

Alabama Defense Factbook



Prepared by Thomas P. Miller & Associates on behalf of the Alabama Military Stability Foundation

Introduction

The state of Alabama is home to four major military installations, two Coast Guard facilities, 13 National Guard units, and 27 Reserve facilities. Anniston Army Depot, Fort Rucker, Maxwell-Gunter Air Force Base, and Redstone Arsenal—along with the Coast Guard Aviation Training Center, Coast Guard Sector Mobile, and the various National Guard and Reserve stations throughout the state—have a significant impact on Alabama’s economy. The military was responsible for economic output in Alabama equal to \$21 billion in FY 2016, accounting for 8.1 percent of Alabama’s gross domestic product (GDP).

In addition to hosting military personnel and employing thousands of civilians, these entities are engines for the Alabama economy. For example, Redstone Arsenal, which hosts the Missile Defense Agency, Space and Missile Defense Command, and NASA Marshall Space Flight Center, is a nucleus for a significant aerospace industry and research cluster in the Huntsville Region. Military bases also support aviation-related economic activity in Alabama through training facilities at Maxwell-Gunter Air Force Base, Fort Rucker, and the Coast Guard Aviation Training Center in Mobile. In addition, the state is home to strong military equipping missions, such as the Anniston Army Depot, the Defense Logistics Agency, and the Army Materiel Command. These bases generate economic activity for an array of contractors, such as BAE Systems, Boeing, General Dynamics, and Lockheed Martin.

Alabama’s Economy & the Military

The military impacts Alabama in numerous ways, from contracts with the Department of Defense, to the spending of active duty military members, civilians, National Guard members and reservists, to veterans’ pensions. Individually, each of these income streams provides a significant boost to the state’s economy but to appreciate their full

impact, one must also consider the ripple effect as income is generated for a much broader audience of Alabamians. Each of the above-listed groups spends a portion of their income to support their families and local businesses. These secondary rounds of spending also can be attributed to the military when determining the military’s total economic impact.

The Alabama Defense Factbook (Factbook) attempts to quantify the full economic impact of these entities by detailing the variety of funds received and estimating multiplier effects produced through successive rounds of spending. Impacts are first presented for the state of Alabama, followed by seven multi-county sub-state regions, and ten individual counties. Please note that, for the sake of privacy, full details are withheld regarding the type of personnel and exact payroll.

Study Overview & Methodology

Each of the following organizations and funding streams is represented in this study:

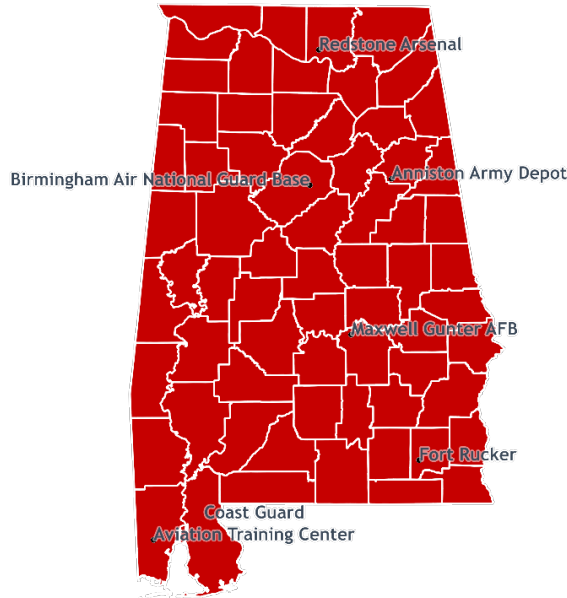
- U.S. Army;
- U.S. Air Force;
- U.S. Coast Guard;
- Reserve and National Guard (Army National Guard, Army Reserve, Air National Guard, Air Force Reserve, Marine Corps Reserve, Navy Reserve, & Coast Guard Reserve);
- Department of Defense prime contractors with primary place of performance in Alabama;
- Companies, government agencies, and non-profits receiving grants issued by the Department of Defense; and
- NASA prime contractors associated with the Department of Defense and with primary place of performance in Alabama.¹

In addition, payroll, place of residency, and place of employment data were collected on civilian, retiree, and active duty personnel associated with each of the installations displayed in the map on the following page.²

¹Though NASA is not a division of the Department of Defense, it is included in this study due to the Marshall Space Flight Center’s location at Redstone Arsenal.

²Please note, the number of active duty and civilians listed in this report are recorded based on place of residency rather than place of employment, because individuals typically spend more near their place of residency than their place of employment.

Alabama Defense Factbook



Certain terminology used in this *Factbook* may be unfamiliar to some. To address this issue, a Glossary of Economic Impact Terminology is provided at the conclusion of this *Factbook*.

This *Factbook* was compiled as part of a larger study using data gathered from each of the state’s military units and installations, as well as various federal government databases. This information was cleaned and analyzed through economic impact modeling. The study culminated in this Alabama Defense Factbook as well as the publication of a report entitled *Economic Impact Analysis of the Military in Alabama*.

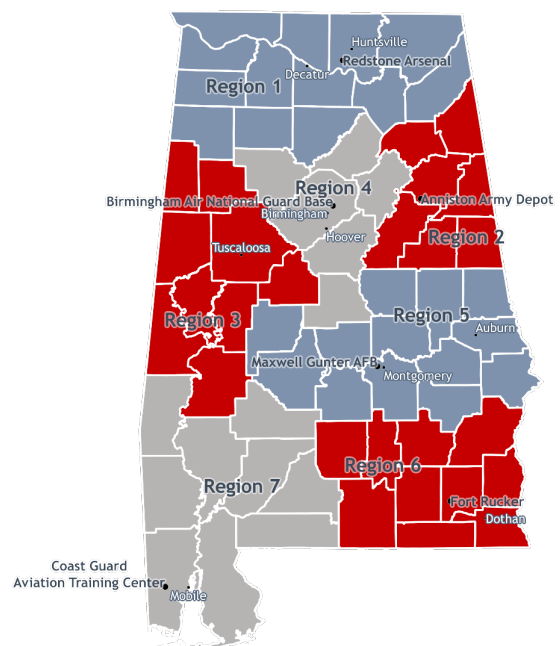
In order to complete the study and prepare this *Factbook*, headcounts and spending data were collected from all Alabama installations. Then, it was ensured that all data were properly tagged with geographic location and industry category—data points that are essential for an economic impact analysis. Finally, the Impact Analysis for Planning (IMPLAN) model was used to generate economic impact calculations for each region and the state. IMPLAN is a national leader in regional input-output modelling and has been used for similar military impact studies across the United States. Additional details on the methodology of this study are contained at the conclusion of the *Factbook*, and a fuller

treatment is provided in the *Economic Impact Analysis of the Military in Alabama* report.

Economic impact analysis models are driven by economic multiplier effects, which estimate households’ and companies’ spending patterns within a given geographic area. In order to calculate meaningful multiplier effects, economic impact analysis must be based on functional economic regions. The Alabama Department of Commerce’s 2016 Workforce Council regions were used for this purpose.

In addition to these seven regions, an impact analysis was completed for ten counties that performed the largest dollar value of contracts in Fiscal Year 2016 or hosted a large number of individuals on the Department of Defense payroll. These counties are as follows, in order of total impact:

- Madison County;
- Mobile County;
- Dale County;
- Montgomery County;
- Jefferson County;
- Calhoun County;
- Tuscaloosa County;
- Limestone County;
- Talladega County; and
- Houston County.

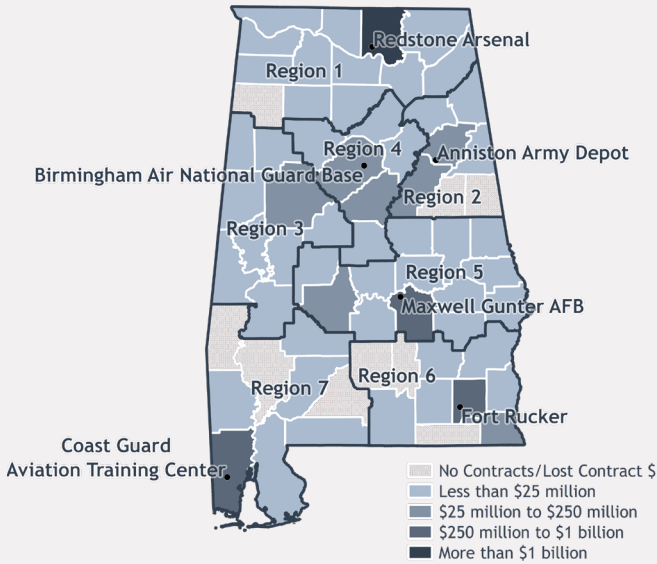




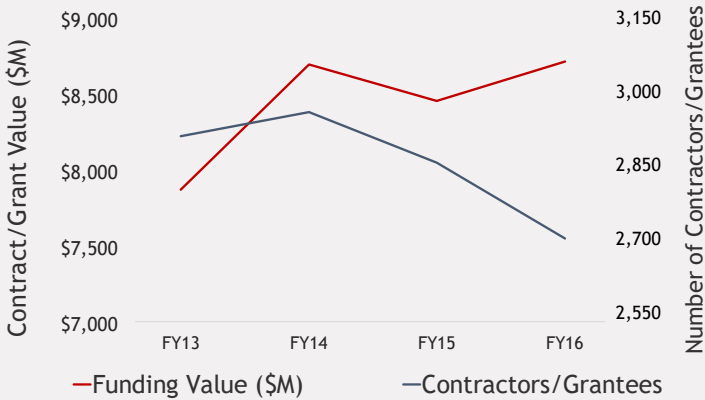
Alabama

Alabama Military Stability Foundation

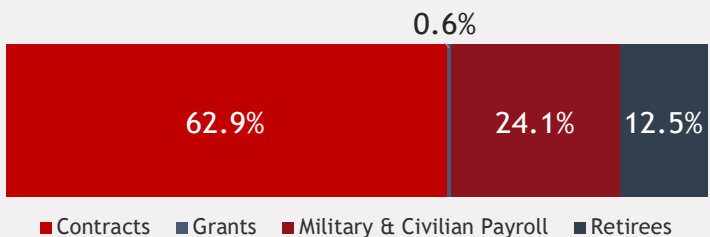
Military impact in Alabama is largest around the state's military installations.



While Alabama's funding value (combined contracts, grants, and SBIR) rose slightly, the number of recipients decreased between FY13 and FY16.¹



Just under 65% of Alabama's direct impact is from contracts.²



Defense Dashboard³

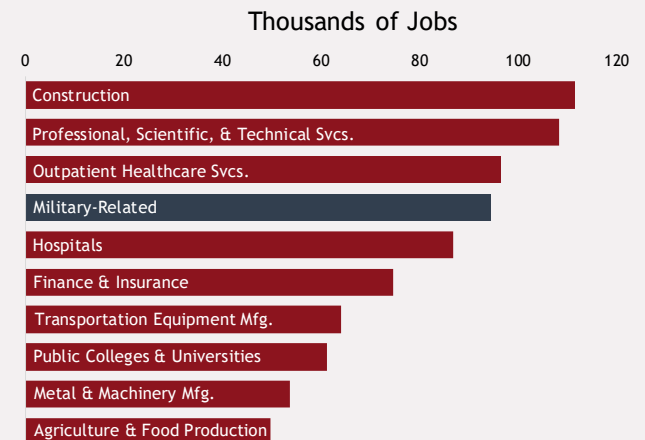
Total Impact (\$M)	\$20,985
Percent of Net Economic Activity	8.1%
Military Spending Per Resident	\$2.40
Estimated Active Duty Personnel	9,805
Estimated Civilians	33,068
Estimated Military Retirees	60,837
Military Funding Multiplier	\$1.79

Total Statewide Impact²

Jobs	210,564
Earnings (\$M)	\$12,951
Output (\$M)	\$20,985
Value Added (\$M)	\$17,000
State & Local Taxes (\$M)	\$991
Federal Taxes (\$M)	\$1,689

Direct Impact Comparison⁵

Statewide military-related employment exceeds some of Alabama's most significant industries such as Transportation Equipment Manufacturing and Agriculture & Food Production.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.

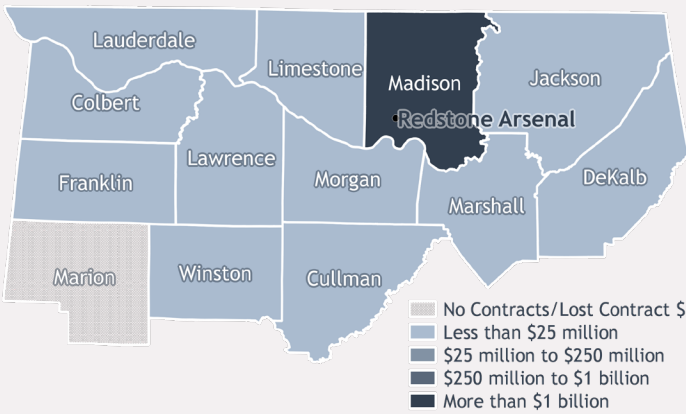


Region 1

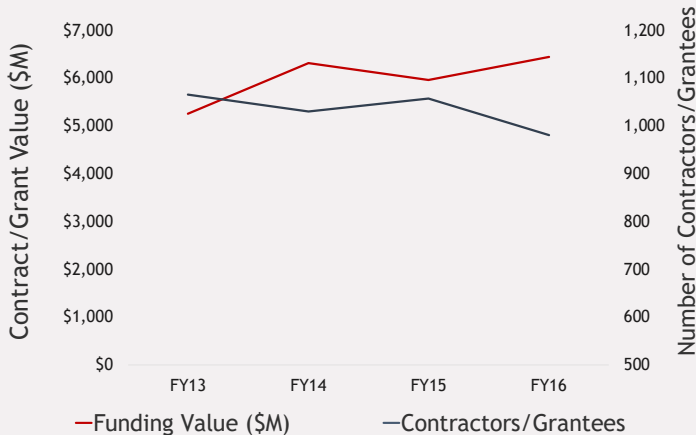
Alabama Military Stability Foundation

COUNTIES: LAUDERDALE | COLBERT | FRANKLIN | MARION | LAWRENCE | WINSTON
| LIMESTONE | MORGAN | CULLMAN | MADISON | MARSHALL | JACKSON | DEKALB

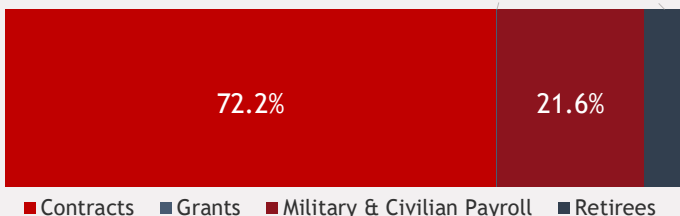
Procurement impact in Region 1 is strongest in Madison County, with \$6.3 billion in contracts and grants in FY 2016.¹



While funding value rose slightly, the number of recipients decreased in Region 1 between FY 13 and FY16.¹



Over 70% of Region 1's direct impact is from contracts.²



Defense Dashboard³

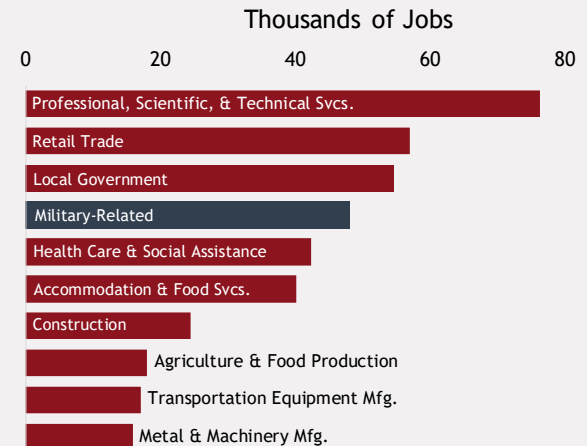
Total Impact (\$M)	\$11,869
Percent of Net Economic Activity	18.6%
Military Spending Per Resident	\$6.52
Estimated Active Duty Personnel	1,033
Estimated Civilians	16,708
Estimated Military Retirees	7,980
Military Funding Multiplier	\$1.60

Total Regional Impact²

Jobs	105,199
Earnings (\$M)	\$7,011
Output (\$M)	\$11,869
Value Added (\$M)	\$9,045
State & Local Taxes (\$M)	\$476
Federal Taxes (\$M)	\$946

Direct Impact Comparison⁵

Military-related employment in Region 1 exceeds significant industries such as Health Care & Social Assistance and Transportation Equipment Manufacturing.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.

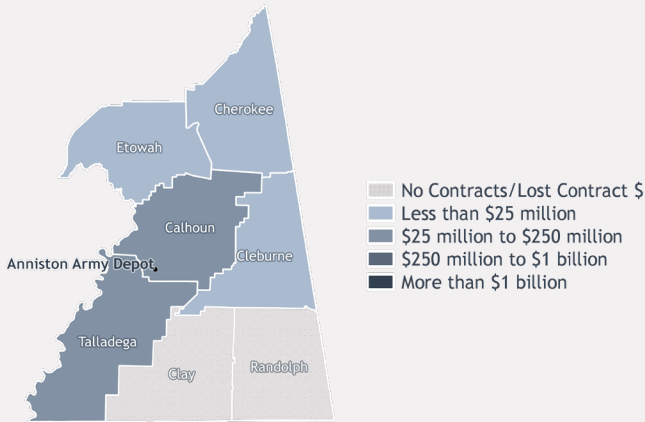


Region 2

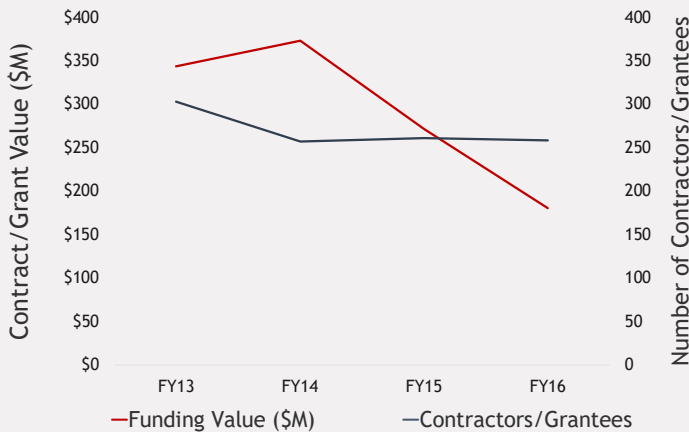
Alabama Military Stability Foundation

COUNTIES: CHEROKEE | ETOWAH | CALHOUN | CLEBURNE | RANDOLPH | CLAY | TALLADEGA

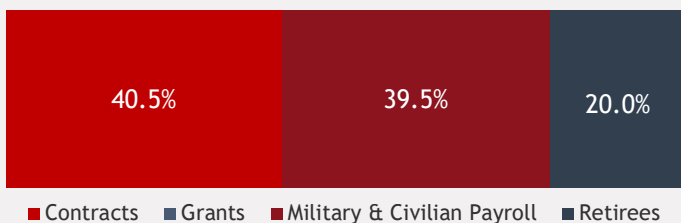
Procurement impact in Region 2 is strongest in Calhoun County with \$117.3 million in contracts in FY 2016.¹



Funding value and the total number of recipients both decreased in Region 2 between FY13 and FY 16.¹



Nearly 60% of Region 2's direct impact is from military and civilian payroll and retirees.²



Defense Dashboard³

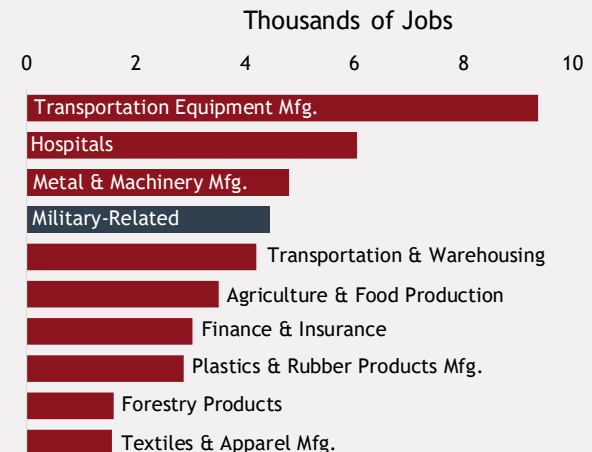
Total Impact (\$M)	\$437
Percent of Net Economic Activity	4.5%
Military Spending Per Resident	\$0.81
Estimated Active Duty Personnel	48
Estimated Civilians	2,984
Estimated Military Retirees	2,606
Military Funding Multiplier	\$1.44

Total Regional Impact²

Jobs	7,583
Earnings (\$M)	\$462
Output (\$M)	\$437
Value Added (\$M)	\$551
State & Local Taxes (\$M)	\$34
Federal Taxes (\$M)	\$33

Direct Impact Comparison⁵

Military-related employment in Region 2 exceeds significant industries such as Agriculture & Food Production and Plastics & Rubber Products Manufacturing.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

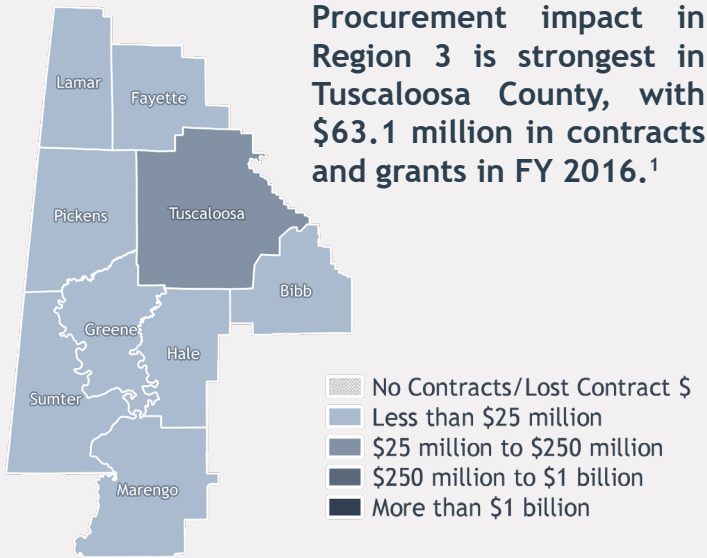
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



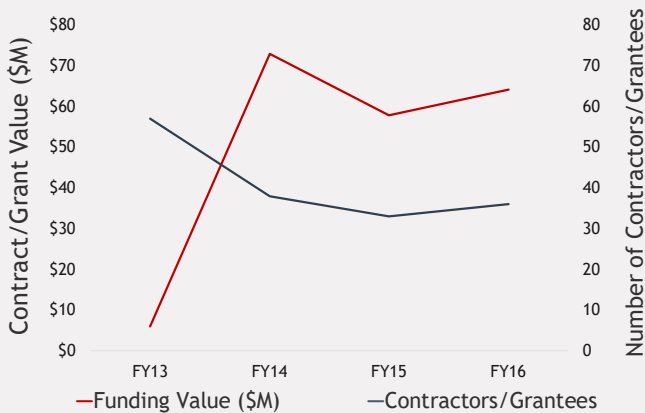
Region 3

Alabama Military Stability Foundation

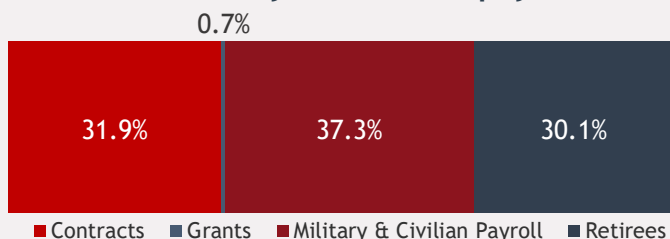
COUNTIES: LAMAR | FAYETTE | PICKENS | TUSCALOOSA | SUMTER | GREENE | HALE | BIBB | MARENGO



While funding value rose significantly, the number of recipients decreased in Region 3 between FY13 and FY16.¹



Over 65% of Region 3's direct impact is from retirees² or military and civilian payroll.²



Defense Dashboard³

Total Impact (\$M)	\$174
Percent of Net Economic Activity	1.7%
Military Spending Per Resident	\$0.37
Estimated Active Duty Personnel	22
Estimated Civilians	98
Estimated Military Retirees	2,636
Military Funding Multiplier	\$1.40

Total Regional Impact²

Jobs	1,703
Earnings (\$M)	\$184
Output (\$M)	\$174
Value Added (\$M)	\$237
State & Local Taxes (\$M)	\$13
Federal Taxes (\$M)	\$12

Direct Impact Comparison⁵

Military-related employment in Region 3 is comparable to industries such as Architectural & Structural Metals Manufacturing and Private Colleges & Universities.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.

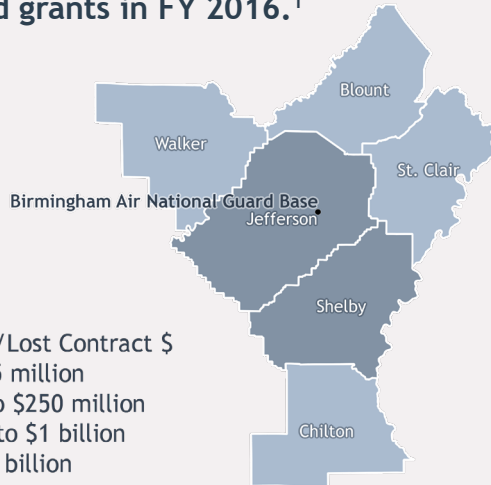


Region 4

Alabama Military Stability Foundation

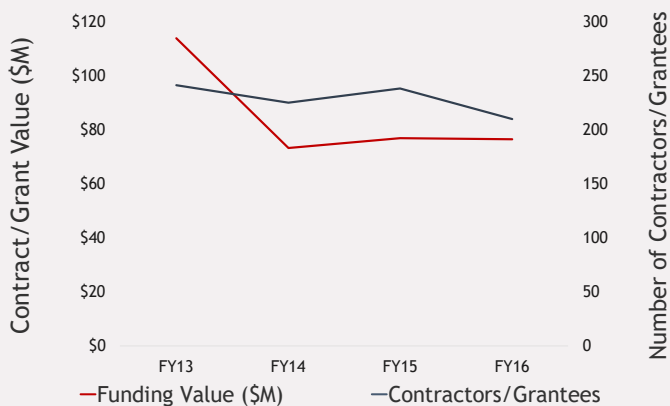
COUNTIES: WALKER | BLOUNT | JEFFERSON | ST. CLAIR | SHELBY | CHILTON

Procurement impact in Region 4 is strongest in Jefferson County, with \$46.8 million in contracts and grants in FY 2016.¹

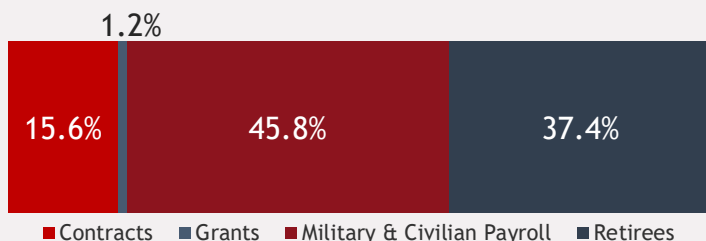


- No Contracts/Lost Contract \$
- Less than \$25 million
- \$25 million to \$250 million
- \$250 million to \$1 billion
- More than \$1 billion

Funding value and the total number of recipients both decreased in Region 4 between FY13 and FY16.¹



Approximately 83% of Region 4's direct impact is from retirees or military and civilian payroll.²



Defense Dashboard³

Total Impact (\$M)	\$640
Percent of Net Economic Activity	1.4%
Military Spending Per Resident	\$0.30
Estimated Active Duty Personnel	378
Estimated Civilians	1,679
Estimated Military Retirees	27,179
Military Funding Multiplier	\$1.90

Total Regional Impact²

Jobs	8,138
Earnings (\$M)	\$659
Output (\$M)	\$640
Value Added (\$M)	\$846
State & Local Taxes (\$M)	\$54
Federal Taxes (\$M)	\$60

Direct Impact Comparison⁵

Military-related employment in Region 4 is comparable to industries such as Child Day Care Services and Nonmetallic Mineral Product Manufacturing.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.

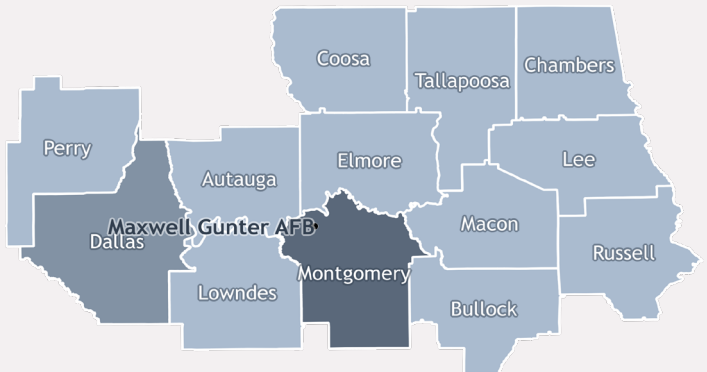


Region 5

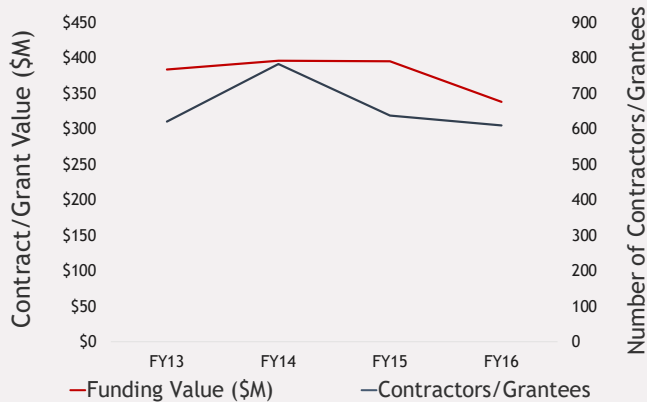
Alabama Military Stability Foundation

COUNTIES: COOSA | TALLAPOOSA | CHAMBERS | PERRY | DALLAS | AUTAUGA | ELMORE | MACON | LEE | LOWNDES | MONTGOMERY | BULLOCK | RUSSEL

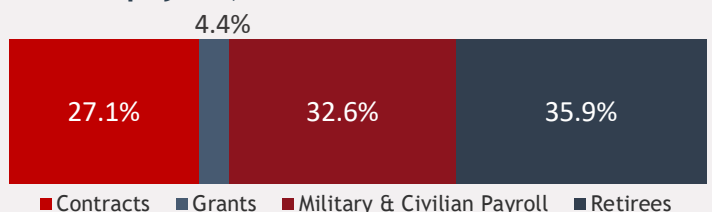
Procurement impact in Region 5 is strongest in Montgomery County, with \$274.8 million in contracts and grants in FY 2016.¹



While the value of contracts decreased from FY13 to FY16, the number of contractors remained relatively steady in Region 5.¹



The direct impact on Region 5 is fairly evenly distributed between contracts, military and civilian payroll, and retirees.²



Defense Dashboard³

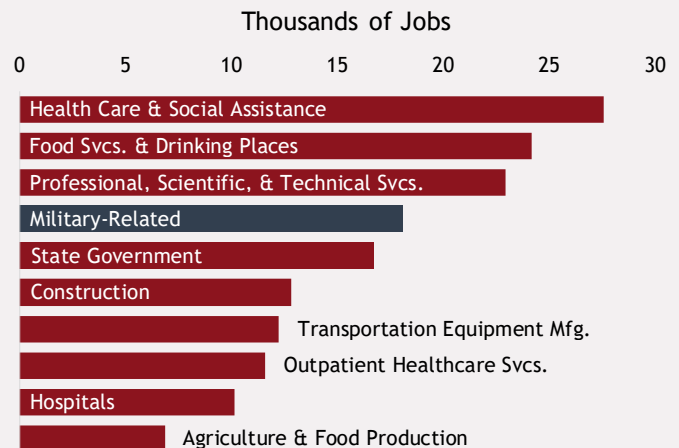
Total Impact (\$M)	\$1,315
Percent of Net Economic Activity	6.5%
Military Spending Per Resident	\$0.95
Estimated Active Duty Personnel	1,953
Estimated Civilians	9,128
Estimated Military Retirees	4,959
Military Funding Multiplier	\$1.83

Total Regional Impact²

Jobs	28,174
Earnings (\$M)	\$1,462
Output (\$M)	\$1,315
Value Added (\$M)	\$1,856
State & Local Taxes (\$M)	\$106
Federal Taxes (\$M)	\$152

Direct Impact Comparison⁵

Military-related employment in Region 5 exceeds significant industries such as State Government and Construction.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.

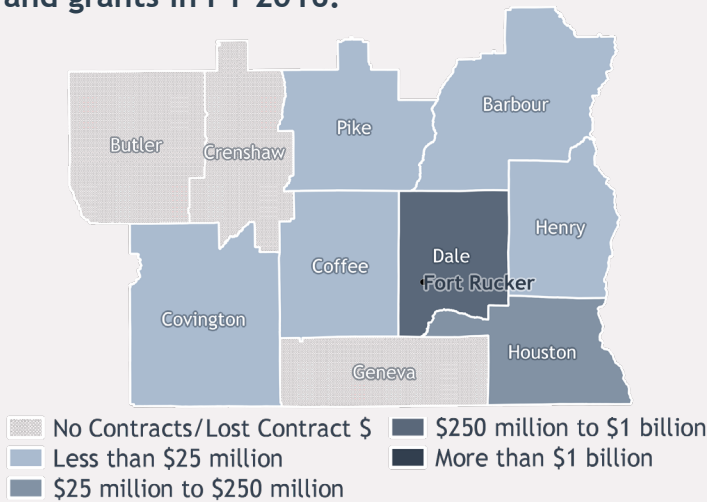


Region 6

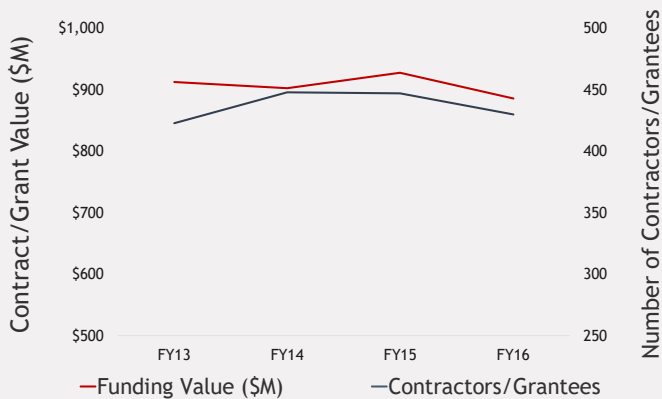
Alabama Military Stability Foundation

COUNTIES: BUTLER | CRENSHAW | PIKE | BARBOUR | COVINGTON | COFFEE | DALE | HENRY | GENEVA | HOUSTON

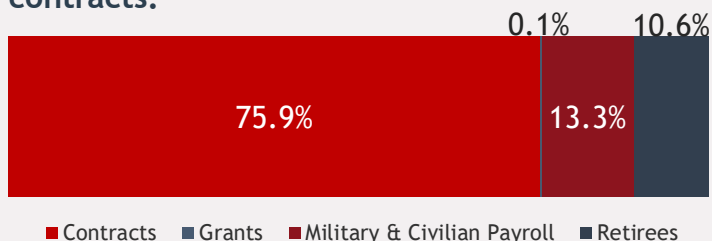
Procurement impact in Region 6 is strongest in Dale County, with \$842.1 million in contracts and grants in FY 2016.¹



The number of contractors in Region 6 spiked in FY14 and FY15, while total funding was volatile. Both decreased in FY16.¹



Over 75% of Region 6's direct impact is from contracts.²



Defense Dashboard³

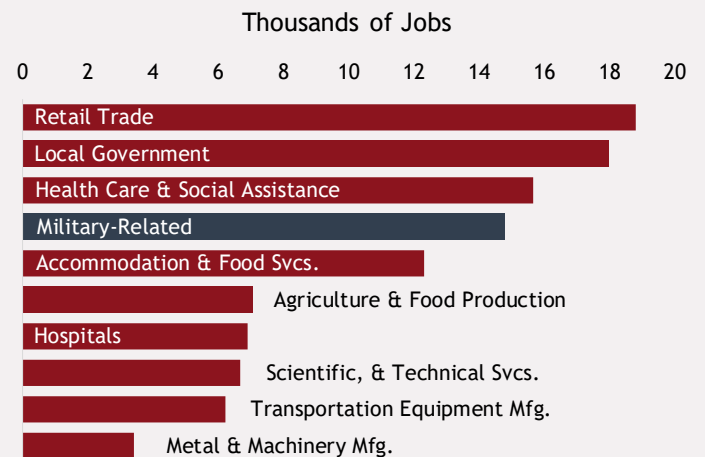
Total Impact (\$M)	\$1,936
Percent of Net Economic Activity	11.8%
Military Spending Per Resident	\$3.15
Estimated Active Duty Personnel	5,797
Estimated Civilians	2,041
Estimated Military Retirees	2,072
Military Funding Multiplier	\$1.61

Total Regional Impact²

Jobs	26,761
Earnings (\$M)	\$1,494
Output (\$M)	\$1,936
Value Added (\$M)	\$1,833
State & Local Taxes (\$M)	\$109
Federal Taxes (\$M)	\$165

Direct Impact Comparison⁵

Military-related employment in Region 6 exceeds significant industries such as Agriculture & Food Production and Hospitals.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.

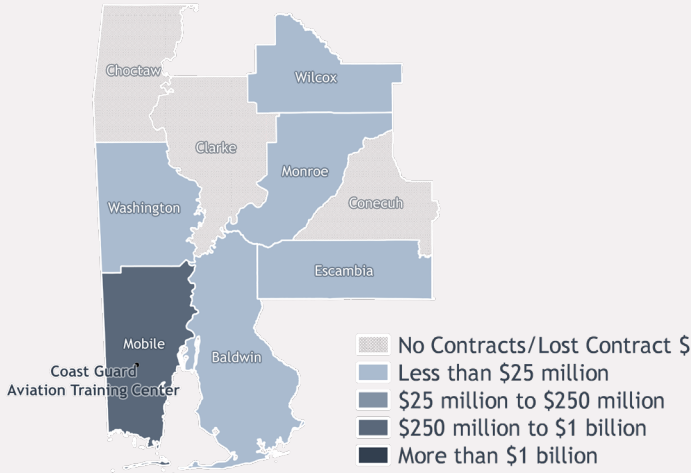


Region 7

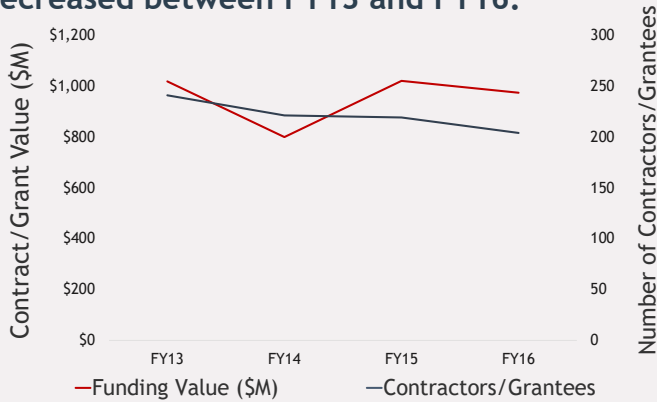
Alabama Military Stability Foundation

COUNTIES: CHOCTAW | WILCOX | WASHINGTON | CLARKE | MONROE | CONECUH
| MOBILE | BALDWIN | ESCAMBIA

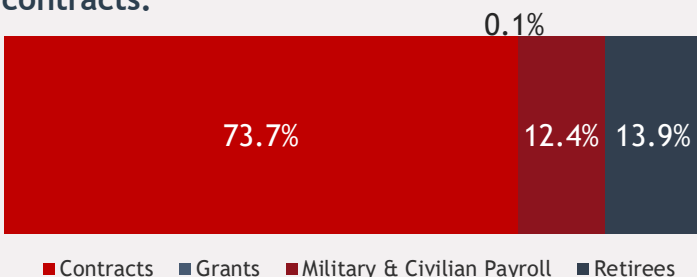
Procurement impact in Region 7 is strongest in Mobile County, with \$960.4 million in contracts and grants in FY 2016.¹



While funding value remained somewhat steady in Region 7, the number of contractors decreased between FY13 and FY16.¹



Nearly 75% of Region 7's direct impact is from contracts.²



Defense Dashboard³

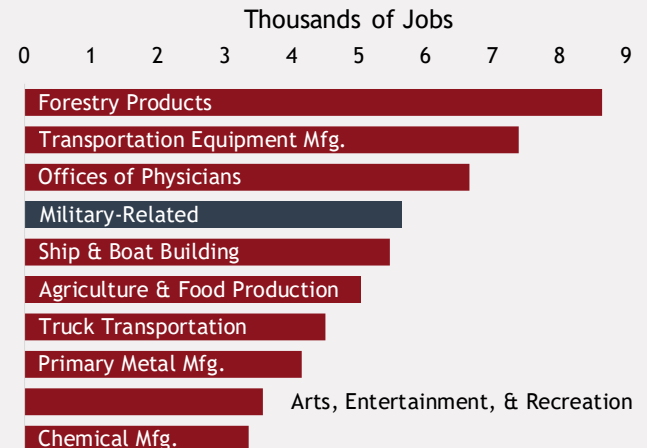
Total Impact (\$M)	\$1,815
Percent of Net Economic Activity	4.1%
Military Spending Per Resident	\$1.52
Estimated Active Duty Personnel	573
Estimated Civilians	430
Estimated Military Retirees	13,404
Military Funding Multiplier	\$1.57

Total Regional Impact²

Jobs	13,849
Earnings (\$M)	\$976
Output (\$M)	\$1,815
Value Added (\$M)	\$1,225
State & Local Taxes (\$M)	\$79
Federal Taxes (\$M)	\$133

Direct Impact Comparison⁵

Military-related employment in Region 7 exceeds significant industries such as Agriculture & Food Production and Primary Metal Manufacturing.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

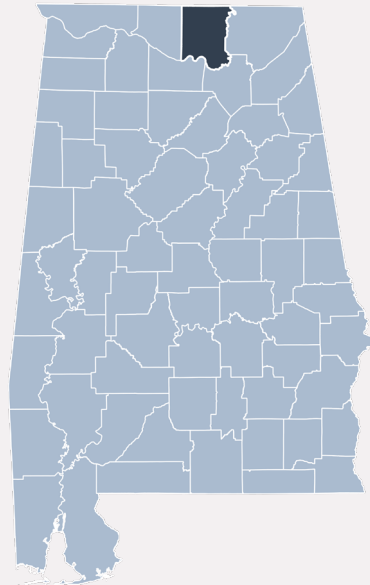
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



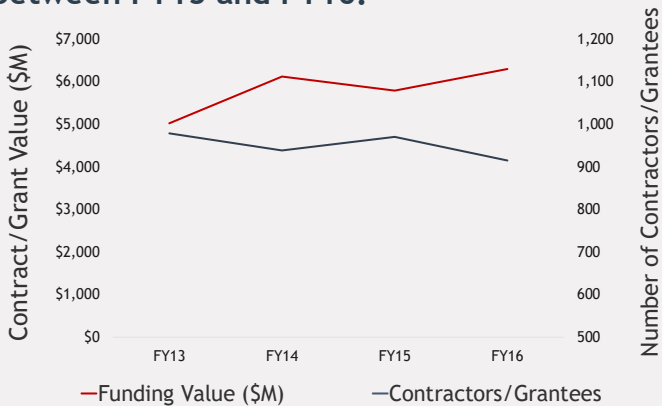
Madison County

Alabama Military Stability Foundation

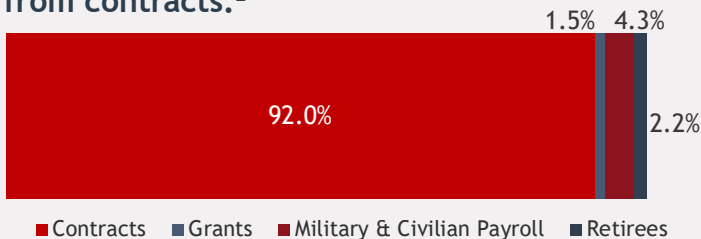
Madison County ranked 1st in the state with \$6.3B in military contracts, grants, and SBIR in FY 2016.¹



While funding value rose, the number of recipients in Madison County decreased between FY13 and FY16.¹



Over 90% of Madison County's direct impact is from contracts.²



Defense Dashboard³

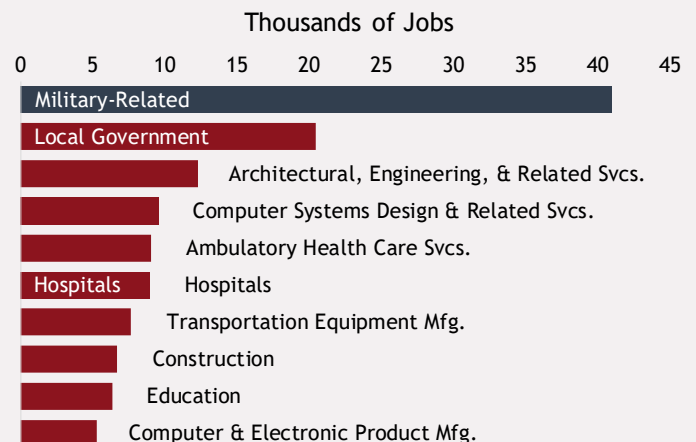
Total Impact (\$M)	\$10,566
Percent of Net Economic Activity	28.8%
Military Spending Per Resident	\$18.86
Estimated Active Duty Personnel	655
Estimated Civilians	11,370
Estimated Military Retirees	3,159
Military Funding Multiplier	\$1.57

Total County Impact²

Jobs	80,038
Earnings (\$M)	\$5,094
Output (\$M)	\$10,566
Value Added (\$M)	\$6,812
State & Local Taxes (\$M)	\$299
Federal Taxes (\$M)	\$783

Direct Impact Comparison⁵

Military-related employment in Madison County exceeds most economic sectors including Engineering & Related Services and Computer Systems Design & Related Services.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

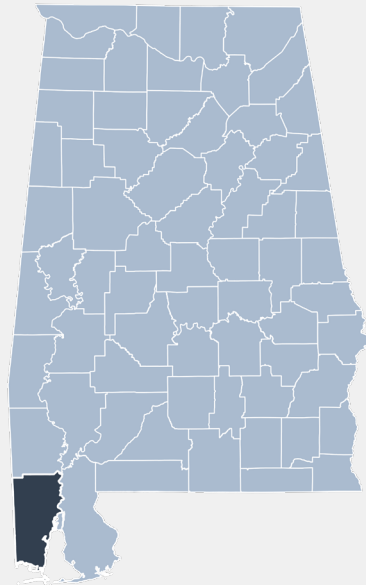
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



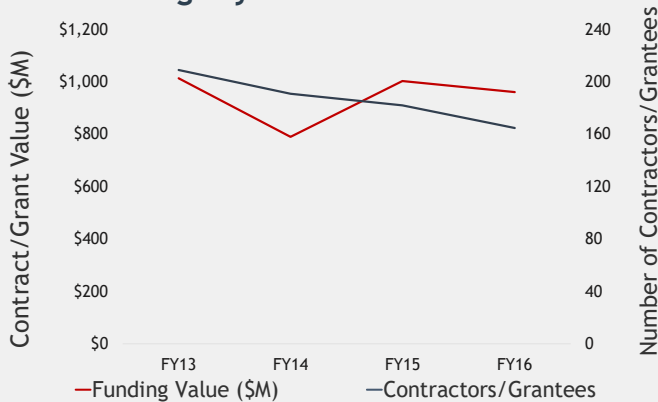
Mobile County

Alabama Military Stability Foundation

Mobile County ranked 2nd in the state with \$960.4M in military contracts, grants, and SBIR in FY 2016.¹



While funding value remained steady, the number of recipients in Mobile County decreased slightly between FY13 and FY16.¹



Approximately 82% of Mobile County's direct impact is from contracts.²



Defense Dashboard³

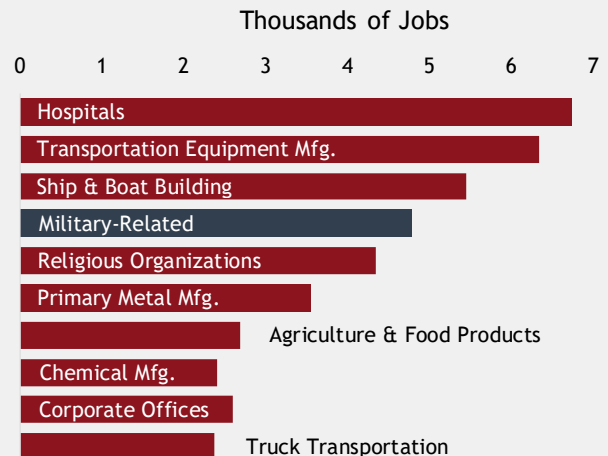
Total Impact (\$M)	\$1,673
Percent of Net Economic Activity	5.3%
Military Spending Per Resident	\$2.59
Estimated Active Duty Personnel	469
Estimated Civilians	232
Estimated Military Retirees	9,645
Military Funding Multiplier	\$1.56

Total County Impact²

Jobs	11,846
Earnings (\$M)	\$803
Output (\$M)	\$1,673
Value Added (\$M)	\$1,006
State & Local Taxes (\$M)	\$62
Federal Taxes (\$M)	\$118

Direct Impact Comparison⁵

Military-related employment in Mobile County exceeds significant industries such as Primary Metal Manufacturing and Agriculture & Food Production.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

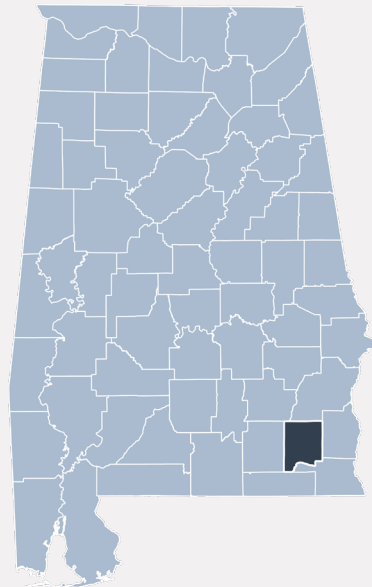
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



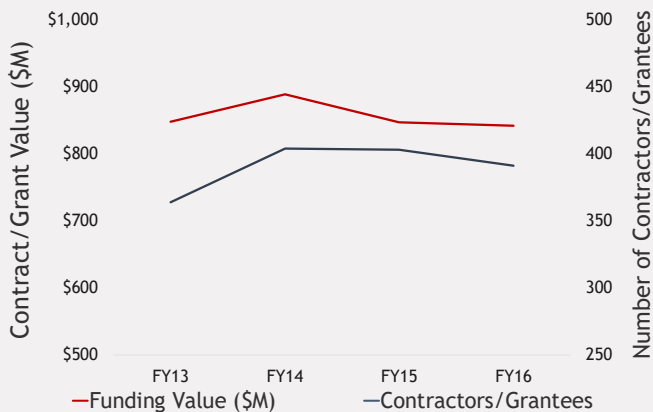
Dale County

Alabama Military Stability Foundation

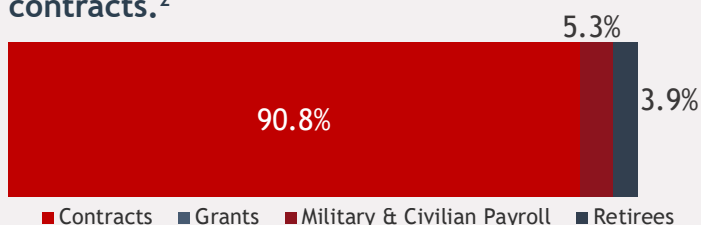
Dale County ranked 3rd in the state with \$842.1M in military contracts and grants in FY 2016.¹



While the number of recipients increased from FY13 to FY16, the funding value decreased slightly.¹



Over 90% of Dale County's direct impact is from contracts.²



Defense Dashboard³

Total Impact (\$M)	\$1,136
Percent of Net Economic Activity	18.1%
Military Spending Per Resident	\$17.91
Estimated Active Duty Personnel	832
Estimated Civilians	315
Estimated Military Retirees	246
Military Funding Multiplier	\$1.29

Total County Impact²

Jobs	9,448
Earnings (\$M)	\$600
Output (\$M)	\$1,136
Value Added (\$M)	\$744
State & Local Taxes (\$M)	\$26
Federal Taxes (\$M)	\$84

Direct Impact Comparison⁵

Military-related employment in Dale County exceeds most economic sectors including Aerospace Product & Parts Manufacturing and Local Government.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

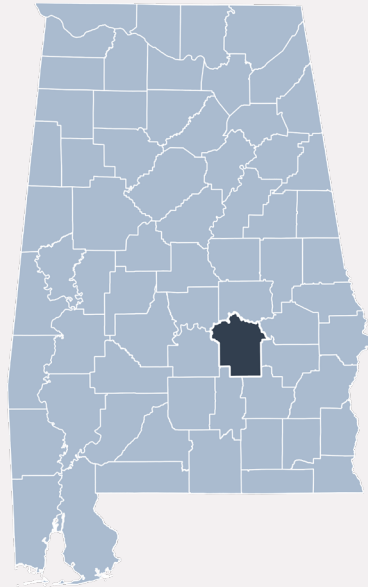
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



Montgomery County

Alabama Military Stability Foundation

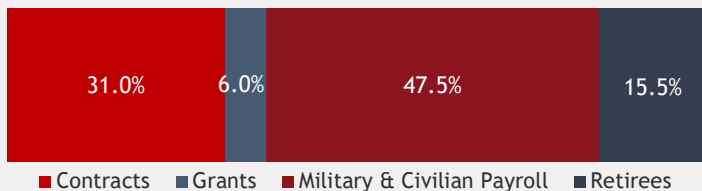
Montgomery County ranked 4th in the state with \$274.8M in military contracts and grants in FY 2016.¹



Both funding value and the number of recipients increased before returning to FY13 levels.¹



Montgomery County has the largest impact from grants of any county at 6%, but nearly 50% of its direct impact is from military and civilian payroll.²



Defense Dashboard³

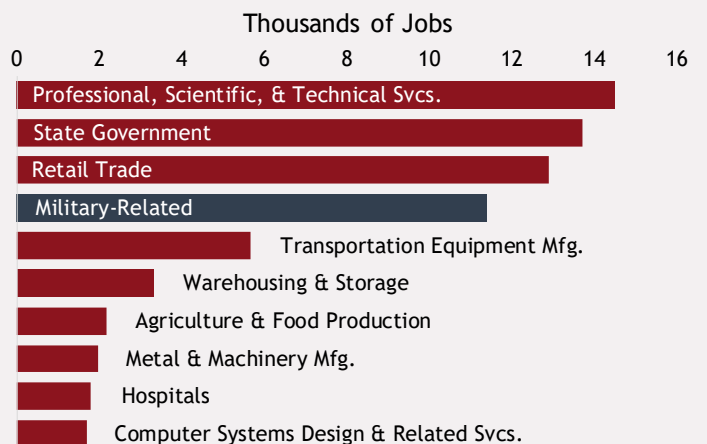
Total Impact (\$M)	\$1,042
Percent of Net Economic Activity	9.9%
Military Spending Per Resident	\$2.49
Estimated Active Duty Personnel	1,133
Estimated Civilians	5,365
Estimated Military Retirees	2,125
Military Funding Multiplier	\$1.85

Total County Impact²

Jobs	20,036
Earnings (\$M)	\$1,126
Output (\$M)	\$1,042
Value Added (\$M)	\$1,450
State & Local Taxes (\$M)	\$75
Federal Taxes (\$M)	\$124

Direct Impact Comparison⁵

Military-related employment in Montgomery County exceeds significant industries such as Transportation Equipment Manufacturing and Agriculture & Food Production.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

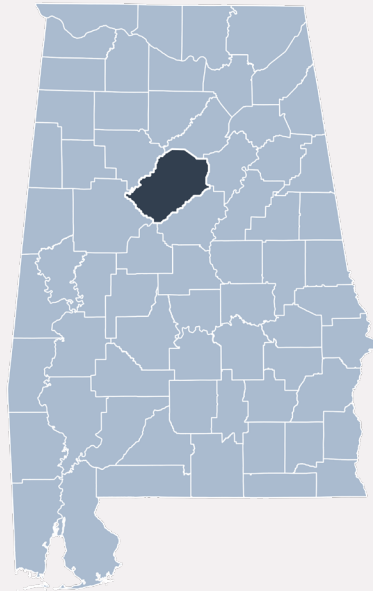
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



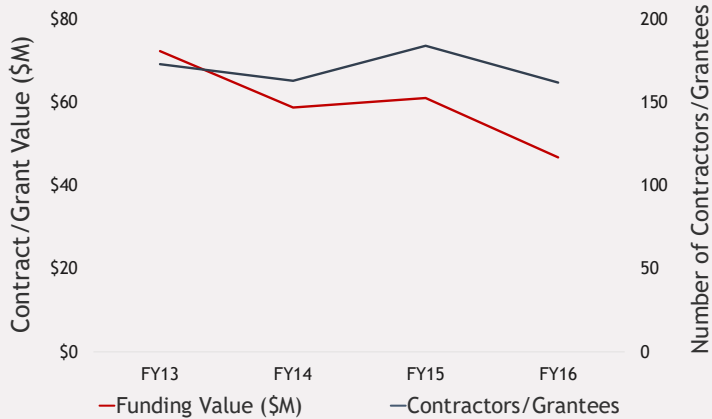
Jefferson County

Alabama Military Stability Foundation

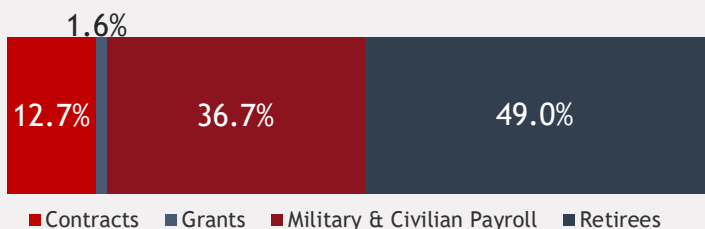
Jefferson County ranked 8th in the state with \$46.8M in military contracts and grants in FY 2016.¹



Both funding value and the number of recipients in Jefferson County were lower in FY16 than in FY13.¹



Nearly 50% of Jefferson County's direct impact is from retirees.²



Defense Dashboard³

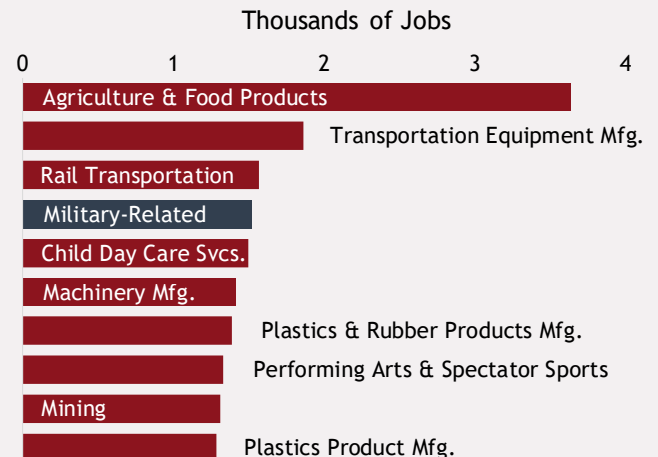
Total Impact (\$M)	\$446
Percent of Net Economic Activity	1.4%
Military Spending Per Resident	\$0.38
Estimated Active Duty Personnel	259
Estimated Civilians	971
Estimated Military Retirees	24,057
Military Funding Multiplier	\$1.80

Total County Impact²

Jobs	5,793
Earnings (\$M)	\$498
Output (\$M)	\$446
Value Added (\$M)	\$637
State & Local Taxes (\$M)	\$39
Federal Taxes (\$M)	\$42

Direct Impact Comparison⁵

Military-related employment in Calhoun County exceeds significant industries such as Finance & Insurance and Metal & Machinery Manufacturing.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

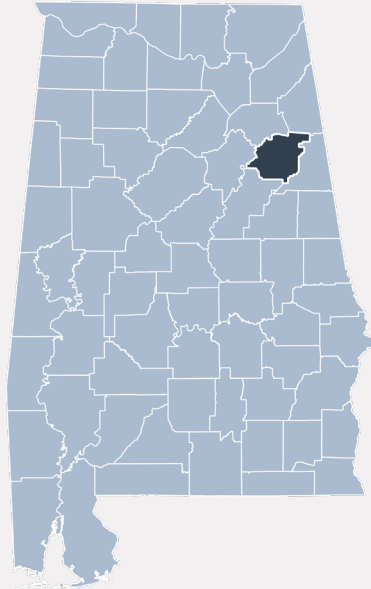
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



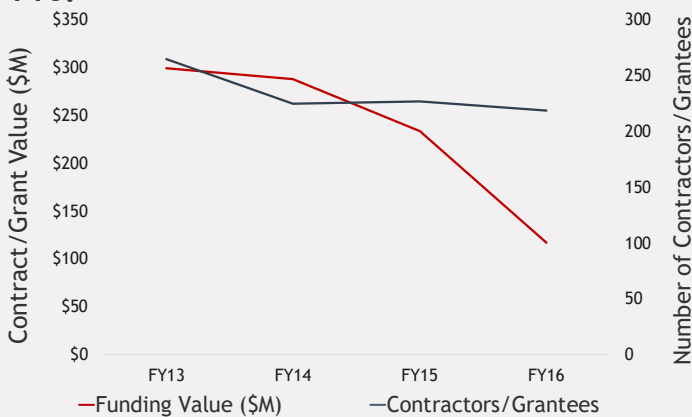
Calhoun County

Alabama Military Stability Foundation

Calhoun County ranked 5th in the state with \$117.3M in military contracts and grants in FY 2016.¹



Funding value decreased significantly, while the number of recipients in Calhoun County remained somewhat steady between FY13 and FY16.¹



Over 50% of Calhoun County's direct impact is from military and civilian payroll and retirees.²



Defense Dashboard³

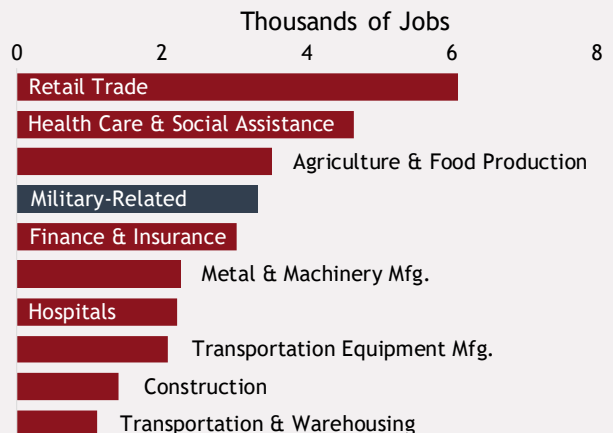
Total Impact (\$M)	\$273
Percent of Net Economic Activity	8.5%
Military Spending Per Resident	\$1.67
Estimated Active Duty Personnel	29
Estimated Civilians	1,941
Estimated Military Retirees	1,167
Military Funding Multiplier	\$1.42

Total County Impact²

Jobs	4,865
Earnings (\$M)	\$275
Output (\$M)	\$273
Value Added (\$M)	\$337
State & Local Taxes (\$M)	\$22
Federal Taxes (\$M)	\$20

Direct Impact Comparison⁵

Statewide military-related employment exceeds some of Alabama's most significant industries such as Transportation Equipment Manufacturing and Agriculture & Food Production.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

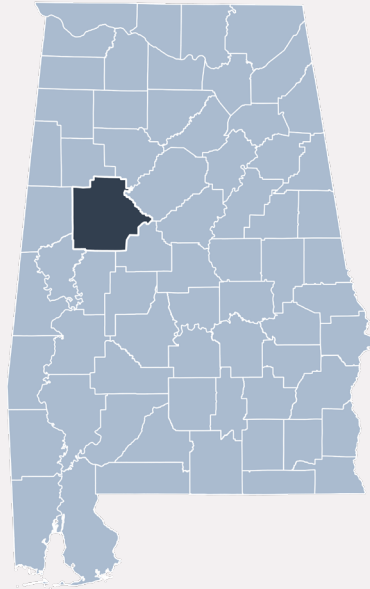
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



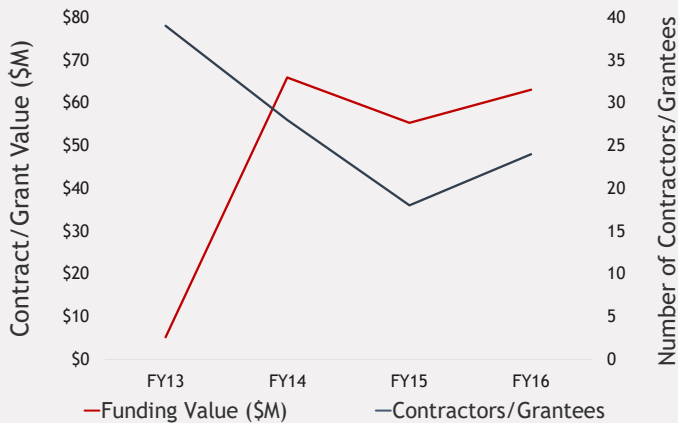
Tuscaloosa County

Alabama Military Stability Foundation

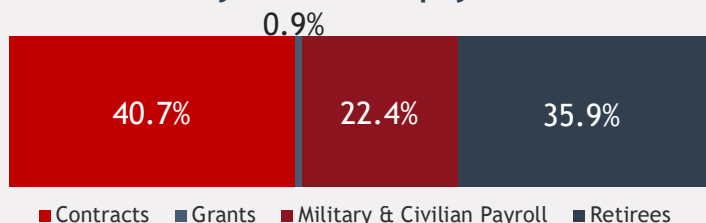
Tuscaloosa County ranked 6th in the state with \$63.1M in military contracts and grants in FY 2016.¹



Funding value rose significantly, while the number of recipients in Tuscaloosa County decreased between FY13 and FY16.¹



Over 50% of Tuscaloosa County's direct impact is from military and civilian payroll or retirees.²



Defense Dashboard³

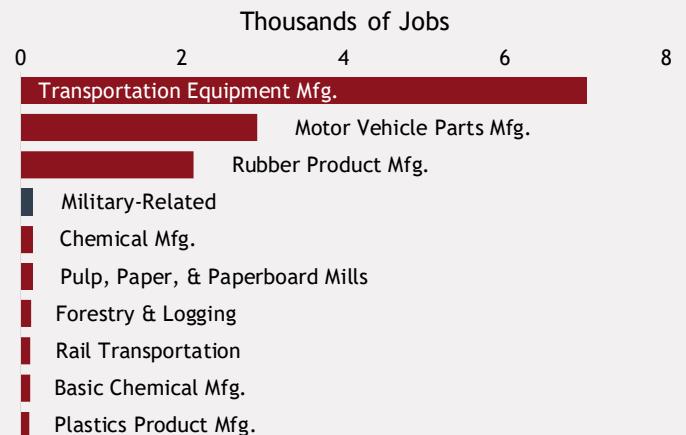
Total Impact (\$M)	\$148
Percent of Net Economic Activity	1.6%
Military Spending Per Resident	\$0.52
Estimated Active Duty Personnel	5
Estimated Civilians	48
Estimated Military Retirees	1,516
Military Funding Multiplier	\$1.37

Total County Impact²

Jobs	1,255
Earnings (\$M)	\$130
Output (\$M)	\$148
Value Added (\$M)	\$175
State & Local Taxes (\$M)	\$10
Federal Taxes (\$M)	\$10

Direct Impact Comparison⁵

Statewide military-related employment exceeds some of Alabama's most significant industries such as Transportation Equipment Manufacturing and Agriculture & Food Production.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

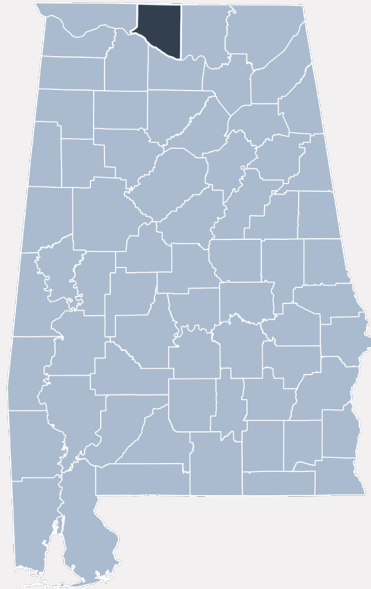
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



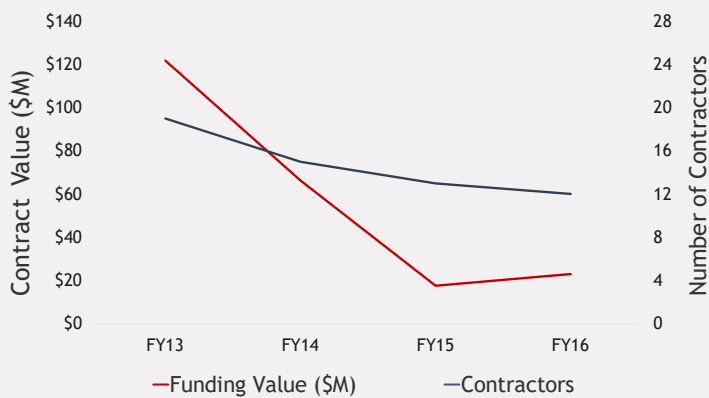
Limestone County

Alabama Military Stability Foundation

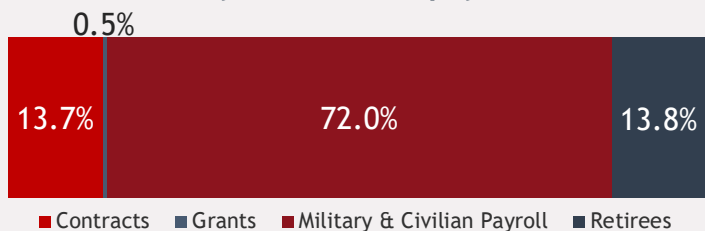
Limestone County ranked 12th in the state with \$23.0M in military contracts, grants, and SBIR in FY 2016.¹



Limestone County lost significant funding value and contract recipients between FY13 and FY16.¹



Nearly 75% of Limestone County's direct impact is from military and civilian payroll.²



Defense Dashboard³

Total Impact (\$M)	\$95
Percent of Net Economic Activity	8.0%
Military Spending Per Resident	\$0.71
Estimated Active Duty Personnel	115
Estimated Civilians	1,698
Estimated Military Retirees	892
Military Funding Multiplier	\$1.43

Total County Impact²

Jobs	3,157
Earnings (\$M)	\$188
Output (\$M)	\$95
Value Added (\$M)	\$216
State & Local Taxes (\$M)	\$11
Federal Taxes (\$M)	\$10

Direct Impact Comparison⁵

Statewide military-related employment exceeds some of Alabama's most significant industries such as Transportation Equipment Manufacturing and Agriculture & Food Production.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

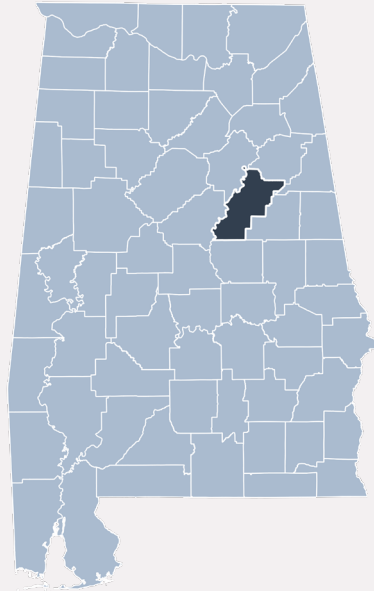
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



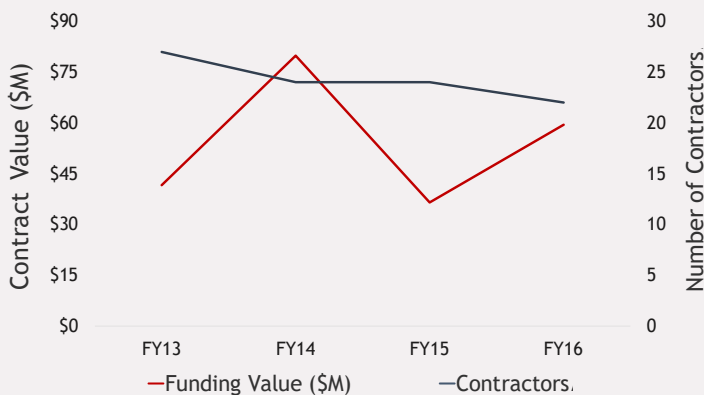
Talladega County

Alabama Military Stability Foundation

Talladega County ranked 7th in the state with \$59.4M in military contracts in FY 2016.¹



While funding value increased, total contract recipients decreased slightly in Talladega County between FY13 and FY16.¹



Approximately 70% of Talladega County's direct impact is from contracts.²



Defense Dashboard³

Total Impact (\$M)	\$62
Percent of Net Economic Activity	2.4%
Military Spending Per Resident	\$0.56
Estimated Active Duty Personnel	2
Estimated Civilians	503
Estimated Military Retirees	29
Military Funding Multiplier	\$1.37

Total County Impact²

Jobs	1,232
Earnings (\$M)	\$62
Output (\$M)	\$62
Value Added (\$M)	\$86
State & Local Taxes (\$M)	\$5
Federal Taxes (\$M)	\$5

Direct Impact Comparison⁵

Statewide military-related employment exceeds some of Alabama's most significant industries such as Transportation Equipment Manufacturing and Agriculture & Food Production.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

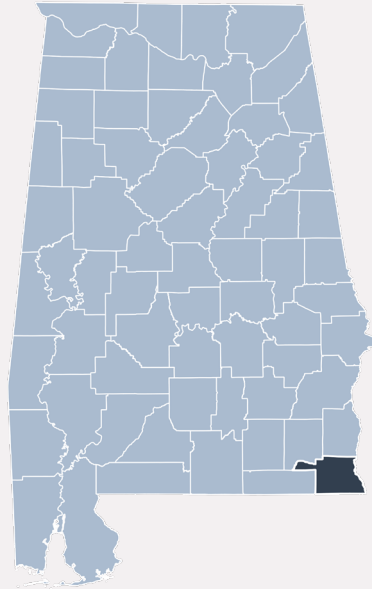
⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.



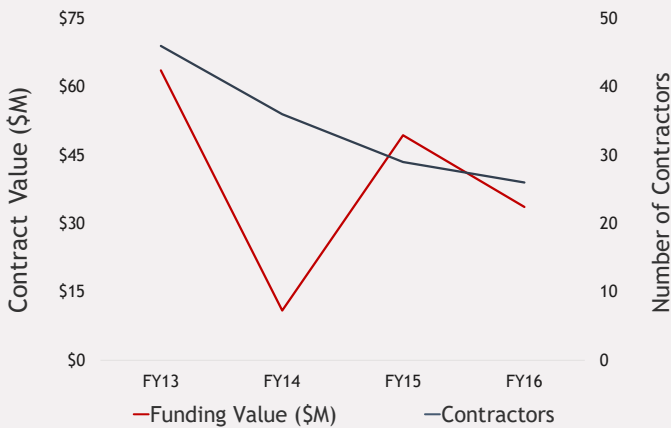
Houston County

Alabama Military Stability Foundation

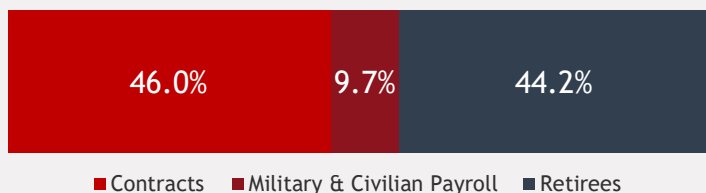
Houston County ranked 10th in the state with \$33.7M in military contracts in FY 2016.¹



Both total funding value and the number of recipients for grants and contracts decreased between FY13 and FY16.¹



Houston County's direct impact is split evenly between contracts and retirees.²



Defense Dashboard³

Total Impact (\$M)	\$54
Percent of Net Economic Activity	0.9%
Military Spending Per Resident	\$0.37
Estimated Active Duty Personnel	89
Estimated Civilians	81
Estimated Military Retirees	59
Military Funding Multiplier	\$1.40

Total County Impact²

Jobs	635
Earnings (\$M)	\$30
Output (\$M)	\$54
Value Added (\$M)	\$39
State & Local Taxes (\$M)	\$2
Federal Taxes (\$M)	\$3

Direct Impact Comparison⁵

Statewide military-related employment exceeds some of Alabama's most significant industries such as Transportation Equipment Manufacturing and Agriculture & Food Production.



¹USAspending.gov

²TPMA & IMPLAN

³TPMA, IMPLAN, Military Installations, & DoD Office of the Actuary

⁴Bureau of Economic Analysis (2016)

⁵Military-related direct employment compared to Emsi 2018 Q1 employment by industry.

Glossary of Economic Impact Terminology

Direct Effects – Direct effects are the result of dollars spent in the region and can include salaries, overhead, raw materials, intermediate inputs, and operating expenses. In this case, direct effects measure the dollar value of military investment in the region.

Direct Impact Comparison – This chart compares the direct military-related employment to a group of industries with similar employment for the given region. Military-related employment includes the following categories: active-duty, civilians and defense contractors. TPMA selected the industries for each region based on size of direct employment anywhere from the sector level (2-digit NAICS) to the industry level (6-digit NAICS). TPMA's objective in these selections is to identify the most specific industry category possible with employment comparable to military-related. TPMA elected to focus on direct employment rather than total employment impact to reduce the possibility of double counting jobs across different industry groupings.

Earnings – Earnings are a common measure of economic impact, as they represent the amount of economic activity that benefits employees, either in terms of income or employee supporting investments. More specifically, earnings include wages and salary, all benefits (e.g., health, retirement), and payroll taxes (employee and employer contributions to social security, unemployment taxes, etc.).

Economic Output – Economic output is another common measure of economic impact. It measures the gross dollar value of sales and taxes that businesses and government agencies in the region collect. IMPLAN measures economic output based on producers' market value prices (as opposed to actual cost of production).

Federal Taxes – Federal tax receipts include combined revenue to the federal government that is ultimately attributable to the military. Though the military itself is tax-exempt, many of the private sector contractors and companies within the Defense supply chain do pay taxes. Federal tax receipts are calculated for the following categories: social insurance tax, excise taxes, custom duties, corporate profits taxes and personal federal income taxes.

Indirect Effects – Indirect effects occur when an industry generates additional business in its supply chain, leading to more sales (or economic output), earnings, and jobs. Business-to-business transactions are categorized as indirect effects and are generated as a ripple effect of the direct effect.

Induced Effects – Induced effects occur because of direct and indirect effects, where an increase in the personal consumption of employees generates additional economic activities in the region. The economic output revenue, earnings generated, and the jobs created due to the increase in personal consumption expenditure are categorized as induced effects.

Jobs – Jobs are another common measure of economic impact. When using the IMPLAN model, job equals the annual average of monthly jobs in that industry. Thus, 1 job lasting 12 months = 2 jobs lasting 6 months each. A job can be either full-time or part-time.

Military Funding Multiplier – The military funding multiplier divides the direct economic output impact of the military in the region by total economic output impact attributable to the military. In mathematical terms, the military funding multiplier = direct impact / (direct + indirect + induced impact). This measure can be interpreted as the degree of additional economic output generated after the initial military funding is received by individuals and companies. Using the example of the state level from this report, for every \$1 in military funding received in Alabama, an additional 79 cents of spending is generated within the state.

Military Spending per Resident – Military spending per resident is the amount of gross military-related spending occurring in the region divided by the region’s total population. This serves as a helpful measure of how much influence the military has over the lives of residents and is useful for comparison across different regions.

Multiplier Effects – Multiplier effects measure the response of the economy in a region of interest to a change in demand or production. Multipliers capture the impact of the direct effect and the impacts generated by successive rounds of re-spending of those initial dollars. The multiplier traces the flows of re-spending that ripple throughout the region until the re-spent dollars have completely leaked to other regions. The most commonly used multipliers in an economic impact assessment include: economic output (sales within the region), earnings, and employment (number of jobs).

Percent of Net Economic Activity – The percent of net economic activity represents the portion of the net economic activity, in terms of all regional value added, that is attributable to the military. In short, this is degree to which the regional economy would shrink if the military had no presence or activity in the region.

Procurement – Procurement measures the dollar value of contracts and grants that are awarded by the Department of Defense or NASA for Fiscal Year 2016 where the company, university or organization’s primary place of performance was Alabama.

SBIR – SBIR, or the Small Business Innovation Research program is a federal program that encourages research and development. In particular, it provides awards to small businesses whose research has the potential for commercialization. Only Department of Defense-funded SBIR awards provided to Alabama businesses are included in this economic impact study.

State and Local Taxes – State and local taxes include combined revenue to state and local government entities that is ultimately attributable to the military. Though the military itself is tax-exempt, many of the private sector contractors and companies within the Defense supply chain do pay taxes. State and local tax receipts are calculated for the following sources: dividends; social security; sales; property; motor vehicle licenses; severance; corporate profits; personal income; property; and miscellaneous other sources.

Total Impact – The dollar value of economic output that is attributable to the military in the state of Alabama in Fiscal Year 16. This number sums the economic output for each stage of ripple effects, including the direct, indirect, and induced effects.

Value Added – Value added consists of compensation of employees; taxes on production and imports less subsidies; and gross operating surplus (or company profits). Value added is smaller in magnitude than economic output but a more accurate measure of local impact because it is not inflated by the cost of inputs purchased outside of the region. When value added is totaled across all industry sectors it is equivalent to gross regional product, which is similar to the gross domestic product reported by the federal government but at a smaller geographical scale. Hence, for the *Factbook*, value added is a measure of the contribution to Gross Regional Product made by the military.

Methodology

To account for the economic impact of the military, a host of sources were referenced. Once received, these data needed to be cleaned, harmonized, and treated prior to use in the IMPLAN impact model. The specific steps utilized for each spending category are outlined below. A fuller treatment of the study methodology is contained in the full *Economic Impact of the Military in Alabama* report.

Source of Impact	Source	Notes
Defense & NASA Contracts & Grants	USAspending.gov	Utilized all data for Fiscal Years 2013-2016. USAspending.gov includes all contracts with funding allocations larger than \$25,000. Contracts were cleaned to classify place of performance by county. NAICS codes were converted to IMPLAN sectors. Subcontracts data were accessed for the full report, but not included in the impact analysis because they could be duplicative related to induced impacts.
SBIR Awards	SBIR.gov; Hoover's	Utilized all data for Fiscal Years 2013-2016. Classified NAICS industry activity of each individual vendor level using Hoover's by Dun & Bradstreet.
Retiree Counts & Income by County & ZIP Code	Department of Defense, Office of the Actuary	Utilized the Statistical Report on Military Retirement System from Fiscal Year 2016. Converted from ZIP code to county. Estimated payment amounts by rank.
Personnel Counts	Military Installations	Received data on active duty, Army and Air Force Reservists, Army and Air National Guard, civilians, and other non-duplicative personnel (including students and trainees).
Personnel Counts	Defense Manpower Data Center	For pieces that were not provided by military installations, counts of active duty and Reserve service members and the APF Civilians File from Fall 2017 were used to fill in gaps.

After assembling and cleaning the above listed data, spending patterns were approximated for active duty, civilians, National Guard, Reservists, and retirees. A spending model was not created for contractors because the IMPLAN model applies an inherent spending model via the model's induced effects. The spending model for retirees was distinctively different due to the fact that military pensions typically serve as supplementary rather than primary income.

Next, data from the US Census Bureau's Consumer Expenditure Survey were used to create nine distinct income brackets, with unique marginal propensity to consume and commodity purchase trends. Marginal propensity to consume is an economic term which describes the degree of income a person uses for consumption rather than savings. It is significant to this analysis because it varies greatly based on a person's level of income. Retiree income was also run through this model, but the full income of these individuals was reduced to a level that approximated their earnings exclusively from the Department of Defense. Once degree of consumption was determined for all aforementioned groups, one of 53 IMPLAN sectors was assigned to each category of spending. Lastly, these data were used as inputs in the input-output model.