

THE
NATIONAL
SECURITY COSTS
OF
PETROLEUM

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Overview

Reliance on imported petroleum clearly involves substantial military costs for defending U.S. oil suppliers in the Middle East. A review of the existing literature on this subject leads to the conclusion that the *national security cost of oil is in the area of \$57 billion per year, or approximately \$9.19 per barrel of oil used in the U.S.*

History of U.S. Interests and Military Involvement in the Middle East

Following the Shah of Iran's downfall in January 1979, the hostage crisis in Iran, the Soviet invasion of Afghanistan, and other politically destabilizing events in the Middle East, the United States reassessed its policies in Southwest Asia. In January 1980, President Carter announced the so-called "Carter doctrine," stating that the United States would use military force, if necessary, to protect its vital interests in the Persian Gulf.

To develop an adequate capability to respond to contingencies in Southwest Asia, the administration established the Rapid Deployment Force in March 1980, later called the rapid Deployment Joint Task Force. The Joint Task Force was to be a pool of rapidly deployable, U.S.-based forces that would give the United States the ability to respond to contingencies throughout the world. The focus of these forces became the Southwest Asia region. In January 1983, the Joint Task Force was redesignated the U.S. Central Command (CENTCOM), which assumed U.S. operational military command responsibility for 18 countries in southwest Asia. When required, approximately 400,000 personnel from the operating forces may be made available to CENTCOM to carry out its responsibilities. Four service component commands and one subordinate unified command report to CENTCOM. Additional operating forces may be provided, if required, from other commands.¹

Throughout the years, U.S. interest and objectives in the region have included maintaining the uninterrupted flow of Persian Gulf oil, ensuring the security of Israel, and promoting a comprehensive resolution of the Arab-Israeli conflict. The United States has aimed at maintaining a presence and ensuring the stability and security of friendly governments in the region so that its interests would not be threatened by either direct Soviet intervention or regional turmoil. Because of the continued improvement in U.S.-Soviet relations, the U.S. Central Command now believes that the potential for direct conflict with the Soviets in this

¹ U.S. General Accounting Office (GAO), Southwest Asia: Cost of Protecting U.S. Interests GAO/NSIAD-91-250, August 1991, p. 8.

region has been significantly reduced. Instead, as demonstrated by Iraq's recent aggression, the most probable near-term threat to U.S. interests would likely originate from a regional conflict.²

The United States has maintained a primarily naval presence in the Persian gulf area since 1949. Throughout this period, the level of forces has varied depending upon the level of instability in the region. During the early 1980s, the United States committed itself to accelerate efforts to improve the capabilities of its forces, primarily those tasked to deploy to Southwest Asia. For example, it designated--from the existing force structure--units to be allocated to Southwest Asia contingencies, funded the procurement of maritime prepositioning ships as well as equipment, augmented its fast sealift capabilities, increased the number of naval battle group deployments, obtained emergency access to airfield and port facilities, and prepositioned military equipment and material ashore. As a result of these efforts, U.S. military capabilities in Southwest Asia have increased considerably over the years.³

Analyses of the Cost of Protecting Middle Eastern Oil Supplies

As the importance of the U.S. commitment to defending Persian Gulf oil supplies became evident during the 1980s, a number of analysts, including critics of U.S. foreign/military policy, began attempting to determine the cost of this commitment. This kind of analysis is difficult because the U.S. military budget is not broken down by mission, but rather by categories like Force, Procurement, Construction, Research and Development, Operations and Maintenance and Personnel. No definitive cost figures are available on specific military missions--not even missions as important as defending U.S. oil supplies in the Middle East.

Nonetheless, over the past 10 years a number of organizations and individual analysts have attempted to determine these costs. For example, the Center for Defense Information estimated that of the \$2 trillion spent on defense from FY 1982 to FY 1988, approximately \$294 billion (15 percent of the total) was devoted to defending the Persian Gulf.⁴ This works out to approximately \$49 billion per year. Howard Moreland, of the Coalition for a New Foreign Policy, applied a modified form of the CIA methodology used for estimating and analyzing military spending in the Soviet Union. He divided the total budget for each force by the total number of active duty personnel to arrive at a cost per active-duty soldier, ascribing each soldier to only one (the primary) mission. Moreland concluded that approximately 23 percent of the military budget for conventional forces is primarily devoted to the Persian Gulf; this suggested a mid-1980s allocation of

² U.S. Department of Defense, Report of the Bottom-Up Review (October 1993), pp. 1-2, 13-14.

³ GAO, p. 9.

⁴ Cited in Gary Staff and Susan Byer Starr, "The True Cost of Oil," Earth Island Journal (Summer 1988), p. 22.

\$54 billion per year.⁵ During the late 1980s the Rocky Mountain institute (RMI) estimated that the cost of securing Persian Gulf oil supplies was approximately \$47-\$50 billion per year. The RMI analysis assumed that all of this cost was associated with forces allocated to U.S. Central Command (CENTCOM). RMI identified units assigned to CENTCOM and noted that roughly one-fourth of active U.S. Army and Marine divisions, as well as aircraft carriers and Air force fighter wings have a first-priority commitment to CENTCOM.⁶ More recently (1991), Harold Hubbard estimated that the cost of military expenditures for safeguarding oil supplies in the Middle East was in the range of \$15-\$54 billion.⁷

GAO Analysis (1991)

In August of 1991 the U.S. General Accounting Office (GAO) published a fairly detailed study of the cost of activities related to the protection of U.S. interests in the Southwest Asia area.⁸ The GAO analysis covered the years 1980 through 1990 and concluded that the U.S., through a wide variety of mechanisms, had contributed over \$365 billion to protecting its interests in Southwest Asia--an average of \$36.5 billion per year.

As indicated by Table 1, the GAO analysis covered a broad range of U.S. government programs and funding activities. Military programs "dedicated" to Southwest Asia included military construction, prepositioning, operation of CENTCOM and military exercises motivated by the need to defend U.S. interests in the region. Southwest Asia "oriented" programs were activities that received an impetus from defense needs in the region but which were also motivated by requirements in other regions. The most important category, "Related Contingency/Mobility Programs," refers to programs motivated by requirements outside of Southwest Asia but which proved useful for meeting contingencies in the region as well. Over 80 percent of this cost is associated with forces available to CENTCOM. Foreign military financing refers to financing aid that the U.S. provides to allied countries to enable them to purchase U.S. military equipment, services and training. The Military Assistance Program provides grants to allied and friendly nations to enable them to purchase U.S. military equipment, supplies and services. IMET refers to the International Military and Education Training Program that provides grant funding for training in military skills and U.S. military doctrine. Bilateral economic assistance involves food and developmental assistance, as well as general support for weak

⁵ Howard Moreland, "A Few Billions for Defense: Plus \$250 Billion More for Overseas Military Intervention," New Policy Papers #1, Coalition for a New Foreign Policy, 1985, p. 4.

⁶ Terry Sabonis-Chafee (Rocky Mountain Institute), "Projecting U.S. Military Power: Extent, Cost and Alternatives in the Gulf," Presented to the 37th Pugwash Conference on Science and World Affairs, Gmunden, Austria, September 1-6, 1987.

⁷ Hubbard, Harold M., "The Real Cost of Energy," Scientific American 264(4), April 1991, pp. 38-39.

⁸ See GAO report previously cited. For the purposes of the GAO analysis only countries of "strategic importance" to the U.S. were included. These countries were the oil-producing states of the Middle East (particularly in the Persian Gulf), non-oil producing states bordering strategic transit points (e.g., Egypt) and key regional allies (e.g., Israel).

Table 1
Costs of U.S. Military/Foreign Aid Programs in Southwest Asia
1980-1990
(Millions of Dollars)

	10-Year Total	Average Cost/Year
SW Asia--Dedicated Programs	21,400	\$2,140
SW Asia--Oriental Programs	5,800	580
Related Contingency/Mobility Programs	272,600	27,260
Foreign Military Financing Program	30,296	3,030
Military Assistance Program	472	47
IMET ^a Program	78	8
Bilateral Economic Assistance	28,285	2,829
Multilateral Assistance	6,626	662
Totals	\$365,557	\$36,556

Source: GAO, pp. 10-18.

^a International Military and Education Training Program.

economies; this aid goes directly from the U.S. to recipient countries. Multilateral assistance is foreign aid conveyed to recipients through various international organizations such as the United Nations and the World Bank.⁹

It should be noted that the GAO analysis did not include the cost of two major, recent military operations in the Persian Gulf area: Operation Earnest Will and Operations Desert Shield/Desert Storm. Under Operation Earnest Will the U.S. reflagged and escorted Kuwaiti oil tankers through the Persian Gulf from May 1987 to August 1988. It is estimated that the incremental cost of this operation was about \$240 million. Under Operations Desert Shield and Desert Storm the U.S. and 31 allied countries conducted combat operations during 1990 and 1991 with the objective of defending regional allies against invasion from Iraq. The U.S. Office of Management and Budget estimated that the cost of these latter two operations was about \$61 billion, most of which was covered by contributions from allied countries.¹⁰

⁹ GAO, pp. 10-18.

¹⁰ GAO, p. 12.

Finally, the GAO analysis included costs that are not closely related to the defense of U.S. oil supplies in the Middle East. The vast majority of the "Bilateral Economic Assistance," for example, is in the form of support to Israel and Egypt. It is doubtful that this aid serves very much to secure U.S. access to oil in the region. Indeed, aid to Israel probably tends to damage relations with most Middle Eastern oil-producing states.

Earl Ravenal/The Cato Institute

Another thoughtful analysis of the cost of defending Persian Gulf oil supplies has been conducted by Earl C. Ravenal, formerly of the Office of the Secretary of Defense and presently a Professor of International Relations at Georgetown University and a senior fellow at the Cato Institute in Washington, D.C.¹¹ Ravenal's cost estimate involves two basic steps: (1) estimating the current and probable future cost of generating forces in the Middle East and (2) accounting for the expected costs of possible wars.

In order to identify the current cost of U.S. forces attributable to the Persian Gulf, Ravenal calculated the cost of procuring and maintaining combat units by dividing the number of combat units into entire 1992 budget of a particular service, as adjusted to absorb that service's share of DoD-wide activities. Forces are then allocated to overall missions; "strategic" nuclear forces (and associated costs) are excluded from further analysis and general purpose forces (conventional and tactical nuclear) remain. During 1992 Ravenal estimated that about 77 percent of the defense budget, or \$215 billion, was allocated to general purpose forces. Next, he assigned costs according to three broad geographical areas: Europe, Asia and "Other Regions and Strategic Reserve." Defense of the Persian Gulf falls into the third category and Ravenal estimated that approximately 60 percent of the \$84 billion assigned to this category could plausibly be allocated to defense of the Persian Gulf. This leads to a current cost estimate of \$50 billion. Finally, Ravenal believes that the current cost estimate must be escalated to incorporate the rising costs of forces allocated to the Persian Gulf. Using a 10-year time horizon and 4 percent escalator, he concluded that the annual cost of generating and maintaining U.S. military forces for the Persian Gulf in 1992 was approximately \$60 billion.¹²

Unlike other analysts, Ravenal goes beyond the preceding calculations and attempts to account for the admittedly amorphous costs of possible wars of various types. In what amounts to an "expected value" calculation, he estimates the potential cost of both a conventional, "half-Vietnam size" war and a nuclear war. Next, he multiplies these damage cost estimates by the estimated probability that these wars will occur during the next 10 years. In the case of the nuclear war, the probability is very low (Ravenal uses 1/4 of 1 percent)

¹¹ Earl C. Ravenal, Designing Defense for a New World Order, CATO Institute, Washington, D.C., 1991.

¹² *Ibid.*, pp. 46, 49-50.

but the cost is very high (\$2 trillion per year); he arrives at expected loss of \$5 billion per year. In the case of conventional war the probability is much higher (10 percent) but the damage estimate is much lower (\$2.5 billion per year); this results in an expected loss of \$5.3 billion.¹³

In conclusion, the Ravenal analysis estimated the total costs of defending the Persian Gulf in 1992 at over \$70 billion per year. As indicated by Table 2, this estimate includes the current (1992) and future cost of sustaining military forces and the added risk of both conventional and nuclear war.

Table 2
Estimated Costs of Ensuring Access to Persian Gulf Oil Supplies
(1992)

	Cost Estimate
Generating/Sustaining Military Forces in Peacetime	\$60.0 billion
"Expected" Losses from Conventional War	5.3 billion
"Expected" Losses from Nuclear War	5.0 billion
Total	\$70.6 billion

Source: Ravenal, p. 54.

Conclusion

The preceding literature review, which is summarized in Table 3 below, covered six estimates of the cost of defending U.S. oil supplies in the Middle East. Particular attention was devoted to two of these analyses, the GAO report and the Ravenal/Cato Institute study, because these assessments provided detailed explanations on how they arrived at their respective cost estimates. Also, both the GAO report and the Ravenal analysis were prepared relatively recently. Although the six analyses appear to arrive at a broad range of costs (\$15-\$70 billion) this range narrows somewhat when all the estimates are normalized to 1992. Based on the data in Table 3, it is probably reasonable to use an average value for the six estimates, \$57 billion per year, as an approximation of the cost of defending U.S. oil supplies in the Middle East. It is also worthy of note that \$57 billion is close to the average of the two most recent and most carefully justified analyses (GAO and Ravenal).

¹³ Ibid., pp. 46-48.

Table 3
Estimated Costs of Defending
Middle Eastern Oil Supplies
(Billions of Dollars)

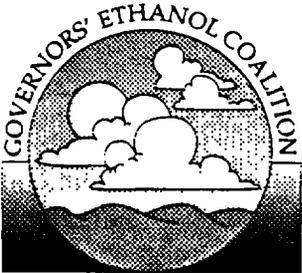
	GAO	Ravenal	Hubbard	CDI	Moreland	RMI
Nominal Cost Estimates	\$37 (1991)	\$70 (1992)	\$15-\$54 (1991)	\$49 (1988)	\$54 (1985)	\$47-\$50 (1987)
Cost Estimates Normalized to 1992 ^a	\$39	\$70	\$36 ^b	\$60	\$76	\$62 ^b

^a All estimates are escalated by 5 percent per year.

^b Average value for the range of cost estimates is used.

If it is assumed that the national security costs of oil were approximately \$57 billion in 1992, then the per barrel cost was \$9.19: \$57 billion divided by 6.2 billion barrels (oil consumption in 1992).

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