Statement of
Robert F. Hale
Assistant Director
for
National Security Division
Congressional Budget Office

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NOTICE

This statement is not available for public release until it is delivered at 2:00 p.m. (EST), Tuesday, March 1, 1988.

Mr. Chairman, and members of the Committee, I appreciate the opportunity to testify today regarding defense burdensharing. My testimony presents quantitative indicators that compare the defense efforts of the United States with those of our allies. Many of these indicators are taken from the March 1987 version of an annual Department of Defense (DoD) publication, titled Report on Allied Contributions to the Common Defense.

Measures in my testimony generally show that, relative to its economic strength, the United States is doing more to contribute to the common defense than almost any of its allies. While the allies vary widely in economic measures of burdensharing, none of them is devoting a larger portion of its resources to defense than the United States. Measures of military capability--such as counts of personnel or of aircraft--sometimes show substantial allied contributions. But, again, most of these measures show the United States contributing more in military capability than its share of total allied resources.

By themselves, these quantitative measures are not an adequate basis for judging what degree of burdensharing would be fair. That judgment is a political one that must weigh not only the contributions to allied defense, which is what I can measure for you, but also the benefits realized by the United States and its allies, which cannot be reliably quantified. For this reason, I will leave to others the task of judging. Instead, I will review and explain the available quantitative indicators, beginning with economic measures.

ECONOMIC MEASURES

Table 1 shows the most commonly used measure of a country's defense burden--the percentage of gross domestic product (GDP) devoted to defense. In 1986, the United States devoted 6.7 percent of its GDP to defense compared with an average of 3.3 percent for our NATO allies and about 1 percent for Japan. (Because of delays in compiling foreign data, 1986 is the latest year for which data are available.)

Spending varied widely among the NATO allies and Japan, but in 1986 none of the allied countries listed in Table 1 devoted more of its GDP to defense than the United States. The second column of Table 1 shows an index of their share of GDP relative to U.S. percentages. An index value of 100 indicates that a country spends as much as the United States in relation to GDP; smaller values indicate lesser portions of resources devoted to defense. Index values range from 14 for Luxembourg to 90 for Greece. For all of the non-U.S. NATO allies together, the index averages 49, indicating that their ratio of defense spending to GDP is about one-half as large as the U.S. ratio.

I should note that these percentages of GDP omit costs borne by many European allies. For example, countries with conscription can limit the wages of their conscripts and hence their defense costs. If recruits in those countries were paid market wages--as they are in the United States with its volunteer military--then NATO defense spending would be higher. Nor do the percentages of GDP that I am using include the value of land and

TABLE 1. 1986 DEFENSE EXPENDITURES AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT (GDP)

	Percent of GDP	Index of Effort (U.S. = 100)
United States	6.7	100
Non-U.S. NATO		
Average	3.3	49
Belgium	3.0	44
Canada	2.2	33
Denmark	2.0	30
France	3.9	58
Germany	3.1	46
Greece	6.1	90
Italy	2.2	33
Luxembourg	0.9	14
Netherlands	3.1	46
Norway	3.1	46
Portugal	3.2	48
Spain a/	2.0	29
Turkey	4.8	71
United Kingdom	5.0	74
Japan a/	1.0	15

SOURCES: Congressional Budget Office computations using data from "Financial and Economic Data Related to NATO Defense," NATO Press Service, December 1987 (for defense expenditures); and data for gross domestic product from International Monetary Fund, International Financial Statistics, (January 1988).

NOTE: Defense expenditures are measured for the fiscal year that most closely overlaps calendar year 1986; GDP data are for calendar year 1986. The non-U.S. NATO average is weighted by each country's GDP.

a. Defense expenditures for Spain and Japan use the national, not NATO, definition, as reported in International Institute for Strategic Studies, The Military Balance 1987-88 (London: IISS, 1987).

facilities provided free by host countries to U.S. forces stationed overseas. Finally, spending measures exclude contributions by the Federal Republic of Germany to help maintain troops in Berlin. These particular costs can be approximated.

It does not appear, however, that these omitted costs would fundamentally alter the results shown in Table 1. The Congressional Budget Office (CBO) estimated the additions to German defense spending needed to take account of the burden of conscription, the value of land used by foreign troops, and the support of the Berlin garrison. Those additions increased the portion of German GDP devoted to defense from 3.1 percent to 3.7 percent, still well below the U.S. level of 6.7 percent. CBO did not have the data to perform these calculations for all U.S. allies. But this adjustment is likely to be most important for Germany because of the number of foreign forces stationed in that country.

The patterns in Table 1 are altered, but not markedly, if spending for official development assistance (ODA) is added to defense spending. ODA spending--more generally called economic assistance--is not used to assist a country's military forces directly. But it may indirectly aid a country's defenses by allowing it to spend more of its own resources on defense or by helping its economy grow. The United States spends substantially less on official development assistance, as a percentage of its GDP, than many of our allies (see Table A-1 in the appendix to my testimony). But ODA spending is small relative to defense spending. Therefore, adding it to

defense spending does not reverse the finding that the United States devotes more to national security efforts than its allies.

Nor do results change when another economic measure is employed--per capita spending on defense. Table 2 shows that, when all 1986 defense spending is converted to U.S. dollars using 1986 exchange rates, the United States spent about $1,155 per person on defense compared with an average of $318 among non-U.S. NATO allies and $163 for Japan.

The gap in per capita defense spending narrows, but is not eliminated, if 1987 exchange rates are used rather than 1986 rates. By that measure, the United States spends about $1,155 per person on defense compared with an average of $362 among non-U.S. NATO allies and $192 for Japan. The importance of this gap may be further lessened for some countries if one

TABLE 2. PER CAPITA DEFENSE SPENDING, 1986 (In U.S. dollars)

	1986 Exchange Rates	1987 Exchange Rates
United States	1,155	1,155
Non-U.S. NATO Average a/	318	362
Japan	163	192

SOURCE: Congressional Budget Office, based on NATO and IISS data for defense expenditures and International Monetary Fund data for exchange rates and population estimates.

a. Table A-2 shows data by country.

believes that richer nations should spend proportionally more on defense. Average GDP per person--a common measure of "richness"--in the United States is about twice that among non-U.S. NATO allies.

The United States not only spends more of its resources on defense than its allies today; it has done so for many years. Table 3 shows the portion of GDP devoted to defense since 1955 by the United States and others. The United States percentage declined from 10 percent in 1955 to 5.1 percent in 1980, then rose to 6.7 percent in 1986. The average for non-U.S. NATO allies never exceeded 4.5 percent. Compared with Japan, the U.S. fraction of GDP devoted to defense has been up to 10 times larger over the same period. The recent downward trend in U.S. defense budgets will narrow the gap only slightly.

TABLE 3. PERCENTAGE OF GROSS DOMESTIC PRODUCT DEVOTED TO DEFENSE

	1955	1960	1965	1970	1975	1980	1986
United States	10.0	8.9	7.4	7.7	6.0	5.1	6.7
Non-U.S. NATO Average a/	4.5	4.1	3.8	3.1	3.2	3.0	3.3
Japan	1.0	1.1	0.9	0.8	0.9	0.9	1.0

SOURCE: Congressional Budget Office, based on data from NATO, the IISS, and the International Monetary Fund.

a. Table A-3 shows data by country.

Probably the only way to make the U.S. and allied defense burdens appear roughly the same is to exclude costs that are thought by some to be unrelated to NATO defenses. There is no good way to measure the proportion of the U.S. defense budget spent on the NATO alliance. With some misgivings, the Department of Defense has made rough estimates suggesting that close to 40 percent of the U.S. defense budget is spent on forces not directly committed to NATO. Eliminating non-NATO spending from the U.S. and NATO totals would alter the comparisons substantially, suggesting that the United States and its allies spend roughly the same share of their resources on direct NATO costs.

But there are good arguments against eliminating non-NATO spending. U.S. forces not directly committed to NATO play an important part in overall alliance defenses. Strategic nuclear forces, though excluded from direct NATO costs in DoD calculations, play a key role in deterring an attack on NATO. Forces stationed in or designated for the Pacific and Persian Gulf regions protect vital NATO interests, such as oil supplies in the Persian Gulf. Moreover, the existence of these forces may force potential adversaries to devote some of their defense budgets to non-NATO areas, rather than focusing solely on the European theater. Perhaps for these reasons, DoD always uses total U.S. defense spending in its assessment of burdensharing.

MILITARY MEASURES

My discussion so far has focused on various spending measures. Another approach to assessing burdensharing considers measures of military capability. Table 4 shows some rough measures for 1985, including defense personnel (defined as total numbers of active-duty personnel, reserves, and civilian personnel), ground forces (measured by division equivalent firepower scores that reflect both numbers and quality of equipment), numbers of tactical aircraft (naval and air forces combined), naval ship tonnage (excluding strategic submarines), and numbers of strategic nuclear warheads. Most of these measures come directly from the 1987 DoD report on allied contributions, though CBO has made additions and amendments to provide a more complete picture. Measured in percentages of totals for all the countries considered in this testimony, the U.S. contribution ranges from 38 percent for defense personnel to 95 percent for strategic nuclear warheads. The measures show substantial contributions by the non-U.S. NATO allies in several categories, notably defense personnel and ground forces. Contributions by Japan are uniformly low.

The DoD report compares these shares with several measures of each country's ability to contribute. Measures of ability to contribute include 1985 shares of gross domestic product and total population. The United States, for example, had 32 percent of the total population of all the allies considered in this testimony and 39 percent of the total GDP (converted using 1987 exchange rates). The U.S. share of military capability roughly

TABLE 4. 1985 INDICATORS OF MILITARY CONTRIBUTION AND ABILITY TO CONTRIBUTE (In percents of total)

	United States	Non-U.S. NATO	Japan
	Military Indicators		
Total Defense Personnel a/	38	59	2
Ground Forces	39	57	4
Tactical Combat Aircraft b/	60	36	4
Naval Ship Tonnage	64	33	3
Strategic Nuclear Warheads c/	95	5	0
	Ability to Contribute		
Share of GDP d/	39	40	21
Share of Population	32	52	16

SOURCES: Except as noted, Department of Defense, Report on Allied Contributions to the Common Defense.

a. Active-duty military, civilian personnel, and committed reserves.

b. Based on data presented in the DoD report, adjusted to include naval tactical aircraft.

c. Computed by the Congressional Budget Office, based on data in International Institute of Strategic Studies, The Military Balance, 1985-1986.

d. Congressional Budget Office, based on 1987 exchange rates.

matches measures of its ability to contribute in two areas (defense personnel and ground forces) and exceeds those measures in three others (tactical aircraft, naval ship tonnage, and strategic nuclear warheads).

Moreover, these measures may understate the U.S. contribution. Most of the measures simply count weapons. Often, however, the U.S. weapons are more modern. For example, the DoD report shows that 45 percent of U.S. tactical aircraft in its Air Force were classed as new-generation forces while only 25 percent of the NATO countries' air force aircraft were in that category.

CONCLUSIONS

Mr. Chairman, the quantitative measures in my testimony show that, while allied contributions are sometimes substantial, the United States devotes a larger share of its resources to the common defense than any of the allies and, by several measures, does more than its share in key categories of military capability.

There are, however, important limitations in using these quantitative measures to judge the fairness of burdensharing. Some factors cannot be quantified. For example, the Federal Republic of Germany has a substantially greater concentration of foreign military personnel within its borders than does the United States, with resulting problems of noise and environmental encroachment. Nor can quantitative measures capture the political costs of persuading a country's electorate to support defense

spending. A 1986 Gallup poll shows that, compared with U.S. citizens, a smaller proportion of citizens in allied countries feel there is a substantial chance of a major war. Thus, it may be more difficult to build a consensus in allied countries for high defense spending.

More importantly, the quantitative indicators in my testimony only measure the contribution of various countries to defense. Those contributions must be judged against the benefits obtained. Perhaps in part because of our various alliances, the United States and its allies have enjoyed 40 years without an armed confrontation with our principal adversary. No one can measure the benefit of avoiding confrontation, though it is obviously substantial. Nor can anyone measure how much the United States would need to devote to its own defense in the absence of these alliances.

Quantitative measures, then, are a good place to start in assessing burdensharing, because they do suggest how much each country is contributing. But they are not a good place to stop. You must also assess the benefits of the alliances, which I know is one of your goals in this hearing.

APPENDIX

TABLE A-1. DEFENSE AND ECONOMIC ASSISTANCE COMBINED, IN PERCENTAGES OF GROSS DOMESTIC PRODUCT, 1986

Country	Defense Expenditures	Economic Assistance	Combined Expenditures	Index of Effort (U.S. = 100)
United States	6.7	0.2	7.0	100
NATO Allies				
Belgium	3.0	0.5	3.4	49
Canada	2.2	0.5	2.7	39
Denmark	2.0	0.9	2.8	41
France	3.9	0.7	4.6	66
Germany	3.1	0.4	3.5	51
Greece	6.1	--	6.1	87
Italy	2.2	0.4	2.6	38
Luxembourg	0.9	--	0.9	14
Netherlands	3.1	1.0	4.1	59
Norway	3.1	1.1	4.3	61
Portugal	3.2	--	3.2	46
Spain a/	2.0	--	2.0	28
Turkey	4.8	--	4.8	69
United Kingdom	5.0	0.3	5.3	76
Non-U.S. NATO Weighted Avg. b/	3.3	0.5	3.7	54
Japan a/	1.0	0.3	1.3	19

SOURCES: Congressional Budget Office computations using data from "Financial and Economic Data Related to NATO Defense," NATO Press Service, December 1987 (for defense expenditures); and data for gross domestic product from International Monetary Fund, International Financial Statistics (January 1988); and Organization for Economic Cooperation and Development, Development Assistance (December 1987).

NOTE: Detail may not add to totals because of rounding.

a. Defense expenditures for Spain and Japan use the national, not NATO, definition, as reported in International Institute for Strategic Studies, The Military Balance 1987-88 (London: IISS, 1987).

b. Using 1986 gross domestic product shares.

TABLE A-2. PER CAPITA DEFENSE EXPENDITURES, 1986
(In U.S. dollars)

Country	Per Capita Defense Expenditures	Index of Effort (U.S. = 100)
United States	1,155	100
NATO Allies		
Belgium	346	30
Canada	308	27
Denmark	322	28
France	511	44
Germany	453	39
Greece	232	20
Italy	235	20
Luxembourg	145	13
Netherlands	365	32
Norway	519	45
Portugal	90	8
Spain a/	113	10
Turkey	53	5
United Kingdom	488	42
Non-U.S. NATO Weighted Average	318	27
Japan a/	163	14

SOURCES: Congressional Budget Office computations using data from "Financial and Economic Data Related to NATO Defense," NATO Press Service, December 1987 (for defense expenditures); and data for gross domestic product and exchange rates from International Monetary Fund, International Financial Statistics (January 1988).

a. Defense expenditures for Spain and Japan use the national, not NATO, definition, as reported in International Institute for Strategic Studies, The Military Balance 1987-88 (London: IISS, 1987).

TABLE A-3. DEFENSE SPENDING IN PERCENTAGES OF GROSS DOMESTIC PRODUCT
(Based on data in national currencies)

Country	1950	1955	1960	1965	1970	1975	1980
United States	4.7	10.0	8.9	7.4	7.7	6.0	5.1
NATO Allies							
Belgium	2.6	4.0	3.6	3.2	2.9	3.1	3.3
Canada	2.6	6.3	4.2	2.9	2.3	2.0	1.9
Denmark	1.7	3.2	2.7	2.8	2.5	2.5	2.4
France	4.7	6.4	6.5	5.2	4.2	3.8	4.0
Germany	n.a.	4.1	4.0	4.3	3.3	3.7	3.3
Greece	5.0	5.1	4.9	3.5	4.8	6.8	5.7
Italy	3.3	3.7	3.1	3.1	2.5	2.5	2.4
Luxembourg	0.9	3.2	1.0	1.4	0.7	0.9	1.0
Netherlands	3.6	5.7	4.1	4.0	3.4	3.2	3.1
Norway	2.5	3.9	2.9	3.8	3.5	3.2	2.9
Portugal	3.5	4.2	4.2	6.2	7.1	5.3	3.5
Turkey	5.7	5.6	5.1	5.0	4.4	6.3	4.7
United Kingdom	6.0	8.1	6.4	5.8	5.1	5.2	5.0
Non-U.S. NATO Weighted Avg. a/	n.a.	4.5	4.1	3.8	3.1	3.2	3.0
Japan b/	n.a.	1.0	1.1	0.9	0.8	0.9	0.9

SOURCES: Congressional Budget Office, based on NATO definition of defense expenditures and GDP data from the International Monetary Fund.

NOTE: n.a. = not available.

a. Using 1986 national GDP shares as weights. Spain was not included, because historical data consistent with that of the other NATO nations were lacking.

b. Defense expenditures for Japan use the national, not NATO, definition, as reported in International Institute for Strategic Studies, The Military Balance 1987-88 (London: IISS, 1987).