

Data Visualization: The Appalachian Regions Contribution to Defense

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The Appalachian Region of the United States has long been recognized as one of the most patriotic areas in the country. From contributing soldiers to both Union and Confederate forces during the Civil War to leading enlistment surges in the post-9/11 era, Appalachia has consistently provided a disproportionately high number of service members. Statistical analysis of socioeconomic, cultural, and geographical factors contributing to this trend is vital to understanding the significance of military service in the 13 Appalachian states.

The Appalachia region is home to some of the poorest communities in the United States. Economic hardship and limited job opportunities make military service appealing to young men and women in the region. For many, military service is a means to achieve financial stability, advanced education, and career training to escape the continuous cycle of poverty. A common sentiment in the region, "If you can make it out of here, you can make it anywhere," reflects the motivation and reality of many to enlist to escape economic hardships. In turn, military recruiters target areas within this region known for high income inequality, where incentives such as signing bonuses and tuition assistance are incredibly effective in attracting new recruits.

Appalachia has a deep-rooted military tradition where service is seen almost as the "family business." Young people are often raised in families with multiple generations of military service, driving a strong cultural expectation of enlistment. According to Lieutenant Colonel Keith Bryant, commander of the Mid-Atlantic U.S. Army Recruiting Battalion, 79% of the Army's newest recruits have relatives who have served (Linehan, 2017). Exposure to veterans within families and communities fosters a sense of duty, patriotism, and familiarity with military life, influencing enlistment decisions.

Appalachia is also home to the country's largest military bases and defense contractor hubs. Fort Bragg in North Carolina, the nation's largest military installation by population, sits squarely within the region. Presence of bases such as this contribute to a higher level of military familiarity among residents and provides additional economic incentives through civilian jobs in defense contracting and military support services (Save, 2024).

**\*\*\*Insert Appendix A (Graph provides percentage of Veterans, Active Duty, and Recruits per state) \*\*\***

The Population Representation in the Military Services report, published by the Office of the Under Secretary for Personnel and Readiness, details Non-Prior Service (NPS) Enlisted Accessions, or new military recruits. FY12 data reveals similar trends for Appalachian states, demonstrating consistency while underscoring the long-standing link between regional demographics and active-duty military enlistment rates (OPA, 2014). Appalachia recruits accounted for 33.31%, 8.3% higher than the second highest producer, the West Region (24.35%), and 20.4% higher than the lowest producer, the Northeast Region (12.95%). This trend is significant because areas with higher veteran populations tend to correlate higher numbers of recruits (OPA, 2024). Furthermore, FY22 confirms that four of the ten states with the highest military enlistment rates include several Appalachian states: Virginia, North Carolina, South Carolina, and Georgia. Additionally, four more Appalachian states—Alabama, Maryland, Mississippi, and Tennessee—fell into the second-highest recruitment category (OPA, 2024).

While the percentages are higher, further analysis sheds light on the impact of military service on each state's populace. While raw data for this metric is not readily available, in 2019, the Watson Institute at Brown University compiled estimates that indicate two of the five states bearing the highest burden of military service in post-9/11 wars were from Appalachia: Georgia and South Carolina (Save, 2024). While this data only accounted for the small portion of service members deployed, it provided a great enough sample size to predict the true demographic

composition of the active military force. As a result, the data supports my hypothesis that of the roughly 1.3 million active service members, Appalachia contributes more than any other region at over 30%.

**\*\*\*Insert Appendix B (Graph provides percentage of Veterans, Active Duty, and Recruits per region) \*\*\***

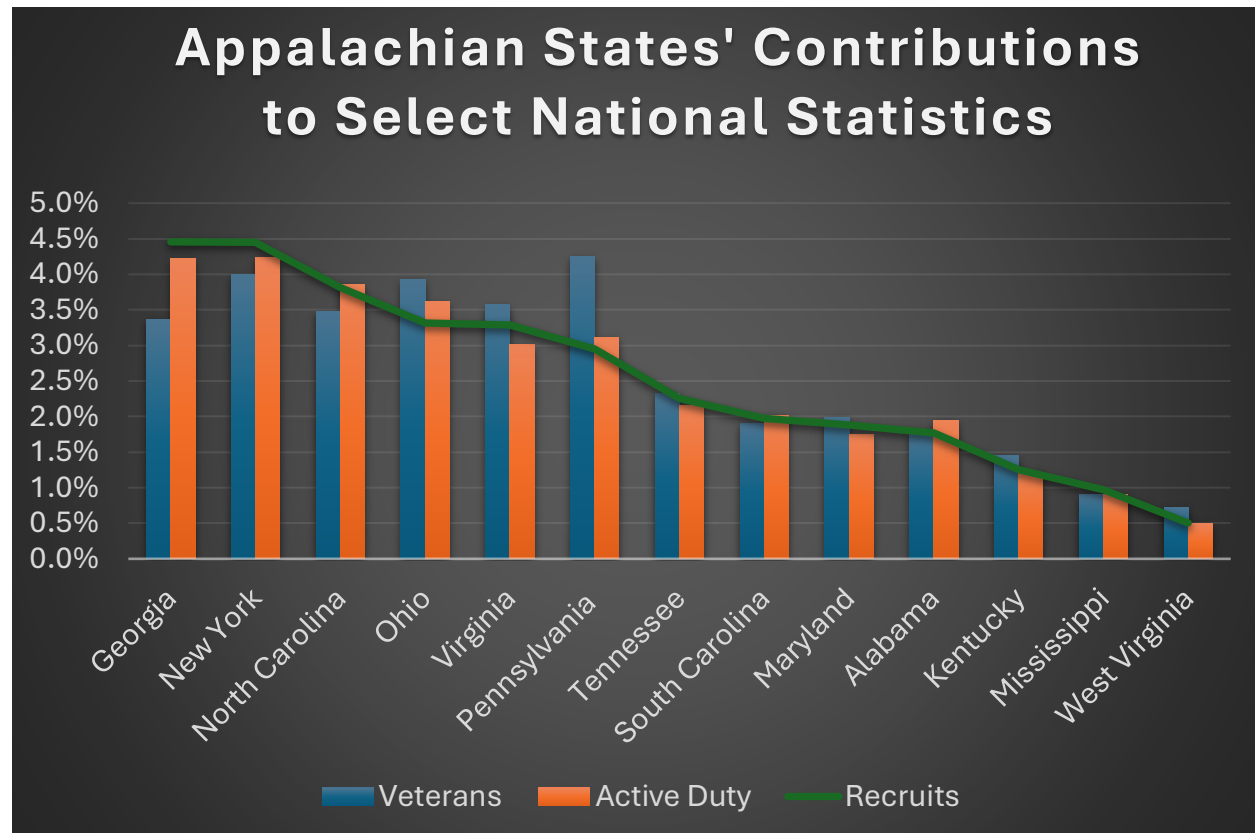
Appalachia also leads the country in recruiting representation of the population. Researchers calculate this statistic, or representation ratios, based area's percentage of recruits divided by the percentage of 18-24-year-old populations for each state that serves as the target base for recruiting efforts. Appalachia is the only region with a representation ratio, higher than 1. Of the 13 states, only New York (0.77), Pennsylvania (0.77), Ohio (0.92), and Tennessee (0.99) fail to obtain this benchmark.

**\*\*\*Insert Appendix C (Table provides raw data for populaces to include representation ratio) \*\*\***

The conclusion is that the Appalachian Region contributes at a disproportionately higher rate to the U.S. military and America's combined national defense. Economic hardship, cultural traditions, and geographical proximity to military installations directly contribute to this trend. By analyzing recruitment data, Appalachian states have consistently been overrepresented in military enlistment for decades and will likely continue to be overrepresented for decades to come. However, as economic opportunities in the region decline, imminent migration to proximal states could severely affect overall recruitment efforts.

Given the analysis of enlistment factors, policymakers must ensure that the decision to serve is an informed choice rather than one not predicated on economic necessity or survival if we are to produce an effective force reflective of the populace. Initiatives to expand vocational training, increase funding for higher education, and diversify economic opportunities in Appalachia could reduce economic reliance on military enlistment while providing a much more well-rounded, educated, and capable recruit to the force.

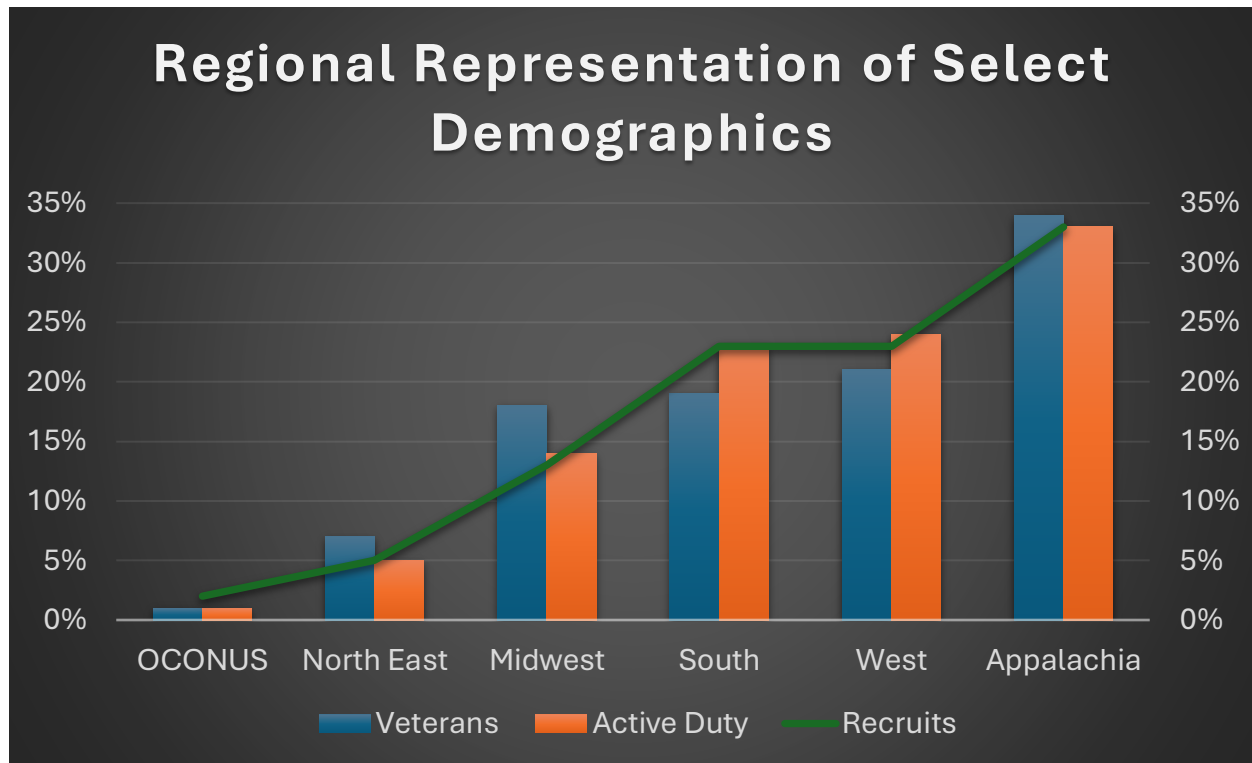
## Appendix A



Notes: Information is based state data compared to national population data. "Veteran" defined as those no longer in active service; "Active Duty" defined as those serving in the Armed Forces full time; "Recruits" are defined as those who have signed contract to begin Active Duty; All statistics are based on available 2020 (FY21) data.

Source: Office of the Under Secretary of Defense for Personnel and Readiness. (2021). *Population representation in the military services: Fiscal year 2020 summary report*. U.S. Department of Defense. <https://www.cna.org/research/pop-rep> ; U.S. Census Bureau Statistics *About Veterans in 2019 at a 90% Confidence Interval*; Office of the Deputy Assistant Secretary of Defense for Military Community and Family Policy. (2023). *2023 demographics profile of the military community*. U.S. Department of Defense.

## Appendix B



Notes: Information is based on national population data. Appalachia Region is an extrapolation of multiple regions. The South Region is composed of Florida, Arkansas, Texas, Louisiana, and Oklahoma. Delaware and Washington DC were moved to the North East Region from the South. Ohio was move to the Appalachia Region from the Midwest. "Veteran" defined as those no longer in active service; "Active Duty" defined as those serving in the Armed Forces full time; "Recruits" are defined as those who have signed contract to begin Active Duty; All statistics are based on available 2020 (FY21) data. Recruits only account for individuals assessing to Active Duty in the four main branches (Army, Navy, Air Force, Marine Corps).

Source: Office of the Under Secretary of Defense for Personnel and Readiness. (2021). *Population representation in the military services*:

## Appendix C

Table 1: Selected Population Data for States in Appalachia				
State	Recruits FY22	18-24yo Population	Representation Ratio	Total Population
New York	6,118	1,677,414	0.77	19,677,151
Georgia	5,951	932,274	1.39	10,912,876
North Carolina	5,131	918,448	1.21	10,698,973
Virginia	3,990	710,681	1.34	8,683,619
Ohio	3,653	1,047,954	0.92	11,756,058
Pennsylvania	3,585	1,114,780	0.77	12,972,008
Tennessee	2,765	601,030	1.09	7,051,339
South Carolina	2,614	446,170	1.28	5,282,634
Maryland	2,473	558,664	0.97	6,164,660
Alabama	2,070	420,224	1.22	5,074,296
Kentucky	1,458	365,846	0.99	4,512,310
Mississippi	1,149	236,633	1.19	2,940,057
West Virginia	591	138,041	1.06	1,775,156
Note: Recruits only account for individuals assessing to Active Duty in the four main branches (Army, Navy, Air Force, Marine Corps). Representation is based number of recruits in relation to the 18-24 year old population of each state.				

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