THE ECONOMIC IMPACT OF THE MILITARY ON NORTH CAROLINA
The Economic Impact of the Military on North Carolina

A joint publication of the North Carolina Department of Commerce and the North Carolina Military Affairs Commission

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Key Findings
• Overall, the economic impact model estimates that the military supports roughly 10 percent of North Carolina’s employment
  • The military supports 578,000 jobs in North Carolina, nearly $34 billion in state personal income, and $66 billion in gross state product
  • 386,000 of the total military-supported jobs occur in the private sector
  • Professional, Scientific and Technical Services, Administrative and Waste Management Services, and Construction are the top three military-supported private industry sectors
  • 102,000 active duty military personnel were assigned to units in North Carolina as of June 2015, and more than 78,000 individuals are projected to leave the military over the next four years
  • The North Carolina National Guard has a strength of nearly 12,000, with more than 20,000 in the Reserves
  • More than 20,000 civilian contractors are employed by the Department of Defense and the North Carolina National Guard in North Carolina
  • Department of Defense prime contracting in FY 2014 totaled $2.5 billion, with 81 percent of that being performed in the South Central and Southeast prosperity zones
  • 79 of 100 counties had prime contracting activity in FY 2014
  • 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 775,000 veterans that reside in every county across the state
  • Military veterans in North Carolina received more than $8.2 billion in pensions, medical care and other support from the Department of Defense and the Department of Veteran Affairs in FY 2014

Introduction
The presence of U.S. military installations in North Carolina supports 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 20131 to better understand the connections between military operations and the North Carolina economy. This report was expanded and updated in 2013 to reflect changes to the economy and the military which occurred during that time period, including the 2007–2009 recession, the effects of federal budget sequestration, and the withdrawal of U.S. troops from Iraq and Afghanistan.2

This report updates the 2013 version and makes two significant changes. First, it includes the contribution of military pensions to the state’s economy, an important but often overlooked source of federal dollars flowing to the state’s veterans. In addition, it includes the state government’s financial support for the North Carolina National Guard and Reserves, an important contribution that was also missing from the 2013 analysis. With the exception of these two additional components, the methodology of the report replicates that of the 2013 study, and uses the REMI PI+ input-output model to estimate the economic impact of total military spending on the North Carolina economy.3

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, followed by a discussion of military contracting performed in the state, active military personnel levels, projected separations from the military, estimates of the veteran population, and pensions distributed within the state. 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 2015. The third section discusses the results from the economic impact model

3The economic impact analysis in this report is based on modeling performed by Scott Nystrom of Regional Economic Models, Inc. (REMI), carried out on behalf of the North Carolina Military Affairs Commission and released on June 1, 2015.
including sectors and industries supported by the military, as well as estimates for the military’s contribution to personal income and gross state product.

I. Background on North Carolina’s Military Presence

The military has had a prominent presence in North Carolina over the last century. According to the Defense Manpower Data Center, North Carolina currently has the fourth largest military population in the United States. 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 and Naval Air Depot
- 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
City: Fayetteville
County: Cumberland

Started as Camp Bragg, Fort Bragg was built as the first modern military base in the state of North Carolina in 1918. It is one of the largest military installations in the world in terms of personnel. As of June 2015, Fort Bragg is home to approximately 48,000 military personnel and 9,500 civilian contract employees. As part of the Base Closure and Reassignment (BRAC) process, Fort Bragg took command of Pope Field, formerly known as Pope Air Force Base. It also hosts the 82nd Airborne Division and the U.S. Army Special Operations Command. The U.S. Army Forces Command (FORSCOM) and U.S. Army Reserve Command (USARC) were relocated to Fort Bragg as part of the BRAC process, which means that Fort Bragg now has the highest number of general officers in the country outside of the Pentagon.

Camp Lejeune Marine Corps Base
City: Jacksonville
County: Onslow

Known as the “Home of Expeditionary Forces in Readiness” and with its close proximity to ports at Wilmington and Morehead City, Camp Lejeune is the oldest Marine Corps base in the state. Its primary purpose is to train and maintain combat-ready units for expeditionary deployment. It is the second largest military base in North Carolina with more than 33,000 active duty military personnel, and like Fort Bragg, it is also one of the largest bases in the nation. The camp has about 3,500 civilian contract employees and some of the units in the base include the II Marine Expeditionary Force and the U.S. Marine Corps Forces Special Command. The base has also received the Commander-In-Chief’s Annual Award for Installation Excellence on six occasions.

Cherry Point Marine Corps Air Station and Naval Air Depot
City: Havelock
County: Craven

Cherry Point is a Marine Corps Air Station and Naval Air Depot with more than 7,500 active duty military members of the Marines and the Navy and more than 1,500 civilian contract employees. 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. The Fleet Readiness Center East claims to be the largest employer of civilians east of Interstate 95 in North Carolina. Like Camp Lejeune, Cherry Point has received the Award for Installation Excellence multiple times.

**New River Marine Corps Air Station**
City: Jacksonville
County: Onslow
Located in Jacksonville, North Carolina, New River Marine Corps Air Station is the largest Marine Corps helicopter base on the East Coast. The base provides support for aviation combat with focus on enhancing combat readiness. There are more than 5,500 Marines and other branches’ military personnel located at the air station. The station has more than 160 civilian employees and contractors. The Second Marine Aircraft Wing as well as several installation support units are located at the facility.

**Seymour Johnson Air Force Base**
City: Goldsboro
County: Wayne
Seymour Johnson Air Force Base, located in Goldsboro, is home to the 4th Fighter Wing and the 916th Air Refueling Wing and employs more than 4,100 active duty personnel. The base has a civilian employee population of more than 700 and also provides combat airpower support to other branches of the U.S. Armed Forces.

**Sunny Point Military Ocean Terminal**
City: Southport
County: Brunswick
Sunny Point is the largest military ocean terminal in the world and is operated by the Department of Defense. It enables the import and export of military supplies and the efficient domestic and international transfer of these goods among multiple modes of transportation including rail, ships, and trucks. The terminal employs more than 200 personnel, including civilian contractors and Army staff.

**U.S. Coast Guard Base**
City: Elizabeth City
County: Pasquotank
The U.S. Coast Guard installation is home to an Aviation Logistics Center, the Aviation Technical Training Center, an Air Station, and a Small Boat Station. 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 by an executive order. The Coast Guard also runs eight additional boat stations up and down the North Carolina coastline.

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15 Defense Manpower Data Center, June 2015.
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.

**North Carolina National Guard**

The National Guard has a significant presence in the state with more than 11,700 military personnel (10,200 in the Army National Guard and 1,500 in the Air National Guard) as of April 2015. It has over 100 facilities spread across the state, from Murphy to Manteo. The North Carolina National Guard’s Joint Force Headquarters is located in Raleigh and its Air National Guard Headquarters is located in Charlotte at the Charlotte-Douglas International Airport.

**Other Military Facilities and Reserve Components**

Other military facilities include the U.S. Coast Guard sector in Wilmington that oversees Coast Guard stations up and down the East Coast of North Carolina. The state has a military reserve strength of more than 21,000 personnel. The United States Army Reserve (USAR) consists of approximately 11,000 personnel; the U.S. Marine Corps Reserve (USMCR) is made up of approximately 4,500 personnel; the U.S. Air Force Reserve (USAFR) has approximately 3,600 personnel; and the U.S. Navy Reserve has approximately 2,200 personnel.

**Contracting**

Military contracts performed in North Carolina occur mainly through prime contracts awarded by the Department of Defense. In FY 2014, prime military contracts performed in North Carolina totaled more than $2.49 billion. The South Central ($1.03 billion) and Southeast ($974 million) regions of the state received 81 percent of the total prime contract dollars, indicating that these regions have developed robust regional defense industries. The Northwest region, by contrast, accounted for only 0.3 percent of the state’s total prime contract dollars.
The Economic Impact of the Military on North Carolina

Table I: DoD Prime Military Contracting by Prosperity Zone

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Central</td>
<td>$1,032,356,895</td>
</tr>
<tr>
<td>Southeast</td>
<td>$974,349,957</td>
</tr>
<tr>
<td>North Central</td>
<td>$157,906,702</td>
</tr>
<tr>
<td>Central</td>
<td>$125,852,595</td>
</tr>
<tr>
<td>Southwest</td>
<td>$110,356,460</td>
</tr>
<tr>
<td>Northeast</td>
<td>$56,933,970</td>
</tr>
<tr>
<td>Western</td>
<td>$26,473,276</td>
</tr>
<tr>
<td>Northwest</td>
<td>$6,871,784</td>
</tr>
<tr>
<td><strong>North Carolina</strong></td>
<td><strong>$2,491,101,639</strong></td>
</tr>
</tbody>
</table>

Data supplied by the NC Military Business Center (Source: FPDS)

Overall, prime contracting activity was performed in 79 of North Carolina’s 100 counties in FY 2014. However, these contracts were heavily concentrated in only a handful of counties. The top 10 counties, for instance, accounted for greater than 88 percent of prime military contracting in North Carolina (Table II). Moreover, the top two counties — Cumberland and Onslow — accounted for nearly 63 percent of prime military contracting. Not surprisingly, these counties are home to the state’s two largest military bases, Fort Bragg and Camp Lejeune.

Table II: Top 10 Counties for DoD Prime Military Contracting

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cumberland</td>
<td>$975,352,435</td>
</tr>
<tr>
<td>Onslow</td>
<td>$590,541,913</td>
</tr>
<tr>
<td>Craven</td>
<td>$194,905,539</td>
</tr>
<tr>
<td>Wake</td>
<td>$94,700,189</td>
</tr>
<tr>
<td>Wayne</td>
<td>$93,335,857</td>
</tr>
<tr>
<td>Guilford</td>
<td>$76,035,460</td>
</tr>
<tr>
<td>Mecklenburg</td>
<td>$60,550,628</td>
</tr>
<tr>
<td>New Hanover</td>
<td>$45,809,098</td>
</tr>
<tr>
<td>Durham</td>
<td>$40,394,372</td>
</tr>
<tr>
<td>Brunswick</td>
<td>$30,408,347</td>
</tr>
</tbody>
</table>

Data supplied by the NC Military Business Center (Source: FPDS)

In addition to prime contracting, a great deal of subcontracting work occurs in North Carolina. During FY 2014, more than $204 million of Department of Defense subcontracting activity was performed in the state.22

Active Military Personnel

According to the Defense Manpower Data Center, more than 102,000 active duty military personnel were assigned to units in North Carolina as of June 2015. The Marine Corps and the Army are the two largest branches of the military in the state, followed by a smaller presence of Air Force, Navy, and Coast Guard personnel. Table III shows the distribution of these forces by location.23

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22Source: Federal Procurement Data System, provided by the NC Small Business and Technology Development Center’s Procurement Technical Assistance Center.
23In addition to these active-duty personnel, there are nearly 12,000 National Guard and 21,000 Reserve forces in the state as of April, 2015, according to Defense Manpower Data Center. There are also nearly 22,000 civilian personnel assigned to bases in the state as of June, 2015.
The occupational makeup of the military is of particular interest to current and potential employers 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 below lists the 10 most common military occupational specializations for North Carolina’s active military personnel, along with several compatible civilian occupations:

### Table IV: Most Common Military Occupational Specializations in North Carolina

<table>
<thead>
<tr>
<th>Military Occupational Code Title</th>
<th>Standard Occupational Classification Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infantryman</td>
<td>Training &amp; Development Workers, Policing &amp; Security, Construction Workers, Heavy &amp; Tractor-Trailer Truck Drivers</td>
</tr>
<tr>
<td>Rifleman</td>
<td>Training &amp; Development Workers, Policing &amp; Security, Construction Workers, Heavy &amp; Tractor-Trailer Truck Drivers</td>
</tr>
<tr>
<td>Motor Vehicle Operator</td>
<td>Heavy &amp; Tractor-Trailer Truck Drivers, Industrial Truck &amp; Tractor Drivers</td>
</tr>
<tr>
<td>Health Care Specialist</td>
<td>Emergency Medical Technicians &amp; Paramedics, Medical Secretaries, Medical Assistants</td>
</tr>
<tr>
<td>Hospital Corpsman</td>
<td>Medical Secretaries, Orderlies, Emergency Medical Technicians &amp; Paramedics, Medical &amp; Nursing Assistants</td>
</tr>
<tr>
<td>Combat Engineer</td>
<td>Construction Workers, Operating Engineers &amp; other Construction Equipment Operators</td>
</tr>
<tr>
<td>Field Radio Operator</td>
<td>Radio Operators, Dispatchers, Police, Fire &amp; Ambulance Dispatchers, Broadcast Technicians, Radio, Cellular, &amp; Tower Equipment Installers &amp; Repairers</td>
</tr>
<tr>
<td>Military Police</td>
<td>Correctional Officers &amp; Jailers, Supervisors of Correctional Officers, Supervisors of Police and Detectives</td>
</tr>
<tr>
<td>Food Service Specialist</td>
<td>Cooks, Institution &amp; Cafeteria Food Preparation Workers</td>
</tr>
</tbody>
</table>

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, automotive and transportation, and logistics.

**Projected Separations from the Military**

From 2015 through 2018, more than 78,000 active duty personnel are projected to separate from the military in North Carolina during the military drawdown from two major wars and the subsequent realignment of troop levels.

**Table V: Projected Military Separations**

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Force</td>
<td>635</td>
<td>1,057</td>
<td>1,191</td>
<td>1,258</td>
<td>4,141</td>
</tr>
<tr>
<td>Army</td>
<td>3,168</td>
<td>8,528</td>
<td>8,730</td>
<td>7,013</td>
<td>27,439</td>
</tr>
<tr>
<td>Coast Guard</td>
<td>177</td>
<td>220</td>
<td>239</td>
<td>329</td>
<td>965</td>
</tr>
<tr>
<td>Marine Corps</td>
<td>7,585</td>
<td>12,328</td>
<td>12,367</td>
<td>10,704</td>
<td>42,984</td>
</tr>
<tr>
<td>Navy</td>
<td>430</td>
<td>949</td>
<td>949</td>
<td>748</td>
<td>3,076</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>11,995</td>
<td>23,082</td>
<td>23,476</td>
<td>20,052</td>
<td>78,605</td>
</tr>
</tbody>
</table>


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 — more than 82 percent of the projected separations from 2015–2018 will be 30 or younger, and more than 96 percent will be no older than 40.\(^24\) 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 other parts of the state.

**The Current Veteran Population**

Currently, approximately 775,000 veterans reside in North Carolina — the eighth largest veteran population in the United States. As can be seen in Table VI, the largest number of veterans reside in the North Central and Southwest regions of the state. However, all eight regions have sizable veteran populations.

**Table VI: Veteran Population by Prosperity Zone**

<table>
<thead>
<tr>
<th></th>
<th>Number of Veterans</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Central</td>
<td>154,000</td>
</tr>
<tr>
<td>Southwest</td>
<td>144,000</td>
</tr>
<tr>
<td>Central</td>
<td>119,000</td>
</tr>
<tr>
<td>Southeast</td>
<td>114,000</td>
</tr>
<tr>
<td>South Central</td>
<td>93,000</td>
</tr>
<tr>
<td>Western</td>
<td>62,000</td>
</tr>
<tr>
<td>Northwest</td>
<td>45,000</td>
</tr>
<tr>
<td>Northeast</td>
<td>43,000</td>
</tr>
</tbody>
</table>

Source: US Department of Veterans Affairs, VetPop2014

*estimates reported to the nearest 1,000

\(^{24}\)Defense Manpower Data Center, June 2015
The Department of Veterans Affairs publishes information from a projection model that estimates the number of veterans in each state and county through 2040. One of the key inputs for the projection model is military separations data, which was discussed in the previous section. 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 VII: Veteran Population Projections

<table>
<thead>
<tr>
<th></th>
<th>2014</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Carolina Veterans</td>
<td>775,000</td>
<td>763,000</td>
<td>720,000</td>
<td>659,000</td>
</tr>
<tr>
<td>Total US Veterans</td>
<td>21,999,000</td>
<td>20,170,000</td>
<td>17,421,000</td>
<td>15,073,000</td>
</tr>
<tr>
<td>% of Total</td>
<td>3.52</td>
<td>3.78</td>
<td>4.13</td>
<td>4.37</td>
</tr>
</tbody>
</table>

Source: US Department of Veterans Affairs, VetPop2014

The veteran population in North Carolina is projected to decrease by 115,619 individuals between 2014 and 2040 (Table VII). This trend is consistent with a decrease in the total veteran population projections for the United States. Interestingly, the veteran population in North Carolina is expected to decrease at a slower rate than the total veteran population in the United States. Consequently, North Carolina’s share of the total veteran population is expected to rise by 2040.

Figure II shows the distribution of veterans by age group. The majority of veterans are age 50 or older; however, nearly 244,000 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 II: North Carolina Veteran Population by Age

Source: US Department of Veterans Affairs, VetPop2014

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26 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.
Retired military personnel in North Carolina received more than $2.3 billion in retirement compensation from the Department of Defense in 2014. In addition, the Department of Veterans Affairs paid more than $3.3 billion in pensions and compensation to North Carolina veterans with a disability rating in 2014. The Veterans Affairs pensions and compensation payments are concentrated primarily in the South Central and Southeast regions of the state (Table VIII).

### Table VIII: Veteran Pensions & Compensation by Prosperity Zone

<table>
<thead>
<tr>
<th>Prosperity Zone</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Central</td>
<td>$689,021,000</td>
</tr>
<tr>
<td>Southeast</td>
<td>$651,237,000</td>
</tr>
<tr>
<td>North Central</td>
<td>$543,566,000</td>
</tr>
<tr>
<td>Southwest</td>
<td>$465,063,000</td>
</tr>
<tr>
<td>Central</td>
<td>$375,084,000</td>
</tr>
<tr>
<td>Western</td>
<td>$232,135,000</td>
</tr>
<tr>
<td>Northeast</td>
<td>$195,008,000</td>
</tr>
<tr>
<td>Northwest</td>
<td>$177,070,000</td>
</tr>
<tr>
<td><strong>North Carolina</strong></td>
<td><strong>$3,328,183,000</strong></td>
</tr>
</tbody>
</table>

Source: US Department of Veterans Affairs, VetPop2014
Note: County totals do not exactly equal state total due to rounding.

The Department of Veterans Affairs also provided more than $1.9 billion in medical care as well as more than $478 million in education and vocational rehabilitation and employment support to North Carolina veterans in 2014.

### II. Economic Impact Analysis Methodology

#### Overview of REMI PI+

The economic impact analysis of the military on North Carolina was recently conducted by Regional Economic Models Incorporated (REMI) using the Policy Insight Plus (PI+) model. 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 III 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 national 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.

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29Ibid.
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The Approach
In order to estimate the economic impact of the military, the REMI model creates a scenario in which military spending has been entirely removed from the U.S. economy.31 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.

Two important additions to the methodology used in the 2013 military impact study are the inclusion of military pensions, as well as nonfederal spending on the military (mostly state funds for the National Guard). In addition, the results are based on the most recent data available for 2015.32

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, it creates 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 the military contributes to our economy.

First, military bases enrich the regional economy because they provide a source of income to military personnel who, in turn, demand goods (i.e., groceries and clothes) and services (i.e., dining out and dry cleaning), spending a portion of their incomes regionally. Military pensions from the federal government also provide income to individuals who will then purchase goods and services in the regional economy. 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.33 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 increase demand for other value chains as well, creating a virtuous spending cycle.

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. The following section details the estimated effects of military spending on employment, personal income, and gross state product.

31“Military” spending in REMI includes the four branches of the Department of Defense and the U.S. Coast Guard. Military pensions administered by the Veteran Administration are included, as well as spending by the state of North Carolina to help support the NC National Guard.
33The 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.
Jobs
Military operations are estimated to contribute significantly to employment in the 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 spending is estimated to support approximately 578,000 jobs within North Carolina, which is roughly 10 percent of North Carolina’s approximate 5.6 million jobs.\(^{34}\) The contribution by funding source is shown in Figure III with the active duty and procurement category responsible for the vast majority of the employment impacts, followed by the contribution of pensions and then the state-funded portions of support for the National Guard and Reserves.\(^ {35}\)

![Figure III: Employment Contribution by Military Funding Source](image)

Figure IV shows the breakdown of the estimated 578,000 military-supported jobs by public or private industry. The breakdown is as follows: approximately 119,000 are federal government jobs, 72,087 are state and local government jobs, and 386,475 are private industry jobs.\(^ {36}\)

![Figure IV: The Composition of Military-Supported Employment in North Carolina](image)

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\(^{34}\)Total number of NC jobs estimate from REMI PI+ model.

\(^{35}\)Note that the National Guard and Reserves portions count only the payroll of the personnel and any supplementary spending made by the state of North Carolina. Equipment and operations funded by the federal government for the Guard and Reserves shows up in the “procurement” category above.

\(^{36}\)Federal government jobs include active duty military as well as civilian personnel, including the Coast Guard.
Figure V shows the entire composition of private industry employment supported by the military, as well as the contribution by “general defense” and military pension funding. The employment impact is spread out across virtually all sectors, albeit to differing degrees. The Professional, Scientific, and Technical Services sector has the most military-supported jobs with nearly 60,000. Other major sectors include Administrative and Waste Services, Construction, Retail Trade, and Health Care and Social Assistance. Sectors least impacted by the military in absolute levels include Utilities, Forestry, Fishing, and Related Activities, and Mining.

Figure VI shows the military-supported employment within the Manufacturing sector. Although manufacturing is only the sixth-highest sector impacted by military spending, it is of great importance to the North Carolina economy due to its concentration and associated high wages and spending multipliers.
The Relative Importance of the Military for Private Industry

Figure V 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, one must look at the military’s impact relative to total employment in each sector. Table IX lists the top 10 industries in terms of the relative impact of the military on employment. Four of the top 10 industry sectors shown in Figure V also make the top 10 in terms of their percentage of total sector employment — Professional, Scientific, and Technical Services; Construction; Administrative and Waste Management Services; and Retail Trade. There are six other sectors that did not make the top 10 in absolute terms, but did in relative terms, including Information; Other Services; Arts, Entertainment, and Recreation; Transportation and Warehousing; Mining; and Utilities.

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

<table>
<thead>
<tr>
<th>Sector</th>
<th>Percentage of Total Sector Jobs in NC Supported by Military</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional, Scientific &amp; Technical Services</td>
<td>18.5%</td>
</tr>
<tr>
<td>Construction</td>
<td>14.0%</td>
</tr>
<tr>
<td>Administrative &amp; Waste Management Services</td>
<td>12.7%</td>
</tr>
<tr>
<td>Information</td>
<td>9.3%</td>
</tr>
<tr>
<td>Other Services, except Public Administration</td>
<td>8.1%</td>
</tr>
<tr>
<td>Arts, Entertainment &amp; Recreation</td>
<td>7.2%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>7.2%</td>
</tr>
<tr>
<td>Transportation &amp; Warehousing</td>
<td>7.0%</td>
</tr>
<tr>
<td>Mining</td>
<td>6.9%</td>
</tr>
<tr>
<td>Utilities</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

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. The REMI model shows that the military (including pensions) supports an estimated $33.7 billion in North Carolina personal income, which is 7.8 percent of total statewide personal income. Additionally, the model estimates that the military (including pensions) is responsible for $66 billion, or 12.8 percent, of gross state product.

Table X: Economic Impact on Gross State Product and Personal Income

<table>
<thead>
<tr>
<th>Results Category</th>
<th>Gross State Product</th>
<th>Personal Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Defense ($)</td>
<td>$62.5 billion</td>
<td>$28.9 billion</td>
</tr>
<tr>
<td>General Defense (%)</td>
<td>12.0% of total</td>
<td>6.7% of total</td>
</tr>
<tr>
<td>Military Pensions ($)</td>
<td>$3.5 billion</td>
<td>$4.8 billion</td>
</tr>
<tr>
<td>Military Pensions (%)</td>
<td>0.8% of total</td>
<td>1.1% of total</td>
</tr>
<tr>
<td>Combined ($)</td>
<td>$66.0 billion</td>
<td>$33.7 billion</td>
</tr>
<tr>
<td>Combined (%)</td>
<td>12.8% of total</td>
<td>7.8% of total</td>
</tr>
</tbody>
</table>

37For precise definitions of personal income or gross product, visit the REMI glossary: [http://www.remi.com/resources/glossary](http://www.remi.com/resources/glossary).
Conclusions
This report supports the general consensus that the military plays a highly significant role in North Carolina’s economy. The impact of the military on state personal income is $33.7 billion, and the impact on gross state product is $66 billion. Overall, the military supports roughly 10 percent of employment, nearly 8 percent of personal income, and almost 13 percent of the North Carolina’s gross state product. The large active duty, guard and reserve military presence in the state is the primary driver of the total economic impact, but defense contracting and pensions of retired military personnel are also important components.

An estimated 386,000 jobs supported by the military are private industry jobs, 119,000 are federal military jobs, and 72,000 are state and local government jobs. Military spending contributes to all sectors of the state’s economy, with large contributions to important private industries such as Professional, Scientific and Technical Services and Construction. This analysis shows that the military’s economic impact extends far beyond the direct activities of active duty personnel and guard and reserve members to include large numbers of veterans and private citizens who directly or indirectly benefit from the state’s large military presence.