

# The Economic Impact of the Military on North Carolina

North Carolina Department of Commerce



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### Key Findings

- Department of Defense contracting in FY 2012 totaled \$3.4 billion, with 40 percent of that being performed in the Southeast region and 37 percent in the Eastern region.
- Nearly 110,000 active duty military personnel were assigned to units in North Carolina as of March 31, 2013, and more than 60,000 individuals are projected to leave the military over the next five years.
- North Carolina's active military personnel have in-demand occupational skills which could contribute to private industries in the state as personnel separate from the military in the future.
- North Carolina has a total of 769,000 veterans that reside in every county across the state.
- Overall, the economic impact model estimates that the military supports roughly 10 percent of North Carolina's economy.
  - The military supports 540,000 jobs in North Carolina, \$30 billion in state personal income, and \$48 billion in gross state product.
  - 340,000 of military-supported jobs occur in the private sector.
  - Professional and Technical Services, Administrative and Waste Services, and Construction are the top three military-supported private industry sectors.
  - Approximately 20 percent of the total economic impact of the military is a result of spillovers from military operations located outside of North Carolina.

### Introduction

The presence of United States military installations in North Carolina has long been understood to support the state's economy in numerous ways. In 2008, the North Carolina Department of Commerce published a study titled *North Carolina's Military Footprint: Current Economic Impacts and Projections for 2013*<sup>1</sup> to better understand the connections between military operations and the North Carolina economy. Since 2008, there has been a significant realignment of military personnel. Additionally, the 2007-2009 recession and the current economic recovery reflect different underlying macroeconomic conditions.

This report analyzes the impact of the military in a fairly broad sense. The first section of the report begins with an overview of the major military facilities in North Carolina, which is followed by a discussion of military contracting performed in the state, active military personnel levels, projected separations, and estimates of the veteran population. The second section of the report details the methodology used to measure the economic impact of the U.S. military on North Carolina's economy in 2013.<sup>2</sup> The third section discusses the results from the economic impact model including sectors and industries supported by the military, three measures of the overall economic impact, and spillovers from military operations located outside of North Carolina.

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<sup>1</sup>North Carolina's Military Footprint: Current Economic Impacts and Projections for 2013.

<http://www.nccommerce.com/Portals/47/Publications/Industry%20Reports/North%20Carolinas%20Military%20Footprint.pdf>

<sup>2</sup>The economic impact analysis in this report is based on modeling carried out by Patrick McHugh from the Fiscal Research Division of the NC General Assembly.

## I. Background on North Carolina's Military Presence

North Carolina has had a prominent military presence over the last century. According to the NC Military Foundation, North Carolina currently has the third largest military population in the United States.<sup>3</sup> The state is also home to more than half of all U.S. special operations forces.<sup>4</sup> There are five military bases, a military ocean terminal, and a U.S. Coast Guard base located within the state:

- Fort Bragg
- Camp Lejeune Marine Corps Base
- Cherry Point Marine Corps Air Station
- New River Marine Corps Air Station
- Seymour Johnson Air Force Base
- Sunny Point Military Ocean Terminal
- U.S. Coast Guard Base Elizabeth City

### Fort Bragg

Fort Bragg was built as the first modern military base in the state in 1918. It is one of the largest military installations in the world in terms of personnel. Currently, more than 50,000 active duty personnel call Fort Bragg home. As part of the Base Closure and Reassignment (BRAC) process, Fort Bragg recently took command of Pope Field, formerly known as Pope Air Force Base. The U.S. Army Forces Command and U.S. Army Reserve Command were relocated to Fort Bragg as part of the BRAC process, which means that Fort Bragg now has the most starred generals in the country outside of the Pentagon.<sup>5</sup>

### Camp Lejeune Marine Corps Base

Known as the “Home of Expeditionary Forces in Readiness,” Camp Lejeune is the oldest Marine Corps base in the state. Its primary purpose is to train and maintain combat-ready units. It is the second largest military base in North Carolina with nearly 36,000 active duty Marines, and like Fort Bragg, it is also one of the largest bases in the nation. Camp Lejeune received the Commander-In-Chief's Annual Award for Installation Excellence in 2009, which was the sixth time it had received the award.<sup>6</sup>

### Cherry Point Marine Corps Air Station

Cherry Point is a Marine Corps Air Station with more than 7,100 active duty Marines. It is home to Fleet Readiness Center (FRC) East, which provides maintenance, engineering, and logistics support for aviation operations of the Marine Corps, Navy, and other branches of the U.S. military. FRC East is the largest employer of civilians east of Interstate 95 in North Carolina, with an annual payroll of more than \$275 million.<sup>7</sup> Like Camp Lejeune, Cherry Point has received the Award for Installation Excellence multiple times.<sup>8</sup>

### New River Marine Corps Air Station

New River Marine Corps Air Station is the largest Marine Corps helicopter base on the East Coast.<sup>9</sup> The base provides support for Aviation Combat with focus on enhancing combat readiness. There are about 6,900 Marines located at the air station.

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<sup>3</sup><http://www.ncmilitary.org/content/unique-military-presence>

<sup>4</sup><http://www.ncse.org/industry-clusters/defense>

<sup>5</sup>[http://www.camplejeuneglobe.com/news/top\\_stories/article\\_add918bf-14b3-5e55-80c3-ef4fa441051f.html](http://www.camplejeuneglobe.com/news/top_stories/article_add918bf-14b3-5e55-80c3-ef4fa441051f.html)

<sup>6</sup><http://www.navair.navy.mil/frce/history.html>

<sup>7</sup><http://www.cherrypoint.marines.mil/About.aspx>

<sup>8</sup><http://www.military.com/base-guide/marine-corps-air-station-new-river>

### Seymour Johnson Air Force Base

Seymour Johnson Air Force Base is home to the 4th Fighter Wing. There are about 4,600 active duty personnel on base. The base provides combat airpower support to U.S. Armed Forces.

### Sunny Point Military Ocean Terminal

Sunny Point is the largest military ocean terminal in the world operated by the Department of Defense. It enables the import and export of military supplies and the efficient transfer of these goods among multiple modes of transportation including rail, ships, and trucks.

### U.S. Coast Guard Base Elizabeth City

The U.S. Coast Guard installation is home to an Aviation Logistics Center, Aviation Technical Training Center, Air Station, and Small Boat Station.<sup>10</sup> The U.S. Coast Guard falls under the jurisdiction of the Department of Homeland Security during peacetime and can be transferred to the Navy in wartime or by an executive order. The Coast Guard also runs eight additional boat stations up and down the North Carolina coastline.

Figure I: Military Installations in North Carolina



Figure I shows the military installations discussed above. North Carolina's bases and other military installations are geographically concentrated in the Eastern and Southern regions of the state.

<sup>10</sup><http://www.uscg.mil/baseelizabethcity/>

### Other Military Facilities

Other military facilities include the US Coast Guard Sector in Wilmington that oversees Coast Guard stations up and down the East Coast of North Carolina. The National Guard also has a significant presence statewide.

### Contracting

Military contracts performed in North Carolina occur mainly through prime contracts awarded by the Department of Defense. There are also contracts that the Coast Guard awards through the Department of Homeland Security, but the focus of this analysis is Department of Defense prime contracts which are much larger in magnitude.<sup>11</sup> Department of Defense contracts performed in North Carolina were worth \$3.44 billion in FY 2012. There were a total of 93,232 Department of Defense actions spread among every region of the state. The regions receiving the most contract dollars were the Southeast region (\$1.36 billion) and the Eastern region (\$1.26 billion) which indicates that there are robust defense industries in these regions. Together, these regions account for 77 percent of Department of Defense contracting in the state. At the other end of the spectrum, the AdvantageWest region received a relatively small amount of \$33 million in total contracts.

**Table I. DoD Prime Military Contracting by Region, 2012**

Region	DoD Actions	Total DoD Contracting	%
Southeast	6,308	\$1,364,095,947	40%
Eastern	52,408	\$1,264,794,613	37%
Research Triangle	3,570	\$263,345,615	8%
Charlotte	16,245	\$219,461,760	6%
Piedmont Triad	14,016	\$214,468,372	6%
Northeast	192	\$77,079,128	2%
AdvantageWest	493	\$33,062,126	1%
<b>Total</b>	<b>93,232</b>	<b>\$3,436,307,561</b>	<b>100%</b>

Data supplied by the NC Business Military Center (Source: FPDS<sup>12</sup>)

Eighty-two of North Carolina’s 100 counties had businesses that received defense contracts in FY 2012. While geographically dispersed, contracting dollars were heavily concentrated in a handful of counties. The top 10 counties accounted for 85 percent of all defense contracting performed in North Carolina. Furthermore, the top two counties accounted for more than two-thirds of all defense contracting. Cumberland County (Fort Bragg) received \$1.21 billion in contracts (35% of total), and Onslow County (Camp Lejeune) received \$835 million in contracts (24% of total).

<sup>11</sup>Coast Guard contracting totaled \$169 million in FY 2012 (5% of total Department of Defense contracting).

<sup>12</sup>The Federal Procurement Data System captures all federal contracting activity except for micropurchases, i.e. transactions under \$2,500.



Table II. Top 10 Counties for DoD Prime Military Contracting, 2012

County	Region	DoD Actions	Total DoD Contracting	%
Cumberland	Southeast	5,066	\$1,205,314,761	35%
Onslow	Eastern	3,888	\$835,060,659	24%
Craven	Eastern	2,431	\$190,409,274	6%
Mecklenburg	Charlotte	14,158	\$144,407,510	4%
Guilford	Piedmont Triad	1,252	\$130,952,786	4%
Wake	Research Triangle	1,443	\$130,122,663	4%
Wayne	Eastern	5,358	\$89,320,435	3%
Brunswick	Southeast	300	\$72,557,726	2%
Pasquotank	Northeast	32	\$68,073,903	2%
New Hanover	Southeast	312	\$66,958,741	2%

Data supplied by the NC Business Military Center (Source: FPDS<sup>12</sup>)

### Active Military Personnel

According to the Defense Manpower Data Center, there were 108,926 active duty military personnel assigned to units in North Carolina as of March 31, 2013. The Army (48,982) and the Marine Corps (46,674) are the two largest branches in the state, followed by a smaller presence of Air Force (6,984), Navy (4,714), and Coast Guard (1,572) personnel. Table III shows the distribution of these forces by base.<sup>13</sup>

Table III. Active Military Personnel by Service and Installation, 2013

	Camp Lejeune	Cherry Point	Fort Bragg	New River	Seymour Johnson	Unknown	Total
Air Force	2	2	2,201	18	4,631	130	6,984
Army	20	-	48,239	-	2	721	48,982
Coast Guard	139	-	-	-	-	1,433	1,572
Marine Corps	31,757	6,709	5	6,846	-	1,357	46,674
Navy	3,707	454	243	39	-	271	4,714
<b>Total</b>	<b>35,625</b>	<b>7,165</b>	<b>50,688</b>	<b>6,903</b>	<b>4,633</b>	<b>3,912</b>	<b>108,926</b>

Source: Defense Manpower Data Center, March 2013

The occupational makeup of the military is of particular interest to policymakers anticipating an overall reduction in forces and the potential transition to civilian employment for some military personnel in the state. Each branch of the military classifies its workforce using a Military Occupational Code, which can then be compared to existing civilian occupations using the Standard Occupational Classification system used by the Bureau of Labor Statistics. Table IV lists the 10 most common military occupational specializations for North Carolina's active military personnel, along with several compatible civilian occupations:

<sup>13</sup>There are also more than 27,000 civilian personnel and more than 38,000 reserve personnel in North Carolina according to Defense Manpower Data.



Table IV. Most Common Military Occupational Specializations in North Carolina

Military Occupational Code Title	Standard Occupational Classification Title
Infantryman	Training and Development Workers, Policing and Security, Construction Workers, Heavy and Tractor-Trailer Truck Drivers
Rifleman	Training and Development Workers, Policing and Security, Construction Workers, Heavy and Tractor-Trailer Truck Drivers
Hospital Corpsman	Medical Records and Health Information Technicians, Medical Assistants, Medical Equipment Preparers
Health Care Specialist	Emergency Medical Technicians and Paramedics
Wheeled Vehicle Repairer	Automotive Master Mechanics Automotive Specialty Technicians
Military Police	Police Patrol Officers, Police Detectives
Motor Vehicle Operator	Heavy and Tractor-Trailer Truck Drivers Industrial Truck and Tractor Drivers
Combat Engineer	Construction Workers Operating Engineers and other Construction Equipment Operators
Field Radio Operator	Radio Operators
Food Service Specialist	Cooks, Institution and Cafeteria Food Preparation Workers

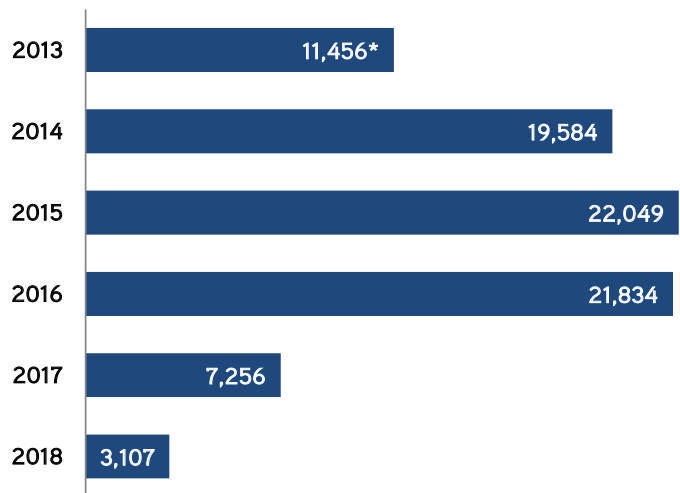
Based on analysis of Defense Manpower Data Center data and O\*Net Military Crosswalk

The military occupational mix shows areas of overlap with some of North Carolina’s largest civilian occupational groups, including concentrations in health care, automotive and transportation-related occupations, and food service occupations. In addition, several occupational specializations within the military have relevance to emerging industry clusters in North Carolina, including aerospace and aviation-related industries. For example, there are currently 356 active duty personnel in the Air Force with specializations in Aerospace Propulsion and Aerospace Ground Equipment, in addition to numerous other related occupations in other branches of the military.

**Projected Separations from the Military**

From 2007 to 2012, an average of 8,000 service personnel with North Carolina mailing addresses separated from the military each year. Moreover, the next several years will see a surge in separations as the military winds down from two major wars and realigns its troop levels.

Figure II: Projected Separations



Projected Separations for Active Duty Service Members with North Carolina Mailing Addresses. Defense Manpower Data Center, March 2013  
\*includes only nine months from April 1, 2013-Dec. 31, 2013

While not all of these separating personnel will seek employment in the state, this expected surge in separations could provide an opportunity for North Carolina businesses to hire and retain some of these skilled workers to meet their workforce needs. Many individuals who leave the military are still in their prime working age — 80 percent of the projected separations from 2013–2018 will be 30 or younger, and 95 percent will be no older than 40. Many also possess technical skills and soft skills including discipline and punctuality, the ability to follow instructions and work as part of a team, and experience working in a large, complex organization. Opportunities to match employers with these individuals will exist locally in the regions surrounding installations as well as throughout the state. More detailed analysis of the skills and experiences of separating personnel can be made available to help guide policymakers and increase awareness on the part of businesses of this potential pool of talent for North Carolina’s economy.

### The Current Veteran Population

North Carolina currently has the ninth largest veteran population in the United States with 769,000 veterans. Veterans reside in every region and county across the state. Veterans tend to reside near the state’s population centers in the Charlotte, Research Triangle, and Piedmont Triad regions, but even more rural regions of the state have sizable veteran populations.

**Table V. Veteran Population by Region, 2013**

Economic Development Region	2013 Veteran Pop.	%
Charlotte	159,063	21%
Research Triangle	145,864	19%
Piedmont Triad	121,384	16%
Southeast	115,930	15%
Eastern	101,010	13%
AdvantageWest	93,854	12%
Northeast	32,278	4%
<b>Total</b>	<b>769,384</b>	<b>100%</b>

Data from Department of Veterans Affairs, VetPop2011

The Department of Veterans Affairs publishes information from a projection model that estimates the number of veterans in each state and county through 2040.<sup>14</sup> One of the key inputs for the projection model is military separations data, which was discussed in the previous section.<sup>15</sup> The focus of this section is on North Carolina projections instead of county projections because there is a much smaller margin of error at the state level.

**Table VI. Veteran Population Projections**

	2013	2020	2030	2040
North Carolina Veterans	769,384	742,912	686,866	621,108
Total Veterans	21,972,964	19,604,276	16,776,896	14,462,805
NC Share of Total U.S. Veterans	3.5%	3.8%	4.1%	4.3%

Data from Department of Veterans Affairs, VetPop2011

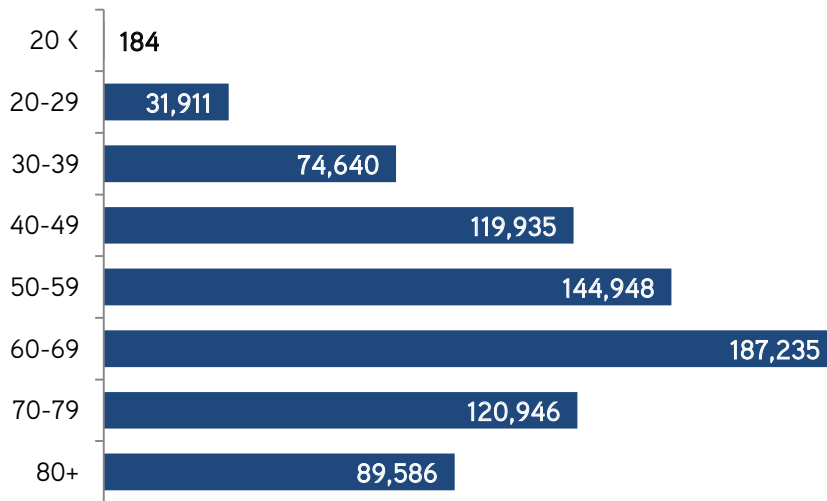
While North Carolina’s veteran population is projected to decrease by 150,000 individuals by 2040, the decrease is at a slower rate than the decrease in the total U.S. veteran population. Thus, North Carolina’s share of the entire veteran population is actually expected to rise by 2040 even while it is expected to decline in absolute terms.

<sup>14</sup>Veteran Population Projection Model 2011 (VetPop2011)

<sup>15</sup>Other key inputs to the VetPop2011 model are data from Veterans Affairs, the American Community Survey, the Internal Revenue Service, and the Social Security Administration.

Veterans are a diverse group in many ways. Figure II shows the distribution of veterans by age group. While the majority of veterans are age 50 or older, about 225,000 veterans are actually younger than 50, making them part of the prime working-age population. Given a reasonable labor force participation rate, veterans represent a large and skilled labor pool that public and private sector employers can utilize.

Figure III: NC Veterans by Age Group, 2013



Data from Department of Veterans Affairs, VetPop2011

## II. Economic Impact Analysis Methodology

### Overview of REMI PI+

The economic impact analysis of the military on North Carolina was completed using the Policy Insight Plus (PI+) model licensed by Regional Economic Models Incorporated (REMI). PI+ is one of the top models in the field.<sup>16</sup> It is based on data from the Bureau of Economic Analysis, the Bureau of Labor Statistics, the Census Bureau, the Department of Defense, the Department of Homeland Security, and other public data sources. Underlying the PI+ model is a base set of assumptions about how regional economies work. As with any economic model, it represents only an approximation of reality. Therefore, the results in Section II should be interpreted as estimates of the economic impact with some level of uncertainty, despite the fact that REMI uses some of the most advanced methods currently available in economic impact analysis.

One specific limitation of the REMI PI+ model is that it does not incorporate unforeseen macroeconomic shocks to the U.S. and global economy. REMI does, however, estimate business cycle fluctuations of the economy based on historical data and trends. The limitation is that big changes in economic conditions such as the national rate of economic growth, international trade patterns, government policies that impact economic performance, and technological innovations that impact productivity cannot be predicted by the model. This limitation is not unique to REMI models, however. To the extent that these economic conditions are stable in the short-run, the estimates from the model accurately approximate the true economic impact of military on North Carolina's economy.

<sup>16</sup>More information about the PI+ model is available at <http://www.remi.com/products/pi>



### The Approach

In modeling the economic impact of the military, military spending has been entirely removed from the United States economy.<sup>17</sup> This approach enables the model to measure the total military impact — economic activity that is generated by military operations outside of North Carolina as well as by military operations inside of North Carolina.

Military spending is not reallocated to other government programs because this analysis seeks to quantify the total impact of the military and does not seek to compare the relative impacts of multiple policy options. Therefore, all of the impacts reported in the next section represent the difference between REMI’s baseline scenario and the scenario where the military does not exist in the U.S. economy.

### How the Military Impacts North Carolina’s Economy

The primary goal of the military is to protect the citizens of the nation and in doing so, provide large economic impacts on local economies. Military operations in North Carolina, as well as those that take place outside of North Carolina, generate a significant amount of economic activity in the state. There are several ways that military impacts contribute to our economy.

First, military bases impact the regional economy because they provide a source of income to military personnel who, in turn, demand goods (e.g. groceries and clothes) and services (e.g. dining out and dry cleaning), spending a portion of their incomes regionally. Another area yielding significant economic impacts is military contracting. Each year, the military purchases billions of dollars of goods and services from defense contractors in North Carolina in sectors such as manufacturing, construction, and aerospace.

In order to meet the military’s demand for goods and services, defense contractors require intermediate inputs for their own production processes. Demand for intermediate inputs translates into demand for suppliers and service providers further “upstream” in the value chain.<sup>18</sup> This economic process continues through the value chain, in effect, amplifying the initial dollar value of military contracts.

Finally, labor is required by virtually all companies in military-supported value chains to differing degrees based on each company’s production technology. Increased employment and increased wages throughout military-supported value chains result in greater levels of household consumption in North Carolina since households have more income to spend. Higher levels of consumption increases demand for other value chains as well, creating a virtuous spending cycle.

Figure IV: Economic Impact Flow Chart



<sup>17</sup>“Military” spending in REMI includes the four branches of the Department of Defense and the U.S. Coast Guard

<sup>18</sup>The concept of a value chain is closely related to the supply chain. A value chain for a final product/service includes all intermediate inputs (goods and services), whereas a supply chain typically only considers goods inputs.

### III. Economic Impact Analysis Results

As stated previously, this analysis assesses the total amount of economic activity that takes place in North Carolina due to all military operations located both inside and outside of the state. The total economic impact of the military is substantial, accounting for roughly one-tenth of North Carolina's economic activity. While the 2008 military study used a different methodology, and assessed only the impact of military operations located within the state's boundaries, the findings of that report seem to be consistent with the findings of the current analysis. The impact of the military on North Carolina appears to have not changed dramatically over the last five years.<sup>19</sup>

#### Jobs

Military operations are estimated to contribute significantly to the job situation in our state. In addition to the active duty military personnel that live on base, state and local government jobs are created due to increased demand for government services, and private sector jobs in the defense industry and other industries are created to meet military-supported demand.

Overall, military operations are estimated to support about 540,000 jobs within North Carolina. The breakdown is as follows: 140,000 (26%) are federal military jobs<sup>20</sup>, 60,000 (11%) are state and local government jobs, and 340,000 (63%) are private sector jobs. As a point of reference, there are about 220,000 students in the entire UNC school system.<sup>21</sup>

Figure III shows the entire composition of private sector employment supported by the military. The employment impact is spread out across virtually all sectors, albeit to differing degrees. The Professional and Technical Services sector has the most military-supported jobs at 69,000. Other major sectors include Administrative and Waste Services, Construction, Retail Trade, and Health Care and Social Assistance. Sectors least impacted by the military include Mining, and Forestry, Fishing, and Related Activities which are included in the other category in Figure III.

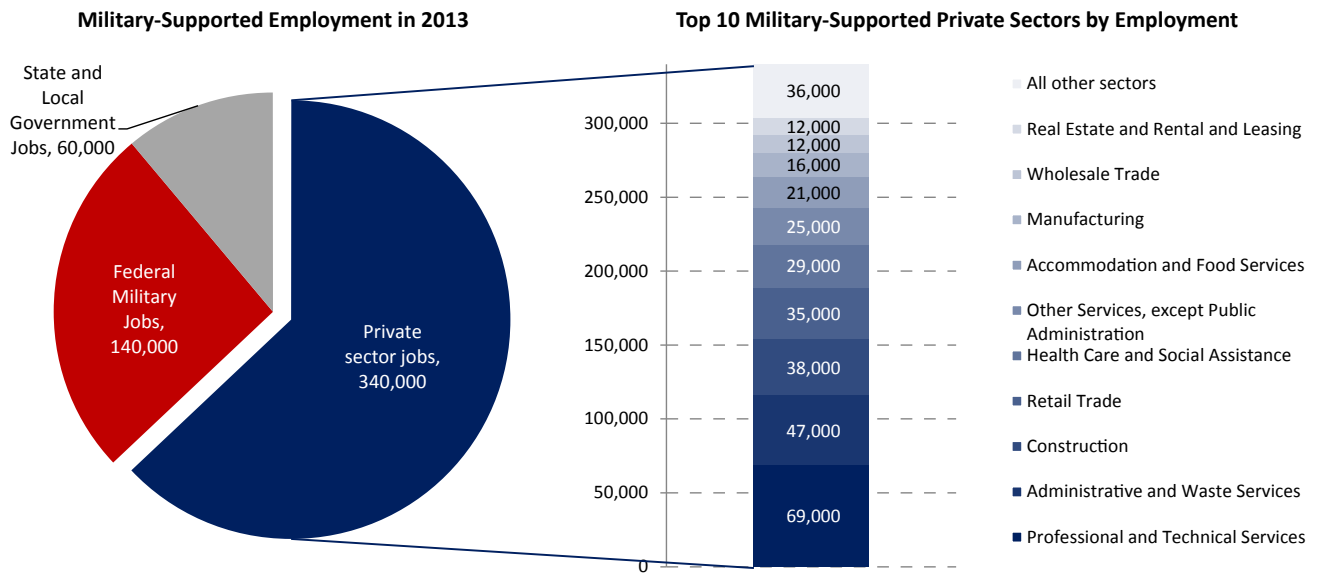
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<sup>19</sup>The 2008 report found that the impact was between 7 percent and 8 percent depending on the measure used. However, as indicated later in this report, out-of-state spillovers account for roughly 20 percent of the total economic impact. Therefore, a 7 percent to 8 percent in-state impact is equivalent to a 10 percent total impact.

<sup>20</sup>Federal military jobs include active duty, civilian, and Coast Guard personnel.

<sup>21</sup><http://fred.northcarolina.edu/pub/output/fallenr/sdf.instsumm.2012.pdf>

Figure V: The Composition of Military-Supported Employment in North Carolina



**The Relative Impact of the Military on Private Sector**

Figure III demonstrates the absolute impact of the military across all private sectors, but it does not answer the question, “To what degree is each sector supported by the military?” To answer this question, one must look at the military’s impact relative to total economic activity in each sector. Table VII lists the top 10 industries in terms of the relative impact of the military.<sup>22</sup> Many of the top industry sectors from Figure III reappear here. However, there are three sectors that did not make the top 10 in absolute terms, but did in relative terms. These sectors are Information; Arts, Entertainment, and Recreation; and Utilities. Overall, Table VII demonstrates the varying degree to which the military impacts each sector of our state’s economy. In the case of an across-the-board cut to national military spending, this table demonstrates the linkages within our economy and the degree to which each sector could potentially be impacted in North Carolina.

Table VII: Top 10 Sectors by Percentage of Military-Supported Economic Activity

Sector	Percentage of Total Sector Jobs in NC Supported by Military
Professional and Technical Services	20.6%
Administrative and Waste Services	14.4%
Construction	9.8%
Information	8.9%
Other Services, except Public Administration	8.1%
Arts, Entertainment, and Recreation	6.9%
Retail Trade	6.3%
Utilities	6.1%
Wholesale Trade	6.0%
Accommodation and Food Services	5.5%

<sup>22</sup>Conclusions are virtually identical whether one uses employment or output as the economic measure. For the sake of simplicity, only the employment percentages are displayed in Table I.



### Other Measures of Economic Impact

Examining personal income and gross state product are supplemental methods for measuring the total economic impact of the military. Personal income is a broad measure of income that includes wages, benefits, dividend and interest income, government assistance, and several other sources of income. Gross state product is the sum of all consumption, investment, and government spending in North Carolina adjusted for trading patterns with other states and countries.<sup>23</sup> The REMI model shows that the military supports an estimated \$30 billion in North Carolina personal income, which is 8 percent of total statewide personal income. Additionally, the model estimates that the military is responsible for \$48 billion, or 12 percent, of gross state product.

**Table VIII: Summary of the Estimated Economic Impact of the Military on North Carolina**

Economic Indicator	Estimated Impact in 2013	Share of NC Total
Employment	540,000	10%
Personal Income	\$30 billion	8%
Gross State Product	\$48 billion	12%

Table VIII summarizes the military impact across each of the economic indicators. Examined together, the three indicators show that roughly 10 percent of economic activity in North Carolina is tied to the military.

### Spillovers from Military Operations Located Outside of North Carolina

Of the total economic impact, the majority is attributed to military operations located within the state of North Carolina. However, the economic impact from military operations located elsewhere (i.e. “spillovers”) is an important factor to take into account. For example, an economic spillover occurs when a manufacturer in North Carolina is paid to supply boots to an army base in Tennessee. The spillover would be even larger if the raw materials for the boots were produced and sold in North Carolina. The REMI model finds that total spillovers account for roughly one-fifth of the economic impact of the military, a nontrivial amount. See Table IX for a detailed breakdown of in-state impacts versus spillovers from outside of the state.

**Table IX: Total Impact vs. Impact of Military Operations Located in North Carolina**

Economic Indicator	Impact of U.S. Military Operations	Impact of NC Military Operations	Spillover from Military Operations Located Outside of NC	Percentage of Total Impact Due to Spillovers
Employment	540,000	420,000	120,000	22%
Personal Income	\$30 billion	\$25 billion	\$5 billion	17%
Gross State Product	\$48 billion	\$38 billion	\$10 billion	21%

<sup>23</sup>For precise definitions of personal income or gross product, visit the REMI glossary: <http://www.remi.com/resources/glossary>.

### Conclusions

This report supports the general consensus that the military plays a large role in North Carolina's economy. The impact of the military on state personal income is \$30 billion, and the impact on gross state product is \$48 billion. Overall, the military supports roughly 10 percent of economic activity in the state. The estimate varies slightly based on which indicator is used. The large military presence in the state is the primary driver of the total economic impact, but this is supplemented by moderate economic spillovers (one-fifth of total impact) from military operations located in other states.

Military bases have a large impact on the North Carolina economy across all sectors of employment, not just federal military employment. An estimated 340,000 jobs supported by the military are private sector jobs, 140,000 are federal military jobs, and 60,000 are state and local government jobs.

Through the realignment of military personnel and the recent recession, the impact of the military appears to have remained relatively stable in North Carolina's economy. In 2011, unemployment rates in military metros were lower than unemployment rates in nonmilitary metros, whereas before the recession unemployment rates were higher in military metros than in nonmilitary metros. This indicates that military installations may have provided some stability to local regional economies during the Great Recession.

In addition to the economic impact of the military, having a strong military presence shapes North Carolina in other ways as well. One particular area for further research is identifying the skills base of transitioning military personnel and the implications that this has for the North Carolina workforce. In-migration patterns are also influenced by the military. More than 90 percent of active duty personnel serving in North Carolina are enlisted from other states. Finally, North Carolina is home to nearly 800,000 veterans, which has implications for health care and demographics.



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