

The U.S. Economic Impact of Approved and Projected DOD Spending Reductions on Equipment in 2013



Stephen S. Fuller, Ph.D.

Dwight Schar Faculty Chair and University Professor

Director, Center for Regional Analysis

George Mason University

October 24, 2011

The U. S. Economic Impact of Approved and Projected DOD Spending Reductions on Equipment in 2013

By

Stephen S. Fuller, Ph.D.
Dwight Schar Faculty Chair and University Professor
Director, Center for Regional Analysis
George Mason University
October 24, 2011

Summary of Research Findings

The economic impact of DOD spending deductions for the acquisition of military equipment (e.g., small arms, ordinance, wireless communications, aircraft and aircraft engines, guided missiles, ships and armored vehicles and tanks) will significantly exceed the initial dollar value of these spending reductions as measured by lost jobs and personal income (salary and wages), reduced non-wage expenditures, and a decreased rate of economic growth—gross domestic product, the value of goods and services produced in the U. S.

Additionally, the impacts of these losses will extend across the full breadth of the U.S. economy, as this decreased spending will result in reduced spending for consumer goods and services. For each job lost by DOD's prime contractors and their direct and indirect suppliers within the aerospace and military equipment industry as a result of DOD cutbacks for the acquisition of military equipment, three additional jobs would be lost in other sectors across the breadth of the U.S. economy. These job losses in non-military equipment manufacturing would occur in professional and business services, financial, information and administrative services, retail trade, leisure and hospitality services, education and health services, construction, and other manufacturing.

DOD spending reductions for the acquisition of military equipment totaling \$19.324 billion have already been approved (BCA 1) and a second reduction (BCA 2) totaling \$25.686 billion may still be occur in the FY 2013 Budget for a total reduction of \$45.01 billion. This total reduction of \$45.01 in DOD spending for the acquisition of military equipment in FY 2013 would have the following economic impacts.

- An initial reduction of \$45.01 billion in DOD spending for the acquisition of military equipment would generate losses in sales throughout the supply chain and induce sales losses through the broader economy totaling \$164,059,027,945; that is, for each \$1 in DOD spending reductions for military equipment, an additional \$2.64 in sales losses will be experienced by other businesses with 71% of these lost sales occurring as a result of

decreased consumer spending by workers directly and indirectly affected by these DOD spending reductions—workers having lost their jobs and/or experienced salary reductions.

- The U.S. employment base would lose 1,006,315 full-time, year-round equivalent jobs with 352,745 being lost directly or indirectly from the prime DOD contractors for this equipment and their suppliers, inclusive of 124,428 from prime contractors and their suppliers and 228,318 from businesses that provide professional and business services to this industry, while 653,570 jobs or 65% of all job losses would come from the induced spending effects generated by this industry as a result of changes in payroll spending across all sectors of the economy; this total job loss would add .6 percentage points to the unemployment rate (raising today's 9.1% rate to 9.7%).
- The wage and salary impacts of this \$45.01 billion in DOD spending reductions would total \$59.4 billion with \$48.4 billion in wage and salary losses occurring among workers working in businesses outside of the military equipment manufacturing supply chain—retail, construction, professional and business services, health and education, leisure and hospitality.
- In addition to reductions in wages and salaries associated with lost jobs, the reduction in DOD acquisitions outlays impacts non-wage income of these firms—spending for operations, capital investment, retained earnings, profits—the loss of which would further negatively impact the U.S. economy as these funds are distributed broadly across its non-military sectors; a reduction of \$45.01 billion in DOD spending for military equipment would generate a reduction of \$27.05 billion in non-wage spending with 63.4% of these occurring in non-DOD prime contractors and their direct and indirect suppliers.
- A \$45.01 reduction in DOD spending in 2013 for the acquisition of military equipment would reduce the U.S. gross domestic product (GDP) by \$86.456 billion; this one-year GDP decline is equivalent to 25% of the projected annual increase in GDP for 2013 and its loss would reduce currently projected growth for 2013 from 2.3% to 1.7% (IHS Global Insight September 2011 forecast).

The sources and magnitudes of the economic impacts of these potential DOD spending reductions of the acquisition of military equipment in FY 2013 are shown in Table 1 below.

Table 1

Summary of U.S. Economic Impacts of the Approved (BCA 1) and Potential
DOD Spending Reductions on Equipment, 2013
(in billions of 2013 \$s , jobs in thousands)

Sources of Impact*	Initial Impacts (1)	Direct Impacts (2)	Indirect Impacts (3)	Industry-Wide Impacts	Induced Impacts (4)	Total Impacts (5)
Sales	\$45.01	\$20.52	\$13.61	\$79.14	\$84.92	\$164.06
Jobs	164.15	108.32	80.28	352.75	653.57	1,006.32
Personal Income	\$15.37	\$7.60	\$4.82	\$27.79	\$31.61	\$59.40
Non-Labor Income	\$3.83	\$3.40	\$2.67	\$9.90	\$17.15	\$27.05
GDP	\$19.21	\$11.00	\$7.50	\$37.71	\$48.75	\$86.46

Sources: GMU Center for Regional Analysis, EMSI

- (1) impacts of initial DOD spending reduction on prime contractors
- (2) impacts on suppliers to prime contractors
- (3) impacts on suppliers to the suppliers to the prime contractors
- (4) impacts of spending reductions on the remainder of the economy due to decreased payroll disbursements and non-wage operating purchases
- (5) sum of initial, supply chain and induced impacts as the effects of these reductions are cycled through the U. S. economy

*Note: columns (1), (2) and (3) comprise the aerospace and military equipment manufacturing industry, as summed under Industry-Wide Impacts. The jobs losses for these sectors total 352,750 jobs and include 124,428 jobs that are specific to firms within the aerospace and military equipment manufacturing industry and 228,318 jobs that are in other subsectors, largely non-manufacturing, that supply goods and services in support of the operations of these aerospace and military equipment manufacturing firms (e.g., engineering services, computer systems design services, transportation services, information services, professional, scientific and technical services, administrative services, educational and health care services, travel and accommodations services, retail trade, construction and management services) purchased directly by these firms. The induced jobs impacts (4) are a result of changes in the spending patterns of employees of these firms and their suppliers as a result of decreased payroll outlays.

Economic Impacts -Top Ten States

While the economic impacts of DOD spending reductions would affect all 50 states, ten states would account for 58.5 percent of the job and income losses projected to occur in 2013 as a result from these \$45.01 billion in reduced military equipment acquisitions. In total, these spending reductions would result in employment

decreases of 588,700 jobs in these ten states and generate losses of \$34.7 billion in personal income. These decreases in economic activity would reduce these states' gross state product by \$50.6 billion in 2013. These ten states and their associated losses in job, earnings and gross state products are shown in Table 2. One-third of these impacts will occur in California, Virginia and Texas.

Table 2
Economic Impacts of DOD Spending Reductions
for Military Equipment in FY 2013: Top Ten States
(jobs in thousands, GSP in billions of 2013 \$s)

State	Job Losses	Lost Earnings	Decrease GSP*
California	125.8	\$7.4	\$10.8
Virginia	122.8	\$7.3	\$10.5
Texas	91.6	\$5.4	\$7.9
Florida	39.2	\$2.3	\$3.4
Massachusetts	38.2	\$2.3	\$3.3
Maryland	36.2	\$2.1	\$3.1
Pennsylvania	36.2	\$2.1	\$3.1
Connecticut	34.2	\$2.0	\$2.9
Arizona	33.2	\$2.0	\$2.9
Missouri	31.2	\$1.8	\$2.7
Totals-Top Ten	588.7	\$34.7	\$50.6

Sources: GMU Center for Regional Analysis, EMSI

*gross state product

Methodology

This analysis employs the input-output model for the U.S. economy. at the six-digit NAICS Code level. developed by EMSI (www.economicmodeling.com). The actual and projected DOD spending reductions for the acquisition of military equipment for FY 2013 (BCA 1 and BCA 2, independently and in total) were distributed across 14 subsectors encompassing the effected industries (NAICs Codes 332992, 3329903, 332994, 332995, 334220, 334511, 336,411, 336412, 336413, 336414, 336415, 336419, 336611, and 336992). This allocation of actual and potential DOD reductions in equipment outlays was based on these 14 subsectors percentage share of the total industry of which they are a part as measured by sales to DOD.

These DOD spending reduction were subtracted from the projected 2013 economy (inclusive of these DOD equipment outlays) and the impacts calculated on each subsector of the U.S. economy based on its purchases and sales to every other

subsector in the U.S. economy. The initial industry impacts reflect the loss of sales to the primary supplier of military equipment to DOD with the direct and indirect impacts reflecting the changes in sales for the suppliers to the aerospace and military equipment industry and changes in sales for their suppliers.

The induced impacts reflect the sales changes that each sector of the economy would experience as a result of decreased personal earnings and personal consumption expenditures by the loss of jobs and personal earnings within the aerospace and military equipment industry, the suppliers to this industry and the businesses that depend on personal consumption outlays.

These changes in sales by subsector of the economy are expressed in terms of jobs, changes in payroll and fringe benefits, changes in non-payroll outlays (operations, investment, retained earnings and profit), and changes in gross domestic product (GDP).

State Economic Impacts of DOD Spending Reductions
for Military Equipment in FY 2013
(jobs in thousands, Earnings in millions and GSP in billions of 2013 \$s)

State	Job Losses	Lost Earnings	Decreased GSP*
Alabama	24,614	\$1,458.9	\$2.123
Alaska	5,394	\$318.4	\$0.463
Arizona	33,208	\$1,949.5	\$2.827
Arkansas	3,452	\$203.7	\$0.296
California	125,789	\$7,410.8	\$10.786
Colorado	17,107	\$1,009.8	\$1.470
Connecticut	34,215	\$1,993.1	\$2.901
Delaware	662	\$39.1	\$0.057
District of Columbia	14,129	\$834.0	\$1.214
Florida	39,246	\$2,298.0	\$3.345
Georgia	25,450	\$1,502.2	\$2.186
Hawaii	714	\$421.7	\$0.614
Idaho	805	\$47.5	\$0.069
Illinois	21,626	\$1,276.5	\$1.858
Indiana	13,273	\$783.5	\$1.140
Iowa	4,730	\$279.2	\$0.406
Kansas	5,897	\$348.1	\$0.507
Kentucky	15,739	\$929.0	\$1.352
Louisiana	17,751	\$1,047.8	\$1.525
Maine	4,055	\$239.4	\$0.348
Maryland	36,227	\$2,155.0	\$3.137
Massachusetts	38,240	\$2,272.6	\$3.308
Michigan	12,398	\$731.8	\$1.065
Minnesota	4,619	\$272.6	\$0.397
Mississippi	4,961	\$292.8	\$0.426
Missouri	31,196	\$1,852.8	\$2.697
Montana	950	\$56.1	\$0.082
Nebraska	2,405	\$142.0	\$0.207
Nevada	3,995	\$235.8	\$0.343
New Hampshire	3,321	\$196.0	\$0.285
New Jersey	23,870	\$1,409.0	\$2.051
New Mexico	4,619	\$272.6	\$0.397
New York	26,768	\$1,580.0	\$2.300
North Carolina	11,019	\$650.4	\$0.947
North Dakota	875	\$51.7	\$0.075
Ohio	18,424	\$1,087.5	\$1.583
Oklahoma	7,326	\$432.4	\$0.629
Oregon	2,707	\$159.8	\$0.233
Pennsylvania	36,157	\$2,134.2	\$3.106

Rhode Island	2,355	\$139.0	\$0.202
South Carolina	13,666	\$806.6	\$1.174
South Dakota	1,701	\$100.4	\$0.146
Tennessee	9,419	\$556.0	\$0.809
Texas	91,575	\$5,439.5	\$7.917
Utah	7,658	\$452.0	\$0.658
Vermont	2,164	\$127.7	\$0.186
Virginia	122,770	\$7,241.2	\$10.539
Washington	15,648	\$923.7	\$1.344
West Virginia	1,047	\$61.8	\$0.090
Wisconsin	25,731	\$1,518.8	\$2.211
Wyoming	473	\$27.8	\$0.041
Other**	4,096	\$241.8	\$0.352
Undistributed	30,080	\$1,391.7	\$2.026
Totals	1,006,315	\$59,403.3	\$86.456

Sources: GMU Center for Regional Analysis, EMSI

*gross state product

**American Samoa, Fed. States of Micronesia, Guam, Marshall Islands, Northern Marianas, Palau, Puerto Rico, and the Virginia Islands.