

# Military Economic Impact on North Carolina



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## PREPARED FOR

North Carolina Military Affairs  
Commission  
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[ourncmilitary.nc.gov](http://ourncmilitary.nc.gov)

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**NC DEPARTMENT**  
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## REMI GLOSSARY

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**Employment:** **Employment** comprises estimates of the number of jobs, full-time plus part-time, by place of work for all industries.

**GSP: Gross State Product.** The market value of goods and services produced by labor and property in the state. It is also the sum of value-added across all industries in the state.

**Personal Income: Income received by persons from all sources.** It is the sum of wages and salaries, supplements to wages and salaries, proprietors' income, rental income, asset income, and personal current transfer receipts, net of contributions for government social insurance.



# Military Economic Impact on North Carolina

## KEY FINDINGS

- 1.** Overall, the economic impact model estimates that the military supports roughly 11 percent of North Carolina's employment:
  - » The military supports 653,000 jobs in North Carolina, over \$49 billion in state personal income, and nearly \$80 billion in gross state product.
  - » 495,000 of total military-supported jobs occur in the private sector.
- 2.** Construction; Professional, Scientific, and Technical Services; and Health Care and Social Assistance are the top three military-supported private industry sectors.
- 3.** Over 100,000 active-duty military personnel were assigned to units in North Carolina as of February 2022, and 75,000 individuals are projected to leave the military over the next four years.
- 4.** The North Carolina National Guard has a strength of over 11,000, with about 10,000 in the Reserves.
- 5.** Nearly 23,000 civilian contractors are employed by the Department of Defense and the North Carolina National Guard in North Carolina.
- 6.** Department of Defense prime contracting in FY 2020 totaled \$6.1 billion, 78 percent of which was performed in the South Central and Southeast prosperity zones.
- 7.** 83 of 100 counties had prime contracting activity in FY 2020.
- 8.** North Carolina's active military personnel have in-demand occupational skills which contribute to private industries in the state as personnel separate from the military in the future.
- 9.** North Carolina has a total of 678,000 veterans that reside in every county across the state.
- 10.** Military veterans in North Carolina received more than \$12 billion in pensions, medical care and other support from the Department of Defense and the Department of Veteran Affairs in FY 2021.



# Introduction

The United States' federal defense spending supports North Carolina's economy in numerous ways. Since 2008, the North Carolina Department of Commerce has published a series of reports to demonstrate the connections between military activity and the North Carolina economy. This report updates the 2015 version<sup>1</sup> and makes one additional change. Specifically, it includes a more complete set of veteran expenditures over and above military pensions. With the exception of this additional component, the methodology of the report replicates that of the 2015 study as closely as possible<sup>2</sup>, and uses the REMI PI+ input-output model to estimate the economic impact of total military spending on the North Carolina economy.<sup>3</sup>

While the primary goal of the military is to protect the citizens of the nation, there are several ways that the military contributes to our economy. First, military spending enriches the regional economy because by providing a source of income to active as well as retired 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.

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, resulting in additional demand for suppliers and service providers further "upstream" in the value chain.

Labor is required by virtually all companies in military-supported value chains. 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.

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<sup>1</sup> The Economic Impact of the Military on North Carolina. North Carolina Department of Commerce, 2015. <https://files.nc.gov/nccommerce/documents/LEAD/Industry-Reports/2015EconomicImpactoftheMilitaryonNorthCarolina.pdf>

<sup>2</sup> The measurement of the direct contributions of the North Carolina National Guard and Reserves could not be fully replicated relative to the 2015 report, though all available detailed 2020 data was utilized in the analysis. As such, the footprint related to this component of the North Carolina military presence is measured as being notably smaller than in the 2015 report. However, the expansion of the data set that was considered in this analysis more than counterbalanced that difference, making the total measured footprint of the North Carolina military presence larger.

<sup>3</sup> The economic impact analysis in this report is based on modeling performed by Dr. Peter Evangelakis, Haozheyi Guan, and Zhuyin Lin of Regional Economic Models, Inc. (REMI), carried out on behalf of the North Carolina Military Affairs Commission and released in October of 2022.



**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 2020. The third section discusses the results from the economic impact model including sectors and industries supported by the military, as well as estimates for the military's contribution to personal income and gross state product.





# Background on North Carolina's Military Presence

## NATIONAL BASES AND STATIONS

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.<sup>1</sup>

There are five active-duty military bases, a military ocean terminal, a U.S. Coast Guard base, and several National Guard and Reserve installations in 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

Fort Bragg is home of the nation's global response force. They are trained and ready to respond to full spectrum contingencies, from disaster response to combat operations. 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. Fort Bragg is home to more than 50,000 military personnel and 17,000 civilian contract employees.<sup>2</sup> As part of the Base Realignment and Closure (BRAC) process, Fort Bragg took command of Pope Field, formerly known as Pope Air Force Base in 2011. It also hosts the 82<sup>nd</sup> 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.

<sup>1</sup> Defense Manpower Data Center, June 2021

<sup>2</sup> Data provided by Fort Bragg. Civilian contractors only include those directly employed by the Department of Defense.

## **Camp Lejeune Marine Corps Base**

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**CITY** Jacksonville

**COUNTY** Onslow

Known as the “Home of Expeditionary Forces in Readiness” and in 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.<sup>3</sup> It is the second largest military base in North Carolina with nearly 39,000 active-duty military personnel, and like Fort Bragg, it is also one of the largest bases in the nation.<sup>4</sup> The camp has about 5,500 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 Operations Command.<sup>5</sup> The base has also received the Commander-In-Chief’s Annual Award for Installation Excellence on nine occasions.<sup>6</sup>

## **Cherry Point Marine Corps Air Station and Naval Air Depot**

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**CITY** Havelock

**COUNTY** Craven

Cherry Point is a Marine Corps Air Station and Naval Air Depot with more than 7,200 active-duty military members of the Marines and the Navy and 3,700 civilian contract employees.<sup>7</sup> 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. Like Camp Lejeune, Cherry Point has received the Award for Installation Excellence multiple times.

## **New River Marine Corps Air Station**

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**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.<sup>8</sup> The base provides support for aviation combat with focus on enhancing combat readiness. There are more than 6,300 Marines and other branches’ military personnel located at the air station and more than 180 civilian employees and contractors.<sup>9</sup> The Second Marine Aircraft Wing as well as several installation support units are located at the facility.<sup>10</sup>

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<sup>3</sup> <http://www.lejeune.marines.mil/About.aspx>

<sup>4</sup> Data provided by Camp Lejeune.

<sup>5</sup> Ibid.

<sup>6</sup> <https://www.lejeune.marines.mil/News/Article/Article/2730175/camp-lejeune-receives-its-9th-commander-in-chiefs-installation-excellence-award/>

<sup>7</sup> Data provided by MCAS Cherry Point.

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

<sup>9</sup> Data provided by MCAS New River.

<sup>10</sup> <http://www.newriver.marines.mil/Units.aspx>

## **Seymour Johnson Air Force Base**

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**CITY** Goldsboro

**COUNTY** Wayne

Seymour Johnson Air Force Base, located in Goldsboro, is home to the 4<sup>th</sup> Fighter Wing and the 916<sup>th</sup> Air Refueling Wing and employs more than 4,500 active-duty personnel.<sup>11</sup> The base has a civilian employee population of nearly 900 and also provides combat airpower support to other branches of the U.S. Armed Forces.<sup>12</sup>

## **Sunny Point Military Ocean Terminal**

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**CITY** Southport

**COUNTY** Brunswick

Sunny Point is the largest military ocean terminal in the world and is operated by the Department of Defense.<sup>13</sup> 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 approximately 250 personnel, including civilian contractors and Army staff.<sup>14</sup>

## **U.S. Coast Guard Base**

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**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.<sup>15</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 by an executive order. The Coast Guard also runs eight additional boat stations up and down the North Carolina coastline. The base has an active-duty population of more than 700 and about 1,600 civilian and contract employees.<sup>16</sup>

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<sup>11</sup> Data provided by Seymour Johnson AFB.

<sup>12</sup> Ibid.

<sup>13</sup> <https://militarybases.com/north-carolina/motsp/#:~:text=The%20Military%20Ocean%20Terminal%20Sunny%20Point%20is%20the%20largest%20military,move%20munitions%20across%20the%20area>

<sup>14</sup> Data provided by Sunny Point Military Ocean Terminal.

<sup>15</sup> <https://www.dcms.uscg.mil/Our-Organization/Director-of-Operational-Logistics-DOL/Bases/Base-Elizabeth-City/>

<sup>16</sup> Data provided by US Coast Guard Base Elizabeth City.

**Figure I: Military Installations in North Carolina**

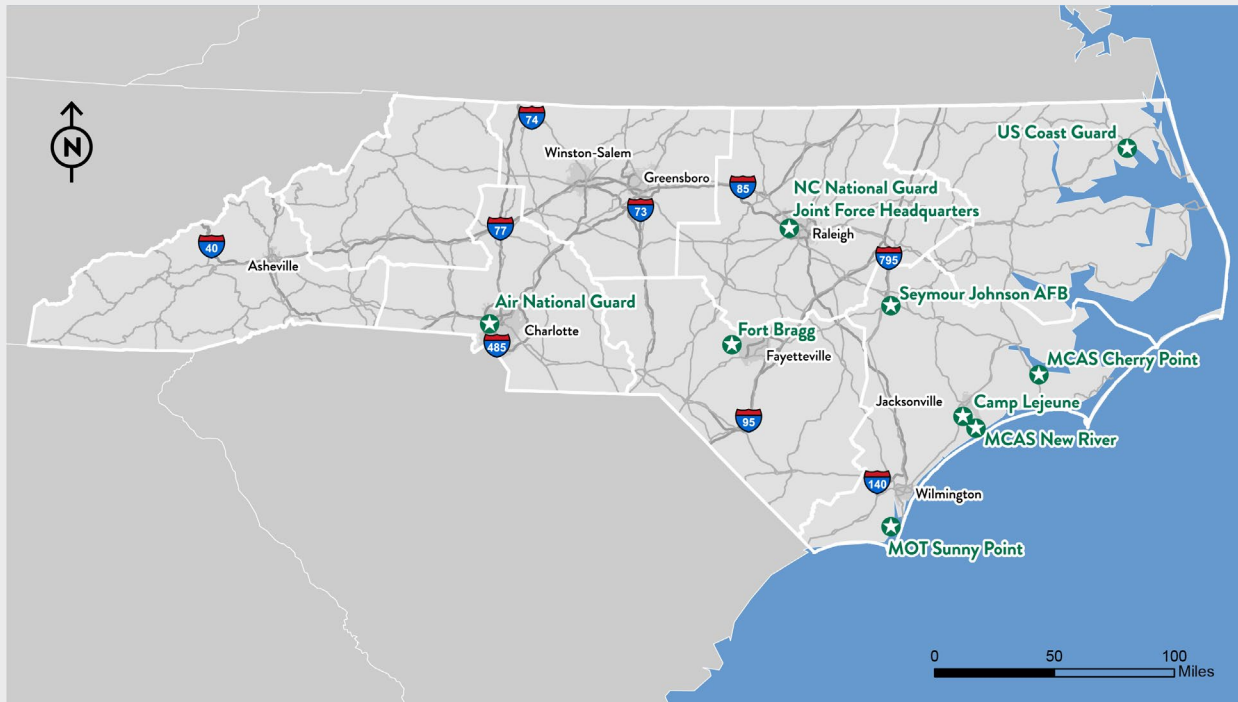


Figure I shows the military installations discussed above. North Carolina's bases and other military installations are geographically concentrated in the Eastern and Southern regions of the state.

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## OTHER MILITARY OPERATIONS IN NC

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### North Carolina National Guard

The National Guard has a significant presence in the state with more than 11,300 military personnel (9,850 in the Army National Guard and 1,450 in the Air National Guard) as of September 2021.<sup>17</sup> 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 10,000 personnel.<sup>18</sup> The United States Army Reserve (USAR) consists of approximately 6,200 personnel; the U.S. Marine Corps Reserve (USMCR) is made up of approximately 1,000 personnel; the U.S. Air Force Reserve (USAFR) has approximately 1,500 personnel; the U.S. Navy Reserve has approximately 1,200 personnel; and the U.S. Coast Guard Reserve (USCGR) has approximately 200 personnel.<sup>19</sup>

### Contracting

Military contracts performed in North Carolina occur mainly through prime contracts awarded by the Department of Defense.<sup>20</sup> In FY 2020, prime military contracts performed in North Carolina totaled \$6.1 billion.<sup>21</sup> The Southeast (\$3.3 billion) and Sandhills (\$1.5 billion) regions of the state received 78 percent of the total prime contract dollars, indicating that these regions have developed robust regional defense industries (Table I).<sup>22</sup> The Northwest region, by contrast, accounted for only 0.2 percent of the state's total prime contract dollars.

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<sup>17</sup> Data provided by the North Carolina National Guard, 2021.

<sup>18</sup> Defense Manpower Data Center, June 2021.

<sup>19</sup> Ibid.

<sup>20</sup> Although the Coast Guard awards contracts through the Department of Homeland Security, these are relatively small when compared to Department of Defense prime contracts.

<sup>21</sup> Federal Procurement Data System (FPDS) provided by the N.C. Military Business Center. The FPDS captures all federal contracting activity except for micropurchases, i.e., transactions under \$2,500. Data are presented by place of performance and includes both North Carolina vendors as well as out-of-state vendors.

<sup>22</sup> Since 2014, North Carolina has operated eight administrative regions known as Prosperity Zones. For a description of the state's Prosperity Zones, please see <https://www.nccommerce.com/about-us/nc-prosperity-zones>

**Table I: DoD Prime Military Contracting by Prosperity Zone, FY20\***

PROSPERITY ZONE	TOTAL DOLLARS
Southeast	\$3,269,831,674
Sandhills	\$1,489,399,773
North Central	\$624,038,730
Piedmont-Triad	\$340,127,756
Southwest	\$263,627,959
Northeast	\$53,130,177
Western	\$47,734,691
Northwest	\$11,157,155
<b>North Carolina</b>	<b>\$6,099,047,914</b>

Overall, prime contracting activity was performed in 83 of North Carolina's 100 counties in FY 2020. However, these contracts were heavily concentrated in only a handful of counties. The top 10 counties, for instance, accounted for greater than 90 percent of prime military contracting in North Carolina (Table II). Moreover, the top two counties — Cumberland and Onslow — accounted for about 55 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, FY20\***

COUNTY	PROSPERITY ZONE	TOTAL DOLLARS
Onslow	Southeast	\$2,199,124,881
Cumberland	Sandhills	\$1,189,966,865
Craven	Southeast	\$847,149,105
Durham	North Central	\$377,616,838
Hoke	Sandhills	\$243,198,945
Guilford	Piedmont-Triad	\$200,569,654
Mecklenburg	Southwest	\$168,683,026
Wake	North Central	\$146,645,753
Rockingham	Piedmont-Triad	\$85,830,987
New Hanover	Southeast	\$79,133,096

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



In addition to contracting, the Department of Defense supports North Carolina small businesses through the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) grants, the single largest source of early-stage technology and commercialization funding for small businesses in the United States. In FY 2020 the Department of Defense made 81 of these grants to North Carolina small businesses for a total of \$27,276,581.<sup>23</sup> Further analysis of SBIR/STTR funding in NC is available in a recently published report by the North Carolina Defense Innovation Task Force, a study group convened by the North Carolina Board of Science, Technology & Innovation (BSTI).<sup>24</sup>

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<sup>23</sup> US Small Business Administration, <https://www.sbir.gov/reports/state-summary>

<sup>24</sup> [https://files.nc.gov/nccommerce/documents/files/Defense-Innovation-Task-Force-Report\\_2022.pdf](https://files.nc.gov/nccommerce/documents/files/Defense-Innovation-Task-Force-Report_2022.pdf)



## ACTIVE-DUTY MILITARY PERSONNEL

According to the Defense Manpower Data Center, more than 101,000 active-duty military personnel were assigned to units in North Carolina as of February 2022. The Army and the Marine Corps 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 service.<sup>25</sup>

**Table III: Active-Duty Military Personnel by Service as of February 2022**

BRANCH	TOTAL PERSONNEL
Army	46,754
Marine Corps	42,743
Air Force	6,150
Navy	4,525
Coast Guard	1,511
Space Force	5
<b>Grand Total</b>	<b>101,688</b>

Source: Defense Manpower Data Center, February 2022.

<sup>25</sup> In addition to these active-duty personnel, there are over 11,000 National Guard and 12,000 Reserve forces in the state as of February 2022 according to Defense Manpower Data Center. There are also over 22,000 civilian personnel paid by Appropriated Funds working in the state.





## TOP MILITARY OCCUPATIONS

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-duty military personnel, along with several compatible civilian occupations:

**Table IV: Most Common Military Occupational Specializations in NC**

MILITARY OCCUPATIONAL CODE TITLE	STANDARD OCCUPATIONAL CLASSIFICATION TITLE
Infantryman	Construction Workers, Policing & Security, Truck Drivers, Maintenance Workers, Training & Development Specialists, Emergency Management Directors.
Rifleman	Policing & Security, Private Detectives & Investigators, Survey and Mapping Technicians

**Table IV: Most Common Military Occupational Specializations in NC**

<b>MILITARY OCCUPATIONAL CODE TITLE</b>	<b>STANDARD OCCUPATIONAL CLASSIFICATION TITLE</b>
Motor Vehicle Operator	Installation and Repair Workers, Truck Drivers, Office Clerks, Supervisors of Material-Moving Machine and Vehicle Operators.
Hospital Corpsman	Medical Secretaries, Orderlies, Emergency Medical Technicians & Paramedics, Medical & Nursing Assistants, Paramedics, Licensed Practical & Licensed Vocational Nurses.
Health Care Specialist	Paramedics, Health Education Specialists, Registered Nurses, Health Informatics Specialists, Occupational Health & Safety Specialists.
Combat Engineer	Construction Workers, Operating Engineers & other Construction Equipment Operators, Administrative Services Managers, Facilities Managers.
Wheeled Vehicle Repairer	Supervisors of Mechanics, Bus & Truck Mechanics & Diesel Engine Specialists, Automotive Service Technicians and Mechanics, Supervisors of Material-Moving Machine and Vehicle Operators.
Field Radio Operator	Broadcast Technicians, Electrical and Electronics Repairers, Installation, Maintenance & Repair Workers, Radio, Cellular, & Tower Equipment Installers & Repairers.
Psychological Operations Specialist	Advertising & Promotions Managers, Clinical & Counseling Psychologists, Fundraising Managers, Intelligence Analysts, Market Research Analysts & Marketing Specialists.
Military Police	Correctional Officers & Jailers, Supervisors of Correctional Officers, Supervisors of Police and Detectives, Animal Control Workers, Transportation Security Screeners.

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 as well as automotive and transportation-related 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 2022 through 2025, nearly 75,000 active-duty personnel are projected to separate from the military in North Carolina.<sup>26</sup>

**Table V: Projected Military Separations**

BRANCH	2022	2023	2024	2025	TOTAL
Marine Corps	7,050	10,403	9,410	10,547	37,410
Army	4,600	8,700	9,530	6,113	28,943
Air Force	896	1,219	1,107	1,035	4,257
Navy	563	992	988	611	3,154
Coast Guard	216	341	309	226	1,092
Space Force	-	1	1	-	2
<b>Total</b>	<b>13,325</b>	<b>21,656</b>	<b>21,345</b>	<b>18,532</b>	<b>74,858</b>

While not all of these separating personnel will seek employment in the state, this expected surge of 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 half (53%) of recent separations from active-duty were age 30 or younger, and three-quarters (76%) were younger than 40.<sup>27</sup> 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. A 2021 survey of transitioning military service members<sup>28</sup> found that 40% listed North Carolina as residence of choice after completing military service. Transitioning service members also listed employment, housing and cost of living as the top factors following military service. Additionally, the Fayetteville State University survey found that almost all military retirees planned to work or attend college following military retirement.

<sup>26</sup> Defense Manpower Data Center, February 2022.

<sup>27</sup> Ibid.

<sup>28</sup> Survey of Transitioning Service Members: Summary Report, <https://ourncmilitary.nc.gov/media/565/open>

## THE CURRENT VETERAN POPULATION

Currently, approximately 678,000 veterans reside in North Carolina — the ninth largest veteran population in the United States. As can be seen in Table VI, the largest number of veterans reside in the two most populous regions of the state, the North Central and Southwest regions, followed by sizable veteran populations in the Southeast, Piedmont-Triad, and the Sandhills.

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

PROSPERITY ZONE	VETERAN POPULATION
North Central	133,000
Southwest	123,000
Southeast	108,000
Piedmont-Triad	97,000
Sandhills	88,000
Western	54,000
Northwest	38,000
Northeast	38,000

Source: US Department of Veteran Affairs, VetPop18.  
Estimated veteran population as of 9/30/2022. Estimates reported to the nearest 1,000.

The US Department of Veterans Affairs publishes information from a projection model that estimates the number of veterans in each state and county through 2048.<sup>29</sup> One of the key inputs for the projection model is military separations data, which was discussed in the previous section.<sup>30</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.

<sup>29</sup> Available at [http://www.va.gov/vetdata/veteran\\_population.asp](http://www.va.gov/vetdata/veteran_population.asp)

<sup>30</sup> Other key inputs to the VetPop2018 model are data from Veterans Affairs, the American Community Survey, the Internal Revenue Service, and the Social Security Administration.

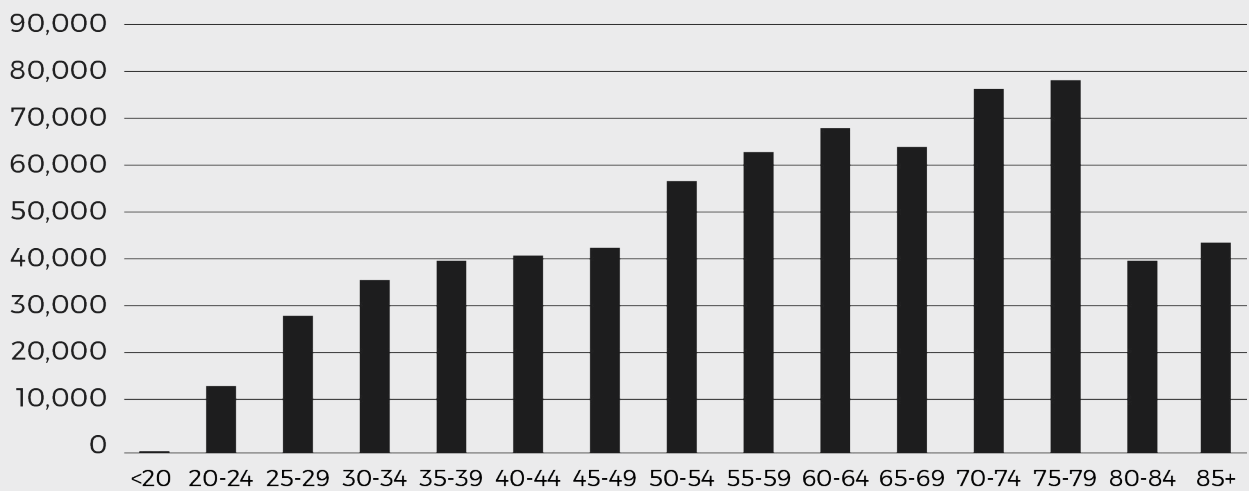
**Table VII: Veteran Population Projections**

VETERAN	2022	2030	2040	2048
NC Veterans	678,000	604,000	524,000	479,000
Total US Veterans	18,792,000	16,187,000	13,613,000	12,236,000
<b>NC % of Total</b>	<b>3.6%</b>	<b>3.7%</b>	<b>3.8%</b>	<b>3.9%</b>

The veteran population in North Carolina is projected to decrease by 199,000 individuals (-29%) between 2022 and 2048 (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 slightly over time.

Figure II shows the distribution of veterans by age group. The majority of veterans are age 60 or older; however, nearly 195,000 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.

**Table VII: Veteran Population Projections**



Source: US Department of Veterans Affairs, VetPop2018

## PENSIONS AND COMPENSATION

Retired military personnel in North Carolina received more than \$2.8 billion in retirement compensation from the Department of Defense in 2020.<sup>31</sup> In addition, the Department of Veterans Affairs paid more than \$5.6 billion in pensions and compensation to North Carolina veterans with a disability rating in 2020.<sup>32</sup> The Veterans Affairs pensions and compensation payments are concentrated primarily in the Sandhills and Southeast regions of the state (Table VIII).

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

PROSPERITY ZONE	TOTAL DOLLARS
Sandhills	\$1,251,882,036
Southeast	\$1,108,429,300
North Central	\$1,008,916,051
Southwest	\$785,155,505
Piedmont-Triad	\$605,931,898
Western	\$305,057,189
Northeast	\$293,024,830
Northwest	\$244,425,722

Source: US Department of Veteran Affairs, FY2020

The Department of Veterans Affairs also provided more than \$3.3 billion in medical care as well as more than \$477 million in education and vocational rehabilitation and employment support to North Carolina veterans in 2020.<sup>33</sup>

<sup>31</sup> Statistical Report on the Military Retirement System, Fiscal Year 2020. Department of Defense Office of the Actuary, September 21. Available at [https://actuary.defense.gov/Portals/15/MRS\\_StatRpt\\_2020%20\[Sept\\_%202021\]\\_1.pdf](https://actuary.defense.gov/Portals/15/MRS_StatRpt_2020%20[Sept_%202021]_1.pdf)

<sup>32</sup> Geographic Distribution of VA Expenditures for Fiscal Year 2021, the National Center for Veterans Analysis and Statistics, Department of Veterans Affairs. Available at <https://www.va.gov/vetdata/Expenditures.asp>

<sup>33</sup> Ibid





# 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.<sup>1</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 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.

<sup>1</sup> More information about the PI+ model is available at <https://www.remi.com/model/pi>





## 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.<sup>2</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.

One important addition to the methodology used in the 2015 military impact study is the inclusion of a more complete set of veteran expenditures instead of a limited focus on military pensions. In addition, the results are based on the most recent data available as of May 2022.<sup>3</sup>

<sup>2</sup> "Military" spending in REMI includes the four branches of the Department of Defense and the U.S. Coast Guard. Military pensions and other payments administered by the Veteran Administration are included, as well as spending by the state of North Carolina to help support the NC National Guard and Reserves.

<sup>3</sup> 2015 report available at <https://files.nc.gov/nccommerce/documents/LEAD/Industry-Reports/2015EconomicImpactoftheMilitaryonNorthCarolina.pdf>



## 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.<sup>4</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 increase demand for other value chains as well, creating a virtuous spending cycle.

<sup>4</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.





# 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.

## 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.

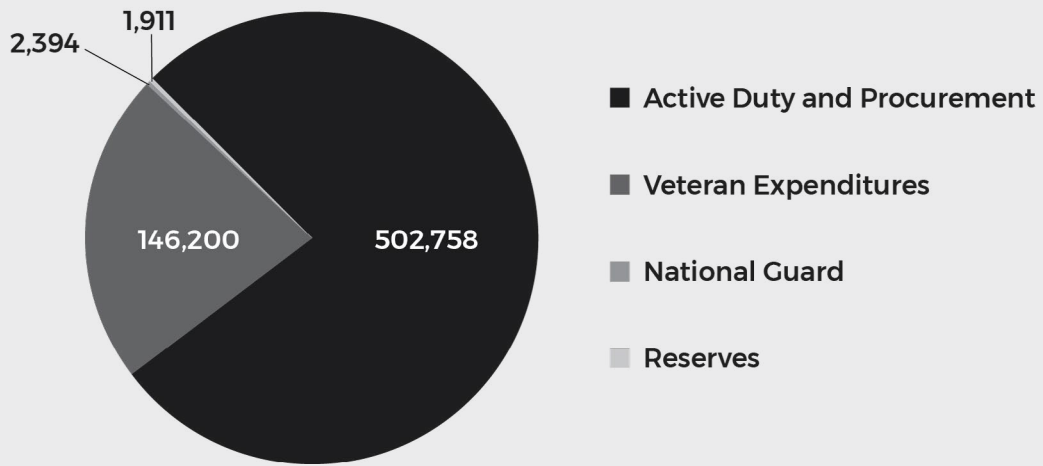
Overall, military spending is estimated to support 653,263 jobs within North Carolina, which is roughly 11 percent of North Carolina's approximate 5.9 million jobs as of year 2020.<sup>1</sup> The contribution by funding source is shown in **Figure III a** (following page) with the active duty and procurement category responsible for the vast majority of the employment impacts, followed by the contribution of payments to veterans, and finally the state-funded portions of support for the National Guard and Reserves.<sup>2</sup>

**Figure III b** (following page) shows the breakdown of employment contributions by veteran expenditures. The total employment contribution is 146,202 jobs, primarily consisting of the 70,687 supported by compensation and the pension program and the 64,765 supported by medical care expenditures.

<sup>1</sup> Total number of NC jobs estimate from REMI PI+ model.

<sup>2</sup> 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.

**Figure III a: Employment Contribution by Military Funding Source**



**Figure III b: Employment Contribution by Type of Veteran Expenditure**

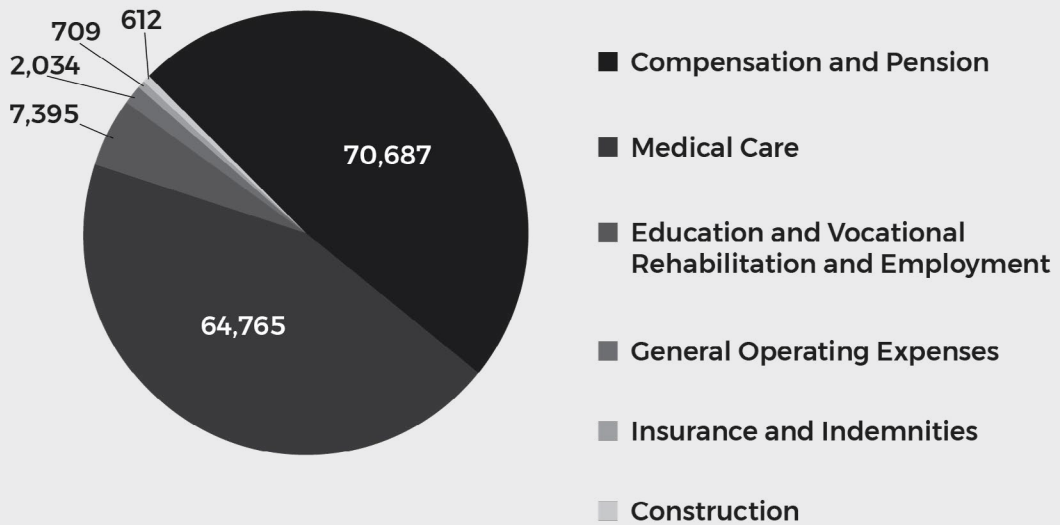
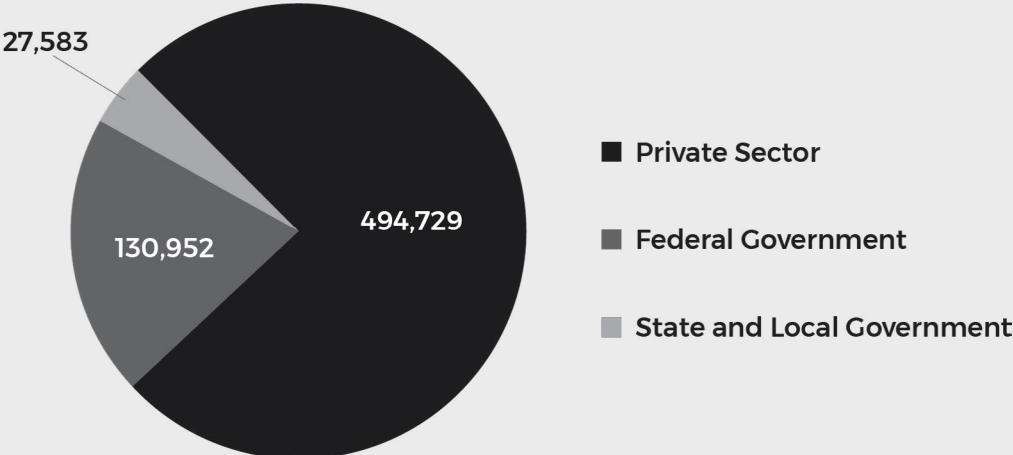


Figure IV shows the breakdown of the estimated 653,263 military-supported jobs by public or private industry. The breakdown is as follows: approximately 130,952 are federal government jobs, 27,583 are state and local government jobs, and 494,729 are private industry jobs.<sup>3</sup>

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



<sup>3</sup> 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 veteran expenditures. The employment impact is spread out across virtually all sectors, albeit to differing degrees. The Construction sector has the most military-supported jobs with nearly 80,000. Other major sectors include Health Care and Social Assistance; Retail Trade; Professional, Scientific, and Technical Services; and Administrative and Waste Management Services. Sectors least impacted by the military in absolute levels include Forestry, Fishing, and Related Activities; Mining; and Utilities.

**Figure V: Employment by Private Industry Sector and Source of Funds**

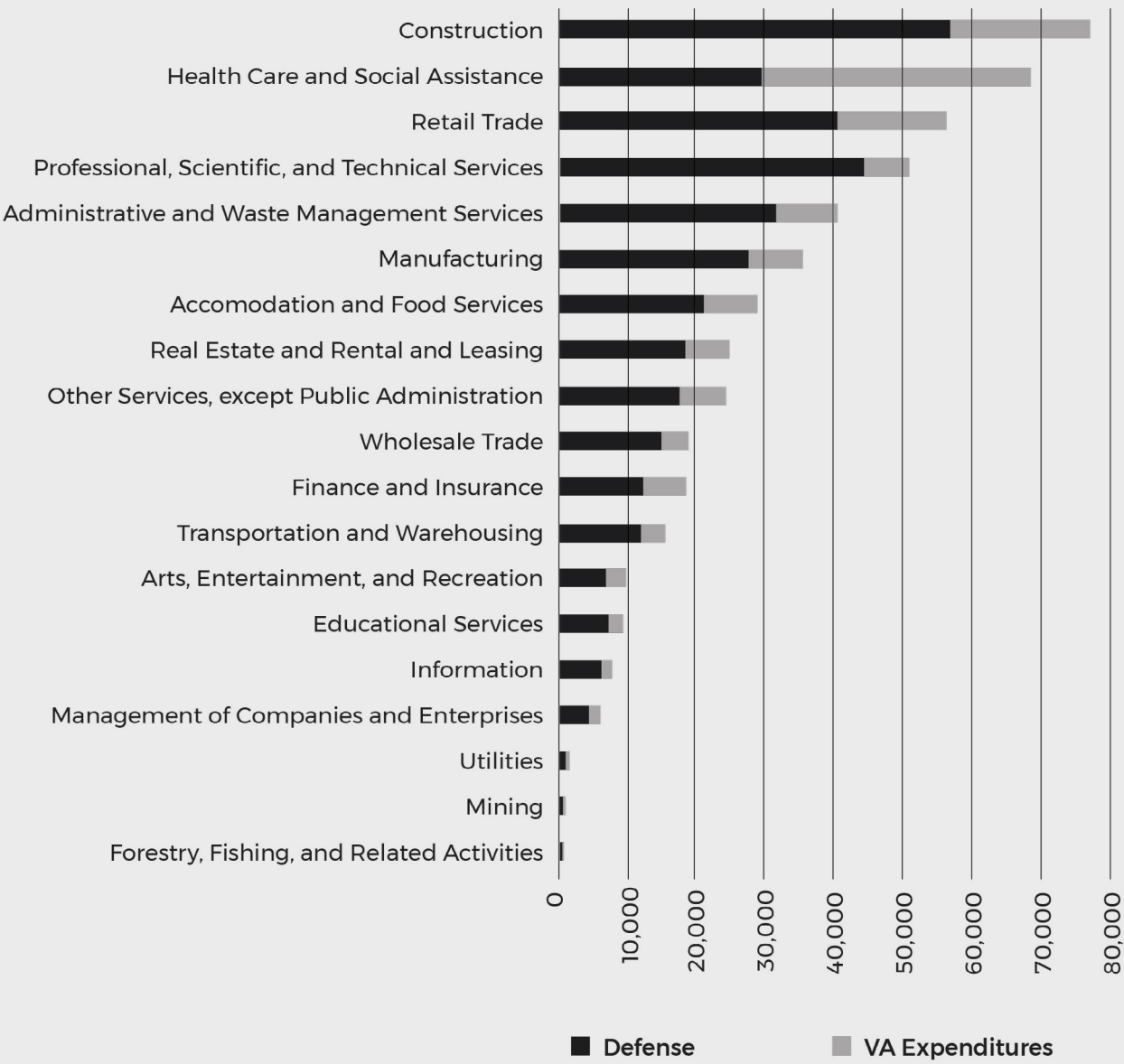
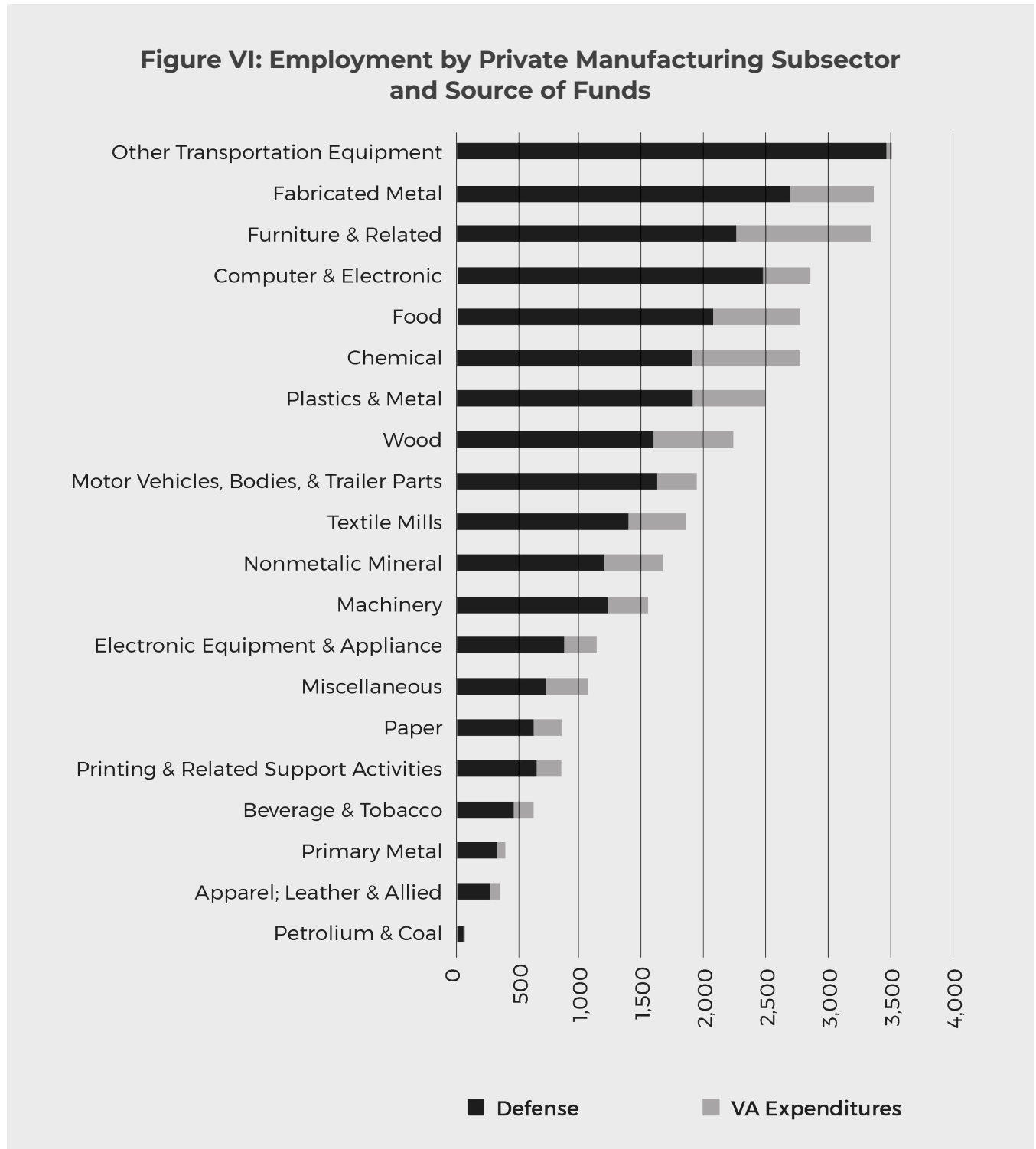


Figure VI shows the military-supported employment within the Manufacturing sector. Although manufacturing is only the sixth-highest sector impacted by military spending, it is of great importance to the North Carolina economy due to its concentration and associated high wages and spending multipliers.





## THE 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. Seven of the top 10 industry sectors shown in Figure V also make the top 10 in terms of their percentage of total sector employment — Construction; Professional, Scientific, and Technical Services; Health Care and Social Assistance; Administrative and Waste Management Services; Wholesale Trade; Retail Trade; and Real Estate and Rental and Leasing. There are three other sectors that did not make the top 10 in absolute terms, but did in relative terms, including Arts, Entertainment, and Recreation; Mining; and Information.

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

SECTOR	PERCENTAGE OF TOTAL SECTOR JOBS IN NC SUPPORTED BY MILITARY
Construction	20.6%
Professional, Scientific, and Technical Services	13.1%
Health Care and Social Assistance	12.3%
Administrative and Waste Management Services	10.1%
Wholesale Trade	9.6%
Arts, Entertainment, and Recreation	9.6%
Mining	9.5%
Retail Trade	9.2%
Real Estate and Rental and Leasing	8.9%
Information	8.3%



## 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>4</sup> The REMI model shows that the military (including veteran expenditures) supports an estimated \$49.1 billion in North Carolina personal income, which is 8.9 percent of total statewide personal income. Additionally, the model estimates that the military (including veteran expenditures) is responsible for \$79.7 billion, or 12.7 percent, of gross state product.

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

RESULTS CATEGORY	GROSS STATE PRODUCT	PERSONAL INCOME
General Defense (\$)	\$65.6 billion	\$36.0 billion
General Defense (%)	10.4% of total	6.5% of total
Veteran Expenditures (\$)	\$14.2 billion	\$13.2 billion
Veteran Expenditures (%)	2.2% of total	2.4% of total
Combined (\$)	\$79.7 billion	\$49.1 billion
Combined (%)	12.7% of total	8.9% of total

<sup>4</sup> For precise definitions of personal income or gross product, please see the REMI Glossary section above.



# Conclusions

## 653,000

The military supports 653,000 jobs in North Carolina, over \$49 billion in state personal income, and nearly \$80 billion in gross state product.

“

North Carolina’s military is an economic engine; providing jobs, security and improving quality of life for all citizens... ”

RODNEY ANDERSON, CHAIR  
NORTH CAROLINA MILITARY AFFAIRS COMMISSION

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 \$49.1 billion, and the impact on gross state product is \$79.7 billion. Overall, the military supports roughly 11 percent of employment, nearly 9 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 veteran expenditures to retired military personnel are also important components.

An estimated 495,000 jobs supported by the military are private industry jobs, 131,000 are federal military jobs, and 28,000 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 Construction and Professional, Scientific, and Technical Services. 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.



# Acknowledgements

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## PHOTO CREDITS

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Officer Bryan Nygaard

2021 International Sniper Competition, K. Kassens

CMC's NC Visit, Staff Sgt. Gabriela Garcia

USACAPOC(A) August 2021 Fort Bragg, N.C., airborne  
operations, SFC Lisa Litchfield \

2019 Wings Over Wayne Airshow, SSgt Alexander Cook

1/2 MCCRE, Lance Cpl. Sarah Pyscher

161<sup>st</sup> CES readiness training in NC, Master Sgt. Michael  
Matkin

Coast Guard rescues 2 aboard disabled sailboat south of  
Cape Hatteras, NC, Petty Officer 3<sup>rd</sup> Class Joshua Canup

U.S. Army Civil Affairs and Psychological Operations  
Command (Airborne) takes to the skies, SFC Lisa  
Litchfield

Airborne Operation, Paolo Bovo

1/2 MCCRE, Lance Cpl. Sarah Pyscher

Coast Guard commissions 44<sup>th</sup> Fast Response Cutter,  
Petty Officer 2<sup>nd</sup> Class Paige Hause

Norwegian armoured infantry train with U.S. Marines, Sgt  
William Chockey

Staff Sgt. Michot Reenlistment Ceremony, by SGT Hunter  
Garcia

2d CEB MCCRE, LCpl Deja Thomas

The U.S. Army Parachute Team teach local NC Soldiers  
how to skydive, SGT Brian Collett