

Originally Processed With FOIA(s):
2025-0878-F

FOIA Number:
2025-0878-F

FOIA MARKER

**This is not a textual record. This is used as an
administrative marker by the George Bush Presidential
Library Staff.**

Record Group/Collection: Dan Quayle Vice Presidential Records
Collection/Office of Origin: Deputy Chief of Staff's Office
Series: Porter, Richard W., Files
Subseries: Subject Files

OA/ID Number: 21807
Folder ID Number: 21807-009

Folder Title:
University of New Mexico Defense Study

Stack:	Row:	Section:	Shelf:	Position:
G	34	6	5	4

*file
Defense cuts*

THE PRICE OF PEACE

The Economic Impact of Reduced Defense Spending: National, State and Industry Strategies

by

Dr. Avraham Shama
Professor of Management
Anderson School of Management
The University of New Mexico
Albuquerque, NM 87131

Tel. (505) 277-6471
FAX 505-277-7108

This manuscript benefited from extensive discussions with Dr. Brian McDonald, Director, Bureau of Business and Economic Research, University of New Mexico, from the able computer work of Timothy L. Meuret, MBA candidate at the Anderson School of Management, and from the expert editorial review and assistance of Peg Merrell of the Anderson School of Management. Responsibility for the content of the paper, however, is the author's alone.

EXECUTIVE SUMMARY

6640

This study centers on the economic effects of reduced defense spending on the nation, its fifty states (and the District of Columbia), and its industry. It begins by providing baseline information about state employment and gross state product (GSP) dependence on defense spending for payroll and prime contracts. It then calculates and assesses the economic impact of the Administration's proposed FY93-FY97 cuts in defense spending, as well as a scenario which roughly doubles the effects of these cuts on the economic health of the states and the nation.

The study reports that peace costs jobs and money. Under the Administration's plan, by 1997 peace will have cost a total of 1,044,029 jobs and \$61.148 billion. States paying the heaviest price are California, Texas and Virginia losing 121,207, 80,144 and 68,782 jobs, respectively. Under a more severe scenario, the price is 2,188,051 jobs and \$130.697 billion. These figures reflect only the direct loss caused by projected reductions in national defense spending. If one assumes that every defense job and dollar generate another job and dollar in the economy, the above losses in jobs and dollars must be doubled to reflect the total price of peace. Put differently, the total price of peace, under the Administration plan, is 2,088,058 jobs and \$122.296 billion. Under the more severe scenario, the total price of the post-cold-war peace is 4,376,102 jobs and \$261.394 billion. Tables A and B provide national and state level information about the direct price of peace in terms of jobs and GSP.

At the same time, the U.S., and affected states and industries, can exploit this post-cold-war era as an opportunity for growth, revitalization and diversification. On the national level, resources freed by peace may be invested in programs to strengthen U.S. economic competitiveness and its leadership in the world. On the state level, negatively affected states may diversify their economic bases and implement competitive strategies to obtain a larger share of the shrinking defense pie. On the industry level, companies can downsize with reduced demand, convert from military to consumer products production, diversify into related specialties, and export.

Any of these strategies will change the character of the U.S., its standard of living, and its place among other nations for years to come.

\$50B

Job and Gross State Product Reductions				
STATE	Jobs		Gross State Product	
	Number Lost	Rank	Dollars Lost	Rank
AK	9,474	35	369	35
AL	25,013	13	1,060	18
AR	9,993	33	273	38
AZ	17,923	23	1,571	12
CA	121,207	1	10,375	1
CO	15,040	25	1,265	16
CT	9,567	34	1,700	10
DC	13,859	27	835	21
DE	3,852	45	90	46
FL	48,635	4	3,027	4
GA	35,253	7	1,334	15
HI	18,368	20	633	27
IA	7,629	38	221	41
ID	1,698	51	63	49
IL	31,475	10	887	20
IN	18,027	22	814	22
KS	14,895	26	571	30
KY	18,057	21	443	33
LA	21,450	16	897	19
MA	18,407	19	2,945	5
MD	32,281	9	2,084	8
ME	7,760	37	445	32
MI	18,952	17	648	26
MN	11,912	30	676	24
MO	23,789	14	2,348	7
MS	15,564	24	761	23
MT	3,711	46	78	47
NC	33,853	8	1,147	17
ND	5,284	40	112	45
NE	8,098	36	239	39
NH	3,339	47	197	42
NJ	23,582	15	1,648	11
NM	3,984	43	314	36
NV	2,744	48	163	43
NY	42,444	5	2,810	6
OH	31,131	11	1,928	9
OK	18,772	18	601	28
OR	7,005	39	228	40
PA	35,504	6	1,421	14
RI	5,026	41	293	37
SC	12,961	28	676	25
SD	3,953	44	75	48
TN	11,299	32	578	29
TX	80,144	2	4,824	3
UT	11,880	31	514	31
VA	68,782	3	4,882	2
VT	1,999	50	44	51
WA	28,294	12	1,429	13
WI	12,386	29	438	34
WV	4,737	42	122	44
WY	2,354	49	62	50
US Total	1,044,029		61,148	

Table A, The Administration's Plan (millions of \$)
*To calculate total price, multiply these figures by two.

\$100B
267,865
121,207
146,658

Job and Gross State Product Reductions				
STATE	Jobs		Gross State Product	
	Number Lost	Rank	Dollars Lost	Rank
AK	18,968	34	739	36
AL	53,581	13	2,271	18
AR	20,224	33	553	38
AZ	35,979	25	3,153	14
CA	267,865	1	22,929	1
CO	43,371	16	3,648	10
CT	18,644	35	3,314	12
DC	27,397	29	1,650	22
DE	7,940	46	185	47
FL	102,278	4	6,365	5
GA	71,189	7	2,694	16
HI	37,502	22	1,293	28
IA	15,389	38	446	42
ID	5,913	49	221	46
IL	64,457	11	1,816	20
IN	36,115	24	1,630	23
KS	29,514	27	1,131	31
KY	36,481	23	894	33
LA	41,960	17	1,735	21
MA	40,285	18	6,446	4
MD	68,597	9	4,427	8
ME	15,205	39	872	34
MI	40,186	19	1,374	27
MN	25,495	30	1,448	26
MO	50,825	14	5,016	7
MS	30,457	26	1,490	24
MT	7,522	47	158	48
NC	70,425	8	2,386	17
ND	10,696	41	228	45
NE	16,590	36	489	40
NH	7,061	48	417	43
NJ	47,916	15	3,348	11
NM	16,250	37	1,282	29
NV	8,376	44	499	39
NY	86,743	5	5,743	6
OH	65,460	10	4,054	9
OK	38,873	21	1,245	30
OR	14,019	40	456	41
PA	77,459	6	3,099	15
RI	9,925	42	578	37
SC	39,544	20	2,064	19
SD	8,118	45	154	49
TN	28,793	28	1,474	25
TX	181,834	2	9,740	3
UT	24,425	31	1,056	32
VA	140,133	3	9,945	2
VT	4,078	51	90	51
WA	59,135	12	3,213	13
WI	24,402	32	863	35
WV	9,701	43	260	44
WY	4,753	50	125	50
US Total	2,188,051		130,697	

Table B, "Doubling" the Administration's Plan (millions of \$)
*To calculate total price, multiply these figures by two.

I. INTRODUCTION

All wars command a great many people and resources, affecting the nature and structure of the economies of the countries involved. The conclusions of wars free these quantities of people and resources for other uses, again affecting the nature, structure and growth of the economies of their countries. Such was the case after World War II, and such has been the case in the aftermath of the Cold War.

It is by now widely accepted that the Cold War was won by the U.S. in 1989. In eastern Europe, this bewildering and tumultuous ending has been followed by an equally historic process of economic and political democratization, which might take a few decades to fully materialize. This change has been so rapid and unexpected that it has caught many policy makers and analysts, wedded to more than forty years of cold war ideology, by surprise. Others see this change as the beginning of a "new spring of nations," a "new world concert," or even "the end of history" (see Fukuyama 1992 and Shama 1992a).

In the United States, the end of the Cold War has brought about planned and actual reductions in the defense budget, as well as concern about the overall effects of such reductions and their implications for employment and economic well-being in the different regions and states of the Union. For example, the Administration's 1992-1997 budget reflects a total of 19.9 percent real reduction in the defense budget over these five years. As a result, by 1997 defense spending is projected to constitute 3.6 percent of the gross national product, compared to 6.4 percent a decade earlier -- a reduction of 43 percent! (See *Budget of the United States, FY93-FY97*).

Reductions in the defense budget mean unemployment and reduced economic growth, affecting different parts of the country differently. A recent study by the Congressional Budget Office (CBO), *The Economic Effects of Reduced Defense Spending* (February 1992), suggests that while cutting the defense budget will reduce the U.S. GNP by only 0.7 percent by the mid-1990's, the gross state product (GSP) of eight states and the district of Columbia will shrink by up to 2.6%. And while these figures seem

small, they translate into large sums of money and many jobs. For example, a 0.7 percent reduction of the U.S. GNP translates into a M\$326.389 decline in GNP and 822,400 lost jobs.

An even more serious picture emerges when the effects of the defense budget reductions on industry are measured. The CBO study estimates that curtailed defense orders will reduce the tank and tank components industry by 17 percent, the shipbuilding and repair industry by 6 percent, the communications equipment industry by 3 percent, and the aircraft industry by 1 percent. Again, while these numbers seem small, they translate into reduced sales ranging from 5 percent to 50 percent in the industries most affected. Furthermore, when the impact of cuts in the defense budget is examined by region and industry combined, some locations pay a heavy price for peace. For example, a recent study of the impact of the defense budget suggests that the cost of peace to Los Angeles may be as high as 420,000 jobs and \$84.6 billion in reduced personal income by 1995 (Reckard, 1992, C5).

Finally, if one assumes progressively larger reductions in the defense budget, as some policy-makers seem to wish, the ensuing impact becomes progressively more serious.

The goals of this research project are to:

- Provide baseline data on defense spending and employment by state.
- Analyze the economic impact of the Bush Administration's proposed FY93-FY97 defense cut by state.
- Examine the economic impact of roughly doubling the above cuts on the economy of each state.
- Outline strategies for states and industries to adapt to or even exploit such changes.

II. METHODOLOGY

Baseline data on the size of the economy in each of the fifty states and the District of Columbia, and on the importance of defense spending on payroll, operations and maintenance, procurement, research

development testing and evaluation by state, were gathered from the U.S. Department of Commerce, from the DOD Atlas/Data Abstract for the U.S., and from the Department of Energy (DOE). It should be noted here that the only DOE items included in this study are those regarded by DOE as defense spending.

To analyze the economic impact of the Bush Administration's proposed FY93-FY97 defense cuts by state gross product, and by state personal income and employment, baseline data were projected to the proposed budget of the United States FY93-FY97. The Administration's proposed budget is referred to as the "Administration Plan" in the remainder of the paper.

To scope out the economic impact of even deeper cuts in the defense spending on gross state product, state personal income, and state employment, the Administration's proposed cuts were roughly doubled. More specifically, whereas the Administration Plan for FY93-FY97 is to cut the overall defense budget by 19.96 percent in constant 1992 dollars, the deeper cuts investigated result in a total reduction of 42.67 percent in defense spending. Included in these calculations is about a 5 percent increase in DOE spending for FY93-FY97 under the Administration Plan, but a 14.39 percent reduction in DOE spending under these deeper cuts.

The rationale for using the "Administration Plan" and "Double the Administration Plan", is that the Administration Plan is likely to reflect the minimum acceptable cuts in defense spending, while doubling the cuts of the Administration Plan reflects very aggressive reductions in defense spending. More specifically, while presidential candidate and present President George Bush plans to cut the defense budget by 19.96 percent by 1997, presidential candidate Bill Clinton plans to cut it by 30 percent during the same period, and many senators and representatives advocate reducing it by as much as 50 percent over the same time. Whether the future will conform with the Administration Plan, twice the Administration Plan, or something in between, the findings of this study give the reader information about what might happen to the economy of the United States and to the economy of each of the fifty states and the District

of Columbia as a result of such reductions in defense spending. *It should be noted that the findings presented in the tables below reflect only the direct loss brought about by projected reductions in defense spending. But since every defense job and dollar generate at least one additional job and dollar in the economy, all figures in these tables must be doubled to obtain the total economic impact of reductions in defense spending (This is what economists refer to as the "multiplier effect").*

III. FINDINGS

The findings of this study include baseline data, the economic impact of the proposed Administration Plan, and the economic impact of "doubling" the cuts of the Administration Plan. Each of these aspects is reported in a separate section below.

a. Baseline Data

Baseline economic information about each of the fifty states and the District of Columbia and the dependence of each on defense spending is reported and highlighted in Tables 1-4 below and a series of tables in Appendix 1.

Table 1. National Defense Ranked by State, 1990. This table shows the importance of defense spending to *State Employment* and *Personal Income* as well as the share of *Total Prime Contracts*, *Total R & D Contracts*, and *Total Non-R & D contracts* in the GSP. Accordingly:

- Alaska, Hawaii and Virginia show the highest percentages of *Total Defense Employed* compared to total state employment. In Alaska, 12.45 percent of the labor force is employed by defense programs, in Hawaii 11.50 percent are employed in defense programs, and in Virginia 7.64 percent of the labor force is employed in such programs.

National Defense Ranked by State 1990

STATE	Percent of State Employment		Percent of State Personal Income		Percent of Gross State Product								Percent of State Personal Income	
	Total Defense Employed		Total Defense Payroll		Total Prime Contracts		Total R&D Contracts		Non-R&D Contracts		Total Defense Spending		Total Defense Spending	
	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
AK	12.45%	1	6.79%	3	2.13%	19	0.0006%	49	2.12%	13	6.36%	10	11.04%	4
AL	5.13%	10	2.28%	14	2.66%	16	0.66%	12	2.00%	15	5.27%	17	6.31%	15
AR	3.68%	27	1.24%	33	0.79%	40	0.03%	40	0.76%	37	2.50%	34	2.98%	35
AZ	3.46%	29	1.57%	28	4.92%	8	0.44%	14	4.48%	3	7.05%	7	8.27%	9
CA	3.01%	33	1.73%	24	3.04%	13	0.95%	8	2.10%	14	4.88%	19	5.90%	17
CO	4.40%	15	2.51%	10	5.61%	3	4.30%	2	1.30%	26	8.60%	5	9.76%	7
CT	1.60%	48	0.61%	42	4.57%	7	0.19%	24	4.38%	4	5.27%	16	5.83%	18
DC	6.30%	7	7.36%	2	4.20%	8	0.16%	25	4.04%	5	6.86%	9	19.86%	1
DE	3.90%	23	1.30%	31	0.59%	47	0.07%	34	0.52%	46	2.06%	42	2.50%	41
FL	2.97%	34	1.49%	29	2.05%	21	0.40%	16	1.65%	21	4.43%	20	4.46%	24
GA	3.98%	22	2.06%	18	1.31%	33	0.06%	35	1.25%	28	3.51%	25	4.38%	25
HI	11.80%	2	7.86%	1	1.79%	25	0.05%	38	1.74%	18	8.67%	3	10.94%	5
IA	1.83%	44	0.23%	51	0.88%	37	0.09%	31	0.79%	36	1.22%	49	1.43%	49
ID	3.75%	25	1.61%	27	1.42%	32	1.19%	7	0.23%	51	3.37%	27	3.89%	30
IL	2.08%	42	0.67%	40	0.49%	50	0.05%	37	0.44%	49	1.19%	50	1.38%	50
IN	2.26%	39	0.84%	38	1.52%	30	0.11%	29	1.41%	24	2.41%	37	2.89%	36
KS	4.18%	19	1.75%	23	1.76%	26	0.03%	42	1.73%	19	3.64%	24	4.24%	27
KY	4.29%	17	1.80%	21	0.62%	46	0.0037%	47	0.62%	42	2.34%	38	2.88%	34
LA	4.00%	21	1.47%	30	1.91%	23	0.0032%	48	1.90%	16	3.33%	28	4.63%	23
MA	1.81%	46	0.53%	43	5.45%	5	1.48%	4	3.97%	6	6.10%	13	6.72%	14
MD	4.76%	13	2.18%	16	4.20%	9	0.91%	10	3.29%	9	6.88%	8	6.94%	13
ME	4.52%	14	2.48%	11	3.41%	12	0.02%	43	3.39%	8	6.03%	14	7.06%	12
MI	1.57%	50	0.37%	47	0.72%	43	0.16%	26	0.56%	43	1.16%	51	1.30%	51
MN	1.66%	47	0.27%	50	1.76%	27	0.41%	15	1.35%	25	2.11%	40	2.55%	40
MO	3.21%	32	1.15%	34	6.14%	2	1.28%	5	4.86%	2	7.43%	6	8.74%	8
MS	5.01%	12	2.43%	12	3.53%	10	0.01%	44	3.51%	7	6.11%	12	7.49%	11
MT	4.29%	18	1.30%	32	0.50%	49	0.0038%	46	0.49%	48	2.10%	41	2.38%	42
NC	3.74%	26	2.15%	17	0.87%	38	0.14%	27	0.73%	38	3.08%	30	3.82%	29
ND	6.93%	4	3.02%	8	0.83%	39	0.0004%	50	0.83%	35	3.49%	26	4.33%	26
NE	3.81%	24	1.85%	20	0.72%	42	0.08%	36	0.68%	39	2.65%	32	3.20%	32
NH	2.09%	41	0.65%	41	1.59%	29	0.33%	20	1.22%	29	2.61%	33	2.84%	37
NJ	2.02%	43	0.73%	39	1.71%	28	0.20%	23	1.52%	23	2.50%	35	2.78%	38
NM	6.76%	5	4.92%	6	7.56%	1	5.78%	1	1.79%	17	12.36%	1	15.52%	2
NV	3.35%	31	2.27%	15	1.82%	24	1.27%	6	0.55%	45	4.25%	23	5.68%	19
NY	1.51%	51	0.36%	48	1.47%	31	0.20%	22	1.27%	27	1.84%	44	2.17%	44
OH	2.13%	40	0.90%	36	2.06%	20	0.37%	17	1.69%	20	2.99%	31	3.51%	31
OK	5.87%	8	2.98%	9	1.12%	35	0.13%	28	0.98%	32	4.34%	22	4.97%	22
OR	1.81%	45	0.38%	46	0.65%	44	0.03%	41	0.62%	41	1.38%	46	1.58%	46
PA	2.43%	38	0.88%	37	1.17%	34	0.34%	19	0.83%	34	2.18%	39	2.37%	43
RI	3.41%	30	1.76%	22	2.83%	15	0.08%	32	2.74%	10	4.91%	18	5.10%	21
SC	6.45%	6	5.36%	5	3.47%	11	2.45%	3	1.02%	31	8.61%	4	10.71%	6
SD	5.07%	11	1.98%	19	0.29%	51	0.0002%	51	0.29%	50	2.42%	36	2.69%	39
TN	2.67%	35	1.10%	35	1.91%	22	0.84%	11	1.07%	30	3.20%	29	4.05%	28
TX	3.55%	28	1.85%	26	2.53%	17	0.22%	21	2.32%	12	4.39%	21	5.66%	20
UT	5.80%	9	3.68%	7	2.99%	14	0.36%	18	2.63%	11	6.28%	11	7.93%	10
VA	7.64%	3	6.48%	4	5.48%	4	0.52%	13	4.98%	1	12.10%	2	14.30%	3
VT	2.51%	36	0.44%	44	0.62%	45	0.07%	33	0.56%	44	1.25%	48	1.53%	48
WA	4.35%	16	2.32%	13	2.53%	18	0.84%	9	1.58%	22	5.30%	15	6.04%	16
WI	1.59%	49	0.32%	49	0.94%	36	0.04%	39	0.90%	33	1.35%	47	1.56%	47
WV	2.46%	37	0.39%	45	0.75%	41	0.09%	30	0.66%	40	1.38%	45	1.67%	45
WY	4.09%	20	1.73%	25	0.53%	48	0.0044%	45	0.52%	47	1.91%	43	3.09%	33
US Total	3.19%		1.51%		2.32%		0.52%		1.80%		3.99%		4.71%	

Table 1

Source: DOD Atlas/Data Abstract for the US 1990 and
Department of Energy EAX to Authors

Note: Total Defense Payroll does not include retired military pay
DOD Defense assets

- Hawaii, District of Columbia, and Alaska have the highest *Total Defense Payroll* under *Percent of State Personal Income*.
- New Mexico leads the nation in *Total Prime Contracts* and *R&D Contracts*, with 7.56 percent of its GSP generated from *Total Prime Contracts* and 5.78 percent of its GSP generated from *Total R&D Contracts*. It is followed by Colorado and South Carolina in *R&D Contracts*, and by Missouri and Colorado in *Total Prime Contracts*.
- In *Non-R&D Contracts*, Virginia, Missouri and Arizona are at the top.
- *Total Defense Spending* as a percentage of GSP shows New Mexico again first with Virginia and Hawaii next in line.
- When in each state *Personal Income* is calculated as a percentage of *Total Defense Spending*, the District of Columbia ranks first with 19.86 percent, followed by New Mexico with 15.52 percent, and Virginia with 14.30 percent.

It should be noted that the defense payroll figures used in this table disregarded retirement, because spending in this area will not change. Also, DOE defense expenditures were included under *R&D Contracts*.

Table 2. Military Spending as a Percentage of Gross State Product. This table compares DOD spending in each state to the GSP. It provides an indication of state dependence on military spending. Hawaii, Alaska, and Virginia rank first, second and third under *Active Duty* payroll. Under *Civilian Payroll*, Virginia, Utah and Hawaii occupied the top three rankings. *Reserve & National Guard* pay ranks Utah, Alabama, and Kansas first, second and third. *Retirement* shows Virginia, Florida and New Mexico as the top three. *Total Military Pay* is the same as *Active Duty* pay, with Hawaii, Alaska, and Virginia in the first three places. *Total Operations Pay*, a figure which includes *Active Duty* and *Civilian* pay, shows Hawaii, Virginia and Alaska most dependent on military spending. Excluding retirement pay did not

Military Spending as a Percentage of Gross State Product

STATE	Department of Defense Payroll																Prime Contracts >\$25,000								Total Military Expenditure
	Active Duty	Rank	Civilian	Rank	Reserve & National Guard	Rank	Retired	Rank	Total Military	Rank	Total Operations Pay	Rank	Total Payroll	Rank	Total Payroll - Retired	Rank	R&D Contracts	Rank	Non-R&D Contracts	Rank	Total Contracts	Rank			
AK	2.91%	2	0.81%	13	0.19%	10	0.32%	32	3.10%	2	3.72%	3	4.23%	3	3.91%	3	0.00%	48	2.12%	13	2.13%	18	6.36%	8	
AL	0.59%	31	1.03%	9	0.29%	2	0.70%	9	0.88%	21	1.62%	15	2.60%	13	1.90%	14	0.86%	8	2.00%	15	2.66%	14	5.27%	15	
AR	0.54%	32	0.33%	29	0.17%	12	0.67%	10	0.71%	33	0.87%	32	1.71%	27	1.05%	31	0.03%	39	0.76%	37	0.79%	38	2.50%	31	
AZ	0.85%	18	0.38%	25	0.11%	35	0.80%	5	0.96%	18	1.23%	25	2.13%	20	1.33%	25	0.44%	10	4.48%	3	4.92%	4	7.05%	4	
CA	0.80%	19	0.56%	18	0.05%	49	0.40%	23	0.85%	25	1.36%	22	1.81%	25	1.41%	23	0.88%	4	2.10%	14	2.98%	12	4.79%	18	
CO	1.07%	10	0.80%	16	0.13%	28	0.78%	6	1.20%	10	1.67%	14	2.58%	14	1.80%	15	3.34%	1	1.30%	26	4.65%	5	7.23%	3	
CT	0.32%	35	0.18%	42	0.05%	50	0.14%	44	0.37%	36	0.51%	41	0.70%	42	0.55%	41	0.19%	18	4.38%	4	4.57%	6	5.27%	14	
DC	0.92%	14	1.47%	4	0.15%	19	0.12%	49	1.08%	15	2.39%	7	2.66%	11	2.54%	8	0.15%	22	4.04%	5	4.19%	7	6.85%	5	
DE	0.61%	30	0.31%	32	0.16%	18	0.40%	24	0.76%	32	0.92%	31	1.47%	31	1.07%	28	0.07%	31	0.52%	46	0.59%	45	2.06%	41	
FL	0.97%	13	0.41%	23	0.08%	45	0.80%	2	1.03%	17	1.38%	21	2.34%	16	1.44%	22	0.36%	13	1.85%	21	2.00%	19	4.35%	20	
GA	0.74%	22	0.71%	15	0.20%	8	0.55%	15	0.95%	19	1.45%	19	2.20%	17	1.65%	19	0.06%	32	1.25%	28	1.31%	29	3.51%	24	
HI	4.28%	1	1.82%	3	0.15%	20	0.63%	11	4.43%	1	6.10%	1	6.88%	1	6.25%	1	0.05%	35	1.74%	18	1.79%	22	8.67%	2	
IA	0.02%	51	0.08%	51	0.10%	37	0.15%	43	0.12%	51	0.10%	51	0.34%	51	0.19%	51	0.09%	28	0.79%	36	0.88%	35	1.22%	49	
ID	0.84%	29	0.20%	39	0.16%	16	0.55%	16	0.80%	27	0.84%	33	1.55%	30	1.01%	32	0.00%	49	0.23%	51	0.24%	51	1.79%	44	
IL	0.27%	37	0.25%	38	0.06%	46	0.12%	48	0.33%	37	0.51%	39	0.69%	43	0.57%	40	0.05%	34	0.44%	49	0.49%	49	1.18%	50	
IN	0.11%	43	0.43%	22	0.16%	15	0.17%	40	0.28%	39	0.55%	38	0.88%	39	0.71%	37	0.11%	26	1.41%	24	1.52%	27	2.41%	34	
KS	0.89%	17	0.36%	27	0.25%	3	0.36%	29	1.14%	14	1.25%	24	1.88%	23	1.50%	21	0.03%	41	1.73%	19	1.76%	23	3.64%	23	
KY	0.90%	16	0.37%	26	0.14%	23	0.30%	35	1.04%	16	1.27%	23	1.71%	28	1.41%	24	0.00%	46	0.62%	42	0.62%	44	2.34%	35	
LA	0.65%	28	0.28%	33	0.13%	25	0.37%	30	0.78%	30	0.93%	30	1.42%	32	1.05%	30	0.00%	47	1.90%	16	1.91%	21	3.33%	26	
MA	0.14%	42	0.25%	37	0.08%	39	0.16%	42	0.23%	41	0.39%	43	0.84%	44	0.48%	43	1.48%	2	3.97%	6	5.45%	3	6.10%	11	
MD	0.74%	23	1.28%	6	0.14%	24	0.53%	17	0.87%	23	2.02%	10	2.68%	9	2.16%	10	0.86%	5	3.29%	9	4.15%	8	6.84%	6	
ME	0.73%	24	1.27%	7	0.12%	30	0.49%	19	0.85%	24	2.00%	11	2.62%	12	2.12%	11	0.02%	42	3.39%	8	3.41%	10	6.03%	12	
MI	0.10%	45	0.17%	44	0.06%	47	0.12%	50	0.16%	48	0.27%	44	0.45%	47	0.33%	46	0.15%	21	0.56%	43	0.71%	41	1.16%	51	
MN	0.03%	49	0.08%	50	0.11%	34	0.13%	45	0.14%	50	0.11%	50	0.35%	50	0.22%	50	0.41%	11	1.35%	25	1.76%	24	2.11%	39	
MO	0.32%	36	0.27%	34	0.16%	17	0.31%	34	0.48%	34	0.59%	37	1.06%	34	0.75%	35	0.90%	3	4.86%	2	5.76%	1	6.82%	7	
MS	0.92%	15	0.83%	12	0.24%	4	0.80%	13	1.16%	13	1.74%	13	2.58%	15	1.98%	13	0.01%	43	3.51%	7	3.53%	9	6.11%	10	
MT	0.69%	27	0.27%	35	0.19%	9	0.45%	21	0.88%	22	0.96%	28	1.60%	29	1.15%	27	0.00%	45	0.49%	48	0.50%	48	2.10%	40	
NC	1.28%	7	0.32%	31	0.08%	42	0.50%	18	1.36%	8	1.60%	16	2.18%	18	1.68%	18	0.14%	23	0.73%	38	0.87%	38	3.08%	27	
ND	1.79%	4	0.44%	21	0.21%	7	0.23%	38	2.00%	4	2.23%	9	2.66%	10	2.43%	9	0.00%	50	0.83%	35	0.83%	37	3.49%	25	
NE	1.08%	9	0.33%	28	0.11%	33	0.40%	26	1.19%	11	1.42%	20	1.93%	22	1.53%	20	0.06%	33	0.88%	39	0.72%	40	2.85%	29	
NH	0.34%	34	0.17%	45	0.08%	41	0.46%	20	0.42%	35	0.51%	40	1.06%	35	0.60%	39	0.33%	15	1.22%	29	1.55%	26	2.61%	30	
NJ	0.18%	38	0.41%	24	0.07%	44	0.13%	47	0.25%	40	0.59%	38	0.79%	40	0.68%	38	0.20%	17	1.52%	23	1.71%	25	2.50%	32	
NM	1.32%	6	1.13%	8	0.14%	22	0.88%	3	1.46%	7	2.45%	6	3.48%	5	2.59%	7	0.68%	7	1.79%	17	2.47%	16	5.95%	13	
NV	0.76%	21	0.19%	41	0.06%	48	0.73%	7	0.81%	28	0.85%	29	1.73%	26	1.00%	33	0.04%	38	0.55%	45	0.59%	46	2.32%	36	
NY	0.15%	41	0.11%	48	0.04%	51	0.07%	51	0.19%	46	0.26%	45	0.38%	49	0.30%	48	0.19%	19	1.27%	27	1.46%	28	1.84%	43	
OH	0.16%	40	0.49%	19	0.07%	43	0.17%	41	0.23%	42	0.66%	35	0.90%	38	0.73%	36	0.27%	16	1.69%	20	1.96%	20	2.66%	28	
OK	1.06%	11	1.32%	5	0.22%	5	0.62%	12	1.28%	9	2.38%	8	3.22%	7	2.60%	6	0.13%	25	0.98%	32	1.12%	32	4.34%	21	
OR	0.08%	46	0.17%	43	0.10%	38	0.40%	28	0.16%	47	0.24%	46	0.73%	41	0.33%	45	0.03%	40	0.82%	41	0.65%	42	1.38%	46	
PA	0.11%	44	0.58%	17	0.12%	28	0.20%	39	0.23%	43	0.68%	34	1.01%	36	0.81%	34	0.34%	14	0.83%	34	1.17%	31	2.18%	37	
RI	0.80%	20	0.75%	14	0.15%	21	0.38%	27	0.95%	20	1.58%	18	2.08%	21	1.70%	17	0.08%	29	2.74%	10	2.63%	13	4.81%	17	
SC	1.77%	5	0.88%	10	0.21%	6	0.83%	4	1.98%	5	2.66%	4	3.69%	4	2.86%	5	0.04%	38	1.02%	31	1.06%	33	4.75%	19	
SD	1.28%	8	0.32%	30	0.18%	11	0.35%	31	1.46%	8	1.59%	17	2.13%	19	1.78%	16	0.00%	51	0.29%	50	0.29%	50	2.42%	33	
TN	0.21%	38	0.20%	40	0.11%	32	0.42%	22	0.32%	38	0.40%	42	0.94%	37	0.52%	42	0.14%	24	1.07%	30	1.21%	30	2.15%	38	
TX	0.70%	26	0.46%	20	0.09%	40	0.58%	14	0.79%	29	1.16%	26	1.82%	24	1.25%	26	0.17%	20	2.32%	12	2.48%	15	4.31%	22	
UT	0.46%	33	2.14%	2	0.31%	1	0.38%	28	0.77%	31	2.60%	5	3.29%	6	2.91%	4	0.36%	12	2.63%	11	2.99%	11	6.28%	9	
VA	2.75%	3	2.61%	1	0.12%	29	1.13%	1	2.87%	3	5.36%	2	6.82%	2	5.48%	2	0.52%	9	4.06%	1	5.48%	2	12.10%	1	
VT	0.04%	48	0.15%	47	0.17%	13	0.27%	37	0.21%	44	0.19%	48	0.63%	45	0.36%	44	0.07%	30	0.56%	44	0.62%	43	1.25%	48	
WA	1.03%	12	0.86%	11	0.13%	27	0.73%	8	1.16%	12	1.90%	12	2.75%	8	2.02%	12	0.76%	6	1.59%	22	2.33%	17	5.09%	16	
WI	0.02%	50	0.09%	49	0.17%	14	0.13%	46	0.19%	45	0.11%	49	0.41%	48	0.28%	49	0.04%	37	0.90%	33	0.94%	34	1.35%	47	
WV	0.04%	47	0.17%	46	0.11%	31	0.30%	36	0.15%	49	0.21%	47	0.63%	46	0.32%	47	0.09%	27	0.66%	40	0.75%	39	1.38%	45	
WY	0.70%	25	0.26%	36	0.10%	36	0.32%	33	0.80%	28	0.96%	27	1.38%	33	1.06%	29	0.00%	44	0.52%	47	0.53%	47	1.91%	42	
US Total	0.61%		0.51%		0.10%		0.38%		0.71%		1.13%		1.61%		1.23%		0.40%		1.80%		2.20%		3.81%		

Table 2

Source: DOD Atlas/Data Abstract for the US 1990 and

US Department of Commerce

affect the top state rankings by total payroll. Please note that when DOE money is excluded, contract rankings change: Colorado, Massachusetts and Missouri lead in *R&D Contracts*. Finally, *Total Military Expenditure* as a percent of GSP shows Virginia with a large 12.1 percent, Hawaii with 8.67 percent and Colorado with 7.23 percent.

Table 3. Military Employment as a Percentage of Total State Non-Agricultural Employment. This table compares the percentage of military employment to total state non-agricultural employment. *Active Duty* shows Alaska, Hawaii and North Dakota with the highest percentages. *Civilian* employment ranks Virginia, Hawaii and Utah as the top three. *Reserve & National Guard* has North Dakota, Alabama and Mississippi at the top. *Total Military*, a number based on *Active Duty* plus *Reserve & National Guard*, ranks Alaska, Hawaii and North Dakota as the three states most dependent on military employment overall.

Table 4. Defense Employment as a Percentage of Total State Non-Agricultural Employment. This table compares the percentage of DOE personnel to total non-agricultural employment in each state. DOE personnel ranks all twelve states with DOE defense personnel. The top three are New Mexico, South Carolina and Nevada.

The picture that emerges from Tables 1-4 and those in Appendix 1 regarding state dependence on defense spending, and hence the vulnerability of the health of a state's economy to cuts in defense spending, is rather complicated and depends on the category of defense spending by state (e.g.: employment, payroll, procurement, R&D), and on the importance of each of these categories to overall state employment, payroll and GSP. For example, measured by percentage of defense employment compared to state employment, Alaska, Hawaii and Virginia are most dependent on defense spending,

Military Employment

as a Percentage of Total State Non-Agricultural Employment

STATE	Active Duty	Rank	Civilian	Rank	Reserve & National Guard	Rank	Total Military	Rank	Total	Rank
AK	7.96%	1	2.09%	5	2.40%	6	10.36%	1	12.45%	1
AL	1.06%	29	1.46%	10	2.61%	2	3.67%	12	5.13%	10
AR	0.91%	31	0.49%	33	2.29%	7	3.20%	21	3.68%	26
AZ	1.45%	18	0.65%	25	1.36%	38	2.81%	26	3.46%	28
CA	1.20%	27	0.87%	17	0.92%	49	2.12%	36	2.99%	32
CO	2.01%	9	0.79%	20	1.27%	39	3.29%	18	4.07%	20
CT	0.41%	37	0.30%	43	0.89%	50	1.30%	50	1.60%	48
DC	1.90%	12	2.36%	4	2.04%	13	3.93%	9	6.30%	5
DE	1.21%	26	0.49%	32	2.20%	10	3.40%	17	3.90%	23
FL	1.29%	25	0.56%	27	1.09%	45	2.39%	32	2.95%	33
GA	1.38%	22	1.19%	12	1.41%	34	2.79%	27	3.98%	22
HI	8.39%	2	3.18%	2	1.94%	17	8.33%	2	11.50%	2
IA	0.03%	51	0.13%	50	1.67%	24	1.70%	40	1.83%	44
ID	1.11%	28	0.32%	40	2.02%	14	3.13%	22	3.45%	29
IL	0.64%	34	0.38%	37	1.04%	46	1.68%	41	2.06%	42
IN	0.21%	43	0.56%	28	1.49%	32	1.70%	39	2.26%	39
KS	1.78%	13	0.58%	26	1.85%	19	3.61%	13	4.18%	18
KY	1.93%	11	0.83%	18	1.53%	28	3.48%	15	4.29%	18
LA	1.39%	21	0.55%	29	2.06%	12	3.45%	16	4.00%	21
MA	0.28%	41	0.38%	38	1.15%	43	1.43%	46	1.81%	46
MD	1.40%	19	1.83%	7	1.53%	29	2.93%	25	4.78%	13
ME	0.96%	30	1.78%	8	1.79%	21	2.74%	28	4.52%	14
MI	0.20%	44	0.27%	45	1.10%	44	1.31%	49	1.57%	50
MN	0.04%	80	0.13%	51	1.49%	33	1.63%	43	1.66%	47
MO	0.63%	35	0.79%	19	1.61%	26	2.24%	34	3.03%	31
MS	1.34%	24	1.12%	14	2.56%	3	3.90%	10	5.01%	12
MT	1.34%	23	0.41%	36	2.55%	4	3.86%	11	4.29%	17
NC	2.08%	8	0.48%	34	1.18%	42	3.26%	20	3.74%	25
ND	3.52%	3	0.68%	24	2.73%	1	6.25%	3	6.93%	4
NE	1.61%	15	0.53%	30	1.67%	23	3.28%	19	3.81%	24
NH	0.41%	38	0.31%	42	1.37%	36	1.78%	38	2.09%	41
NJ	0.42%	36	0.71%	22	0.89%	51	1.31%	48	2.02%	43
NM	2.34%	5	1.56%	9	1.80%	20	4.13%	7	5.69%	8
NV	1.40%	20	0.32%	41	1.02%	47	2.42%	31	2.74%	34
NY	0.33%	40	0.22%	48	0.96%	48	1.29%	51	1.51%	51
OH	0.23%	42	0.68%	23	1.19%	41	1.42%	47	2.10%	40
OK	1.99%	10	1.87%	6	2.01%	15	4.00%	8	5.87%	6
OR	0.09%	47	0.22%	47	1.51%	30	1.59%	42	1.81%	45
PA	0.11%	45	0.96%	15	1.37%	37	1.48%	44	2.43%	37
RI	0.61%	32	0.90%	16	1.70%	22	2.51%	30	3.41%	30
SC	2.21%	6	1.18%	13	2.00%	16	4.21%	6	5.39%	9
SD	2.15%	7	0.47%	35	2.45%	5	4.60%	4	5.07%	11
TN	0.39%	39	0.34%	39	1.66%	25	2.05%	37	2.39%	38
TX	1.49%	17	0.78%	21	1.25%	40	2.74%	29	3.52%	27
UT	0.76%	33	2.78%	3	2.26%	8	3.02%	24	5.80%	7
VA	2.78%	4	3.36%	1	1.51%	31	4.28%	5	7.64%	3
VT	0.05%	48	0.24%	46	2.22%	9	2.26%	33	2.51%	35
WA	1.52%	16	1.23%	11	1.59%	27	3.11%	23	4.34%	15
WI	0.05%	49	0.14%	49	1.40%	35	1.45%	45	1.59%	49
WV	0.08%	46	0.27%	44	2.11%	11	2.19%	35	2.46%	36
WY	1.71%	14	0.51%	31	1.86%	18	3.57%	14	4.09%	19
US Total	1.01%		0.79%		1.34%		2.35%		3.14%	

Table 3

Source: DOD Atlas/Data Abstract for the US 1990 and

Defense Employment

as a Percentage of Total State Non-Agricultural Employment

STATE	DOE Defense Personnel	Rank	Total Civilian	Rank	Total Defense Employed	Rank
AK	0.00%		2.09%	7	12.45%	1
AL	0.00%		1.46%	11	5.13%	10
AR	0.00%		0.49%	36	3.68%	27
AZ	0.00%		0.65%	26	3.46%	29
CA	0.02%	11	0.89%	20	3.01%	33
CO	0.33%	4	1.11%	15	4.40%	15
CT	0.00%		0.30%	43	1.60%	48
DC	0.00%		2.36%	5	6.30%	7
DE	0.00%		0.49%	35	3.90%	23
FL	0.02%	10	0.69%	29	2.97%	34
GA	0.00%		1.19%	13	3.98%	22
HI	0.00%		3.18%	2	11.50%	2
IA	0.00%		0.13%	50	1.83%	44
ID	0.30%	5	0.63%	27	3.75%	25
IL	0.00%		0.38%	40	2.06%	42
IN	0.00%		0.56%	31	2.26%	39
KS	0.00%		0.58%	30	4.18%	19
KY	0.00%		0.83%	21	4.29%	17
LA	0.00%		0.55%	32	4.00%	21
MA	0.00%		0.38%	41	1.81%	46
MD	0.00%		1.83%	9	4.76%	13
ME	0.00%		1.78%	10	4.82%	14
MI	0.00%		0.27%	45	1.57%	50
MN	0.00%		0.13%	51	1.66%	47
MO	0.18%	7	0.97%	16	3.21%	32
MS	0.00%		1.12%	14	5.01%	12
MT	0.00%		0.41%	39	4.29%	18
NC	0.00%		0.48%	37	3.74%	26
ND	0.00%		0.68%	25	6.93%	4
NE	0.00%		0.53%	33	3.81%	24
NH	0.00%		0.31%	42	2.09%	41
NJ	0.00%		0.71%	24	2.02%	43
NM	1.06%	1	2.62%	4	6.75%	5
NV	0.61%	3	0.93%	18	3.35%	31
NY	0.00%		0.22%	48	1.51%	51
OH	0.03%	8	0.72%	23	2.13%	40
OK	0.00%		1.87%	6	5.87%	6
OR	0.00%		0.22%	47	1.81%	45
PA	0.00%		0.96%	17	2.43%	38
RI	0.00%		0.90%	19	3.41%	30
SC	1.06%	2	2.24%	6	6.45%	6
SD	0.00%		0.47%	38	5.07%	11
TN	0.28%	6	0.62%	28	2.67%	35
TX	0.03%	9	0.81%	22	3.55%	28
UT	0.00%		2.78%	3	5.80%	9
VA	0.00%		3.36%	1	7.64%	3
VT	0.00%		0.24%	46	2.51%	36
WA	0.01%	12	1.24%	12	4.35%	16
WI	0.00%		0.14%	49	1.59%	49
WV	0.00%		0.27%	44	2.46%	37
WY	0.00%		0.51%	34	4.09%	20
US Total	0.05%		0.84%		3.19%	

Table 4

Source: DOD Atlas/Data Abstract for the US 1990

while New York, Michigan and Wisconsin are least dependent on defense spending. On the other hand, measuring by spending by prime contracts, New Mexico, Missouri and Colorado depend the most on defense spending, while South Dakota, Illinois and Montana depend the least. Taking total defense spending as a percentage of GSP, however, the following are the ten states most dependent on defense spending and the ten least dependent (see Table 1):

Most Dependent States

New Mexico (12.36%)
 Virginia (12.10%)
 Hawaii (8.67%)
 South Carolina (8.61%)
 Colorado (8.60%)
 Missouri (7.43%)
 Arizona (7.05%)
 Maryland (6.88%)
 District of Columbia (6.86%)
 Alaska (6.36%)

Least Dependent States

Michigan (1.16%)
 Illinois (1.19%)
 Iowa (1.22%)
 Vermont (1.25%)
 Wisconsin (1.35%)
 Oregon (1.38)
 West Virginia (1.38%)
 New York (1.84%)
 Wyoming (1.91%)
 Delaware (2.06%)

b. The Administration Plan

The reductions in defense spending proposed by the Administration and their impact on the economies of the states are reported in Tables 5-8. Each of these tables is described below.

Table 5. National Defense Spending, FY92-FY97. This table includes line items extracted from the January 1992 Budget of the United States. DOE programs in this table refer to line 053 of the budget titled "Atomic Energy". As can be seen, the proposed administration plan is to cut defense spending by 5.94 percent in *current* dollars during the period of 1992-1997.

Table 6. National Defense Spending, FY93-FY97 (in constant dollars). This table reports the proposed Administration Plan in constant 1992 dollars. As can be seen, the Administration Plan would by 1997

National Defense Spending, FY 92 – FY 97

BUDGET ITEM/YEAR	1992	1993	1994	1995	1996	1997	%Change
Military Personnel	79,289	76,952	72,298	71,709	73,274	75,275	-5.06%
Operations and Maintenance	105,252	96,146	94,821	96,771	99,053	100,706	-4.32%
Procurement	73,952	67,263	63,838	62,257	61,788	61,378	-17.00%
RD&E	36,145	37,194	38,824	38,287	37,275	36,367	0.61%
DOE Defense Programs	11,685	11,901	12,489	13,018	13,740	14,404	23.27%
Total	306,323	289,456	282,270	282,042	285,130	288,130	-5.94%

Table 5 (millions of \$)

Source: Budget of the United States, FY93 – FY97, January 1992.

Note: Military construction, family housing and other were included in Operations and Maintenance;
DOE Defense Programs are line 053 Atomic Energy.

National Defense Spending, FY 92 – FY 97

BUDGET ITEM/YEAR	1992	1993	1994	1995	1996	1997	%Change
Military Personnel	79,289	74,486	67,765	65,042	64,371	64,053	-19.22%
Operations and Maintenance	105,252	93,066	88,875	87,774	87,018	85,693	-18.58%
Procurement	73,952	65,108	59,835	56,469	54,281	52,228	-29.38%
RD&E	36,145	36,002	36,390	34,727	32,746	30,945	-14.39%
DOE Defense Programs	11,685	11,520	11,706	11,808	12,071	12,257	4.89%
Total	306,323	280,182	264,570	255,820	250,488	245,175	-19.96%

Table 6 (Constant \$, 1992=100.0)

Source: Budget of the United States, FY93 – FY97, January 1992.

Note: Military construction, family housing and other were included in Operations and Maintenance;
DOE Defense Programs are line 053 Atomic Energy.

cut defense spending by 19.96 percent in constant 1992 dollars. These cuts, however, are not uniform to all budget categories; while spending on *Procurement* would be cut by 29.38 percent, spending on DOE defense programs would increase by 4.89 percent. More specifically, the following is a breakdown of the national defense budget and the respective planned reductions:

<u>Budget Item</u>	<u>Planned Cuts FY93-FY97 in Percents</u>
Military Personnel	- 19.22
Operations and Maintenance	- 18.58
Procurement	- 29.38
RDT&E	- 14.39
DOE Defense Programs	+ 4.89
Total	- 19.96

Table 7. Reduction in Defense Spending: The Administration Plan. Using the results regarding defense spending by state reported in previous tables (especially Table 1) in combination with the proposed Federal Budget outlays for FY93-FY97, it is possible to estimate the relative cuts of defense spending by state. Table 7 shows Connecticut, Wisconsin and Mississippi with the highest percentage cut in defense spending (22.86%, 22.23%, and 22.06%, respectively). States with the least cuts are New Mexico, Idaho, and South Carolina (6.84%, 8.11% and 9.92%, respectively). Measured by the number of jobs directly lost as a result of the Administration Plan indicates that the ten states with the largest employment losses are: California (121,207 jobs), Texas (80,144 jobs), Virginia (68,782 jobs), Florida (48,635 jobs), New York (42,444 jobs), Pennsylvania (35,504 jobs), Georgia (35,253 jobs), North Carolina (33,853 jobs), Maryland (32,281 jobs), and Illinois (31,475 jobs). As these job losses have a ripple effect which brings about additional job losses, the numbers should be doubled to estimate to obtain total job losses.

Table 8. Reduction in National Defense: The Administration Plan. This table compares the numbers reported in Table 7 with gross state product, personal income and state employment. Again, the ranking

Reduction in Defense Spending The Administration Plan

STATE	Percent of Reduction	Defense Spending	Defense Payroll	Defense Employment	Rank
AK	-20.93%	369	227	9,474	23
AL	-20.38%	1,060	383	25,013	34
AR	-20.70%	273	114	9,993	27
AZ	-21.91%	1,571	298	17,923	7
CA	-19.89%	10,375	3,049	121,207	43
CO	-14.48%	1,265	325	15,040	46
CT	-22.86%	1,700	179	9,567	1
DC	-21.99%	835	310	13,859	6
DE	-20.32%	90	47	3,852	36
FL	-20.27%	3,027	1,008	48,635	37
GA	-20.94%	1,334	628	35,253	21
HI	-20.22%	633	457	18,368	38
IA	-21.89%	221	35	7,629	9
ID	-8.11%	63	26	1,698	50
IL	-20.81%	887	429	31,475	25
IN	-21.84%	814	240	18,027	10
KS	-21.55%	571	236	14,895	13
KY	-20.57%	443	267	18,057	30
LA	-22.02%	887	281	21,450	5
MA	-20.93%	2,945	234	18,407	22
MD	-20.66%	2,084	653	32,281	28
ME	-22.04%	445	157	7,760	4
MI	-20.82%	648	184	18,952	24
MN	-21.16%	676	71	11,912	17
MO	-20.18%	2,348	309	23,789	41
MS	-22.06%	761	247	15,564	3
MT	-20.42%	78	43	3,711	33
NC	-20.16%	1,147	630	33,853	42
ND	-20.44%	112	78	5,284	32
NE	-20.36%	239	138	8,098	35
NH	-20.76%	197	45	3,339	26
NJ	-21.74%	1,648	434	23,582	12
NM	-6.84%	314	100	3,984	51
NV	-9.96%	163	65	2,744	48
NY	-21.81%	2,810	461	42,444	11
OH	-20.48%	1,928	493	31,131	31
OK	-20.19%	601	360	18,772	40
OR	-21.35%	228	55	7,005	14
PA	-20.21%	1,421	526	35,504	39
RI	-21.90%	293	101	5,026	8
SC	-9.92%	676	339	12,961	49
SD	-19.82%	75	55	3,953	44
TN	-13.77%	578	157	11,299	47
TX	-21.26%	4,824	1,406	80,144	15
UT	-21.03%	514	238	11,880	20
VA	-21.05%	4,882	2,212	68,782	19
VT	-21.11%	44	13	1,999	18
WA	-18.74%	1,429	550	26,294	45
WI	-22.23%	438	91	12,386	2
WV	-21.19%	122	28	4,737	16
WY	-20.61%	62	35	2,354	29
US Total	-19.96%	61,148	19,622	1,044,029	

Table 7 (millions of \$ 1992 Dollars)

Reduction in National Defense The Administration Plan

STATE	Percent of Gross State Product		Percent of State Personal Income		Percent of State Employment	
	Defense Spending	Rank	Defense Payroll	Rank	Defense Employment	Rank
AK	1.78%	12	1.90%	3	3.48%	1
AL	1.46%	15	0.63%	11	1.42%	9
AR	0.69%	33	0.34%	32	1.01%	25
AZ	2.27%	2	0.50%	19	1.12%	18
CA	1.38%	16	0.49%	23	0.85%	29
CO	1.79%	11	0.52%	18	0.91%	28
CT	1.83%	9	0.21%	38	0.56%	43
DC	2.06%	5	2.21%	1	1.89%	4
DE	0.55%	41	0.35%	29	1.04%	22
FL	1.24%	19	0.42%	28	0.84%	30
GA	0.97%	25	0.57%	15	1.09%	20
HI	2.22%	4	2.01%	2	2.94%	2
IA	0.39%	47	0.07%	51	0.59%	40
ID	0.36%	49	0.17%	43	0.40%	51
IL	0.33%	51	0.18%	41	0.57%	42
IN	0.73%	31	0.26%	35	0.69%	34
KS	1.09%	21	0.52%	17	1.25%	13
KY	0.63%	35	0.48%	24	1.15%	15
LA	1.04%	23	0.46%	26	1.25%	14
MA	1.97%	7	0.17%	42	0.58%	41
MD	1.97%	6	0.62%	12	1.36%	10
ME	1.80%	10	0.74%	8	1.35%	11
MI	0.34%	50	0.11%	48	0.46%	49
MN	0.68%	34	0.09%	50	0.54%	44
MO	2.23%	3	0.34%	31	0.96%	27
MS	1.88%	8	0.75%	7	1.54%	7
MT	0.56%	40	0.35%	30	1.15%	16
NC	0.83%	28	0.58%	14	1.01%	26
ND	0.94%	26	0.81%	6	1.86%	5
NE	0.71%	32	0.50%	21	1.03%	24
NH	0.78%	29	0.19%	40	0.63%	37
NJ	0.77%	30	0.22%	37	0.62%	38
NM	1.15%	20	0.46%	27	0.63%	36
NV	0.52%	42	0.28%	33	0.41%	50
NY	0.60%	37	0.12%	45	0.49%	47
OH	0.86%	27	0.26%	34	0.61%	39
OK	1.08%	22	0.74%	9	1.46%	8
OR	0.40%	46	0.11%	47	0.53%	45
PA	0.59%	39	0.24%	36	0.66%	35
RI	1.49%	14	0.54%	16	1.04%	23
SC	1.03%	24	0.64%	10	0.77%	31
SD	0.61%	36	0.50%	20	1.29%	12
TN	0.59%	38	0.20%	39	0.49%	48
TX	1.31%	18	0.49%	22	1.06%	21
UT	1.68%	13	0.98%	5	1.55%	6
VA	3.38%	1	1.81%	4	2.13%	3
VT	0.37%	48	0.13%	44	0.73%	32
WA	1.36%	17	0.60%	13	1.12%	17
WI	0.44%	44	0.11%	49	0.52%	46
WV	0.41%	45	0.12%	46	0.73%	33
WY	0.52%	43	0.47%	25	1.11%	19
US Total	1.11%		0.42%		0.89%	

Table 8

of most and least affected states depends on spending categories. For example, *Defense Payroll* reduction as a percentage of personal income ranks District of Columbia, Hawaii and Alaska as most affected, and Iowa, Minnesota and Wisconsin as least affected, while *Defense Employment* reduction as a percentage of state employment affects Alaska, Hawaii and Virginia most, and Idaho, Nevada and Michigan least. But perhaps a more encompassing indicator is the *Defense Spending* reduction as a percentage of GSP. The following are the ten most negatively affected and the ten least negatively affected states:

<u>Most Negative Impact</u>	<u>Reduction as Percent of Gross State Product</u>
Virginia	3.38
Arizona	2.27
Missouri	2.23
Hawaii	2.22
District of Columbia	2.06
Maryland	1.97
Massachusetts	1.97
Mississippi	1.88
Connecticut	1.83
Maine	1.80

<u>Least Negative Impact</u>	<u>Reduction as Percentage of Gross State Product</u>
Illinois	0.33
Michigan	0.34
Idaho	0.36
Vermont	0.37
Iowa	0.39
Oregon	0.40
West Virginia	0.41
Wisconsin	0.44
Wyoming	0.52
Nevada	0.52

c. **"Doubling" The Administration Plan**

This scenario roughly doubles the proposed cuts of the Administration Plan and assesses the economic impact of these cuts on the economies of the states. More specifically, following are the

Administration's total proposed cuts by 1997 expressed in percentage and in constant 1992 dollars, and the corresponding "Doubling the Administration Plan" scenario.

<u>Budget Item</u>	<u>Administration Cuts FY93-97 in %s</u>	<u>"Doubling" the Administration Cuts FY93-97 in %s</u>
Military Personnel	- 19.22	- 40.00
Operations and Maintenance	- 18.52	- 40.00
Procurement	- 29.38	- 50.00
RDT&E	- 14.39	- 30.00
DOE Defense Programs	+ 4.89	- 14.39

As can be seen, the Administration's cuts were roughly doubled in the areas of *Military Personnel*, *Operations and Maintenance*, and *RDT&E*. On the other hand, cuts in *Procurement* were increased from 29.38 percent to 50 percent, because it was felt that a cut beyond 50 percent would make work in other areas less efficient, if not impossible. Also, spending by *DOE Defense Programs* are cut by 14.39 percent rather than increased by 4.89 percent as under the Administration Plan. The rationale for this 14.39 percent cut is that once the budget cuts of other defense spending categories are approximately doubled, defense programs must be cut by roughly the same percentage that the *RDT&E* was cut under the Administration Plan. This 14.39 percent reduction is especially significant to states dependent on funds from DOE defense programs. These states include New Mexico, South Carolina, Nevada, Colorado, Idaho, Tennessee, Missouri, Ohio, Texas, Florida, California and Washington.

Using the above assumptions, the economic impact of this scenario is reported below.

Table 9. Reduction in Defense Spending ("Doubling" the Administration Plan). This table reports the reduction in defense spending, assuming the administration's proposed cuts will be roughly doubled as explained above. Accordingly, the ~~three~~ most affected states in terms of percentage cuts of defense spending are: Massachusetts (-45.8%), Minnesota (-45.3%) and New York (-44.6%). The three least

Reduction in Defense Spending "Doubling" the Administration Plan

STATE	Percent of Reduction	Defense Spending	Defense Payroll	Defense Employment	Rank
AK	-41.90%	739	455	18,968	35
AL	-43.65%	2,271	821	53,581	15
AR	-41.89%	553	231	20,224	36
AZ	-43.98%	3,153	597	35,979	9
CA	-43.95%	22,929	6,738	267,865	10
CO	-41.76%	3,648	937	43,371	39
CT	-44.55%	3,314	349	18,644	4
DC	-43.46%	1,650	612	27,397	16
DE	-41.87%	185	96	7,940	37
FL	-42.64%	6,365	2,120	102,278	30
GA	-42.28%	2,694	1,268	71,189	32
HI	-41.28%	1,293	932	37,502	45
IA	-44.15%	446	71	15,389	7
ID	-28.24%	221	92	5,913	50
IL	-42.62%	1,816	878	64,457	31
IN	-43.76%	1,630	481	36,115	14
KS	-42.70%	1,131	467	29,514	29
KY	-41.56%	894	539	36,481	42
LA	-43.07%	1,735	550	41,960	23
MA	-45.80%	6,446	512	40,285	1
MD	-43.89%	4,427	1,388	68,597	12
ME	-43.19%	872	307	15,205	20
MI	-44.16%	1,374	390	40,186	6
MN	-45.28%	1,448	151	25,495	2
MO	-43.12%	5,016	659	50,825	22
MS	-43.16%	1,490	483	30,457	21
MT	-41.39%	158	86	7,522	43
NC	-41.93%	2,386	1,310	70,425	34
ND	-41.37%	228	159	10,696	44
NE	-41.72%	489	283	16,590	40
NH	-43.91%	417	95	7,061	11
NJ	-44.17%	3,348	881	47,916	5
NM	-27.91%	1,282	406	16,250	51
NV	-30.39%	499	200	8,376	48
NY	-44.56%	5,743	943	86,743	3
OH	-43.06%	4,054	1,036	65,460	25
OK	-41.81%	1,245	746	38,873	38
OR	-42.73%	456	111	14,019	28
PA	-44.09%	3,099	1,148	77,459	8
RI	-43.26%	578	200	9,925	18
SC	-30.28%	2,064	1,033	39,544	49
SD	-40.71%	154	113	8,118	46
TN	-35.10%	1,474	400	28,793	47
TX	-42.93%	9,740	2,840	161,834	26
UT	-43.24%	1,056	490	24,425	19
VA	-42.88%	9,945	4,506	140,133	27
VT	-43.07%	90	26	4,078	24
WA	-42.14%	3,213	1,237	59,135	33
WI	-43.79%	863	179	24,402	13
WV	-43.40%	250	58	9,701	17
WY	-41.61%	125	70	4,753	41
US Total	-42.67%	130,697	40,681	2,188,051	

Table 9 (millions of \$, 1992 Dollars)

affected states are: New Mexico (-27.9%), Idaho (-28.2%) and South Carolina (-30.3%). On the other hand, measuring the number of jobs directly lost as a result of this scenario shows the following top ten states in job losses: California (267,867), Texas (161,834), Virginia (140,133), Florida (102,278), New York (86,743), Pennsylvania (77,459), Georgia (71,189), North Carolina (70,425), Maryland (68,597) and Ohio (65,460). Once again, since these losses generate additional job losses because of their ripple effect, these figures must be doubled to obtain total probable job losses.

Table 10. Reduction in National Defense (Doubling the Administration Plan). This table compares the figures reported in Table 9 with gross state product, personal income and state employment. Again, ranking most and least affected states depends on spending category. Using the more encompassing measure of *Defense Spending* reduction as *Percent of Gross State Product*, the following are the ten most negatively affected and ten least negatively affected states.

<u>Most Negatively Affected</u>	<u>Reduction as Percent of Gross State Product</u>
Virginia	6.89
Colorado	5.15
Missouri	4.77
New Mexico	4.71
Arizona	4.56
Hawaii	4.52
Massachusetts	4.31
Maryland	4.20
District of Columbia	4.08
Mississippi	3.68
<u>Least Negatively Affected</u>	<u>Reduction as Percent of Gross State Product</u>
Illinois	0.67
Michigan	0.72
Vermont	0.75
Iowa	0.80
Oregon	0.81
West Virginia	0.84
Wisconsin	0.86
Wyoming	1.04
Delaware	1.13
Montana	1.14

Reduction in National Defense "Doubling" the Administration Plan

STATE	Percent of Gross State Product		Percent of State Personal Income		Percent of State Employment	
	Defense Spending	Rank	Defense Payroll	Rank	Defense Employment	Rank
AK	3.56%	12	3.80%	3	6.97%	1
AL	3.12%	16	1.35%	13	3.04%	7
AR	1.40%	36	0.69%	33	2.05%	29
AZ	4.56%	5	1.01%	23	2.24%	21
CA	3.06%	17	1.09%	18	1.89%	31
CO	5.15%	2	1.50%	10	2.64%	13
CT	3.57%	11	0.42%	40	1.08%	47
DC	4.08%	9	4.38%	1	3.74%	5
DE	1.13%	43	0.72%	31	2.15%	24
FL	2.61%	21	0.88%	28	1.76%	32
GA	1.95%	25	1.14%	17	2.21%	23
HI	4.52%	6	4.11%	2	6.00%	2
IA	0.80%	48	0.15%	51	1.19%	44
ID	1.24%	40	0.59%	34	1.38%	36
IL	0.67%	51	0.38%	43	1.16%	45
IN	1.47%	33	0.51%	38	1.38%	37
KS	2.16%	23	1.04%	20	2.48%	16
KY	1.27%	38	0.97%	25	2.33%	20
LA	2.03%	24	0.90%	27	2.45%	17
MA	4.31%	7	0.38%	42	1.28%	40
MD	4.20%	8	1.33%	15	2.90%	10
ME	3.53%	13	1.45%	12	2.65%	11
MI	0.72%	50	0.23%	47	0.98%	51
MN	1.46%	35	0.18%	50	1.15%	46
MO	4.77%	3	0.74%	30	2.06%	28
MS	3.68%	10	1.46%	11	3.02%	9
MT	1.14%	42	0.71%	32	2.33%	19
NC	1.72%	28	1.21%	16	2.10%	27
ND	1.89%	26	1.64%	8	3.76%	4
NE	1.46%	34	1.02%	22	2.10%	26
NH	1.66%	29	0.41%	41	1.33%	38
NJ	1.56%	31	0.46%	39	1.26%	42
NM	4.71%	4	1.87%	7	2.57%	14
NV	1.60%	30	0.86%	29	1.26%	41
NY	1.23%	41	0.24%	45	1.01%	50
OH	1.81%	27	0.54%	35	1.29%	39
OK	2.23%	22	1.53%	9	3.02%	8
OR	0.81%	47	0.23%	48	1.06%	48
PA	1.28%	37	0.52%	36	1.43%	35
RI	2.94%	19	1.06%	19	2.05%	30
SC	3.13%	15	1.95%	6	2.34%	18
SD	1.26%	39	1.03%	21	2.64%	12
TN	1.50%	32	0.52%	37	1.25%	43
TX	2.65%	20	1.00%	24	2.14%	25
UT	3.46%	14	2.02%	5	3.19%	6
VA	6.89%	1	3.69%	4	4.35%	3
VT	0.75%	49	0.26%	44	1.50%	33
WA	3.06%	18	1.34%	14	2.51%	15
WI	0.86%	45	0.21%	49	1.02%	49
WV	0.84%	46	0.24%	46	1.49%	34
WY	1.04%	44	0.95%	26	2.24%	22
US Total	2.37%		0.42%		0.89%	

Table 10

IV. STRATEGIES

As shown in the previous sections, reductions in defense spending reduce jobs and income. Specifically, the post-cold-war peace will cost the United States up to 4.38 million jobs and up to \$261.394 billion in lost income by 1997 under the more drastic scenario which roughly doubles the Administration's planned cuts. Even according to the Administration Plan, peace will cost up to 2,088,052 jobs and \$122.296 billion in lost income. Table 11 provides a summary of the direct and total costs, in terms of lost jobs and income, of the Administration Plan, and of a scenario which roughly doubles the Administration Plan.

Table 11: Direct and Total Impacts of Defense Spending

	<u>Jobs Lost</u>	<u>Income Lost in \$Billions</u>
The Administration Plan		
Direct Price	1,044,026	61.148
Total Price (Direct Price x 2 =)	2,088,052	122.296
"Doubling" The Administration Plan		
Direct Price	2,188,051	130.697
Total Price (Direct Price x 2 =)	4,376,102	261.394

Understandably, this potential impact concerns national lenders, governors of affected states, and corporate executive officers in affected industries. However, this high cost of peace may be avoided if the U.S. and affected states and industries treat the post-cold-war era as an opportunity for growth and rejuvenation, and capitalize on such an opportunity by developing and implementing strategies in a businesslike manner.

Basic to all national, state and industry strategies to adapt to and exploit this new situation is the realization that the end of the Cold War has drastically changed both the environment and the game played.

On the national level, the mission to remove the communist threat of the former Eastern Bloc countries has been accomplished. A new mission must now be carefully developed and implemented in the decade ahead. Two diametrically opposed alternatives are:

- **Invest in deficit reductions**, i.e., use the reductions in the defense budget to reduce the approximately \$400 billion deficit in the national budget.
- **Invest in national economic competitiveness**, i.e., invest defense budget reductions in social and economic growth programs geared to increasing the economic competitiveness of the U.S.

These options have different short and long-term effects. In the short term, investing savings from defense spending in reducing the deficit will increase unemployment and reduce the GNP; in the long term, such action will increase national savings and investment and stimulate economic growth. On the other hand, in the short term, investing savings from defense spending in national competitiveness will not reduce the deficit but will reduce unemployment and increase the GNP; in the longer term it may result in greater economic growth and in a stronger U.S. position on the global economic map. Choosing between the two options requires a careful identification and match of global opportunities with the national goals sought by this country's leaders. For example, it has been suggested that the U.S. should develop a more competitive economic posture and use the national laboratories as the champions of its industrial policy (Kuttner, 1992). Elsewhere, however, it has been argued that such a conversion from guns to butter may be a tall order for the national laboratories (Shama, 1992b). Conscious choice of a national mission and implementation strategies, based on a careful and systematic analysis, must be made or action will be dictated by the circumstances of the moment.

Indeed, if politics is the authoritative allocation of resources, how to reallocate savings from defense spending is politics in the making.

On the state level, affected states have two complementary strategies available to adapt to the new situation:

- **Diversify**, i.e., look at reductions in defense spending as an opportunity to change a state's employment mix and to widen its economic base. Helping existing companies within the state grow, and recruiting out-of-state companies are the two main modes of this strategy.
- **Increase market share**, i.e., develop a persuasive strategy to get a larger share of shrinking defense spending, by becoming a niching and/or low cost producer, while developing a reputation for quality and experience unmatched by other states. For example, a military installation or a national laboratory already known for a certain specialty, can position itself as the only viable quality and relatively low-cost leader for that specialty. And given the cost structure of many of the national laboratories, meaningful cost cutting of 10-20% can be easily accomplished to realize this strategy.

On the industry level, affected industries are those dependent on selling their products and services to the defense programs of DOD and DOE, e.g., McDonnell Douglas, General Dynamics, Raytheon and Lockheed. Such companies can use several complementary strategies to deal with declining demand from the national defense programs:

- **Downsize to meet reduced demand.** For example, in the past few years, McDonnell Douglas has reduced its labor force by 21,960 jobs, Lockheed by 27,100 jobs, and General Dynamics by 19,539 jobs.
- **Convert some production capacity from military to consumer products.** This option is more appealing than feasible, for even if a military-gear industry were able to produce consumer goods, it lacks essential factors, such as low cost, reputation, and mass distribution, for success in the consumer market (Weidenbaum, 1992).

- **Diversify into related specialties.** Examples of such related fields include environmental safety, waste management, and infrastructure such as roads and bridges. While this strategy seems appealing in that it capitalizes on existing strengths, its use may result in a very crowded and competitive field among yesterday's military contractors.
- **Export.** Exporting means replacing the U.S. military customer with customers abroad. Except for this change, military contractors could go about their business as they did in the past. This is a viable strategy which has been pursued by military contractors in recent years.
- **Lobby for smaller, more gradual cuts in the defense budget while implementing the above strategies.** Military contractors are powerful, knowledgeable and well-equipped to conduct effective and successful lobbying. They are able to pursue this strategy to buy time and adjust to new realities.

Again, a choice among these strategies or a mix of strategies involves a systematic analysis of external factors such as changes in customer needs and wants, demand, market size, competition, and economic, technical and political conditions, and of internal factors such as the company's financial health, market share, areas of distinctive competence, etc. These external and internal analyses might result in a new mission statement and lead to the development and implementation of new goals, objectives and strategies.

V. SUMMARY

This paper has quantified the price of peace in terms of jobs and gross product on the nation and its states. It showed that some states may pay a higher price for peace than others because their economies are more dependent on defense spending.

The paper also argued that the post-cold-war era may be viewed as a growth opportunity for the United States, its states, and its industry. Strategies for such growth on the national, state and industry level were also outlined in this paper.

Baseline Data

Baseline economic information about each of the fifty states and the District of Columbia and their dependence on defense spending is reported and highlighted below. Please note that four of these tables, 3.1, 3.2, 3.4, and 3.5, are identical to Tables 1, 2, 3 and 4, respectively, in the body of the paper. They are included here to give a full picture of the baseline data.

Table 1. State Data 1990. This table reports the gross state product, personal income by state and the number of people employed in non-agriculture in each state. It provides a backdrop against which cuts in the defense budget may be assessed.

Table 2.1. National Defense Employment by State 1990. This table reports the number of civilians and military personnel employed by the DOD and DOE in their defense mission. (Those employed by DOE, directly or indirectly are counted as civilians). Even though these figures do not include employment by military contractors, they show that those employed by the DOD and DOE/defense account for about 3.2% of the labor force.

Table 2.2. National Defense Payroll by State 1990. This table breaks down state defense payroll by active duty, civilians (which includes all DOE defense employees), reserves and national guards, and retired. Noteworthy are the relatively large numbers in California, Florida, Texas, and Virginia.

Table 2.3. National Defense Spending by State 1990. This table separates DOD and DOE/defense payroll data. It should be noted that most DOE spending is done in a small number of states such as South Carolina, New Mexico, California, Tennessee, Colorado and Arizona. It should also be noted that the DOE figures in this table, provided by private correspondence, total \$6.6 billion. On the other hand, the

administration's proposed FY93-FY97 budget reports "a funding of approximately \$11 billion for 'Atomic Energy'" (line 053), believed to be DOE defense.

Table 2.4. National Defense Employment by State (including Active Duty, Civilian DOE, Reserve & National Guard). This table separates DOD and DOE employment by state.

Table 3.1. National Defense Ranked by State 1990. This table shows the importance of defense spending on state employment and personal income as well as the share of *Total Prime Contracts*, *Total R & D Contracts*, and *Total Non-R & D contracts* in the GSP. Accordingly:

- Alaska, Hawaii and Virginia show the highest percentages of *Total Defense Employed* compared to total state employment.
- Hawaii, District of Columbia, and Alaska have the highest *Total Defense Payroll as a Percent of State Personal Income*.
- New Mexico leads the nation in *Total Prime Contracts* and *R&D Contracts*, followed by Colorado and South Carolina in *R&D Contracts*, and by Missouri and Colorado in *Total Prime Contracts*.
- In *Non-R&D Contracts*, Virginia, Missouri and Arizona are at the top.
- *Total Defense Spending* as a percentage of GSP shows New Mexico again first with Virginia and Hawaii next in line.
- When *Total Defense Spending* is compared to *Personal Income*, the District of Columbia ranks first with 19.86 percent, followed by New Mexico with 15.52 percent, and Virginia with 14.30 percent.

It should be noted that the defense payroll figure used in this table disregarded retirement, because spending in this area will not change. Also, DOE defense expenditures were included under *R&D Contracts*.

Table 3.2. Military Expenditure as a Percentage of GSP. This table compares DOD spending in each state to the GSP. It provides an indication of state dependence on military spending. Hawaii, Alaska, and Virginia rank first, second and third under *Active Duty* payroll. Under *Civilian Payroll*, Virginia, Utah and Hawaii occupied the top three rankings. *Reserve & National Guard* pay ranks Utah, Alabama, and Kansas first, second and third. *Retirement* shows unusual results with Virginia, Florida and New Mexico as the top three. *Total Military Pay* came out the same as *Active Duty* pay with Hawaii, Alaska, and Virginia in the first three places. *Total Operations Pay*, a figure which includes *Active Duty* and *Civilian* pay, shows Hawaii, Virginia and Alaska most dependent on military spending. Excluding retirement pay did not affect the top state rankings by total payroll. Please note that when DOE money is excluded, contract rankings change: Colorado, Massachusetts and Missouri lead in *R&D Contracts*. Finally, *Total Military Expenditure* as a percent of GSP shows Virginia with a large 12.1 percent, Hawaii with 8.67 percent and Colorado with 7.23 percent.

Table 3.3. Military Spending as a Percentage of Personal Income. This table is the same as Table 3.2 except that it uses personal income for each state as the comparative figure. Again, Hawaii, Alaska, and Virginia rank first, second and third in *Active Duty* payroll. *Civilian Payroll* shows the District of Columbia, Virginia and Utah at the top. *Reserve & National Guard* pay ranked District of Columbia, Utah, and Alabama as first, second and third. *Retirement* shows unusual results, with Virginia, New Mexico, and South Carolina as the top three, all of them over 1%. *Total Military Pay* comes out the same as *Active Duty Pay* with Hawaii, Alaska, and Virginia ranking as the top three. *Total Operations Pay*, a figure which includes *Active Duty* and *Civilian Pay*, shows Hawaii, the District of Columbia and Alaska as the top three. *Total Payroll* ranks Hawaii, Virginia, and District of Columbia at the top. If DOE money is excluded, contract rankings change: Colorado, Massachusetts, and California lead in *R&D*, while *Total Contracts* ranks Missouri, Virginia and Massachusetts in the first three spots. *Total*

Military Expenditure shows the District of Columbia with a large 19.82%, Virginia with 14.3% and Alaska with 11.04%.

Table 3.4. Military Employment as a Percentage of Total State Non-Agricultural Employment. This table compares the percentage of military employment to total state non-agricultural employment. *Active Duty* shows Alaska, Hawaii and North Dakota with the highest percentages. *Civilian* employment ranks Virginia, Hawaii and Utah as the top three. *Reserve & National Guard* had North Dakota, Alabama and Mississippi at the top. *Total Military*, a number based on *Active Duty* plus *Reserve & National Guard*, ranks Alaska, Hawaii and North Dakota as the three states most dependent on military employment overall.

Table 3.5. Defense Employment as a Percentage of Total State Non-Agricultural Employment. This table compares the percentage of DOE personnel to total non-agricultural employment in each state. DOE personnel ranks all twelve states with DOE defense personnel. The top three are New Mexico, South Carolina and Nevada.

Table 3.6. Defense Spending as a Percentage of Gross State Product. This table is exactly like Table 3.2, except that DOE spending has been added. Each column that was affected by the addition of DOE defense spending has been recalculated from Table 3.2. Only twelve states show DOE defense employment, while seventeen states reflect DOE defense spending. *DOE Defense Payroll* ranked South Carolina, New Mexico and Nevada as the top three. *Total Civilian Payroll* changes from Table 3.2's Virginia, Utah and Hawaii as the top three to the new ranking of Virginia, New Mexico and South Carolina. *Total Defense Payroll* also changes from Hawaii, Virginia and Alaska as the top three to Hawaii, Virginia and South Carolina. *DOE Spending* is highest in New Mexico, South Carolina and Nevada. *DOE Spending* added to *R&D Contracts* changes that ranking from Colorado, Massachusetts

and Missouri to New Mexico, Colorado and South Carolina. *Total Prime Contracts* also changes from Missouri, Virginia and Massachusetts to New Mexico, Missouri and Colorado. Finally, *Total Defense Spending* shows New Mexico with 12.36%, Virginia with 12.1% and Hawaii with 8.67%.

Table 3.7. Defense Spending as a Percentage of Personal Income. This table is exactly like Table 3.3, except that DOE spending has been added. Each column that was affected by the addition of DOE defense spending has been recalculated from Table 3.3. Again, only twelve states show DOE defense employment, while seventeen states reflect DOE defense spending. *DOE Defense Payroll* ranked South Carolina, New Mexico and Nevada as the top three. *Total Civilian Payroll* changed from Table 3.3's District of Columbia, Virginia and Utah to the new ranking of District of Columbia, Virginia and New Mexico. *Total Defense Payroll* remained unchanged, with Hawaii, Virginia and the District of Columbia at the top. *Total Defense Payroll - Retired* was also unchanged, with Hawaii, District of Columbia and Alaska at the top. *DOE Spending* ranks highest in New Mexico, South Carolina and Nevada. *DOE Spending* added to *R&D Contracts* changed that ranking from Colorado, Massachusetts and California to New Mexico, Colorado and South Carolina. *Total Prime Contracts* also changed from the District of Columbia, Missouri and Virginia to the District of Columbia, New Mexico and Missouri. Finally, *Total Defense Spending* showed the District of Columbia with 19.86%, New Mexico with 15.52% and Virginia with 14.3%.

Table 3.8. Employment. This table shows the same rankings in the first column as the *Total* column of Table 3.4 in the first column. The subsequent columns show state rankings for DOD totals and Military totals. Iowa, Minnesota and Wisconsin have the highest percentages of *Military* personnel in the DOD total. This also means that these three have the lowest percentage of *Civilian* personnel. Utah, Virginia and Maine have the highest percentage of civilian employees and thus the lowest percentage of military. The next two columns show the percentage of *Active* personnel versus *Reserve & National Guard*

(*R&NG*) in the total military employment in each state. Alaska, Hawaii and Virginia have the highest percentage of *Active* duty personnel and thus have the lowest percentage of *R&NG*. *R&NG* shows Iowa, Vermont and Minnesota with the highest percentages; they thus rank lowest in *Active* duty employment. These percentages may be indicative of the numbers of bases in the respective states.

State Data 1990

STATE	Gross State Product	Personal Income	Number of Non-Ag Employment
AK	20763	11956	272100
AL	72769	60776	1762289
AR	39662	33389	985333
AZ	69171	58946	1606857
CA	749268	619381	14182061
CO	70791	62378	1644676
CT	92772	83842	1720469
DC	40463	13980	731739
DE	16273	13397	369963
FL	243432	241713	5822072
GA	138226	110886	3225837
HI	28588	22663	625083
IA	56107	47870	1292158
ID	17805	15423	427521
IL	271923	233661	5541173
IN	111240	93805	2622522
KS	52480	45050	1190089
KY	70651	55351	1567731
LA	85290	61237	1714418
MA	149703	135861	3153312
MD	105529	104631	2365071
ME	24719	21146	574334
MI	190440	171003	4119472
MN	99474	82223	2222376
MO	105262	89572	2467114
MS	40490	33009	1008532
MT	13850	12205	323201
NC	139005	108396	3354031
ND	12024	9686	284394
NE	33484	27734	788260
NH	25157	23147	532450
NJ	214508	192893	3789719
NM	27218	21677	631719
NV	31140	23298	662433
NY	468036	397602	8608317
OH	223899	190720	5075317
OK	55697	48620	1285237
OR	56467	49198	1317239
PA	242090	222228	5409314
RI	19641	18894	484437
SC	65950	53006	1688444
SD	12218	10997	307245
TN	98124	77540	2301426
TX	367832	285085	7551562
UT	30549	24199	764689
VA	144375	122215	3223186
VT	12057	9889	272146
WA	105087	92174	2356396
WI	99976	86147	2403841
WV	29838	24622	649290
WY	11982	7378	212405
US Total	5503496	4662699	117491000

Table 1 (millions of \$)

Source: US Department of Commerce

National Defense Employment

by State 1990

STATE	Civilian	Military	Total
AK	5,688	28,187	33,875
AL	25,796	64,631	90,427
AR	4,818	31,488	36,306
AZ	10,470	45,151	55,621
CA	126,472	300,506	426,978
CO	18,306	54,066	72,372
CT	5,080	22,418	27,498
DC	17,302	28,781	46,083
DE	1,822	12,597	14,419
FL	34,252	138,939	173,191
GA	38,437	89,911	128,348
HI	19,857	52,042	71,899
IA	1,702	21,970	23,672
ID	2,676	13,370	16,046
IL	21,269	93,144	114,413
IN	14,635	44,679	59,314
KS	6,856	42,917	49,773
KY	13,079	54,250	67,329
LA	9,427	59,200	68,627
MA	11,989	45,070	57,059
MD	43,197	69,292	112,489
ME	10,224	15,743	25,967
MI	10,965	53,842	64,807
MN	2,923	34,068	36,991
MO	23,944	55,348	79,292
MS	11,280	39,284	50,564
MT	1,311	12,556	13,867
NC	16,141	109,262	125,403
ND	1,931	17,773	19,704
NE	4,173	25,892	30,065
NH	1,675	9,466	11,141
NJ	26,858	49,784	76,642
NM	16,558	26,106	42,664
NV	6,164	16,033	22,197
NY	18,839	111,270	130,109
OH	36,387	71,833	108,220
OK	23,980	51,467	75,447
OR	2,955	20,933	23,888
PA	51,672	80,017	131,689
RI	4,355	12,183	16,538
SC	37,804	71,027	108,831
SD	1,451	14,133	15,584
TN	14,209	47,166	61,375
TX	61,529	206,770	268,299
UT	21,294	23,071	44,365
VA	108,184	138,027	246,211
VT	641	6,192	6,833
WA	29,186	73,278	102,464
WI	3,270	34,845	38,115
WV	1,778	14,200	15,978
WY	1,090	7,587	8,677
US Total	985,901	2,761,765	3,747,666

Table 2.1

Source: DOD Atlas/Data Abstract for the US 1990 and
Department of Energy FAX to Authors

National Defense Payroll by State 1990

STATE	Active Duty	Civilian	Res & NG	Retired	Total
AK	604,774	168,489	39,028	66,088	878,379
AL	430,360	746,134	208,407	509,249	1,894,150
AR	214,026	132,052	69,338	264,300	679,716
AZ	588,347	259,828	75,177	550,135	1,473,487
CA	5,993,828	4,370,756	376,561	3,001,656	13,742,801
CO	759,378	712,890	90,670	553,250	2,116,188
CT	300,225	168,344	45,446	132,106	646,121
DC	373,017	593,958	62,393	47,314	1,076,682
DE	98,834	50,453	25,504	64,685	239,476
FL	2,349,601	1,086,627	154,124	2,189,189	5,779,541
GA	1,026,379	976,928	282,752	758,881	3,044,940
HI	1,223,717	520,973	42,782	180,214	1,967,686
IA	10,693	43,682	54,669	83,657	192,701
ID	113,542	105,828	29,210	97,059	345,639
IL	723,668	672,042	162,364	321,199	1,879,273
IN	123,982	482,583	182,828	192,457	981,850
KS	464,761	191,001	131,563	197,790	985,115
KY	634,436	262,338	98,542	215,259	1,210,575
LA	552,980	237,093	109,405	311,949	1,211,427
MA	216,545	374,557	133,873	238,788	963,763
MD	775,938	1,355,559	145,109	556,151	2,832,757
ME	181,142	314,408	29,376	121,567	646,493
MI	187,877	328,597	111,751	220,345	848,570
MN	25,225	84,248	110,181	131,682	351,336
MO	334,936	524,631	168,999	330,928	1,359,494
MS	370,774	334,409	97,475	241,777	1,044,435
MT	94,932	37,424	26,510	62,797	221,663
NC	1,778,733	438,683	115,780	700,380	3,033,576
ND	215,311	52,663	24,717	27,473	320,164
NE	362,816	111,967	37,179	132,611	644,573
NH	85,489	43,120	21,375	116,826	266,810
NJ	391,287	872,476	145,354	277,682	1,686,799
NM	358,197	668,042	39,283	240,839	1,306,361
NV	235,780	276,376	16,979	227,796	756,931
NY	681,595	529,127	203,865	341,316	1,755,903
OH	365,451	1,194,362	152,707	385,932	2,098,452
OK	590,532	736,587	121,354	345,625	1,794,098
OR	36,448	98,257	54,183	223,537	412,425
PA	258,937	1,393,862	299,320	482,424	2,434,543
RI	156,534	147,746	29,193	75,103	408,576
SC	1,168,237	1,537,903	137,299	547,967	3,391,406
SD	156,039	38,799	22,434	43,266	260,538
TN	205,486	538,327	109,465	413,514	1,266,792
TX	2,563,874	1,819,112	325,323	2,123,685	6,831,994
UT	139,562	655,122	94,725	115,442	1,004,851
VA	3,968,799	3,773,820	174,516	1,638,100	9,555,235
VT	4,285	18,168	20,906	32,736	76,095
WA	1,087,176	923,488	132,107	766,479	2,909,250
WI	24,647	87,493	167,823	131,871	411,834
WV	12,233	50,360	33,390	90,520	186,503
WY	83,679	31,531	12,307	37,782	165,299
US Total	33,705,044	31,173,222	5,555,621	21,159,378	91,593,265

Table 2.2 (thousands of \$)

Source: DOD Atlas/Data Abstract for the US 1990 and
Department of Energy FAX to Authors

Note: Civilian payroll includes both DOE Defense and DOD civilians.

National Defense Spending by State 1990

STATE	Total Payroll	Prime Contracts			DOE Defense	Total
		Total	R&D	Non-R&D		
AK	878,379	441,326	115	441,211	0	1,319,705
AL	1,894,150	1,937,921	481,387	1,456,534	0	3,832,071
AR	679,716	313,625	12,272	301,353	0	993,341
AZ	1,473,487	3,400,470	301,935	3,098,535	0	4,873,957
CA	13,742,801	22,312,357	6,610,268	15,702,089	494,293	36,549,451
CO	2,116,188	3,290,864	2,367,111	923,753	679,624	6,086,676
CT	646,121	4,241,210	179,817	4,061,393	0	4,887,331
DC	1,076,682	1,693,914	58,720	1,635,194	5,310	2,775,906
DE	239,476	95,800	10,926	84,874	0	335,276
FL	5,779,541	4,879,767	865,123	4,014,644	119,043	10,778,351
GA	3,044,940	1,811,991	85,719	1,726,272	0	4,856,931
HI	1,967,686	511,893	13,033	498,860	0	2,479,579
IA	192,701	493,966	50,231	443,735	0	586,667
ID	345,639	41,883	93	41,790	211,749	599,271
IL	1,879,273	1,339,029	137,786	1,201,243	5,015	3,223,317
IN	981,850	1,695,481	127,065	1,568,416	0	2,677,331
KS	985,115	922,858	14,774	908,084	0	1,907,973
KY	1,210,575	439,411	2,643	436,768	0	1,649,986
LA	1,211,427	1,626,884	2,743	1,624,141	0	2,838,311
MA	963,763	8,165,567	2,215,450	5,950,117	0	9,129,330
MD	2,832,757	4,380,991	911,012	3,469,979	46,631	7,260,379
ME	646,493	843,365	4,423	838,942	0	1,489,858
MI	848,570	1,359,895	293,575	1,066,320	7,000	2,215,465
MN	351,336	1,749,205	405,195	1,344,010	0	2,100,541
MO	1,359,494	6,063,901	947,440	5,116,461	402,419	7,825,814
MS	1,044,435	1,429,048	5,990	1,423,058	0	2,473,483
MT	221,663	68,824	522	68,302	0	290,487
NC	3,033,576	1,214,932	198,669	1,016,263	0	4,248,508
ND	320,164	99,259	44	99,215	0	419,423
NE	644,573	241,543	19,928	221,615	0	886,116
NH	266,810	390,956	84,098	306,858	0	657,766
NJ	1,686,799	3,668,838	418,776	3,250,062	0	5,355,637
NM	1,306,361	671,620	184,908	486,712	1,387,097	3,365,078
NV	756,931	182,713	12,837	169,876	382,791	1,322,435
NY	1,755,903	6,834,639	898,889	5,935,750	24,287	8,614,829
OH	2,098,452	4,382,858	606,892	3,775,966	220,378	6,701,688
OK	1,794,098	621,689	73,330	548,359	0	2,415,787
OR	412,425	365,165	16,001	349,164	0	777,590
PA	2,434,543	2,834,360	816,649	2,017,711	0	5,268,903
RI	408,576	554,898	15,854	539,044	0	963,474
SC	3,391,406	698,625	23,969	674,656	1,589,477	5,679,508
SD	260,538	35,584	30	35,554	0	296,122
TN	1,266,792	1,190,626	139,036	1,051,590	684,345	3,141,763
TX	6,831,994	9,131,844	614,368	8,517,476	184,057	16,147,895
UT	1,004,851	913,651	110,531	803,120	0	1,918,502
VA	9,555,235	7,918,833	754,569	7,164,264	0	17,474,068
VT	76,095	75,049	8,108	66,941	0	151,144
WA	2,909,250	2,451,073	782,972	1,668,101	206,281	5,566,604
WI	411,834	935,494	40,709	894,785	0	1,347,328
WV	186,503	225,172	28,073	197,099	0	411,675
WY	165,299	63,006	526	62,480	0	228,305
US Total	91,593,265	121,253,873	21,955,134	99,298,739	6,649,797	219,496,935

Table 2.3 (thousands of \$)

Source: DOD Atlas/Data Abstract for the US 1990 and
Department of Energy FAX to Authors

National Defense Employment by State 1990

STATE	Active Duty	Civilian	DOE	Res & NG	Total Military	Total
AK	21,660	5,688	0	6,527	28,187	33,875
AL	18,706	25,796	0	45,925	64,631	90,427
AR	8,968	4,818	0	22,520	31,488	36,306
AZ	23,239	10,470	0	21,912	45,151	55,621
CA	169,522	123,433	3,039	130,984	300,506	426,978
CO	33,110	12,921	5,385	20,956	54,066	72,372
CT	7,091	5,080	0	15,327	22,418	27,498
DC	13,883	17,302	0	14,898	28,781	46,083
DE	4,460	1,822	0	8,137	12,597	14,419
FL	75,368	32,797	1,455	63,571	138,939	173,191
GA	44,583	38,437	0	45,328	89,911	128,348
HI	39,936	19,857	0	12,106	52,042	71,899
IA	366	1,702	0	21,604	21,970	23,672
ID	4,743	1,376	1,300	8,627	13,370	16,046
IL	35,243	21,269	0	57,901	93,144	114,413
IN	5,523	14,635	0	39,156	44,679	59,314
KS	20,902	6,856	0	22,015	42,917	49,773
KY	30,210	13,079	0	24,040	54,250	67,329
LA	23,832	9,427	0	35,368	59,200	68,627
MA	8,722	11,989	0	36,348	45,070	57,059
MD	33,186	43,197	0	36,106	69,292	112,489
ME	5,485	10,224	0	10,258	15,743	25,967
MI	8,385	10,965	0	45,457	53,842	64,807
MN	998	2,923	0	33,070	34,068	36,991
MO	15,507	19,457	4,487	39,841	55,348	79,292
MS	13,470	11,280	0	25,814	39,284	50,564
MT	4,329	1,311	0	8,227	12,556	13,867
NC	69,724	16,141	0	39,538	109,262	125,403
ND	10,001	1,931	0	7,772	17,773	19,704
NE	12,696	4,173	0	13,196	25,892	30,065
NH	2,164	1,675	0	7,302	9,466	11,141
NJ	16,037	26,858	0	33,747	49,784	76,642
NM	14,757	9,840	6,718	11,349	26,106	42,664
NV	9,280	2,104	4,060	6,753	16,033	22,197
NY	28,627	18,839	0	82,643	111,270	130,109
OH	11,551	34,759	1,628	60,282	71,833	108,220
OK	25,640	23,980	0	25,827	51,467	75,447
OR	1,003	2,955	0	19,930	20,933	23,888
PA	6,099	51,672	0	73,918	80,017	131,689
RI	3,926	4,355	0	8,257	12,183	16,538
SC	37,263	19,965	17,839	33,764	71,027	108,831
SD	6,593	1,451	0	7,540	14,133	15,584
TN	8,861	7,732	6,477	38,305	47,166	61,375
TX	112,608	59,227	2,302	94,162	206,770	268,299
UT	5,809	21,294	0	17,262	23,071	44,365
VA	89,489	108,184	0	48,538	138,027	246,211
VT	149	641	0	6,043	6,192	6,833
WA	35,785	28,886	300	37,493	73,278	102,464
WI	1,088	3,270	0	33,757	34,845	38,115
WV	529	1,778	0	13,671	14,200	15,978
WY	3,628	1,090	0	3,959	7,587	8,677
US Total	1,184,734	930,911	54,990	1,577,031	2,761,765	3,747,666

Table 2.4

Source: DOD Atlas/Data Abstract for the US 1990 and

National Defense Ranked by State 1990

STATE	Percent of State Employment		Percent of State Personal Income		Percent of Gross State Product								Percent of State Personal Income	
	Total Defense Employed		Total Defense Payroll		Total Prime Contracts		Total R&D Contracts		Non-R&D Contracts		Total Defense Spending		Total Defense Spending	
	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank	Rank
AK	12.45%	1	6.79%	3	2.13%	19	0.0006%	49	2.12%	13	6.36%	10	11.04%	4
AL	5.13%	10	2.28%	14	2.66%	16	0.66%	12	2.00%	15	5.27%	17	6.31%	15
AR	3.68%	27	1.24%	33	0.79%	40	0.03%	40	0.76%	37	2.50%	34	2.98%	35
AZ	3.46%	29	1.57%	28	4.92%	6	0.44%	14	4.48%	3	7.05%	7	8.27%	9
CA	3.01%	33	1.73%	24	3.04%	13	0.95%	8	2.10%	14	4.88%	19	5.90%	17
CO	4.40%	15	2.51%	10	5.61%	3	4.30%	2	1.30%	26	8.60%	5	9.76%	7
CT	1.60%	48	0.61%	42	4.57%	7	0.19%	24	4.38%	4	5.27%	16	5.83%	18
DC	6.30%	7	7.36%	2	4.20%	8	0.16%	25	4.04%	5	6.86%	9	19.86%	1
DE	3.90%	23	1.30%	31	0.59%	47	0.07%	34	0.52%	46	2.06%	42	2.50%	41
FL	2.97%	34	1.49%	29	2.05%	21	0.40%	16	1.65%	21	4.43%	20	4.46%	24
GA	3.98%	22	2.06%	18	1.31%	33	0.06%	35	1.25%	28	3.51%	25	4.38%	25
HI	11.50%	2	7.80%	1	1.79%	25	0.05%	38	1.74%	18	8.67%	3	10.94%	5
IA	1.83%	44	0.23%	51	0.88%	37	0.09%	31	0.79%	36	1.22%	49	1.43%	49
ID	3.75%	25	1.61%	27	1.42%	32	1.19%	7	0.23%	51	3.37%	27	3.89%	30
IL	2.06%	42	0.67%	40	0.49%	50	0.05%	37	0.44%	49	1.19%	50	1.38%	50
IN	2.28%	36	0.84%	38	1.52%	30	0.11%	29	1.41%	24	2.41%	37	2.85%	36
KS	4.18%	19	1.75%	23	1.76%	26	0.03%	42	1.73%	19	3.64%	24	4.24%	27
KY	4.29%	17	1.80%	21	0.62%	46	0.0037%	47	0.62%	42	2.34%	38	2.98%	34
LA	4.00%	21	1.47%	30	1.91%	23	0.0032%	48	1.90%	16	3.33%	28	4.63%	23
MA	1.81%	46	0.53%	43	5.45%	5	1.48%	4	3.97%	6	6.10%	13	6.72%	14
MD	4.76%	13	2.18%	16	4.20%	9	0.91%	10	3.29%	9	6.88%	8	6.94%	13
ME	4.52%	14	2.48%	11	3.41%	12	0.02%	43	3.39%	8	6.03%	14	7.05%	12
MI	1.57%	50	0.37%	47	0.72%	43	0.16%	26	0.56%	43	1.16%	51	1.30%	51
MN	1.86%	47	0.27%	50	1.76%	27	0.41%	15	1.35%	25	2.11%	40	2.55%	40
MO	3.21%	32	1.15%	34	6.14%	2	1.28%	5	4.86%	2	7.43%	6	8.74%	8
MS	5.01%	12	2.43%	12	3.53%	10	0.01%	44	3.51%	7	6.11%	12	7.49%	11
MT	4.29%	18	1.30%	32	0.50%	49	0.0038%	46	0.49%	48	2.10%	41	2.38%	42
NC	3.74%	26	2.15%	17	0.87%	38	0.14%	27	0.73%	38	3.08%	30	3.92%	29
ND	6.93%	4	3.02%	8	0.83%	39	0.0004%	50	0.83%	35	3.49%	26	4.33%	26
NE	3.81%	24	1.85%	20	0.72%	42	0.08%	36	0.68%	39	2.85%	32	3.20%	32
NH	2.09%	41	0.65%	41	1.55%	29	0.33%	20	1.22%	29	2.61%	33	2.84%	37
NJ	2.02%	43	0.73%	39	1.71%	28	0.20%	23	1.52%	23	2.50%	35	2.78%	38
NM	6.75%	5	4.92%	6	7.56%	1	5.78%	1	1.79%	17	12.36%	1	15.52%	2
NV	3.35%	31	2.27%	15	1.82%	24	1.27%	6	0.55%	45	4.25%	23	5.68%	19
NY	1.51%	51	0.36%	48	1.47%	31	0.20%	22	1.27%	27	1.84%	44	2.17%	44
OH	2.13%	40	0.90%	36	2.06%	20	0.37%	17	1.69%	20	2.99%	31	3.51%	31
OK	5.87%	8	2.98%	9	1.12%	35	0.13%	28	0.98%	32	4.34%	22	4.97%	22
OR	1.81%	45	0.38%	46	0.65%	44	0.03%	41	0.82%	41	1.38%	46	1.58%	46
PA	2.43%	38	0.88%	37	1.17%	34	0.34%	19	0.83%	34	2.18%	39	2.37%	43
RI	3.41%	30	1.76%	22	2.83%	15	0.08%	32	2.74%	10	4.91%	18	5.10%	21
SC	6.45%	6	5.36%	5	3.47%	11	2.45%	3	1.02%	31	8.61%	4	10.71%	6
SD	5.07%	11	1.98%	19	0.29%	51	0.0002%	51	0.29%	50	2.42%	36	2.69%	39
TN	2.67%	35	1.10%	35	1.91%	22	0.84%	11	1.07%	30	3.20%	29	4.05%	28
TX	3.55%	28	1.65%	26	2.53%	17	0.22%	21	2.32%	12	4.39%	21	5.66%	20
UT	5.80%	9	3.68%	7	2.99%	14	0.36%	18	2.63%	11	6.28%	11	7.93%	10
VA	7.64%	3	6.48%	4	5.48%	4	0.52%	13	4.96%	1	12.10%	2	14.30%	3
VT	2.51%	36	0.44%	44	0.62%	45	0.07%	33	0.56%	44	1.25%	48	1.53%	48
WA	4.35%	16	2.32%	13	2.53%	18	0.94%	9	1.59%	22	5.30%	15	6.04%	16
WI	1.59%	49	0.32%	49	0.94%	36	0.04%	39	0.90%	33	1.35%	47	1.56%	47
WV	2.46%	37	0.39%	45	0.75%	41	0.09%	30	0.66%	40	1.38%	45	1.67%	45
WY	4.09%	20	1.73%	25	0.53%	48	0.0044%	45	0.52%	47	1.91%	43	3.09%	33
US Total	3.19%		1.51%		2.32%		0.52%		1.80%		3.99%		4.71%	

Table 3.1

Source: DOD Atlas/Data Abstract for the US 1990 and Department of Energy FAX to Author

Note: Total Defense Payroll does not include retired military pay

STATE	Department of Defense Payroll															Prime Contracts >\$25,000										Total Military Expenditure	
	Active Duty	Rank	Civilian	Rank	Reserve & National Guard	Rank	Retired	Rank	Total Military	Rank	Total Operations Pay	Rank	Total Payroll	Rank	Total Payroll - Retired	Rank	R&D Contracts	Rank	Non-R&D Contracts	Rank	Total Contracts	Rank	Total Military Expenditure	Rank			
AK	2.91%	2	0.81%	13	0.19%	10	0.32%	32	3.10%	2	3.72%	3	4.23%	3	3.91%	3	0.00%	48	2.12%	13	2.13%	18	6.36%	8			
AL	0.59%	31	1.03%	9	0.29%	2	0.70%	9	0.88%	21	1.82%	15	2.80%	13	1.90%	14	0.66%	8	2.00%	15	2.66%	14	5.27%	15			
AR	0.54%	32	0.33%	29	0.17%	12	0.67%	10	0.71%	33	0.87%	32	1.71%	27	1.05%	31	0.03%	39	0.76%	37	0.79%	38	2.50%	31			
AZ	0.85%	18	0.38%	25	0.11%	35	0.80%	5	0.96%	18	1.23%	25	2.13%	20	1.33%	25	0.44%	10	4.48%	3	4.92%	4	7.05%	4			
CA	0.80%	19	0.56%	18	0.05%	49	0.40%	23	0.85%	25	1.36%	22	1.81%	25	1.41%	23	0.88%	4	2.10%	14	2.98%	12	4.79%	18			
CO	1.07%	10	0.60%	16	0.13%	26	0.78%	6	1.20%	10	1.67%	14	2.58%	14	1.80%	15	3.34%	1	1.30%	28	4.65%	5	7.23%	3			
CT	0.32%	35	0.18%	42	0.05%	50	0.14%	44	0.37%	36	0.51%	41	0.70%	42	0.55%	41	0.19%	18	4.38%	4	4.57%	6	5.27%	14			
DC	0.92%	14	1.47%	4	0.15%	19	0.12%	49	1.08%	15	2.39%	7	2.66%	11	2.54%	8	0.15%	22	4.04%	5	4.19%	7	6.85%	5			
DE	0.61%	30	0.31%	32	0.16%	18	0.40%	24	0.76%	32	0.92%	31	1.47%	31	1.07%	28	0.07%	31	0.52%	46	0.59%	45	2.08%	41			
FL	0.97%	13	0.41%	23	0.08%	45	0.90%	2	1.03%	17	1.38%	21	2.34%	16	1.44%	22	0.36%	13	1.65%	21	2.00%	19	4.35%	20			
GA	0.74%	22	0.71%	15	0.20%	8	0.55%	15	0.95%	19	1.45%	19	2.20%	17	1.65%	19	0.06%	32	1.25%	28	1.31%	29	3.51%	24			
HI	4.28%	1	1.82%	3	0.15%	20	0.63%	11	4.43%	1	6.10%	1	6.88%	1	6.25%	1	0.05%	35	1.74%	18	1.79%	22	8.67%	2			
IA	0.02%	51	0.06%	51	0.10%	37	0.15%	43	0.12%	51	0.10%	51	0.34%	51	0.19%	51	0.09%	28	0.79%	36	0.88%	35	1.22%	49			
ID	0.64%	29	0.20%	39	0.16%	16	0.55%	16	0.80%	27	0.84%	33	1.55%	30	1.01%	32	0.00%	49	0.23%	51	0.24%	51	1.79%	44			
IL	0.27%	37	0.25%	38	0.06%	46	0.12%	48	0.33%	37	0.51%	39	0.69%	43	0.57%	40	0.05%	34	0.44%	49	0.49%	49	1.18%	50			
IN	0.11%	43	0.43%	22	0.16%	15	0.17%	40	0.28%	39	0.55%	38	0.88%	39	0.71%	37	0.11%	26	1.41%	24	1.52%	27	2.41%	34			
KS	0.89%	17	0.36%	27	0.25%	3	0.38%	29	1.14%	14	1.25%	24	1.88%	23	1.50%	21	0.03%	41	1.73%	19	1.76%	23	3.64%	23			
KY	0.90%	16	0.37%	26	0.14%	23	0.30%	35	1.04%	16	1.27%	23	1.71%	28	1.41%	24	0.00%	46	0.62%	42	0.62%	44	2.34%	35			
LA	0.65%	28	0.28%	33	0.13%	25	0.37%	30	0.78%	30	0.93%	30	1.42%	32	1.05%	30	0.00%	47	1.90%	16	1.91%	21	3.33%	26			
MA	0.14%	42	0.26%	37	0.09%	39	0.16%	42	0.23%	41	0.39%	43	0.64%	44	0.48%	43	1.48%	2	3.97%	6	5.45%	3	6.10%	11			
MD	0.74%	23	1.26%	6	0.14%	24	0.53%	17	0.87%	23	2.02%	10	2.68%	9	2.16%	10	0.86%	5	3.29%	9	4.15%	8	6.84%	6			
ME	0.73%	24	1.27%	7	0.12%	30	0.49%	19	0.85%	24	2.00%	11	2.62%	12	2.12%	11	0.02%	42	3.39%	8	3.41%	10	6.03%	12			
MI	0.10%	45	0.17%	44	0.06%	47	0.12%	50	0.16%	48	0.27%	44	0.45%	47	0.33%	46	0.15%	21	0.56%	43	0.71%	41	1.16%	51			
MN	0.03%	49	0.08%	50	0.11%	34	0.13%	45	0.14%	50	0.11%	50	0.35%	50	0.22%	50	0.41%	11	1.35%	25	1.76%	24	2.11%	39			
MO	0.32%	36	0.27%	34	0.16%	17	0.31%	34	0.48%	34	0.59%	37	1.06%	34	0.75%	35	0.90%	3	4.86%	2	5.76%	1	6.82%	7			
MS	0.92%	15	0.83%	12	0.24%	4	0.60%	13	1.16%	13	1.74%	13	2.58%	15	1.98%	13	0.01%	43	3.51%	7	3.53%	9	6.11%	10			
MT	0.69%	27	0.27%	35	0.19%	9	0.45%	21	0.88%	22	0.96%	28	1.60%	29	1.15%	27	0.00%	45	0.49%	48	0.50%	48	2.10%	40			
NC	1.28%	7	0.32%	31	0.08%	42	0.50%	18	1.36%	8	1.60%	16	2.18%	18	1.68%	18	0.14%	23	0.73%	38	0.87%	36	3.06%	27			
ND	1.79%	4	0.44%	21	0.21%	7	0.23%	38	2.00%	4	2.23%	9	2.66%	10	2.43%	9	0.00%	50	0.83%	35	0.83%	37	3.49%	25			
NE	1.08%	9	0.33%	28	0.11%	33	0.40%	25	1.19%	11	1.42%	20	1.83%	22	1.53%	20	0.06%	33	0.66%	39	0.72%	40	2.65%	29			
NH	0.34%	34	0.17%	45	0.08%	41	0.46%	20	0.42%	35	0.51%	40	1.06%	35	0.60%	39	0.33%	15	1.22%	29	1.55%	26	2.61%	30			
NJ	0.18%	38	0.41%	24	0.07%	44	0.13%	47	0.25%	40	0.59%	38	0.79%	40	0.66%	38	0.20%	17	1.52%	23	1.71%	25	2.50%	32			
NM	1.32%	6	1.13%	8	0.14%	22	0.88%	3	1.46%	7	2.45%	6	3.48%	5	2.59%	7	0.68%	7	1.79%	17	2.47%	16	5.95%	13			
NV	0.76%	21	0.19%	41	0.05%	48	0.73%	7	0.81%	26	0.95%	29	1.73%	26	1.00%	33	0.04%	38	0.55%	45	0.59%	46	2.32%	36			
NY	0.15%	41	0.11%	48	0.04%	51	0.07%	51	0.19%	46	0.26%	45	0.38%	49	0.30%	48	0.19%	19	1.27%	27	1.46%	28	1.84%	43			
OH	0.16%	40	0.49%	19	0.07%	43	0.17%	41	0.23%	42	0.66%	35	0.90%	36	0.73%	36	0.27%	16	1.89%	20	1.96%	20	2.86%	26			
OK	1.06%	11	1.32%	5	0.22%	5	0.62%	12	1.28%	9	2.38%	8	3.22%	7	2.60%	6	0.13%	25	0.96%	32	1.12%	32	4.34%	21			
OR	0.06%	46	0.17%	43	0.10%	38	0.40%	26	0.16%	47	0.24%	46	0.73%	41	0.33%	45	0.03%	40	0.62%	41	0.65%	42	1.38%	46			
PA	0.11%	44	0.58%	17	0.12%	28	0.20%	39	0.23%	43	0.68%	34	1.01%	36	0.81%	34	0.34%	14	0.83%	34	1.17%	31	2.18%	37			
RI	0.80%	20	0.75%	14	0.15%	21	0.38%	27	0.95%	20	1.55%	18	2.08%	21	1.70%	17	0.08%	29	2.74%	10	2.83%	13	4.91%	17			
SC	1.77%	5	0.88%	10	0.21%	6	0.83%	4	1.98%	5	2.66%	4	3.69%	4	2.86%	5	0.04%	38	1.02%	31	1.06%	33	4.75%	19			
SD	1.28%	8	0.32%	30	0.18%	11	0.35%	31	1.46%	8	1.59%	17	2.13%	19	1.78%	16	0.00%	51	0.29%	50	0.29%	50	2.42%	33			
TN	0.21%	38	0.20%	40	0.11%	32	0.42%	22	0.32%	38	0.40%	42	0.94%	37	0.52%	42	0.14%	24	1.07%	30	1.21%	30	2.15%	38			
TX	0.70%	26	0.46%	20	0.06%	40	0.58%	14	0.79%	29	1.16%	26	1.82%	24	1.25%	26	0.17%	20	2.32%	12	2.48%	15	4.31%	22			
UT	0.46%	33	2.14%	2	0.31%	1	0.38%	28	0.77%	31	2.60%	5	3.29%	6	2.91%	4	0.36%	12	2.63%	11	2.99%	11	6.28%	9			
VA	2.75%	3	2.61%	1	0.12%	29	1.13%	1	2.87%	3	5.36%	2	6.02%	2	5.48%	2	0.52%	9	4.96%	1	5.48%	2	12.10%	1			
VT	0.04%	48	0.15%	47	0.17%	13	0.27%	37	0.21%	44	0.19%	48	0.63%	45	0.36%	44	0.07%	30	0.56%	44	0.62%	43	1.25%	48			
WA	1.03%	12	0.86%	11	0.13%	27	0.73%	8	1.16%	12	1.90%	12	2.75%	8	2.02%	12	0.75%	6	1.59%	22	2.33%	17	5.09%	16			
WI	0.02%	50	0.09%	49	0.17%	14	0.13%	46	0.19%	45	0.11%	49	0.41%	48	0.28%	49	0.04%	37	0.90%	33	0.94%	34	1.35%	47			
WV	0.04%	47	0.17%	46	0.11%	31	0.30%	36	0.15%	49	0.21%	47	0.63%	46	0.32%	47	0.09%	27	0.66%	40	0.75%	39	1.38%	45			
WY	0.70%	25	0.26%	36	0.10%	36	0.32%	33	0.80%	28	0.96%	27	1.38%	33	1.06%	29	0.00%	44	0.52%	47	0.53%	47	1.91%	42			
US Total	0.61%		0.51%		0.10%		0.38%		0.71%		1.13%		1.61%		1.23%		0.40%		1.80%		2.20%		3.81%				

Table 3.2

Table 3.2

Source: DOD Atlas/Data Abstract for the US 1990 and
US Department of Commerce

Military Spending as a Percentage of Personal Income

STATE	Department of Defense Payroll															Prime Contracts >\$25,000					Total Military Expenditure			
	Active Duty	Rank	Civilian	Rank	Reserve & National Guard	Rank	Retired	Rank	Total Military	Rank	Total Operations Pay	Rank	Total Payroll	Rank	Total Payroll - Retired	Rank	R&D Contracts	Rank	Non-R&D Contracts	Rank		Total Contracts	Rank	
AK	5.06%	2	1.41%	8	0.33%	4	0.55%	19	5.38%	2	6.47%	3	7.35%	4	6.79%	3	0.00%	48	3.69%	9	3.69%	12	11.04%	3
AL	0.71%	31	1.23%	10	0.34%	3	0.84%	8	1.05%	22	1.84%	15	3.12%	12	2.28%	13	0.79%	8	2.40%	16	3.19%	15	6.31%	14
AR	0.64%	32	0.40%	31	0.21%	13	0.79%	11	0.85%	33	1.04%	32	2.04%	29	1.24%	32	0.04%	39	0.90%	38	0.94%	38	2.98%	33
AZ	1.00%	18	0.44%	25	0.13%	36	0.93%	5	1.13%	19	1.44%	26	2.50%	18	1.57%	26	0.51%	10	5.26%	4	5.77%	5	8.27%	5
CA	0.97%	21	0.68%	17	0.06%	49	0.48%	28	1.03%	24	1.65%	20	2.19%	25	1.71%	24	1.07%	3	2.54%	15	3.60%	13	5.79%	18
CO	1.22%	11	0.68%	16	0.15%	28	0.89%	7	1.38%	13	1.80%	16	2.93%	14	2.04%	17	3.79%	1	1.48%	28	5.28%	6	8.21%	6
CT	0.36%	36	0.20%	43	0.05%	50	0.16%	46	0.41%	36	0.56%	40	0.77%	43	0.61%	42	0.21%	21	4.84%	5	5.06%	7	5.83%	16
DC	2.67%	4	4.25%	1	0.46%	1	0.34%	37	3.11%	4	6.92%	2	7.70%	3	7.36%	2	0.42%	13	11.70%	1	12.12%	1	19.82%	1
DE	0.74%	29	0.38%	33	0.18%	17	0.48%	27	0.93%	30	1.11%	30	1.79%	33	1.30%	30	0.08%	31	0.63%	46	0.72%	47	2.50%	40
FL	0.97%	20	0.42%	28	0.06%	48	0.91%	6	1.04%	23	1.39%	27	2.36%	20	1.45%	26	0.38%	16	1.66%	24	2.02%	24	4.38%	24
GA	0.93%	22	0.88%	14	0.25%	9	0.68%	15	1.18%	18	1.81%	17	2.75%	16	2.06%	16	0.08%	32	1.56%	26	1.63%	29	4.38%	23
HI	8.40%	1	2.30%	4	0.19%	19	0.80%	10	5.89%	1	7.70%	1	8.68%	1	7.89%	1	0.08%	35	2.20%	18	2.26%	21	10.94%	4
IA	0.02%	51	0.08%	51	0.11%	37	0.17%	44	0.14%	51	0.11%	51	0.40%	51	0.23%	51	0.10%	28	0.93%	36	1.03%	36	1.43%	49
ID	0.74%	30	0.24%	41	0.19%	18	0.63%	17	0.83%	31	0.97%	33	1.79%	32	1.16%	33	0.00%	49	0.27%	51	0.27%	51	2.06%	44
IL	0.31%	37	0.29%	37	0.07%	46	0.14%	49	0.38%	38	0.60%	39	0.80%	42	0.67%	39	0.06%	34	0.51%	49	0.57%	48	1.38%	50
IN	0.13%	43	0.51%	22	0.19%	15	0.21%	41	0.33%	39	0.85%	38	1.05%	39	0.84%	37	0.14%	26	1.67%	23	1.81%	26	2.85%	34
KS	1.03%	17	0.42%	27	0.29%	8	0.44%	31	1.32%	15	1.46%	25	2.19%	27	1.75%	22	0.03%	40	2.02%	19	2.05%	23	4.24%	26
KY	1.15%	14	0.47%	23	0.18%	23	0.39%	34	1.32%	14	1.82%	21	2.19%	26	1.80%	20	0.00%	45	0.79%	42	0.79%	43	2.98%	32
LA	0.90%	23	0.39%	32	0.18%	22	0.51%	24	1.08%	21	1.29%	28	1.98%	30	1.47%	27	0.00%	46	2.65%	14	2.66%	19	4.63%	22
MA	0.16%	42	0.28%	38	0.10%	41	0.18%	43	0.26%	42	0.44%	43	0.71%	46	0.53%	43	1.63%	2	4.38%	6	6.01%	4	6.72%	13
MD	0.74%	28	1.30%	9	0.14%	31	0.53%	21	0.88%	32	2.04%	14	2.71%	17	2.18%	14	0.87%	5	3.32%	11	4.19%	9	6.89%	12
ME	0.86%	25	1.49%	6	0.14%	30	0.57%	18	1.00%	26	2.34%	10	3.06%	13	2.48%	10	0.02%	42	3.87%	8	3.89%	10	7.05%	11
MI	0.11%	45	0.19%	45	0.07%	47	0.13%	50	0.18%	49	0.30%	45	0.50%	47	0.37%	47	0.17%	24	0.62%	47	0.80%	42	1.29%	51
MN	0.03%	49	0.10%	49	0.13%	35	0.16%	45	0.16%	50	0.13%	49	0.43%	50	0.27%	50	0.49%	11	1.63%	25	2.13%	22	2.65%	39
MO	0.37%	34	0.32%	35	0.19%	20	0.37%	35	0.56%	34	0.69%	36	1.25%	34	0.88%	34	1.06%	4	5.71%	3	6.77%	2	8.02%	7
MS	1.12%	16	1.01%	12	0.30%	5	0.73%	13	1.42%	12	2.14%	12	3.16%	10	2.43%	11	0.02%	43	4.31%	7	4.33%	8	7.49%	9
MT	0.76%	27	0.31%	36	0.22%	11	0.51%	22	1.00%	27	1.06%	31	1.82%	31	1.30%	31	0.00%	47	0.56%	48	0.56%	49	2.38%	41
NC	1.84%	8	0.40%	29	0.11%	40	0.65%	16	1.75%	8	2.05%	13	2.80%	15	2.15%	15	0.18%	22	0.84%	35	1.12%	34	3.82%	27
ND	2.22%	5	0.54%	21	0.26%	8	0.28%	39	2.48%	5	2.77%	8	3.31%	9	3.02%	8	0.00%	50	1.02%	34	1.02%	37	4.33%	25
NE	1.31%	10	0.40%	30	0.13%	34	0.48%	28	1.44%	11	1.71%	19	2.32%	22	1.85%	19	0.07%	33	0.80%	41	0.87%	40	3.20%	29
NH	0.37%	35	0.19%	46	0.09%	42	0.50%	25	0.46%	35	0.56%	41	1.15%	36	0.65%	41	0.36%	15	1.33%	30	1.69%	28	2.84%	35
NJ	0.20%	38	0.45%	24	0.08%	44	0.14%	48	0.28%	40	0.66%	37	0.87%	40	0.73%	38	0.22%	19	1.68%	22	1.90%	25	2.78%	36
NM	1.65%	7	1.42%	7	0.18%	21	1.11%	2	1.83%	7	3.08%	7	4.37%	6	3.26%	7	0.85%	6	2.25%	17	3.10%	16	7.47%	10
NV	1.01%	18	0.25%	38	0.07%	45	0.88%	4	1.08%	20	1.27%	29	2.32%	23	1.34%	29	0.06%	36	0.73%	43	0.78%	44	3.10%	30
NY	0.17%	41	0.13%	48	0.05%	51	0.09%	51	0.22%	46	0.30%	44	0.44%	49	0.36%	48	0.23%	18	1.49%	27	1.72%	27	2.16%	43
OH	0.19%	40	0.58%	20	0.08%	43	0.20%	42	0.27%	41	0.77%	34	1.05%	38	0.85%	38	0.32%	17	1.88%	20	2.30%	20	3.35%	28
OK	1.21%	12	1.51%	5	0.25%	10	0.71%	14	1.46%	10	2.73%	9	3.69%	8	2.98%	9	0.15%	25	1.13%	32	1.28%	32	4.97%	21
OR	0.07%	48	0.20%	44	0.11%	39	0.45%	30	0.18%	48	0.27%	46	0.84%	41	0.38%	46	0.03%	41	0.71%	44	0.74%	46	1.58%	46
PA	0.12%	44	0.63%	18	0.13%	33	0.22%	40	0.25%	44	0.74%	35	1.10%	37	0.88%	35	0.37%	14	0.91%	37	1.28%	33	2.37%	42
RI	0.83%	26	0.78%	15	0.15%	25	0.40%	32	0.98%	28	1.61%	22	2.16%	28	1.76%	21	0.08%	29	2.85%	13	2.94%	17	5.10%	20
SC	2.20%	6	1.10%	11	0.26%	7	1.03%	3	2.46%	6	3.30%	5	4.60%	5	3.56%	6	0.05%	38	1.27%	31	1.32%	31	5.91%	15
SD	1.42%	8	0.35%	34	0.20%	14	0.39%	33	1.62%	8	1.77%	18	2.37%	19	1.98%	18	0.00%	51	0.32%	50	0.32%	50	2.69%	38
TN	0.27%	38	0.25%	40	0.14%	29	0.53%	20	0.41%	37	0.51%	42	1.19%	35	0.65%	40	0.18%	23	1.36%	29	1.54%	30	2.72%	37
TX	0.90%	24	0.59%	18	0.11%	38	0.74%	12	1.01%	25	1.49%	24	2.35%	21	1.61%	25	0.22%	20	2.89%	12	3.20%	14	5.56%	19
UT	0.58%	33	2.71%	3	0.39%	2	0.48%	29	0.97%	29	3.28%	6	4.15%	7	3.68%	5	0.46%	12	3.32%	10	3.78%	11	7.93%	8
VA	3.25%	3	3.09%	2	0.14%	28	1.34%	1	3.39%	3	6.34%	4	7.82%	2	6.48%	4	0.62%	9	5.86%	2	6.48%	3	14.30%	2
VT	0.04%	48	0.18%	47	0.21%	12	0.33%	38	0.25%	43	0.23%	48	0.77%	44	0.44%	44	0.08%	30	0.68%	45	0.76%	45	1.53%	48
WA	1.16%	13	0.98%	13	0.14%	27	0.83%	9	1.32%	16	2.16%	11	3.14%	11	2.31%	12	0.85%	7	1.81%	21	2.66%	18	5.80%	17
WI	0.03%	50	0.10%	50	0.19%	16	0.15%	47	0.22%	45	0.13%	50	0.48%	48	0.32%	49	0.05%	37	1.04%	33	1.09%	35	1.56%	47
WV	0.05%	47	0.20%	42	0.14%	32	0.37%	36	0.19%	47	0.25%	47	0.76%	45	0.39%	45	0.11%	27	0.80%	40	0.81%	39	1.67%	45
WY	1.13%	15	0.43%	26	0.17%	24	0.51%	23	1.30%	17	1.56%	23	2.24%	24	1.73%	23	0.01%	44	0.85%	39	0.85%	41	3.09%	31
US Total	0.72%		0.61%		0.12%		0.45%		0.84%		1.33%		1.90%		1.45%		0.47%		2.13%		2.60%		4.50%	

Table 3.3
Source: DOD Atlas/Data Abstract for the 1990s

Table 3.3

Source: DOD Atlas/Data Abstract for the 11 and
US Department of Commerce

as a Percentage of Total State Non-Agricultural Employment									
STATE	Active Duty	Civilian	Rank	Rank	Rank	Rank	Total Military	Total	Rank
AK	7.96%	2.09%	5	2.40%	6	10.36%	1	12.45%	1
AL	1.06%	2.61%	2	2.61%	2	3.67%	12	5.13%	10
AR	0.91%	0.49%	31	0.49%	33	2.29%	7	3.68%	26
AZ	1.45%	0.65%	18	1.56%	25	2.81%	26	3.46%	28
CA	1.20%	0.87%	27	0.87%	17	2.12%	36	2.99%	32
CO	2.01%	0.79%	9	1.27%	39	3.29%	18	4.07%	20
CT	0.41%	0.30%	43	0.89%	50	1.30%	50	1.60%	48
DC	1.90%	2.36%	12	2.04%	13	3.93%	9	6.30%	5
DE	1.21%	0.49%	26	2.20%	10	3.40%	17	3.90%	23
FL	1.29%	0.66%	25	1.08%	45	2.39%	32	2.95%	33
GA	1.38%	1.19%	22	1.41%	34	2.79%	27	3.98%	22
HI	6.38%	3.16%	2	1.94%	17	8.33%	2	11.50%	2
IA	0.03%	0.13%	51	1.67%	24	1.70%	40	1.83%	44
ID	1.11%	0.32%	28	2.02%	40	3.13%	22	3.45%	28
IL	0.64%	0.38%	34	1.04%	46	1.68%	41	2.06%	42
IN	0.21%	0.56%	43	1.48%	28	1.70%	39	2.26%	39
KS	1.76%	0.58%	13	1.85%	19	3.61%	13	4.18%	18
KY	1.83%	0.83%	11	2.06%	29	3.46%	16	4.29%	16
LA	1.38%	0.55%	21	2.06%	29	3.46%	16	4.00%	21
MA	0.28%	0.38%	41	1.15%	43	1.43%	46	1.81%	46
MD	1.40%	1.83%	19	1.53%	29	2.93%	25	4.76%	13
ME	0.86%	1.78%	30	1.79%	21	2.74%	28	4.52%	14
MI	0.20%	0.27%	44	1.10%	44	1.31%	49	1.57%	50
MN	0.04%	0.13%	50	1.49%	33	1.53%	43	1.66%	47
MO	0.63%	0.79%	35	1.61%	26	2.24%	34	3.03%	31
MS	1.34%	1.12%	24	2.58%	3	3.90%	10	5.01%	12
MT	2.08%	0.46%	8	1.18%	42	3.26%	20	3.74%	25
NC	2.08%	0.46%	8	1.18%	42	3.26%	20	3.74%	25
ND	3.52%	0.68%	3	2.73%	1	6.25%	3	6.93%	4
NE	1.61%	0.53%	30	1.67%	23	3.28%	19	3.81%	24
NH	0.41%	0.31%	38	1.37%	36	1.78%	38	2.09%	41
NJ	0.42%	0.71%	36	0.89%	51	1.31%	48	2.02%	43
NM	2.34%	1.56%	5	1.80%	20	4.13%	7	5.69%	8
NV	1.40%	0.32%	20	1.02%	41	2.42%	31	2.74%	34
NY	0.33%	0.22%	40	0.98%	46	1.28%	51	1.51%	51
OH	0.23%	0.68%	42	1.18%	41	1.42%	47	2.10%	40
OK	1.88%	1.87%	10	2.01%	15	4.00%	8	5.87%	6
OR	0.08%	0.22%	47	1.51%	30	1.58%	42	1.81%	45
PA	0.11%	0.86%	45	1.37%	37	1.48%	44	2.43%	37
RI	0.81%	0.80%	32	1.70%	22	2.51%	30	3.41%	30
SC	2.21%	1.18%	6	2.00%	16	4.21%	6	5.39%	9
SD	2.15%	0.47%	7	2.45%	5	4.60%	4	5.07%	11
TN	0.39%	0.34%	39	1.68%	25	2.05%	37	2.39%	38
TX	1.48%	2.78%	17	1.25%	21	2.74%	29	3.52%	27
UT	0.76%	2.78%	33	2.26%	8	3.02%	24	5.80%	7
VA	2.78%	3.36%	4	1.51%	31	4.28%	5	7.64%	3
VT	0.05%	0.24%	48	2.22%	9	2.28%	33	2.51%	35
WA	1.52%	1.23%	18	1.69%	11	3.11%	23	4.34%	15
WI	0.05%	0.14%	49	1.45%	35	1.45%	45	1.59%	49
WV	0.08%	0.27%	46	2.11%	44	2.18%	35	2.46%	36
WY	1.71%	0.51%	14	1.86%	18	3.57%	14	4.09%	19

Table 3.4
Source: DOD Atlas/Data Abstract for the US 1990 and US Department of Commerce

as a Percentage of Total State Non-Agricultural Employment									
STATE	DOE	Defense Personnel	Rank	Total (Civilian)	Rank	Employed	Rank	Total	Rank
AK	0.00%	0.00%	7	2.09%	7	12.45%	1	12.45%	1
AL	0.00%	0.00%	11	1.46%	11	5.13%	10	5.13%	10
AR	0.00%	0.00%	36	0.49%	36	3.68%	27	3.68%	27
AZ	0.00%	0.00%	26	0.65%	26	3.46%	29	3.46%	29
CA	0.02%	0.02%	20	0.89%	20	3.01%	33	3.01%	33
CO	0.33%	0.33%	15	1.11%	15	4.40%	15	4.40%	15
CT	0.00%	0.00%	43	0.30%	43	1.60%	48	1.60%	48
DC	0.00%	0.00%	5	2.38%	5	6.30%	7	6.30%	7
DE	0.00%	0.00%	35	0.49%	35	3.90%	23	3.90%	23
FL	0.02%	0.02%	29	0.58%	29	2.97%	34	2.97%	34
GA	0.00%	0.00%	13	1.19%	13	3.98%	22	3.98%	22
HI	0.00%	0.00%	2	3.18%	2	11.50%	2	11.50%	2
IA	0.00%	0.00%	50	0.13%	50	1.83%	44	1.83%	44
ID	0.30%	0.30%	27	0.63%	27	3.75%	25	3.75%	25
IL	0.00%	0.00%	40	0.38%	40	2.06%	42	2.06%	42
IN	0.00%	0.00%	31	0.56%	31	2.26%	39	2.26%	39
KS	0.00%	0.00%	30	0.58%	30	4.18%	19	4.18%	19
KY	0.00%	0.00%	21	0.53%	21	4.29%	17	4.29%	17
LA	0.00%	0.00%	32	0.55%	32	4.00%	21	4.00%	21
MA	0.00%	0.00%	41	0.38%	41	1.81%	46	1.81%	46
MD	0.00%	0.00%	9	1.83%	9	4.76%	13	4.76%	13
ME	0.00%	0.00%	10	1.78%	10	4.52%	14	4.52%	14
MI	0.00%	0.00%	45	0.27%	45	1.57%	50	1.57%	50
MN	0.00%	0.00%	51	0.13%	51	1.66%	47	1.66%	47
MO	0.18%	0.18%	16	0.97%	16	3.21%	32	3.21%	32
MS	0.00%	0.00%	14	1.12%	14	5.01%	12	5.01%	12
MT	0.00%	0.00%	39	0.41%	39	4.29%	18	4.29%	18
NC	0.00%	0.00%	37	0.46%	37	3.74%	26	3.74%	26
ND	0.00%	0.00%	25	0.68%	25	6.93%	4	6.93%	4
NE	0.00%	0.00%	33	0.53%	33	3.81%	24	3.81%	24
NH	0.00%	0.00%	42	0.31%	42	2.09%	41	2.09%	41
NJ	0.00%	0.00%	24	0.71%	24	2.02%	43	2.02%	43
NM	1.08%	1.08%	4	2.62%	4	6.75%	5	6.75%	5
NV	0.61%	0.61%	18	0.83%	18	3.35%	31	3.35%	31
NY	0.00%	0.00%	48	0.22%	48	1.51%	51	1.51%	51
OH	0.03%	0.03%	23	0.72%	23	2.13%	40	2.13%	40
OK	0.00%	0.00%	8	1.87%	8	5.87%	6	5.87%	6
OR	0.00%	0.00%	47	0.22%	47	1.81%	45	1.81%	45
PA	0.00%	0.00%	17	0.86%	17	2.43%	38	2.43%	38
RI	0.00%	0.00%	19	0.80%	19	3.41%	30	3.41%	30
SC	1.06%	1.06%	6	2.24%	6	6.45%	6	6.45%	6
SD	0.00%	0.00%	38	0.47%	38	6.07%	11	6.07%	11
TN	0.28%	0.28%	28	0.62%	28	2.67%	35	2.67%	35
TX	0.03%	0.03%	22	0.81%	22	3.55%	28	3.55%	28
UT	0.00%	0.00%	3	2.78%	3	5.80%	9	5.80%	9
VA	0.00%	0.00%	1	3.36%	1	7.64%	3	7.64%	3
VT	0.00%	0.00%	46	0.24%	46	2.51%	36	2.51%	36
WA	0.01%	0.01%	12	1.24%	12	4.35%	16	4.35%	16
WI	0.00%	0.00%	49	0.14%	49	1.59%	49	1.59%	49
WV	0.00%	0.00%	44	0.27%	44	2.46%	37	2.46%	37
WY	0.00%	0.00%	34	0.51%	34	4.09%	20	4.09%	20

Table 3.5
Source: DOD Atlas/Data Abstract for the US 1990 and US Department of Energy FAX to Author and US Department of Commerce

STATE	DOE Defense Payroll	Rank	Total Civilian Payroll	Rank	Total Defense Payroll	Rank	Total Def Payroll - Retired	Rank	DOE Defense Spending	Rank	Total R&D Contracts	Rank	Total Prime Contracts	Rank	Total Defense Spending	Rank
AK	0.00%		0.81%	15	4.23%	5	3.91%	5	0.00%		0.0006%	49	2.13%	19	6.36%	10
AL	0.00%		1.03%	10	2.80%	14	1.80%	15	0.00%		0.86%	12	2.66%	16	5.27%	17
AR	0.00%		0.33%	33	1.71%	28	1.05%	33	0.00%		0.03%	40	0.79%	40	2.50%	34
AZ	0.00%		0.38%	29	2.13%	21	1.33%	27	0.00%		0.44%	14	4.82%	6	7.05%	7
CA	0.02%	11	0.58%	19	1.83%	27	1.43%	24	0.07%	10	0.95%	8	3.04%	13	4.88%	19
CO	0.41%	4	1.01%	11	2.90%	8	2.21%	10	0.96%	5	4.30%	2	5.61%	3	8.60%	5
CT	0.00%		0.18%	42	0.70%	42	0.55%	42	0.00%		0.19%	24	4.57%	7	5.27%	16
DC	0.00%		1.47%	6	2.88%	12	2.54%	8	0.01%	14	0.16%	25	4.20%	8	6.86%	9
DE	0.00%		0.31%	36	1.47%	31	1.07%	30	0.00%		0.07%	34	0.59%	47	2.06%	42
FL	0.03%	10	0.45%	25	2.37%	17	1.47%	23	0.05%	12	0.40%	16	2.05%	21	4.43%	20
GA	0.00%		0.71%	17	2.20%	18	1.65%	20	0.00%		0.06%	35	1.31%	33	3.51%	25
HI	0.00%		1.82%	5	6.88%	1	6.25%	1	0.00%		0.05%	38	1.79%	25	8.67%	3
IA	0.00%		0.08%	51	0.34%	51	0.19%	51	0.00%		0.09%	31	0.88%	37	1.22%	49
ID	0.39%	5	0.59%	18	1.94%	23	1.40%	26	1.19%	4	1.19%	7	1.42%	32	3.37%	27
IL	0.00%		0.25%	41	0.89%	43	0.57%	41	0.002%	17	0.05%	37	0.49%	50	1.19%	50
IN	0.00%		0.43%	27	0.88%	39	0.71%	38	0.00%		0.11%	29	1.52%	30	2.41%	37
KS	0.00%		0.36%	31	1.88%	25	1.50%	22	0.00%		0.03%	42	1.76%	26	3.64%	24
KY	0.00%		0.37%	30	1.71%	29	1.41%	25	0.00%		0.0037%	47	0.62%	46	2.34%	38
LA	0.00%		0.28%	37	1.42%	32	1.05%	32	0.00%		0.0032%	48	1.91%	23	3.33%	28
MA	0.00%		0.25%	40	0.84%	44	0.48%	43	0.00%		1.48%	4	5.45%	5	6.10%	13
MD	0.00%		1.28%	8	2.68%	10	2.16%	11	0.04%	13	0.91%	10	4.20%	9	6.88%	8
ME	0.00%		1.27%	9	2.62%	13	2.12%	12	0.00%		0.02%	43	3.41%	12	6.03%	14
MI	0.00%		0.17%	44	0.45%	47	0.33%	46	0.004%	16	0.16%	26	0.72%	43	1.16%	51
MN	0.00%		0.08%	50	0.35%	50	0.22%	50	0.00%		0.41%	15	1.78%	27	2.11%	40
MO	0.23%	7	0.50%	23	1.29%	34	0.98%	34	0.38%	7	1.28%	5	6.14%	2	7.43%	6
MS	0.00%		0.83%	14	2.58%	15	1.98%	14	0.00%		0.01%	44	3.53%	10	6.11%	12
MT	0.00%		0.27%	38	1.60%	30	1.15%	29	0.00%		0.0038%	46	0.50%	49	2.10%	41
NC	0.00%		0.32%	35	2.18%	19	1.68%	19	0.00%		0.14%	27	0.87%	38	3.06%	30
ND	0.00%		0.44%	26	2.68%	11	2.43%	9	0.00%		0.0004%	50	0.83%	39	3.49%	26
NE	0.00%		0.33%	32	1.93%	24	1.53%	21	0.00%		0.08%	36	0.72%	42	2.65%	32
NH	0.00%		0.17%	45	1.08%	36	0.60%	40	0.00%		0.33%	20	1.55%	29	2.61%	33
NJ	0.00%		0.41%	28	0.79%	40	0.66%	39	0.00%		0.20%	23	1.71%	28	2.50%	35
NM	1.32%	2	2.45%	2	4.80%	4	3.91%	4	5.10%	1	5.78%	1	7.56%	1	12.36%	1
NV	0.70%	3	0.89%	12	2.43%	16	1.70%	17	1.23%	3	1.27%	6	1.82%	24	4.25%	23
NY	0.00%		0.11%	48	0.38%	49	0.30%	48	0.01%	15	0.20%	22	1.47%	31	1.84%	44
OH	0.04%	8	0.53%	22	0.94%	38	0.78%	37	0.10%	9	0.37%	17	2.08%	20	2.98%	31
OK	0.00%		1.32%	7	3.22%	7	2.60%	7	0.00%		0.13%	28	1.12%	35	4.34%	22
OR	0.00%		0.17%	43	0.73%	41	0.33%	45	0.00%		0.03%	41	0.85%	44	1.38%	46
PA	0.00%		0.58%	20	1.01%	37	0.81%	36	0.00%		0.34%	19	1.17%	34	2.18%	39
RI	0.00%		0.75%	16	2.08%	22	1.70%	18	0.00%		0.08%	32	2.83%	15	4.91%	18
SC	1.45%	1	2.33%	3	5.14%	3	4.31%	3	2.41%	2	2.45%	3	3.47%	11	8.61%	4
SD	0.00%		0.32%	34	2.13%	20	1.78%	16	0.00%		0.0002%	51	0.29%	51	2.42%	36
TN	0.35%	6	0.55%	21	1.29%	35	0.87%	35	0.70%	6	0.84%	11	1.91%	22	3.20%	29
TX	0.03%	9	0.49%	24	1.86%	26	1.28%	28	0.05%	11	0.22%	21	2.53%	17	4.39%	21
UT	0.00%		2.14%	4	3.29%	6	2.91%	6	0.00%		0.36%	18	2.99%	14	6.28%	11
VA	0.00%		2.81%	1	6.62%	2	5.48%	2	0.00%		0.52%	13	5.48%	4	12.10%	2
VT	0.00%		0.15%	47	0.63%	45	0.36%	44	0.00%		0.07%	33	0.62%	45	1.25%	48
WA	0.02%	12	0.88%	13	2.77%	9	2.04%	13	0.20%	8	0.94%	9	2.53%	18	5.30%	15
WI	0.00%		0.09%	49	0.41%	48	0.28%	49	0.00%		0.04%	39	0.94%	36	1.35%	47
WV	0.00%		0.17%	46	0.63%	46	0.32%	47	0.00%		0.09%	30	0.75%	41	1.38%	45
WY	0.00%		0.26%	39	1.38%	33	1.06%	31	0.00%		0.0044%	45	0.53%	48	1.91%	43
US Total	0.05%		0.57%		1.66%		1.28%		0.12%		0.52%		2.32%		3.99%	

Table 3.6

Source: DOD Atlas/Data Abstract for the US 1990,
Department of Energy FAX to Authors and
US Department of Commerce

STATE	DOE Defense Payroll	Rank	Total Civilian Payroll	Rank	Total Defense Payroll	Rank	Total Def Payroll - Retired	Rank	DOE Defense Spending	Rank	Total R&D Contracts	Rank	Total Prime Contracts	Rank	Total Defense Spending	Rank
AK	0.00%		1.41%	9	7.35%	4	6.79%	3	0.00%		0.0010%	49	3.69%	14	11.04%	4
AL	0.00%		1.23%	11	3.12%	14	2.28%	14	0.00%		0.79%	12	3.19%	17	6.31%	15
AR	0.00%		0.40%	35	2.04%	30	1.24%	33	0.00%		0.04%	40	0.94%	40	2.98%	35
AZ	0.00%		0.44%	30	2.50%	19	1.57%	28	0.00%		0.51%	14	5.77%	7	8.27%	9
CA	0.03%	11	0.71%	18	2.22%	26	1.73%	24	0.08%	10	1.15%	8	3.68%	15	5.90%	17
CO	0.46%	4	1.14%	13	3.39%	9	2.51%	10	1.09%	5	4.88%	2	6.37%	5	9.76%	7
CT	0.00%		0.20%	43	0.77%	43	0.61%	42	0.00%		0.21%	25	5.06%	8	5.83%	18
DC	0.00%		4.25%	1	7.70%	3	7.36%	2	0.04%	14	0.46%	16	12.15%	1	19.86%	1
DE	0.00%		0.38%	37	1.79%	33	1.30%	31	0.00%		0.08%	34	0.72%	48	2.50%	41
FL	0.03%	10	0.45%	29	2.39%	21	1.49%	29	0.05%	12	0.41%	19	2.07%	26	4.46%	24
GA	0.00%		0.88%	16	2.75%	17	2.06%	18	0.00%		0.08%	35	1.63%	33	4.38%	25
HI	0.00%		2.30%	6	8.68%	1	7.89%	1	0.00%		0.06%	38	2.28%	24	10.94%	5
IA	0.00%		0.09%	51	0.40%	51	0.23%	51	0.00%		0.10%	31	1.03%	38	1.43%	49
ID	0.45%	5	0.69%	20	2.24%	24	1.81%	27	1.37%	4	1.37%	7	1.64%	32	3.89%	30
IL	0.00%		0.29%	40	0.80%	42	0.67%	40	0.002%	17	0.06%	37	0.58%	49	1.38%	50
IN	0.00%		0.51%	28	1.05%	39	0.84%	38	0.00%		0.14%	29	1.81%	29	2.85%	36
KS	0.00%		0.42%	32	2.19%	28	1.75%	23	0.00%		0.03%	41	2.05%	27	4.24%	27
KY	0.00%		0.47%	27	2.19%	27	1.80%	21	0.00%		0.005%	46	0.79%	45	2.98%	34
LA	0.00%		0.39%	36	1.98%	31	1.47%	30	0.00%		0.0045%	47	2.66%	20	4.63%	23
MA	0.00%		0.28%	41	0.71%	46	0.53%	43	0.00%		1.63%	5	6.01%	6	6.72%	14
MD	0.00%		1.30%	10	2.71%	18	2.18%	16	0.04%	13	0.92%	11	4.23%	11	6.94%	13
ME	0.00%		1.48%	8	3.06%	15	2.48%	11	0.00%		0.02%	43	3.99%	12	7.05%	12
MI	0.00%		0.19%	45	0.50%	47	0.37%	47	0.004%	16	0.18%	27	0.80%	44	1.30%	51
MN	0.00%		0.10%	49	0.43%	50	0.27%	50	0.00%		0.49%	15	2.13%	25	2.55%	40
MO	0.27%	7	0.59%	24	1.52%	35	1.15%	34	0.45%	7	1.51%	6	7.22%	3	8.74%	8
MS	0.00%		1.01%	14	3.16%	12	2.43%	12	0.00%		0.02%	44	4.33%	9	7.49%	11
MT	0.00%		0.31%	39	1.82%	32	1.30%	32	0.00%		0.0043%	48	0.56%	50	2.38%	42
NC	0.00%		0.40%	33	2.80%	16	2.15%	17	0.00%		0.18%	26	1.12%	36	3.82%	29
ND	0.00%		0.54%	25	3.31%	10	3.02%	8	0.00%		0.0005%	50	1.02%	39	4.33%	26
NE	0.00%		0.40%	34	2.32%	23	1.86%	20	0.00%		0.07%	38	0.87%	42	3.20%	32
NH	0.00%		0.19%	46	1.15%	36	0.65%	41	0.00%		0.36%	21	1.69%	31	2.84%	37
NJ	0.00%		0.45%	28	0.87%	40	0.73%	39	0.00%		0.22%	24	1.90%	28	2.78%	38
NM	1.66%	2	3.08%	3	6.03%	6	4.92%	6	6.40%	1	7.25%	1	9.50%	2	15.52%	2
NV	0.83%	3	1.19%	12	3.25%	11	2.27%	15	1.64%	3	1.70%	4	2.43%	21	5.68%	19
NY	0.00%		0.13%	48	0.44%	49	0.36%	48	0.01%	15	0.23%	23	1.73%	30	2.17%	44
OH	0.05%	8	0.63%	23	1.10%	37	0.90%	36	0.12%	9	0.43%	18	2.41%	23	3.51%	31
OK	0.00%		1.51%	7	3.69%	8	2.98%	9	0.00%		0.15%	28	1.28%	34	4.97%	22
OR	0.00%		0.20%	44	0.84%	41	0.36%	46	0.00%		0.03%	42	0.74%	47	1.58%	46
PA	0.00%		0.63%	22	1.10%	38	0.88%	37	0.00%		0.37%	20	1.28%	35	2.37%	43
RI	0.00%		0.78%	17	2.16%	29	1.76%	22	0.00%		0.08%	32	2.94%	18	5.10%	21
SC	1.80%	1	2.90%	4	6.40%	5	5.36%	5	3.00%	2	3.04%	3	4.32%	10	10.71%	6
SD	0.00%		0.35%	38	2.37%	22	1.98%	19	0.00%		0.0003%	51	0.32%	51	2.69%	39
TN	0.45%	6	0.69%	19	1.63%	34	1.10%	35	0.88%	6	1.06%	10	2.42%	22	4.05%	28
TX	0.04%	9	0.64%	21	2.40%	20	1.65%	26	0.06%	11	0.28%	22	3.27%	16	5.66%	20
UT	0.00%		2.71%	5	4.15%	7	3.68%	7	0.00%		0.46%	17	3.78%	13	7.93%	10
VA	0.00%		3.08%	2	7.82%	2	6.48%	4	0.00%		0.62%	13	6.48%	4	14.30%	3
VT	0.00%		0.18%	47	0.77%	44	0.44%	44	0.00%		0.08%	33	0.76%	46	1.53%	48
WA	0.02%	12	1.00%	15	3.16%	13	2.32%	13	0.22%	8	1.07%	9	2.88%	19	6.04%	16
WI	0.00%		0.10%	50	0.48%	48	0.32%	49	0.00%		0.05%	39	1.09%	37	1.56%	47
WV	0.00%		0.20%	42	0.76%	45	0.39%	45	0.00%		0.11%	30	0.91%	41	1.67%	45
WY	0.00%		0.43%	31	2.24%	25	1.73%	25	0.00%		0.01%	45	0.85%	43	3.09%	33
US Total	0.06%		0.67%		1.96%		1.51%		0.14%		0.61%		2.74%		4.71%	

Table 3.7

Source: DOD Atlas/Data Abstract for the US 1990,
Department of Energy FAX to Authors and
US Department of Commerce

	Employment		DOD Total				Military Total			
	DOD	Rank	Military	Rank	Civilian	Rank	Active	Rank	Res & NG	Rank
AK	12.45%	1	83.21%	22	16.79%	30	76.84%	1	23.16%	51
AL	5.13%	10	71.47%	40	28.53%	12	28.94%	34	71.06%	18
AR	3.68%	26	86.73%	15	13.27%	37	28.48%	35	71.52%	17
AZ	3.46%	28	81.18%	26	18.82%	26	51.47%	14	48.53%	38
CA	2.99%	32	70.88%	41	29.12%	11	56.41%	8	43.59%	44
CO	4.07%	20	80.71%	28	19.29%	24	61.24%	5	38.76%	47
CT	1.60%	48	81.53%	24	18.47%	28	31.63%	33	68.37%	19
DC	6.30%	5	62.45%	46	37.55%	6	48.24%	20	51.76%	32
DE	3.90%	23	87.36%	13	12.64%	39	35.41%	27	64.59%	25
FL	2.95%	33	80.90%	27	19.10%	25	54.25%	12	45.75%	40
GA	3.98%	22	70.05%	42	29.95%	10	49.59%	16	50.41%	36
HI	11.50%	2	72.38%	38	27.62%	14	76.74%	2	23.26%	50
IA	1.83%	44	92.81%	1	7.19%	51	1.67%	51	98.33%	1
ID	3.45%	29	90.67%	5	9.33%	47	35.47%	26	64.53%	26
IL	2.06%	42	81.41%	25	18.59%	27	37.84%	25	62.16%	27
IN	2.26%	39	75.33%	34	24.67%	18	12.36%	44	87.64%	8
KS	4.18%	18	86.23%	17	13.77%	35	48.70%	19	51.30%	33
KY	4.29%	16	80.57%	29	19.43%	23	55.69%	10	44.31%	42
LA	4.00%	21	86.26%	16	13.74%	36	40.26%	24	59.74%	28
MA	1.81%	46	78.99%	30	21.01%	22	19.35%	40	80.65%	12
MD	4.76%	13	61.60%	47	38.40%	5	47.89%	21	52.11%	31
ME	4.52%	14	60.63%	49	39.37%	3	34.84%	28	65.16%	24
MI	1.57%	50	83.08%	23	16.92%	29	15.57%	43	84.43%	9
MN	1.66%	47	92.10%	2	7.90%	50	2.93%	49	97.07%	3
MO	3.03%	31	73.99%	35	26.01%	17	28.02%	36	71.98%	16
MS	5.01%	12	77.69%	33	22.31%	19	34.29%	30	65.71%	22
MT	4.29%	17	90.55%	7	9.45%	45	34.48%	29	65.52%	23
NC	3.74%	25	87.13%	14	12.87%	38	63.81%	4	36.19%	48
ND	6.93%	4	90.20%	8	9.80%	44	56.27%	9	43.73%	43
NE	3.81%	24	86.12%	18	13.88%	34	49.03%	17	50.97%	35
NH	2.09%	41	84.97%	21	15.03%	31	22.86%	39	77.14%	13
NJ	2.02%	43	64.96%	45	35.04%	7	32.21%	32	67.79%	20
NM	5.69%	8	72.63%	37	27.37%	15	56.53%	7	43.47%	45
NV	2.74%	34	88.40%	10	11.60%	42	57.88%	6	42.12%	46
NY	1.51%	51	85.52%	20	14.48%	32	25.73%	37	74.27%	15
OH	2.10%	40	67.39%	44	32.61%	8	16.08%	42	83.92%	10
OK	5.87%	6	68.22%	43	31.78%	9	49.82%	15	50.18%	37
OR	1.81%	45	87.63%	11	12.37%	41	4.79%	46	95.21%	6
PA	2.43%	37	60.76%	48	39.24%	4	7.62%	45	92.38%	7
RI	3.41%	30	73.67%	36	26.33%	16	32.23%	31	67.77%	21
SC	5.39%	9	78.06%	31	21.94%	21	52.46%	13	47.54%	39
SD	5.07%	11	90.69%	4	9.31%	48	46.65%	23	53.35%	29
TN	2.39%	38	85.92%	19	14.08%	33	18.79%	41	81.21%	11
TX	3.52%	27	77.73%	32	22.27%	20	54.46%	11	45.54%	41
UT	5.80%	7	52.00%	51	48.00%	1	25.18%	38	74.82%	14
VA	7.64%	3	56.06%	50	43.94%	2	64.83%	3	35.17%	49
VT	2.51%	35	90.62%	6	9.38%	46	2.41%	50	97.59%	2
WA	4.34%	15	71.73%	39	28.27%	13	48.83%	18	51.17%	34
WI	1.59%	49	91.42%	3	8.58%	49	3.12%	48	96.88%	4
WV	2.46%	36	88.87%	9	11.13%	43	3.73%	47	96.27%	5
WY	4.09%	19	87.44%	12	12.56%	40	47.82%	22	52.18%	30

Table 3.8

Source: DOD Atlas/Data Abstract for the US 1990 and
US Department of Commerce