in the proportion of its labor force that has attained at least a bachelor’s degree or higher. For example, 22% of Cumberland County residents over the age of 25 have attained a bachelor’s degree (Figure 13a), compared to an average of 30% for the state and 45-50% for Durham and Wake counties. The proportion of Hoke and Harnett County residents with at least a bachelor’s degree is even lower, at 18%.

**Figures 13a, 13b. 13c: Civilian Population Educational Attainment 25 Years and Over**



Source: U.S. Census Bureau, 2014 American Community Survey

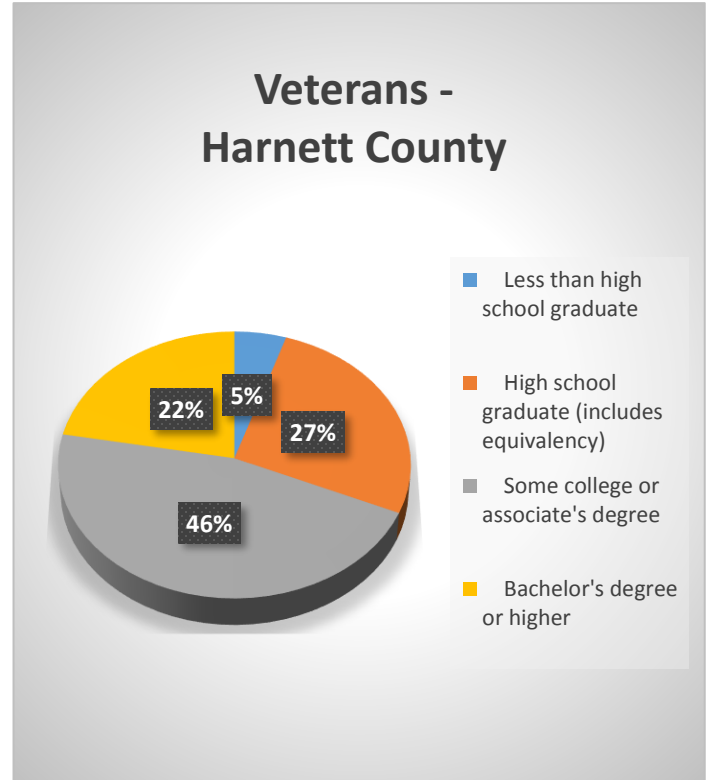
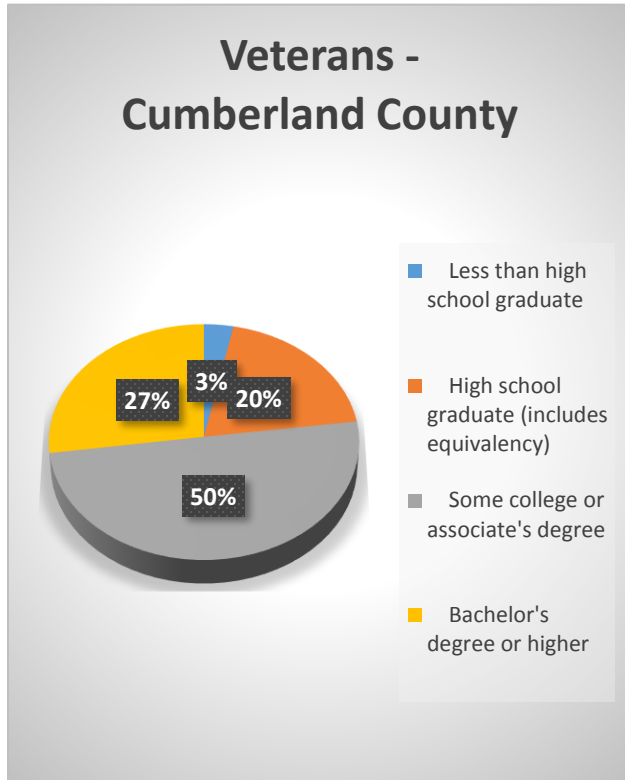


One key asset is the disproportionate presence of a skilled, disciplined set of military veterans. Among this veteran population within the county, 77% have some college or associate degrees and higher, and 27% have a bachelor’s degree or higher—representing significantly higher educational attainment than the average non-veteran population (Table 14).

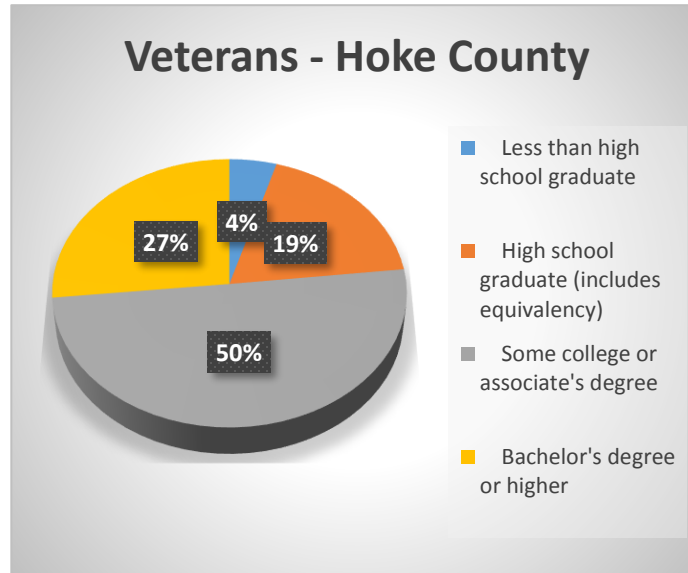
Source: U.S. Census Bureau, 2014 American Community Survey

Economic data also confirms the presence of assets that could help fuel future growth, despite the prospects of continued reductions in military presence. On an annual basis, an average of 6,000 service personnel normally separate from the US Army via Fort Bragg. It is estimated that as many as one-third remain in the area. Surveys indicate that even more transitioning veterans (55%) would remain in the region if suitable employment were available. (HAS Report, 2016). This large labor pool of skilled workers could be an attractive proposition to other private- and public-sector employers.

Figures 14a, 14b, 14c: Veterans Educational Attainment



Source: U.S. Census Bureau, 2014 American Community Survey




*Source: U.S. Census Bureau, 2014 American Community Survey*

Education represents another important regional asset, including three community colleges: Fayetteville Technical Community College, Central Carolina Community College and a satellite location of Sandhills Community College. Each community college is known to be highly responsive to specialized training needs of regional employers. The region is also home to three well-regarded colleges: Fayetteville State University, Campbell University, and Methodist University. The institutions offer excellent preparation for such high potential occupations as healthcare/healthcare administration, business management, accounting, engineering, information technology, cyber security, and teaching. [See also Workforce Development Strategy]

While the area also offers many quality of life benefits, it should be noted that one particularly attractive attribute is relatively high housing affordability, with close to 80% of the area's housing for sale being affordable for a family making the median income for the region (Table 9).

**Table 9: Real Estate Conditions**

Real Estate Conditions			
Housing Opportunity Index (%)			
	Q3:16	Q2:16	Q3:15
Asheville MSA	59.3	60.0	62.9
Charlotte MSA	69.7	70.0	69.5
Durham MSA	72.4	73.7	70.2
 Fayetteville MSA	77.4	79.5	80.5
Greensboro-High Pont MSA	77.6	76.7	74.1
Raleigh-Cary MSA	67.2	69.0	72.5
Winston-Salem MSA	83.2	79.8	80.8

Source: Federal Reserve Bank of Richmond

### Prospective Impacts on Public Education

Military demographic information indicates that 48% of active duty Army personnel have dependent children. Among those Army families with children, the average number of dependent children is 2.1, with 34% being pre-school (0-4 years old), 33% being elementary school (5-10 years old), 13% middle school (11-13 years old), and 16% high school (14 - 18 years old) (2014 Demographics: Profile of the Military Community, U.S. Dept. of Defense).

Based on this recent demographic data, a reduction of 3,000 active duty military personnel would be expected to lead to a reduction of approximately 3,000 school age children, in the following distribution:

- Pre-School: 1,019
- Elementary: 999
- Middle School: 380
- High School: 473
- **Total: 2,871**

From a FY 2012 peak of 16,000 military-connected students, representing 31% of Cumberland County Schools students, the military-connected proportion has declined by almost 4,000 students, now accounting for approximately 24% of the total.

This level of prospective future impact is comparable to the reductions in the number of military-connected students that have, in fact, already taken place over the past several years. The Department of Defense provides data on military-connected students by school district for districts with high proportions of such students (Figures 15a, 15b, 15). This data indicates that for Cumberland County Schools there was a reduction of 3,700 military-connected students

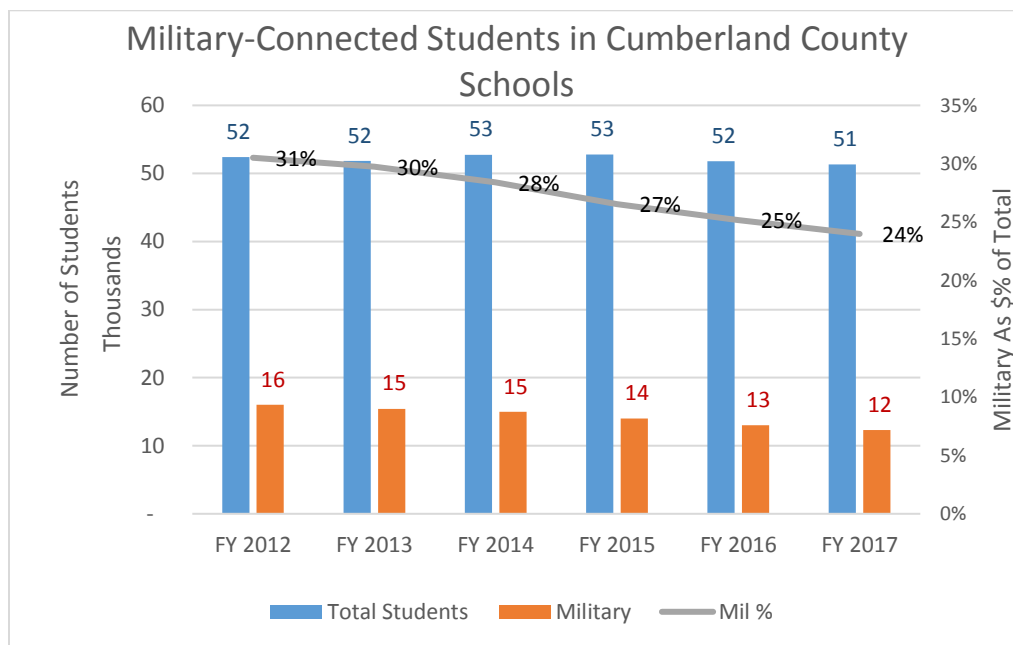
from FY 2012 to FY 2017. It is interesting to note that the decline in military-connected students in Cumberland County has been almost completely offset by an increase in students who are not dependents of military personnel. This could be an indication that many of the families with



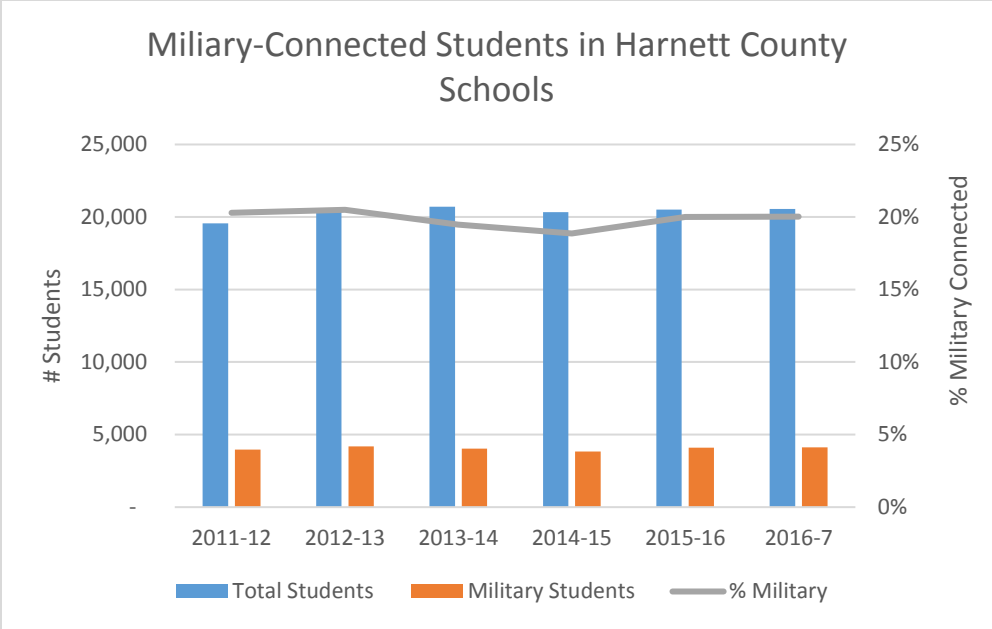
school age children who are transitioning away from the military may be choosing to stay in the area in part due to the area school systems.

Trends in Harnett and Hoke Counties have been somewhat different. Harnett County enrollment of military-connected students has been relatively stable at approximately 20% of the total. Declines in certain areas have been offset by increased military housing in western Harnett County. While data available for Hoke County is more limited, the data that is available shows that Hoke County enrollment of military-connected students increased from 22% of total students in 2011-12 to 27% in 2016-17. Officials attribute most of this growth to increased numbers of military-connected families choosing to live in Hoke County because of property tax advantages.

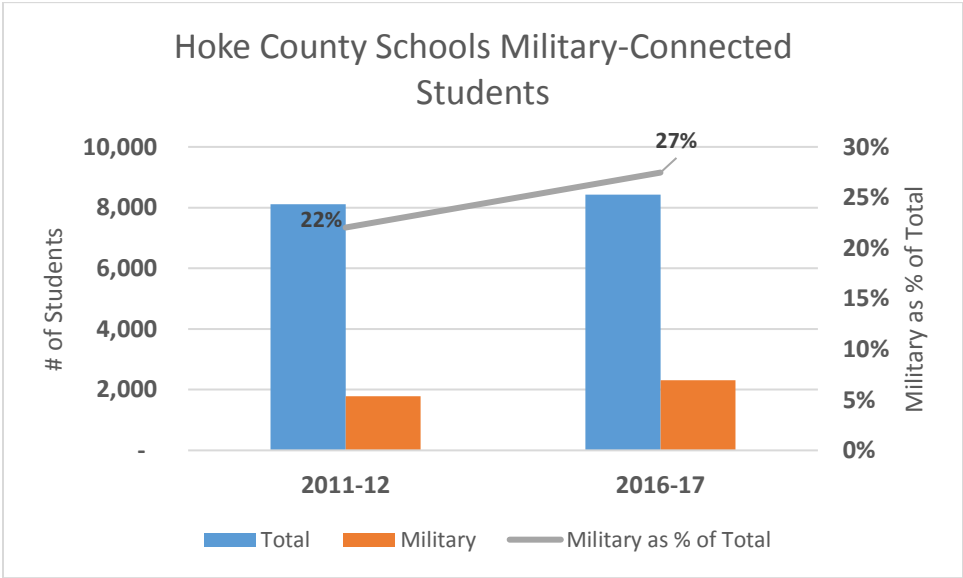
**Figures 15a, 15b, 15c: Military-Connected Students**



Source: Department of Defense

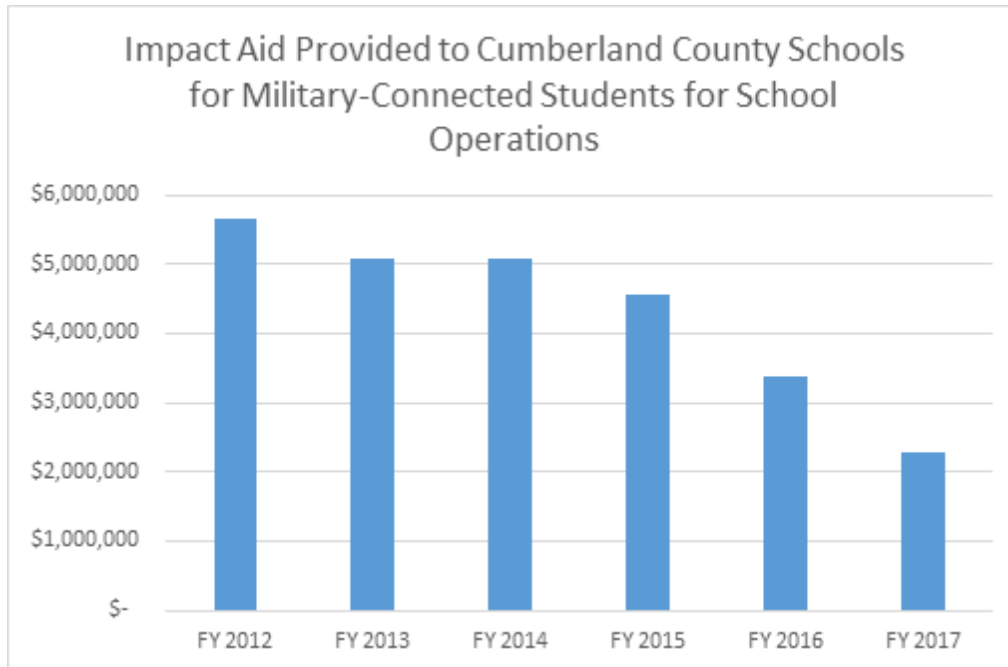


Source: Harnett County Schools



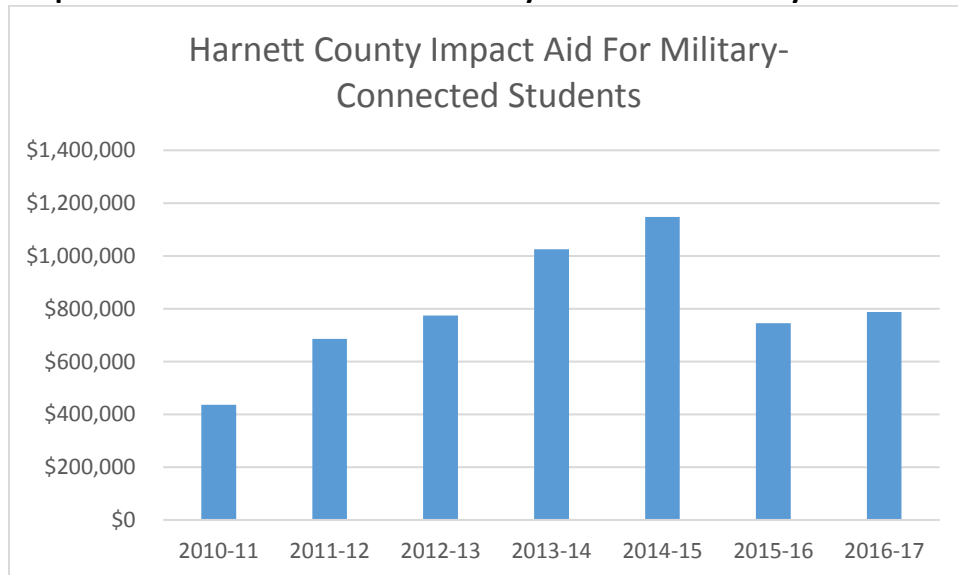
Source: Department of Defense, Hoke County Schools

**Figure 16a: Impact Aid Provided to Cumberland County Schools for Military-Connected Students for School Operations**



Source: Department of Defense

**Figure 16b: Impact Aid Provided to Harnett County Schools for Military Connected Students**



Source: Harnett County Schools

Associated with declines in military-connected students have been declines in Impact Aid grants provided by the federal government to local education agencies (i.e. school districts) that are located near military installations. While there are several impact aid-related grants available, Figure 16a shows the decline of \$3.4 million that has taken place for Impact Aid supporting general operations for Cumberland County Schools since FY 2012. Aid to Harnett County

Schools increased between 2013-15 with the construction of new military housing in western Harnett County, but that aid has now begun to decline as well (see Figure 16b). Harnett County officials indicate that because there was not previously sufficient capacity to accommodate the increased enrollment in western Harnett County, this growth has placed a financial burden on the school district, as the aid provided falls far short of that needed to fund the new schools required.

### Housing Impacts

Estimates of the potential impacts on the local housing market were derived by first examining Census Bureau data to determine current residential locations of active duty military-affiliated personnel in the target region. Guidance received from the regional association of realtors indicated that of those living off post, approximately half rented and half were purchasing their homes. If these trends remained constant with troop reductions, a cut of 3,000 troops would be felt most in Cumberland County, which could experience an increase in overall vacant housing of as much as 9.2%, increasing vacancy rates in the county to as much as 16.2% from a 2014 level of 12.9% (Table 10).

**Table 10: Increase in Vacant Housing**

2014	Cumberland County	Harnett County	Hoke County	Total
<b>Population</b>	325,814	126,865	51,644	504,323
<b>Population 16 and over</b>	247,401	91,521	36,653	375,575
<b>Armed forces</b>	26,994	4,454	3,130	34,578
<b>Owner-occupied units</b>	65,642	27,488	11,010	104,140
<b>Renter-occupied units</b>	56,646	14,113	5,524	76,283
<b>Vacant housing units</b>	18,122	6,521	2,613	27,256
<b>Owner vacancy rate</b>	3.0%	2.5%	3.8%	
<b>Rental vacancy rate</b>	8.8%	8.7%	9.2%	
<b>Overall vacancy rate</b>	12.9%	13.9%	13.6%	
<b>Median housing value (\$)</b>	\$128,600	\$133,400	\$143,500	
<b>Units occupied by armed forces</b>	26,994	4,454	3,130	34,578
<b>Estimated armed forces owner-occupied</b>	13,497	2,227	1,565	17,289
<b>Estimated armed forces renter-occupied</b>	13,497	2,227	1,565	17,289

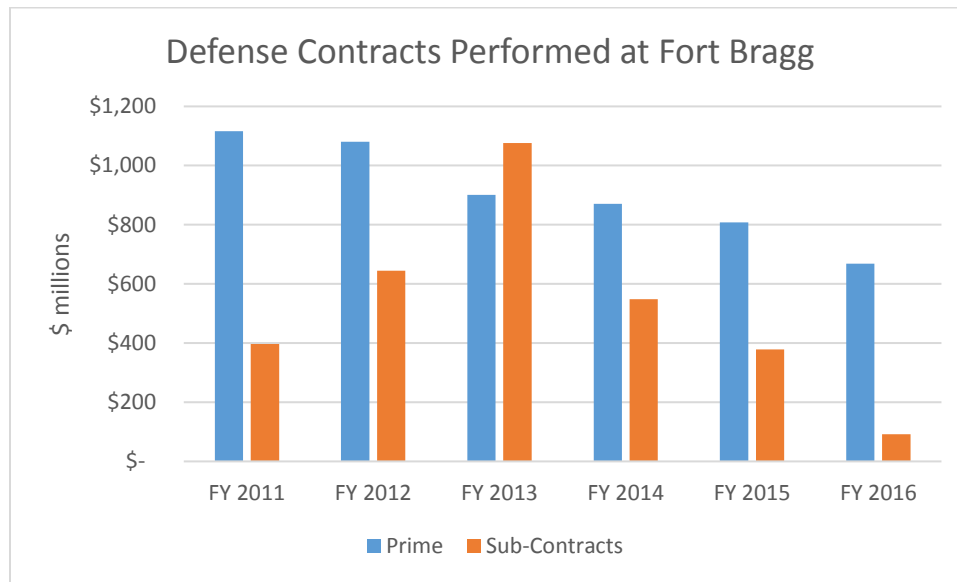
<b>3,000 Armed Forces Reduction:</b>				
<b>Housing units lost</b>	1,664	275	193	2,131
<b>% Increase in vacant housing</b>	9.2%	4.2%	7.4%	7.8%
<b>2,000 Armed Forces Reduction:</b>				
<b>Housing units lost</b>	1,109	183	129	1,421
<b>% Increase in vacant housing</b>	6.1%	2.8%	4.9%	5.2%
<b>1,000 Armed Forces Reduction:</b>				
<b>Housing units lost</b>	555	92	64	710
<b>% Increase in vacant housing</b>	3.1%	1.4%	2.5%	2.6%

Source: U.S. Census Bureau

### Defense Contracting Sector

Consistent with the declines in troop strength that have occurred at Fort Bragg over the 2012-2016 period (Table 3), there have also been declines in defense contracting activity.

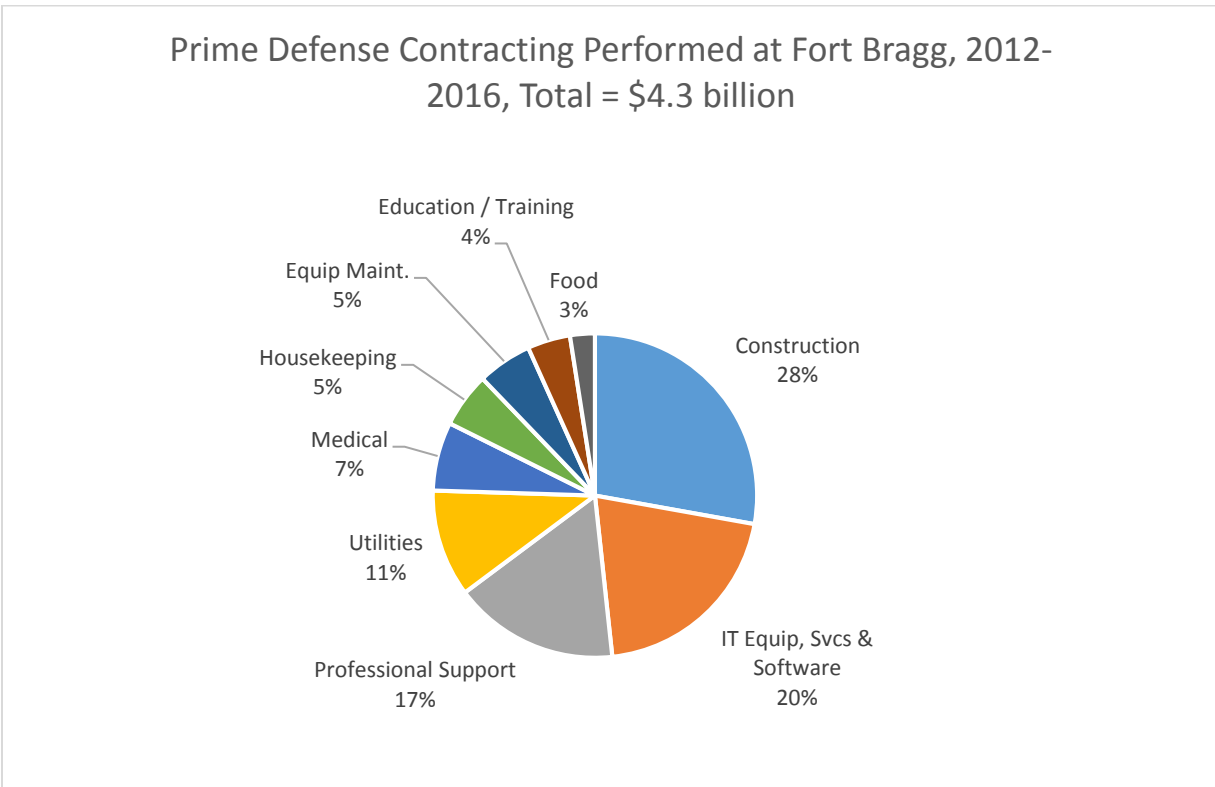
Prime contracting activity performed at Fort Bragg in FY 2016 totaled \$668 million, down from over \$1 billion in the 2011-2012 period. Similarly, subcontracting (which includes subcontracts performed at Fort Bragg where the primary contract may have been controlled from a different location) in FY 2016 had declined to \$92 million, from a peak of over \$1 billion in FY 2013. (Figure17)

**Figure 17: Defense Contracts Performed at Fort Bragg**

Source: [usaspending.gov](http://usaspending.gov)

Analysis indicates a potential opportunity to increase the proportion of defense contracting activity going to companies with North Carolina operations. Of the \$4.3 billion in prime contracts performed at Fort Bragg over the 2012-2016 period, approximately 15% were won by North Carolina-based companies or North Carolina subsidiaries. This compares to approximately 70% of prime defense contracts at the Army's Redstone Arsenal installation being performed in the nearby Huntsville, Alabama area. While 43% of the \$2.7 billion in sub-contracts performed at Fort Bragg over the 2012-16 period were won by North Carolina-based operations, 97% of these North Carolina sub-contracts were construction-related, and thus not sustainable over an extended period. Figure 18 provides an initial indication of the range of contracting opportunities that have direct links to Fort Bragg activities.

**Figure 18: Prime Defense Contracting Performed at Fort Bragg, 2012-2016, Total=\$4.3 billion**



Source: [usaspending.gov](http://usaspending.gov)

## Troop Reduction Scenarios

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As noted above, the number of active duty military personnel assigned to Fort Bragg has already declined by approximately 5,000 over the period FY 2012 to FY 2016 (Table 3). These declines were essentially “under the radar,” with no public announcements or descriptions. Since 2015, the only specific reductions that have been announced have been the closing of the 440<sup>th</sup> Airlift Wing in 2016, representing a reduction of over 1,000 personnel from peak levels, which was offset by an increase in another command. A reduction of another 840 Army soldiers was said to be expected by 2018, but no confirmed details were made public.

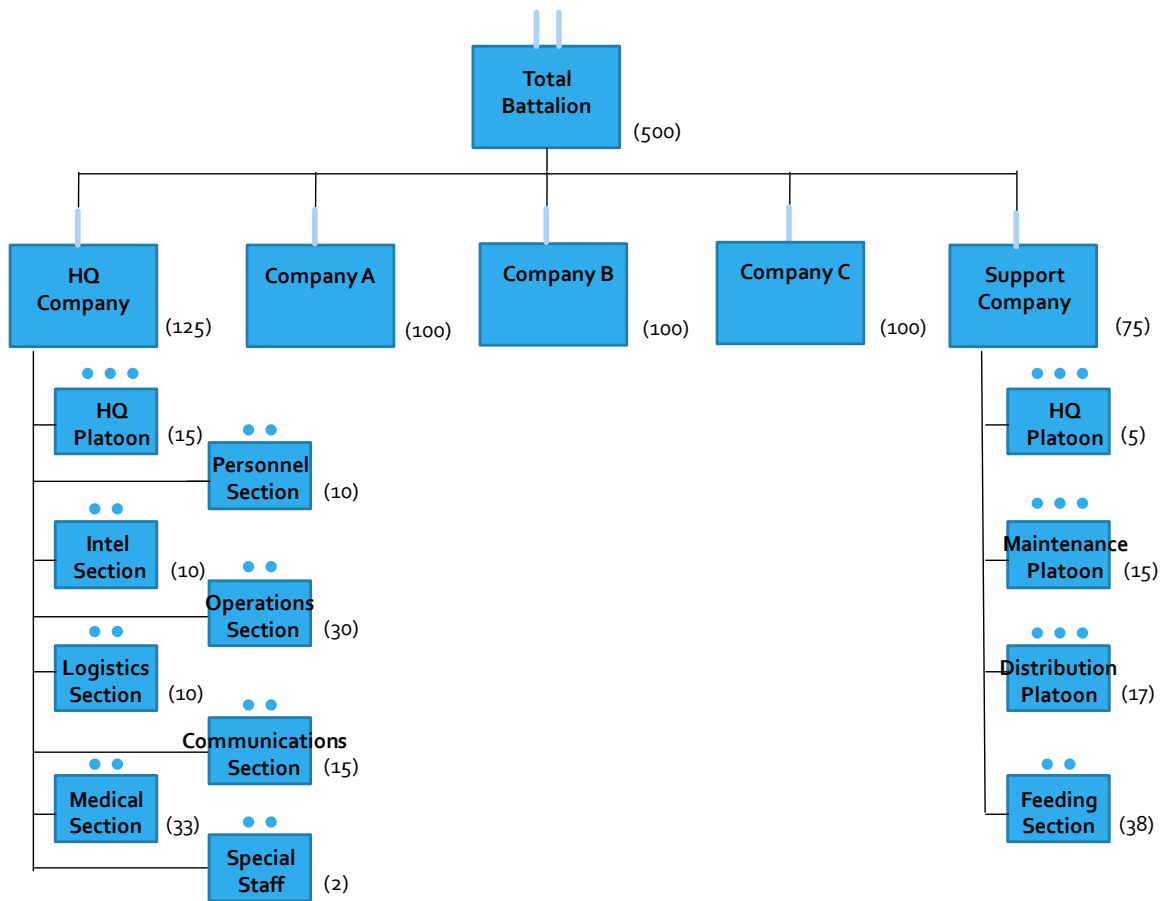
The study team was asked to assess potential impacts associated with future troop reduction levels of 1,000, 2,000, and 3,000 personnel. Two different approaches were used to develop these illustrative projections of potential future outcomes.

- **Scenario 1** is based on the 2013-2015 Armed Forces annual survey of consumer expenditures by military personnel and their families. This survey was used to determine the typical disposable income and expenditure patterns for 3,000, 2,000, and 1,000 soldiers. It assumed that (1) the drawdown of troops will continue to reflect the existing ratio of civilian personnel to the active duty soldiers; (2) other than the local installation contracts, the number and value of Department of Defense contracts are uncorrelated to the size of troops; and (3) the active duty soldiers who are separated from Fort Bragg do not stay in the area.
- **Scenario 2** develops average salary of military personnel who may be reduced based on the assumption that future reductions will take place primarily at the battalion level, weighted more heavily to more junior level personnel than would be assumed in Scenario 1. This second approach was also recommended by a military liaison affiliated with the Department of Defense Office of Economic Adjustment.

The personnel ranks and classification comprising a typical Army battalion (Figure 19) were used to compute personnel payroll. Adjustments were made in payroll for relevant federal taxes and saving rates to derive the disposable incomes for different personnel levels. The average disposable income was used to compute total disposable income for 3,000, 2,000, and 1,000 troops. It is assumed that separation of active duty soldiers will result in at least 10% reduction in civilian jobs. On consultant's recommendation, it was stipulated that one-quarter of civilian jobs will be in each of the following salary levels: GS 11, 12, 13, and 14. Relevant federal and state taxes and average saving rates were deducted to obtain total civilian disposable income.



Figure 19: Generic 500-Soldier U.S. Army Battalion (for planning purposes)



Source: Planning Document of the U.S. Army

## Potential Economic Impact of Further Troop Reductions

The IMPLAN econometric modelling software is used in this study to estimate the economic impact of troop reductions and increases at Fort Bragg. The IMPLAN Pro software is widely used by academic institutions and federal, state, and local governmental agencies. The software uses input-output tables to track how dollars injected into a sector are spent and then re-spent in other sectors of the economy, creating ripple effects in the entire region.

Under Scenario 1, the IMPLAN results indicate (Table 11):

- A reduction of 3,000 troops could result in the loss of approximately 5,000 full-time and part-time jobs in the three-county region (including the loss of troops), approximately \$618 million in sales, \$264 million in wages and salaries, and \$12 million in tax revenues.
- With a 2,000 troop reduction, the three-county region will lose 3,238 full-time and part-time jobs, approximately \$416 million in sales, \$176 million in wages and salaries, and about \$8 million in taxes.
- With a 1,000 soldier draw down, the three-county region will lose 1,618 full-time and part-time jobs, about \$228 million in sales, approximately \$88 million in wages and salaries, and about \$4 million in state and local taxes.

**Each 100 active-duty military jobs in the region support as many as 60 other jobs (including civilians at Fort Bragg). Each active-duty military job can support an average of as much as \$90,000 in labor income, representing soldier income plus income for a soldier's share of supported jobs.**

**Table 11: Fort Bragg Troop Reduction Scenario 1: Economic Impact**

<b>3,000 Troop Reduction</b>				
Region	Employment	Labor Income	Output	State and Local Taxes
<b>Cumberland County</b>	-4,847	(\$264,458,573)	(\$617,522,885)	(\$12,087,902)
<b>Harnett County</b>	-6.5	(\$169,138)	(\$244,877)	(\$23,279)
<b>Hoke County</b>	-2.5	(\$35,895)	(\$176,356)	(\$5,167)
<b>Total Impact</b>	<b>-4,856.0</b>	<b>(\$264,663,606)</b>	<b>(\$617,944,118)</b>	<b>(\$12,116,348)</b>
<b>2,000 Troop Reduction</b>				
Region	Employment	Labor Income	Output	State and Local Taxes
<b>Cumberland County</b>	-3,231.9	(\$176,305,715)	(\$411,681,907)	(\$8,058,259)
<b>Harnett County</b>	-4.3	(\$112,759)	(\$4,429,918)	(\$15,512)

<b>Hoke County</b>	-1.6	(\$23,932)	(\$117,836)	(\$3,444)
<b>Total Economic Impact</b>	<b>-3,237.80</b>	<b>(\$176,442,406)</b>	<b>(\$416,229,661)</b>	<b>(\$8,077,215)</b>
<b>1,000 Troop Reduction</b>				
<b>Region</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Output</b>	<b>State and Local Taxes</b>
<b>Cumberland County</b>	-1,615	(\$88,152,857)	(\$227,884,333)	(\$3,710,243)
<b>Harnett County</b>	-2.2	(\$56,379)	(\$87,257)	(\$7,759)
<b>Hoke County</b>	-0.8	(\$11,966)	(\$23,916)	(\$1,723)
<b>Total Impact</b>	<b>-1.618</b>	<b>(\$88,221,202)</b>	<b>(\$227,995,506)</b>	<b>(\$3,719,725)</b>

Source: IMPLAN model and authors' calculations

As expected, the residents of Cumberland County will bear the brunt of the adverse economic impact of reduction in troops. For example, for a loss of 3,000 soldiers, over 99% of the region's reductions in jobs, wages, and sales would occur in Cumberland County.

The top ten industries impacted given the Scenario 1 approach are shown in Table 12. Other than the federal government, the major sectors that will lose jobs are limited-service restaurants, full-service restaurants, real estate sector, office of physicians, general merchandise stores, nursing and community care facilities, food and drinking places, food and beverages stores, and personal care services. The real estate sector will lose almost 49 jobs and \$8 million in sales. The offices of physicians will see a reduction of 37 jobs and a loss of about \$5 million in sales. Offices of physicians and nursing facilities together will also experience about \$4 million reduction in wages and salaries. Top ten losers in terms of wages and salaries are also shown in the table.

**Table 12: Top Ten Industries/Sectors**

<b>Cumberland County</b>		
<b>Top Ten Sectors by Employment</b>		<b>Total Employment</b>
<b>536</b>	* Employment and payroll of federal govt., military	-4,044.0
<b>502</b>	Limited-service restaurants	-62.7
<b>501</b>	Full-service restaurants	-57.9
<b>440</b>	Real estate	-48.7
<b>475</b>	Offices of physicians	-36.8
<b>405</b>	Retail - General merchandise stores	-35.7
<b>483</b>	Nursing and community care facilities	-30.7
<b>503</b>	All other food and drinking places	-26.8
<b>400</b>	Retail - Food and beverage stores	-24.3
<b>509</b>	Personal care services	-24.2

<b>Top Ten Sectors by Labor Income</b>		<b>Total Labor Income</b>
<b>536</b>	* Employment and payroll of federal govt., military	-258,262,072.4
<b>475</b>	Offices of physicians	-3,089,430.8
<b>501</b>	Full-service restaurants	-1,085,560.1
<b>434</b>	Nondepository credit intermediation and related activities	-1,061,034.6
<b>502</b>	Limited-service restaurants	-940,052.9
<b>483</b>	Nursing and community care facilities	-919,302.4
<b>504</b>	Automotive repair and maintenance, except car washes	-914,022.4
<b>405</b>	Retail - General merchandise stores	-907,154.5
<b>396</b>	Retail - Motor vehicle and parts dealers	-855,422.3
<b>395</b>	Wholesale trade	-811,931.5
<b>Top Ten Sectors by Output</b>		<b>Total Output</b>
<b>536</b>	* Employment and payroll of federal govt., military	-495,893,093.0
<b>441</b>	Owner-occupied dwellings	-17,101,382.0
<b>440</b>	Real estate	-8,392,286.1
<b>475</b>	Offices of physicians	-4,911,116.0
<b>502</b>	Limited-service restaurants	-4,368,363.2
<b>428</b>	Wireless telecommunications carriers (except satellite)	-2,746,040.8
<b>395</b>	Wholesale trade	-2,725,459.5
<b>501</b>	Full-service restaurants	-2,324,109.7
<b>405</b>	Retail - General merchandise stores	-2,182,999.4
<b>433</b>	Monetary authorities and depository credit intermediation	-2,004,096.6

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The economic impact of potential reduction of troops in Scenario 2 is similar to Scenario 1, although smaller. Scenario 2 impacts include (Table 13):

- With a 3,000 troop reduction, the region will lose approximately 3,630 jobs (including the loss of troops), \$450 million in sales, \$107 million in wages and salaries, and \$5 million in state and local tax revenues.
- With a 2,000 troop reduction, the region will lose 2,395 jobs, \$291.3 million in sales, \$63.7 million in wages and salaries, and about \$3 million in state and local taxes.
- With 1,000 troop reduction, the region will lose approximately 1,209 jobs, \$105 million in sales, \$35.8 million in wages and salaries, and about \$1.7 million in state and local taxes.

Table 13: Fort Bragg Troops Reduction Scenario 2 Economic Impact

3,000 Troop Reduction				
Region	Employment	Labor Income	Output	State and Local Taxes
<b>Cumberland County</b>	-3,627	(\$107,589,895)	(\$450,204,241)	(\$5,147,004)
<b>Harnett County</b>	-2.6	(\$68,811)	(\$262,356)	(\$9,479)
<b>Hoke County</b>	-1	(\$14,605)	(\$71,900)	(\$2,102)
<b>Total Impact</b>	<b>-3,630.6</b>	<b>(\$107,673,311)</b>	<b>(\$450,538,497)</b>	<b>(\$5,158,585)</b>
2,000 Troop Reduction				
Region	Employment	Labor Income	Output	State and Local Taxes
<b>Cumberland County</b>	-2,393	(\$63,659,523)	(\$291,115,618)	(\$3,026,483)
<b>Harnett County</b>	-1.6	(\$40,714)	(\$155,232)	(\$5,543)
<b>Hoke County</b>	-0.6	(\$8,641)	(\$45,548)	(\$1,243)
<b>Total Economic Impact</b>	<b>-2,395.20</b>	<b>(\$63,708,878)</b>	<b>(\$291,316,398)</b>	<b>(\$3,033,269)</b>
1,000 Troop Reduction				
Region	Employment	Labor Income	Output	State and Local Taxes
<b>Cumberland County</b>	-1,208	(\$35,783,426)	(\$105,041,297))	(\$1,712,323)
<b>Harnett County</b>	-0.9	(\$22,886)	(\$87,257)	(\$3,151)
<b>Hoke County</b>	-0.3	(\$4,857)	(\$29,916)	(\$699)
<b>Total Economic Impact</b>	<b>-1,209.20</b>	<b>(\$35,811,169)</b>	<b>(\$105,158,470)</b>	<b>(\$1,716,173)</b>
<b>Multipliers</b>	Employment	Output	Labor Income	
	Multiplier	Multiplier	Multiplier	
<b>3,000 Troops</b>	1.1	1.08	1.1	

Source: IMPLAN model and authors' calculations

The impact of a reduction of 3,000 soldiers on the top ten sectors by labor income, output, and employment are shown in Table 14. The major industries that will be impacted by the drawdown of 3,000, 2,000, and 1,000 troops will be federal government, limited-service restaurants, real estate, retail, and offices of physicians, nursing, and community care facilities.

**Table 14: Top Ten Impacted Sectors by Labor Income**

Description	Labor Income
* Employment and payroll of federal govt., military	-75,383,357.5
* Employment and payroll of federal govt., non-military	-21,599,222.9
Offices of physicians	-1,160,143.1
Full-service restaurants	-407,649.6
Nondepository credit intermediation and related activities	-398,439.7
Limited-service restaurants	-353,008.7
Nursing and community care facilities	-345,216.5
Automotive repair and maintenance, except car washes	-343,233.7
Retail - General merchandise stores	-340,654.7
Retail - Motor vehicle and parts dealers	-321,228.2
Top Ten by Output	Total Output
* Employment and payroll of federal govt., military	-367,873,213.8
* Employment and payroll of federal govt., non-military	-46,261,371.7
Owner-occupied dwellings	-6,421,911.4
Real estate	-3,151,471.5
Offices of physicians	-1,844,222.4
Limited-service restaurants	-1,640,407.9
Wireless telecommunications carriers (except satellite)	-1,031,193.3
Wholesale trade	-1,023,464.6
Full-service restaurants	-872,749.7
Retail - General merchandise stores	-819,760.0
Top Ten by Employment	Total Employment
* Employment and payroll of federal govt., military	-3,000.0
* Employment and payroll of federal govt., non-military	-300.0
Limited-service restaurants	-23.5
Full-service restaurants	-21.8
Real estate	-18.3
Offices of physicians	-13.8
Retail - General merchandise stores	-13.4
Nursing and community care facilities	-11.5
All other food and drinking places	-10.1
Retail - Food and beverage stores	-9.1

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### Economic Impact by Other Major Industries

The impacts on specific industries in Scenario 1 and 2 are further detailed in Table 15. The estimates are based on the 2013-2015 Annual Expenditure of Armed Forces Survey of

disposable income of most of the households included in the survey. In Scenario 1, the actual spending on each item was multiplied by the number of soldiers to obtain the total spending. Scenario 2 expenditures are based on the total disposable income of a generic battalion. The total spending was calculated by multiplying average spending of all consuming units in the survey by the total disposable income of 3,000, 2000, and 1,000 soldiers.

The potential reduction of 3,000 soldiers under Scenarios 1 and 2 will impact other major industries as follows: the food industry will lose sales between \$24 and \$9.5 million; restaurants between \$8.7 and \$3 million; alcoholic beverages between \$1.5 million and \$867,796; furniture industry between \$1.6 million and \$593,546; new cars and trucks dealers between \$5.7 and \$2.8 million; used cars and trucks between \$7.5 and \$2.5 million; entertainment industry between \$9 and \$3.7 million; personal care products and services between \$2 million and \$909,570; and major appliances between \$782,910 and \$336,397.

**Table 15: Impact by Major Industries**

	Scenario 1			Scenario 2		
	Total 3,000 Troops	Total 2,000 Troops	Total 1,000 Troops	Total 3,000 Troops	Total 2,000 Troops	Total 1,000 Troops
<b>Food</b>	\$24,459,540	\$16,306,360	\$6,879,380	\$9,571,565	\$6,381,043	\$3,190,422
<b>Meals at restaurants, carry outs and other*</b>	\$8,734,590	\$5,833,060	\$2,338,060	\$3,374,829	\$2,249,879	\$1,124,591
<b>Alcoholic beverages</b>	\$1,542,450	\$1,028,300	\$383,890	\$867,796	\$445,196	\$222,538
<b>Housing</b>	\$12,828,270	\$8,552,180	4,376,090	\$4,005,159	\$2,698,099	\$1,734,689
<b>Mortgage interest and charges</b>	\$825,230	\$550,620	\$275,310	\$520,470	\$346,970	\$173,442
<b>Household furnishings and equipment</b>	\$5,523,980	\$3,669,320	\$1,132,100	\$2,321,116	\$1,546,517	\$773,696
<b>Furniture</b>	\$1,615,890	\$1,077,260	\$362,450	\$593,546	\$394,495	\$197,859
<b>New cars and trucks</b>	\$5,784,480	\$3,856,320	\$896,600	\$2,385,796	\$1,589,581	\$795,240
<b>Used cars and Trucks</b>	\$7,511,040	\$5,007,360	\$2,225,520	\$2,501,078	\$1,666,390	\$833,666
<b>Major appliances</b>	\$782,910	\$521,940	\$137,710	\$336,397	\$224,264	\$112,128
<b>Gasoline and motor oil</b>	\$8,657,430	\$5,771,620	\$2,405,030	\$3,104,394	\$2,068,360	\$1,120,890
<b>Vehicle insurance*</b>	\$3,050,970	\$2,033,980	\$884,730	\$1,504,379	\$1,002,321	\$501,444
<b>Leased and rental vehicles</b>	\$2,092,800	\$1,395,200	\$539,400	\$400,200	\$266,641	\$133,396
<b>Health insurance</b>	\$7,167,540	\$4,778,360	\$1,613,550	\$3,770,259	\$2,512,005	\$1,265,713
<b>Hospital room and services</b>	\$472,740	\$311,160	\$91,560	\$183,579	\$122,313	\$61,191

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<b>Entertainment</b>	\$9,073,830	\$6,049,220	\$2,054,230	\$3,780,245	\$2,518,659	\$1,260,042
<b>Personal care products and services</b>	\$2,089,680	\$1,393,120	\$557,020	\$909,670	\$606,084	\$303,212
<b>College tuition</b>	\$754,410	\$502,940	\$25,790	\$1,107,701	\$736,518	\$368,245
<b>Elementary and high school tuition</b>	\$519,150	\$346,100	\$86,610	\$216,903	\$144,600	\$72,298
<b>Legal fees</b>	\$433,590	\$289,060	\$121,100	\$183,593	\$122,322	\$61,395
<b>Accounting fees</b>	\$145,110	\$96,740	\$33,440	\$94,565	\$63,605	\$31,820
<b>Cash contributions to charities and other organizations</b>	\$268,800	\$179,200	\$89,600	\$300,833	\$200,436	\$100,274
<b>Cash contributions to church, religious organizations</b>	\$1,901,640	\$1,267,760	\$89,600	\$1,024,722	\$682,650	\$341,518
<b>Cash contribution to educational institutions</b>	\$129,180	\$86,120	\$63,600	\$60,578	\$40,361	\$20,192

Source: 2013-2015 Annual Expenditure of Armed Forces Survey and authors' calculations.



## Target Sectors

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The purpose of this Target Industry Validation is to review, identify, update, and validate promising industry sectors for the Fayetteville region including Cumberland, Harnett, and Hoke Counties. By recruiting new companies to the region, the potentially negative economic impacts of troop reductions can be mitigated. Beyond the scope of troop reductions or increases, the Fayetteville region should seek to diversify the economy. Objective II B in Fayetteville’s FY2017-18 strategic plan is “to implement strategies that diversify the city’s tax base and increase the industrial and commercial tax bases.”

Before implementing target marketing awareness and business attraction, retention, and expansion strategies, it is critically important that proper analysis and research be done. Matching the strengths and assets of the Fayetteville region with the needs of growing and expanding companies is vital to the success of targeting. For this study, we looked at area advantages the region can build upon to expand their economic base. We also analyzed the target sectors of each county to ensure our recommendations do not conflict with local strategies.

We factored in economic and demographic trends, industry growth trends, and existing industries in the region. In addition, we evaluated industry and company types which would find the Fayetteville region attractive. Fayetteville possesses many assets and strengths, including infrastructure, location, workforce, and military resources. We also want to recognize the natural resources, recreational opportunities, and overall quality of life. Our objective is to recommend industries that are the most feasible and the most desirable for the region.

Based on our research and analysis, we recommend the following target industry sectors.

- Logistics and Warehousing
- Defense and Security
- Advanced Manufacturing
- Business Services

### Recommended Targets

#### Logistics and Warehousing

Fayetteville is in the perfect location to take advantage of the opportunities in Logistics and Warehousing. The existing logistics and distribution industry in the region is flourishing for good reason. The transportation assets of the region are evident – with ready access to interstates, rail, and airports. Fayetteville’s location is also in the center of the Eastern seaboard with access to a large population. Additionally, Fayetteville and the surrounding region have a skilled workforce for this cluster, as evidenced from the existing companies. The industry cluster is broad, including



freight forwarding, warehousing, wholesaling, e-commerce, and supply chain planning segments.

### Defense and Security

The Fayetteville region can build upon the Defense and Security Cluster existing in the region, with a focus on traditional segments, as well as developing technologies such as unmanned aerial vehicles, robotics, and biometrics. The Fayetteville region has a long military history and represents the largest Army base in the world. Even if government spending on defense remains flat, commercial applications will continue their growth. While the Fayetteville region doesn't want to be dependent on the military for industry growth, the region's association with the military is known worldwide. That reputation will help open conversations with leads and prospects. The military presence at Fort Bragg and the large pool of skilled workers in the area will encourage growing and expanding companies to consider the area to access the talent pool. The educational assets in the region also support this industry well. The defense and security industry cluster can include search and navigation instruments, aerospace, communications equipment, wiring, cybersecurity, and other related areas.



There may be significant growth potential associated with increasing the share of defense contracts performed for Fort Bragg commands that are fulfilled by companies with significant local presence. As an example, almost two-thirds of contracts performed for commands based at Redstone Arsenal in Alabama are fulfilled by companies with a major presence in the near-by Huntsville, Alabama, metropolitan area. This contrasts with what appears to be less than 20% of Fort Bragg contracts being fulfilled by companies with local presence in the greater Fayetteville region. There may be opportunities to attract on a targeted basis companies fulfilling contracts from other states to locate major offices near Fort Bragg. There may also be opportunities to help existing small defense contractors or other businesses in the region grow with targeted assistance focused on commercializing military technology. The Department of Defense has initiatives currently underway to help drive military technology into non-military applications. Designing and manufacturing unmanned aerial vehicles for agricultural applications is one example.

### Advanced Manufacturing

The Fayetteville region’s economic landscape is diverse, but it has room to grow its manufacturing base. Both Cumberland and Harnett Counties have a lower percentage of manufacturing when compared to the state average. However, Hoke County has a comparatively large manufacturing base. There is opportunity to grow in several sub-segments in the region, including chemicals, electrical equipment, and automotive suppliers. Many of these segments have experienced healthy growth over the past few years and are forecasted to continue growing into the future. This cluster will benefit from the transportation network in the region as well as the available skilled workforce and education resources. This cluster will support the transportation, aviation, and defense industries in the area as well as production technology that serves many other industries.



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### Business Services

Business services, from banking and insurance to management consulting and software, will find a good home in the Fayetteville region. An educated workforce is available for office-based industries, augmented each year by exiting military personnel, military spouses, and graduating students. The Fayetteville region has room to grow in this industry and should take advantage of the opportunity of growth in business services. Many segments have experienced recent growth and will continue to grow and expand into the future, including data processing, search engines, credit card processing, loan administration, portfolio management, insurance claims adjusting, and payroll and bookkeeping services.



### Small Business and Entrepreneurial Opportunities

Table 16 shows the industries and sectors in Cumberland, Harnett, and Hoke Counties with excess demand that is not currently met by local suppliers. These sectors represent small business development and entrepreneurial opportunities, which are discussed in the strategies section of this report.

**Table 16: Sectors/Industries with Excess Demand in the Region**

Sectors/Industry with Excess Demand		
Cumberland County- Excess Demand Sectors/industry		
NAICS	Industry	Excess Demand
4452	Specialty Food Stores	\$118,871,795
445	Food and Beverages stores	\$106,600,864
443	Electronic and Appliances Stores	\$71,245,517

<b>447</b>	Gasoline Stations	\$29,067,044
<b>4412</b>	Other Motor Vehicles Dealers	\$19,179,338
<b>4453</b>	Beer, wine, and Liquor Stores	\$9,518,640
<b>4442</b>	Lawn & Garden Equipment Supply Stores	\$8,912,064
<b>4512</b>	Books, Periodicals, and Music Stores	\$7,305,590
<b>4483</b>	Jewelry, Luggage, and Leather Goods Stores	\$4,096,069
<b>7223</b>	Special Food Services	\$2,665,089
<b>7224</b>	Drinking Places-Alcoholic Beverages	\$941,440
<b>4533</b>	Used Merchandise stores	\$295,220

**Harnett County- Excess Demand Sectors/industry**

<b>NAICS</b>	<b>Industry</b>	<b>Excess Demand</b>
<b>452</b>	General Merchandise Stores	\$121,589,741
<b>4521</b>	Department Stores excluding leased Departments	\$92,357,060
<b>441</b>	Motor Vehicles and Parts Dealers	\$72,369,671
<b>4411</b>	Automobile Dealers	\$51,683,618
<b>448</b>	Clothing and Clothing Specialty Stores	\$47,849,557
<b>4452</b>	Specialty Food Stores	\$42,729,539
<b>443</b>	Electronic and Appliances Stores	\$40,612,988
<b>722</b>	Food Services and Drinking Places	\$36,245,968
<b>4481</b>	Clothing stores	\$33,244,535
<b>4529</b>	Other Merchandise Stores	\$29,232,681
<b>7221</b>	Full service restaurants	\$25,110,802
<b>453</b>	Miscellaneous Store Retailers	\$24,994,285
<b>451</b>	Sporting Goods, Hobby, Book and Music Stores	\$23,432,353
<b>4412</b>	Other Motor Vehicles Dealers	\$23,247,950
<b>454</b>	Non-stores Retailers	\$22,690,780
<b>4441</b>	Bldg Materials and Supply Dealers	\$20,164,871
<b>4539</b>	Other Miscellaneous Stores Retailers	\$19,939,839
<b>4541</b>	Electronic Shopping and Mail-order Houses	\$18,360,460
<b>4511</b>	Sporting Goods, Hobby, and Musical instrument Stores	\$18,320,132
<b>444</b>	Bldg Materials, Garden Equip and Supplies	\$15,994,448
<b>442</b>	Furniture and Home Furnishings	\$13,806,470
<b>4421</b>	Furniture stores	\$9,372,208
<b>4483</b>	Jewelry, Luggage, and Leather Goods Stores	\$8,926,985
<b>7222</b>	Limited service eating places	\$6,235,111
<b>4532</b>	Office supplies, Stationary, and Gifts Stores	\$6,062,522
<b>7224</b>	Drinking Places-Alcoholic Beverages	\$6,015,941
<b>4482</b>	Shoe Stores	\$5,678,037
<b>4512</b>	Books, Periodicals, and Music Stores	\$5,112,221
<b>4422</b>	Home Furnishings Stores	\$4,434,262
<b>4543</b>	Direct Selling Establishments	\$3,414,533
<b>4542</b>	Vending Machines Operators	\$915,787

**Hoke County- Excess Demand Sectors/industry**

<b>NAICS</b>	<b>Industry</b>	<b>Excess Demand</b>
441	Motor Vehicles and Parts Dealers	\$105,410,540
4411	Automobile Dealers	\$91,224,024
445	Food and beverages stores	\$53,004,844
4451	Grocery Stores	\$34,439,999
722	Food Services and Drinking Places	\$29,064,135
448	Clothing and Clothing Accessories Stores	\$22,359,196
443	Electronic and Appliances Stores	\$21,481,614
443	Electronic and Appliances stores	\$21,481,614
444	Bldg Materials, Garden Equip and Supplies	\$20,624,928
4441	Bldg Materials and Supply Dealers	\$19,022,043
4441	Bldg Materials and supply dealers	\$19,022,043
4452	Specialty Food Stores	\$17,638,583
446	Health and Personal care stores	\$15,804,471
4482	Shoe Stores	\$15,350,457
4481	Clothing stores	\$15,350,457
7222	Limited service eating places	\$13,905,689
4529	Other General Merchandise Stores	\$13,139,150
7221	Full service restaurants	\$12,238,585
453	Miscellaneous Store Retailers	\$10,839,340
451	Sporting Goods, Hobby, Book, and Music Stores	\$10,496,599
447	Gasoline Stations	\$10,496,599
442	Furniture and Home Furnishings	\$9,473,764
4412	Other Motor Vehicles Dealers	\$8,838,187
4511	Sporting Goods, Hobby, Musical instrument Stores	\$7,513,235
4539	Other Miscellaneous Stores Retailers	\$6,535,758
4413	Auto Parts, Accessories, and Tire Services	\$5,348,329
4421	Furniture stores	\$5,231,084
4483	Jewelry, Luggage, and Leather Goods Stores	\$5,006,311
4422	Home Furnishings Stores	\$4,242,680
4422	Home Furnishings Stores	\$4,242,680
4541	Electronic Shopping and Mail-order Houses	\$4,018,395
4512	Books, Periodicals, and Music Stores	\$3,014,563
4532	Office supplies, Stationary, and Gifts Stores	\$2,537,562
454	Non-stores Retailers	\$2,537,562
7224	Drinking Places Alcohol beverages	\$2,307,500
4543	Direct Selling Establishments	\$1,976,712
4442	Lawn and Garden Equipment and Supplies	\$1,602,985
4533	Used merchandise stores	\$1,380,510
4453	Beer, Wine, and Liquor stores	\$926,262
7223	Special Food Services	\$612,361
4531	Florists	\$385,510

Source: ESRI Reports

## Workforce Development Strategies

### Synopsis

The Fayetteville State University (FSU) team prepared an inventory of the skills and experiences of expected separating soldiers and impacted civilian workers and matched them with the labor force needs of the region. The bottom line result is positive - there does not seem to be a major disconnect between the numbers or abilities of separating soldiers and needs of the region. Where additional training is indicated, special arrangements can be made with the regional community colleges including Fayetteville Technical Community College (FTCC), Sandhills Community College (SCC), and Central Carolina Community College (CCCC) to provide much of the “gap” education, and/or perhaps with the area’s three universities as well. To those separating soldiers and civilians who aspire to start their own businesses, technical and business planning assistance can be provided by the FTCC, SCC, and CCCC Small Business Centers, the FSU Small Business and Technology Development Center (SBTDC), and Veteran Business Outreach Center (VBOC). Those who lose Fort Bragg base support contracts can be provided technical assistance through the FTCC-based Military Business Center (this might include contractors, suppliers, and service providers).

Longer term, the education, training, and workforce and economic development entities will need to work much more closely together to develop skills and talent pipelines for any emerging cluster industries and sector employers involved in any diversification strategy across the tri-county region. It is hoped that this plan will help guide civilian and military service providers and increase awareness of private and public sector employers regarding this talent pool for the tri-county region and larger state labor market.



### Detailed Workforce Development Implementation Planning Approach

Based on the results of the economic analyses of the three major impact counties, both current and future recommended scenarios, a set of implementable recommendations regarding inter-related and dependent workforce/talent and economic development and education issues are included in this overall assessment and proactive action plan. While the FSU team possessed expert knowledge of these realms, the in-depth analysis and recommended strategies that

follow include input from many other key Workforce/Economic Development (WD/ED) and education community/regional stakeholders/partners, including: two sister four-year institutions: Methodist University and Campbell University; FSU's SBTDC and VBOC; three regional community colleges (including their Small Business Centers and FTCC's Military Business Center); three local Workforce Development Boards; Chambers of Commerce; Fort Bragg's Transition Assistance Program (TAP f/d/b/a ACAP); Military and Veterans organizations; and local/area Economic Developers. Some of the region's largest private (and public including federal, state, and local government) employers were also consulted.

Once the predicted impact of personnel losses on the tri-county region's various economic and employment sectors/occupations was determined, recommendations were developed and proposed for each major cluster including health care, retail, hospitality, services, real estate, and defense (especially contractor and supporting businesses). Workforce skill sets and strategies to assist and transition military personnel were identified, but additionally, new and/or increased workforce pipelines may need to be developed, including via continuing education and entrepreneurial preparation. One overall goal is to keep businesses and skilled workers in the region as the experience and education represented by these workers could complement other tri-county employers as well. Another objective is to help with sector diversification efforts. To those two ends, the FSU team - working with key stakeholders/partners and collaborative steering committee/s - created a shorter-term roadmap for assistance to affected workers and businesses in this section; and longer-term recommendations to revitalize and further diversify the regional economy and labor market elsewhere in this report.

In general, the implementation plan regarding Workforce/Economic Development issues includes the following action items:

- ⊙ Providing coordinated outreach and assistance for all dislocated workers – both military and civilian – and small to medium-sized businesses impacted to retain talent, jobs, and employers in the region. Specifically healthcare, retail, hospitality, services, real estate, and defense.
- ⊙ Bridging any skills gaps jobseekers may face including IT/computer, work readiness, soft/interpersonal, and job finding/getting/holding skills training or retraining/up-skilling (credential stacking/latticing) so people can seek, gain, and keep new employment.
- ⊙ Fostering entrepreneurship so some displaced workers might become small business owners and existing small firms might continue to prosper.
- ⊙ Adjusting, aligning, and enhancing regional economic and workforce development strategies, including perhaps diversification, using this new and more accurate data.
- ⊙ Developing, attracting new, and/or expanding existing businesses across the tri-county area -- perhaps including cluster development.
- ⊙ Assisting the growth and expansion of new/existing industry cluster(s) that are less reliant on federal defense contracts.

- ⦿ Developing and launching career information education efforts around key growth industries and their major occupations throughout the regional k-20 and workforce/training system.

Other challenges that may need to be addressed and overcome include the fact already recognized and published by OEA that the effects of relatively small/er reductions such as those considered here can be masked until the cumulative effects ultimately become visible, necessitating early identification of and assistance to “at-risk” workers, companies, and sectors.

- ⦿ This entire effort might also include the need for a coordinated initiative to advertise the region as a good place for veterans to live, work, and play due to its military friendly communities.

### Specific Skill Set Analyses

For any active duty military and military civilians attached to Fort Bragg and involved in a reduction-in-force scenario, military occupational skills (MOS) needs to be addressed. This will ease the potential transition to civilian employment in the tri-county region. In this study we looked at the major and most prevalent occupational codes and skill sets, which were then compared to existing civilian occupations using conversion cross-walks or translators - namely O\*Net Online and CareerOneStop. Then these were compared with the Standard Occupational Classification (SOC) system from the U.S. Bureau of Labor Statistics for occupational matchmaking in key current regional and future growth sectors.

For purposes of this study, it has been determined that the five most common military occupational specializations for Fort Bragg’s active military personnel are: Infantryman (11B); Health Care Specialist (68W); Wheeled Vehicle Repairer (63W/91B); Military Police (31B); Combat Engineer (12B); and Food Service Specialist (99B). These occupations match quite closely those identified by a survey used to publish “Military Human Capital Snapshot, Fort Bragg - Fayetteville, NC,” January, 2016, an assessment of the transitioning military workforce at Fort Bragg.

This particular military occupational skills mix shows strong correlation with several of the tri-county Fort Bragg region’s largest civilian sectors/occupations, including growing areas in health care, public administration, public safety/homeland security, business management, logistics, and food service occupations. It also shows alignment with the target sectors of defense and security, and segments of advanced manufacturing.

At any given time, per NCWorks data, there are approximately 4,000 jobs available in the Fayetteville MSA (again, that includes Cumberland and Hoke counties). In a typical month, there are an average 7,000 job openings advertised online. Both counts are relatively unduplicated. Cumberland County usually represents the 5<sup>th</sup> highest number of job openings advertised across North Carolina. Concurrently, there are about 14,000 potential candidates in any given month in the local MSA. The actual number of unemployed in the MSA is usually at a



1:1 ratio to advertised online job openings. The major jobs at any given time are Truck Drivers; Nurses; Network & Computer Systems Administrators; Computer User Support Specialists; Retail Salespersons and Supervisors; Maintenance & Repair Workers; and Customer Service Representatives. Again, these occupations match up nicely with those military/civilian labor force impacted in our scenario and some of the target sectors identified for recruitment.

The employers usually with the highest number of job openings advertised online in this MSA are: General Dynamics; CACI; Department of Veterans Affairs; Booz Allen Hamilton; Cape Fear Valley Health System; Army Medical Command; FSU; SENTEL Corporation; Cumberland County; Cumberland County Schools; U.S. Army; Burger King Corporation; Harris Teeter Inc.; ManTech International Corporation; Leidos Holdings, Inc.; Compass Group; and PSA Healthcare. The nature of these employers matches quite closely the occupational skills of the military and civilian workers plus spouses potentially impacted.

Furthermore, the most common minimum education requirement is high school diploma or equivalent; the 2<sup>nd</sup> most common requirement is a Bachelor of Science degree. Meanwhile, the most common education level of potential candidates (in the NCWorks system) is high school diploma or equivalent, with the 2<sup>nd</sup> most common level being 1-3 years of college or a technical or vocational school. The most common minimum experience requirement is entry level, with 1-2 years coming in 2<sup>nd</sup>. However, the most common level of experience of potential candidates was over 10 years; and 5-10 years at 2<sup>nd</sup> place. The average weekly wage for the MSA is approximately \$750, or \$18.75 an hour or \$38,750 annualized full-time. This is ranked 8<sup>th</sup> in the state. While relatively low, it matches the minimum desired wage of available candidates – with the most common being the \$20-\$35K range and 2<sup>nd</sup> being the \$35-\$50K range.

### Future Growth Occupations

In addition to simply noting and matching current and projected occupational demand with existing labor skill sets, it is also valuable to point out opportunities to provide community college type training and university education for selected high potential skill types, particularly for exiting soldiers and military – civilians who are probably knowledgeable in these areas, and particularly since this has been pointed out in other studies as an opportunity worth building upon to attract companies to locate operations here. Many military-connected personnel also possess valuable security clearances.

In order to develop a more highly skilled and educated workforce for the future – more in alignment with sectors and careers inherent in further diversifying the economy more towards STEM (Science, Technology, Engineering, and Math) disciplines - it is also important to put more emphasis on the potential to develop workforce talent along dimensions that would attract new and/or additional companies to locate here in targeted, high-paying industries that could leverage defense or other special assets, such as the advanced manufacturing sectors of aerospace, virtual reality simulation, and remotely piloted aircraft, in addition to an emphasis on preparing excess workforce for where the most jobs are currently, such as retail.

As noted elsewhere, there are already programs for incumbent worker training and education meant to help current employees upgrade their skills. There are also customized training programs offered by the NC Community College System. As their website states:

“The NC Community College System’s Customized Training Program provides education, training, and support services for new, expanding and existing business and industry in North Carolina through our network of 58 community colleges, serving all 100 counties of the state. Our goal is to foster and support three key aspects of your company's well-being:

Job Growth  
Technology Investment  
Productivity Enhancement

All solutions are the result of collaboration with the management team and customizing the training to meet specific objectives adding to business success.”

A review of the potential sectors targeted and discussed elsewhere in this report includes the following:

- Logistics and Warehousing
- Defense and Security
- Advanced Manufacturing
- Business Services

A fifth sector of growth not necessarily requiring any additional economic development recruitment efforts is:

- Health Care/Life Science

On balance, these five sectors require a higher order of knowledge, skills, and abilities (KSAs) leading to equally higher incomes. This means at least some of the focus for the tri-county region needs to be placed on preparing new workers for future jobs in the identified sectors for possible potential growth. While there are some jobs in each sector that may only require a high school diploma and/or short to moderate on-the-job training (OJT), or a certificate, many others will require either longer term OJT and/or college degrees including 2+2 and advanced programs. Several jobs involve technical aspects that are tied into the STEM disciplines; many of these are also tied back to established career pathways in the K-20 education systems.

- ◎ One area that almost all local employers express a need for is for more customer service, interpersonal and sales skills, and training for the same. In fact, the Greater Fayetteville Chamber of Commerce is planning to offer a series of communications classes for existing employers and their employees. Regional educational institutions would be wise to offer even more education and training in these critical topics as well.

The Chamber is also going to be sponsoring a series of business and education roundtables on a quarterly basis to help identify and meet other skills gaps.

Much of this “transition” work, of course, also depends on the ability of the tri-county region to attract more business and industry operating in the five targeted growth sectors. This would need to be done in concert with local workforce development and public and post-secondary education leaders to ensure that their talent development and supply programs and pipelines are aligned and adequate to meet future demand. The number one indicator that corporate site locators use in determining to build, move, or expand operations is the quality and quantity of the local labor force and education/training system needed to produce such qualified workers.

One prime local example of an institution of higher learning developing and offering such in-demand and higher level programs is Campbell University in Harnett County. Over the last few years, partly in response to regional labor market needs and projections, the university has rolled out new undergraduate programs in nursing, engineering, homeland and cyber-security, and new graduate and professional programs including physical therapy and osteopathic medicine. Each of these fits one of the target growth sectors identified in this report. Also, FSU has developed award-winning programs in health care and health care administration, business, management information systems, and K-12 teaching, and has developed customized project management and cybersecurity graduate level programs for both military personnel and civilians. The university is also strong in preparation for criminal justice-related occupations. BRAC efforts led to the opening of the Center for Defense and Homeland Security housing training academies in cybersecurity, emergency management, and national security.

One other local example for community colleges is FTCC’s launch of its cutting-edge Collision Repair and Refinishing Technology curriculum that prepares individuals to apply technical knowledge and skills to repair, reconstruct, and finish hi-tech automobile bodies, fenders, and external features. They also have a relatively new simulation and game development curriculum.

Finally, the local public school systems – notably Cumberland County’s – have opened four early colleges, with two located at FSU. The third, located at FTCC, is called Polytechnic High School and focuses on vocational education mainly in STEM disciplines. In Hoke County, SandHoke Early College High School is a partnership between the Hoke County School System and Sandhills Community College. Harnett County may want to explore doing similar.

In Harnett County, there are now two apprenticeship programs tied into the public high schools, Computer-Integrated Machining Technology and Welding Technology. These were created by Harnett County Schools, the North Carolina Department of Commerce, Central Carolina Community College, and several local companies. As future success in the local, regional, national, or even global economy may require a two- or four-year degree, a certificate or diploma, the Career & College Promise (CCP) program allows qualified high-school-age

students in North Carolina to pursue these options, tuition free, while they are in high school. This allows students to get a jumpstart on their workplace and college preparation.

- ⦿ To make even more progress in these nascent efforts, a career information education initiative would need to be planned, coordinated, and implemented, focused on the five future growth sectors presented here plus their major occupations. This would need to include at a minimum the K-12, secondary, and post-secondary education and training institutions as well as regional Workforce Development Board operations and partners, including industry. This effort could also help position the region for external grants and other funding opportunities involving career clusters and sector training. This effort would require more robust career, educational, and personal advising and counseling in the K-12 system so that middle and high school students could better understand the range of careers available with various levels of required education, training and skills. This recommendation is made in the strategies section.
- ⦿ The tri-county regional education, workforce, and economic development systems would need to be even more aligned with current and future talent needs of targeted industry sectors. Core competencies and industry-specific skills needed for the projected high/er growth and wage occupations in the region would need to be developed. This sector or cluster strategy is an approach that has been adopted across the country and not just in other military towns seeking diversification.
- ⦿ The regional umbrella leadership group would also need to have an on-going process to continually analyze and update any workforce gap projections for each targeted growth industry to keep the talent re-skilled and up-skilled.
- ⦿ More programs in the educational systems that would provide WorkKeys Assessment and Career Readiness Certificates (CRC) will be needed as well.
- ⦿ Examples of some specific courses that that are currently offered through regional K-12 Career Technical Education programs and are directly relevant to the target growth industries include: Drafting, Electronics, Biotechnology, Computer Integrated Manufacturing, Fundamentals of Technology, Manufacturing, and Transportation Systems. More would need to be developed, along with an increased number of apprenticeships and life-long-learning programs.

One such initiative already in the works is a multi-county Health Career Pathway that includes Cumberland and Hoke (and Moore, but not Harnett) Counties that is currently waiting for state approval to implement. This certified pathway will allow the partnership to develop programs in health care careers, plus provide additional funds for career awareness programs, work-based learning opportunities, apprenticeships, and job placement with large health care employers. The program was developed over a six-month period through meetings with industry, education, community partners, and government agencies to meet the continually

growing demand for medical professionals. There is a continuum of jobs starting with direct patient care and nursing assistance through to medical assistance and health records IT, and from 2-year to advanced degrees. Each will be addressed in this program.

- ⦿ More of this type of aligned and integrated planning and model implementation will be needed in this region to meet talent needs for other clusters for up to a decade out.

Looking further into the future, even beyond the more stackable certifications mentioned above, increasing numbers of education providers – including universities – and/or businesses or industry consortia are launching series of nano-degrees in tech-focused courses that range from basic to complex STEM disciplines. Schools are doing so in partnership with employers, with a focus much more directly on employment and employability. Many non-traditional learners are taking courses to advance their careers. The world of work increasingly demands a quick response from the education and training system to provide people with desired qualifications. More entities will also need to offer recognized “micro-credentials” to accompany these nano-degrees, or areas of specialization. After all, people are much more likely to invest in training if it confers a qualification that others will recognize as useful. Another answer will be for the regional colleges and universities to make their courses more accessible by doing even more teaching online. This applies to regional K-12 education systems as well.

## Goal: Invest in Education and Training

The deciding site location factor for expanding companies is workforce. The deciding factor for most families relocating is schools. Three of the top ten things that make a community great relate to education: community college, public schools, and a research institution (Conway, Inc. 2015). Investing in educational programs that align with targeted growth sectors will reap wide ranging rewards in economic development, including attracting exiting and retiring military to stay in the region.

### Strategy: K-14 Education

#### Action Steps:

- ⦿ Implement a program like the Greenwood Promise in Greenwood County, SC. Greenwood County is raising an endowment that will fund enough scholarships to pay for every high school graduate to attend Piedmont Technical College for two years. The community’s expectation then becomes a K-14 education rather than a K-12 education. Similar programs are up and running in Wythe County and the Roanoke Region in Virginia, as well as Laurens County, SC. Greenwood County has plans to continue fundraising to grow the endowment to provide a four-year college education at Lander University.

In other communities it has been estimated that scholarships will need to be raised for approximately 35% of the graduating class, due to the fact that a portion will go to four-year schools, a portion will receive scholarships, and a portion will not participate.

A regional fundraising effort could be the catalyst to fund an endowment that will provide for the scholarships. Such a regional fundraising effort is now being considered by the Freshwater Coast Foundation in Abbeville, SC.

A program such as this will encourage military families to stay in the area after exiting because of the benefit of a college education for their children. This study found that more than half prefer to stay in the community.

- ◎ Many communities across North Carolina have started early colleges, which allow students to be dual enrolled in high school and community college. Students earn college credits while completing their high school requirements. Cumberland and Hoke Counties have early college programs. Harnett County should explore the program as a way to support education and workforce development.
- ◎ Focus on specific courses that are offered through regional K-12 Career Technical Education programs and are directly relevant to the target growth industries such as: Drafting, Electronics, Biotechnology, Computer Integrated Manufacturing, Fundamentals of Technology, Manufacturing, and Transportation Systems.
- ◎ Replicate the multi-county Health Career Pathway model for other target sectors. The model includes programs in careers, career awareness, work-based learning, apprenticeships, and job placement.

## Strategy: Workforce Development

### Action Steps:

- ◎ Implement a careers initiative for the five target sectors for recruitment (logistics and warehousing, defense and security, advanced manufacturing, and business services). Include K-12, secondary, and post-secondary education and training institutions as well as regional Workforce Development Board operations and partners including industry. A good example is the distribution training program in York County, SC. While learning about logistics, students apply their training to pack and distribute backpacks of food that are sent home with students on the weekends.



- ⦿ Develop career awareness information for each of the five target sectors. We have found from other studies that marketing information for careers should contain:
  - Information on types of jobs, skills, wages, and education requirements.
  - Images of people like the students in the work setting.
  - For exiting military, include the occupational code and how training align with the sectors.

For an example of an award-winning career awareness video, view this: <https://www.youtube.com/watch?v=SYRHwDmpb4Q&t=134s>, created by the Henderson County Partnership for Economic Development, NC.

- ⦿ Harnett County's best practice model of increasing apprenticeship programs can be expanded to Cumberland and Hoke Counties.
- ⦿ One area that almost all local employers express a need for is for more customer service, interpersonal, and sales skills training. The Greater Fayetteville Chamber of Commerce is offering a series of classes on such topics for existing employers and their employees. We recommend that community college and university programs integrate this training into all curriculums that support the target clusters, as well as the major employment cluster of health care.
- ⦿ We have found in other studies that as many as 15% of employers require a Career Readiness Certificate, while less than 7% of military spouses or exiting military have one. We recommend increased marketing of the WorkKeys Assessment and Career Readiness Certificates (CRC). Through the community college system, the assessment is free to military and military dependents.
- ⦿ The regional leadership should have an on-going process to continually analyze and update workforce gap projections for each targeted growth industry to keep the talent re-skilled and up-skilled.
- ⦿ Provide coordinated outreach and assistance for all dislocated workers – both military and civilian – and small to medium-sized businesses impacted to retain talent, jobs, and employers in the region, specifically health care, retail, hospitality, services, real estate, and defense.
- ⦿ Bridge any skills gaps jobseekers may face, including IT/computer, work readiness, soft/interpersonal, and job finding/getting/holding skills training or retraining/up-skilling (credential stacking/latticing) so they can seek, gain, and keep new employment.
- ⦿ Foster entrepreneurship so some displaced workers might become small business owners and existing small firms might continue to prosper.
- ⦿ Provide customer service, interpersonal, and sales skills and training for existing employers and their employees.

## Economic Development Strategy

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The development of a regional economy can be a daunting task. The investment needed is high; the projects are complex; and many partners are required. However, the Fayetteville region does not have a choice of whether to invest in economic development. Too much of the economy is reliant on the military and related industries, and military contributions to the economy have declined at the rate of 2-4% per year over the last few years. Like other communities once dependent upon textiles and furniture, the region needs to diversify before there is a significant negative economic event, such as large military reductions. Too many textile communities waited too late to act and are still trying to recover economic losses decades later.

A sound economic development strategy is based on assets. Most of the assets of the Fayetteville region (location, transportation, utilities, educational institutions, etc.) will not change with a troop reduction of 3,000 at Fort Bragg, or an increase in troops. There would be some workforce reduction as military dependents and spouses leave the area; however, the basic economic development and diversification strategy will remain the same. Therefore, most recommendations in this report are focused on enhancing the strategies of the economic development programs through regional collaboration that aligns economic development, workforce development, and education. If there were an immediate loss of 3,000 active duty soldiers and their families, efforts could be launched to recruit people to replace the loss; rather than recruiting companies to provide jobs that will attract people.

*“Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has.”*

– Margaret Mead





## Goal: Increased & Connected Economic Development Efforts

Basic economic development strategies will not change with a reduction of 1,000, 2,000, or even 3,000 active duty personnel at Fort Bragg. There are fluctuations in troop levels at Fort Bragg regularly. The reasons companies move to and expand in this region will remain the same – location, transportation, educational assets, etc. Thus, one strategy to combat a potential negative economic impact is to increase current economic development efforts in the areas of recruitment, retention, and expansion of existing businesses through higher levels of regional collaboration.

### Strategy: Business Recruitment

Economic diversification is needed in the Fayetteville regional economy. The region is highly dependent on public sector and related health and education sector jobs even outside of the military (over 50% of non-military wages). When considering military employment in addition to the public sector, the concentration is significantly higher. Fayetteville’s strategic plan includes a recommendation to diversify the city’s tax base and increase the industrial and commercial tax bases, a goal of each of the counties.

The largest private sector employment categories in the region are retail trade and manufacturing. Typically, retail does not pay at or above the average county wage, but manufacturing does. We recommend the region focus on recruiting sectors that will diversify the economy, are growing, and pay at or above the average wage.

Each of the local economic development organizations recruits new businesses directly and through the marketing efforts of regional partnerships. Cumberland and Hoke Counties are part of North Carolina’s Southeast Regional Partnership, and Harnett County is a member of the Research Triangle Regional Partnership. The targets for recruitment with these regional partnerships overlap except for business services. Logistics and warehousing, advanced manufacturing, and defense and security are targets of the Southeast Partnership. Defense and security and some sectors of advanced manufacturing are targets of the Research Triangle Partnership. The business services sector is one target not covered by either regional partnership.

### Action Steps:

To be more aggressive in recruiting new business, the counties must act and think regionally.

- ⊙ There is an opportunity for the county economic development offices to launch a specific marketing effort at the business services industry. For example, the three counties could conduct a sales trip to site consultants that focus on business services not covered by the regional organizations, and develop information for the business services industry on their websites.

- ⊙ Annually, the three organizations should review their programs of work for alignment, potential areas of collaboration, and leverage. It may be possible to come together for marketing purposes as a sub-region as relates to opportunities and risks associated with Fort Bragg.
- ⊙ The three local economic development offices should meet quarterly to share marketing plans to identify points of leverage. For example, if Cumberland County is participating in a sales trip targeting defense, Harnett County may want to reserve its resources for a sales trip in logistics.

This study shows that the Fayetteville region receives less in military contracts than comparable regions. There is an opportunity to attract additional military contractors.

- ⊙ Identify and contact key defense contractors engaged in activities relevant to Fort Bragg but which do not currently have operations in this region. Ascertain what would be required for them to consider establishing operations in the region. Communicate availability of customized education and training programs to meet workforce needs, as well as other regional assets.
- ⊙ Develop assessment of new opportunities to pursue defense contracts in innovation-based growth areas that could leverage regional expertise, and communicate those opportunities to relevant sources of competency, including sources of related commercial expertise and entrepreneurial veterans.
- ⊙ In conjunction with the NC Military Business Center's work, develop marketing information that shows large and small contractors in the region. Large contractors want to know there is a base of smaller contractors for subcontracting work, and smaller contractors want to know there is a group of larger contractors with which to collaborate. We understand this task will be exceedingly difficult given the clandestine nature of many subcontractor businesses. However, leveraging connections with Fort Bragg may help.

A unique asset of being a military region is the workforce advantage offered by exiting military and trailing spouses. We have found in other studies that military spouses are more educated than the population in general.

- ⊙ Quantify and publicize the military spouses available for work. It is estimated that as many as one-third of exiting military remain in the region, and the majority would prefer to stay in the region if adequate employment is available. Studies have also found that generally exiting military are more educated than the general workforce.

Seymour Johnson Air Force Base regularly surveys newcomers to determine if the spouse is seeking employment, skill set, education, etc. A recent survey there found almost 200 spouses actively seeking work. This information is very useful to existing businesses seeking to hire talented workers. Cooperation with Fort Bragg will be critical on a similar study.

## Strategy: Business Retention and Expansion

Approximately 75% of all new investment and job creation comes from existing businesses. A proactive Business Retention and Expansion (BRE) program offers significant returns to the community. Each local economic development office has a BRE program; however, there is an opportunity to use the regional information in this study to support existing businesses.

### Action Steps:

- ⊙ Economic Gardening is an economic development strategy developed and deployed in Littleton, CO. The program uses market data to help small businesses grow and entrepreneurs capture opportunities. Other than the federal government, the major sectors that are expected to lose employment are limited-service restaurants, full-service restaurants, real estate sector, office of physicians, general merchandise stores, nursing and community care facilities, food and drinking places, food and beverages stores, and personal care services. These businesses are ideal for an economic gardening program. More information on economic gardening can be found at the Edward Lowe Foundation: <http://edwardlowe.org/entrepreneurship-programs/economic-gardening/> We recommend the three-county regional explore a regional economic gardening program.
- ⊙ Proactively visit companies on a regular basis. Develop a target profile of companies for the visitation program. The target profile could include companies in specific target sectors, size, relationship with Fort Bragg, growth trajectory, at-risk, etc. Through the visitation program, gather data that will allow for trends analysis on existing businesses and the economy. Share high-level data among offices regarding military contractors, major regional employers, and firms in target sectors.
- ⊙ Create an “at-risk” profile for industry sectors most likely to be impacted by troop reductions (health care, retail, hospitality, services, real estate, and defense) so economic development staff can identify companies at-risk of closure. The profile could include reductions in employment, utilities, services, and less community engagement/participation.
- ⊙ Include in the visitation questionnaire a gauge of dependency on the military to start tracking how vulnerable many businesses are to troop reductions.
- ⊙ Continue with business networking through online and social media discussion groups and face-to-face networking at lunch and learn seminars.
- ⊙ Through the visitation survey information, create an advocacy platform to support regulatory change that will help local businesses grow.
- ⊙ As business climate issues are identified, consider regional (three-county) strategies in response, e.g. if training and the talent pipeline is an issue, consider a meeting about higher education in all three counties to hear feedback from employers and work toward improvements

## Strategy: Product Development

Approximately 80% of all expanding companies search for an existing building. In the three-county region, there are only 13 available buildings that are over 30,000 SF. Of those 13 buildings, only five have clear ceiling height over 22', and all five are in Fayetteville. Advanced manufacturing requires higher ceilings than was the norm decades ago when manufacturing was more labor intensive. The fact that the region lacks a quality inventory of available industrial buildings is a glaring gap in the economic development program.



There is a healthy inventory of sites listed with the NC Department of Commerce (44); however, none of the sites is a Certified Site, an indicator of the level of due diligence completed.

### Action Steps:

- ⦿ Inventory available buildings in the three-county region. Attention should be paid to buildings suitable for the targeted sectors. Consider convening the commercial/industrial real estate community for a discussion of the industrial real estate market and how vacancies align, or do not, with target sectors. Collect information on the demand for industrial business in the region as you explore public and private options for development.
- ⦿ Explore investment in spec building development. Catawba County has a good model of a public-private partnership spec building development program.
- ⦿ Develop a list of needed enhancements for the top three to five sites in each county. Enhancements could include engineering studies, infrastructure extensions, clearing, etc. Regionally support local investment in site development.
- ⦿ Do not overlook space for small businesses. This study shows they will be the ones most adversely affected by a troop reduction, and therefore will need the most support.

## Goal: Increased Connectivity & Collaboration

The current and increased economic development efforts will benefit from a higher level of connectivity and collaboration across the region. We heard from the community input sessions that leaders want a higher level of collaboration across the region. Objective II C in Fayetteville's FY 2017-18 strategic plan is to "leverage partnerships for job creation and retention, with a focus on local and regional workforce and increasing per capita income." We heard clearly from Hoke and Harnett Counties that they need a strong region to be successful.

## Strategy: Regional Planning and Collaboration

Hoke, Harnett, and Cumberland Counties, and the City of Fayetteville are married through Fort Bragg and the regional economy; however, often communication between the entities is lacking. There are efficiencies to be leveraged through regional collaboration. The City of Fayetteville can lead regional collaboration as the city in the MSA.

- ⊙ One way to increase collaboration is to identify regional projects that can bring people together for a common cause. The key learning from this study is the need for regional alignment of target clusters with education, workforce development, and economic development.
  - Fayetteville can host a Higher Education Summit to bring together all institutions of higher learning in the region. The agenda would be to discuss the regional strategy to develop the five target clusters as well as support existing top employment clusters such as health care.
  - Another point of collaboration should be alignment of capital improvement, comprehensive plans, and infrastructure extensions with target sectors.

## Strategy: Leadership Development

We have found that the main difference between successful and unsuccessful communities is leadership. To develop the leadership talent, identify new leaders, and connect leaders across the region, we recommend launching a regional leadership development program. Chambers of commerce, economic development, universities, and local governments are a few of the partners that should be involved. There are good models of leadership programs such as Leadership North Carolina and the Rural Economic Development Institute, which trains rural leaders to bring positive change.

### Action Steps:

- ⊙ Typically, leadership programs recruit a class to meet one day a month for eight months. At each meeting the class focuses on a topic such as economic development, history, local government, natural resources, etc.
- ⊙ The leadership program should be self-sustaining through tuition and sponsorships.
- ⊙ Efforts should be made to recruit a balanced class from across geographies, industry sectors, and demographics (race and age).
- ⊙ Often the leadership class each year will take on a community service project.

## Strategy: Place-Making for the Next Generation

Millennials will make up 75% of the workforce by 2025. The economic preferences of that generation are much different than previous generations. Many move to an area before finding a job. This is true in Charleston, SC, a place where approximately 47 people move to every day. Objective II D of Fayetteville’s strategic plan is to “invest in community places, revitalizing downtown as a focal point, and building opportunities to leverage the Cape Fear River.” Harnett County is already drawing many people because of its quality of life. Each community can get behind regional place-making initiatives.

### Action Steps:

- ⦿ Invest in recreation amenities that not only connect the region but also leverage the natural resources. Examples are greenways, bike paths, scenic driving trails, etc. The new baseball stadium is another example.
- ⦿ Develop policies that encourage public art. For example, there could be a consistent art theme across the region that is carried throughout murals, public sculpture, and signage. In every community engagement meeting in Fayetteville, branding was discussed. Public art is one way to brand a community. Think of the painted pigs in Lexington or the metal sculptures in Greenville as unique markers of the community.
- ⦿ Place-making includes revitalizing areas like downtowns. There are many best practices in downtown revitalization. A few include Columbia, SC’s vacant building revitalization grant; Hickory, NC’s landscaping grant; and Charlotte, NC’s security grant. The downtowns across the region can collaborate on the location of incentive districts that complement a regional place-making initiative.

## Goal: Support Entrepreneurship

Eighty-two percent of establishments in the Fayetteville MSA employ less than ten people. Sole proprietorships make up 12.6% of all establishments (YourEconomy.Org). Small business is big business. Entrepreneurship is a pathway for many exiting and retiring military, as well as others looking to serve the military. Military accounts for approximately 31% of the total value of goods and services produced in the Fayetteville MSA; thus, there are excellent opportunities for small businesses to leverage that level of economic activity.

## Strategy: Increase Access to Regional Capital

### Action Steps:

- ⦿ It is estimated that as many as one-third of exiting military remain in the area. Surveys indicate that even more transitioning veterans (55%) would remain in the region if suitable employment were available. Self-employment is one alternative to traditional employment. Many of the military subcontractors in the region are former military.

- ⦿ IMAF Sandhills Angel Fund serves this region. A regional angel investing network can be leveraged to support start-up businesses in the region. The three-county region could pool dollars from local investors into a collaborative loan fund for smaller businesses, such as the Invest Local program managed by Mountain BizWorks.
- ⦿ Revolutionary Coworking recently launched in Fayetteville. Every business, no matter how small, needs physical space. There has been a surge in co-work space in urban areas, and some not-so-urban areas, of the state. Given the opportunity for exiting military to become entrepreneurs, we recommend the region collaborate on filling Revolutionary Coworking, and depending upon its success, look for additional small business space.

Whereas the recommendations above focus on traditional economic development strategies, the following are outside-of-the-box. If Fort Bragg reduced active duty troops by 3,000 immediately and at one time, there could be a loss of as many as 6,000 consumers in the marketplace. If the region wanted to be aggressive at recruiting people, instead of recruiting jobs for the people to follow, these are a few inventive approaches.

## Goal: Retain and/or Replace 6,000 People

The loss of 3,000 active duty soldiers may mean the loss of 6,000 people to the population and economy of the region. The loss could come in one snapshot of time. Almost 80% of military personnel reside in Cumberland County; thus, the impact will be felt the strongest in that county. As mentioned elsewhere, many exiting soldiers and their families seem to choose to stay in this region for one reason or another. Again, this trend could be increased through a coordinated campaign to advertise the region as a good place for veterans to live, work, and play due to its military friendly communities.

Recruiting companies to provide jobs which will attract more people to move to the region is a long-term strategy. If the region is serious about recruiting people in the short-term, it must think outside-the-box.

### Strategy: Recruit People to the Region

#### Action Steps:

- ⦿ There are examples of communities providing rent subsidies for entrepreneurs/small business owners and free land to people who will build a home. These radical ideas focus on bringing people to the community with the thinking that companies and growth will follow people. This can be true - retail sectors follow demographic and consumer patterns.

There are several places in the U.S. that offer incentives for people to move there:

- Harmony, MN: cash rebates for new home construction
- New Haven, CT: down payment assistance, loans for home renovation, free in-state college tuition

- Niagara Falls, NY: student loan reimbursement
  - Detroit, MI: cash and loans for renters and new homeowners
  - Kansas: tax waivers and student loan reimbursement
  - Alaska: annual mineral royalty dividends for all residents
  - Curtis, NB: free lot on which to build your new home
- ◎ There are other examples of communities supporting newcomers, especially refugees, with relocation packages that include housing assistance, workforce training, and job placement.
- ◎ In North Carolina, the City of Morganton has offered low interest loans to developers of residential housing for active adults. In this case, the incentive is directed to the developer.

## Goal: Adaptive Reuse of Space and Capacity

If 3,000 active duty positions are eliminated at Fort Bragg, there may be an inventory of vacant houses and classrooms. It is likely that the vacancy will be spread across all four jurisdictions rather than whole neighborhoods becoming vacant.

### **Strategy: Use Vacated Residential and Institutional Space**

#### **Action Steps:**

- ◎ The region should inventory “at-risk” residential and industrial space so that in the case of a major reduction at Fort Bragg, policies can easily target areas for redevelopment.
- Vacant school space could be repurposed for community college training or university training.
  - Vacant housing could be repurposed to support university housing needs of students and professors.



## Implementation Plan

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Implementation has been important from the very beginning of this project. Economic, workforce, and community development professionals who will be charged with leading implementation want to know what to do. They want clear action steps from this study. The recommendations will take time to implement and will be impacted by funding and collaboration.

We recommend that three task forces be created to guide implementation. First, a task force for economic development made up of the three economic development organizations. Second, an education and workforce development task force made up of representatives of the public schools, institutions of higher education, and workforce development agencies. Third, a task force of chambers of commerce should lead the effort to implement a regional leadership development program. We charge the task forces to:

- ⦿ Endorse the recommendations from this study.
- ⦿ Determine how recommendations from this study can be integrated into the work plans of the appropriate organizations, such as integrating target sectors into existing workforce and education programs.
- ⦿ Assign action steps to appropriate agencies.
- ⦿ Create a process to check in on progress with implementation.

Collaboration will be the key to implementation. Individually, the city and counties have good track records with implementation. One example is the City of Fayetteville's strategic plan. Another example is implementation of the Fayetteville Alliance strategic plan. However, regional strategies often fail because there is not a single entity responsible for implementation. Therefore, it is critical that responsibilities be assigned and progress measured.

The summary of action steps on the following page provides a quick review of the recommendations from this study. The task forces should review the study in depth and pick a few action items to work on in the coming fiscal year.

**Summary of Action Steps**

Education	Workforce Development	Economic Development
<ul style="list-style-type: none"> <li>• Implement a K-14 System where community college is free</li> <li>• Expand Early College</li> <li>• CTE Related to Target Sectors</li> <li>• Replicate Career Pathway Model</li> </ul>	<ul style="list-style-type: none"> <li>• Alignment with Target Sectors</li> <li>• Career Awareness in Target Sectors</li> <li>• Expand Apprenticeships</li> <li>• Customer Service Training</li> <li>• Increase CRCs</li> <li>• Workforce Gaps Analysis</li> <li>• Skills Bridging to Target Sectors</li> <li>• Higher Educational Summit</li> <li>• Leverage Military Spouse Talent Pool</li> </ul>	<ul style="list-style-type: none"> <li>• Business Recruitment in Target &amp; Niche Sectors</li> <li>• Collaborate as a Sub-Regional Market</li> <li>• Recruit/retain/expand Contractors</li> <li>• Economic Gardening</li> <li>• Target At-Risk Firms</li> <li>• Site &amp; Building Development</li> <li>• Regional Leadership Development</li> <li>• Regional Planning</li> <li>• Place-Making</li> <li>• Entrepreneurship                             <ul style="list-style-type: none"> <li>• Loan pool, investor network, space</li> </ul> </li> </ul>

## Appendix A: Steering Committee Members and Consulting Team

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### Steering Committee Members

Rodney	Anderson	Retired General
Tamara	Bryant	Fayetteville Technical Community College
Letitia	Edens	Hoke County
TJ	Haney	NC Community College System
Chris	Hawk	Harnett County
Angie	Hedgepeth	Fayetteville Regional Association of Realtors
Tracy	Jackson	Cumberland County
Mark	Locklear	Harnett County
Jim	Lott	Cumberland Workforce Development Board
Adrian	Lowery	Lumber River Council of Governments
John	Lowery	NC Works Commission
Zan	Monroe	Fayetteville Regional Association of Realtors
Greg	Moore	Fayetteville Technical Community College
Monika	Morris	Fayetteville Technical Community College
James	Palenick	City of Fayetteville
Brandon	Plotnick	Fayetteville Alliance
Don	Porter	Hoke County
Darsweil	Rogers	Fayetteville Chamber of Commerce
Angie	Stewart	Harnett County Economic Development
Patricia	Tyson	City of Fayetteville
Robert	Van Geons	Fayetteville Alliance
Teddy	Warner	Economic Development Partnership of NC

### Consulting Team Members:

#### Fayetteville State University, School of Business and Economics

- Dr. Pamela Jackson, Dean, School of Business and Economics
- Mr. Greg McElveen, Assistant to the Dean for Strategic Initiatives, School of Business and Economics
- Dr. Inder Nijhawan, Professor Emeritus of Economics, School of Business and Economics
- Dr. Thomas G. E. Williams, Professor of Finance, School of Business and Economics
- Mr. Tim Moore, Director, Community Engagement, School of Business and Economics

Creative Economic Development Consulting

- Crystal Morphis, CEcD, Founder and CEO
- Penny Whiteheart, Senior Consultant
- Leigh Howe, Applied Marketing, Partner

## Appendix B: Economic Profile Background Data

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This section provides economic background data for Cumberland, Harnett, and Hoke counties and key municipalities within those counties. A summary of the region's economic data is provided, along with the potential implications for a personnel reduction at Fort Bragg. The information includes economic output data; population size and composition; employment levels; educational attainment of the workforce; income levels; veteran presence in the population and their characteristics; and the housing stock. The information is presented under three categories, namely:

1. Fayetteville MSA Economic Output – Real GDP is the measure of economic output used. It shows patterns over time and provides comparisons to highlight the significance of the military to the region.
2. County Economic Data – The various data presented provides some basis for identifying potential strengths and weaknesses relative to any economic shock related to a personnel cut.
3. Cities and Town Economic Data – This data is similar to that provided for the counties but presents a view that may be of more interest to the city officials involved with economic development.

*Real GDP Data (Bureau of Economic Analysis is the source of data on Real GDP and Real Per Capita GDP. Source of all other data is U.S. Census Bureau)*

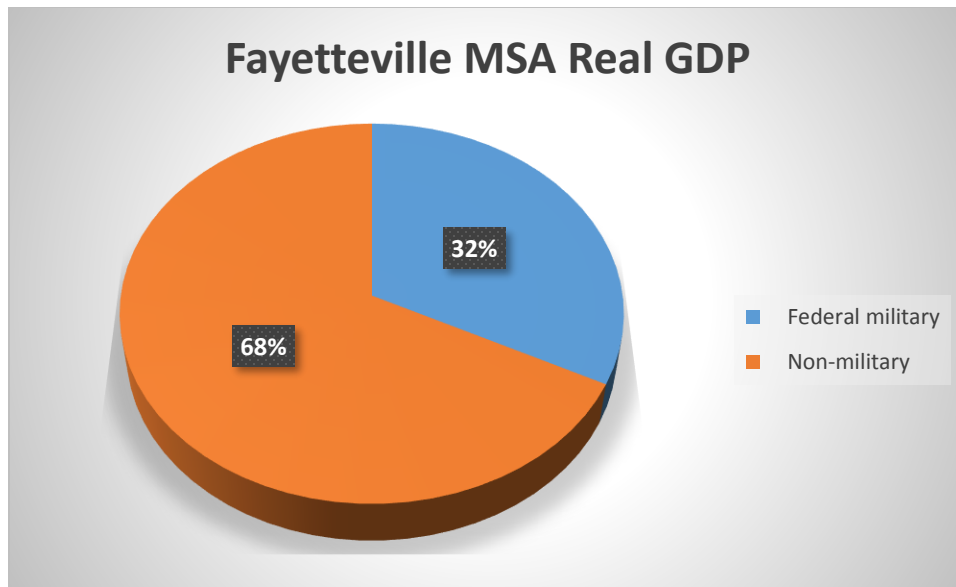
### **Area Profile (Economic Landscape)**

In an attempt to fully explore the probable impact of a personnel draw-down at Fort Bragg on the three-county area, we compiled a regional profile that offers the best opportunity to identify potentially measurable effects for a diverse set of stakeholders. For this reason, information is presented for the Fayetteville MSA, the three counties, and the major towns within these counties that are mostly likely to experience a direct impact.

### **Fayetteville MSA – Economic Output**

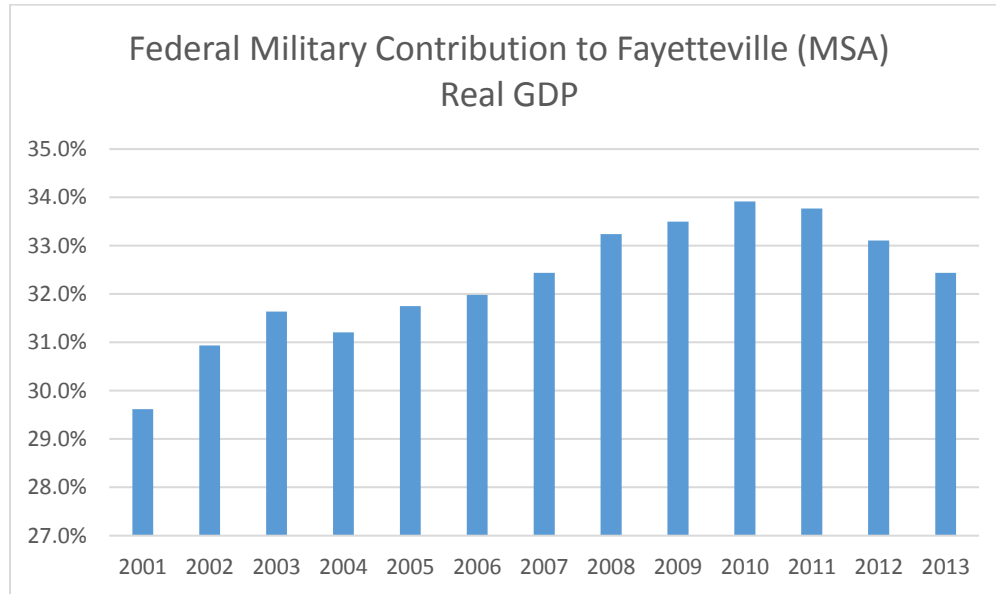
As a first step, the regional economic output (GDP) is best analyzed at the MSA level, therefore, we focus on the Fayetteville MSA that covers the Fort Bragg area. The significance of the military to the area is demonstrated by the fact that the federal military component of the national MSA GDP is less than two percent, approximately 2.5 percent for North Carolina, but averages over 30 percent for the Fayetteville MSA during the 12 years ending in 2013. The latest figures available at the time of this report showed the military contribution to the Fayetteville MSA Real GDP at 32.4 percent.

**Figure 20: Fayetteville MSA Real GDP – Federal Military Contribution**



*Source: Bureau of Economic Analysis (2013 data)*

While the military component of Real GDP as a percentage of total Real GDP for both the national MSA and North Carolina showed moderate fluctuation, the comparable figures for the Fayetteville MSA was a gradual increase. The military contribution to the area grew gradually from 30 percent in 2001 to peak at 34 percent in 2010, before beginning a downward trend. This downward trend is also seen at both the national and statewide level.

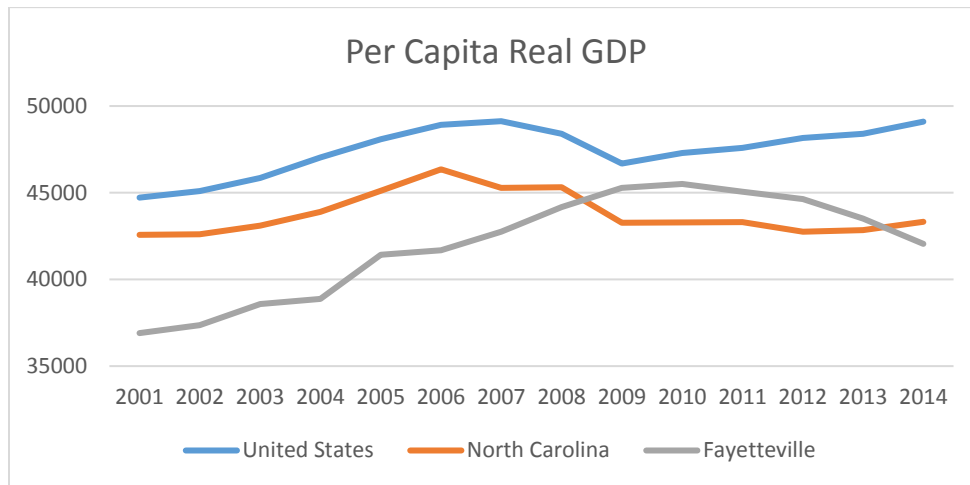
**Figure 21: Fayetteville MSA Real GDP Trend**

*Source: Bureau of Economic Analysis*

### **Per Capita Real GDP**

Looking at the real output on a per capita basis provides a more in depth picture of the economic significance of the military on the area. In doing so, we compare the per capita real GDP for the Fayetteville MSA to that North Carolina and the U.S. The contrasting picture that emerged in the comparison of the military component of real GDP is even more profound when we examine the per capita real GDP at the three levels. Per capita real GDP peaked earlier at both the national and state level before doing so for the Fayetteville MSA at \$45,506 in 2010. It is also worth noting that even as the real per capita GDP decline began in 2007 as the national economy began to contract, the per capital real GDP continued to grow within the Fayetteville MSA, and only started to show decline later. That decline appears more in line with a reduction in war fighting effort.

**Figure 22: Per Capita Real GDP for Fayetteville MSA relative to the US and North Carolina**

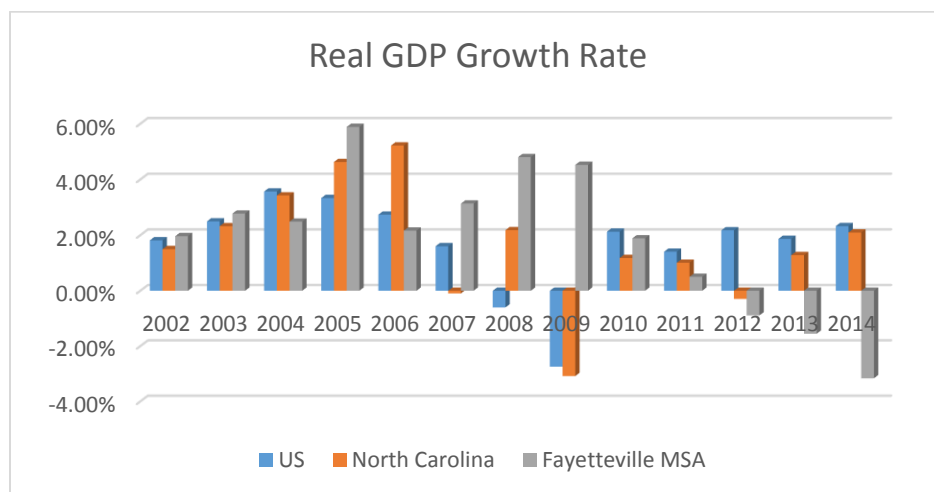


Source: Bureau of Economic Analysis

**Real GDP Growth Rate**

An examination of the actual growth rate in real GDP presents a picture which reinforces that derived from the per capita real GDP figures. The most revealing information is the dichotomy in the growth rates for 2009, with Fayetteville MSA reported at 4.5%, while both North Carolina and the U.S. were negative; -3% and -2.8% respectively. The divergence has continued since, now in the reverse, with Fayetteville MSA recording the negative growth beginning in 2012 while North Carolina and the U.S. are in positive territory as the economy rebounded. This evidence is indicative of the relative importance of the military within the Fayetteville MSA compared to the state of North Carolina and the United States as a whole.

**Figure 23: Real GDP for Fayetteville MSA relative to the U.S. and North Carolina**



Source: Bureau of Economic Analysis



## Counties

### Population

A broader representation of the economic profile of the area is best presented at the county level, with some further delineation reserved for the major towns in the counties. Cumberland County accounts for 65.4 percent, Harnett County 24.6 percent, and Hoke 10 percent of the total population of the 496,000. Females account for just over half of the population, a pattern that holds true also for the state and the nation. The region has a somewhat younger population, as reflected in the median ages, than both the state and nation. Both Cumberland and Hoke counties have a substantially larger proportion of non-white population than the state and the country, due primarily to the large number of African Americans. The Hispanic presence within the region, though lower than the national proportion, is higher than the state. The variations in both the age and ethnic composition of the region's population are worthy of consideration by policy makers.

Ostensibly due to the location of Fort Bragg, both active armed forces personnel and veterans are a major component of the region's population, which provides an additional perspective from which to examine the population.

Just over 70 percent of the armed forces personnel at Fort Bragg are reported as residents within the three-county region. The overwhelming majority (78 percent) of these reside in Cumberland County. Clearly this high concentration of military personnel is unique only to communities in which military installations are located.

Veterans account for a much higher proportion of the population within the three-county region than for both North Carolina and the nation. Veterans represent between 13.5% and 19.9% of the population within the region, but only 9.6% for North Carolina and 8.7% for the U.S. Combine this characteristic with the fact that on average veterans have higher median income, higher level of education attainment, and experience a lower rate of employment than the non-veteran civilian population, retaining retiring soldiers could be a plus for these counties.

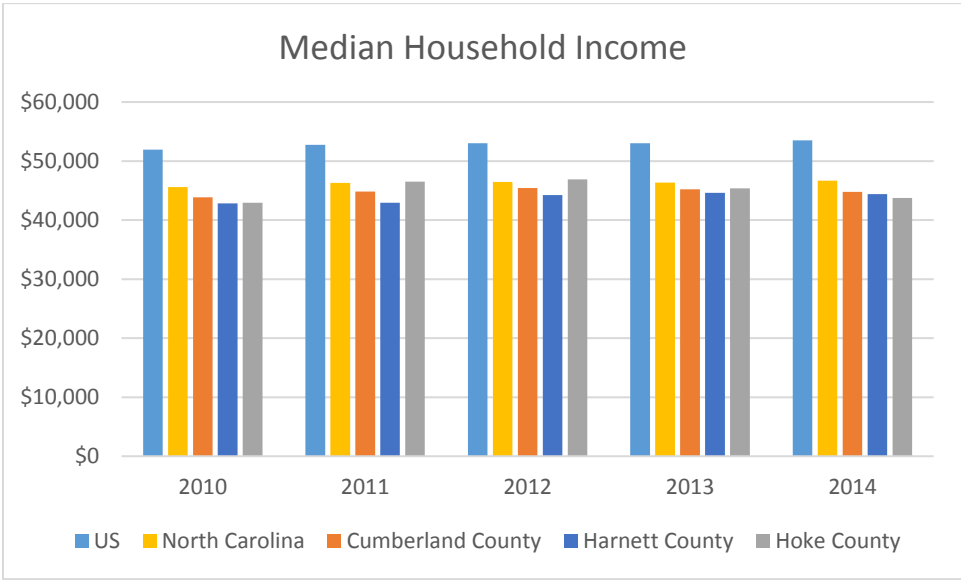
### Income

Across the board, the region experiences lower income than the state, which itself trails the nation on this metric. The differences are more pronounced on a per capita basis. The more recently available data does not bode well for this picture, as weekly wages for the region currently lag behind the state<sup>1</sup>.

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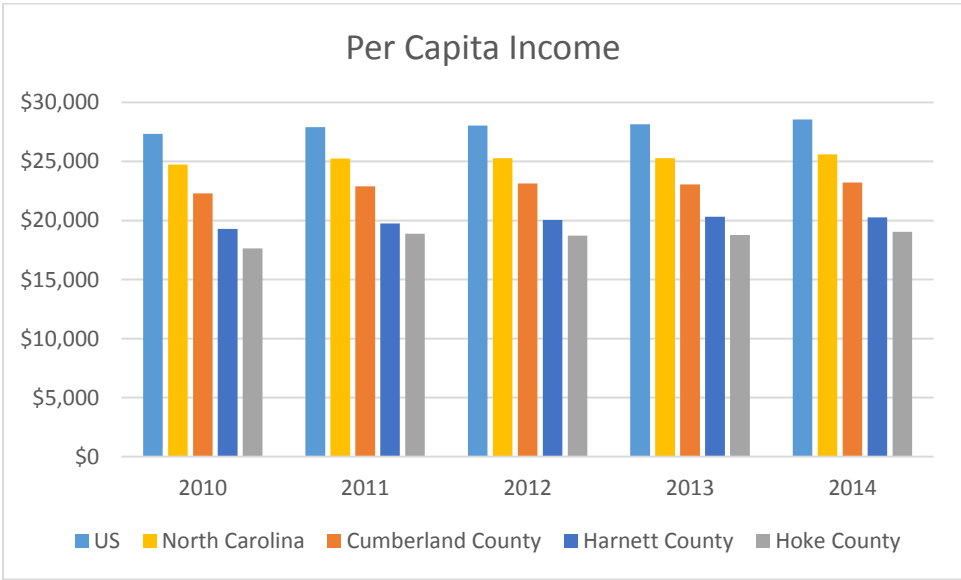
<sup>1</sup> Bureau of Labor Statistics, Q2 2016 data shows the region trailing the state by a weekly wage gap of between \$115 and \$252; with Cumberland County experiencing a 1.3% decline from the prior year.

Figure 24: Median Household Income



Source: U.S. Census Bureau

Figure 25: Per Capita Income



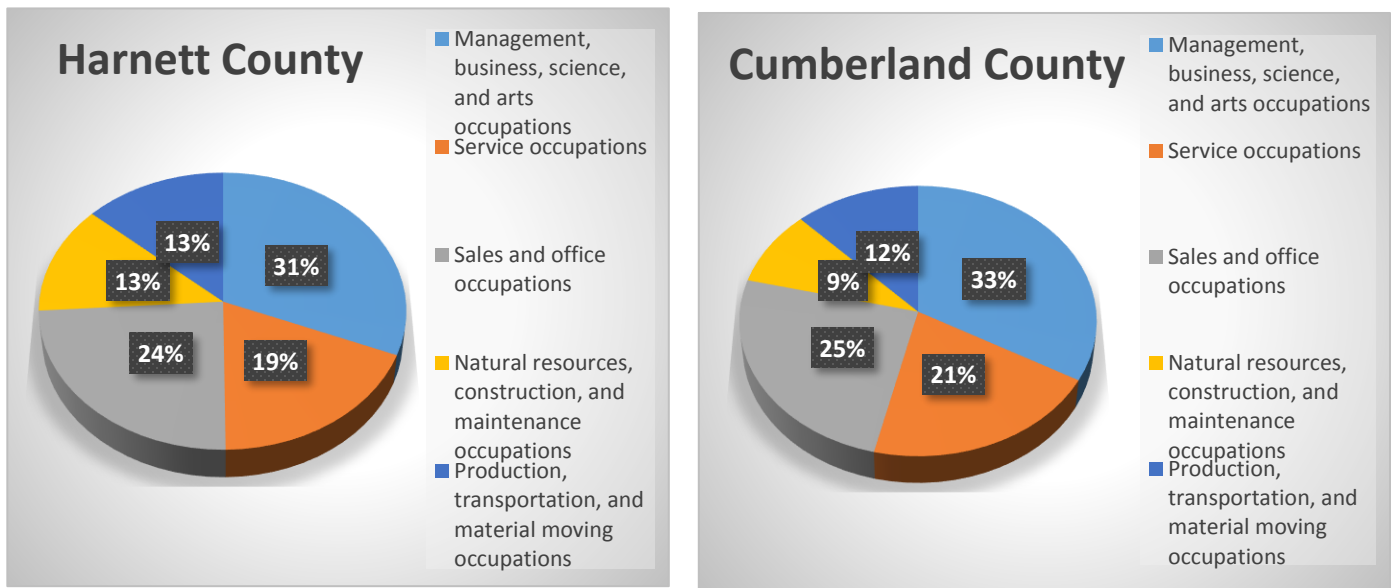
Source: U.S. Census Bureau

**Employment**

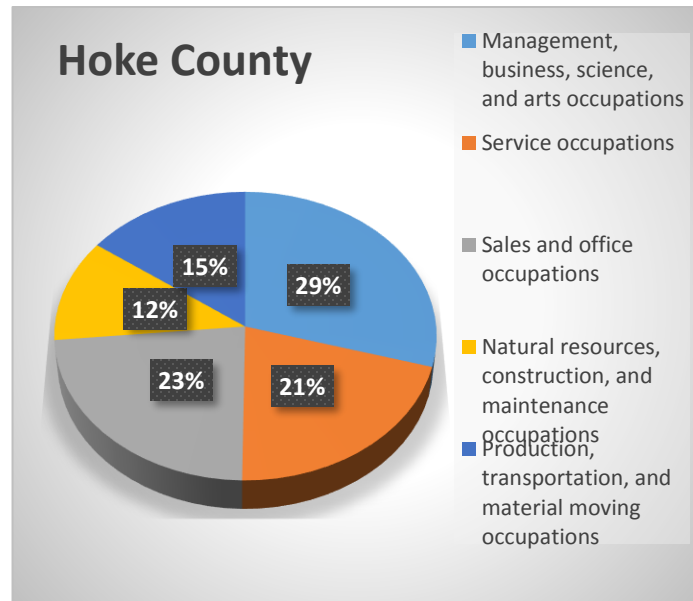
The region experiences higher levels of unemployment consistent with difference in the demographics and composition of the regional economy. A review of the employment situation, with respect to type of occupation and sector of the economy, can still be instructive.

The pattern of employment across the five classes of occupation varies slightly among the three counties. What stands out most glaringly is the relative weakness of employment in management, business, and science relative to the state and the country. As a proportion of total employment, the counties trail the state by three to seven percentage points and the nation by four to eight percentage points.

**Figure 26a, 26b, 26c: Employment by Sector**



Source: U.S. Census Bureau, 2014 American Community Survey



Source: U.S. Census Bureau, 2014 American Community Survey

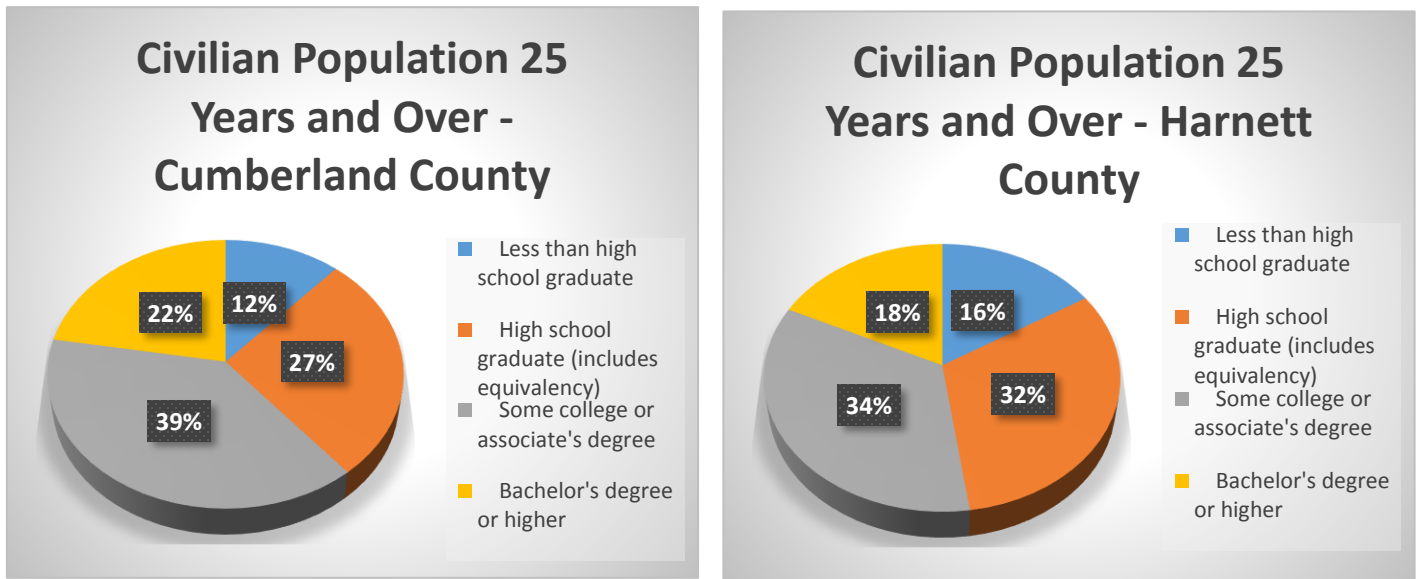
Employment within the three counties, like the nation, is dominated by private sector work, however the proportion of private sector jobs is markedly lower by between six and ten percentage points. The gap in private sector employment is filled by government jobs, which account for between 21 and 27 percent of the employment across the region. The comparable figures for the state and the nation is approximately 15 percent for government employment.

Lower levels of employment in higher wage occupations and the prevalence of government work within the region are two takeaways from this information that should attract attention.

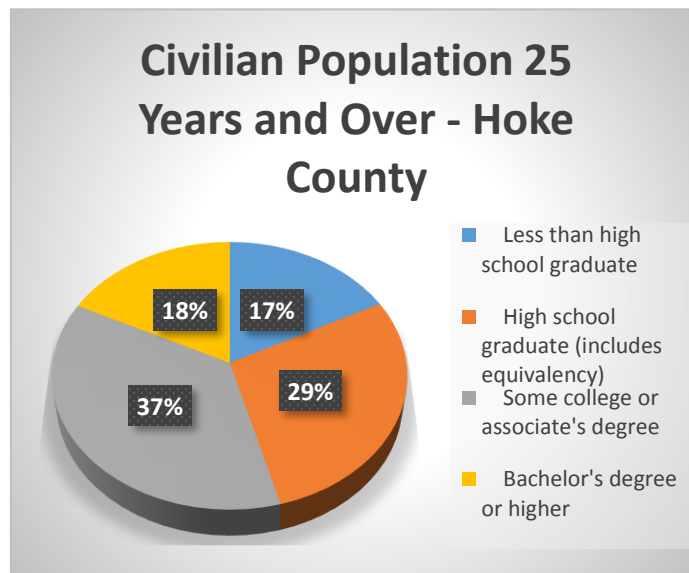
**Education**

The level of educational attainment of a workforce, a well-established determinant of employability and earnings, is a major component of the economic profile of any region. The region lags both the state and nation on the proportion of its labor force that have attained at least some college education. However, the component that pops out are those workers with a bachelor’s degree or higher, where the region is behind the state by between 25 and 58 percent and the nation by between 31 and 66 percent.

**Figure 27a, 27b, 27c: Civilian Population 25 Years and Over**



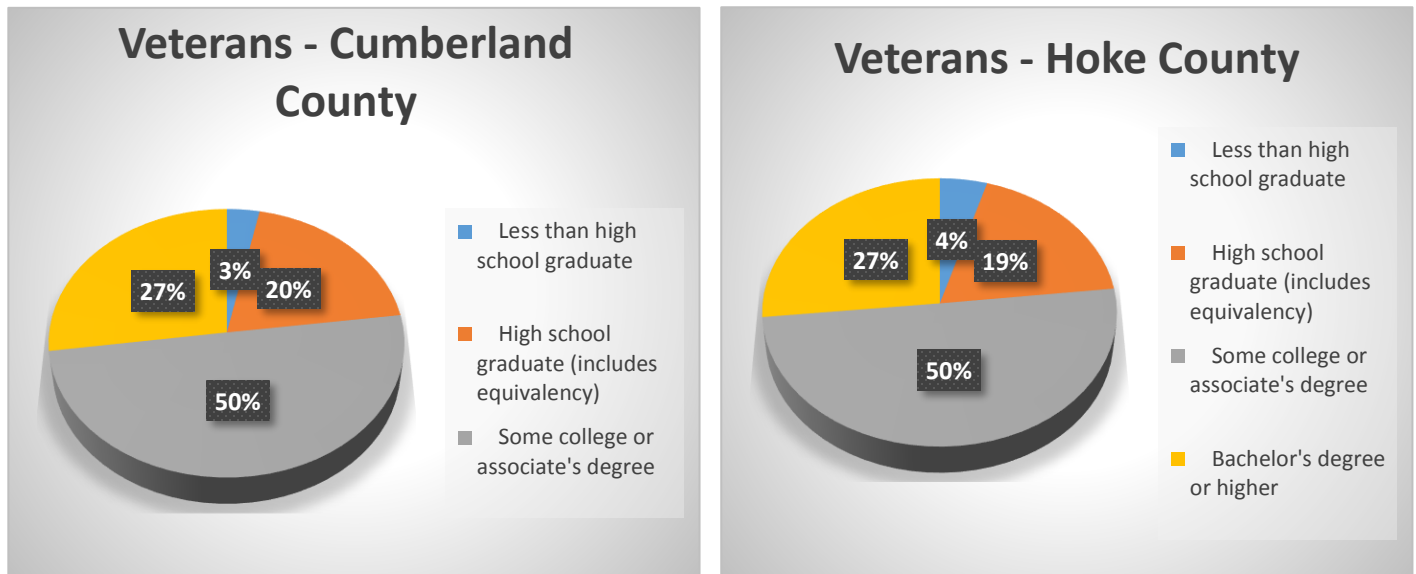
Source: U.S. Census Bureau, 2014 American Community Survey



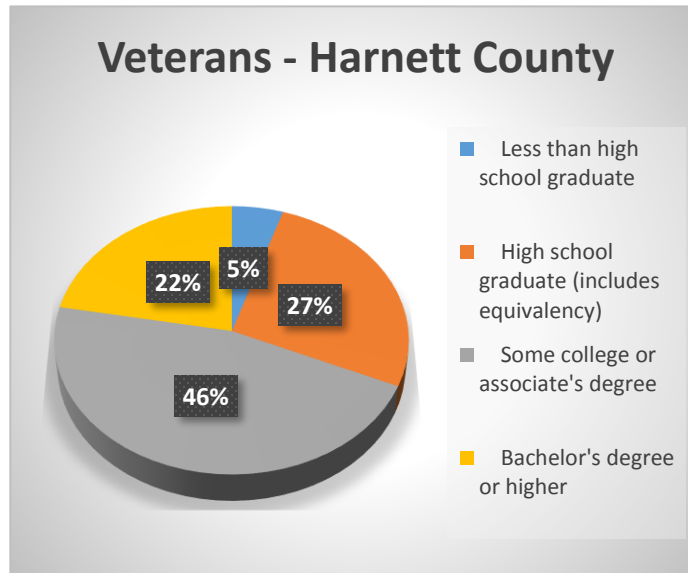
Source: U.S. Census Bureau, 2014 American Community Survey

The significance of the veteran community in this region is even more pronounced when the focus is shifted to the working population, 25 years and older. Of the 179,999 civilians 25 years and over that reside in Cumberland County, 40,192, or 22.3 percent, are veterans. Sixty-one percent of these Cumberland County civilians have some college or associate’s degree or higher, with 22 percent holding a bachelor’s degree or higher. However, for the veteran population within the county, the comparable figures are 77 percent with some college or associate degrees and higher, and 27 percent for bachelor’s degree or higher. A similar pattern in the higher education standing among the veteran population is observed for the other two counties; Harnett County with 52 percent and 18 percent for the overall civilian population, but 68 percent and 22 percent for the veteran population; and Hoke County at 55 percent and 18 percent for the civilian population, and 77 percent and 27 percent for the veteran population. Note that veterans comprise 15.5 percent of the civilian population 25 years and over in Harnett County and 16.2 percent in Hoke County.

**Figure 28a, 28b, 28c: Veterans**



Source: U.S. Census Bureau, 2014 American Community Survey



Source: U.S. Census Bureau, 2014 American Community Survey

## Housing

The housing stock and its characteristics are another important component of profile of the region. Except for Cumberland County, the distribution of the housing stock across the region is comparable with the state and the nation, with respect to tenure status, which hovers above 64 percent. The proportion of owner-occupied units for Cumberland County is only 54 percent<sup>2</sup>. The overall vacancy rates are also similar; however, rental vacancy rates tend to be slightly higher for the region relative to the country. The proportion of units with a mortgage is also higher for the region. Housing values as measured by median values are substantially higher outside of the region, ranging between 22 and 37 percent at the national level, and between 8 and 19 percent at the state level. The lower median housing unit values within the region is reflected by over 50 percent of the units valued at less \$150,000, while the opposite is true for both the state and nation as whole, for which it is 48 and 41 percent respectively.

## Businesses

Approximately 3.5 percent of North Carolina's businesses are located within the three counties, with Cumberland County serving as home to 74 percent of these. The earnings of workers within the counties are somewhat lower than the proportion of business and employees, which is indicative of lower wages. This pattern remained stable over the 2010-14 period. Cumberland County's continued primacy in terms of number of business enterprises is also reflected in the number of employees and payroll, with some slight advantage. The adverse changes over the

<sup>2</sup> The relatively large number of armed forces personnel who reside in Cumberland County may in fact be a contributing factor, since the reported armed forces owner-occupied proportion is around 50 percent, which is much lower than the national average.

five-year period are the decline in the number of business in Cumberland and Hoke counties, along with an associated drop in employment. Hoke County’s employment decreased by 9.5 percent, and only Hoke recorded a decline in payroll.

For Cumberland County, the construction and manufacturing sectors suffered the largest percentage declines in number of businesses, but the corresponding payroll losses was smaller. These and other major payroll declines in finance and insurance and management companies were offset by payroll increases at health care and social assistance, educational services, accommodation and food services, and transportation and warehousing businesses. The unfavorable situation reported for Hoke County is driven by manufacturing, which suffered an 8 percent drop in the number of business, a 39 percent drop in employees, and over 30 percent drop in payroll. The experience of Hoke County would have been more severe except for some positive movement in the payroll situation in health care and social assistance and the retail trade.

**Table 16: County Business Patterns**

County Business Patterns - 2014				
	Number of establishments	Paid employees for pay period including March 12 (number)	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)
<b>North Carolina</b>	219,897	3,560,448	40,008,913	155,372,284
<b>Cumberland County</b>	5,689	92,537	741,621	3,079,679
<b>Harnett County</b>	1,609	19,249	138,484	582,528
<b>Hoke County</b>	417	5,015	30,048	126,724

Source: U.S. Census Bureau, 2014 American Community Survey

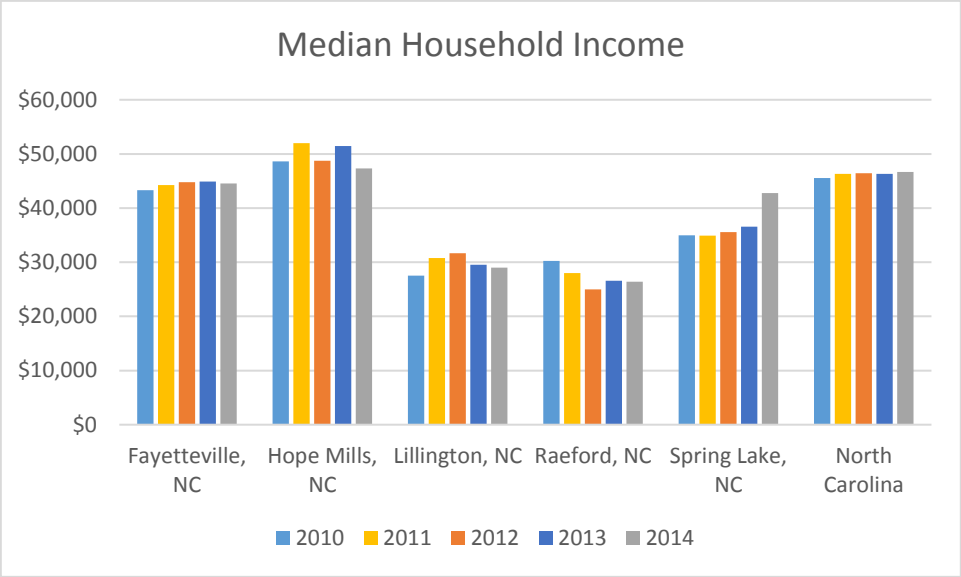
### Major Towns

Of the five major towns within the region, three are in Cumberland County, and there is one each in Harnett and Hoke counties. The major towns are Fayetteville, Hope Mills, Lillington, Raeford, and Spring Lake. Fayetteville is far larger than the other towns in terms of both the population and the economy, features which in turn affect several other aspects of a community. The population of Fayetteville far exceeds the population of the other four towns combined.

Household income at the state level exceeds that of all the towns except for Hope Mills. On a per capita income basis, the state leads all five towns by at least seven percent, but exceeds Lillington, which has experienced a decline in per capita income over the past five years, by a whopping 98 percent.

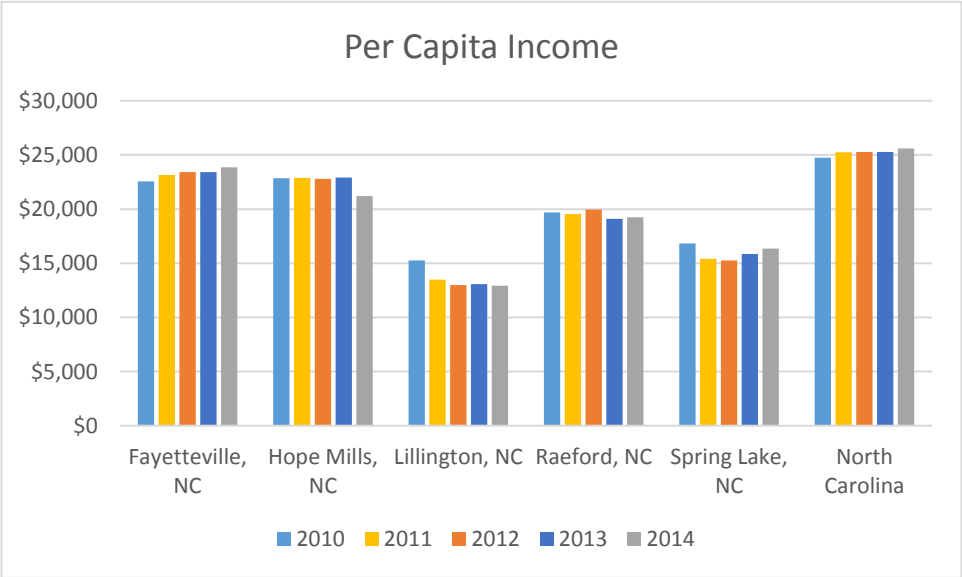


**Figure 29: Median Household Income**



Source: U.S. Census Bureau, 2014 American Community Survey

**Figure 30: Per Capita Income**



Source: U.S. Census Bureau, 2014 American Community Survey

Table 17: Selected Economic Data Counties

Census Bureau, American Community Survey 2010-2014	United States	North Carolina	Cumberland County	Harnett County	Hoke County
<b>Total population</b>	314,107,084	9,750,405	324,002	121,789	50,034
<b>Male</b>	154,515,159	4,750,366	157,667	59,921	24,456
<b>Female</b>	159,591,925	5,000,039	166,335	61,868	25,578
<b>Median age (years)</b>	37.4	37.8	31.0	33.4	31.1
<b>White alone</b>	62.8%	64.6%	46.1%	63.4%	41.0%
<b>Black or African American alone</b>	12.2%	21.2%	35.3%	20.4%	32.3%
<b>Hispanic or Latino (of any race)</b>	16.9%	8.7%	10.4%	11.4%	12.4%
<b>Asian alone</b>	4.9%	2.4%	2.3%	1.1%	1.2%
<b>American Indian and Alaska Native alone</b>	0.7%	1.1%	1.1%	0.8%	8.0%
<b>Other races alone</b>	0.4%	0.3%	0.6%	0.1%	0.5%
<b>Two or more races</b>	2.1%	1.9%	4.3%	2.7%	4.6%
<b>EMPLOYMENT STATUS</b>					
<b>Population 16 years and over</b>	248,775,628	7,717,630	247,401	91,521	36,653
<b>In labor force</b>	158,965,511	4,879,118	162,166	56,119	22,634
<b>Civilian labor force</b>	157,940,014	4,793,358	135,172	51,665	19,504
<b>Employed</b>	143,435,233	4,287,690	117,557	45,298	16,862
<b>Unemployed</b>	14,504,781	505,668	17,615	6,367	2,642
<b>Armed Forces</b>	1,025,497	85,760	26,994	4,454	3,130
<b>Not in labor force</b>	89,810,117	2,838,512	85,235	35,402	14,019
<b>Civilian labor force</b>	157,940,014	4,793,358	135,172	51,665	19,504
<b>Percent Unemployed</b>	9.2%	10.5%	13.0%	12.3%	13.5%
<b>Mean family income (dollars)</b>	86,963	75,892	65,716	63,968	59,021
<b>Median family income (dollars)</b>	65,443	57,328	52,106	53,089	53,102
<b>Per capita income (dollars)</b>	28,555	25,608	23,204	20,274	19,036
<b>Median household income (dollars)</b>	53,482	46,693	44,778	44,417	43,754
<b>Mean household income (dollars)</b>	74,596	64,555	58,139	56,723	54,760
<b>Median earnings for workers (dollars)</b>	30,815	28,159	28,591	27,643	26,915
<b>Median earnings for male full-time,     year-round workers (dollars)</b>	49,400	43,437	40,371	43,547	43,323
<b>Median earnings for female full-time,     year-round workers (dollars)</b>	39,087	35,472	32,736	32,334	31,807

Census Bureau, American Community Survey 2010-2014	United States	North Carolina	Cumberland County	Harnett County	Hoke County
<b>OCCUPATION BY CLASS OF WORKER</b>					
<b>Civilian employed population 16 years and over</b>	143,435,233	4,287,690	117,557	45,298	16,862
<b>Management, business, science, and arts occupations</b>	52,234,574	1,541,258	39,027	14,125	4,968
<b>Service occupations</b>	26,053,338	758,433	24,122	8,433	3,503
<b>Sales and office occupations</b>	34,935,133	1,016,981	29,512	10,948	3,923
<b>Natural resources, construction, and maintenance occupations</b>	12,875,934	403,182	10,605	5,725	1,941
<b>Production, transportation, and material moving occupations</b>	17,336,254	567,836	14,291	6,067	2,527
<b>INDUSTRY</b>					
<b>Civilian employed population 16 years and over</b>	143,435,233	4,287,690	117,557	45,298	16,862
<b>Agriculture, forestry, fishing and hunting, and mining</b>	2,807,292	59,781	645	679	345
<b>Construction</b>	8,843,718	284,986	6,702	4,201	949
<b>Manufacturing</b>	14,955,235	535,084	9,051	4,884	2,415
<b>Wholesale trade</b>	3,937,598	118,706	1,686	1,365	254
<b>Retail trade</b>	16,598,718	506,433	15,848	5,316	1,932
<b>Transportation and warehousing, and utilities</b>	7,066,666	184,221	4,954	1,810	417
<b>Information</b>	3,064,078	77,183	1,904	605	267
<b>Finance and insurance, and real estate and rental and leasing</b>	9,467,555	268,732	4,766	2,027	366
<b>Professional, scientific, and management, and administrative and waste management services</b>	15,618,627	431,640	9,005	3,927	998
<b>Educational services, and health care and social assistance</b>	33,297,237	1,011,582	32,578	10,374	4,650
<b>Arts, entertainment, and recreation, and accommodation and food services</b>	13,610,162	402,861	12,520	3,745	1,515
<b>Other services, except public administration</b>	7,112,579	211,390	5,780	2,159	920
<b>Public administration</b>	7,055,768	195,091	12,118	4,206	1,834
<b>CLASS OF WORKER (SECTOR)</b>					
<b>Civilian employed population 16 years and over</b>	143,435,233	4,287,690	117,557	45,298	16,862
<b>Private wage and salary workers</b>	79.1%	78.9%	69.0%	72.8%	70.7%
<b>Government workers</b>	14.6%	15.2%	26.6%	20.7%	24.3%
<b>Self-employed in own not incorporated business workers</b>	6.1%	5.8%	4.3%	6.2%	4.9%
<b>Unpaid family workers</b>	0.2%	0.2%	0.1%	0.2%	0.1%
<b>OCCUPATION BY CLASS OF WORKER</b>					
<b>Civilian employed population 16 years and over</b>	143,435,233	4,287,690	117,557	45,298	16,862
<b>Management, business, science, and arts occupations</b>	36.4%	35.9%	33.2%	31.2%	29.5%

Census Bureau, American Community Survey 2010-2014	United States	North Carolina	Cumberland County	Harnett County	Hoke County
<b>Service occupations</b>	18.2%	17.7%	20.5%	18.6%	20.8%
<b>Sales and office occupations</b>	24.4%	23.7%	25.1%	24.2%	23.3%
<b>Natural resources, construction, and maintenance occupations</b>	9.0%	9.4%	9.0%	12.6%	11.5%
<b>Production, transportation, and material moving occupations</b>	12.1%	13.2%	12.2%	13.4%	15.0%
<b>Educational attainment of population 25 years and older</b>					
<b>Less than high school</b>	13.7%	14.7%	11.6%	16.1%	17.3%
<b>High school graduate</b>	28.0%	26.9%	27.4%	31.6%	28.5%
<b>Some college, associate</b>	29.0%	30.6%	38.7%	34.4%	36.6%
<b>Bachelor's degree or higher</b>	29.3%	27.8%	22.3%	17.8%	17.6%
<b>Veterans</b>					
<b>Less than high school</b>	7.4%	7.3%	3.2%	5.0%	4.6%
<b>High school graduate</b>	29.3%	27.7%	19.7%	26.6%	18.6%
<b>Some college, associate</b>	36.6%	39.2%	49.9%	46.3%	50.1%
<b>Bachelor's degree or higher</b>	26.6%	25.8%	27.2%	22.1%	26.6%
<b>Nonveterans</b>					
<b>Less than high school</b>	14.4%	15.6%	14.0%	18.2%	19.8%
<b>High school graduate</b>	27.9%	26.8%	29.6%	32.5%	30.4%
<b>Some college, associate</b>	28.2%	29.5%	35.5%	32.2%	34.0%
<b>Bachelor's degree or higher</b>	29.5%	28.0%	20.9%	17.0%	15.9%
<b>HOUSING OCCUPANCY</b>					
<b>Total housing units</b>	132,741,033	4,385,668	140,410	48,122	19,147
<b>Occupied housing units</b>	116,211,092	3,742,514	122,288	41,601	16,534
<b>Vacant housing units</b>	16,529,941	643,154	18,122	6,521	2,613
<b>Homeowner vacancy rate</b>					
<b>Rental vacancy rate</b>	2.1	2.4	3.0	2.5	3.8
<b>HOUSING TENURE</b>					
<b>Occupied housing units</b>	116,211,092	3,742,514	122,288	41,601	16,534
<b>Owner-occupied</b>	74,787,460	2,461,741	53.7%	66.1%	66.6%
<b>Renter-occupied</b>	41,423,632	1,280,773	46.3%	33.9%	33.4%
<b>VALUE</b>					
<b>Owner-occupied units</b>	74,787,460	2,461,741	65,642	27,488	11,010

Census Bureau, American Community Survey 2010-2014	United States	North Carolina	Cumberland County	Harnett County	Hoke County
Less than \$50,000	9.3%	10.2%	9.1%	13.0%	13.2%
\$50,000 to \$99,999	15.6%	18.0%	24.9%	21.8%	19.4%
\$100,000 to \$149,999	16.0%	20.3%	24.8%	22.1%	19.8%
\$150,000 to \$199,999	15.1%	17.5%	18.0%	18.4%	27.8%
\$200,000 to \$299,999	18.2%	17.5%	15.2%	16.2%	14.9%
\$300,000 to \$499,999	15.5%	11.3%	6.2%	6.4%	4.6%
\$500,000 to \$999,999	8.2%	4.3%	1.4%	1.7%	0.2%
\$1,000,000 or more	2.1%	0.9%	0.3%	0.4%	0.1%
Median (dollars)	175,700	153,600	128,600	133,400	143,500
<b>MORTGAGE STATUS</b>					
Owner-occupied units	74,787,460	2,461,741	65,642	27,488	11,010
Housing units with a mortgage	65.6%	66.1%	70.7%	68.0%	72.3%
Housing units without a mortgage	34.4%	33.9%	29.3%	32.0%	27.7%

Source: U.S. Census Bureau, 2014 American Community Survey

**Table 18: North Carolina Business Pattern**

North Carolina	Number of establishments	Paid employees for pay period including March 12 (number)	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)
<b>Total for all sectors</b>	219,897	3,560,448	40,008,913	155,372,284
<b>Agriculture, forestry, fishing and hunting</b>	790	4,671	41,709	174,888
<b>Mining, quarrying, and oil and gas extraction</b>	206	3,233	39,158	167,300
<b>Utilities</b>	562	19,494	558,591	1,818,309
<b>Construction</b>	21,086	167,929	1,667,398	7,528,882
<b>Manufacturing</b>	8,721	408,132	4,810,536	19,609,960
<b>Wholesale trade</b>	11,674	174,694	3,306,229	11,877,850
<b>Retail trade</b>	34,246	469,243	2,773,634	11,547,754
<b>Transportation and warehousing</b>	5,509	113,804	1,204,170	4,964,460
<b>Information</b>	3,469	80,535	1,524,539	5,687,425
<b>Finance and insurance</b>	13,085	172,319	5,119,189	14,506,552
<b>Real estate and rental and leasing</b>	10,618	51,023	519,652	2,172,662
<b>Professional, scientific, and technical services</b>	23,413	203,500	3,468,905	14,318,796
<b>Management of companies and enterprises</b>	1,781	92,537	2,880,292	9,622,942
<b>Administrative and support and waste management and remediation services</b>	12,281	355,469	2,782,217	12,030,004
<b>Educational services</b>	2,671	94,867	912,468	3,792,715

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Health care and social assistance	23,053	560,309	5,742,940	24,055,763
Arts, entertainment, and recreation	3,576	60,055	398,066	1,762,635
Accommodation and food services	19,923	379,757	1,337,353	5,874,571
Other services (except public administration)	22,796	148,355	919,881	3,849,416
Industries not classified	437	f	1,986	9,400

Source: U.S. Census Bureau, 2014 County Business Patterns

**Table 19: Cumberland County Business Pattern**

<b>Cumberland County</b>				
	Number of establishments	Paid employees for pay period including March 12 (number)	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)
<b>Total for all sectors</b>	5,689	92,537	741,621	3,079,679
<b>Agriculture, forestry, fishing and hunting</b>	8	c	D	D
<b>Mining, quarrying, and oil and gas extraction</b>	5	b	D	D
<b>Utilities</b>	10	302	4,660	20,814
<b>Construction</b>	432	3,455	30,782	137,404
<b>Manufacturing</b>	95	6,834	79,938	338,814
<b>Wholesale trade</b>	160	2,302	22,247	90,567
<b>Retail trade</b>	1,069	16,603	96,324	396,238
<b>Transportation and warehousing</b>	152	3,776	38,519	158,345
<b>Information</b>	62	1,741	17,719	69,197
<b>Finance and insurance</b>	306	1,928	24,480	88,589
<b>Real estate and rental and leasing</b>	323	1,748	16,230	61,194
<b>Professional, scientific, and technical services</b>	575	5,073	67,506	284,420
<b>Management of companies and enterprises</b>	31	303	5,777	29,190
<b>Administrative and support and waste management and remediation services</b>	249	7,247	44,947	185,612
<b>Educational services</b>	69	2,318	14,239	59,879
<b>Health care and social assistance</b>	772	19,268	204,123	842,677
<b>Arts, entertainment, and recreation</b>	66	972	3,232	14,082
<b>Accommodation and food services</b>	652	13,871	45,458	193,529
<b>Other services (except public administration)</b>	645	4,662	24,575	105,196
<b>Industries not classified</b>	8	a	13	122

Source: U.S. Census Bureau, 2014 County Business Patterns

Table 20: Harnett County Business Pattern

Harnett County				
	Number of establishments	Paid employees for pay period including March 12 (number)	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)
<b>Total for all sectors</b>	1,609	19,249	138,484	582,528
<b>Agriculture, forestry, fishing and hunting</b>	6	a	D	D
<b>Mining, quarrying, and oil and gas extraction</b>	4	e	D	D
<b>Utilities</b>	2	b	D	D
<b>Construction</b>	233	1,289	9,816	45,327
<b>Manufacturing</b>	60	1,330	12,010	53,245
<b>Wholesale trade</b>	56	500	4,839	18,957
<b>Retail trade</b>	273	3,242	17,145	71,574
<b>Transportation and warehousing</b>	39	1,109	10,724	44,889
<b>Information</b>	14	c	D	D
<b>Finance and insurance</b>	89	568	6,606	25,212
<b>Real estate and rental and leasing</b>	76	251	1,391	5,828
<b>Professional, scientific, and technical services</b>	109	433	3,915	18,851
<b>Management of companies and enterprises</b>	5	c	731	4,823
<b>Administrative and support and waste management and remediation services</b>	96	918	5,796	26,088
<b>Educational services</b>	24	g	D	D
<b>Health care and social assistance</b>	169	3,757	30,242	117,420
<b>Arts, entertainment, and recreation</b>	16	79	362	1,612
<b>Accommodation and food services</b>	157	2,690	7,224	30,358
<b>Other services (except public administration)</b>	177	788	3,999	16,990
<b>Industries not classified</b>	4	a	S	43

Source: U.S. Census Bureau, 2014 County Business Patterns

Table 21: Hoke County Business Pattern

Hoke County				
	Number of establishments	Paid employees for pay period including March 12 (number)	First-quarter payroll (\$1,000)	Annual payroll (\$1,000)
<b>Total for all sectors</b>	417	5,015	30,048	126,724
<b>Agriculture, forestry, fishing and hunting</b>	2	a	D	D
<b>Utilities</b>	3	a	D	D
<b>Construction</b>	38	258	1,995	8,482

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<b>Manufacturing</b>	11	1,436	11,148	45,093
<b>Wholesale trade</b>	10	94	814	3,996
<b>Retail trade</b>	79	819	4,410	18,813
<b>Transportation and warehousing</b>	15	c	D	D
<b>Information</b>	5	b	D	D
<b>Finance and insurance</b>	16	75	701	2,475
<b>Real estate and rental and leasing</b>	22	46	295	1,145
<b>Professional, scientific, and technical services</b>	38	c	702	3,046
<b>Administrative and support and waste management and remediation services</b>	21	110	287	1,188
<b>Educational services</b>	5	b	D	D
<b>Health care and social assistance</b>	65	1,092	6,105	27,808
<b>Arts, entertainment, and recreation</b>	6	20	80	320
<b>Accommodation and food services</b>	24	481	1,120	5,067
<b>Other services (except public administration)</b>	56	248	992	3,826
<b>Industries not classified</b>	1	a	D	D

Source: U.S. Census Bureau, 2014 County Business Patterns

**Table 22: Industry Employment by Town**

Fayetteville						
	Total	Management, business, science, and arts occupations	Service occupations	Sales and office occupations	Natural resources, construction, and maintenance occupations	Production, transportation, and material moving occupations
<b>Civilian employed population 16 years and over</b>	70,730	34.5%	21.2%	25.8%	7.9%	10.7%
<b>Agriculture, forestry, fishing and hunting, and mining</b>	208	20.2%	0.0%	5.8%	58.7%	15.4%
<b>Construction</b>	3,294	15.1%	0.6%	9.8%	71.1%	3.4%
<b>Manufacturing</b>	4,579	13.4%	2.7%	9.0%	9.2%	65.7%
<b>Wholesale trade</b>	897	21.4%	1.0%	47.7%	5.1%	24.7%
<b>Retail trade</b>	9,591	6.0%	5.1%	75.6%	3.9%	9.3%
<b>Transportation and warehousing, and utilities</b>	2,473	7.8%	2.8%	31.9%	6.4%	51.2%
<b>Information</b>	1,089	32.0%	2.8%	45.0%	18.2%	2.0%
<b>Finance and insurance, and real estate and rental and leasing</b>	2,949	33.1%	4.8%	53.2%	4.4%	4.5%
<b>Professional, scientific, and management, and administrative and waste management services</b>	5,209	45.2%	22.3%	21.2%	3.8%	7.5%
<b>Educational services, and health care and social assistance</b>	20,178	65.5%	22.0%	9.9%	0.5%	2.0%



<b>Arts, entertainment, and recreation, and accommodation and food services</b>	8,503	15.2%	62.1%	18.1%	0.3%	4.4%
<b>Other services, except public administration</b>	3,659	19.5%	38.3%	14.2%	17.7%	10.4%
<b>Public administration</b>	8,101	41.8%	22.4%	22.2%	9.9%	3.7%
<b>Hope Mills</b>						
	Total	Management, business, science, and arts occupations	Service occupations	Sales and office occupations	Natural resources, construction, and maintenance occupations	Production, transportation, and material moving occupations
<b>Civilian employed population 16 years and over</b>	6,027	32.2%	19.3%	26.7%	7.4%	14.4%
<b>Agriculture, forestry, fishing and hunting, and mining</b>	0	-	-	-	-	-
<b>Construction</b>	240	20.0%	0.0%	0.0%	74.6%	5.4%
<b>Manufacturing</b>	520	4.6%	3.8%	19.6%	10.6%	61.3%
<b>Wholesale trade</b>	135	0%	8.9%	43.0%	0.0%	48.1%
<b>Retail trade</b>	780	8.1%	3.5%	70.4%	4.9%	13.2%
<b>Transportation and warehousing, and utilities</b>	280	0.0%	0.0%	35.0%	0.0%	65.0%
<b>Information</b>	64	0.0%	10.9%	67.2%	21.9%	0.0%
<b>Finance and insurance, and real estate and rental and leasing</b>	252	38.1%	10.7%	51.2%	0.0%	0.0%
<b>Professional, scientific, and management, and administrative and waste management services</b>	420	14.8%	20.2%	36.7%	14.8%	13.6%
<b>Educational services, and health care and social assistance</b>	1,629	70.6%	16.9%	9.1%	1.5%	1.9%
<b>Arts, entertainment, and recreation, and accommodation and food services</b>	723	23.0%	53.0%	17.2%	0.0%	6.9%
<b>Other services, except public administration</b>	359	17.5%	46.0%	15.3%	13.6%	7.5%
<b>Public administration</b>	625	42.9%	25.6%	24.3%	3.7%	3.5%
<b>Lillington</b>						
	Total	Management, business, science, and arts	Service occupations	Sales and office occupations	Natural resources, construction, and maintenance occupations	Production, transportation, and material moving occupations

	occupations					
<b>Civilian employed population 16 years and over</b>	836	34.1%	23.3%	19.7%	3.8%	19.0%
<b>Agriculture, forestry, fishing and hunting, and mining</b>	16	100.0%	0.0%	0.0%	0.0%	0.0%
<b>Construction</b>	37	27.0%	0.0%	0.0%	29.7%	43.2%
<b>Manufacturing</b>	88	11.4%	0.0%	14.8%	13.6%	60.2%
<b>Wholesale trade</b>	24	37.5%	0.0%	16.7%	0.0%	45.8%
<b>Retail trade</b>	76	2.6%	0.0%	73.7%	0.0%	23.7%
<b>Transportation and warehousing, and utilities</b>	33	33.3%	0.0%	33.3%	9.1%	24.2%
<b>Information</b>	18	22.2%	0.0%	0.0%	16.7%	61.1%
<b>Finance and insurance, and real estate and rental and leasing</b>	26	19.2%	0.0%	80.8%	0.0%	0.0%
<b>Professional, scientific, and management, and administrative and waste management services</b>	76	51.3%	28.9%	15.8%	3.9%	0.0%
<b>Educational services, and health care and social assistance</b>	276	44.9%	43.1%	2.9%	0.0%	9.1%
<b>Arts, entertainment, and recreation, and accommodation and food services</b>	61	27.9%	60.7%	11.5%	0.0%	0.0%
<b>Other services, except public administration</b>	37	10.8%	29.7%	13.5%	0.0%	45.9%
<b>Public administration</b>	68	50.0%	8.8%	41.2%	0.0%	0.0%
<b>Raeford</b>						
	Total	Management, business, science, and arts occupations	Service occupations	Sales and office occupations	Natural resources, construction, and maintenance occupations	Production, transportation, and material moving occupations
<b>Civilian employed population 16 years and over</b>	1,630	29.0%	22.9%	24.4%	8.2%	15.5%
<b>Agriculture, forestry, fishing and hunting, and mining</b>	0	0.0%	-	-	-	-
<b>Construction</b>	25	0.0%	0.0%	0.0%	100.0%	0.0%
<b>Manufacturing</b>	339	20.1%	0.0%	0.0%	13.6%	66.4%
<b>Wholesale trade</b>	0	-	-	-	-	-
<b>Retail trade</b>	223	0.0%	0.0%	87.4%	0.0%	12.6%
<b>Transportation and warehousing, and utilities</b>	0	-	-	-	-	-
<b>Information</b>	23	0.0%	0.0%	100.0%	0.0%	0.0%

<b>Finance and insurance, and real estate and rental and leasing</b>	14	57.1%	0.0%	42.9%	0.0%	0.0%
<b>Professional, scientific, and management, and administrative and waste management services</b>	74	14.9%	17.6%	67.6%	0.0%	0.0%
<b>Educational services, and health care and social assistance</b>	581	52.7%	31.8%	15.5%	0.0%	0.0%
<b>Arts, entertainment, and recreation, and accommodation and food services</b>	155	0.0%	100.0%	0.0%	0.0%	0.0%
<b>Other services, except public administration</b>	92	39.1%	0.0%	22.8%	38.0%	0.0%
<b>Public administration</b>	104	41.3%	20.2%	11.5%	26.9%	0.0%
<b>Spring Lake</b>						
	Total	Management, business, science, and arts occupations	Service occupations	Sales and office occupations	Natural resources, construction, and maintenance occupations	Production, transportation, and material moving occupations
<b>Civilian employed population 16 years and over</b>	3,080	26.6%	31.2%	26.0%	4.6%	11.6%
<b>Agriculture, forestry, fishing and hunting, and mining</b>	10	0.0%	0.0%	0.0%	100.0%	0.0%
<b>Construction</b>	102	20.6%	0.0%	0.0%	79.4%	0.0%
<b>Manufacturing</b>	164	9.1%	0.0%	0.0%	17.7%	73.2%
<b>Wholesale trade</b>	22	68.2%	0.0%	31.8%	0.0%	0.0%
<b>Retail trade</b>	609	7.7%	3.4%	81.0%	0.0%	7.9%
<b>Transportation and warehousing, and utilities</b>	105	24.8%	0.0%	10.5%	0.0%	64.8%
<b>Information</b>	41	61.0%	0.0%	39.0%	0.0%	0.0%
<b>Finance and insurance, and real estate and rental and leasing</b>	132	67.4%	15.2%	17.4%	0.0%	0.0%
<b>Professional, scientific, and management, and administrative and waste management services</b>	236	5.9%	58.1%	36.0%	0.0%	0.0%
<b>Educational services, and health care and social assistance</b>	789	48.3%	42.7%	4.9%	0.0%	4.1%
<b>Arts, entertainment, and recreation, and accommodation and food services</b>	473	9.3%	65.8%	7.6%	0.0%	17.3%
<b>Other services, except public administration</b>	112	11.6%	71.4%	8.0%	8.9%	0.0%
<b>Public administration</b>	285	44.9%	19.3%	28.8%	4.2%	2.8%

Source: U.S. Census Bureau, 2014 American Community Survey

**Table 23: Employment by Sector by Town**

Employment by Sectors					
	Fayetteville	Hope Mills	Lillington	Raeford	Spring Lake
<b>Civilian employed population 16 years and over</b>	70,730	6,027	836	1,630	3,080
<b>Agriculture, forestry, fishing and hunting, and mining</b>	208	0	16	0	10
<b>Construction</b>	3,294	240	37	25	102
<b>Manufacturing</b>	4,579	520	88	339	164
<b>Wholesale trade</b>	897	135	24	0	22
<b>Retail trade</b>	9,591	780	76	223	609
<b>Transportation and warehousing, and utilities</b>	2,473	280	33	0	105
<b>Information</b>	1,089	64	18	23	41
<b>Finance and insurance, and real estate and rental and leasing</b>	2,949	252	26	14	132
<b>Professional, scientific, and management, and administrative and waste management services</b>	5,209	420	76	74	236
<b>Educational services, and health care and social assistance</b>	20,178	1,629	276	581	789
<b>Arts, entertainment, and recreation, and accommodation and food services</b>	8,503	723	61	155	473
<b>Other services, except public administration</b>	3,659	359	37	92	112
<b>Public administration</b>	8,101	625	68	104	285
<b>Total</b>	70,730	6,027	836	1,630	3,080
<b>Employment by Sectors (percent)</b>					
	Fayetteville	Hope Mills	Lillington	Raeford	Spring Lake
<b>Civilian employed population 16 years and over</b>	100.0%	100.0%	100.0%	100.0%	100.0%
<b>Agriculture, forestry, fishing and hunting, and mining</b>	0.3%	0.0%	1.9%	0.0%	0.3%
<b>Construction</b>	4.7%	4.0%	4.4%	1.5%	3.3%
<b>Manufacturing</b>	6.5%	8.6%	10.5%	20.8%	5.3%
<b>Wholesale trade</b>	1.3%	2.2%	2.9%	0.0%	0.7%
<b>Retail trade</b>	13.6%	12.9%	9.1%	13.7%	19.8%
<b>Transportation and warehousing, and utilities</b>	3.5%	4.6%	3.9%	0.0%	3.4%
<b>Information</b>	1.5%	1.1%	2.2%	1.4%	1.3%
<b>Finance and insurance, and real estate and rental and leasing</b>	4.2%	4.2%	3.1%	0.9%	4.3%
<b>Professional, scientific, and management, and administrative and waste management services</b>	7.4%	7.0%	9.1%	4.5%	7.7%

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<b>Educational services, and health care and social assistance</b>	28.5%	27.0%	33.0%	35.6%	25.6%
<b>Arts, entertainment, and recreation, and accommodation and food services</b>	12.0%	12.0%	7.3%	9.5%	15.4%
<b>Other services, except public administration</b>	5.2%	6.0%	4.4%	5.6%	3.6%
<b>Public administration</b>	11.5%	10.4%	8.1%	6.4%	9.3%
<b>Total</b>	100%	100%	100%	100%	100%
<b>Employment by Occupations</b>					
	Fayetteville	Hope Mills	Lillington	Raeford	Spring Lake
<b>Civilian employed population 16 years and over</b>	70,730	6,027	836	1,630	3,080
<b>Management, business, science, and arts occupations</b>	34.5%	32.2%	34.1%	29.0%	26.6%
<b>Service occupations</b>	21.2%	19.3%	23.3%	22.9%	31.2%
<b>Sales and office occupations</b>	25.8%	26.7%	19.7%	24.4%	26.0%
<b>Natural resources, construction, and maintenance occupations</b>	7.9%	7.4%	3.8%	8.2%	4.6%
<b>Production, transportation, and material moving occupations</b>	10.7%	14.4%	19.0%	15.5%	11.6%
<b>Total</b>	100%	100%	100%	100%	100%

Source: U.S. Census Bureau, 2014 American Community Survey

**Table 24: Selected Economic Data for Towns**

Subject	Fayetteville city, NC		Hope Mills town, NC		Lillington town, NC		Raeford city, NC		Spring Lake town, NC	
	Estimate	Percent	Estimate	Percent	Estimate	Percent	Estimate	Percent	Estimate	Percent
<b>EMPLOYMENT STATUS</b>										
<b>Population 16 years and over</b>	157,188	157,188	11,500	11,500	2,875	2,875	3,474	3,474	8,495	8,495
<b>In labor force</b>	103,387	65.8%	7,279	63.3%	976	33.9%	1,855	53.4%	6,078	71.5%
<b>Civilian labor force</b>	82,028	52.2%	6,683	58.1%	957	33.3%	1,826	52.6%	3,671	43.2%
<b>Employed</b>	70,730	45.0%	6,027	52.4%	836	29.1%	1,630	46.9%	3,080	36.3%
<b>Unemployed</b>	11,298	7.2%	656	5.7%	121	4.2%	196	5.6%	591	7.0%
<b>Armed Forces</b>	21,359	13.6%	596	5.2%	19	0.7%	29	0.8%	2,407	28.3%
<b>Not in labor force</b>	53,801	34.2%	4,221	36.7%	1,899	66.1%	1,619	46.6%	2,417	28.5%
<b>Civilian labor force</b>	82,028	82,028	6,683	6,683	957	957	1,826	1,826	3,671	3,671
<b>Percent Unemployed</b>	(X)	13.8%	(X)	9.8%	(X)	12.6%	(X)	10.7%	(X)	16.1%

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<b>Females 16 years and over</b>	80,547	80,547	6,632	6,632	1,034	1,034	1,970	1,970	4,460	4,460
<b>In labor force</b>	47,190	58.6%	3,907	58.9%	547	52.9%	1,096	55.6%	2,547	57.1%
<b>Civilian labor force</b>	44,310	55.0%	3,838	57.9%	547	52.9%	1,096	55.6%	2,300	51.6%
<b>Employed</b>	38,421	47.7%	3,429	51.7%	508	49.1%	972	49.3%	1,898	42.6%
<b>OCCUPATION</b>										
<b>Civilian employed population 16 years and over</b>	70,730	70,730	6,027	6,027	836	836	1,630	1,630	3,080	3,080
<b>Management, business, science, and arts occupations</b>	24,407	34.5%	1,940	32.2%	285	34.1%	472	29.0%	818	26.6%
<b>Service occupations</b>	14,983	21.2%	1,161	19.3%	195	23.3%	374	22.9%	961	31.2%
<b>Sales and office occupations</b>	18,229	25.8%	1,612	26.7%	165	19.7%	397	24.4%	801	26.0%
<b>Natural resources, construction, and maintenance occupations</b>	5,572	7.9%	445	7.4%	32	3.8%	134	8.2%	142	4.6%
<b>Production, transportation, and material moving occupations</b>	7,539	10.7%	869	14.4%	159	19.0%	253	15.5%	358	11.6%
<b>INDUSTRY</b>										
<b>Civilian employed population 16 years and over</b>	70,730	70,730	6,027	6,027	836	836	1,630	1,630	3,080	3,080
<b>Agriculture, forestry, fishing and hunting, and mining</b>	208	0.3%	0	0.0%	16	1.9%	0	0.0%	10	0.3%
<b>Construction</b>	3,294	4.7%	240	4.0%	37	4.4%	25	1.5%	102	3.3%
<b>Manufacturing</b>	4,579	6.5%	520	8.6%	88	10.5%	339	20.8%	164	5.3%
<b>Wholesale trade</b>	897	1.3%	135	2.2%	24	2.9%	0	0.0%	22	0.7%
<b>Retail trade</b>	9,591	13.6%	780	12.9%	76	9.1%	223	13.7%	609	19.8%
<b>Transportation and warehousing, and utilities</b>	2,473	3.5%	280	4.6%	33	3.9%	0	0.0%	105	3.4%
<b>Information</b>	1,089	1.5%	64	1.1%	18	2.2%	23	1.4%	41	1.3%
<b>Finance and insurance, and real estate and rental and leasing</b>	2,949	4.2%	252	4.2%	26	3.1%	14	0.9%	132	4.3%
<b>Professional, scientific, and management, and administrative and waste management services</b>	5,209	7.4%	420	7.0%	76	9.1%	74	4.5%	236	7.7%
<b>Educational services, and health care and social assistance</b>	20,178	28.5%	1,629	27.0%	276	33.0%	581	35.6%	789	25.6%
<b>Arts, entertainment, and recreation, and accommodation and food services</b>	8,503	12.0%	723	12.0%	61	7.3%	155	9.5%	473	15.4%
<b>Other services, except public administration</b>	3,659	5.2%	359	6.0%	37	4.4%	92	5.6%	112	3.6%
<b>Public administration</b>	8,101	11.5%	625	10.4%	68	8.1%	104	6.4%	285	9.3%

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<b>CLASS OF WORKER</b>										
<b>Civilian employed population 16 years and over</b>	70,730	70,730	6,027	6,027	836	836	1,630	1,630	3,080	3,080
<b>Private wage and salary workers</b>	47,761	67.5%	4,152	68.9%	581	69.5%	1,238	76.0%	2,388	77.5%
<b>Government workers</b>	20,001	28.3%	1,638	27.2%	226	27.0%	322	19.8%	598	19.4%
<b>Self-employed in own not incorporated business workers</b>	2,842	4.0%	237	3.9%	29	3.5%	70	4.3%	94	3.1%
<b>Unpaid family workers</b>	126	0.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
<b>INCOME AND BENEFITS (IN 2014 INFLATION-ADJUSTED DOLLARS)</b>										
<b>Total households</b>	77,935	77,935	5,756	5,756	997	997	1,804	1,804	4,516	4,516
<b>Less than \$10,000</b>	6,887	8.8%	427	7.4%	157	15.7%	340	18.8%	336	7.4%
<b>\$10,000 to \$14,999</b>	4,226	5.4%	316	5.5%	82	8.2%	213	11.8%	263	5.8%
<b>\$15,000 to \$24,999</b>	8,663	11.1%	673	11.7%	189	19.0%	305	16.9%	709	15.7%
<b>\$25,000 to \$34,999</b>	10,400	13.3%	768	13.3%	177	17.8%	279	15.5%	813	18.0%
<b>\$35,000 to \$49,999</b>	13,557	17.4%	748	13.0%	169	17.0%	222	12.3%	1,020	22.6%
<b>\$50,000 to \$74,999</b>	15,280	19.6%	1,113	19.3%	93	9.3%	113	6.3%	788	17.4%
<b>\$75,000 to \$99,999</b>	8,421	10.8%	911	15.8%	77	7.7%	122	6.8%	416	9.2%
<b>\$100,000 to \$149,999</b>	6,741	8.6%	540	9.4%	38	3.8%	140	7.8%	113	2.5%
<b>\$150,000 to \$199,999</b>	2,190	2.8%	225	3.9%	10	1.0%	56	3.1%	37	0.8%
<b>\$200,000 or more</b>	1,570	2.0%	35	0.6%	5	0.5%	14	0.8%	21	0.5%
<b>Median household income (dollars)</b>	44,514	(X)	47,332	(X)	29,031	(X)	26,392	(X)	37,154	(X)
<b>Mean household income (dollars)</b>	57,695	(X)	57,575	(X)	37,381	(X)	47,950	(X)	42,771	(X)
<b>With earnings</b>	62,249	79.9%	4,654	80.9%	655	65.7%	1,161	64.4%	4,003	88.6%
<b>Mean earnings (dollars)</b>	55,087	(X)	56,736	(X)	39,725	(X)	41,957	(X)	41,013	(X)
<b>With Social Security</b>	18,267	23.4%	1,564	27.2%	336	33.7%	533	29.5%	546	12.1%
<b>Mean Social Security income (dollars)</b>	16,073	(X)	13,088	(X)	14,146	(X)	15,639	(X)	12,362	(X)
<b>With retirement income</b>	17,205	22.1%	1,319	22.9%	181	18.2%	420	23.3%	527	11.7%
<b>Mean retirement income (dollars)</b>	24,404	(X)	21,696	(X)	18,882	(X)	52,356	(X)	19,175	(X)
<b>With Supplemental Security Income</b>	4,228	5.4%	226	3.9%	106	10.6%	153	8.5%	204	4.5%
<b>Mean Supplemental Security Income (dollars)</b>	8,922	(X)	8,730	(X)	7,392	(X)	8,269	(X)	7,649	(X)
<b>With cash public assistance income</b>	1,680	2.2%	164	2.8%	5	0.5%	38	2.1%	35	0.8%
<b>Mean cash public assistance income (dollars)</b>	2,278	(X)	1,954	(X)	7,400	(X)	5,455	(X)	1,711	(X)
<b>With Food Stamp/SNAP benefits in the past 12 months</b>	12,942	16.6%	885	15.4%	161	16.1%	427	23.7%	753	16.7%

<b>Median family income (dollars)</b>	50,493	(X)	57,739	(X)	39,479	(X)	35,923	(X)	39,121	(X)
<b>Mean family income (dollars)</b>	64,252	(X)	65,292	(X)	48,214	(X)	53,481	(X)	45,661	(X)
<b>Per capita income (dollars)</b>	23,843	(X)	21,194	(X)	12,936	(X)	19,260	(X)	16,365	(X)

Source: U.S. Census Bureau, 2014 American Community Survey

**Table 25: Employment by Sectors for Towns**

Employment by Sectors for Local Cities and Towns					
	Fayetteville	Hope Mills	Lillington	Raeford	Spring Lake
<b>Civilian employed population 16 years and over</b>	70,730	6,027	836	1,630	3,080
<b>Agriculture, forestry, fishing and hunting, and mining</b>	0.3%	0.0%	1.9%	0.0%	0.3%
<b>Construction</b>	4.7%	4.0%	4.4%	1.5%	3.3%
<b>Manufacturing</b>	6.5%	8.6%	10.5%	20.8%	5.3%
<b>Wholesale trade</b>	1.3%	2.2%	2.9%	0.0%	0.7%
<b>Retail trade</b>	13.6%	12.9%	9.1%	13.7%	19.8%
<b>Transportation and warehousing, and utilities</b>	3.5%	4.6%	3.9%	0.0%	3.4%
<b>Information</b>	1.5%	1.1%	2.2%	1.4%	1.3%
<b>Finance and insurance, and real estate and rental and leasing</b>	4.2%	4.2%	3.1%	0.9%	4.3%
<b>Professional, scientific, and management, and administrative and waste management services</b>	7.4%	7.0%	9.1%	4.5%	7.7%
<b>Educational services, and health care and social assistance</b>	28.5%	27.0%	33.0%	35.6%	25.6%
<b>Arts, entertainment, and recreation, and accommodation and food services</b>	12.0%	12.0%	7.3%	9.5%	15.4%
<b>Other services, except public administration</b>	5.2%	6.0%	4.4%	5.6%	3.6%
<b>Public administration</b>	11.5%	10.4%	8.1%	6.4%	9.3%
<b>Total</b>	100%	100%	100%	100%	100%

Source: U.S. Census Bureau, 2014 American Community Survey

**Table 26: Employment by Occupations for Towns**

Employment by Occupations for Local Cities and Towns					
	Fayetteville	Hope Mills	Lillington	Raeford	Spring Lake
<b>Civilian employed population 16 years and over</b>	70,730	6,027	836	1,630	3,080
<b>Management, business, science, and arts occupations</b>	34.5%	32.2%	34.1%	29.0%	26.6%



<b>Service occupations</b>	21.2%	19.3%	23.3%	22.9%	31.2%
<b>Sales and office occupations</b>	25.8%	26.7%	19.7%	24.4%	26.0%
<b>Natural resources, construction, and maintenance occupations</b>	7.9%	7.4%	3.8%	8.2%	4.6%
<b>Production, transportation, and material moving occupations</b>	10.7%	14.4%	19.0%	15.5%	11.6%
<b>Total</b>	100%	100%	100%	100%	100%

Source: U.S. Census Bureau, 2014 American Community Survey

**Table 27: Civilian Labor Force Unemployed Percent by Town**

Civilian labor force unemployed, percent	Fayetteville	Hope Mills	Lillington	Raeford	Spring Lake
<b>2014</b>	14.6	9.8	12.6	10.7	16.1
<b>2013</b>	14.6	9.4	13.1	11.8	18.9
<b>2012</b>	13.9	10.5	14.7	13.5	17.9
<b>2011</b>	12.9	8.4	13.3	9.9	14.6
<b>2010</b>	11.7	6.8	9.8	7.8	11.6

Source: U.S. Census Bureau, 2014 American Community Survey

## Appendix C: Economic Impact Model Assumptions, Methodology, and Supplementary Results

The IMPLAN professional software is used in this study to estimate the economic impact. The IMPLAN Pro software is considered as a gold standard for estimating the economic impact and is widely used by academic institutions as well as federal, state, and local governmental agencies. The software uses the input-output tables to track how dollars injected into a sector are spent and re-spent in other sectors of the economy, creating ripple effects in the entire region.

The study uses a Multiple Region Input Output (MRIO) Model to estimate the economic impact. The rationale for using MRIO instead of a single region model is as follows:

1. Close geographical location of Cumberland, Harnett, and Hoke counties.
2. Commuting patterns of workers among the three counties.
3. Trade patterns among the three counties.
4. Spill-over effects among the three counties.
5. The three counties significantly interact with one another.
6. Counties complement one another.
7. The economic effects of an external event are inseparable among the three counties.

The baseline data and information is provided by a regional model that includes Cumberland, Harnett, and Hoke counties.

**Table 28: IMPLAN Regional Model**

Fort Bragg--Impact of Military	Copyright 2016 Minnesota IMPLAN Group, Inc.		
<b>Model Information</b>			
<b>Model Year</b>	2014	<b>Value Added</b>	
<b>GRP</b>	\$17,718,122,417	Employee Compensation	\$11,677,804,124
<b>Total Personal Income</b>	\$14,888,310,000	Proprietor Income	\$653,816,838
<b>Total Employment</b>	207,220	Other Property Type Income	\$4,801,379,740
		Tax on Production and Import	\$585,121,715
<b>Number of Industries</b>	219		
<b>Land Area (Sq. Miles)</b>	653	Total Value Added	\$17,718,122,417
<b>Area Count</b>	1		
<b>Final Demand</b>			
<b>Population</b>	326,328	Households	11,136,503,735
<b>Total Households</b>	125,319	State/Local Government	\$2,303,135,989
<b>Average Household Income</b>	\$118,803	Federal Government	\$17,780,608,158
		Capital	\$1,953,338,196

<b>Trade Flows Method</b>	Trade Flows Model	Exports	\$4,883,169,229	
<b>Model Status</b>	Multipliers	Imports	-\$19,513,972,801	
		Institutional Sales	-\$824,660,118	
<b>Economic Indicators</b>				
<b>Shannon-Weaver Index</b>	.6007	Total Final Demand:	\$17,718,122,388	
<b>Top Ten Industries</b>				
<b>Sector</b>	<b>Description</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Output</b>
536	* Employment and payroll of federal govt, military	52,764	\$5,303,258,000	\$6,229,695,000
535	* Employment and payroll of federal govt, non-military	12,708	\$1,207,496,000	\$1,886,813,000
533	* Employment and payroll of local govt, non-education	8,863	\$583,120,800	\$676,594,200
534	* Employment and payroll of local govt, education	8,665	\$436,734,600	\$506,217,400
502	Limited-service restaurants	7,250	\$104,699,000	\$483,887,700
440	Real estate	5,770	\$62,645,480	\$942,615,300
501	Full-service restaurants	5,027	\$90,681,440	\$193,088,600
532	* Employment and payroll of state govt, education	4,308	\$202,174,300	\$236,112,800
405	Retail - General merchandise stores	4,001	\$97,882,050	\$240,496,200
456	Scientific research and development services	3,045	\$268,531,400	\$837,533,400

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Table 28 above shows that the region employs 265,000 people to produce goods and services worth about \$21 billion.

Total population of the region is about 504,000. Approximately 190,000 households earn \$20,556,270,000 in personal income, including investment and other income as well as wages.

IMPLAN has 536 sectors, but only 262 sectors are represented in the region. This reflects the fact that a few sectors/industries dominate the region and determine its economic growth. The dominance of service sectors and the conspicuous absence of manufacturing industries is evident from the list of top ten employers. The major employers in this region are federal, state, and local governments, which together employ more workers in the region than the top 20 employers combined. It is also noteworthy that the federal government alone (because of the military at Fort Bragg) employs one fifth of all workers in the region.

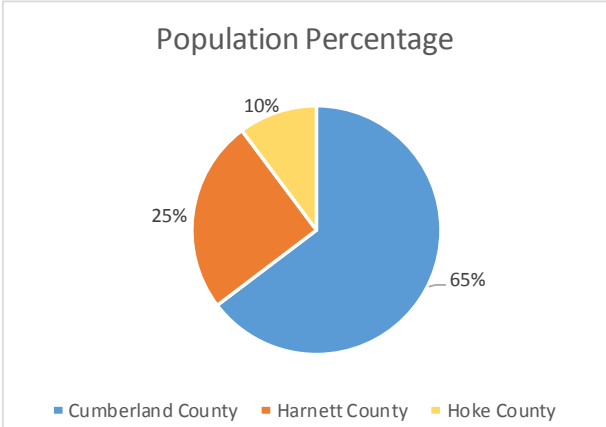
Because the region is not highly diversified, much is imported from elsewhere in the state, the country, and abroad. While the three-county region exports about \$6.5 billion, the region imports almost \$25 billion worth of goods and services. This presents a potential opportunity

for sustained growth by potentially leveraging resources and expertise within the region to produce within the region goods and services that are currently imported from elsewhere.

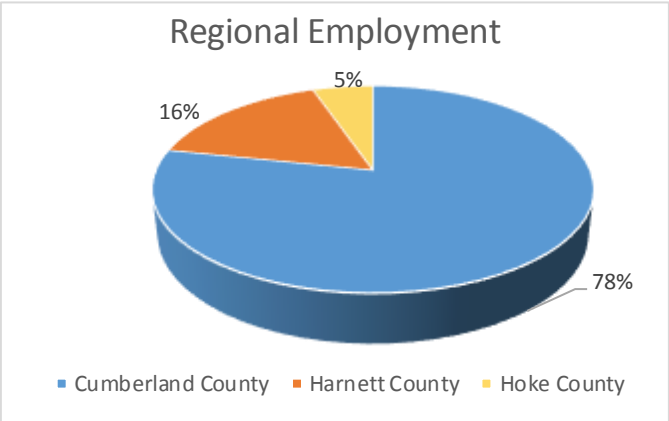
Cumberland County’s economy is the largest economy in the region, with 85 percent of Regional GDP, followed by Harnett County with 11 percent and Hoke with about 4 percent.

**Figure 31: Key Regional Economic Data Driving Allocation of Economic Impact Assessment by County**

**Figure 31a: Population Percentage**

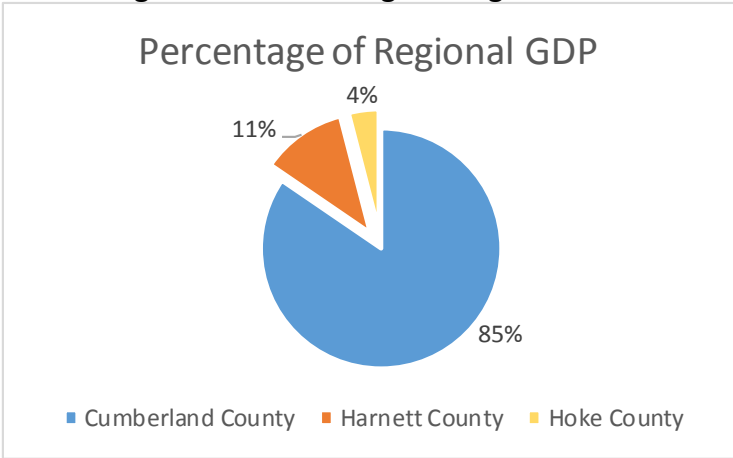


**Figure 31b: Regional Employment**



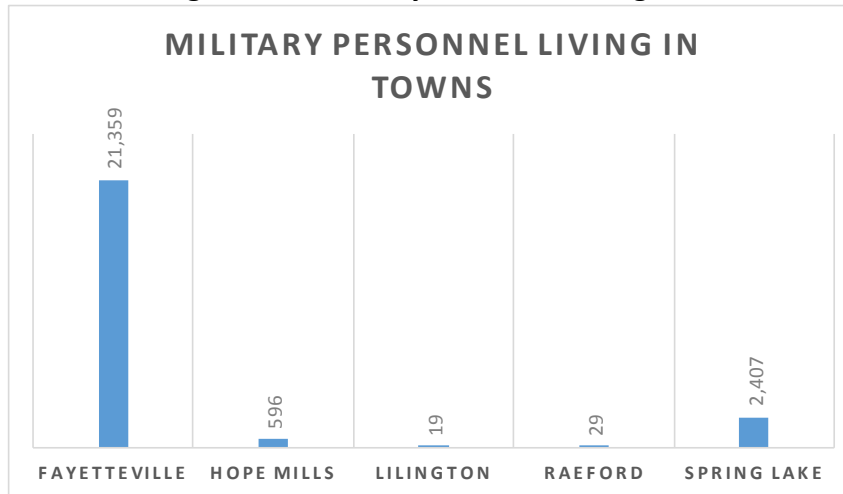
Source: U.S. Census Bureau and Bureau of Economic Analysis

**Figure 31c: Percentage of Regional GDP**



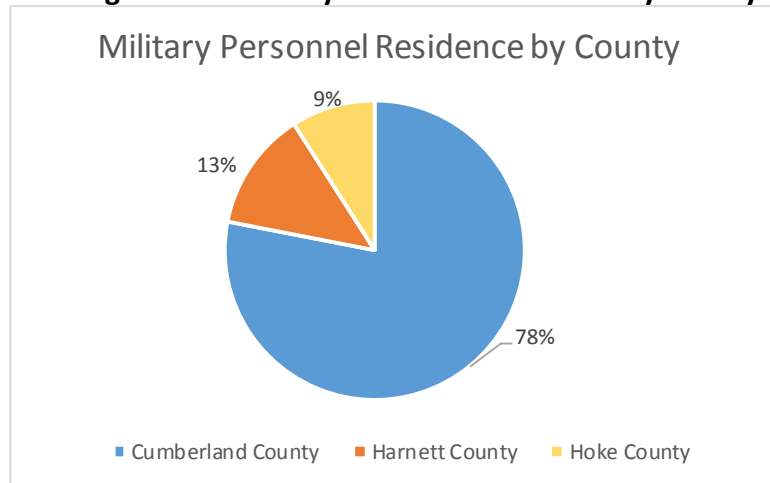
Source: U.S. Census Bureau and Bureau of Economic Analysis

**Figure 31d: Military Personnel Living in Town**



Source: U.S. Census Bureau and Bureau of Economic Analysis

**Figure 31f: Military Personnel Residence by County**



Source: U.S. Census Bureau and Bureau of Economic Analysis

Regional employment reflects the same trend. Cumberland County employs about 78 percent of the labor force, Harnett about 16 percent and Hoke approximately 5 percent.

Approximately 64 percent of the region’s population resides in Cumberland County, followed by more than a quarter living in Harnett County and about 11 percent in Hoke County.

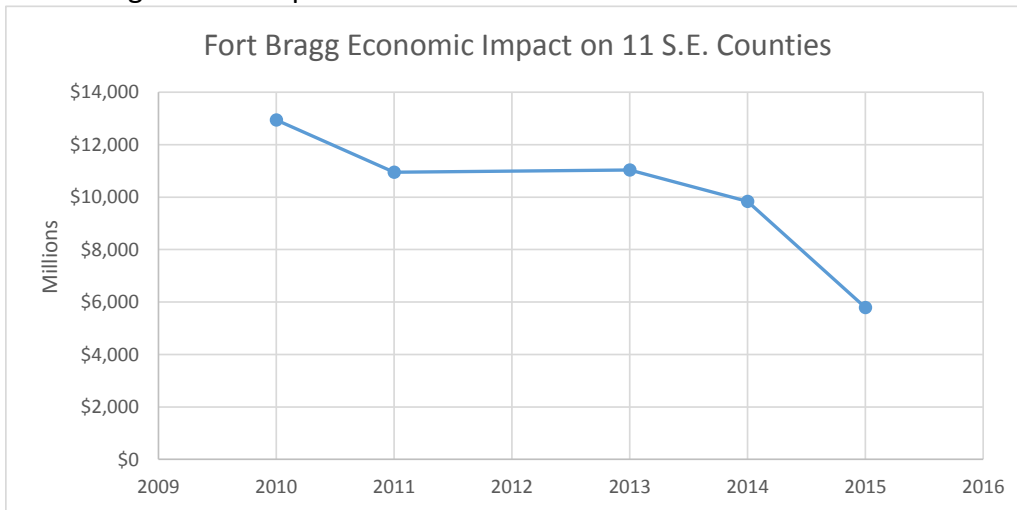
The chart shows distribution of the military population among different municipalities in a county. Fayetteville has the largest concentration of military population at about 32,000, followed by Spring Lake with about 22,000, 500 in Hope Mills, 19 in Lillington and 29 in Raeford.

The data presented in the slide suggest that whether the troops are reduced by 3,000, 2,000, or 1,000, the brunt of the impact will be borne by residents of Cumberland County.

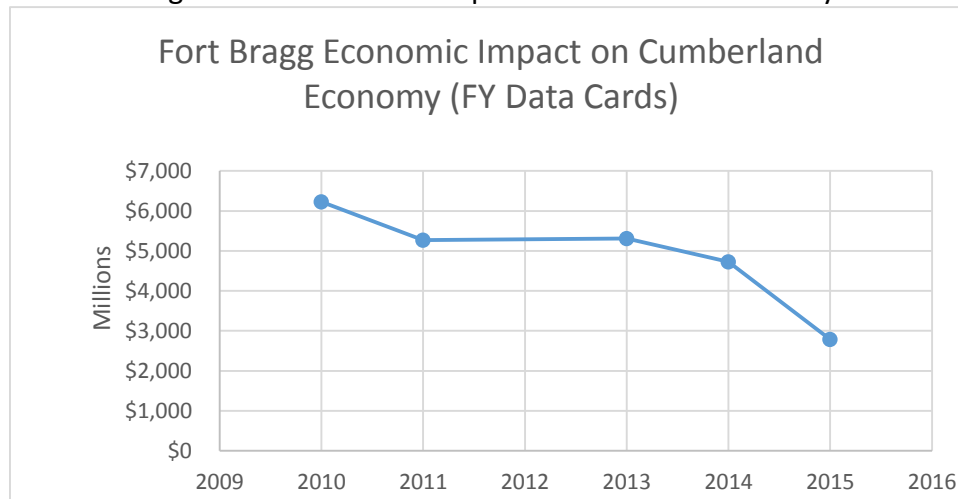
**Figure 32: Trends in Contributions of Fort Bragg to Regional Economy**

To assess the economic impact of a potential reduction in troops at Fort Bragg, it may be instructive to examine the recent contributions of military presence at Fort Bragg to the broader regional economy.

**Figure 32a: Impact on 11 Southeastern North Carolina Counties**



**Figure 32b: Estimated Impact on Cumberland County**



Source: Fort Bragg Office of Public Affairs, FY State Cards, and authors' calculations.

Figure 32c: Estimated Impact on Harnett County

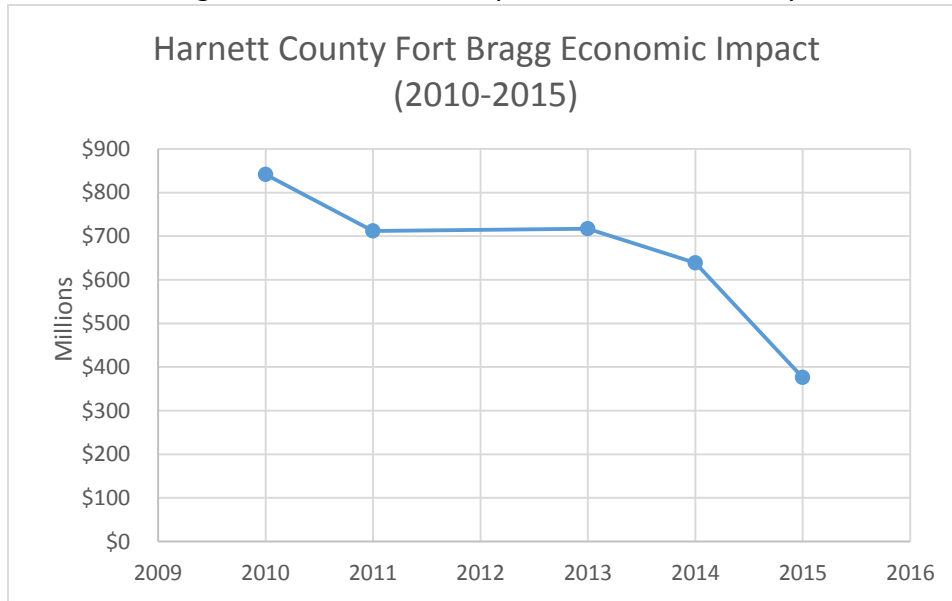
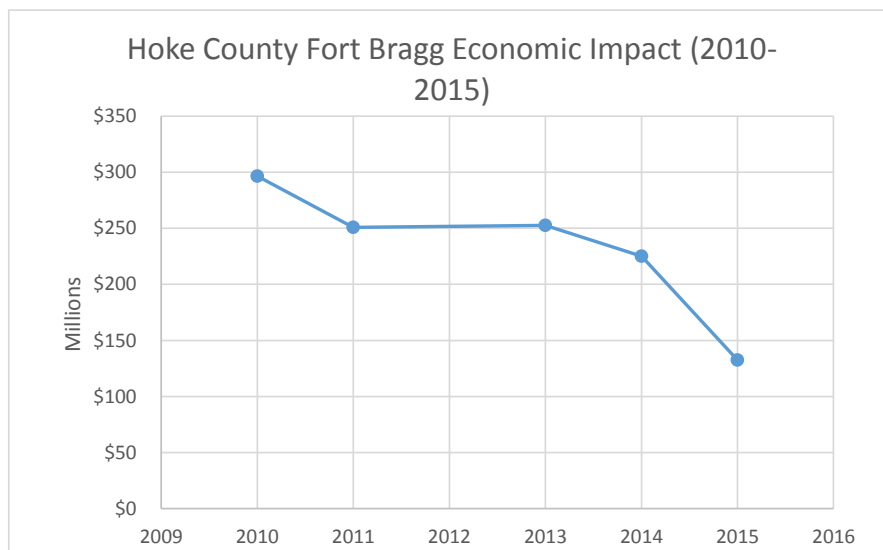


Figure 32d: Estimated Impact on Hoke County



Source: Fort Bragg Office of Public Affairs, FY State Cards, and authors' calculations.

It is important to note that except for 2012, there has been a steady decline in the overall economic impact of Fort Bragg on this region (see Figure 32 above).

In the 11-county region, the economic impact of Fort Bragg has steadily declined from \$12 billion in 2010 to about \$6 billion in 2015-- almost a 50 percent reduction. The trend is the same for Cumberland, Harnett, and Hoke counties.

It is noteworthy that the number of active-duty soldiers peaked in 2012 and has been steadily declining ever since. The peak for Fort Bragg's total population occurred one year later.

**Table 29: Fort Bragg Population**

Fort Bragg Population ASIP COP Data (31 January 2016)	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Active Duty Army Military	44,436	45,437	45,290	45,051	44,954	44,702	42,532	41,716	40,877
Reserve Component Military (Assigned at Fort Bragg)	1,891	1,810	1,816	3,207	3,281	3,283	3,262	3,391	2,358
Other Military ( Air Force, Other Services)	785	818	751	2,936	2,862	2,998	3,002	3,002	3,010
Students-Military (incl PCS & TDY)	5,995	4,943	5,502	4,730	5,600	5,786	5,873	5,119	4,796
<b>Total Fort Bragg Military Population</b>	<b>53,107</b>	<b>53,008</b>	<b>53,359</b>	<b>55,924</b>	<b>56,697</b>	<b>56,769</b>	<b>54,669</b>	<b>53,228</b>	<b>51,041</b>
Civilian Employees (Assigned at Fort Bragg)	9,340	10,158	11,344	14,116	14,515	14,380	14,470	14,663	13,808
Contract Employees (Working at Fort Bragg)	6,688	6,984	5,472	5,481	5,496	6,342	5,888	5,552	6,054
Military Family Members (Active Duty Military)	80,723	80,572	81,106	85,004	86,179	86,289	83,097	80,907	69,797
<b>Total Fort Bragg Population</b>	<b>149,858</b>	<b>150,722</b>	<b>151,281</b>	<b>160,525</b>	<b>162,887</b>	<b>163,780</b>	<b>158,124</b>	<b>154,350</b>	<b>140,700</b>

Source: Fort Bragg Public Relations, January 2017

### Fort Bragg Troops Increase Scenarios

It is reasonable to assume that the labor output and technology co-efficients in the regional IMPLAN model will not change if the troops at Fort Bragg were to increase. Accordingly, the employment, income, and output multiplier impact will be the same as in the troop reduction scenarios except the impact will be positive rather than negative. Table 30 illustrates the potential economic impact of 3,000, 2,000, and 1,000 increase in active duty soldiers at Fort Bragg under Scenario 1.

**Table 30: Fort Bragg Troops Increase Scenario 1 Economic Impact**

3000 Troops Increase				
Region	Employment	Labor Income	Output	State and Local Taxes
Cumberland County	4,847	\$264,458,573	\$617,522,885	\$12,087,902
Harnett County	6.5	\$169,138	\$244,877	\$23,279
Hoke County	2.5	\$35,895	\$176,356	\$5,167
<b>Total Impact</b>	<b>4,856.0</b>	<b>\$264,663,606</b>	<b>\$617,944,118</b>	<b>\$12,116,348</b>
2000 Troops Increase				
2000 Troops Reduction				
Region	Employment	Labor Income	Output	State and Local Taxes
Cumberland County	3,231.9	\$176,305,715	\$411,681,907	\$8,058,259
Harnett County	4.3	\$112,759	\$4,429,918	\$15,512
Hoke County	1.6	\$23,932	\$117,836	\$3,444



<b>Total Economic Impact</b>	<b>3,237.80</b>	<b>\$176,442,406</b>	<b>\$416,229,661</b>	<b>\$8,077,215</b>
<b>1000 Troops Increase</b>				
1000 Troops Reduction				
<b>Region</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Output</b>	<b>State and Local Taxes</b>
<b>Cumberland County</b>	-1,615	\$88,152,857	\$227,884,333	\$3,710,243
<b>Harnett County</b>	2.2	\$56,379	\$87,257	\$7,759
<b>Hoke County</b>	0.8	\$11,966	\$23,916	\$1,723
<b>Total Impact</b>	<b>1.618</b>	<b>\$88,221,202</b>	<b>\$227,995,506</b>	<b>\$3,719,725</b>

Source: IMPLAN model and authors' calculations

It is noteworthy that the Scenario 1 potential economic impact analysis and magnitude are the same for troop increase as for the troop reduction except the economic impact is positive. The top sectors impacted by the potential increase in troops will also remain unchanged.

It is evident from the above table, given the income and expenditure patterns noted, a 3,000 increase in troops would result in the region gaining approximately 5,000 full-time and part-time jobs, approximately \$618 million in sales, \$264 million in wages and salaries and \$12 million in tax revenues.

With a 2,000 troop reduction, the region will gain 3,237 full-time and part-time jobs, approximately \$416 million in sales, \$176 million in wages and salaries and about \$8 million in taxes, given this set of troop income assumptions.

With a 1,000 soldier draw down, the region will gain 1,618 full-time and part-time jobs, about \$228 million in sales, approximately \$88 million in wages and salaries and about \$4 million in state and local taxes in this scenario.

The table shows the potential economic impact of 3,000, 2,000, and 1,000 troops increase at Fort Bragg on the tri-county region under Scenario 2. As stated earlier, the employment, income, and output multipliers are like a double-edged sword: just as a reduction in soldiers (and consequent reduction in payroll) decreases the economic activity, an increase in the number of soldiers will increase the economic activity manifold.

**Table 31: Scenario Set 2—Impact of Prospective Troop Increase**

<b>3000 Troops Increase</b>				
<b>Region</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Output</b>	<b>State and Local Taxes</b>
<b>Cumberland County</b>	3,627	\$107,589,895	\$450,204,241	\$5,147,004

<b>Harnett County</b>	2.6	\$68,811	\$262,356	\$9,479
<b>Hoke County</b>	1	\$14,605	\$71,900	\$2,102
<b>Total Impact</b>	<b>3,630.6</b>	<b>\$107,673,311</b>	<b>\$450,538,497</b>	<b>\$5,158,585</b>
<b>2000 Troops Increase</b>				
<b>Region</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Output</b>	<b>State and Local Taxes</b>
<b>Cumberland County</b>	2,393	\$63,659,523	\$291,115,618	\$3,026,483
<b>Harnett County</b>	1.6	\$40,714	\$155,232	\$5,543
<b>Hoke County</b>	0.6	\$8,641	\$45,548	1,243
<b>Total Economic Impact</b>	<b>2,395.20</b>	<b>\$63,708,878</b>	<b>\$291,316,398</b>	<b>\$3,033,269</b>
<b>1000 Troops Increase</b>				
<b>Region</b>	<b>Employment</b>	<b>Labor Income</b>	<b>Output</b>	<b>State and Local Taxes</b>
<b>Cumberland County</b>	1,208	\$35,783,426	\$105,041,297	\$1,712,323
<b>Harnett County</b>	0.9	\$22,886	\$87,257	\$3,151
<b>Hoke County</b>	0.3	\$4,857	\$29,916	\$699
<b>Total Economic Impact</b>	<b>1,209.20</b>	<b>\$35,811,169</b>	<b>\$105,158,470</b>	<b>\$1,716,173</b>
<b>Multipliers</b>				
	<b>Employment</b>	<b>Output</b>	<b>Labor Income</b>	
	<b>Multiplier</b>	<b>Multiplier</b>	<b>Multiplier</b>	
<b>3,000 Troops</b>	1.1	1.08	1.1	

Source: IMPLAN model and authors' calculations

### IMPLAN Model: Some Caveats

Some caution is needed in interpreting the results summarized above and in the report. The IMPLAN model is based on some key assumptions, which are as follows:

1. Fixed technology. It is assumed that the technology used by the industry whose impact is being analyzed remains unchanged and will not be affected by the impact. In other words, resource-mix is unaffected.
2. Every firm within the industry uses the same resource mix or technology.
3. It is assumed that the industry is subject to constant returns to scale. There are no economies or diseconomies associated with the scale of production.
4. There are no supply constraints. The impact of an industry or an activity will not affect the resource prices. Even if prices are affected, the industry resource buying decisions are unaffected.
5. The product-mix in an industry remains constant.

6. The regional purchase coefficient (the amounts of inputs purchased from local vendors) does not change.

These assumptions may seem inordinately restrictive, but they are common to all input-output models. Most researchers conclude that the IMPLAN impact estimates are reasonably accurate so long as (1) the scale of activity is not too large to significantly change the total demand for and supply of resources; (2) there is no radical change in technology; (3) regional purchase coefficient remains the same. The most serious error may occur if the regional purchase coefficient has changed and a researcher fails to make an adjustment for it in the model.

There is no evidence that the nature and scale of troops reduction or increase are so large to seriously violate the assumption mentioned above.

## Appendix D: Target Sector Analysis: Supporting Analytics and Data

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*The research for the target sector analysis was led by Applied Marketing Sciences in partnership with Creative Economic Development Consulting.*

The following tables, information, and analysis were compiled to understand the framework of industry in Fayetteville, including Cumberland, Harnett, and Hoke Counties. Each level of information allows a deeper look at the industry clusters for Fayetteville and the region. An understanding was established for the type of industry supported and developing in the region by looking at what exists in the region, employment levels, and location quotients. Multiple industry clusters were considered throughout the process. The resulting recommended target industries for Fayetteville were discovered to be strong in the regional economy, were (in part or full) forecasted for future growth, or represented a developing opportunity. Analyzing multiple information sources allowed the data to be overlaid and industry clusters to be researched, considered, and ultimately chosen, for Fayetteville.

### Summary of Analyses

The analysis began with a look at the base industries in Cumberland, Harnett, and Hoke Counties, along with North Carolina as comparison. Total employment, percentage of employment by sector, and location quotient was performed at this base industry level. Trade, transportation, and utilities, along with education and health services and leisure and hospitality, were recognized as a strong industry base in the Fayetteville region.

A location quotient by industry cluster was then completed by establishment, employment, and wages. Industry location quotient is a way of quantifying how “concentrated” an industry is in a region compared to a larger geographic area, such as the state or nation. The basic uses of location quotient include: 1) determining which industries make the regional economy unique; 2) identifying the “export orientation” of an industry and identifying the most export-oriented industries in the region; and 3) identifying emerging export industries beginning to bring money into the region. Industry clusters identified through this process were biomedical/biotechnical; chemicals and chemical based products; defense and security; energy; transportation and logistics; primary metal manufacturing; and transportation equipment.

A deeper look was then taken at the employment levels by 3-digit NAICS Codes to understand the specific opportunities in manufacturing, logistics, and services. At this level of analysis, the specific clusters began to materialize around defense, logistics, manufacturing, and business services.

Another consideration was the forecasted growth by industry segment. While growth factors were studied across all industries, the fastest growing segments were included in the tables below. Growing segments were found among many of the industry clusters being considered

for Fayetteville. This part of the analysis identified health care and life sciences for consideration given the various segments of this industry included in the fastest growing industries.

**Table 32: Employment Calculated from Quarterly Census of Employment and Wages Data - 2015 (BLS)**

Industry	Cumberland			
	North Carolina -- Statewide	County, North Carolina	Harnett County, North Carolina	Hoke County, North Carolina
Base Industry: Total, all industries	3,474,750	81,035	18,053	5,380
Natural resources and mining	32,017	245	299	120
Construction	189,375	4,269	1,527	230
Manufacturing	461,030	6,333	1,631	1,422
Trade, transportation, and utilities	794,347	22,533	4,929	1,069
Information	75,926	1,360	390	28
Financial activities	213,180	3,549	699	152
Professional and business services	589,487	11,519	1,696	567
Education and health services	555,258	13,646	3,828	1,225
Leisure and hospitality	459,140	14,596	2,614	454
Other services	104,991	2,985	440	114

Source: U.S. Bureau of Labor Statistics

#### Comparison of Cumberland, Harnett, and Hoke Counties to North Carolina, 2015 (BLS)

The distribution of business by major sectors was analyzed to compare and contrast Cumberland, Harnett, and Hoke Counties, along with North Carolina as a whole.

Based on this analysis, each county has a unique make up. While manufacturing percentages are lower in Cumberland and Harnett Counties, Hoke County shows a strong manufacturing base. Alternatively, Cumberland and Harnett are strong in trade, transportation, and utilities, along with leisure and hospitality, while Hoke County falls below the state average in both areas. All counties are above average in education and health services.

**Table 33: Percentage of Employment calculated from Quarterly Census of Employment and Wages Data**

Industry	Cumberland			
	North Carolina -- Statewide	County, North Carolina	Harnett County, North Carolina	Hoke County, North Carolina
Base Industry: Total, all industries	100.00%	100.00%	100.00%	100.00%
Natural resources and mining	0.92%	0.30%	1.66%	2.23%
Construction	5.45%	5.27%	8.46%	4.28%
Manufacturing	13.27%	7.82%	9.03%	26.43%
Trade, transportation, and utilities	22.86%	27.81%	27.30%	19.87%
Information	2.19%	1.68%	2.16%	0.52%
Financial activities	6.14%	4.38%	3.87%	2.83%
Professional and business services	16.96%	14.21%	9.39%	10.54%
Education and health services	15.98%	16.84%	21.20%	22.77%
Leisure and hospitality	13.21%	18.01%	14.48%	8.44%
Other services	3.02%	3.68%	2.44%	2.12%

Percentage of Employment: Ratio of industry employment to base-industry employment times 100.

**Table 34: Location Quotients calculated from Quarterly Census of Employment and Wages Data**

Industry	Cumberland County, North Carolina	Harnett County, North Carolina	Hoke County, North Carolina
Base Industry: Total, all industries	1	1	1
Natural resources and mining	0.33	1.8	2.42
Construction	0.97	1.55	0.78
Manufacturing	0.59	0.68	1.99
Trade, transportation, and utilities	1.22	1.19	0.87
Information	0.77	0.99	0.24
Financial activities	0.71	0.63	0.46
Professional and business services	0.84	0.55	0.62
Education and health services	1.05	1.33	1.42
Leisure and hospitality	1.36	1.1	0.64
Other services	1.22	0.81	0.7

Location Quotient: Ratio of analysis-industry employment in the analysis area to base-industry employment in the analysis area divided by the ratio of analysis-industry employment in the base area to base-industry employment in the base area.

Source: U.S. Bureau of Labor Statistics

#### Industry Cluster Analysis/Location Quotient

Cumberland, Harnett, and Hoke Counties were analyzed by industry cluster to take a closer look at those clusters where the Location Quotient (LQ) was greater than one, indicating the area is producing more goods or services than it is consuming; therefore, exporting and creating value. The industry clusters having a Location Quotient greater than one in establishments or employment include:

- Apparel and Textiles
- Biomedical/Biotechnical (Life Sciences)
- Chemicals and Chemical Based Products
- Defense and Security
- Education and Knowledge Creation
- Energy
- Transportation and Logistics
- Primary Metal Manufacturing
- Transportation Equipment Manufacturing

**Table 35: Industry Cluster Analysis/Location Quotient**

Description	QCEW Cluster - Establishments	Industry Cluster Establishment LQ	QCEW Cluster - Employment	Industry Cluster Employment LQ	QCEW Cluster - Wages	Industry Cluster Annual Wages LQ
Total All Industries	8,432	1.00	147,581	1.00	\$5,465,352,132	1.00
Advanced Materials	72	0.60	1,785	0.37	\$121,044,736	0.45
Agribusiness, Food Processing & Technology	121	0.95	2430	0.72	\$86,089,229	0.87
Apparel & Textiles	34	0.59	722	1.00	\$26,906,351	1.03
Arts, Entertainment, Recreation & Vistor Industries	229	0.93	3,109	0.53	\$67,064,558	0.42
Biomedical/Biotechnical (Life Sciences)	477	1.53	18,962	1.17	\$863,902,508	1.43
Business & Financial Services	1196	0.89	6,954	0.53	\$376,160,557	0.43
Chemicals & Chemical Based Products	47	0.80	4351	2.05	\$264,707,723	2.51
Defense & Security	279	0.86	11,627	1.43	\$711,678,697	1.57
Education & Knowledge Creation	106	0.88	9,948	1.78	\$502,362,055	2.32
Energy (Fossil & Renewable)	436	1.17	3,842	0.58	\$184,408,032	0.47
Forest & Wood Products	44	0.77	710	0.52	\$30,300,460	0.62
Glass & Ceramics	4	0.53	29	0.12	\$1,367,444	0.15
Information Technology & Telecommunications	210	0.63	2,669	0.47	\$194,612,269	0.47
Transportation & Logistics	218	1.07	4,078	0.91	\$158,052,502	0.95
Manufacturing Supercluster	44	0.42	2,642	0.48	\$184,619,476	0.64
Primary Metal Mfg	1	1.70	57	1.75	\$2,917,490	2.52
Fabricated Metal Product Mfg	22	0.44	544	0.39	\$24,536,530	0.46
Machinery Mfg	2	0.53	30	0.21	\$1,087,675	0.19
Computer & Electronic Product Mfg	10	0.63	100	0.09	\$6,014,902	0.07
Electrical Equipment, Appliance & Component Mfg	4	0.61	368	0.91	\$24,526,362	1.39
Transportation Equipment Mfg	5	0.53	1543	1.16	\$125,536,519	1.71
Mining	10	0.88	105	0.46	\$4,924,885	0.43
Printing & Publishing	115	0.65	1136	0.49	\$50,895,378	0.44

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment & Wages (QCEW) and Purdue Center for Regional Development (cluster definitions).

### Manufacturing Analysis

Looking deeper into the industries at the county and regional level, we analyzed the employment, by 3-digit NAICS Industry Code, for Cumberland, Harnett, and Hoke Counties. Many industry numbers were not disclosable in the data. Given what we can determine from the analysis, the manufacturing industries of note in the region include:

- Food manufacturing
- Chemical manufacturing
- Fabricated metal manufacturing

**Table 36: Employment calculated from Quarterly Census of Employment and Wages Data (2015)**

Industry	North Carolina -- Statewide	Cumberland County, North Carolina	Harnett County, North Carolina	Hoke County, North Carolina
Base Industry: Total, all industries	3,474,750	81,035	18,053	5,380
NAICS 311 Food manufacturing	53,083	509	111	ND
NAICS 312 Beverage and tobacco product manufacturing	11,423	ND	ND	NC
NAICS 313 Textile mills	28,368	ND	NC	ND
NAICS 314 Textile product mills	6,155	9	NC	ND
NAICS 315 Apparel manufacturing	8,459	ND	NC	NC
NAICS 316 Leather and allied product manufacturing	777	NC	ND	NC
NAICS 321 Wood product manufacturing	17,358	242	ND	ND
NAICS 322 Paper manufacturing	16,292	ND	ND	NC
NAICS 323 Printing and related support activities	11,694	114	15	NC
NAICS 324 Petroleum and coal products manufacturing	752	NC	ND	NC
NAICS 325 Chemical manufacturing	42,446	276	37	474
NAICS 326 Plastics and rubber products manufacturing	33,064	ND	32	ND
NAICS 327 Nonmetallic mineral product manufacturing	14,299	244	94	ND
NAICS 331 Primary metal manufacturing	8,119	NC	ND	ND
NAICS 332 Fabricated metal product manufacturing	37,035	252	479	ND
NAICS 333 Machinery manufacturing	32,300	ND	58	NC
NAICS 334 Computer and electronic product manufacturing	32,523	37	ND	NC
NAICS 335 Electrical equipment and appliance mfg.	21,429	ND	ND	ND
NAICS 336 Transportation equipment manufacturing	34,521	ND	ND	NC
NAICS 337 Furniture and related product manufacturing	35,701	76	31	NC
NAICS 339 Miscellaneous manufacturing	15,234	61	110	ND

Footnotes:

(ND) Not Disclosable

(NC) Not Calculable, the data does not exist or it is zero

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment &amp; Wages

### Wholesale/Retail/Transportation Analysis

Looking deeper into the industries at the county and regional level, we analyzed the employment, by 3-digit NAICS Industry Code, for Cumberland, Harnett, and Hoke Counties. Many industry numbers were not disclosable in the data. Wholesale, retail, or transportation industries of note in the region include:

- General merchandise stores
- Motor vehicle and parts dealers
- Food and beverage stores
- Warehousing and storage
- Clothing and clothing accessories stores
- Truck transportation



**Table 37: Employment Calculated from Quarterly Census of Employment and Wages Data (2015)**

Industry	North Carolina -- Statewide	Cumberland County, North Carolina	Harnett County, North Carolina	Hoke County, North Carolina
Base Industry: Total, all industries	3,474,750	81,035	18,053	5,380
NAICS 423 Merchant wholesalers, durable goods	89,634	1,003	334	62
NAICS 424 Merchant wholesalers, nondurable goods	57,247	782	159	93
NAICS 425 Electronic markets and agents and brokers	31,923	240	ND	7
NAICS 441 Motor vehicle and parts dealers	65,824	2,764	412	27
NAICS 442 Furniture and home furnishings stores	15,474	460	70	ND
NAICS 443 Electronics and appliance stores	14,397	484	34	NC
NAICS 444 Building material and garden supply stores	40,062	1,048	298	ND
NAICS 445 Food and beverage stores	88,133	2,144	1,363	162
NAICS 446 Health and personal care stores	33,372	997	356	44
NAICS 447 Gasoline stations	29,621	1,073	329	104
NAICS 448 Clothing and clothing accessories stores	37,668	1,315	69	ND
NAICS 451 Sports, hobby, music instrument, book stores	17,949	547	47	17
NAICS 452 General merchandise stores	104,669	4,194	653	292
NAICS 453 Miscellaneous store retailers	25,043	821	95	ND
NAICS 454 Nonstore retailers	11,954	132	27	ND
NAICS 481 Air transportation	13,997	ND	ND	NC
NAICS 482 Rail transportation	ND	ND	ND	ND
NAICS 483 Water transportation	207	NC	NC	NC
NAICS 484 Truck transportation	42,994	1,280	168	ND
NAICS 485 Transit and ground passenger transportation	5,764	162	NC	ND
NAICS 486 Pipeline transportation	277	NC	NC	NC
NAICS 487 Scenic and sightseeing transportation	365	NC	NC	NC
NAICS 488 Support activities for transportation	14,530	822	71	ND
NAICS 491 Postal service	ND	ND	ND	ND
NAICS 492 Couriers and messengers	15,717	407	ND	ND
NAICS 493 Warehousing and storage	23,336	1,388	ND	ND

Footnotes:

(ND) Not Disclosable

(NC) Not Calculable, the data does not exist or it is zero

Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment &amp; Wages

### Services Analysis

Looking deeper into the industries at the county and regional level, we analyzed the employment, by 3-digit NAICS Industry Code, for Cumberland, Harnett, and Hoke Counties. Many industry numbers were not disclosable in the data. Services industries of note in the region include:

- Food services and drinking places
- Ambulatory health care services
- Administrative and support services
- Professional and technical services
- Educational services
- Nursing and residential care facilities

**Table 38: Employment Calculated from Quarterly Census of Employment and Wages Data (2015)**

Industry	North Carolina -- Statewide	Cumberland County, North Carolina	Harnett County, North Carolina	Hoke County, North Carolina
Base Industry: Total, all industries	3,474,750	81,035	18,053	5,380
NAICS 511 Publishing industries, except Internet	21,627	377	ND	ND
NAICS 512 Motion picture and sound recording industries	4,896	239	ND	NC
NAICS 515 Broadcasting, except Internet	7,885	114	ND	ND
NAICS 517 Telecommunications	26,152	585	128	ND
NAICS 518 Data processing, hosting and related services	12,942	ND	ND	NC
NAICS 519 Other information services	2,424	ND	ND	ND
NAICS 521 Monetary authorities - central bank	259	NC	NC	NC
NAICS 522 Credit intermediation and related activities	83,470	1,136	336	51
NAICS 523 Securities, commodity contracts, investments	22,208	161	18	ND
NAICS 524 Insurance carriers and related activities	52,446	588	116	ND
NAICS 525 Funds, trusts, and other financial vehicles	21	NC	NC	NC
NAICS 531 Real estate	40,496	1,249	194	86
NAICS 532 Rental and leasing services	13,890	416	34	NC
NAICS 533 Lessors of nonfinancial intangible assets	391	NC	NC	NC
NAICS 541 Professional and technical services	219,181	4,669	538	ND
NAICS 551 Management of companies and enterprises	81,896	361	204	ND
NAICS 561 Administrative and support services	278,380	6,207	872	444
NAICS 562 Waste management and remediation services	10,030	283	82	11
NAICS 611 Educational services	71,074	1,375	1,391	ND
NAICS 621 Ambulatory health care services	194,643	6,590	1,157	458
NAICS 622 Hospitals	114,752	ND	NC	ND
NAICS 623 Nursing and residential care facilities	99,671	3,023	697	363
NAICS 624 Social assistance	75,119	ND	584	216
NAICS 711 Performing arts and spectator sports	15,050	57	ND	ND
NAICS 712 Museums, historical sites, zoos, and parks	3,300	49	NC	ND
NAICS 713 Amusements, gambling, and recreation	44,659	952	ND	ND
NAICS 721 Accommodation	42,059	1,251	105	ND
NAICS 722 Food services and drinking places	354,072	12,287	2,333	ND
NAICS 811 Repair and maintenance	37,061	1,285	262	26
NAICS 812 Personal and laundry services	34,126	1,140	87	46
NAICS 813 Membership associations and organizations	25,793	357	48	28

Footnotes:

(ND) Not Disclosable

(NC) Not Calculable, the data does not exist or it is zero

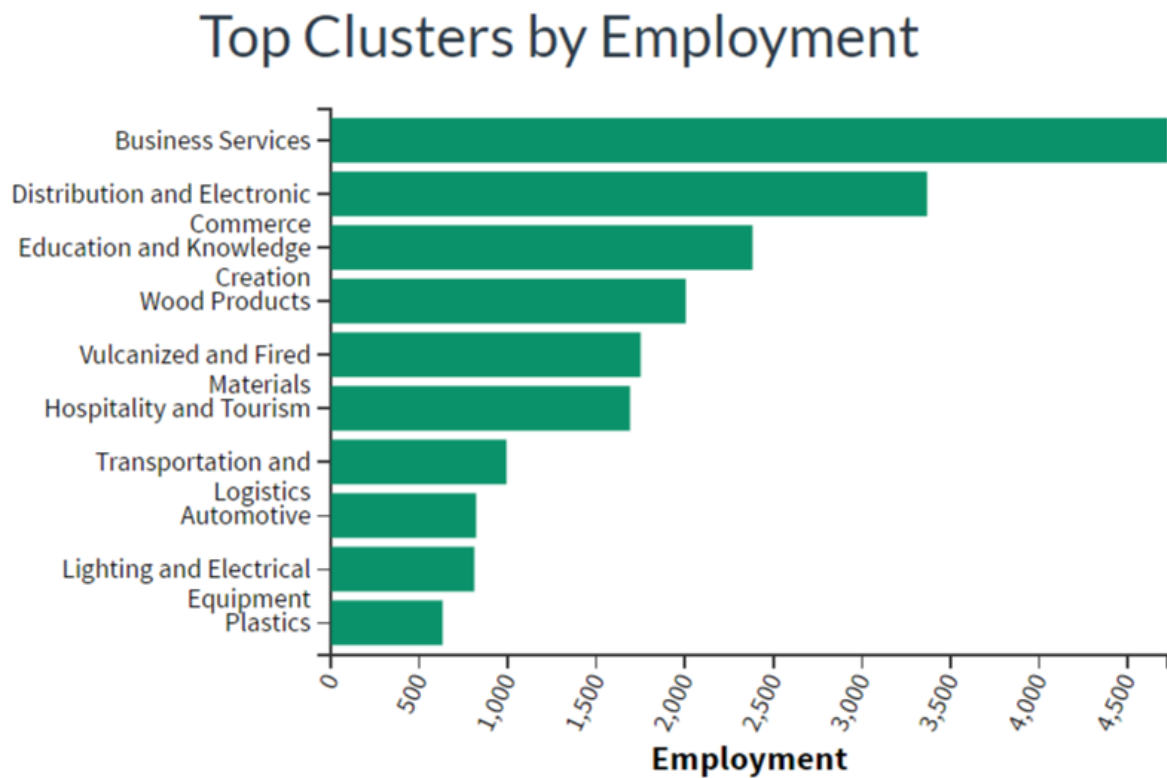
Source: U.S. Bureau of Labor Statistics, Quarterly Census of Employment &amp; Wages

Current Fayetteville Businesses (D&B)

Using current Dun & Bradstreet company location data, we analyzed the primary industry for companies with twenty employees or greater (1,499 companies within the three-county region) in manufacturing, wholesale, and services industry. The following industries were present and were noted for further exploration.

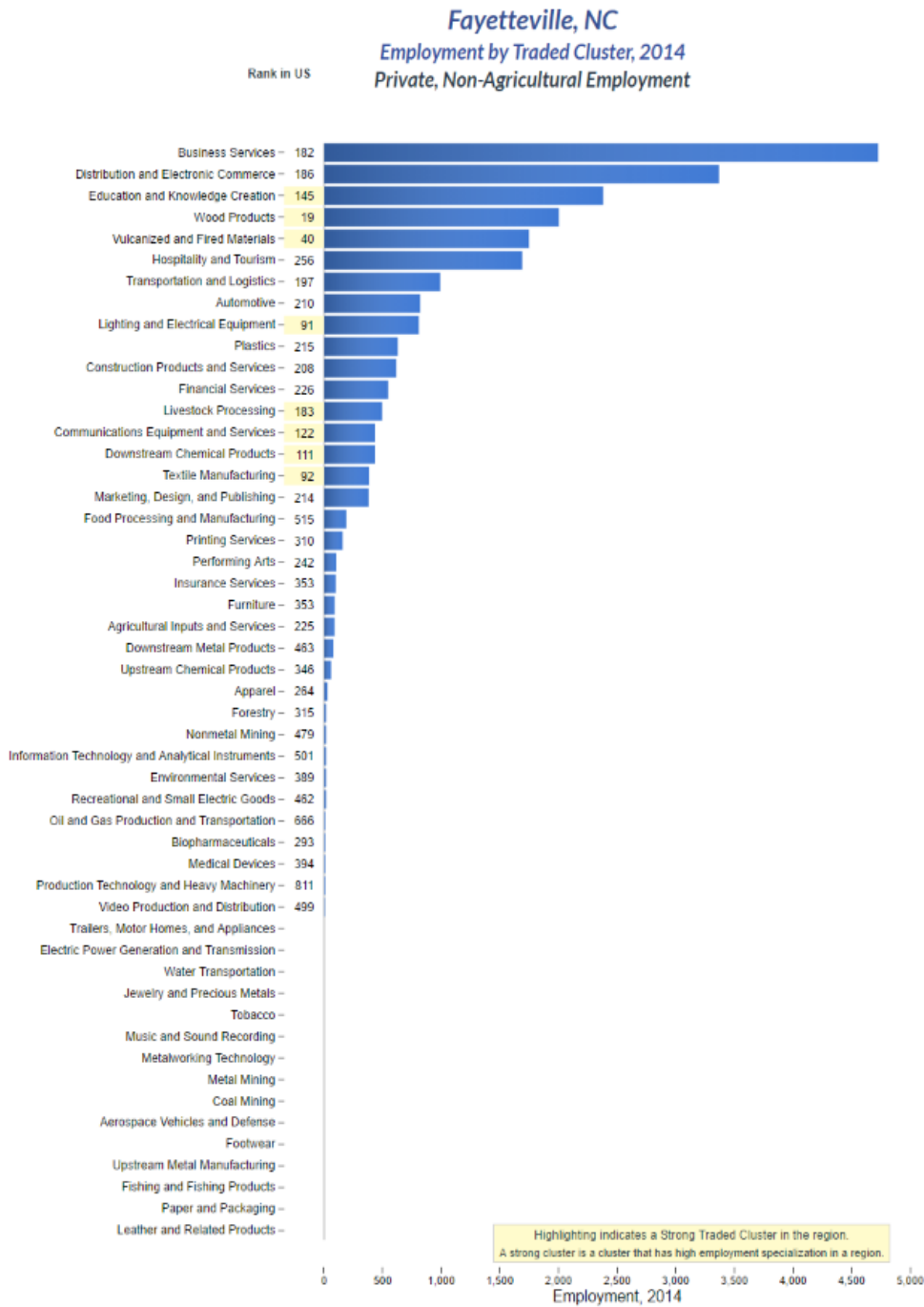
- Food Products / Processing
- Fabricated Metal Products
- Motor Freight Transportation and Warehousing
- Communications
- Wholesale Trade – Durable Goods
- Wholesale Trade – Non-Durable Goods
- Depository Institutions
- Business Services
- Engineering, Accounting, Research, Management and Related Services

**Figure 33: Top Clusters in Fayetteville Metropolitan (U.S. Cluster Mapping Project)**



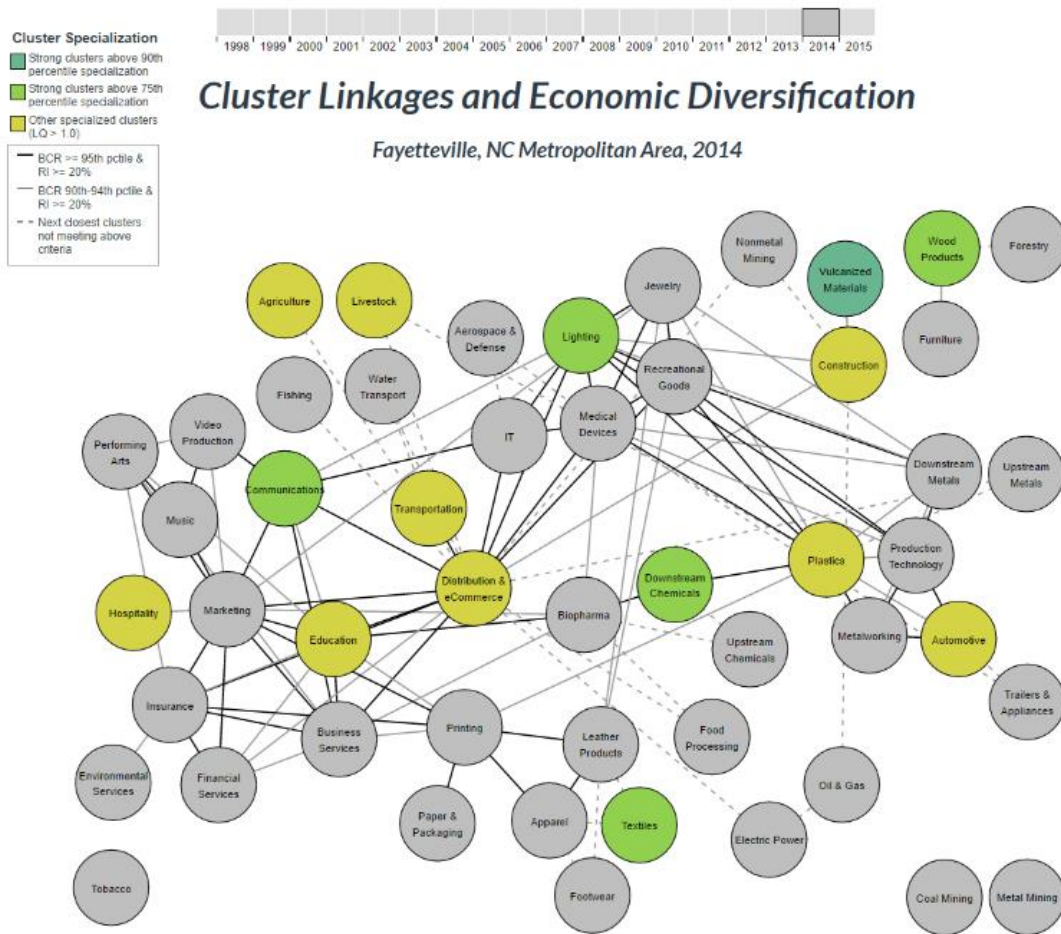
Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

**Figure 34: Employment by Traded Cluster Fayetteville, NC**



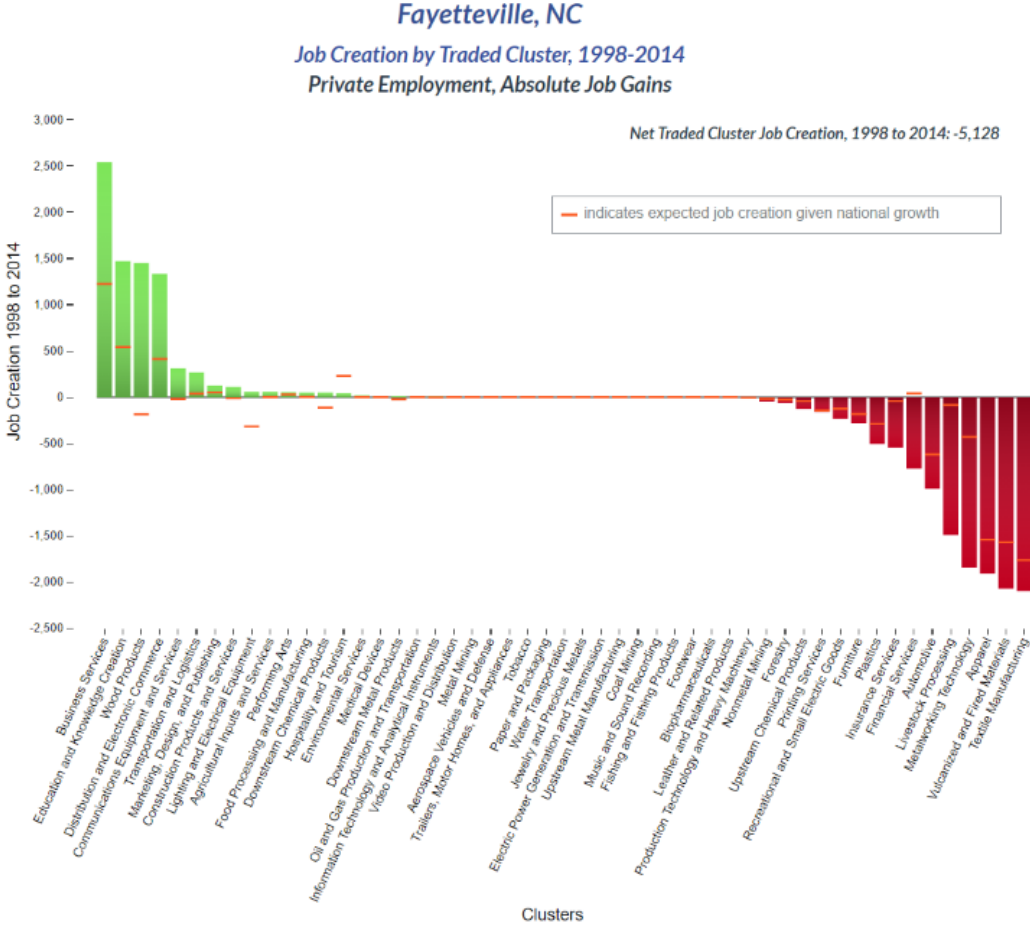
Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

Figure 35: Cluster Linkages and Economic Diversification



Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

Figure 36: Job Creation by Traded Cluster Fayetteville, NC



Source: U.S. Cluster Mapping Project, Institute for Strategy and Competitiveness, Harvard Business School.

**Table 39: Fastest Growing Industries**

According to IBISWorld, the following industries are forecast to have 4% or greater growth in the period from 2015 to 2016.

Code	Title	Revenue Growth % (2016)
<b>11111</b>	Soybean Farming in the US	7.55
<b>11191</b>	Tobacco Growing in the US	6.37
<b>21111</b>	Oil Drilling & Gas Extraction in the US	22.33
<b>21211</b>	Coal Mining in the US	4.72
<b>21221</b>	Iron Ore Mining in the US	10.41
<b>21231</b>	Stone Mining in the US	5.77
<b>22111c</b>	Hydroelectric Power in the US	7.12
<b>22111d</b>	Wind Power in the US	9.77
<b>22111e</b>	Solar Power in the US	21.81
<b>23611b</b>	Apartment & Condominium Construction in the US	5.97
<b>23611c</b>	Housing Developers in the US	8.10
<b>23611d</b>	Remodeling in the US	5.90
<b>23622a</b>	Commercial Building Construction in the US	5.10
<b>23712</b>	Oil & Gas Pipeline Construction in the US	7.27
<b>23713</b>	Transmission Line Construction in the US	5.83
<b>23811</b>	Concrete Contractors in the US	5.23
<b>23814</b>	Masonry in the US	7.88
<b>23815</b>	Glass & Glazing Contractors in the US	6.59
<b>23822b</b>	Plumbers in the US	6.88
<b>23831</b>	Drywall & Insulation Installers in the US	4.74
<b>23832</b>	Painters in the US	4.37
<b>23833</b>	Flooring Installers in the US	4.54
<b>23834</b>	Tile Installers in the US	4.09
<b>23899b</b>	Swimming Pool Construction in the US	6.64
<b>23899c</b>	Fence Construction in the US	8.51
<b>31191</b>	Snack Food Production in the US	4.18
<b>31213</b>	Wineries in the US	5.18
<b>32111</b>	Sawmills & Wood Production in the US	5.11
<b>32121</b>	Wood Paneling Manufacturing in the US	4.12
<b>32412</b>	Asphalt Manufacturing in the US	4.12
<b>32519</b>	Organic Chemical Manufacturing in the US	5.18
<b>32541a</b>	Brand Name Pharmaceutical Manufacturing in the US	5.66
<b>32541b</b>	Generic Pharmaceutical Manufacturing in the US	5.66
<b>32562</b>	Cosmetic & Beauty Products Manufacturing in the US	7.81
<b>32611</b>	Plastic Film, Sheet & Bag Manufacturing in the US	5.06

<b>32731</b>	Cement Manufacturing in the US	6.03
<b>32742</b>	Gypsum Product Manufacturing in the US	6.52
<b>32799</b>	Mineral Product Manufacturing in the US	5.01
<b>33299a</b>	Guns & Ammunition Manufacturing in the US	5.14
<b>33313</b>	Mining, Oil & Gas Machinery Manufacturing in the US	8.72
<b>33321</b>	Woodworking Machinery Manufacturing in the US	4.74
<b>33329b</b>	Printing, Paper, Food, Textile & Other Machinery Manufacturing in the US	5.12
<b>33341</b>	Heating & Air Conditioning Equipment Manufacturing in the US	4.24
<b>33351</b>	Metalworking Machinery Manufacturing in the US	4.18
<b>33441a</b>	Semiconductor & Circuit Manufacturing in the US	6.70
<b>33451b</b>	Medical Device Manufacturing in the US	4.89
<b>33512</b>	Lighting Fixtures Manufacturing in the US	4.60
<b>33592</b>	Wire & Cable Manufacturing in the US	4.14
<b>33593</b>	Wiring Device Manufacturing in the US	5.53
<b>33632</b>	Automobile Electronics Manufacturing in the US	6.74
<b>33635</b>	Automobile Transmission Manufacturing in the US	4.14
<b>33661a</b>	Ship Building in the US	5.84
<b>33661b</b>	Boat Building in the US	4.30
<b>33711</b>	Cabinet & Vanity Manufacturing in the US	4.86
<b>42332</b>	Stone, Concrete & Clay Wholesaling in the US	6.20
<b>42351</b>	Metal Wholesaling in the US	5.23
<b>42361</b>	Electrical Equipment Wholesaling in the US	4.97
<b>42371</b>	Tool & Hardware Wholesaling in the US	4.77
<b>42373</b>	Heating & Air Conditioning Wholesaling in the US	4.69
<b>42432</b>	Men's & Boys' Apparel Wholesaling in the US	5.37
<b>42461</b>	Plastics Wholesaling in the US	5.10
<b>42471</b>	Gasoline & Petroleum Bulk Stations in the US	14.87
<b>44122b</b>	Bicycle Dealership and Repair in the US	4.93
<b>44229</b>	Home Furnishings Stores in the US	5.52
<b>44611</b>	Pharmacies & Drug Stores in the US	5.56
<b>44612</b>	Beauty, Cosmetics & Fragrance Stores in the US	4.92
<b>44833</b>	Handbag, Luggage & Accessory Stores in the US	4.52
<b>45291</b>	Warehouse Clubs & Supercenters in the US	4.78
<b>45399</b>	Small Specialty Retail Stores in the US	5.29
<b>45411a</b>	E-Commerce & Online Auctions in the US	10.82
<b>48111b</b>	Domestic Airlines in the US	4.17
<b>48541</b>	Public School Bus Services in the US	4.19
<b>48691</b>	Refined Petroleum Pipeline Transportation in the US	7.60
<b>48710</b>	Sightseeing Transportation in the US	4.20
<b>48851</b>	Freight Forwarding Brokerages & Agencies in the US	4.22
<b>49222</b>	Couriers & Local Delivery Services in the US	5.37



<b>49319</b>	Specialized Storage & Warehousing in the US	12.84
<b>51121</b>	Software Publishing in the US	4.23
<b>51121a</b>	Operating Systems & Productivity Software Publishing in the US	5.28
<b>51121c</b>	Business Analytics & Enterprise Software Publishing in the US	4.54
<b>51121d</b>	Design, Editing & Rendering Software Publishing in the US	4.58
<b>51121e</b>	Video Game Software Publishing in the US	7.87
<b>51224</b>	Audio Production Studios in the US	6.03
<b>51711b</b>	Satellite TV Providers in the US	4.59
<b>51711e</b>	VoIP in the US	10.54
<b>51741</b>	Satellite Telecommunications Providers in the US	4.57
<b>51821</b>	Data Processing & Hosting Services in the US	4.61
<b>51913a</b>	Search Engines in the US	7.81
<b>51913b</b>	Internet Publishing and Broadcasting in the US	6.67
<b>52222</b>	Auto Leasing, Loans & Sales Financing in the US	7.84
<b>52232</b>	Credit Card Processing & Money Transferring in the US	5.67
<b>52311</b>	Investment Banking & Securities Dealing in the US	5.76
<b>52315</b>	Commodity Dealing and Brokerage in the US	7.19
<b>52321</b>	Stock & Commodity Exchanges in the US	5.82
<b>52391</b>	Venture Capital & Principal Trading in the US	12.85
<b>52392</b>	Portfolio Management in the US	8.62
<b>52393</b>	Financial Planning & Advice in the US	6.14
<b>52413</b>	Reinsurance Carriers in the US	5.02
<b>52429</b>	Third-Party Administrators & Insurance Claims Adjusters in the US	5.50
<b>52512</b>	Health & Welfare Funds in the US	4.66
<b>52592</b>	Trusts & Estates in the US	10.64
<b>53113</b>	Storage & Warehouse Leasing in the US	4.04
<b>53121</b>	Real Estate Sales & Brokerage in the US	4.89
<b>53231</b>	Tool & Equipment Rental in the US	4.84
<b>53311</b>	Intellectual Property Licensing in the US	4.63
<b>54132</b>	Landscape Design in the US	4.95
<b>54135</b>	Building Inspectors in the US	4.24
<b>54136</b>	Geophysical Services in the US	4.97
<b>54137</b>	Surveying & Mapping Services in the US	4.78
<b>54161</b>	Management Consulting in the US	4.59
<b>54161b</b>	HR Consulting in the US	4.77
<b>54162</b>	Environmental Consulting in the US	4.85
<b>54169</b>	Scientific & Economic Consulting in the US	7.64
<b>54171</b>	Scientific Research & Development in the US	5.10
<b>54183</b>	Media Buying Agencies in the US	5.93
<b>54187</b>	Print Advertising Distribution in the US	4.07
<b>54194</b>	Veterinary Services in the US	6.63

<b>56111</b>	Human Resources & Benefits Administration in the US	4.36
<b>56133</b>	Professional Employer Organizations in the US	5.24
<b>56292</b>	Recycling Facilities in the US	4.97
<b>56299</b>	Portable Toilet Rental & Septic Tank Cleaning in the US	4.44
<b>61111a</b>	Public Schools in the US	4.42
<b>62111a</b>	Primary Care Doctors in the US	4.66
<b>62132</b>	Optometrists in the US	4.04
<b>62139a</b>	Podiatrists in the US	5.46
<b>62139b</b>	Alternative Healthcare Providers in the US	4.02
<b>62161</b>	Home Care Providers in the US	5.95
<b>62191</b>	Ambulance Services in the US	4.15
<b>62199</b>	Blood & Organ Banks in the US	7.23
<b>62231</b>	Specialty Hospitals in the US	5.52
<b>62311</b>	Nursing Care Facilities in the US	5.59
<b>62321</b>	Residential Intellectual Disability Facilities in the US	4.47
<b>62331</b>	Retirement Communities in the US	5.79
<b>62412</b>	Elderly & Disabled Services in the US	6.32
<b>71121b</b>	Racing & Individual Sports in the US	4.35
<b>71141</b>	Celebrity & Sports Agents in the US	4.18
<b>72121</b>	Campgrounds & RV Parks in the US	4.32
<b>81219b</b>	Hair Loss Treatment & Removal in the US	6.55
<b>81291</b>	Pet Grooming & Boarding in the US	5.25
<b>81299a</b>	Dating Services in the US	4.50
<b>81321</b>	Donations, Grants & Endowment in the US	7.36
<b>81399</b>	Homeowners' Associations in the US	4.62
<b>NN001</b>	Biotechnology in the US	9.07
<b>NN005</b>	Sustainable Building Material Manufacturing in the US	25.97

## Appendix E: Target Industry Profiles

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### Industry Profiles

#### Summary

Profiles were developed for each of the recommended target industries for Fayetteville. Profiles are important in taking the next steps in proactively targeting companies and providing insight into each industry cluster and sub-segments. The profiles will provide understanding of the industry cluster and each industry sub-sector included in the cluster.

The Industry Profiles include the following information:

- ⦿ Definition of the industry by North American Industry Classification System (NAICS) Codes
- ⦿ Targeting recommendations
- ⦿ Industry statistics by industry sub-segment including
  - Industry revenue
  - Industry profit
  - Historical and forecasted growth
  - Revenue per employee
  - Wages as a percentage of revenue
  - Average employees per establishment
  - Wages per employee
- ⦿ Industry sub-segment summaries and outlooks, along with key external drivers and key success factors

#### Logistics and Warehousing

##### Cluster Definition (NAICS Codes)

48412 Long Distance Freight Trucking  
 48423 Tank and Refrigeration Trucking  
 48851 Freight Forwarding Brokerages and Agencies  
 48899 Freight Packing and Logistics Services  
 49311 Public Storage and Warehousing  
 49312 Refrigerated Storage  
 49319 Specialized Storage and Warehousing  
 45411 E-Commerce and Online Auctions  
 42312 Auto Parts Wholesaling  
 42351 Metal Wholesaling  
 42361 Electrical Equipment Wholesaling  
 42369 Electronic Parts and Equipment Wholesaling

**Table 40a: Industry Vitals-Logistics and Warehousing**

Target Sector	NAICS	Description	Revenue (\$bn)	Profit (\$bn)	Annual Growth 10-15 (%)	Annual Growth 16-21 (%)	Revenue per Employee (\$'000)	Wages % of Revenue	Emp. per Estab.	Wages/Employee (\$)
<b>Logistics and Warehousing</b>										
	48412	Long-Distance Freight Trucking	182.3	13.7	2.1%	2.1%	170.0	26.3	2.9	44,720.70
	48423	Tank & Refrigeration Trucking	37.7	2.6	1.1%	3.0%	166.0	28.9	9.8	48,067.40
	48851	Freight Forwarding Brokerages and Agencies	123.4	5.9	5.4%	3.5%	427.6	13.4	6.2	57,334.10
	48899	Freight Packing and Logistics Services	2.3	0.2	1.6%	1.7%	73.6	68.5	4.8	50,432.60
	49311	Public Storage and Warehousing	20.4	3.5	2.5%	3.3%	103.1	42.0	18.1	43,297.30
	49312	Refrigerated Storage	4.6	0.8	1.6%	2.0%	103.9	42.6	20.7	44,280.90
	49319	Specialized Storage and Warehousing	7.7	1.3	7.3%	2.6%	174.2	31.4	18.6	54,760.30
	45411a	E-Commerce and Online Auctions	294.6	18.3	10.1%	4.4%	829.0	5.6	2.5	46,160.30
	42312	Auto Parts Wholesaling	181.0	8.0	4.6%	2.0%	829.1	6.0	12.0	49,336.40
	42351	Metal Wholesaling	152.7	4.6	-7.7%	2.4%	1,042.0	5.7	16.0	58,903.30
	42361	Electrical Equipment Wholesaling	160.0	6.7	3.1%	3.3%	799.5	9.3	13.4	73,994.00
	42369	Electronic Parts and Equipment Wholesaling	351.8	15.1	2.8%	2.6%	1,204.9	7.9	17.6	95,240.60

**Targeting Recommendations**

The following avenues are recommendations, as targeting strategies, for Logistics and Warehousing:

- ⊙ Email marketing and awareness campaigns to surrounding communities and states to create awareness of specific opportunities within Fayetteville such as industry park developments, available sites, and incentives
- ⊙ National, ongoing lead generation program
- ⊙ Trade show marketing in conjunction with regional or state partners for an opportunity to meet with companies as well as network within the industry

Initial target lists can be built from online resources such as Hoovers, Avention, InfoUSA, and industry associations. As lists are built, we search for companies fitting the target using industry codes and business descriptions. The company research process evaluates each company as well as their fit with Fayetteville assets, benefits, and culture.

Selected industry associations relevant to this target include:

- ⊙ International Warehouse Logistics Association – [www.iwla.com](http://www.iwla.com)
- ⊙ Global Cold Chain Alliance – [www.gcca.org](http://www.gcca.org)
- ⊙ Electronic Retailing Association – [www.retailing.org](http://www.retailing.org)
- ⊙ National Association of Wholesaler-Distributors – [www.naw.org](http://www.naw.org)
- ⊙ Council of Supply Chain Management Professionals – [www.cscmp.org](http://www.cscmp.org)
- ⊙ Retail Industry Leaders Association – [www.rila.org](http://www.rila.org)

**Segment Summaries**

*48412 Long-Distance Freight Trucking*

**DEFINITION** Operators in the Long-Distance Freight Trucking industry handle various commodities, usually palletized and transported in containers or van trailers. Establishments typically provide trucking between metropolitan areas and regions that may cross North American country borders. The industry includes establishments operating as truckload or less-than-truckload carriers.

**KEY EXTERNAL DRIVERS**

- Freight transportation services index
- Industrial production index
- Per capita disposal income
- Price of diesel
- Total trade value

**KEY SUCCESS FACTORS**

- Market research and understanding
- Having a high profile in the market
- Output is sold under contract – incorporate long-term sales contracts
- Optimum capacity utilization
- Ensuring pricing policy is appropriate
- Superior financial management and debt management

**OUTLOOK** Revenue for the Long-Distance Freight Trucking industry is expected to rise 2.4% in 2017. Increasing manufacturing activity and greater retail spending will ensure higher freight volumes as retail inventory returns to pre-recessionary levels. In addition, rising trade volumes during the next five years will increase shipments to and from U.S. ports, requiring more trucking companies to move goods across the country. The Transportation Services Index is also expected to grow as consumer spending slowly increases, indicating greater demand for industry services. In the five years to 2021, IBISWorld forecasts that industry revenue will grow at an annualized rate of 2.1% to \$202.0 billion.

*48423 Tank and Refrigeration Trucking*

**DEFINITION** This industry comprises establishments that provide long-distance specialized transportation of cargo using trucks and trailers. The industry moves cargo that, because of size, weight, shape or other characteristics, requires specialized equipment for transportation. Companies within this industry transport items such as automobiles, gravel, sand, dirt, chemicals, frozen goods, livestock, milk and petroleum.

**KEY EXTERNAL DRIVERS**

- Freight transportation services index
- U.S. oil and gas production index
- Demand from frozen food wholesaling
- Price of diesel

**KEY SUCCESS FACTORS**

- Optimum capacity utilization
- Output is sold under contract – incorporate long-term sales contracts
- Access to the latest available and most efficient technology and techniques
- Access to highly skilled workforce
- Having a diverse range of clients
- Successful industrial relations policy

**OUTLOOK** Over the next five years, the Tank and Refrigeration Trucking industry will continue to grow steadily. A strengthening U.S. economy is anticipated to lead to increased consumer spending, stimulating retail, industrial, and construction activity. Thus, demand for industry services will climb. Moreover, as the manufacturing sector recovers and fuel surcharges rise, revenue will pick up from recent declines. Therefore, in the five years to 2021, industry revenue is forecast to climb an annualized 3.0% to \$43.7 billion.

*48851 Freight Forwarding Brokerages and Agencies*

**DEFINITION** Companies in this industry arrange the transportation of freight between shippers and carriers. These operators are usually known as freight forwarders, marine shipping agents

or customs brokers and offer services for many modes of transportation. Because operators act as agents, the industry does not include the cost of arrangement as part of its revenue.

#### KEY EXTERNAL DRIVERS

- Freight transportation services index
- Total trade value
- Consumer spending
- E-commerce sales
- World price of crude oil
- Ability to quickly adopt new technology
- Understanding government policies and their implications
- Provision of superior after sales service
- Access to quality personnel
- Having contacts within key markets

#### KEY SUCCESS FACTORS

**OUTLOOK** The Freight Forwarding Brokerages and Agencies industry will continue to grow at a relatively brisk pace over the next five years. A strengthening domestic economy, including increased consumer spending and recovering industrial activity, is projected to lead to higher freight volumes. Consequently, demand for industry services is expected to increase. Moreover, operators will continue to expand their international businesses as emerging markets further develop and trade grows. However, the recent slowdown in emerging market growth and U.S. manufacturing may continue to slow this trend. Nonetheless, in the five years to 2021, industry revenue is forecast to climb at an annualized rate of 3.5% to \$146.8 billion.

#### *48899 Freight Packing and Logistics Services*

**DEFINITION** This industry's main activity is providing packing and crating services for the transportation sector. The industry is composed of companies that provide consolidation of freight consignments, trade document preparation, packing, crating and otherwise preparing goods for transportation and logistics consulting services. The industry does not include actual transportation of goods.

#### KEY EXTERNAL DRIVERS

- Consumer spending
- Freight transportation services index
- Industrial production index
- Total trade value
- Marketing of differentiated products
- Ability to quickly adopt new technology
- Ability to provide goods and services in diverse locations
- Effective quality control
- Proximity to key markets
- Access to multi-skilled and flexible workforce

#### KEY SUCCESS FACTORS

**OUTLOOK** The Freight Packing and Logistics Services industry will grow more robustly in coming years as the global economy gains traction. Over the five years to 2020, revenue is forecast to rise at an annualized rate of 2.2% to \$2.5 billion. Stronger consumption and manufacturing levels, as well as trade growth, will bolster freight volumes. These higher freight volumes will boost demand for freight packing and logistics services. The freight transportation services

index is forecast to increase at an annualized 1.5% over the five-year period. Nonetheless, strong internal and external competition will slow growth.

Domestic and international trade are important sources of demand for freight packing and logistics services. As domestic wholesale trade and imports and exports increase, industry revenue grows as well. Operators are often responsible for packing consignments or preparing documents for product exports. Domestic wholesale trade and the total value of U.S. trade are projected to rise over the next five years, supporting industry growth. Industry operators that survived the recession will benefit from continuous increases in demand through 2020.

Rebounding domestic and overseas demand will also attract new entrants to the industry, with the number of enterprises expected to rise at an annualized rate of 1.3% to 5,867 in 2020, as demand picks up and freight volumes are revived. This industry expansion over the next five years reflects an expected long-term rise in freight trade. However, the recent slowdown in emerging market growth is anticipated to slow down demand for trade-related industry services.

IBISWorld projects that a flexible workforce will continue to protect industry profitability. Companies typically hire employees on an as-needed basis, allowing them to reduce the size of their staff when downstream demand weakens so that they can stay afloat amid weaker revenue streams. Moreover, many participants operate independently and do not maintain a permanent staff. As demand for industry services grows, employment is expected to modestly increase at an annualized rate of 1.4% to 21,701 workers over the five years to 2020. Wages will follow a similar trend, increasing at an annualized rate of 1.8% to total \$1.2 billion in 2020. This growth will help the industry maintain healthy profit, which is forecast to rise from 8.4% of revenue in 2015 to 9.9% in 2020. As demand returns and the workforce expands, the average employee wage is expected to rise

#### *49311 Public Storage and Warehousing*

**DEFINITION** Industry operators provide third-party storage warehousing and storage services to the manufacturing, wholesale and retail sectors. Operators generally use equipment such as forklifts, pallets, and racks to handle goods in containers like boxes, barrels, and drums. Industry companies avoid specializing in handling bulk products of any particular type, size or quantity. Companies that rent or lease space for self-storage to consumers are not included in this industry.

##### **KEY EXTERNAL DRIVERS**

- Consumer spending
- E-commerce sales
- Freight transportation services index
- Total trade value
- Manufacturing capacity utilization

##### **KEY SUCCESS FACTORS**

- Use of most efficient work practices
- Ability to alter mix of inputs in line with cost
- Optimum capacity utilization
- Output is sold under contract – incorporate long-term sales contracts
- Provision of appropriate facilities

**OUTLOOK** The Public Storage and Warehousing industry is expected to experience stronger growth over the next five years. An anticipated acceleration of consumer spending relative to

the prior period will further lift demand for warehousing from manufacturers as they ship, and purchase storage for, more consumer goods. In addition, increased import penetration into the manufacturing sector is expected to drive greater demand because foreign manufacturers often require domestic third parties to receive and store products for the U.S. market. Finally, although it will continue to put upward pressure on industry wage and rental costs, sustained growth in e-commerce is also expected to increase third party warehousing needs, driving strong industry growth. Over the five years to 2021, industry revenue is expected to increase at an annualized rate of 3.3% to \$24.1 billion.

#### *49312 Refrigerated Storage*

**DEFINITION** This industry includes establishments that operate refrigerated warehousing and storage facilities. Temperature-controlled services include blast freezing and tempering. Establishments that primarily store furs for trade are included in this industry. These furs are used as raw materials for the manufacturing of garments and personal accessories such as bags and shoes.

##### **KEY EXTERNAL DRIVERS**

- Consumer spending
- Total trade value
- Demand from grocery wholesaling
- Demand from brand name pharmaceutical manufacturing
- Demand from frozen food production
- Optimum capacity utilization
- Automation – reduces costs, particularly those associated with labor
- Output is sold under contract – incorporate long-term sales contracts
- Provision of appropriate facilities

##### **KEY SUCCESS FACTORS**

**OUTLOOK** The Refrigerated Storage industry is forecast to grow during the five years to 2021, supported by increasing demand from downstream markets and higher trade volume. Improving economic conditions will enable consumers to purchase a greater variety of food products at grocery stores and other retail channels, boosting demand for refrigerated storage. While pharmaceutical manufacturers only account for a small share of industry revenue, demand from this downstream market segment is anticipated to grow as the U.S. population ages, lifting demand for prescription medication. Additionally, growing demand for pharmaceutical goods in countries such as China, Brazil, and India will cause U.S. pharmaceutical companies to increasingly rely on refrigerated storage facilities to store their goods before they are exported. The total U.S. trade value is anticipated to grow at an annualized rate of 4.4% over the five years to 2021. Coupled with robust consumer spending, overall industry revenue is forecast to grow at an annualized rate of 2.0% to \$5.0 billion over the same period, including a growth of 1.5% in 2017. Data from the U.S. Department of Agriculture indicates that total cold storage capacity in the United States has grown steadily over the past decade. IBISWorld forecasts capacity to continue growing during the outlook period. As credit conditions improve, refrigerated storage operators are expected to invest in new facilities, expand the storage space of existing facilities and invest in new technology and equipment.



#### 49319 Specialized Storage and Warehousing

**DEFINITION** Companies in the Specialized Storage and Warehousing industry primarily operate specialized warehousing and storage facilities. This does not include general merchandise, refrigerated and farm product warehousing or storage.

##### KEY EXTERNAL DRIVERS

- Demand from oil drilling and gas extraction
- Demand from petroleum refining
- Regulation for the specialized storage and warehouse industry
- Demand from chemical manufacturing
- Demand from logging
- Ability to alter mix of inputs in line with cost
- Optimum capacity utilization
- Automation – reduces costs, particularly those associated with labor
- Output is sold under contract – incorporate long-term sales contracts
- Ability to accommodate environmental requirements

##### KEY SUCCESS FACTORS

**OUTLOOK** The Specialized Storage and Warehousing industry is expected to grow in the five years to 2020. Industry fortunes are linked closely to the performance of the oil and gas sectors, the chemical manufacturing sector, and, to a lesser extent, the logging and automobile-manufacturing sectors. Other factors that affect industry growth include legislative compliance with security and environmental regulation, as well as technological innovation. Steady growth in demand for oil drilling and gas storage is expected to cause industry revenue to grow at a steady annualized rate of 5.9% in the five years to 2020, to \$9.1 billion. In 2016, industry revenue is forecast to increase 12.8% as demand for petroleum storage increases as a result of low oil prices, and the growing economy boosts demand from chemical manufacturers and the logging industry.

#### 45411 E-Commerce and Online Auctions

**DEFINITION** The E-Commerce and Online Auctions industry comprises establishments that sell merchandise online. The internet is the main selling platform via either a retailer's online store or an auction site. This industry excludes media and software that is streamed or downloaded online.

##### KEY EXTERNAL DRIVERS

- Per capital disposable income
- Number of mobile internet connections
- Percentage of services conducted online
- World price of crude oil

##### KEY SUCCESS FACTORS

- Ability to control stock on hand
- Ability to quickly adopt new technology
- Provision of superior after sales service
- Having a loyal customer base

**OUTLOOK** The E-Commerce and Online Auctions industry will continue to grow, albeit at a slower rate than in the past, as the convenience and ability to compare items and prices incentives consumers to purchase products online. In the five years to 2021, revenue is expected to increase at an annualized rate of 4.4% to \$366.2 billion, with a 4.9% growth in 2017. Despite

accelerated per capita disposable income growth, the growth in the number of mobile internet connections is expected to slow over the five years to 2021, rising at an annualized rate of only 5.1%, depressing industry revenue.

Additionally, volatility in the world price of crude oil is expected to have negative impacts on the average industry profit margin. In the five years to 2016, the world price of crude oil drastically declined due to increased supply; however, a correction in the price over the five years to 2021 is estimated to raise the price at an annualized rate of 8.5%. An increase in the price of crude oil could negatively affect operators' profit margin by increasing shipping costs.

#### *42312 Auto Parts Wholesaling*

**DEFINITION** This industry comprises operators that sell automotive parts wholesale to automobile manufacturers, automotive parts retailers and auto service providers. Sales of new tires and tubes are not included.

#### **KEY EXTERNAL DRIVERS**

- Demand from car and automobile manufacturing
- Number of motor vehicle registrations
- Per capital disposable income
- Age of vehicle fleet
- Regulation for the automotive sector
- Upstream vertical integration (ownership links)
- Ability to control stock on hand
- Having contacts in key markets
- Production of goods currently favored by the market
- Development of a symbiotic relationship with another industry

#### **KEY SUCCESS FACTORS**

**OUTLOOK** As the entire automotive sector grows steadily in line with a generally improving economy, the Auto Parts Wholesaling industry will benefit. Additionally, IBISWorld expects the industry to continue its upward trend as demand from car and automobile manufacturing improves. Moreover, due to stricter emission requirements and increased ecofriendly initiatives, automakers are demanding lighter and more efficient auto parts, which are anticipated to also spur industry demand. Thus, industry revenue is estimated to grow at an annualized rate of 2.0% to \$200.0 billion over the five years to 2021.

In the future, the average value of auto parts demanded per vehicle may decline because of consumer trends moving toward more compact, fuel-efficient vehicles. These cars are smaller in size and scope, requiring fewer parts in production than the amount a sport utility vehicle (SUV) or light truck would call for. Over the next five years, consumer demand for these vehicles will facilitate higher compact car production. While the value of parts per vehicle is generally lower in these compact vehicles, recently introduced computer components, such as on-board diagnostic systems aimed at controlling vehicle emissions and proposed technological safety features, have the ability to increase their value. Additionally, as vehicles age and their components depreciate, replacement parts become more important. Therefore, suppliers will focus on wholesaling strategies around new, high profit margin products as they are incorporated into new vehicle production and aging vehicles as replacement parts. As a result of this new strategy, industry profit is expected to benefit.

Leaner operating conditions lean will also ultimately lead operators to improved profitability. For example, operators are expected to find alternative ways to increase capacity without expanding the number of facilities. To this end, the number of industry establishments is forecast to grow at an annualized rate of only 1.0% to 19,174 facilities over the five years to 2021. As a result, operators are projected to hire more employees. Therefore, employment numbers are anticipated to slightly grow at an annualized rate of 1.6% to 235,969 employees over the five-year period. For fear of being overzealous, participants in the Auto Parts Wholesaling industry are cautiously increasing capacity and hiring, despite recent economic improvements. Nonetheless, as demand rebounds and operating costs are kept relatively low, industry operators are estimated to benefit from increased profit margins.

#### *42351 Metal Wholesaling*

**DEFINITION** Metal wholesaling operators distribute primary metal products, both ferrous and nonferrous, to industrial and construction markets. Operators maintain inventory and may perform functions like sawing and cleaning on a custom basis and as part of the distribution service. However, operators do not distribute precious metals, such as gold, silver and platinum, and they also do not distribute insulated wire or recyclable metal scrap.

#### **KEY EXTERNAL DRIVERS**

- World price of steel
- Industrial production index
- Value of construction
- World price of aluminum
- Ability to control stock on hand and maintain appropriate inventory levels
- Having links with suppliers
- Access to the latest available and most efficient technology and techniques
- Ability to alter mix of offerings in line with price changes and consumer preference
- Proximity to key markets

#### **KEY SUCCESS FACTORS**

- Effective quality control

**OUTLOOK** Moving forward, the Metal Wholesaling industry's performance will remain tied to conditions in key industrial markets and movements in primary metal prices. Sustained need for metals in key manufacturing, mining and construction industries will propel demand for industry services, especially as disposable income, business investment and interest rates continue to improve. The price of steel is expected to trend upward, after its decline over the past five years. Overall, revenue is expected to increase at an annualized rate of 2.4% in the five years to 2021 to reach \$171.8 billion.

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Defense and Security

Cluster Definition (NAICS Codes)

- 33299 Guns and Ammunition Manufacturing
- 33361 Engine and Turbine Manufacturing
- 33422 Communication Equipment Manufacturing
- 33429 Alarm, Horn, and Traffic Control Equipment Manufacturing
- 33451 Navigational Instrument Manufacturing
- 33592 Wire and Cable Manufacturing
- 33593 Wiring Device Manufacturing
- 33641 Aircraft, Engine, and Parts Manufacturing
- 33641 Space Vehicle and Missile Manufacturing
- 33699 Tank and Armored Vehicle Manufacturing
- 51121 Security Software Publishing
- 51721 Wireless Telecommunications Carriers
- 51791 Radar and Satellite Operations
- 54151 IT Consulting

**Table 40b: Industry Vitals-Defense and Security**

Target Sector	NAICS	Description	Revenue (\$bn)	Profit (\$bn)	Annual Growth 10-15 (%)	Annual Growth 16-21 (%)	Revenue per Employee (\$'000)	Wages % of Revenue	Emp. per Estab.	Wages/Employee (\$)
<b>Defense and Security</b>										
	33299a	Guns & Ammunition Manufacturing	15.8	1.2	6.5%	2.8%	429.3	15.2	53.8	65,111.10
	33361a	Engine & Turbine Manufacturing	55.7	4.9	2.2%	1.5%	534.5	12.2	93.3	65,088.70
	33422	Communication Equipment Manufacturing	27.3	1.4	-3.8%	1.3%	406.6	22.4	92.7	91,029.70
	33429	Alarm, Horn & Traffic Control Equipment Manufacturing	5.4	0.3	-2.0%	0.8%	388.3	17.6	38.6	68,338.40
	33451a	Navigational Instrument Manufacturing	104.3	7.8	-2.1%	1.3%	372.3	23.1	65.4	85,910.20
	33592	Wire and Cable Manufacturing	8.7	0.5	-2.0%	1.7%	249.6	18.5	29.2	46,056.10
	33593	Wiring Device Manufacturing	16.0	0.9	6.9%	4.4%	389.2	14.6	73.3	56,756.10
	33641a	Aircraft, Engine & Parts Manufacturing	241.2	28.2	6.9%	4.2%	567.6	16.5	248.2	93,596.70
	33641b	Space Vehicle & Missile Manufacturing	27.7	3.0	1.6%	2.1%	383.4	32.1	547.0	122,951.80
	33699b	Tank & Armored Vehicle Manufacturing	3.3	0.3	-23.9%	6.3%	463.7	14.5	111.9	67,082.70
	51121f	Security Software Publishing	12.6	1.7	5.9%	5.0%	457.6	33.1	39.8	151,419.10
	51721	Wireless Telecommunications Carriers	255.9	64.7	2.7%	3.2%	1,095.1	6.5	22.0	70,946.90
	51791b	Radar & Satellite Operations	2.8	0.2	5.5%	3.1%	522.1	20.6	31.2	107,417.70
	54151	IT Consulting	386.9	28.6	2.5%	2.7%	190.0	43.4	4.4	82,389.60

Targeting Recommendations

The following avenues are recommendations, as targeting strategies, for Defense and Security:

- ⦿ National, ongoing lead generation program
- ⦿ Email marketing and awareness campaigns to surrounding communities and states in order to create awareness of specific opportunities within Fayetteville such as industry park developments, available sites, and incentives
- ⦿ Trade show marketing in conjunction with regional or state partners for an opportunity to meet with companies as well as network within the industry

Initial target lists can be built from online resources such as Hoovers, Avention, InfoUSA, and industry associations. As lists are built, we search for companies fitting the target using industry codes and business descriptions. The company research process evaluates each company, as well as, their fit with Fayetteville assets, benefits and culture.

Selected industry associations relevant to this target include:

- ⦿ National Electrical Manufacturers Association – [www.nema.org](http://www.nema.org)
- ⦿ Aerospace Industries Association – [www.aia-aerospace.org](http://www.aia-aerospace.org)

- ⦿ Information Systems Security Association – [www.issa.org](http://www.issa.org)
- ⦿ National Defense Industrial Association – [www.ndia.org](http://www.ndia.org)
- ⦿ National Homeland Security Association – [www.nationalusai.com](http://www.nationalusai.com)
- ⦿ AeroDef Manufacturing – [www.areodefevent.com](http://www.areodefevent.com)
- ⦿ International Society for Optics and Photonics – [www.spie.org](http://www.spie.org)

## Segment Summaries

### *33299 Guns and Ammunition Manufacturing*

**DEFINITION** This industry manufactures small arms (including shotguns, rifles, revolvers, pistols, machine guns, and grenade launchers), and ammunition, ordnance, and accessories.

#### KEY EXTERNAL DRIVERS

- Federal funding for defense
- Non-NATO defense spending
- Local and state government investment
- Per capita disposable income
- Trade-weighted index

#### KEY SUCCESS FACTORS

- Having a loyal customer base
- Access to high quality inputs
- Effective quality control
- Having a good technical knowledge of the product
- Establishment of branch names
- Control of distribution arrangements

**OUTLOOK** The Guns and Ammunition Manufacturing industry's trajectory over the next five years will largely depend on U.S. defense spending and perceptions about the future of firearms legislation. While revenue grew substantially over the past five years, it is forecast to move more in line with historical growth rates as consumer demand eventually begins to normalize. Nonetheless, increased military spending on industry products will help bolster industry growth, despite overall spending remaining below levels seen in 2012. Moreover, industry operators will increasingly depend on exports for expansion. Overall, in the five years to 2021, industry revenue is forecast to grow at an annualized 2.8% to \$18.2 billion, with a 3.4% increase in 2017.

### *33361 Engine and Turbine Manufacturing*

**DEFINITION** Operators in this industry manufacture turbines and equipment used for power transmission, such as generators, as well as diesel engines for highway vehicles and heavy-duty equipment. Parts and accessories are included, but wind turbines are excluded (see IBISWorld report 33361b).

#### KEY EXTERNAL DRIVERS

- Trade-weighted index
- Demand from truck transportation
- Private investment in industrial equipment and machinery
- Electric power consumption
- World price of steel

#### KEY SUCCESS FACTORS

- Quickly adopting new technology
- Using the latest technologies
- Effective quality control
- Securing long-term sales contracts
- Access to export destinations

**OUTLOOK** Over the five years to 2021, industry manufacturers will benefit from an extended upturn in domestic freight volumes, especially in the trucking sector. Greater industrial and manufacturing activity will also ultimately increase energy demand, aiding industry sales of turbine and power generation equipment. However, sales growth for industry exports is anticipated to slow in subsequent years, as a strengthening U.S. dollar and diminished global growth in vital emerging economies may threaten export demand for engines and turbines. However, exports are still anticipated to account for a fair share of industry revenue. Consequently, in the five years to 2021, industry revenue is expected to increase a more moderate annualized rate of 1.5% to \$59.9 billion, including an estimated growth of 2.0% in 2017.

### *33422 Communication Equipment Manufacturing*

**DEFINITION** This industry primarily manufactures broadcasting and other wireless communication equipment. Examples of such equipment include antennas, set-top boxes, GPS systems, cell phones, satellite uplink technologies, and radio and TV broadcasting equipment. Operators in this industry do not manufacture radio or television sets, intercoms, or equipment to test communication signals.

#### **KEY EXTERNAL DRIVERS**

- Aggregate private investment
- Consumer spending
- Trade-weighted index
- Number of cable TV subscriptions
- Number of mobile internet connections
- Demand from radio broadcasting

#### **KEY SUCCESS FACTORS**

- Effective quality control
- Production of a range which accommodates future developments
- Having technology sharing arrangements with major players
- Superior financial management and debt management

**OUTLOOK** The Communication Equipment Manufacturing industry will benefit from increasing demand as the economy grows and consumer sentiment rises, stimulating demand from downstream industries. Moreover, as the unemployment rate decreases and per capita disposable income rises, consumers are expected to increase discretionary spending, particularly on electronics such as smart phones. Over the five years to 2021, consumer spending is forecast to increase at an annualized rate of 2.4%. Additionally, demand from the Wireless Telecommunications Carriers industry (IBISWorld report 51721) and the Television Broadcasting industry (IBISWorld report 51512) are expected to grow at a faster rate than in the previous five-year period, while demand from the Radio Broadcasting industry (IBISWorld report 51511) is also anticipated to increase over the next five years. As a result of stronger demand, industry revenue is expected to rebound and grow at an annualized rate of 1.3% to \$29.2 billion over the five years to 2021.

### *33429 Alarm, Horn, and Traffic Control Equipment Manufacturing*

**DEFINITION** This industry manufactures communications equipment that includes alarm systems, hazard detection systems, traffic signals, sirens, and intercom systems. This industry excludes

telephone apparatuses, radio and TV broadcast equipment, and wireless communications equipment.

#### KEY EXTERNAL DRIVERS

- Demand from car and automobile manufacturing
- Demand from road and highway construction
- Housing starts
- Trade-weighted index
- Value of private nonresidential construction

#### KEY SUCCESS FACTORS

- Automation
- Having links with suppliers
- Establishment of export markets
- Production of premium goods/services
- Access to the latest available and most efficient technology and techniques
- Economies of scale

**OUTLOOK** As residential and nonresidential construction industries ramp up building activity in the next five years, the Alarm, Horn, and Traffic Control Equipment Manufacturing industry is set for steady revenue growth. The industry will also benefit from a rebound in U.S. automobile manufacturing and renewed investments in roads and highways. In the five years to 2020, revenue is forecast to increase at an annualized rate of 0.8% to \$5.6 billion. More robust growth in industry revenue is anticipated to be subdued by competition from imports and slow export growth caused by an appreciating dollar during the five-year period.

#### *33451 Navigational Instrument Manufacturing*

**DEFINITION** The industry manufactures navigational, measuring and control instruments. Its products include aeronautical instruments, appliance regulators and controls (except switches), laboratory analytical instruments, navigation and guidance systems, and physical properties testing equipment.

#### KEY EXTERNAL DRIVERS

- Demand from laboratory testing services
- Private investment in industrial equipment and machinery
- Research and development expenditure
- Trade-weighted index
- Government consumption and investment

#### KEY SUCCESS FACTORS

- Access to the latest technology
- Having links with suppliers
- Developed export markets
- Economies of scale
- Access to highly skilled workforce
- Research and development

**OUTLOOK** Over the five years to 2021, the Navigational Instrument Manufacturing industry's revenue is forecast to increase at an annualized rate of 1.3% to \$111.1 billion. Revenue will decline 0.3% in 2017 due to strong rises in the TWI. During this period, increasing corporate profit will allow for greater private R&D spending, which will facilitate product innovation and industry revenue growth. Furthermore, operators will benefit from a rebound in government consumption and investment, allowing for greater demand in the segment. Continued strong demand from downstream markets and emerging markets, such as energy, will also contribute to the industry's projected growth. For example, the government has also provided tax grants

to enterprises that operate in renewable energy, such as solar and wind. Government incentives will enable these industries to expand in the next five years, and their operations will require testing and measuring devices provided by industry operators. However, growing international competition and lower economic prospects in certain export regions will hamper growth.

### *33592 Wire and Cable Manufacturing*

**DEFINITION** This industry manufactures insulated nonferrous wire and cable and fiber optic cable used for power transmission and communication. This industry does not manufacture nonferrous wire or unsheathed fiber-optic materials, and instead uses wire and optical fiber manufactured by companies outside the industry.

#### **KEY EXTERNAL DRIVERS**

- Trade-weighted index
- World price of copper
- Demand from broadcasting and telecommunications
- Government consumption and investment
- Value of private nonresidential construction
- Consumer spending

#### **KEY SUCCESS FACTORS**

- Access to the latest available and most efficient technology and techniques
- Having contracts with large customers
- Establishment of export markets
- Undertaking technical research and development
- Guaranteed supply of key inputs
- Economies of scale

**OUTLOOK** Over the five years to 2021, improving economic conditions are expected to further stimulate downstream demand for wire and cable. An anticipated rise in per capita disposable income will result in greater consumer spending on electrical goods and appliances, driving rising demand for electrical wires from downstream consumer goods manufacturers. Additionally, as the population continues to rise, increased demand for power will continue to stimulate rising private and public expenditure and investment in power infrastructure, driving downstream utilities sector demand for power transmission wire and cable. Furthermore, increasing construction activity and rising telecommunications sector spending on wireless connectivity are expected to sustain growing demand for building and fiber-optic cable. In addition to rising downstream demand for industry products, world copper prices are projected to increase, positively impacting revenue. The Wire and Cable Manufacturing industry revenue is projected to increase at an annualized rate of 1.5% to reach \$13.6 billion over the five years to 2021. Despite this positive trend, revenue growth will continue to be constrained by high import penetration, as both offshoring of manufacturing operations to low-wage countries and the further appreciation of the US dollar are anticipated to continue over the outlook period.

### *33593 Wire Device Manufacturing*

**DEFINITION** Companies in this industry manufacture current-carrying wiring devices and noncurrent-carrying wiring devices for wiring electrical circuits. These include products such as outlet and switch electrical wiring boxes, electrical insulators, transmission pole and line



hardware, electrical metallic tubes, switches, conductor connectors, electric sockets, plugs, and electric cords.

#### KEY EXTERNAL DRIVERS

- Demand from electricians
- Demand from electrical equipment manufacturing
- Housing starts
- Industrial production index
- Trade-weighted index
- World price of copper

#### KEY SUCCESS FACTORS

- Having links with suppliers
- Establishment of export markets
- Access to the latest available and most efficient technology and techniques
- Economies of scale
- Effective quality control
- Control of distribution arrangements

**OUTLOOK** The Wiring Device Manufacturing industry is expected to continue benefiting from improved economic conditions over the next five years. Construction activity, consumer spending, and private investment are all expected to increase over the period. Furthermore, an increase in domestic demand from downstream industries and a rise in exports will also contribute to the industry's improved performance. As a result of these trends, industry revenue is expected to grow at an annualized rate of 4.4% to \$19.8 billion in the five years to 2020, including a 5.5% increase in 2016 alone. From a cost perspective, industry consolidation among the larger and medium sized players will raise productivity and keep labor costs in check due to streamlining production. Thus, while total industry employment will increase at a five-year average annual rate of 2.8% to total 46,985 workers by 2020; industry wages as a percentage of revenue will go from 14.4% in 2015 to 13.6% in 2020.

#### *33641 Aircraft, Engine, and Parts Manufacturing*

**DEFINITION** Companies in this industry manufacture and overhaul complete aircraft, develop prototypes and convert aircraft. The industry also includes the manufacture, conversion, and overhaul of aircraft engines and propulsion systems. Additionally, the industry makes related parts and auxiliary equipment. For information on guided missiles, space vehicles and related equipment, which are excluded from this industry, see Space Vehicle and Missile Manufacturing industry (IBISWorld report 33641b).

#### KEY EXTERNAL DRIVERS

- Demand from air transportation
- Federal funding for defense
- Non-NATO defense spending
- Trade-weighted index

- Economies of scope
- Well-developed internal processes
- Establishment of export markets
- Ability to accommodate environmental requirements
- Economies of scale
- Access to the latest available and most efficient technology and techniques

#### KEY SUCCESS FACTORS

**OUTLOOK** Over the next five years the Aircraft, Engine and Parts Manufacturing industry will reach new altitudes. Rising domestic and international demand for air travel will create strong

demand for more commercial aircraft and associated parts. In addition, airlines will seek to replace older models with newer, more fuel-efficient ones. However, weak U.S. military spending will continue to put pressure of defense contractors. Nonetheless, increased military hardware exports and a leveling off of the defense budget should ease this pressure. Therefore, in the five years to 2021, industry revenue is forecast to climb at an annualized rate of 4.2% to \$296.5 billion.

### *33641 Space Vehicle and Missile Manufacturing*

**DEFINITION** The Space Vehicle and Missile Manufacturing industry consists of businesses involved in the manufacture of guided missiles and space vehicles, including the development of prototypes and the manufacture and development of parts, propulsion units and support equipment used in guided missiles and space vehicles. This industry does not produce satellites.

#### **KEY EXTERNAL DRIVERS**

- Federal funding for defense
- Non-NATO defense spending
- Technological change for the space vehicle and missile industry
- Demand from satellite telecommunications providers
- Trade-weighted index

#### **KEY SUCCESS FACTORS**

- Well-developed internal processes
- Ability to take advantage of government subsidies and other grants
- Ability to expand and curtail operations rapidly in line with market demand
- Economies of scale
- Access to the latest available and most efficient technology and techniques

**OUTLOOK** Over the next five years, the Space Vehicle and Missile Manufacturing industry will slowly liftoff. More stable government funding and development of next generation missile systems will boost revenue growth, while NASA funds further space programs. Moreover, climbing defense spending in emerging markets and continued geopolitical tensions will strengthen demand for missile exports. Industry competition will also intensify as new players continue to enter the market, while the commercial segment expands. At the same time, government funding will remain constrained, tempering demand and endangering industry programs. Therefore, over the five years to 2021, industry revenue is forecast to climb an annualized 2.1% to \$30.8 billion.

### *33699 Tank and Armored Vehicle Manufacturing*

**DEFINITION** This U.S. industry manufactures complete military armored vehicles, combat tanks, and specialized components for combat tanks, including self-propelled weapons.

#### **KEY EXTERNAL DRIVERS**

- Federal funding for defense
- Non-NATO defense spending
- World price of steel
- Trade-weighted index

#### **KEY SUCCESS FACTORS**

- Provision of superior after sales service
- Undertaking technical research and development

- Financial structure of the company
- Establishment of export markets
- Access to the latest available and most efficient technology and techniques
- Experienced work force

**OUTLOOK** Over the next five years, the Tanks and Armored Vehicle Manufacturing industry will stabilize and expand as defense spending cuts on industry programs reverse. Operators will still face heavy fire, as the United States further scales down combat operations in Afghanistan and the government attempts to reduce the deficit, with spending on tanks and armored vehicles will remain pressured. However, these cuts are anticipated to reverse, with funding for industry programs expected to grow over 5.0% each year after 2016. Additionally, industry exports are projected to climb as geopolitical tensions continue to generate foreign demand for US arms. Therefore, in the five years to 2020, industry revenue is forecast to climb at an annualized 6.3% to \$4.4 billion.

#### *51121 Security Software Publishing*

**DEFINITION** This industry develops and distributes antivirus, anti-keylogger, spyware removal, encryption and firewall software. Operators in the industry may also provide consulting and technical support related to this software.

#### **KEY EXTERNAL DRIVERS**

- Crime rate
- Private investment in computers and software
- Number of mobile internet connections
- Number of broadband connections
- Price of computers and peripheral equipment

- Government consumption and investment

#### **KEY SUCCESS FACTORS**

- Undertaking technical research and development
- Access to highly skilled workforce
- Protection of patents
- Ability to quickly adopt new technology
- Access to retail distribution channels

**OUTLOOK** Over the five years to 2021, revenue for the Security Software Publishing industry is expected to grow at an annualized rate of 5.0% to \$16.1 billion, starting with a 5.4% jump in 2017. New opportunities in mobile will continue to drive industry growth as consumers migrate away from their desks to portable computing devices, such as smartphones and tablets, forcing security software to adapt to protect new devices. Additionally, with computing technology evolving at a rapid pace, the prevalence and complexity of cyber attacks will grow, forcing consumers and businesses to invest more in security software. However, slowed corporate profit growth will lead to slow growth in private investment for computers and software. Moreover, growth in the number of mobile internet connections is also expected to slow.

#### *51721 Wireless Telecommunications Carriers*

**DEFINITION** This industry operates and maintains switching and transmission facilities to provide direct communication through radio-based cellular networks. Industry services include cellular mobile phone services, paging services, wireless internet access, and wireless video services.

**KEY EXTERNAL DRIVERS**

- Number of mobile internet connections
- Percentage of services conducted online
- Per capita disposable income
- Price of semiconductor and electronic components

**KEY SUCCESS FACTORS**

- Developing close relationships in other industries
- Ready access to investment funding
- Ability to quickly adopt new technology
- Having a high profile in the market
- Exclusive product sales contracts
- Economies of scale

**OUTLOOK** The Wireless Telecommunications Carriers industry is well positioned for future growth. Expanding demand for wireless data services is anticipated to offset declining demand for voice-only services, particularly as more broadband-enabled mobile devices, such as tablet computers and e-readers, achieve wider penetration. Over the five years to 2021, the number of wireless subscribers is expected to continue increasing. As a result, revenue is projected to grow at an annualized rate of 3.2% over the next five years, reaching \$300.1 billion in 2021. The battle to establish a dominant fourth-generation (4G) technology appears to have come to an end. Verizon and AT&T have settled on long-term evolution (LTE) as their preferred 4G technology, and Sprint-Nextel has also indicated that it will be transitioning from WiMax, a wireless technology similar to Wi-Fi that travels faster and further, to LTE. The emergence of LTE as the dominant 4G wireless technology is expected to enable a more rapid transition by consumers to 4G devices and continue encouraging households to let go of their wired service. A format war between LTE and WiMax would likely have kept many consumers from committing to either as they waited to see which standard would emerge victorious and offer the greatest service area. The speedy victory of 4G technology is expected to increase industry revenue by reducing capital costs, enabling industry operators to focus on further developing this technology instead of two separate options.

*51791 Radar and Satellite Operations*

**DEFINITION** Industry operators provide specialized satellite telecommunication services such as satellite tracking, telemetry and radar station operation. They also provide terminal stations and facilities connected with terrestrial systems that transmit telecommunications to, and receive telecommunications from, satellite systems. The industry does not provide telecommunication services but works closely with those that do, reflecting high interdependence in the telecommunications sector.

**KEY EXTERNAL DRIVERS**

- Demand from satellite telecommunications providers
- Demand from satellite TV providers
- Government consumption and investment
- Number of broadband connections
- Per capita disposable income

- Private investment in computers and software

**KEY SUCCESS FACTORS**

- Proximity to key markets
- Ability to effectively manage debtors
- Access to secure revenue
- Access to highly skilled workforce
- Having an integrated operation
- Ability to quickly adopt new technology

**OUTLOOK** The outlook for companies in the Radar and Satellite Operations industry suggests slightly slower revenue growth. Over the five years to 2021, IBISWorld forecasts that revenue will increase at an annualized rate of 3.1% to \$3.3 billion. While the industry will benefit from an expanding global economy and stability in demand from the downstream satellite telecommunications market, the industry's revenue growth per year will trail its performance during the previous five-year period. Fortunately, the continual business and consumer need for satellite telecommunications service and repair will stretch satellite network capacity and necessitate some infrastructure upgrades and expansions. The interdependency of satellite launches and the tracking, telemetry and control (TT&C) of these satellites remain high. The limited supply of operators with the experience and technology required to perform these operations will likely allow the industry's well-established players to increase their prices accordingly. Therefore, industry profit margins are also expected to remain stable and reach 8.4% in 2021.

#### *54151 IT Consulting*

**DEFINITION** The IT Consulting industry includes firms that provide the following services to client companies: writing, testing, and supporting custom software; planning and designing integrated hardware, software, and communication infrastructure; and on-site management of computer systems and data processing facilities. This industry excludes packaged software publishers and off-site data processing and hosting services.

#### **KEY EXTERNAL DRIVERS**

- Private investment in computers and software
- Corporate profit
- Demand from finance and insurance
- Government consumption and investment

#### **KEY SUCCESS FACTORS**

- Adoption of a commercial focus
- Access to the latest available and most efficient technology and techniques
- Access to highly skilled workforce
- Effective cost controls
- Good project management skills

**OUTLOOK** The IT Consulting industry is forecast to experience consistent growth over the next five years. In terms of technological trends, demand for industry services will primarily be driven by mainstream adoption of third-platform services, which encompasses cloud-based computing, big data analytics and mobile-based solutions. In terms of economic factors, industry revenue will be driven by continued growth in corporate profit, which is expected to boost private investment in computers and software, as well as increasing demand from the finance and insurance industry. Overall, the industry is projected to grow at an annualized 2.7% to \$442.4 billion over the five years to 2021.

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## Advanced Manufacturing

## Cluster Definition (NAICS Codes)

- 32518 Inorganic Chemical Manufacturing
- 32519 Organic Chemical Manufacturing
- 33231 Structural Metal Product Manufacturing
- 33271 Machine Shop Services
- 33272 Screw, Nut, and Bolt Manufacturing
- 33512 Lighting Fixtures Manufacturing
- 33531 Electrical Equipment Manufacturing
- 33632 Automobile Electronics Manufacturing
- 33635 Automobile Transmission Manufacturing

Table 40c: Industry Vitals-Advanced Manufacturing

Target Sector	NAICS	Description	Revenue (\$bn)	Profit (\$bn)	Annual Growth 10-15 (%)	Annual Growth 16-21 (%)	Revenue per Employee (\$'000)	Wages % of Revenue	Emp. per Estab.	Wages/Employee (\$)
<b>Advanced Manufacturing</b>										
	32518	Inorganic Chemical Manufacturing	35.4	2.9	-0.4%	2.1%	903.1	8.7	59.8	78,532.40
	32519	Organic Chemical Manufacturing	146.2	17.6	0.8%	3.3%	1,488.4	5.5	52.9	81,671.60
	33231	Structural Metal Product Manufacturing	44.9	3.8	2.5%	3.6%	311.9	17.4	29.5	54,408.70
	33271	Machine Shop Services	41.4	2.5	0.6%	1.6%	167.5	27.9	13.2	46,728.40
	33272	Screw, Nut & Bolt Manufacturing	28.6	1.9	0.9%	2.8%	214.8	24.7	29.7	53,056.50
	33512	Lighting Fixtures Manufacturing	11.6	0.6	1.7%	0.6%	321.6	16.4	34.8	52,690.70
	33531	Electrical Equipment Manufacturing	39.8	2.4	0.3%	70.0%	355.4	16.5	51.2	58,605.10
	33632	Automobile Electronics Manufacturing	27.7	2.6	10.5%	-0.7%	432.6	133.3	89.7	57,488.10
	33635	Automobile Transmission Manufacturing	41.3	2.3	3.5%	2.4%	634.0	10.2	125.1	64,495.80

## Targeting Recommendations

The following avenues are recommendations, as targeting strategies, for Advanced Manufacturing:

- ⊙ National, ongoing lead generation program
- ⊙ Trade show marketing in conjunction with regional or state partners for an opportunity to meet with companies, as well as network within the industry
- ⊙ Email marketing and awareness campaigns to surrounding communities and states to create awareness of specific opportunities, within Fayetteville such as industry park developments, available sites, and incentives

Initial target lists can be built from online resources such as Hoovers, Avention, InfoUSA, and industry associations. As lists are built, we search for companies fitting the target using industry codes and business descriptions. The company research process evaluates each company, as well as its fit with Fayetteville assets, benefits, and culture.

Selected industry associations relevant to this target include:

- ⊙ National Electrical Manufacturers Association – [www.nema.org](http://www.nema.org)
- ⊙ Society of Chemical Manufacturers and Affiliates – [www.socma.com](http://www.socma.com)
- ⊙ Specialty and Agro Chemicals America – [www.chemicalsamerica.com](http://www.chemicalsamerica.com)
- ⊙ Precision Metalforming Association – [www.pma.org](http://www.pma.org)
- ⊙ Electronic Components Industry Association – [www.ecianow.org](http://www.ecianow.org)
- ⊙ Original Equipment Suppliers Association – [www.oesa.org](http://www.oesa.org)

## Segment Summaries

*32518 Inorganic Chemical Manufacturing*

**DEFINITION** This industry produces inorganic chemicals including titanium dioxide, chloralkali products, and carbon black. Inorganic chemicals are mineral based, while organic chemicals are carbon based (see 32519 Organic Chemical Manufacturing). Inorganic chemicals are mainly used as inputs in manufacturing and industrial processes. Inorganic chemicals are used as pigments and dyes (32513) or pesticides (32532) are not included in this industry.

**KEY EXTERNAL DRIVERS**

- Industrial production index
- Housing starts
- Price of electric power
- Trade-weighted index

- Having contracts that are favorable to the purchaser
- Economies of scale
- Access to the latest available and most efficient technology and techniques
- Establish relationships with downstream industries
- Must comply with government regulations

**KEY SUCCESS FACTORS**

**OUTLOOK** Over the five years to 2021, IBISWorld expects the Inorganic Chemical Manufacturing industry to slowly expand, as downstream industries grow. As the housing sector improves, demand from the construction, paint, and glass manufacturing sectors will drive sales growth. The American Chemistry Council estimates that the chemical business impacts more than 96% of all goods manufactured in the United States, so moderate industrial production will fuel demand for industry products. Consequently, in the five years to 2021, IBISWorld expects industry revenue to grow an annualized 2.1% to \$39.2 billion, beginning with a 2.2% growth in revenue in 2017.

*32519 Organic Chemical Manufacturing*

**DEFINITION** This industry manufactures basic organic chemicals (other than petrochemicals), industrial gases and synthetic dyes and pigments. Key product groups include gum and wood products, cyclic crudes and intermediates, ethyl alcohol and other basic organic chemicals. These products are predominantly intermediates that are used as raw material inputs by other manufacturing industries in the production of downstream products.

**KEY EXTERNAL DRIVERS**

- Industrial production index
- Trade-weighted index
- World price of crude oil
- Consumer spending
- Value of construction

**KEY SUCCESS FACTORS**

- Comply with government regulations
- Ability to accommodate environmental requirements
- Having contracts that are favorable to purchaser
- Having a diverse range of clients
- Degree of globalization in the firm

**OUTLOOK** Over the five years to 2021, revenue for the Organic Chemical Manufacturing industry is expected to grow at an average annual rate of 3.2% to \$171.6 billion. The industry will experience a rise in demand as key buying markets (e.g. cosmetic and beauty products

manufacturing and rubber manufacturing) increase purchases. As disposable income grows, rising consumer demand for beauty products will underpin this trend. Additionally, exports will rise as steady economic growth in developing nations propels demand for consumer and construction-related goods which use organic chemicals produced by this industry. However, raw material price volatility and government legislation in the form of security, environmental, safety, and health regulations will pose threats to future performance.

### *33231 Structural Metal Products Manufacturing*

**DEFINITION** Operators in this industry manufacture structural metal products such as reinforcing bars, bar joists, railway bridge sections, dam gates, transmission tower sections, and railroad car racks. They also manufacture metal plate work such as bins, culverts, hoods, ladles, and containment vessels, as well as prefabricated metal buildings. Most industry products are used in nonresidential building and utility construction.

#### **KEY EXTERNAL DRIVERS**

- Value of private nonresidential construction
- World price of steel
- Government funding for highways
- Value of utilities construction
- Trade-weighted index

#### **KEY SUCCESS FACTORS**

- Availability of resources
- Ability to vary services to suit different needs
- Having a diverse range of clients
- Economies of scale
- Proximity to key markets

**OUTLOOK** The Structural Metal Product Manufacturing industry is expected to improve over the five years to 2021, propelled by steady nonresidential construction and recovering steel prices. In turn, revenue is estimated to increase at an annualized rate of 3.6% over the period to \$53.6 billion, beginning with an estimated 3.3% increase in 2017. Still, as domestic demand picks up, the industry is likely to experience rising competition from Chinese manufacturers who will continue to be the largest steel producers in the world due to highly cost-efficient production. Import competition will propel continual innovation and restructuring within the industry, including increased attention to cost efficiency and vertical integration.

### *33271 Machine Shop Services*

**DEFINITION** The Machine Shop Services industry cuts raw materials into specified shapes and sizes using a variety of tools, such as lathes, milling machines, grinders, and drill presses. Almost all forms of metal product fabrication involve machining, and industry operators may also machine plastic and composite materials.

#### **KEY EXTERNAL DRIVERS**

- Industrial production index
- Demand from metal stamping and forging
- Demand from car and automobile manufacturing

- Demand from machinery manufacturing
- Aggregate private investment
- World price of steel
- Federal funding for defense

#### **KEY SUCCESS FACTORS**



- Ability to quickly adopt new technology
- Effective quality control
- Access to multiskilled and flexible workforce
- Ability to vary services to suit different needs

**OUTLOOK** In the five years to 2021, the Machine Shop Services industry is expected to build on its recent growth due to the continued expansion of most of its major downstream markets. Except for defense spending, indicators of downstream demand are forecast to improve over the next five years. Thus, industry revenue is expected to grow at an annualized rate of 1.6% to \$44.7 billion over the five years to 2021.

### *33272 Screw, Nut, and Bolt Manufacturing*

**DEFINITION** This industry manufactures metal fastening products that can be divided into two groups. Precision fastening products are custom made for a particular project or customer. Alternatively, metal bolt, nut, screw, rivet, washer, and industrial fastening products are fabricated to an industry standard and are designed for the wider market. This industry does not manufacture plastic fastening products.

#### **KEY EXTERNAL DRIVERS**

- Industrial production index
- Value of construction
- World price of steel
- Trade-weighted index

#### **KEY SUCCESS FACTORS**

- Having a diverse range of clients
- Having links with suppliers
- Effective cost controls
- Development of new products
- Degree of globalization in the firm
- Effective quality control

**OUTLOOK** The Screw, Nut, and Bolt Manufacturing industry has been growing due to the resurgence of key manufacturing and construction industries. In the five years to 2021, growth will continue to be heavily driven by an increase in aircraft and automotive demand and foreign demand for precision products. The shift to precision products will also keep profit healthy despite rising imports and increasing saturation of the domestic and global market for fasteners. IBISWorld expects industry revenue to grow an annualized 2.8% during the period to \$32.9 billion, beginning with 5.0% growth in 2017 due to recovering steel input prices.

### *33512 Lighting Fixtures Manufacturing*

**DEFINITION** This industry manufactures electric lighting fixtures, nonelectric lighting equipment, lighting fixture components and lampshades made of metal, paper or textiles. The industry excludes establishments that manufacture light bulbs and tubes, glass lighting fixtures, vehicular lighting equipment, current-carrying wiring devices, and lampshades made of plastic.

#### **KEY EXTERNAL DRIVERS**

- Value of private nonresidential construction
- Housing starts
- Government funding for highways

- Import penetration into the manufacturing sector
- Per capita disposable income
- Trade-weighted index

**KEY SUCCESS FACTORS**

- Having links with suppliers
- Access to niche markets
- Production of goods currently favored by the market

- Production of premium goods/services
- Economies of scale
- Having a wide and expanding product range

**OUTLOOK** The world is in the midst of a “green” transition, in which consumers are increasingly seeking more energy-efficient items to reduce their environmental impact and save money. In response to consumer interest, operators will continue to refine existing lighting fixture designs, while also developing new technologies to accommodate demand for more environmentally friendly products. In the past, the transition to energy-efficient products has been led by strong demand for LED fixtures, driven by governmental regulation to eliminate incandescent light bulb manufacturing. The switch to LED and other energy-efficient products is expected to continue in the next five years to 2021, driving growth in the industry by annualized rate of 0.6% to \$11.9 billion in 2021.

According to a McKinsey study entitled “Lighting the Way: Perspectives on the global lighting market, by 2020,” LED products are expected to account for 70% of the global market. As energy efficiency and cost savings continues to spur demand for LEDs and the market becomes saturated, revenue growth is expected to slow. To maintain revenue, companies must develop new energy-efficient technology to continue to drive demand and differentiate their products from low-cost imports.

*33531 Electrical Equipment Manufacturing*

**DEFINITION** This industry manufactures power, distribution, and specialty transformers; electric motors, generators and motor-generator sets; switchgear and switchboard apparatus; relays; and industrial controls. Electrical equipment manufacturers sell their products to other manufacturing industries, wholesalers, and the construction sector.

**KEY EXTERNAL DRIVERS**

- Demand from manufacturing
- Industrial production index
- Demand from building, developing and general contracting
- Electric power consumption

**KEY SUCCESS FACTORS**

- Business expertise of operators
- Adoption of latest available and most efficient technology and techniques
- Access to high quality control
- Economies of scale

**OUTLOOK** Greater demand for energy-efficient electrical equipment will drive the Electrical Equipment Manufacturing industry forward over the five years to 2021, albeit slowly. Expected upgrades in electrical infrastructure will also stimulate demand for industry products over the period. As a result, revenue is projected to modestly rise at an average annual rate of 0.7% to \$41.3 billion over the next five years, including a 0.5% increase in 2017. Industry growth will continue to be constrained by high import penetration, which will be further encouraged by the appreciation of the U.S. dollar.

*33632 Automobile Electronics Manufacturing*

**DEFINITION** This industry manufactures motor vehicle parts that have or operate with the aid of small components that control and direct an electric current. Industry operators include manufacturers of lighting systems, electrical wiring, electrical control units, sensors, electronic ignition systems, and driver displays. Manufacturers of electric motors are excluded.

#### KEY EXTERNAL DRIVERS

- Demand from car and automobile manufacturing
- New car sales
- World price of crude oil
- Consumer Confidence Index
- National unemployment rate
- Trade-weighted index

#### KEY SUCCESS FACTORS

- Access of the latest available and most efficient technology and techniques
- Effective cost controls
- Undertaking technical research and development
- Degree of globalization
- Ability to control stock on hand

**OUTLOOK** The Automobile Electronics Manufacturing industry is expected to recede from its previously strong growth over the five years to 2021. While industry revenue is projected to continue to be strong, several factors are anticipated to facilitate a minor decline. The unemployment rate is expected to grow slightly, as it has been hovering near its lower rate. This, in combination with prolonged slow economic growth, is expected to cause consumer confidence to decline. Consumers are far more likely to buy a vehicle that contains substantial automobile electronics when they are employed and have a positive outlook for future income. The amount of new car sales is forecast to decline an annualized 1.3% over the period, limiting demand from automakers for industry parts. Conversely, the industry will be supported by an increase in revenue per new car as vehicles are manufactured with a larger portion of electronic parts. As a result, industry revenue is anticipated to decline at an annualized rate of 0.7% to \$26.7 billion over the five years to 2021.

#### *33635 Automobile Transmission Manufacturing*

**DEFINITION** Companies in this industry manufacture transmissions for motor vehicles (cars and light, medium and heavy-duty trucks), parts for transmissions, and powertrain parts. Industry products include clutches, gears, differentials and axle bearings.

#### KEY EXTERNAL DRIVERS

- Demand from car and automobile manufacturing
- Trade-weighted index
- Consumer Confidence Index
- Regulation for the automotive sector
- World price of crude oil
- Yield on 10-year treasury note

#### KEY SUCCESS FACTORS

- Access of the latest available and most efficient technology and techniques
- Ability to accommodate environmental requirements
- Effective cost controls
- Undertaking technical research and development
- Degree of globalization of the firm

**OUTLOOK** Over the five years to 2021, the Automobile Transmission Manufacturing industry's performance is expected to mirror that of the automotive industry at large. Due to the near one-to-one ratio of transmissions to automobiles, slower growth of car, truck, and special purpose vehicle production is expected to have a similar effect on transmission and powertrain part manufacturers. As a result, IBISWorld estimates industry revenue will increase at an annualized rate of 2.3% to \$46.4 billion in the five years to 2021.

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## Business Services

### Cluster Definition (NAICS Codes)

- 51121 Software Publishing
- 51821 Data Processing and Hosting Services
- 51913 Search Engines
- 51913 Internet Publishing and Broadcasting
- 52221 Credit Card Issuing
- 52222 Auto Leasing, Loans and Sales Financing
- 52232 Credit Card Processing and Money Transferring
- 52239 Loan Administration, Check Cashing, and Other Services
- 52312 Securities Brokering
- 52392 Portfolio Management
- 52393 Financial Planning and Advice
- 52411 Life Insurance and Annuities
- 52411 Health and Medical Insurance
- 52412 Property, Casualty and Direct Insurance
- 52413 Reinsurance Carriers
- 52429 Third-Party Administrators and Insurance Claims Adjusters
- 54121 Payroll and Bookkeeping Services
- 54121 Accounting Services
- 54161 Management Consulting
- 56145 Credit Bureaus and Rating Agencies

**Table 40d: Industry Vitals-Business Services**

Target Sector	NAICS	Description	Revenue (\$bn)	Profit (\$bn)	Annual Growth 10-15 (%)	Annual Growth 16-21 (%)	Revenue per Employee (\$'000)	Wages % of Revenue	Emp. per Estab.	Wages/Employee (\$)
<b>Business Services</b>										
	51121	Software Publishing	205.0	42.6	3.0%	2.8%	450.2	33.6	38.8	151,238.70
	51821	Data Processing & Hosting Services	144.4	21.1	6.8%	4.8%	230.3	410.3	9.8	95,101.10
	51913a	Search Engines	53.7	12.1	12.1%	8.0%	1,037.4	26.0	52.3	269,949.80
	51913b	Internet Publishing and Broadcasting	90.4	18.5	15.4%	9.3%	339.6	12.1	3.5	41,177.70
	52221	Credit Card Issuing	93.4	23.3	1.1%	4.5%	1,474.5	5.1	74.1	75,163.90
	52222	Auto Leasing, Loans & Sales Financing	106.6	20.9	3.9%	3.3%	909.3	11.2	28.8	102,227.30
	52232	Credit Card Processing & Money Transferring	77.9	12.1	6.8%	3.7%	558.4	14.8	27.9	82,870.50
	52239	Loan Administration, Check Cashing & Other Services	111.6	18.3	15.4%	3.9%	191.0	22.7	5.3	43,391.70
	52312	Securities Brokering	143.4	20.9	1.8%	1.6%	467.5	35.9	5.3	167,891.50
	52392	Portfolio Management	248.9	81.6	4.8%	2.4%	1,318.3	20.8	9.6	273,829.40
	52393	Financial Planning & Advice	48.5	10.6	7.7%	3.0%	244.5	32.1	1.7	78,485.50
	52411a	Life Insurance & Annuities	881.6	60.8	2.0%	2.3%	2,526.3	4.0	37.7	100,009.70
	52411b	Health & Medical Insurance	779.2	31.9	4.0%	2.1%	1,590.1	5.0	87.8	79,576.00
	52412	Property, Casualty and Direct Insurance	626.0	82.0	3.3%	3.2%	1,047.1	8.5	39.7	88,943.80
	52413	Reinsurance Carriers	47.9	7.1	0.5%	3.4%	4,040.5	4.4	34.1	177,431.10
	52429	Third-Party Administrators & Insurance Claims Adjusters	207.3	20.7	10.0%	2.5%	496.0	8.8	3.0	43,502.90
	54121b	Payroll & Bookkeeping Services	72.6	9.7	6.6%	3.5%	71.5	59.8	3.3	42,738.00
	54121c	Accounting Services	97.3	17.4	4.4%	3.2%	185.8	39.0	5.5	72,497.90
	54161	Management Consulting	252.8	24.8	5.6%	4.1%	147.3	39.5	2.3	58,215.90
	56145	Credit Bureaus & Rating Agencies	8.7	1.3	4.6%	2.2%	402.1	26.2	18.3	105,514.00

### Targeting Recommendations

The following avenues are recommendations, as targeting strategies, for Business Services:

- ⊙ Email marketing and awareness campaigns to surrounding communities and states in order to create awareness of specific opportunities within Fayetteville such as office park developments, available buildings, and incentives
- ⊙ National, ongoing lead generation program
- ⊙ Entrepreneurial development and encouraging business start-ups

Initial target lists can be built from online resources such as Hoovers, Avention, InfoUSA, and industry associations. As lists are built, we search for companies fitting the target using industry codes and business descriptions. The company research process evaluates each company, as well as, their fit with Fayetteville assets, benefits and culture.

Selected industry associations relevant to this target include:

- ⊙ comScore – [www.comscore.com](http://www.comscore.com)
- ⊙ The Shared Services and Outsourcing Network – [www.ssonetwork.com](http://www.ssonetwork.com)
- ⊙ The Software & Information Industry Association - [www.siiia.net](http://www.siiia.net)
- ⊙ Securities Industry and Financial Markets Association – [www.sifma.org](http://www.sifma.org)
- ⊙ American Council of Life Insurers – [www.acli.com](http://www.acli.com)
- ⊙ Insurance Information Institute – [www.iii.org](http://www.iii.org)

## Segment Summaries

*51121 Software Publishing*

**DEFINITION** Software publishers disseminate licenses to customers for the right to execute software on their own computers. Operators in this industry market and distribute software products and may also design the software, produce support materials, and provide support services.

**KEY EXTERNAL DRIVERS**

- Private investment in computers and software
- Number of mobile internet connections
- Corporate profit
- Demand from video games
- Government consumption and investment
- Percentage of households with at least one computer

- Per capita disposable income

**KEY SUCCESS FACTORS**

- Undertaking technical research and development
- Protection of patents
- Access to highly skilled workforce
- Access to the latest available and most efficient technology and techniques
- Effective marketing
- Having a high profile in the market

**OUTLOOK** The Software Publishing industry is expected to continue growing over the five years to 2021. As private investment in computers and software continues to increase, and the proportion of households with at least one computer surges to more than 90.0%, software license purchases will follow suit. Increases in government spending and growth in mobile internet connections and smartphone ownership rates will also support industry growth, especially with security software.

In addition, higher corporate profit among downstream industries, such as health care and finance, and booming demand for security products and video games, are expected to strongly contribute to revenue growth. Consequently, industry revenue is forecast to increase an annualized 2.8% to \$234.9 billion by 2021. Constantly improving technology and falling hardware prices will make computers, cell phones, video games, and, ultimately, software more accessible to more people. Businesses will continue to use information technology to increase efficiency and security. For example, a major feature of the Obama administration's 2010 health care reform plan involves supplying tax incentives for health insurers and medical professionals to switch from paper-based record systems to digital records. Finance, insurance, and healthcare companies also increasingly use security software, such as fraud detection, to protect the vast amounts of data they store. Competence in software programs is expected to become a prerequisite to employment in a wide range of industries.

### 51821 Data Processing and Hosting Services

**DEFINITION** This industry provides data processing or hosting activities. Data processing services provide specialized reports from information supplied by clients. Hosting services can include web and application hosting. Services range from automated data entry to processing data.

#### KEY EXTERNAL DRIVERS

- Number of mobile internet connections
- Percentage of services conducted online
- Demand from internet publishing and broadcasting
- Corporate profit
- Price of computers and peripheral equipment
- Private investment in computers and software

#### KEY SUCCESS FACTORS

- Effective quality control
- Having a cost-effective distribution system
- Ability to quickly adopt new technology
- Ability to manage external (outsourcing) contracts
- Access to multiskilled and flexible workforce
- Ensuring pricing policy is appropriate

**OUTLOOK** Over the five years to 2021, the Data Processing and Hosting Services industry is expected to experience strong growth attributed to non-industry companies' continued outsourcing of information technology (IT) to third parties. Efforts to improve operational efficiencies, coupled with the rising costs of handling IT internally, will drive outsourcing by large companies. Moreover, the continued shift to online services will drive additional demand for industry services. As a result, IBISWorld expects industry revenue to grow at an annualized rate of 4.8% to \$182.3 billion over the five years to 2021, including an increase of 4.4% in 2017 alone.

### 51913 Search Engines

**DEFINITION** This industry includes enterprises that operate search engines and other types of search-based websites that display advertisements. These search engines typically provide search services for free and earn income when a user clicks on an advertising link, known as a "paid click." Websites may attract users to their search engines by offering a range of additional free services, such as e-mail, news, social networking, entertainment and other information.

**KEY EXTERNAL DRIVERS**

- Number of mobile internet connections
- Consumer spending
- Percentage of services conducted online
- Total advertising expenditure
- Demand from internet publishing and broadcasting

**KEY SUCCESS FACTORS**

- Quick adoption of new technology
- Strong branding
- A highly skilled workforce
- Economies of scale
- Effective quality control

**OUTLOOK** As the number of mobile internet connections and the percentage of services conducted online continue to increase, the amount of advertising money spent in the Search Engines industry is expected to rise accordingly. The increasing prominence of internet advertising will also contribute to this aggressive shift in advertising expenditure to search engine marketing. However, the extremely high growth in the mobile segment is expected to slow, consumer confidence is anticipated to drop, and corporate profit growth will decelerate, which will ultimately slow growth. Industry revenue is thus expected to increase an annualized 8.0% over the five-year period, reaching \$79.0 billion in 2021. Large search engines that grow their user bases and continually improve their advertising technology will capture most of this growth. Moreover, Google, Yahoo, and Microsoft, the industry's dominant players, will aggressively compete for users and advertisers in both the PC and mobile search markets.

*51913 Internet Publishing and Broadcasting*

**DEFINITION** This industry includes organizations and individuals that offer non-physical products such as news, music, and video, exclusively through the internet. Revenue in this industry is derived from the sale of advertising space or subscriptions to consumers. In addition, companies may derive revenue from intellectual property licensing and the sale of user information to third parties. This industry does not include search engines, internet service providers, or publishers of offline content.

**KEY EXTERNAL DRIVERS**

- Number of mobile internet connections
- Total advertising expenditure
- Demand from search engines
- Demand from television broadcasting
- Internet traffic volume

**KEY SUCCESS FACTORS**

- Developing a clear niche
- Word of mouth recommendations
- Attracting advertisers
- Protection of intellectual property/copyrighting of output
- Access to highly skilled workforce

**OUTLOOK** Over the five years to 2021, the Internet Publishing and Broadcasting industry is projected to grow rapidly as advertisers continue to shift resources toward internet and mobile platforms. This expected growth is largely a result of the continued influx of mobile internet connections that are expected in the United States over the five-year period, and strong increases in internet traffic volume. Advertisers are expected to continue aggressively targeting internet users through social media and other content sites and applications. The internet content publishers that will benefit the most from this increased advertising expenditure are the industry's well-established major players and smaller players that develop specialized



mobile applications or publish original content that pertains to a niche market. Growth in online streaming platforms, such as Netflix and Hulu, will boost revenue further. Over the five years to 2021, industry revenue is anticipated to increase at an annualized rate of 9.3% to \$141.0 billion, with a 9.1% increase in 2017 alone.

### *52221 Credit Card Issuing*

**DEFINITION** This industry issues credit cards, providing the funds required to buy goods and services in return for payment on a full balance or installment basis. Credit cards issued in the United States are not issued directly by Visa, MasterCard, or any other payment-solution organization. Rather, Visa, MasterCard, and other similar corporations provide the actual payment systems used when payments are made by credit card.

#### **KEY EXTERNAL DRIVERS**

- Aggregate household debt
- National unemployment rate
- Prime rate
- Households earning more than \$100,000
- Per capita disposable income

#### **KEY SUCCESS FACTORS**

- Access to the latest available and most efficient technology and techniques
- Having an extensive distribution/collection network
- Effective cost controls
- Production of goods currently favored by the market
- Marketing of differentiated products
- Market research and understanding

**OUTLOOK** An improving economy, increased e-commerce and security, and higher interest rates will help spur revenue growth for the Credit Card Issuing industry in the coming five years. In the five years to 2021, industry revenue is projected to grow an annualized 4.5% to \$116.5 billion, including anticipated growth of 6.6% in 2017. E-commerce is expected to increase at an annualized rate of 10.6% over the next five years, which will further exacerbate the shift away from cash and checks towards credit card issuers. Additionally, the level of aggregate household debt is forecast to rise an annualized 4.3%, spurring higher interest income from outstanding debts. Profitability within the industry is also anticipated to increase as interest rates continue to rise, allowing companies to earn higher interest on credit issuance. Furthermore, costs associated with establishing data security should taper as operators become increasingly capable to adjust to cyber threats. As a result, the industry profit margin is forecast to increase from 25.0% in 2016 to 29.1% in 2021.

### *52222 Auto Leasing, Loans, and Sales Financing*

**DEFINITION** This industry includes establishments that provide sales financing or sales financing in combination with leasing. Sales financing establishments are primarily engaged in lending money for the purpose of providing collateralized goods through a contractual-installment sales agreement, either directly from or through arrangements with dealers. Industry participants generate revenue through the interest and fees that are included in the installment payments of borrowers.

#### **KEY EXTERNAL DRIVERS**

- Consumer Confidence Index

- Yield on 10-year Treasury note
- Corporate profit
- National unemployment rate

- Per capita disposable income
- Price of new cars
- Well-developed internal processes
- Financial position of the company
- Ability to raise revenue from additional sources
- Ability to carry out credit checks on clients
- Access to highly skilled workforce

#### KEY SUCCESS FACTORS

- Output is sold under contract – incorporate long-term sales contracts

**OUTLOOK** The Auto Leasing, Loans, and Sales Financing industry entered a turnaround phase in the latter half of 2012, which is expected to continue over the five years to 2021. Higher consumer confidence and disposable income will drive the anticipated recovery. Consequently, industry revenue is forecast to grow at an annualized rate of 3.3% to reach \$125.4 billion over the next five years, including projected growth of 5.1% in 2017. Automobile and machinery sales are expected to rebound during the period, but persistent unemployment may hinder recovery.

Rising income levels and low interest rates will encourage individuals and companies to purchase automobiles as their current vehicles age. Businesses will also be more likely to replace older machinery and equipment, thereby increasing the volume of loans and leases. An increase in customer consumption and an improving economy will raise the likelihood of borrowers making monthly payments and is expected to provide a boost to the industry's profit margins.

#### *52232 Credit Card Processing and Money Transferring*

**DEFINITION** This industry offers financial transaction processing, reserve and liquidity services and check or other financial instrument clearinghouse services. The industry excludes electronic transactions associated with the U.S. Federal Reserve (central bank).

#### KEY EXTERNAL DRIVERS

- Consumer spending
- Consumer Confidence Index
- E-commerce sales
- Per capita disposable income
- Regulation for the credit card processing and money transferring industry

#### KEY SUCCESS FACTORS

- Access to the latest and most efficient technology and techniques
- Low operating costs
- Use of specialist equipment or facilities
- Ability to effectively change community behavior
- Economies of scale
- Comply with government regulations

**OUTLOOK** Consumers will continue to bypass cash and perform transactions using credit cards or other electronic means, leading to higher transaction volumes for the Credit Card Processing and Money Transferring industry. IBISWorld anticipates revenue for the Credit Card Processing and Money Transferring industry to grow at an annualized rate of 3.7% to \$93.5 billion in the five years to 2021. Over this period, the growing popularity of electronic payment methods, due to the growing online retail and e-commerce market, will drive industry growth. Consumer spending will rise as a result of easily accessible payment methods and markets, increasing

transaction volumes. The industry's client base will continue to grow as more merchants rely on credit cards and other electronic methods for payment from customers. As a result, growth will continue steadily through 2016 and is expected to increase 4% in 2017.

In addition, continued declines in paper check use and cash transactions are anticipated to support industry growth. Most transactions are now conducted electronically, with 59% of all transactions made with a credit or debit card, and only 15% made with checks, according to a 2013 Federal Reserve study on payment trends in the United States. Check activity is projected to steadily decline as consumers and businesses increasingly prefer electronic payment methods for their speed and flexibility.

#### *52239 Loan Administration, Check Cashing, and Other Services*

**DEFINITION** The Loan Administration, Check Cashing, and Other Services industry services loans, most notably mortgages. This industry does not originate loans, which includes legally arranging and issuing the loan. Servicing loans includes performing all of the administrative aspects of managing a debt portfolio. Operators also perform money transmission services, which include selling and cashing traveler's checks, money orders, and cashier's checks, as well as renting safe-deposit boxes.

#### **KEY EXTERNAL DRIVERS**

- Demand from real estate loans and collateralized debt
- House price index
- Prime rate
- Consumer Confidence Index
- Housing starts

#### **KEY SUCCESS FACTORS**

- Experienced work force
- Having links with suppliers
- Ability to effectively manage risk
- Well-developed internal processes
- Ability to constantly blend new technology with services

**OUTLOOK** The Loan Administration, Check Cashing, and Other Services industry is forecast to expand at a steady pace over the next five years as a result of new loan activity, which had been severely hurt by the subprime fallout and the subsequent decline in home prices. Rising home prices will lead to renewed demand for mortgages as consumers' trust in real estate investments renews. The rise in demand will increase operators' ability to acquire mortgage-servicing rights and the associated fees. IBISWorld estimates home prices will increase at an annualized rate of 2.5% over the five years to 2021. In light of these conditions, industry revenue is forecast to grow at an annualized rate of 3.8% to \$134.5 billion in the five years to 2021. Rising consumer sentiment, which measures consumers' level of optimism about their own financial situation and the economy, will encourage spending on big-ticket items that require loans (e.g. home mortgages) and drive industry revenue.

Increased demand from loan servicing and the benefit of technological integration is also expected to improve margins for operators in this industry. A decline in delinquencies and a rise in the prime rate will increase the fees the industry generates. IBISWorld expects profit to increase from 16.4% of revenue in 2016 to 17.5% in 2021. Nonetheless, as industry participants take advantage of technological advancements that improve the automation of their processes, especially within the check cashing segment of this industry, new regulatory compliance costs

and a significant decrease in subprime lending, which yields higher fees, will hamper further growth of profit margins.

Moreover, the number of mergers and acquisitions will settle down as companies grow revenue through increased demand for mortgage originations and innovation, as opposed to absorbing the competition. Over the next five years, the number of enterprises is forecast to increase at an annualized rate of 1.2% to 36,149 companies. Employment is estimated to increase at an annualized rate of 1.7% to 634,164 workers, as companies rehire employees due to rising servicing demand.

### *52312 Securities Brokering*

**DEFINITION** Companies in this industry execute securities buyers' orders by acting as agents that arrange transactions between buyers and sellers on a commission or transaction-fee basis. The Securities Brokering industry continues to converge with various other securities and banking industries due to regulatory, technological, and market trends. However, this report excludes investment banking, securities dealing, and commercial banking activities.

#### **KEY EXTERNAL DRIVERS**

- S&P 500
- Investor uncertainty
- Yield on 10-year Treasury note
- Demand from open-end investment funds
- Personal savings rate
- Regulation for the investment management industries

#### **KEY SUCCESS FACTORS**

- Must comply with government regulations
- Well-developed internal processes
- Market research and understanding
- Access to highly skilled workforce
- Provision of a related range of goods/services (one-stop shop)
- Ability to quickly adopt new technology

**OUTLOOK** The Securities Brokering industry's revenue is forecast to grow an annualized 1.6% to \$155.3 billion over the five years to 2021. Rising interest rates will attract more investors to debt instruments, increasing securities trading volumes and, as a result, industry commissions and fees. While initially driving away retail investors, or individuals who trade on their own account, financial market volatility will ultimately result in higher demand for investment advice to both protect and build wealth. As a result, a large portion of revenue growth will be based on expansion of activities outside securities brokerage, such as investment advice.

Over the next five years, a number of long-term trends will support steady growth in financial market activity and trading volume. U.S. investors will be attracted to overseas securities due to the continued globalization of financial markets, cross-border mergers of stock exchanges, and the prospect of strong growth in emerging markets. Additionally, rising disposable incomes and retirement savings will boost the share of securities in household asset portfolios, particularly through mutual funds and exchange-traded funds. In turn, continued growth in these open-end investment funds, which provide retail investors with access to diverse markets, will increase securities trading volumes.

While future growth in alternative trading systems is likely to keep hampering revenue from institutional investors, or investors who trade on behalf of organizations, growth in trading activity and asset inflows from retail investors should still increase overall revenue. This trend

will likely decrease institutional trade volume as a share of brokerage revenue through 2021, as technology drives brokerage trading fees down and enables institutions to engage in direct trading with each other, eliminating the need for securities brokers as intermediaries. Trade commission revenue will also likely bottom out.

### *52392 Portfolio Management*

**DEFINITION** The industry comprises firms that actively manage assets for clients. Portfolio managers have the authority to make investment decisions and generate revenue through fees that are based on service and portfolio performance. Industry operators manage assets for investment vehicles such as mutual funds, hedge funds and variable insurance products.

#### **KEY EXTERNAL DRIVERS**

- S&P 500
- Per capita disposable income
- Yield on 10-year Treasury note
- External competition for the portfolio management industry
- Having an extensive distribution/collection network
- Highly trained workforce
- Having a high prior success rate
- Having a good reputation
- Ability to adapt technology infrastructure to meet new compliance and reporting requirements
- Ability to offer new products and services to meet changing customer tastes

#### **KEY SUCCESS FACTORS**

**OUTLOOK** Over the five years to 2021, the performance of the Portfolio Management industry is anticipated to benefit from a number of long-term, structural trends. The aging of the domestic population is assisting the growth of mutual funds, pension funds, and other collective investment schemes. As a growing number of individuals approach retirement age, the value of assets in pension plans and other forms of retirement savings is anticipated to increase. Additionally, interest rates, which have been effectively held down to the zero lower bound by the Federal Reserve since late 2008, are anticipated to increase in mid-2015, causing the value of industry assets under management (AUM) to increase over time. Moreover, the technology-driven globalization of the industry will also enable portfolio managers to continue diversifying into emerging markets. Moderate growth anticipated in both the S&P 500 and the MSCI World index will underpin improvements in portfolio performance across actively managed funds, drawing in a significant number of investors. These inflows, combined with rising bond yields, are forecast to cause industry revenue to rise at an annualized rate of 2.3% over the five years to 2021 to \$281.2 billion, which includes expected growth of 2.6% in 2017.

### *52393 Financial Planning and Advice*

**DEFINITION** This industry comprises companies that provide financial planning, financial advice, and wealth management to individuals and business clients. Operators also offer advice, in conjunction with other activities such as portfolio management, protection planning, and brokerage services. This industry does not include mutual fund companies, hedge funds,

discount brokers, insurance brokers, or other companies that deliver these services, outside the context of a written financial plan.

#### KEY EXTERNAL DRIVERS

- Per capita disposable income
- S&P 500
- Investor uncertainty
- Median age of population
- Households earning more than \$100,000
- Regulation for the investment management industries

#### KEY SUCCESS FACTORS

- Having a loyal customer base
- Have a good reputation
- Experienced work force
- Market research and understanding

**OUTLOOK** Over the five years to 2021, increased market valuations for various types of assets and securities are expected to push industry revenue growth at an annualized rate of 3.0% to \$56.2 billion. As the economy continues to recover, the number of wealthy households and institutions needing financial management services will also increase, raising the value of assets under management (AUM) for firms. The majority of this growth is expected to go to existing firms, rather than the limited number of new operators breaking into the industry. In 2017, total industry revenue is estimated to rise 3.9%. Rising interest rates, geopolitical tension and inflation over the next year are anticipated to encourage consumers to consult professional services for managing their finances and protecting their assets.

#### *52411 Life Insurance and Annuities*

**DEFINITION** Operators within this industry are primarily engaged in accepting liability under annuities and life, disability income, and accidental death and dismemberment insurance policies. Enterprises within this industry include fraternal organizations, privately held insurers, publicly traded insurers, and mutual insurance companies.

#### KEY EXTERNAL DRIVERS

- Median age of population
- Per capita disposable income
- Number of employees
- Yield on 10-year Treasury note
- S&P 500

#### KEY SUCCESS FACTORS

- Financial strength
- Must comply with government regulations
- Effective asset management
- Having an extensive distribution network
- Effective cost controls

**OUTLOOK** Growth in household wealth and an aging domestic population are anticipated to boost demand levels for the Life Insurance and Annuities industry over the five years to 2021. Downstream consumers are expected to increasingly use life insurance and annuity products for asset protection and retirement purposes over the five-year period. Additionally, as the outlook for sustainable social welfare programs is anything but certain, households are expected to share a larger burden of their retirement and estate planning needs, benefiting

industry demand. Furthermore, as the economy improves, investment income for industry operators is forecast to rise due to improvements in equity markets and interest rate increases. As a result of these trends, industry revenue is forecast to increase at an annualized rate of 2.3% to \$989.5 billion over the five years to 2021, with an anticipated 2.8% increase in 2017 alone.

Profitability is expected to improve over the five-year period, as the Federal Reserve's latest aim is to increase interest rates to 2.4% by 2018. Due to these rising interest rates, industry operators will generate higher returns on fixed income, boosting investment income.

Furthermore, insurers are anticipated to benefit from a decline in delinquency rates and lower asset write-downs on mortgage and other debt-related securities. This trend is important because many life insurers built up a large portfolio of mortgage-backed securities and other collateralized debt obligations during the housing boom and have been slow to divest these products. By 2021, the average industry profit margin is forecast to reach 7.1%.

#### *52411 Health and Medical Insurance*

**DEFINITION** This industry underwrites (i.e. assumes the risks of and assigns premiums for) health and medical insurance policies. Insurance is the transfer of the risk of a loss in exchange for payment. Operators also provide administrative services for self-funded insurance plans (whereby an employer provides health benefits to workers with its own funds). Under this structure, the industry operator is a third-party administrator and is not responsible for health benefit payments.

#### **KEY EXTERNAL DRIVERS**

- Total health expenditure
- Number of employees
- Median age of population
- Number of physician visits
- Per capita disposable income

#### **KEY SUCCESS FACTORS**

- Having an extensive distribution/collection network
- Having a good reputation
- Ability to pass on cost increases
- Must comply with government regulations
- Effective cost controls
- Ability to raise revenue from additional sources

**OUTLOOK** Medical cost inflation and increased demand for medical insurance will dictate performance for the Health and Medical Insurance industry over the five years to 2021. Industry revenue will remain highly correlated with total health expenditure, which is expected to continue to trend upward from 2016 to 2021. However, the industry's average profit margin is forecast to decline from 3.9% of revenue in 2016 to 3.6% in 2021, due to increased compliance costs caused by health care reform. Despite constrained profitability, revenue is projected to increase at an annualized 2.1% over the period, reaching \$860.8 billion, largely due to increased demand caused by the same legislation.

#### *52412 Property, Casualty, and Direct Insurance*

**DEFINITION** Operators in this industry are primarily engaged in underwriting insurance policies that protect individuals, businesses, and agencies against losses that occur as a result of property damage, liability, or other risks. Industry participants also protect real estate owners

or creditors against losses sustained because of any title defect to real property. This industry does not include insurance coverage for life, disability, accidental death, dismemberment or health risks.

#### KEY EXTERNAL DRIVERS

- Number of motor vehicle registrations
- Homeownership rate
- Natural disaster index
- Yield on 10-year Treasury note
- Regulation for the property, casualty, and direct insurance industry
- S&P 500

#### KEY SUCCESS FACTORS

- Ability to effectively manage risk
- Offer a range of insurance products
- Management of a high quality assets portfolio
- Disciplined underwriting processes
- Having a cost effective distribution system
- Possession of accurate information

**OUTLOOK** The Property, Casualty, and Direct Insurance industry is expected to keep pace with the overall economy over the five years to 2021, due to the resurgence in automotive sales, recovery in housing, and rise in investment income. Generally, industry growth does not fluctuate dramatically with economic activity because insurance is not a discretionary purchase. However, due to the recession's dramatic impact on investment markets and the prolonged nature of the downturn, the industry is expected to continue benefiting from growth in the broader economy. This factor is particularly true for title insurers, which were decimated by the unprecedented decline in housing transactions resulting from the subprime mortgage crisis. As a result of these trends, revenue for the industry is forecast to increase at an annualized rate of 3.2% to \$732.7 billion over the five years to 2021, with expected growth of 3.5% in 2017 alone.

#### 52413 Reinsurance Carriers

**DEFINITION** Companies in this industry specialize in assuming all or part of the risk associated with existing insurance policies originally underwritten by other insurance carriers. In other words, the primary business of participants in this industry is insuring insurance companies.

#### KEY EXTERNAL DRIVERS

- Demand from property, casualty, and direct insurance
- Demand from life insurance and annuities
- Natural disaster index
- Yield on 10-year Treasury note
- S&P 500

#### KEY SUCCESS FACTORS

- Disciplined underwriting processes
- Ability to effectively manage risk
- **MUST COMPLY WITH GOVERNMENT REGULATIONS**
- **DEGREE OF GLOBALIZATION IN THE FIRM**
- **POSSESSION OF ACCURATE INFORMATION**

**OUTLOOK** Over the five years to 2021, Reinsurance Carriers industry revenue is forecast to grow at an annualized rate of 3.4% to \$56.6 billion. In the early part of the five-year period, the industry will benefit from rising premium prices and interest rate hikes, leading revenue to increase 3.9% in 2017. In the later years of the period, premium prices are anticipated to soften, but increased investment income from rising interest rates and stock prices will help to offset some of the profit-eroding effects. Due to the increased frequency and severity of global



weather catastrophes, success within the Reinsurance Carriers industry will depend more heavily on underwriting discipline, or pricing risk adequately, and capital management. Reinsurance carriers will focus these critical activities on adjusting their businesses to contend with mass capital depletion in the event of a natural disaster. This process will involve revising pricing policies and renewing expansion in alternative financing strategies such as CAT bonds.

#### *52429 Third-Party Administrators and Insurance Claim Adjusters*

**DEFINITION** Operators in this industry investigate, appraise, and settle insurance claims; provide third-party administration services of insurance and pension funds; and offer insurance advisory and ratemaking services. This industry does not include companies that primarily provide portfolio management services, sell insurance policies, or offer actuarial consulting services.

#### **KEY EXTERNAL DRIVERS**

- Number of employees
- Per capita disposable income
- Natural disaster index
- S&P 500

#### **KEY SUCCESS FACTORS**

- Access to highly skilled workforce
- Undertaking technical research and development
- Ability to vary services to suit different needs
- **DEGREE OF GLOBALIZATION IN THE FIRM**
- **AUTOMATION – REDUCES COSTS, PARTICULARLY THOSE ASSOCIATED WITH LABOR**

**OUTLOOK** Expansion and regulation in downstream insurance and employee-benefit fund markets will increase outsourcing to the Third-Party Administrators and Insurance Claims Adjusters industry, driving growth over the five years to 2021. Therefore, IBISWorld estimates that industry revenue will increase at an average annual rate of 2.5% to \$234.2 billion over the five years to 2021. Downstream demand for industry services will be also be bolstered by higher employment levels, which raises the number of funds and plan participants, as well as higher disposable income levels, which increases the likelihood that consumers will purchase insurance. Meanwhile, new financial-sector regulations stemming from the financial crisis will raise compliance costs and pressure profitability for employee-benefit and insurance funds, which will consequently increase outsourcing to industry operators over the next five years. Moreover, rising downstream demand will attract more companies and individuals to the industry, but heightened competition will put downward pressure on profit margins. Consequently, the average industry profit margin is expected to decline from 10.0% in 2016 to 8.7% in 2021.

Nevertheless, the industry will also benefit from a strengthening economy. Insurance policy volumes will rise, particularly within the business sector, which will support a revival in demand for claims adjustment services. In particular, rising medical costs for downstream health and medical insurers (IBISWorld report 52411b); higher weather-related losses for general insurers driven by climate change (IBISWorld report 52412); and higher costs for life insurers (IBISWorld report 52411a) will result in greater outsourced claims volumes and higher demand for third-party administration services. Advisory and risk management services will also benefit from the

improved economy, since businesses, insurers, and individuals will be able to allocate a greater portion of income to these services to mitigate risks and hedge liabilities. Furthermore, demand from insurance and employee-benefit funds will grow as their plan participants and assets increase, along with rising employment and financial markets, leading to higher industry revenue from third-party administration services.

#### *54121 Payroll and Bookkeeping Services*

**DEFINITION** Operators in this industry provide outsourced payroll services for clients' employees and basic bookkeeping services are also included. However, this industry does not include tax preparation companies or certified public accountants.

##### **KEY EXTERNAL DRIVERS**

- Outsourcing to the business services sector
- National unemployment rate
- Number of businesses
- Corporate profit
- External competition for the payroll and business services industry

##### **KEY SUCCESS FACTORS**

- Access to quality personnel management
- Ability to quickly adopt new technology
- Accessibility to consumers/users
- Economies of scale
- Ability to management external (outsourcing) contracts

**OUTLOOK** Industry growth will be driven by increasing product penetration and an expanding customer base in the five years to 2021. In a climate of improving economic conditions, managers and small business operators will focus their time strategizing business activity and expansion plans, decreasing their focus on administrative tasks such as payroll and bookkeeping. Many businesses will prefer to outsource payroll services in order to focus on core competencies. Furthermore, an improving labor market will provide the Payroll and Bookkeeping Services industry with a platform for growth, given the rising number of businesses and employees. Over the five years through 2021, the number of businesses in the United States is expected to grow at an annualized rate of 0.8%, which will drive down the national unemployment rate. Consequently, in the five years to 2021, IBISWorld projects that revenue will increase at an annualized rate of 3.5% to \$86.2 billion.

#### *54121 Accounting Services*

**DEFINITION** Firms in this industry are certified to audit the accounting records of public and private organizations and to demonstrate compliance to generally accepted accounting practices. Certified public accountants (CPAs), included in this industry, provide a variety of accounting services, including auditing accounting records, designing accounting systems, preparing financial statements, developing budgets, and providing advice on matters related to accounting.

##### **KEY EXTERNAL DRIVERS**

- Corporate profit
- Initial public offerings

- Demand from finance and insurance
- Number of businesses
- Number of adults ages 20 to 64

**KEY SUCCESS FACTORS**

- Access to highly skilled workforce
- Having a good reputation
- Effective quality control
- Maintenance of excellent client relations
- Having a clear market position
- Ability to compete on tender

**OUTLOOK** The Accounting Services industry is expected to experience stronger demand over the next five years as overall business activity improves. Increased corporate profit and business sentiment will cause aggregate private investment to increase and create higher demand for traditional accounting services like auditing and corporate tax assistance. Furthermore, increased corporate activity, including mergers and acquisitions (M&As) and initial public offerings (IPOs), will spur growth for industry services. Additionally, the industry is expected to benefit from rising demand for advisory services, such as consulting on tax issues and financial transactions. Increased consumer wealth will also drive demand from individuals seeking tax assistance; however, competitive conditions are also expected to intensify in the market for the provision of services to private citizens. Overall, the industry is projected to grow at an average annual rate of 3.2% to \$113.7 billion over the five years to 2021, because of private investment and demand growth.

*54161 Management Consulting*

**DEFINITION** Management consultants advise businesses, nonprofits and public-sector agencies in the following areas: organizational design, human resources, corporate strategy, information technology strategy, marketing and sales, finances, and logistics. This industry excludes establishments providing day-to-day administrative services and establishments that are concentrated in recruitment, training, public relations, market research, engineering design, computer systems design, and investment advice.

**KEY EXTERNAL DRIVERS**

- Corporate profit
- Aggregate private investment
- Number of businesses
- Government consumption and investment

**KEY SUCCESS FACTORS**

- Ability to compete on tender
- Well-developed internal processes
- Access to highly skilled workforce
- Access to niche markets
- Having good working relationships with subcontracting building trade specialists

**OUTLOOK** Over the next five years, strong macro-economic conditions are expected to help drive growth in the Management Consulting industry. Rising corporate profit will increase business budgets and, therefore, increase spending on consulting services. Additionally, as businesses become increasingly confident in future conditions, companies are expected to increase the size of their workforces and expand investment in new facilities and operations. Investment in new capabilities will likely boost demand for process and operations management consulting, corporate strategy and organizational design.

Furthermore, rapid information technology developments will continue to be instrumental in developing new strategies, designs and understanding an evolving U.S. market. Private sector investment in information technology is expected to boom and management consultants will likely pursue more solutions that incorporate computer systems. Moreover, major investment in life sciences and healthcare over the next five years will help drive growth for consultants that assist in merger and acquisition activity. Consequently, the Management Consulting industry is projected to grow at an average annual rate of 4.1% to \$308.9 billion over the five years to 2021. Major accounting and specialized prestigious consulting firms are expected to win most contracts and drive industry revenue.

#### *56145 Credit Bureaus and Rating Agencies*

**DEFINITION** This industry comprises operators that provide information, outlooks and ratings on the credit worthiness of particular companies, individuals, securities, or financial obligations. The Credit Bureaus and Rating Agencies industry can be divided into two primary groups: credit bureaus and credit rating agencies (CRAs). Credit bureaus provide services related to consumer credit information, while CRAs generally focus on businesses, governments, securities and financial markets.

#### **KEY EXTERNAL DRIVERS**

- Number of businesses
- Aggregate household debt
- National unemployment rate
- S&P 500
- Yield on 10-year Treasury note

#### **KEY SUCCESS FACTORS**

- Level of security provided/used
- Access to high quality inputs
- Access to highly skilled workforce
- Accessibility to consumers/users

**OUTLOOK** In the five years to 2021, the U.S. Credit Bureaus and Rating Agencies industry's revenue is forecast to increase at an average annual rate of 2.2% to \$9.6 billion. As the economy continues its recovery and the financial sector completely stabilizes, banks and other lending institutions are expected to gradually decrease lending standards some (not accounting for potential regulation changes). As standards become laxer and unemployment continues falling, consumer spending and borrowing will rise at a faster pace, which will improve the need for credit bureau services, consumer reports, and credit-card marketing. At the same time, lending will get a boost from a recovery in the secondary market for structured debt instruments. Increased demand for these instruments will support demand for credit rating agency (CRA) services. Additionally, the growth of credit bureaus and CRAs will be supported by innovation and diversification, as agencies look to leverage vast amounts of information. Despite strong growth, the industry is expected to face increased scrutiny and regulation in the aftermath of the credit market crisis. In the next five years, credit rating agencies will face added government oversight in response to their inability to foresee the risks associated with mortgage-backed securities (MBSs) and collateralized debt obligations (CDOs). In addition, larger CRAs are expected to improve transparency and credit rating procedures to regain credibility within the financial marketplace. Even with added regulation, industry agencies are projected to increase their profit margins (i.e. earnings before interest and taxes) from 14.9% in

2016 to 15.2% by 2021. This rise will be driven by technological advancements, which will automate services and improve employee productivity.

## Appendix F: Workforce Development Background/Supplemental Data and Resources

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### Workforce Development Background/Supplemental Data

#### **Approach:**

The FSU Project Team sought to understand how the various levels of potential personnel losses at Fort Bragg will also impact the local civilian labor force, employers, and workforce training needs in the tri-county study area. This includes direct military, military-civilian, contractor, military family, and civilian adults inside and outside the gates for the three counties and larger municipalities within. The overall purpose of this plan is to demonstrate the number and types of jobs and employment sectors that will be impacted because of prospective military downsizings. The plan also determines the general skill requirements of job “replacement” occupations as one basis for designing and providing appropriate talent development/placement and workforce re/training and education programs throughout the region utilizing all the related military and private/public partners mentioned elsewhere in this report.

More specifically, the approach included (but was not limited to) the following:

Examining - Current baseline employment by sector; Military and related employment; Personnel reduction job impacts (direct, indirect, induced); Jobs and skill requirements (by sector); and Wages.

Then based on a comparison of the current skills base versus the existing and/or new jobs/businesses, determinations were made regarding which and how much additional training and education and/or job placement assistance might actually be required. The concepts and design the FSU Project Team utilized include:

Implementation Recommendations – Communicate, convene, and consult with key community stakeholders particularly in regional workforce/economic development and education realms (listed elsewhere); Develop coordinated and collaborative strategies and initiatives to address identified skills and other gaps; and provide assistance gaining employment or starting a business in the regional economic sectors of strength, opportunity, and growth.

#### **Top Industry Sectors Impacted by Fort Bragg Personnel Reduction Scenario**

Scenario: Reduce military personnel by 3,000, with 1,044 associated federal civilian jobs assumed to be lost

**Table: 41: Top Ten Sectors by Employment**

Top Ten Sectors by Employment	
Sector	Total Regional Employment Impact
* Employment and payroll of federal govt, military	-4,044
Limited-service restaurants	-63
Full-service restaurants	-58
Real estate	-49
Offices of physicians	-37
Retail - General merchandise stores	-36
Nursing and community care facilities	-31
All other food and drinking places	-27
Retail - Food and beverage stores	-24
Personal care services	-24

To recap from data found elsewhere in this report, if the maximum reduction of 3,000 direct military personnel were to occur, this would likewise impact an additional 1,044 associated military-civilian jobs. These losses would then impact approximately 350 - 400 “outside the gate” jobs in the sectors and establishments so indicated. Most military installation towns are primarily populated by such enterprises. Spread across those many such operations in the tri-county region, it is thought that these losses could be absorbed and shifted to other similar or new work places and entities requiring this respective talent.

#### **Specific Skill Set Analyses:**

The occupational skills (MOS) makeup of the active duty Army service members and military-civilians attached to Fort Bragg involved in any reduction-in-force scenario needed to be assessed in order to better ease their potential transition to civilian employment in this tri-county region. The major and most prevalent occupational codes and skill sets were then compared to existing civilian occupations using conversion cross-walks or translators - namely O\*Net Online and CareerOneStop. Then these were compared with the Standard Occupational Classification (SOC) system from the U.S. Bureau of Labor Statistics for occupational match-making in key current regional and future growth sectors.

For purposes of this study, it has been determined that the five most common military occupational specializations for Fort Bragg’s active military personnel are: Infantryman (11B); Health Care Specialist (68W); Wheeled Vehicle Repairer (63W/91B); Military Police (31B); Combat Engineer (12B); and Food Service Specialist (99B). These occupations match quite closely those identified by a survey used to publish “Military Human Capital Snapshot, Fort Bragg - Fayetteville, NC,” an assessment of the transitioning military workforce at Fort Bragg, in January 2016. As is evident from the O\*Net information below, these all relate to several compatible civilian occupations across the region:

**Table 42: Military Occupational Specializations**

<b>11B Infantryman (Army - Enlisted)</b>	
11-3131.00	Training and Development Managers
11-9161.00	Emergency Management Directors
13-1151.00	Training and Development Specialists Green Occupation Green
21-1092.00	Probation Officers and Correctional Treatment Specialists
33-1011.00	First-Line Supervisors of Correctional Officers
33-3012.00	Correctional Officers and Jailers Bright Outlook Bright Outlook
33-3051.01	Police Patrol Officers Bright Outlook
33-9032.00	Security Guards Bright Outlook
47-2061.00	Construction Laborers Bright Outlook Green Occupation
49-9043.00	Maintenance Workers, Machinery
53-1031.00	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators
53-3033.00	Light Truck or Delivery Services Drivers Bright Outlook
<b>68W Health Care Specialist (Army - Enlisted)</b>	
11-9111.00	Medical and Health Services Managers Bright Outlook Bright Outlook
21-1091.00	Health Educators
29-2041.00	Emergency Medical Technicians and Paramedics Bright Outlook
29-2071.00	Medical Records and Health Information Technicians Bright Outlook
31-9092.00	Medical Assistants Bright Outlook
31-9097.00	Phlebotomists Bright Outlook
43-6013.00	Medical Secretaries Bright Outlook
<b>63W Wheel Vehicle Repairer (Army - Enlisted)</b>	
49-3023.01	Automotive Master Mechanics Bright Outlook Bright Outlook
49-3023.02	Automotive Specialty Technicians Bright Outlook Green Occupation Green
49-3031.00	Bus and Truck Mechanics and Diesel Engine Specialists Green Occupation
<b>91B Wheeled Vehicle Repairer (Army - Enlisted)</b>	
11-1021.00	General and Operations Managers Bright Outlook Bright Outlook Green Occupation Green
49-1011.00	First-Line Supervisors of Mechanics, Installers, and Repairers Bright Outlook Green Occupation
49-2093.00	Electrical and Electronics Installers and Repairers, Transportation Equipment
49-2096.00	Electronic Equipment Installers and Repairers, Motor Vehicles
49-3023.01	Automotive Master Mechanics Bright Outlook
49-3023.02	Automotive Specialty Technicians Bright Outlook Green Occupation
49-3031.00	Bus and Truck Mechanics and Diesel Engine Specialists Green Occupation
49-3042.00	Mobile Heavy Equipment Mechanics, Except Engines
49-3053.00	Outdoor Power Equipment and Other Small Engine Mechanics
49-9071.00	Maintenance and Repair Workers, General Bright Outlook Green Occupation



49-9098.00	Helpers--Installation, Maintenance, and Repair Workers Green Occupation
53-1031.00	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators
53-3032.00	Heavy and Tractor-Trailer Truck Drivers Bright Outlook Green Occupation
53-6051.07	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation Green Occupation
11-3131.00	Training and Development Managers
11-9039.02	Fitness and Wellness Coordinators Bright Outlook Bright Outlook
11-9151.00	Social and Community Service Managers
11-9161.00	Emergency Management Directors
11-9199.07	Security Managers Bright Outlook
11-9199.08	Loss Prevention Managers Bright Outlook
13-1151.00	Training and Development Specialists Green Occupation Green
13-1199.02	Security Management Specialists Bright Outlook
19-4092.00	Forensic Science Technicians Bright Outlook
21-1092.00	Probation Officers and Correctional Treatment Specialists
33-1011.00	First-Line Supervisors of Correctional Officers
33-1012.00	First-Line Supervisors of Police and Detectives
33-3011.00	Bailiffs
33-3012.00	Correctional Officers and Jailers Bright Outlook
33-3021.01	Police Detectives
33-3021.02	Police Identification and Records Officers
33-3021.03	Criminal Investigators and Special Agents
33-3021.05	Immigration and Customs Inspectors
33-3021.06	Intelligence Analysts Bright Outlook
33-3031.00	Fish and Game Wardens Green Occupation
33-3041.00	Parking Enforcement Workers
33-3051.01	Police Patrol Officers Bright Outlook
33-3051.03	Sheriffs and Deputy Sheriffs Bright Outlook
33-3052.00	Transit and Railroad Police
33-9011.00	Animal Control Workers
33-9021.00	Private Detectives and Investigators
33-9031.00	Gaming Surveillance Officers and Gaming Investigators
33-9032.00	Security Guards Bright Outlook
33-9091.00	Crossing Guards
33-9093.00	Transportation Security Screeners
33-9099.02	Retail Loss Prevention Specialists Bright Outlook
39-2011.00	Animal Trainers
43-4061.00	Eligibility Interviewers, Government Programs
43-4111.00	Interviewers, Except Eligibility and Loan

43-9011.00	Computer Operators			
43-9061.00	Office Clerks, General	Bright Outlook		
<b>12B Combat Engineer (Army - Enlisted)</b>				
11-3011.00	Administrative Services Managers			
47-2061.00	Construction Laborers	Bright Outlook	Bright Outlook	Green Occupation Green
47-5031.00	Explosives Workers, Ordnance Handling Experts, and Blasters			
<b>94B Food Service Specialist (Army - Enlisted)</b>				
35-2012.00	Cooks, Institution and Cafeteria	Bright Outlook	Bright Outlook	

Source: O\*Net Online - <https://www.onetonline.org/crosswalk/MOC/>

Fortunately, this particular military occupational skills mix shows some strong correlation with several of the tri-county/Fort Bragg region's largest civilian sectors/occupations, including growing areas in health care, transportation-related, and food service occupations. In addition, a couple of the occupational specializations within the military (and military-civilian) roles have a connection to established professional and business service industries or targeted growth and emerging sectors in this region such as defense and homeland security. These occupations also align with several degree and continuing education/certification programs offered by the three regional community colleges and four-year institutions. There are also military training and certification cross walks that will give college course credit for certain training received while in the Army; some functional skills sets are highly transferable.

### **Projected Separations from Fort Bragg**

On an annual basis, an average of 6,000 service personnel normally separate from the U.S. Army via Fort Bragg. They are generally replaced with new enlistees on the base, but a number choose to remain residing and working and spending in this region. That number is currently unknown, but it is estimated that as many as 1/3 remain. Of the 6,000 annually transitioning service members, 38%, or 2,400, may remain in the Fayetteville/Cumberland County metropolitan area. More importantly, 55%, or 3,300 service members, would remain in the region, if suitable employment were available. (HAS Report, 2016). This large labor pool of skilled workers should be an attractive proposition to other private- and public-sector employers.

While not all of these separating personnel included here will seek employment in the tri-county area, this 1,000-3,000 of total studied separations could provide a special opportunity for local businesses and other employers to hire and retain some of these skilled workers to meet regional workforce needs. As prior studies have indicated, many who leave the Army possess various technical/STEM skills and "soft" skills including leadership, communications, reliability, project management, and team work. They are also still in their prime working age. Opportunities to match employers with these individuals will exist locally via military and civilian/public "career transition" entities listed and discussed below. Furthermore, this labor pool is highly educated and well-trained when compared to the U.S. population it serves. In fact, 82.8 percent of U.S. military officers in 2010 had at least a bachelor's degree, compared to 29.9 percent of the general population. 93.6 percent of enlisted soldiers had at least a high

school diploma, compared to 59.5 percent of America (USDOD, 2010). Previous studies have found similar statistics for the Fort Bragg area. This connected workforce could also include working military spouses and their adult children.

### **Jobs**

In addition to the active duty military personnel assigned to Fort Bragg, there are many military civilian employees (at about a 1:3 ratio), local government workers, and private sector employees in the defense and other industries that support and serve the military.

An internet search of U.S. Army websites indicates that the great majority of military-civilians are employed in one of the following occupations:

#### **Army Career Programs**

- Accounting & Budget Medical Officer
- Attorney
- Medical Technology
- Civil Engineering/Architecture
- Nursing
- Computer Engineering
- Psychology
- Contracting
- Quality Assurance
- Electrical Engineering Safety and Occupational
- Human Resource Management
- Cyber
- Industrial Hygiene
- Foreign Affairs
- Information Technology
- Public Affairs & Communications Media
- Logistics Management
- Program Management
- Mechanical Engineering
- Social Science, and Welfare

In addition, these are similar areas of their occupational expertise:

- General Administrative, Clerical, and Office Services
- Natural Resources Management and Biological Sciences
- Veterinary Medical Science
- Legal and Kindred
- Copyright, Patent, and Trademark
- Physical Sciences
- Library and Archives
- Mathematical Sciences
- Equipment, Facilities, and Services
- Education
- Inspection, Investigation, Enforcement, and Compliance
- Quality Assurance, Inspection, and Grading
- Supply
- Transportation

#### **Military Spouses:**

According to Points of Light, across the Army there are some 710,000 active duty spouses, 93% of whom are female. An additional 500,000 spouses are married to a Reservist or National Guardsman.

Recent studies have found that:

- 84% have some college education; 25% hold an undergraduate degree; and 10% hold a post-graduate degree.
- 77% of spouses report that they want or need to work.
- 38% of military spouses are underemployed, compared to approximately 6% rate for civilian spouses.
- Only 19% of military spouses have adequate full-time employment

Closer to home, it is estimated that there are approximately 26,000 (1,500 dual service) active duty military spouses in the Sandhills/Cape Fear region. [Women make up about 24,700 of the military spouses.] Based on those numbers, there could be as many as 1,400 military spouses affected by the transition of 3,000 active-duty soldiers from Fort Bragg.

Administrative assistant/secretary is the most common occupation among military spouses, followed by teacher, child care services, and nursing. The following represents additional information from a USAA study about those and other top military spouse careers and job prospects.

#### Secretary/administrative assistant

Jobs as a secretary/administrative assistant are expected to grow by 12% this decade. Military spouses looking to eventually work their way up the business ladder and earn a promotion and/or better pay, might consider a degree in business administration.

#### Teacher

One in 20 military spouses from the USAA article were teachers (preK- 12). The Bureau of Labor Statistics (BLS) projects employment for kindergarten and elementary school teachers will grow by 17% between 2010 and 2020, a more optimistic prediction than the growth for high school teachers (7%) in the same time frame. The average growth rate for all occupations is 14%.

#### Child care worker

Jobs as a child care worker are expected to grow by 20% by 2020, per the BLS. The BLS projects the U.S. will create 262,000 more child care jobs in the next eight years. The only negative: below-average annual salary.

#### Registered Nurse

The nursing profession is expected to grow at a rate of 26% between 2010-2020, which is the fastest rate of all professions. The BLS expects registered nurses to gain 712,000 new jobs around the country this decade. Military spouses who are interested in this flourishing and secure field could get a leg up on the competition by looking into online nursing programs.

#### Retail sales

Jobs in retail sales (the BLS described these positions primarily in clothing, furniture, and automobiles) are expected to grow by 17% from 2010 to 2020.

### Waiter/Waitress

The employment outlook for waiters and waitresses is expected to grow by 9% (below average) by 2020.

Many spouses (male and female) with a college education work in the education and health care industries. Almost every military town or a nearby city including Fayetteville and the tri-county Fort Bragg region have a large school system and/or hospital(s). Banking is another good alternative. Given all of this, the 1,000 or so military spouses that might be impacted by a loss of 3,000 soldiers have the types of needed jobs and skills in the kinds of needed sectors in the local economy that should be able to be sustained and utilized.

The employment impact of a military asset such as Fort Bragg is spread out across virtually all sectors, albeit to differing degrees. According to other reports, the Professional and Technical Services sector usually has the most military-supported jobs; other major sectors include Administrative and Waste Services, Construction, Retail Trade, and Health Care and Social Assistance. This is the case here in the Fort Bragg region as well.

Again, because of the maximum potential loss of 3,000 soldiers and 1,000 military-civilians under the worst case scenario studied here, it is estimated that an additional 350 – 400 or so induced jobs could then be lost because of the reduction in demand for goods and services within the tri-county Fort Bragg region. While this loss of employment (direct, indirect, and induced) may make it difficult for some of those affected to find new employment, the research team feels confident that the local market could absorb those dislocated into similar jobs. Even though current jobs within the region are concentrated in a few sectors, they tend to match the skills and experience levels offered by those inside and outside the gate impacted by the total cumulative force reductions.

A review of major county-level occupations by population also indicates a pretty strong match between the skill sets/job types of military-connected residents/workers and those predominately existing in the region:

**Table: 43: Population by Occupation**

Population by Occupation			
	Hoke	Harnett	Cumberland
Sales, office, administrative support	23%	24%	25%
Production, transportation, material moving	16%	15%	12.50%
Construction, extraction, maintenance-repair	11%	13%	8%
Management, business, finance	9%	12%	11%
Education, library	7%	7%	8%
Food preparation, serving	6.50%	5%	7%

*(Source: bestplaces.net)*

### Occupations by Projected Growth

The table below shows the occupations with the highest estimated annual openings in North Carolina (no data available for Fayetteville MSA, North Carolina) for the 2012 - 2022 time period.

**Table 44a: Occupations by Projected Growth-North Carolina**

Rank	Occupation	2012 Estimated Employment	2022 Projected Employment	2012- 2022 Annual Percent Change	Estimated Annual Openings
1	Combined Food Preparation and Serving Workers, Including Fast Food 🌟	124,908	145,961	1.6	6,874
2	Retail Salespersons 🌟	136,699	150,827	1.0	6,089
3	Cashiers 🌟	103,871	109,641	0.5	5,068
4	Waiters and Waitresses 🌟	73,544	79,356	0.8	4,119
5	Registered Nurses 🌟🌟	87,850	105,730	1.9	3,491
6	Customer Service Representatives 🌟	78,961	91,424	1.5	3,395
7	Home Health Aides 🌟	47,102	66,588	3.5	2,845
8	Laborers and Freight, Stock, and Material Movers, Hand 🌟	71,447	76,855	0.7	2,754
9	Nursing Assistants 🌟	54,375	68,841	2.4	2,481
10	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive 🌟	71,612	83,863	1.6	2,087
11	Office Clerks, General 🌟	64,717	70,248	0.8	1,913
12	Childcare Workers 🌟	37,200	45,224	2.0	1,896
13	General and Operations Managers 🌟🌟	54,359	62,457	1.4	1,827
14	First-Line Supervisors of Retail Sales Workers 🌟	59,350	63,900	0.7	1,746
15	First-Line Supervisors of Office and Administrative Support Workers 🌟🌟	39,472	46,745	1.7	1,663
16	Janitors and Cleaners, Except Maids and Housekeeping Cleaners 🌟	54,698	60,502	1.0	1,609

17	First-Line Supervisors of Food Preparation and Serving Workers	34,450	39,976	1.5	1,525
18	Heavy and Tractor-Trailer Truck Drivers	51,663	58,606	1.3	1,520
19	Accountants and Auditors	32,799	38,281	1.6	1,519
20	Receptionists and Information Clerks	29,673	36,199	2.0	1,452
21	Stock Clerks and Order Fillers	47,722	47,714	0.0	1,442
22	Elementary School Teachers, Except Special Education	37,007	43,138	1.5	1,427
23	Maids and Housekeeping Cleaners	37,984	44,413	1.6	1,396
24	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	45,039	49,972	1.0	1,371
25	Landscaping and Groundskeeping Workers	35,622	40,171	1.2	1,353

✦ BRIGHT OUTLOOK NATIONALLY | ✦ BRIGHT OUTLOOK STATEWIDE | ✦ GREEN OCCUPATIONS

Source: Labor & Economic Analysis Division, Economic Analysis

Here is similar occupational growth projection data for the larger Sandhills Region (but not including Harnett):

**Table 44b: Occupations by Projected Growth-Sandhills Region**

Occupation	2012 Employment	2022 Employment	Net Change	Median Annual Wage
Registered Nurses	6445	7870	1425	57024
Elementary School Teachers, Except Special Education	4582	5347	765	38738
Licensed Practical and Licensed Vocational Nurses	2208	2922	714	39018
Interpreters and Translators	745	1251	506	187367
First-Line Supervisors of Office and Administrative Support Workers	2691	3190	499	43179
Bookkeeping, Accounting, and Auditing Clerks	3215	3655	440	30434
General and Operations Managers	2920	3349	429	91916
Heavy and Tractor-Trailer Truck Drivers	3870	4144	274	30073
First-Line Supervisors of Construction Trades and Extraction Workers	1327	1589	262	49573
Child, Family, and School Social Workers	1091	1326	235	41932

Accountants and Auditors	1252	1473	221	55884
Middle School Teachers, Except Special and Career/Technical Education	1322	1543	221	38942
Secondary School Teachers, Except Special and Career/Technical Education	2192	2401	209	39163
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	845	1049	204	35580

Source: NC Commerce/LEAD

Note: The equivalent lists for the Cumberland County, Lumber River (which includes Hoke County), and Triangle South Workforce Development Area (which includes Harnett County) reflect similar top growth projection occupations.

Also, please note that any cuts may also have the potential to adversely impact minority-owned and/or -staffed businesses if significant numbers of separated soldiers and Army military-civilians move to areas outside of this tri-county region. Proactive interventions could utilize the existing resources of the local FSU-housed SBTDC and VBOC, regional community college SBCs, FTCC's MBC, Fayetteville Women's Business Center/CEED, Chambers of Commerce, and others seeking to assist local small businesses.

Military personnel spend their money in the local economy, usually within a 5-10 mile radius "spend area," supporting additional jobs, income, taxes, and sales. Currently about two-thirds, or 36,000, live on post, with the other third, or 18,000, reside "outside the gates." Recently, the elimination or relocation of the 440th Airlift Wing occurred, consisting of approximately 350 active airmen and Air Force civilian employees and up to 1,000 drilling reservists stationed at Pope Army Airfield on Fort Bragg. It is thought, however, that this had minor, if any, adverse impacts in regional workforce or economic activity.

In addition, other ongoing and new infrastructure improvements and construction and development activity also benefits the regional economy through additional jobs primarily in the construction field. This activity should help to mitigate at least some of any adverse impacts of the troop and other personnel reductions.

[One remaining "unknown" problem is that it is not clear to what extent the dozens of companies and contractors doing business with Fort Bragg will even be impacted. If so, researchers would need to know exactly what portion of their revenue is reliant on military and defense spending, and what skills and knowledge are required by the companies' workforces to be able to meet the military's or Fort Bragg's needs.]

### **Potential Entrepreneurial and Economic Development Opportunities in the Tri- County Region**

Many regions and/or towns/counties that are heavily dependent on military installations and seek diversification attempt to increase and/or develop economic diversification including entrepreneurial initiatives. As referenced elsewhere, the region possesses several assets to help with additional concentrated assistance, support and coaching for entrepreneurs, small



business owners, and start-ups, including via incubators and accelerators. The Workforce Development Boards might also be able to provide such assistance to separated soldiers and other displaced workers.

The table below shows the industries and sectors in Cumberland, Harnett, and Hoke Counties with excess demand that is not currently met by suppliers. This is one way of identifying potential economic development and entrepreneurial opportunities in a given area. For example, in Cumberland County, an approximately \$119 million demand for specialty food is currently being met by suppliers outside the county. Similarly, in Harnett County there is \$121.5 million excess demand for general merchandise items, and in Hoke County \$53 million excess demand for beverages and food are currently being met by suppliers from outside the county. Admittedly, the excess demand in some industries cannot be met because the county may currently lack infrastructure and complementary businesses.

**Table 45: Sectors/Industry with Excess Demand**

<b>Sectors/industry with Excess Demand</b>		
<b>Cumberland County- Excess Demand Sectors/industry</b>		
<b>NAICS</b>	<b>Industry</b>	<b>Excess Demand</b>
4452	Specialty Food Stores	\$118,871,795
445	Food and Beverages stores	\$106,600,864
443	Electronic and Appliances Stores	\$71,245,517
447	Gasoline Stations	\$29,067,044
4412	Other Motor Vehicles Dealers	\$19,179,338
4453	Beer wine and Liquor Stores	\$9,518,640
4442	Lawn & Garden Equipment Supply Stores	\$8,912,064
4512	Books, Periodical & Music Stores	\$7,305,590
4483	Jewelry, Luggage and Leather Goods Stores	\$4,096,069
7223	Special Food Services	\$2,665,089
7224	Drinking Places-Alcoholic Beverages	\$941,440
4533	Used Merchandise stores	\$295,220
<b>Harnett County- Excess Demand Sectors/industry</b>		
<b>NAICS</b>	<b>Industry</b>	<b>Excess Demand</b>
452	General Merchandise Stores	\$121,589,741
4521	Department Stores excluding leased Department	\$92,357,060
441	Motor Vehicles and Parts Dealers	\$72,369,671
4411	Automobile Dealers	\$51,683,618
448	Clothing and Clothing Specialty Stores	\$47,849,557
4452	Specialty Food Stores	\$42,729,539
443	Electronic and Appliances Stores	\$40,612,988
722	Food Services and Drinking Places	\$36,245,968
4481	Clothing stores	\$33,244,535
4529	Other Merchandise Stores	\$29,232,681

7221	Full service restaurants	\$25,110,802
453	Miscellaneous Store Retailers	\$24,994,285
451	Sporting Goods, Hobby, Book and Music Stores	\$23,432,353
4412	Other Motor Vehicles Dealers	\$23,247,950
454	Non-stores Retailers	\$22,690,780
4441	Bldg Materials and Supply Dealers	\$20,164,871
4539	Other Miscellaneous Stores Retailers	\$19,939,839
4541	Electronic Shopping and Mail-order Houses	\$18,360,460
4511	Sporting Goods, Hobby, Musical instrument Stores	\$18,320,132
444	Bldg Materials, Garden Equip and Supplies	\$15,994,448
442	Furniture and Home Furnishings	\$13,806,470
4421	Furniture stores	\$9,372,208
4483	Jewelry, Luggage and Leather Goods Stores	\$8,926,985
7222	Limited service eating places	\$6,235,111
4532	Office supplies, Stationary and Gifts Stores	\$6,062,522
7224	Drinking Places-Alcoholic Beverages	\$6,015,941
4482	Shoe Stores	\$5,678,037
4512	Books, Periodical & Music Stores	\$5,112,221
4422	Home Furnishings Stores	\$4,434,262
4543	Direct Selling Establishments	\$3,414,533
4542	Vending Machines Operators	\$915,787

**Hoke County- Excess Demand Sectors/industry**

NAICS	Industry	Excess Demand
441	Motor Vehicles and Parts Dealers	\$105,410,540
4411	Automobile Dealers	\$91,224,024
445	Food and beverages stores	\$53,004,844
4451	Grocery Stores	\$34,439,999
722	Food Services and Drinking Places	\$29,064,135
448	Clothing and Clothing Accessories Stores	\$22,359,196
443	Electronic and Appliances Stores	\$21,481,614
443	Electronic and Appliances stores	\$21,481,614
444	Bldg Materials, Garden Equip and Supplies	\$20,624,928
4441	Bldg Materials and Supply Dealers	\$19,022,043
4441	Bldg Materials and supply dealers	\$19,022,043
4452	Specialty Food Stores	\$17,638,583
446	Health and Personal care stores	\$15,804,471
4482	Shoe Stores	\$15,350,457
4481	Clothing stores	\$15,350,457
7222	Limited service eating places	\$13,905,689
4529	Other General Merchandise Stores	\$13,139,150
7221	Full service restaurants	\$12,238,585
453	Miscellaneous Store Retailers	\$10,839,340
451	Sporting Goods, Hobby, Book and Music Stores	\$10,496,599

447	Gasoline Stations	\$10,496,599
442	Furniture and Home Furnishings	\$9,473,764
4412	Other Motor Vehicles Dealers	\$8,838,187
4511	Sporting Goods, Hobby, Musical instrument Stores	\$7,513,235
4539	Other Miscellaneous Stores Retailers	\$6,535,758
4413	Auto Parts, Accessories and Tire Services	\$5,348,329
4421	Furniture stores	\$5,231,084
4483	Jewelry, Luggage and Leather Goods Stores	\$5,006,311
4422	Home Furnishings Stores	\$4,242,680
4422	Home Furnishings Stores	\$4,242,680
4541	Electronic Shopping and Mail-order Houses	\$4,018,395
4512	Books, Periodical & Music Stores	\$3,014,563
4532	Office supplies, Stationary and Gifts Stores	\$2,537,562
454	Non-stores Retailers	\$2,537,562
7224	Drinking Places Alcohol beverages	\$2,307,500
4543	Direct Selling Establishments	\$1,976,712
4442	Lawn and Garden Equipment and Supplies	\$1,602,985
4533	Used merchandise stores	\$1,380,510
4453	Beer, Wine and liquor stores	\$926,262
7223	Special Food Services	\$612,361
4531	Florists	\$385,510

Regional residents seeking to start a new small business or grow an existing one in these or other markets could utilize the existing resources of the local FSU-housed SBTDC and VBOC, regional community college SBCs, Fayetteville Women’s Business Center/CEED, Chambers of Commerce, and others seeking to assist entrepreneurs.

### **From Findings to Transition**

This study has attempted to understand the extent of the direct and indirect military and defense workforce footprint in the tri-county Fort Bragg region. This understanding can help with a “seamless” transition or “soft-landing” for dislocated soldiers and other impacted defense contract and civilian employees. Furthermore, it has sought to understand future opportunities for key job and industry growth in both the public and private sectors in order to meet economic and workforce needs. Part of both is a proactive focus on retaining and strengthening the defense and other sector businesses and workers that make the tri-county region their home via workforce adjustment and retraining efforts. Other sections of this report have focused on the related need to reduce the exposure of the regional economy to a reliance on military and defense spending and develop a diversification strategy and support system for those companies, workers, and communities.

Therefore, the end of this plan below identifies a labor or talent transition process and a system that connects employees to growth industries/occupations and identifies technological and “high-touch” tools to support their transition process.

## Regional Workforce Development, Career Intervention, and Transition Resources

In order to accomplish these types of talent “transitions,” a collaborative effort across several entities on and off post across the three counties will need to involve the following:

[Note: Given the fact that the great majority of potential dislocated workers would be military-connected, emphasis is placed on services targeted to service members and veterans. All providers besides DoD-TAP also provide similar or the exact same services and programs to the civilian population. **Most of this information is taken directly from their respective websites.**]

The **Department of Defense Transition Assistance Program (DoD-TAP)** provides information, access to important documents, and training to ensure service members separating from active duty are prepared for their next step in life - whether pursuing additional education, finding a job in the public or private sector, or starting their own business. This redesigned TAP is the result of an interagency collaboration to offer separating service members and their spouses better, with more easily accessible resources and information to make their transitions more successful.

### Benefit Highlights:

The DOD -TAP for Service Members and Veterans website is designed to provide separating service members and veterans access to their Verification of Military Experience and Training (VMET) documents, view completed Transition Modules and Tracks, view Pre-separation counseling checklist DD 2648 for active duty or DD 2648-1 for reserves and your Individual Transition Plan (ITP).

From this site, service members and their spouses can:

- Learn about the new Transition GPS (Goals, Plans, Success) curriculum
- Determine how and where to start preparing for their transition to civilian life
- Discover a host of online resources regarding VA benefits, financial planning assistance, and assessing and documenting their skills for transition to civilian life

**Table 46: Transition Courses**

**They can now complete several complementary SFL-TAP courses online on the Joint Knowledge Online (JKO) website. The following eight transition courses are now available:**

Course Name	JKO Course Identifier
-------------	-----------------------

Dress For Success	USA-ACAP009
Family Concerns	USA-ACAP005
Interview Techniques	USA-ACAP010
ITP Review	USA-ACAP004
Salary Negotiations	USA-ACAP011
Skills Development	USA-ACAP008
Special Issues	USA-ACAP006
Value of a Mentor	USA-ACAP007

### The SFL-TAP Process

The SFL-TAP process must be initiated early. Allowing soldiers to start early provides you and the soldier the flexibility needed to prevent a conflict between mission requirements and SFL-TAP services. It also ensures compliance with timeliness standards and promotes the program's effectiveness. As they prepare for transition, soldiers need an average of 40 hours, spread over a 12-24 month period of time, to take advantage of SFL-TAP services. For more information on timeliness requirements and the need to start early, read *Getting Started Early*.

Commanders will assist soldiers in getting an early start through a formal notification process. Soldiers must register for services and schedule their first service. For their first service, soldiers will receive pre-separation counseling, complete DD Form 2648 or 2648-1, the Pre-separation Counseling Checklist, learn more about SFL-TAP and schedule additional services. Soldiers document the counseling and additional VOW/CRS requirements on DD Form 2958, Individual Transition Plan Counseling Checklist. This form documents the soldier's achievement of VOW/CRS and determines if the soldier and their unit have met the Army's timeliness standard.

Many soldiers will sign up to receive employment assistance training, either by attending a Department of Labor Employment Workshop (DOLEW) or viewing DOLEW training online. The DOLEW provides the skills and knowledge soldiers need to attain their post active duty transition goals. Once they've completed the DOLEW, soldiers will need additional assistance and services to select a career objective, write a resume, find a job opportunity, apply for a job, and prepare for an interview. These additional services can be scheduled and completed over a number of weeks and months and around mission requirements using a variety of resources. In addition to this regular menu of additional services, many SFL-TAP Centers schedule special events. Throughout the SFL-TAP Process, the TSM and SFL-TAP Center staff remain accessible to commanders and other Army Leaders. You can always verify a soldier's appointments or confirm that the soldier reported for a scheduled appointment by contacting your SFL-TAP center. The entire SFL-TAP Team is committed to helping you support your transition while also ensuring that your critical mission continues without interruption.

### Getting Started Early

Each commander, sergeant major and first sergeant is responsible for ensuring that soldiers initiate SFL-TAP services early on in the transition process. Recognizing that the effectiveness of services is directly linked to the time soldiers spend preparing for their transition from active

duty, soldiers should begin the transition process up to two years (for retirees) or no later than one year (for non-retiring transitioners) prior to transition from active duty. From a leader's point of view, early is better than late. Soldiers who begin their SFL-TAP services early in their transition are better able to complete SFL-TAP activities around unit duty requirements. More importantly, if the Army is to realize the benefits of reduced unemployment compensation costs, enhanced active duty retention, enhanced enlistment in the National Guard and Reserve, and enhanced image of the Army as a great place to start, soldiers must have time to receive substantive transition and employment assistance services. SFL-TAP Centers maintain statistics on unit compliance with Army, DOD policies, and congressional mandates regarding timely involvement in transition and job assistance services. Your chain of command will typically have access to this data and your unit's compliance rate will be a matter of record.

### Registering for Services

Notified soldiers can register for their first SFL-TAP service online, in person, or pre-register by phone. Once registered, they can schedule services and print an appointment slip. Soldiers can choose to receive services in the SFL-TAP Center or online. Face-to-face service at the SFL-TAP center is always the preferred method. Either way, they will be advised of what they need to do next. You are always welcome to contact the SFL-TAP Center to confirm a soldier's first appointment or to confirm that the soldier actually reported to the SFL-TAP Center as scheduled or completed pre-separation counseling online.

### First Visit

The first step in the SFL-TAP process is a two-hour pre-separation counseling session, most often presented as an automated presentation delivered by the SFL-TAP website or at the SFL-TAP Center. The contents of the counseling are defined by DOD and Army policy and provide soldiers valuable information on transition benefits and programs designed to assist their smooth transition from active duty. Soldiers complete a DD Form 2648 or 2648-1 to acknowledge receipt of this counseling and indicate their desire for additional information and services. The date of this briefing is recorded in the automated SFL-TAP system and, along with the Soldiers ETS date, is the basis for all statistical reports on unit compliance with Army, DOD policies and congressional mandates. At the conclusion of the briefing, soldiers will be provided information on other service providers and given the opportunity to schedule follow-on SFL-TAP services. When soldiers do schedule a follow-on activity, they can print an appointment slip. As always, unit commanders and leaders can always verify an appointment by calling the SFL-TAP Center.

### Workshops

The next step in the SFL-TAP process is attendance at a Department of Labor Employment Workshop (DOLEW). DOLEW is conducted by DOL facilitators. The workshop is three days in length and provides attendees the knowledge, information and skills they need to achieve their post-transition occupational goals. The Veterans Administration provides two briefings to ensure soldiers are made aware of all the benefits offered to veterans of the Armed Services, to include those disabled as a result of their service. Additional Workshops assist soldiers by comparing their current salary, benefits, and opportunities with those they might be able to

attain in the private sector, as well as identifying gaps in their military skills that may assist with civilian employment. A schedule of your installation's workshops can be found on SFL-TAP On-Line.

#### Additional Services

No one ever found a job just by attending a class. The real work of preparing for transition success begins where the workshop ends. Soldiers, even those going to school after separation, will need to begin the process of setting a career objective. Objective setting requires a careful assessment of occupations, the job market and the soldier's own skills, aptitudes, experience, education, and training. Once the soldier has set an objective, the tough task of achieving that objective begins. Typically, job seekers must create a resume, network, identify job opportunities, apply for jobs, prepare for interviews, and prepare to negotiate salary and benefits. These are difficult tasks and few soldiers have ever performed them prior to their entry on active duty. SFL-TAP staff members are qualified professionals who have the training and resources to help soldiers perform these critical tasks. Counselors can be contacted through SFL-TAP On-Line or counseling sessions can be scheduled for individual attention. Soldiers can also go to SFL-TAP On-Line or schedule time in the SFL-TAP Center to use the automated job assistance training program, JATA, as a means of supplementing workshop instruction as well as career exploration tools, resume writers and Internet job search resources. Generally, soldiers can print an appointment slip and commanders and leaders can always contact the SFL-TAP Center to verify an appointment or attendance at an appointment.

#### Special Events

The SFL-TAP Center may schedule special events to enrich SFL-TAP services. Job fairs may be held to help transitioners meet and interview with hiring employers. Local employers may be invited into the SFL-TAP Center to help soldiers understand the local job market and better appreciate what employers are looking for in successful job applicants. The SFL-TAP Center also might hold short classes for those who want to learn more about a specific job search topic such as resume writing or interviewing. A schedule of these special events can be found on SFL-TAP On-Line.

**Table 47: Preseparation Timeline**

<b>Preseparation Timeline</b>	
24 - 12 Months Prior to Transition (Retirees Only)	<ul style="list-style-type: none"> <li>• <b>Complete Pre-separation Counseling</b></li> <li>• <b>Complete Initial Counseling</b></li> <li>• <b>Begin Individual Transition Plan (ITP)</b></li> <li>• <b>Register on eBenefits</b></li> </ul>
18 - 12 Months Prior to Transition (Non-Retirees)	<ul style="list-style-type: none"> <li>• <b>Complete Preseparation Counseling</b></li> <li>• <b>Complete Initial Counseling</b></li> <li>• <b>Begin Individual Transition Plan (ITP)</b></li> <li>• <b>Register on eBenefits</b></li> </ul>
15 - 12 Months Prior to Transition	<ul style="list-style-type: none"> <li>• <b>Complete MOS Crosswalk/Gap Analysis</b></li> <li>• <b>Complete Standardized Individual Assessment</b></li> <li>• <b>Identify requirements for Certification/ Licensure</b></li> </ul>
12 - 9 Months Prior to Transition	<ul style="list-style-type: none"> <li>• <b>Complete DOL Employment Workshop and obtain DOL Gold Card</b></li> </ul>
9 - 6 Months Prior to Transition	<ul style="list-style-type: none"> <li>• <b>Attend VA Benefits Briefings I and II</b></li> </ul>
6 - 5 Months Prior to Transition	<ul style="list-style-type: none"> <li>• <b>Complete Resume of Choice</b></li> </ul>
5 - 4 Months Prior to Transition	<ul style="list-style-type: none"> <li>• <b>Complete 12-Month Post Separation Budget</b></li> </ul>
No Later Than 3 Months Prior to Transition	<ul style="list-style-type: none"> <li>• <b>Complete DD Form 2958 (Capstone)</b></li> </ul>
<p><b>*Transition Career Tracks (Accessing Higher Education, Career Technical Training and Entrepreneurship) will be completed throughout the transition period in accordance with each Soldiers ITP.</b></p> <p><b>*Continuum of Military Service Counseling will be conducted in accordance with appropriate Army timeline standards.</b></p>	

**NCWorks Career Centers:** Formerly known as JobLink, or ESC Job Service Centers, these are operated by regional Workforce Development Boards and staff under the auspices of the N.C. Department of Commerce/Division of Workforce Solutions. They provide job seeker services for veterans, transitioning service members, and eligible spouses. They are located in all three counties.

Veterans (and other civilians) can visit their NCWorks Career Center and take advantage of the following no-cost services:

- Career assessments
- Labor market information
- Access to training opportunities, job fairs, and workshops
- Job interview preparation



- Resume and cover letter assistance
- Assistance with NCWorks Online
- Access to computers and free internet service
- Help applying for federal employment and training programs in which veterans receive priority of service

Veterans and eligible military spouses receive priority for all career services and training.

Some veterans face significant barriers that make it difficult for them to find suitable employment, especially vets who are transitioning into civilian life. Most offices have specialized staff—all of whom are veterans—who work closely with employers to create more opportunities for veterans and provide the following services to veterans themselves:

- Help developing an employability plan and goals
- Coaching in individual and group settings
- Referrals to supportive services, including vocational rehabilitation, transportation, elder care, food and nutrition services, and non-profit organizations that address homelessness

The following criteria are considered significant barriers to employment:

- Disabilities
- Homelessness
- Unemployed for at least 27 weeks
- Criminal background (released within the last 12 months)
- No high school diploma or GED
- Low income
- Between 18-24 years old

#### NCWorks Online

The state's official job-search website, NCWorks Online, gives veterans access to job postings for 24 hours before they are made available to the public. The system provides information on training opportunities, local services, and other resources available to veterans. Employers can also search exclusively for candidates who are veterans.

#### NCWorks Apprenticeships

The apprenticeship program is recognized as one of the leading methods for acquiring skills and knowledge necessary to become a craftsman. Business and industry, the North Carolina Department of Commerce and community colleges work together to provide apprenticeship programs consisting of on-the-job training and related instruction. Colleges provide the related instruction for both registered and non-registered apprentices. Related instruction may be provided through classroom instruction, correspondence or individualized instructional programs.

Veterans participating in NCWorks Apprenticeships can continue to draw benefits from the GI Bill, even though they are employed as part of an apprenticeship.

It is understood that due to military responsibilities, soldiers often require an additional level of scheduling flexibility to earn their college degree. Online flex courses provide a self-paced format, giving them the ability to choose their start date and work at their desired pace until completion

The NC Community College System's Customized Training Program provides education, training, and support services for new, expanding, and existing business and industry in North Carolina through the network of community colleges serving all 100 counties of the state. The goal is to foster and support three key aspects of your company's well-being:

- Job Growth
- Technology Investment
- Productivity Enhancement

The Customized Training Program provides training assistance for full-time production and direct customer services positions for new and existing companies in North Carolina. The program is dedicated to the enhancement of workforce skills essential to successful employment. Eligible companies must demonstrate two of the following criteria: 1) The business is making an appreciable capital investment; 2) The business is deploying new technology; 3) The business is creating jobs, expanding an existing workforce, or enhancing the productivity and profitability of the operations within the state; and 4) The skills of the workforce will be enhanced by the assistance. This initiative could be tapped as well as another workforce and economic development resource for the region.

### **Work-Based Learning**

Work-Based Learning (WBL) courses are designed to provide students with exposure to supervised work experience in industry, business, government, health, or service work situations. They are joint ventures between the educational institution and employers that help prepare students for responsible positions in the world of work. Students may earn college credit for Work-Based Learning when it directly relates to their program of study.

The North Carolina Department of Commerce administers a Registered Apprenticeship program that helps workers learn new specialized skills needed in today's workforce. The apprenticeship program combines on-the-job training with invaluable classroom instruction. A student enrolled in a community college technical education program may utilize WBL for the on-the-job training requirement of the apprenticeship.

### **Regional Community Colleges**

In general, the community colleges offer degree plus corporate and continuing education and certificate programs that also match the predicted regional training and talent needs. These include the following areas:

Degree:

- Agricultural and Natural Resources Technologies
- Biological and Chemical Technologies

- Business Technologies
- Commercial and Artistic Production Technologies
- Construction Technologies
- Engineering Technologies
- Health Sciences
- Industrial Technologies
- Public Service Technologies
- Transport Systems Technologies

Certificates:

- Emergency Services – CPR, EMT-Basic, EMT-Basic (State/National Registry), EMT-Paramedic, Emergency Medical Technician
- Extension Education – Automotive, Commercial Sewing, Foreign Language, Motorcycle Repair, Sign Language, Small Gas Engine, Teacher Renewal, Wedding/Event Planning & More!
- Health care Programs – Cardiovascular Monitor Technician, CNA I & II, Phlebotomy, RMA I & II
- Fire Training – Fire training for current professionals
- Law Enforcement – LET training for current professionals
- Online Programs – Business, Computer Training, Healthcare, Medical Office, Personal Development

Non-credit courses also include:

- Business/Management
- Barbering & Cosmetic Arts
- Human Resources Development (HRD)
- Medical Industry
- Building/Construction Trades
- Industrial Skills

Community colleges also provide the following:

Human Resources Development (HRD)

The Human Resources Development (HRD) program provides workforce development training to individuals in transition. The goal of the HRD program is three pronged in its purpose: to provide program outreach and student recruitment activities to unemployed and underemployed individuals, to enhance and develop employability skills, and to assist individuals in accessing meaningful training and/or employment opportunities.

There are six HRD courses listed on the Continuing Education Master Course List - Employability Skills (HRD 3001), HRD Employability Lab (HRD 3002), Career Planning and Assessment (HRD 3003), Career Readiness/Pathways (HRD 3004), Technology Awareness (HRD 3005), Employability Motivation and Retention (HRD 3006). HRD courses are open to all and are fee waived to unemployed individuals, dislocated workers, and workers earning at or below 200% of the federal poverty standards.

Being student-centered, the HRD program focuses its activities toward providing instructional training in employability skills specifically designed to meet the needs of individuals facing job transition, skill and self- assessment activities designed to identify the individual's interests, work values, aptitudes, and/or job readiness as related to career, employment, and/or educational goals, and career development activities to include career and/or academic planning and advisement, job search strategies for the 21st century, post-training placement assistance and follow-up counseling, and linkages to community support services.

**FTCC** has a convenient location at the Bragg Training and Education Center (BTEC), as well as venues in Spring Lake and Fayetteville proper, for the thousands of soldiers and families stationed at Fort Bragg and Pope Army Airfield. They are committed to offering top quality college courses in a variety of formats to provide the flexibility they need.

With over 200 programs of study to choose from and Military Services Specialists on staff, they can help soldiers pursue their educational goals Fayetteville Technical Community College's participation as a Service Members Opportunity College streamlines credit transfers between schools. Although some North Carolina community colleges, including Fayetteville Technical Community College and Central Carolina Community Colleges, have programs that provide significant course credits for military training, each institution in the University of North Carolina system determines which credits they will accept as transfer credits, or whether course credit will be granted for military training.

Military Medic to Paramedic EMS Bridge Programs is one such initiative that may help separated soldiers to quickly transition to a related civilian occupation in high demand.

FTCC is also proud to participate in the My Career Advancement Account (MyCAA) Scholarship. Through the MyCAA Scholarship program, an eligible military spouse can receive up to \$4,000 of tuition assistance over two years. The scholarship is designed to assist military spouses in acquiring the education and qualifications needed to enter a high-demand, high-growth portable career field or occupation.

Transition Tech is another special training program for transitioning military service members that provides industry-focused certificates and credentials, resume assistance, and mock interview opportunities designed to prepare them to enter the civilian workforce. After completing industry courses, each Transition Tech student will complete five days of Human Resource Development to prepare for resumes and interviews with industry employers.

#### *Program Cost*

These courses are FREE to veterans and active military in transition through a partnership with Workforce Development (NC Works).

#### *Training Length*

Most programs are 10-12 weeks in length, but depending on your MOS and skill level, you may be able to complete the training in less time.

FTCC has proudly provided affordable and convenient educational pathways for our nation's military for over four decades. They are committed to supporting our military students in their pursuit of education through:

- A Tuition Grant to cover any tuition costs over \$250/credit hour (TA Limit)
- Waived Administrative Fees for all military students using tuition assistance
- Low or No Cost Textbooks to limit any out-of-pocket costs
- Credit for Military Training based on your military training and experience will reduce the number of courses needed to complete your degree

**The North Carolina Military Business Center (NCMBC)** is a business development entity of the North Carolina Community College System, headquartered at Fayetteville Technical Community College (FTCC). The **mission** of the NCMBC is to leverage military and other federal business opportunities to expand the economy, grow jobs and improve quality of life in North Carolina. The NCMBC's primary goal is to increase federal revenues for businesses in North Carolina. The Department of Defense has an annual impact of \$48 billion and is the second largest sector of North Carolina's economy (12% GDP). With six major military bases, 116 National Guard and 40 Army Reserve facilities, adding up to the third highest number of uniformed military personnel in the country, the State of North Carolina created the NCMBC to leverage opportunities with these installations and with DoD commands worldwide.

The NCMBC connects North Carolina firms to current government contracting opportunities in two ways – with a team of business development specialists across the state who also provide technical services, and electronically with [www.MatchForce.org](http://www.MatchForce.org).

Business Development. The NCMBC's business development team includes experienced business development, industry and procurement specialists operating from 12 community colleges across the state – from Franklin to Elizabeth City. These specialists identify the most lucrative federal contract opportunities (prime and subcontracts), notify and pre-position North Carolina firms for specific opportunities, and assist firms to understand government solicitations, prepare winning proposals, and to successfully execute federal contracts.

MatchForce. To connect North Carolina businesses with all federal opportunities, including local opportunities at bases in the state, the NCMBC administers the state's official, FREE web portal for federal contracting – [www.MatchForce.org](http://www.MatchForce.org). North Carolina businesses register on the portal, receive automatic matches to federal prime opportunities and to subcontracting opportunities posted by other registered businesses, and post job opportunities for FREE that match job skills posted by registered individuals. Firms identifying contract opportunities through MatchForce can then contact the NCMBC business development team for one-on-one assistance.

The **Small Business Center Network**, comprised of 58 Small Business Centers throughout North Carolina on community college campuses, supports the development of new businesses and the growth of existing businesses by being a community-based provider of training, counseling, and resource information. The programs and services of the Small Business Center Network

promote entrepreneurship and the development of small businesses across North Carolina. The centers are local, community-based resources that help existing and potential small business owners plan and operate successfully. The specialized staff assist with business plan development and review, information on financial support, one-on-one business counseling, and referrals to other agencies and sources of business assistance. Additionally, the centers provide free and low cost seminars and courses and serve as a resource library of relevant business publications, videos/audios and software.

Confidential counseling services and access to resource libraries are free of charge. Some seminars and workshops require a minimal registration fee. Services provided by the Small Business Center Network can be customized to suit specific business needs.

At **Central Carolina Community College**, they understand the unique needs of service members and their spouses. This is why they work to make it possible for them to finish their college education, regardless of location. Whether you want to earn points toward promotion or to transfer credits toward a bachelor's degree, their staff will work to build a plan that's right for each student.

Veterans Upward Bound is designed to motivate and assist veterans in the development of academic and other requisite skills necessary for acceptance and success in a program of post-secondary education. The program provides assessment and enhancement of basic skills through counseling, mentoring, tutoring, and academic instruction in the core subject areas. The primary goal of the program is to increase the rate at which participants enroll in and complete postsecondary education programs.

**Sandhills Community College.** The Sandhills Hoke Center offers curriculum and continuing education courses as well as serving as the home for Sandhoke Early College High School. The University Studies Associate in Arts, Criminal Justice, Nursing Assistant, and Basic Law Enforcement Training are offered in total at the Hoke Center.

Continuing Education classes in Career Training, College and Career Readiness and Career Development are taught at the Sandhills Hoke Center.

Education programs are approved by the North Carolina State Approving Agency for the enrollment of persons eligible for education assistance benefits from the U.S. Department of Veterans Affairs (VA). Those entitled to VA benefits are eligible veterans, participants in the Montgomery G.I. Bill contributory program, active duty military in voluntary education programs, drilling National Guard, drilling Reservists, and spouses and children of disabled or deceased veterans.

The Office of Veterans Affairs in Student Services provides information and assistance to students applying for VA education benefits. Apply on the VA website [www.gibill.va.gov](http://www.gibill.va.gov). Please see the VA Certifying Official regarding any specific questions regarding these programs.

To be eligible for VA educational benefits, one must be enrolled in an approved curriculum, taking only those courses required for graduation in the chosen curriculum.

Students must maintain Satisfactory Academic Progress under the same standards as Financial Aid Recipients.

The VA will not pay for enrollment in the following:

- course audits
- repeated courses previously passed
- credit by examination
- courses not required in chosen curriculum
- continuing education classes
- dropped or withdrawn classes

## Regional Universities

**Fayetteville State University (FSU)** is a public comprehensive regional university offering degrees at the baccalaureate, master's, and doctoral levels across 54 programs of study. The University's Schools of Business and Economics, Nursing, Education, and Criminal Justice are widely recognized as being top-tier schools in the state of North Carolina by *U.S. News and World Report* and other educational review sources. The University has also been voted as best in the state of North Carolina for Veterans, and its online MBA program has been voted as among the most affordable in the nation among highly accredited institutions. For over thirty years, the faculty and staff of Fayetteville State University have embraced military service members and their families. Today, they continue to strengthen the relationship while striving to meet the educational needs of this growing and valuable sect of the regional community.

In commitment to military families, Fayetteville State University is constantly rising to the challenge of tailoring its academic programs to assist them in achieving their personal and career goals. Thus, they offer various degree programs at bachelor's and master's levels as well as fully online programs in criminal justice, psychology, sociology, fire science, and business administration-general, making the pursuit of higher education convenient and feasible..

The **Veterans Business Outreach Center (VBOC)** at the School of Business and Economics (SBE) offers continued entrepreneurial services and training to veterans in U.S. Small Business Administration Region IV (serving all of NC plus some other southeastern states). The VBOC mission is to maximize the availability, applicability, and usability of small business programs for veterans, service-disabled veterans, reserve component members, and their dependents or survivors. VBOC, with its parent Office of Veterans Business Development, is SBA's liaison with the veterans' business community providing policy analysis, reporting, and training programs for veteran entrepreneurs. VBOC has a number of programs and services to assist aspiring and existing veteran entrepreneurs such as training, counseling, mentorship, and capital access through SBA loan programs to veteran-owned and service-disabled veteran-owned small businesses. Current veteran entrepreneurship training opportunities at FSU Include:

- Collaborative, hands-on, interactive learning opportunities for veterans, disabled veterans, spouses, National Guard, and reserve component members
- Continued training at area military bases through *Operation Boots to Business: From Service to Startup*
- VBOC 's *Entrepreneur Boot Camp for Veterans with Disabilities*
- Ongoing one-on-one business counseling and training programs, courses and seminars
- Building a community of interactive veteran resource partners locally and across SBA Region IV
- Workshops to include *QuickBooks, How to Write a Business Plan, Credit Counseling, and SBA Loan Programs: the Veterans Advantage*

### **Small Business & Technology Development Center at FSU**

Organized as an inter-institutional program of the University of North Carolina, operated in partnership with the SBA, the Small Business and Technology Development Center (SBTDC) is the primary organization through which the State of North Carolina provides counseling and technical assistance to the business community. The SBTDC's mission is to support the growth and development of North Carolina's economy by encouraging entrepreneurship, assisting in the creation and expansion of small businesses, and facilitating technology development and transfer.

The Cape Fear SBTDC's primary focus is in-depth, one-on-one, confidential counseling. Assistance is provided free-of-charge to the small business owners or aspiring entrepreneurs. As the only full-service counseling resource statewide, the SBTDC helps with the myriad of tasks facing a business owner including assessing the feasibility of a business idea, preparing a business plan, finding sources of capital loan package preparation, developing marketing strategies, and improving operations and human resource management.

**GoArmyEd** is the virtual gateway to request Tuition Assistance (TA) online, anytime, for classroom, distance learning, and eArmyU online college courses. Information on other Army Continuing Education System (ACES) programs and services is also available on GoArmyEd.com. GoArmyEd is a dynamic online portal that automates many of the paper-based processes you historically conducted with your Army Education Counselor. GoArmyEd is your one-stop location for managing your college education using TA benefits.

GoArmyEd is used by:

- Soldiers to pursue their postsecondary educational goals.
- Army Education Counselors to provide educational guidance.
- Colleges to deliver degree and course offerings and to report soldier progress.

### Teaching Licensure Opportunities for Transitioning Soldiers

Fayetteville State University, in cooperation with the Fort Bragg Education Center, offers a program of Teacher Licensure Opportunities for Transitioning Soldiers (TLOTS) through the School of Education. This program allows transitioning soldiers who have a maximum of two



years of active duty remaining and hold at least a B.A. or B.S. degree to enroll in a teacher licensure program. For program requirements, contact the School of Education.

Fayetteville State University first established its presence on Fort Bragg in 1973. Since then, Fayetteville State University/Fort Bragg Center has continued to provide excellent education for all Fort Bragg Military personnel, their dependents, and citizens of the surrounding communities.

The “Focus” of Fayetteville State University/Fort Bragg Center is to “Target & Achieve” the specific needs and requirements unique to our military. Students may take a minimum of three semester hours or a maximum of nine semester hours credit each term, depending upon personal obligations. Also, all courses are taught after standard business hours to afford the flexibility and opportunity for higher learning.

Finally, the Center for Defense & Homeland Security (CDHS) at FSU offers training academy programs in cybersecurity, emergency management, and national security for military-connected students, civilians, and professionals in the field.

### **Methodist University**

The University offers bachelor's degrees in over 80 fields of study (majors and concentrations) including communications, justice studies, business administration, education, and social work. New majors, minors, and concentrations recently added include entrepreneurship, interdisciplinary studies of clandestine labs, church leadership, and radio communications. The University offers four master's degree programs: the Master of Medical Science in physician assistant studies, the Master of Business Administration in organizational management and leadership or health care administration, the Master of Justice Administration, and the Master of Education in literacy or special education. In the fall of 2015, the University enrolled its first doctoral level students in the Doctor of Physical Therapy program. MU also hosts a Center for Entrepreneurship plus offers a related major.

Their office on post services their active-duty military students. At the office, military students can receive financial aid consultation, register for classes, and receive academic advising. On our Fort Bragg Campus, students can take MU at Night classes toward their degree, and even earn entire degrees in Business Administration or Environmental & Occupational Management without setting foot on the main campus.

*G.I. Jobs* has named Methodist University a *Military Friendly School* for five straight years, and they are proud to offer educational services for active duty military, guardsmen, reservists, veterans, spouses, and dependents.

### **Veteran Services**

MU provides information on aid for veterans, spouses, and dependents. From the G. I. Bill to the Yellow Ribbon Program, their website can answer questions about veteran benefits

**Campbell University** is committed to meeting the needs of active duty and veteran military students to help them build their future in the civilian and military worlds.

Campbell University offers:

- Over 150 tracks and concentrations including relatively new offerings in nursing, engineering, homeland and cyber-security
- 5 graduate and professional programs including physical therapy and osteopathic medicine
- Convenient day and evening programs
- Online courses
- One of the best ROTC programs in the nation
- Liberal transfer policy

In addition, Campbell University is a member of Service Members Opportunity Colleges (SOC) providing soldiers with enhanced transfer opportunities and the chance to turn their military training into college credit. While their main campus is located in Harnett County's Buies Creek, they offer a number of courses on Fort Bragg in the Bragg Training and Education Center (BTEC).

## Appendix G: Harnett County Population Distribution

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To address a question raised by the representatives from Harnett County regarding the potential impact at the local level of changes in the number of Ft. Bragg armed forces personnel, we compiled and presented, in Table 48, data on the distribution of armed forces personnel throughout Harnett County at the zip code level. Harnett County is, primarily, represented by 13 zip codes, eight of these zip codes extend into neighboring counties.

First, we separate the zip codes into two groups based on geographic proximity to Ft. Bragg, which aligns roughly along a diagonal running from northwest to southeast of the county. This results in seven zip codes classified as within the Ft. Bragg area (western area); the other six zip codes as outside of the Ft Bragg area (eastern area). It turns out that the seven zip codes within the western area represented 44% of the 13-zip code population but 97% of the armed forces personnel within the area in 2015. The corollary is that the eastern area account for 56% of the 13-zip code population but only 3% of the armed forces personnel.

Five years earlier, in 2011, the population distribution across the 13 zip code area was quite similar. The corresponding figures for the western area were 45% and 95%, and 55% and 5% for eastern area.

To better understand the situation in Harnett County we apportion the total population 16 years and over along with the armed forces population for the county according to Harnett County's proportion of the total populations for the 13 zip codes area. The 2015 Census data indicates a population of 16 years and over of 93,412 for Harnett County, including 4,618 armed forces personnel. The comparable figures for the thirteen zip codes are 183,463 and 6,461, respectively. Harnett County represents 51% of the 13 zip code population and 72% of armed forces personnel. As a consequence, western Harnett County accounts for 4,499 or 97% of the 4,618 armed forces personnel that resides within Harnett County. Similar computations for 2011 shows that 95 or 3,229 of the 3,414 armed forces personnel that resided in the county were located within western Harnett County.

During the period 2011 to 2015, Harnett County's population 16 years and over grew by 10.5% to 93,412 while its armed forces population grew by 35.3% from 3,414 to 4,618. Skewness of the armed forces population distribution towards western Harnett County is even more pronounced. The population 16 years and over grew by 8.3% in western Harnett County to 41,354, while the armed forces population grew by 39.4 from 3,229 to 4,499. During the same period eastern Harnett County's population of 16 years and over grew by 12.3% and recorded a decline of 36% in the number of armed personnel residents to from 185 to 119. In effect, the overall population of western Harnett County is growing at a slower rate than eastern Harnett County, however, the armed forces component of the population has skyrocketed over this period in the west of the county.

**Table 48: Harnett County Population 16 years and over for 2011 and 2015**

Area	Western Harnett County	Eastern Harnett County	Total
<b>Zip Codes*</b>	27332, 27505, 27546, 28323, 28326, 28356, 28390	27501, 27521, 27526, 27540, 28334, 28339	
<b>2015</b>			
<b>Zip Codes Population</b>	81,220	102,243	183,463
<b>Zip Codes Armed Forces</b>	6,295	166	6,461
<b>2011</b>			
<b>Zip Codes Population</b>	72,884	88,468	161,352
<b>Zip Codes Armed Forces</b>	4,442	255	4,697
<b>2015</b>			
<b>Harnett Population</b>	41,354	52,058	93,412
<b>Harnett Armed Forces</b>	4,499	119	4,618
<b>2011</b>			
<b>Harnett Population</b>	38,196	46,363	84,559
<b>Harnett Armed Forces</b>	3,229	185	3,414

Source: U.S Census Bureau, American Community Survey

\* Zip Codes - <https://www.unitedstateszipcodes.org/>

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