Defense Choices and Resource Constraints: The Dilemma of the Investment-Driven Defense Budget

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Introduction

After five years of unprecedented growth in military spending, the defense policy of the United States has come to a dangerous crossroads. At the start of the decade, defense budget questions were debated almost exclusively in terms of threats to American security, but by 1986 fiscal issues dominated the defense debate. Most important, the built-in pressures for continued increases in defense spending of the Reagan Administration's first five defense budgets now clash directly with severe federal spending constraints. This escalating tension forces the Administration and Congress to confront basic questions about the relationship between defense policy and defense resources.

This article describes the origins of the dilemma Congress and the Department of Defense (DoD) now face and examines the impact the spending trends of the early 1980s will have on the defense budgets of the coming years. In the future, sound budget management and planning by DoD will hinge upon a clear understanding of the fiscal track followed since 1981. Security choices now must be made within this fiscal context.

The driving force behind the early '80s defense policy and budget decisions was the incoming Reagan Administration's perception of a grave threat to the nation's security. In the eyes of the new Pentagon leadership, U.S. security declined in the 1970s as a result of financial neglect, while during this same period Soviet defense capabilities grew because of dramatic increases in Soviet military spending. This perspective proved persuasive to the public and to

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Congress, which provided nearly all the defense funds requested by the Administration between 1981 and 1985. As a result, budget authority for national defense more than doubled from fiscal year (FY) 1980 (the last full budget year of the Carter Administration) through FY 1986. This increase in authority brought actual defense spending (outlays) in FY 1986 to a higher level, adjusted for inflation, than in any peacetime year since the end of World War II.

The composition of this unprecedented buildup — the way in which the money was allocated and the failure to set priorities among weapons programs — helped to create DoD's current fiscal bind. Since FY 1981, the defense budget has been increasingly driven by commitments to research, procurement and military construction, the "investment" part of defense spending. The investment share of defense budget authority has risen from 38 percent in FY 1980 to 48 percent in FY 1986. The dramatic growth in investment spending has resulted in a large accumulation of unspent funds and a rising share of future defense outlays obligated to weapons contracts. In the next few years, increasing weapons costs,

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2. In April of 1981, 41% of those polled thought the Soviets were stronger than the U.S., 36% thought the two superpowers were "about equal" and only 18% thought the U.S. was stronger. ABC/Washington Post, Survey No. 209 (Nov. 13, 1985). By 1981, 51% of those polled felt that the U.S. was spending too little on national defense, 22% that spending was about right, and only 15% that the U.S. spent too much on defense. The Gallup Poll, Survey No. 249-G (Mar. 1985).

3. For the purposes of this article, "budget authority" and "appropriations" are used interchangeably. "Budget authority" means funds appropriated by Congress in a given fiscal year, some of which will be spent in that year but some of which may continue to be spent over a number of years. "Outlays" are the actual spending which will occur in a given year. Some programs, primarily weapons, will take several years to complete; not all of the appropriations will be spent in the first year for which they were provided. Outlays thus lag behind budget authority. In any given year, outlays grow out of both the new funds appropriated for that year and out of past appropriations for weapons programs that are still being completed.

"National Defense" is generally used in this article to cover Function 050, the national defense function in the federal budget. Function 050 includes not only the Defense Department budget, but also nuclear weapons funds for the Department of Energy, and funds for the civil defense parts of the Federal Emergency Management Agency, the Selective Service, and the nation's strategic stockpiles.
Defense Choices and Resource Constraints

mounting demands for skilled personnel and for operations and maintenance support for new sophisticated programs, and production commitments to new hardware currently in research and development will generate further upward pressures on future defense budgets.

Just when DoD is facing pressures to increase spending, budgetary constraints are limiting available funds. When Congress considers the Defense Department's budget request, threats to U.S. security are no longer the overwhelming concern. Instead, wasteful and uncontrollable defense spending and unprecedented budgetary deficits combine to make defense a "resource" issue, and these will dominate the defense debate unless budget planners begin to make choices among programs.

The present severe constraints on overall federal spending are forcing both the Administration and Congress to find new ways to restrain future budget growth. Defense has not been spared in the search to reduce the federal spending deficit. Initial congressional appropriations for defense in FY 1986 were frozen at FY 1985 levels. Following implementation of the Gramm-Rudman-Hollings Deficit Reduction Act, defense budget authority for FY 1986 declined nearly 6 percent (after inflation) below FY 1985 levels, the first actual reduction in defense funds since the beginning of the defense buildup under President Jimmy Carter.4 This downward

4. The Gramm-Rudman-Hollings Deficit Reduction Act of 1986, Pub. L. No. 99-177, 1986 U.S. CODE CONG. & ADMIN. NEWS (99 Stat.) 1037 covered defense spending in some detail. The act provided that 50% of the cuts required to meet a specific deficit reduction target would have to come from defense outlays. Given the slow spendout rate for some defense programs (primarily weapons systems), this means the Defense Department would have to cut budget authority in amounts that would provide the necessary results in outlays for the fiscal year in question. Some defense outlays were given special exemptions: DoD could elect to exclude outlays on weapons programs already under contract, and, for 1986 alone, the President could choose to exempt some or all spending on military personnel accounts from the cuts.

In addition, for 1986 alone, DoD was allowed to protect specific programs in its budget, provided cuts were increased on other programs in that same account with the result that the account as a whole took its share of required cuts. For example, in the 1986 cuts, the Department elected to protect the Strategic Defense Initiative from cuts. As a result, all other programs in the "Defense Agencies RDT&E" [research development, testing and evaluation] account were cut double the normal rate of 4.9% (or nearly 10%) in order to reach Gramm-Rudman-Hollings targets. To some extent this protected new budget authority for some programs (again, primarily weapons programs) with large unobligated balances. See G. ADAMS & J. COLMAN, GRAMM-RUDMAN-HOLLINGS AND THE FY 1986 DEFENSE BUDGET (Defense Budget Project, Jan. 6, 1986); for the announced FY 1986 cuts under Gramm-Rudman-Hollings, see OMB & CBO, SEQUESTRATION REPORT FOR FISCAL YEAR 1986 — A JOINT REPORT TO THE COMPTROLLER GENERAL OF THE U.S., 51 Fed. Reg. 1919 (1986).
trend continued in 1986, when Congress froze the FY 1987 defense budget at the lower FY 1986 level.\(^5\)

The Defense Department faces a real budgetary dilemma; the Pentagon can no longer have it all. In FY 1987, Congress could trim the defense budget around the edges. In the coming years, however, such trimming will not be adequate. Both DoD and Congress will be pressed to define security requirements more carefully, so that those requirements can be met with more limited resources. In order properly to address the fiscal crisis facing defense, DoD and Congress clearly need to understand current fiscal trends, establish priority-setting mechanisms, adopt sound management practices, and fundamentally rethink the relationship between national security needs and budgetary resources.

The balance between defense investment and consumption, and between spending for personnel and maintenance, must be restored. Not all new weapons systems should proceed to production; choices between systems must be made while weapons are in the research and development stage. Efficient management and accounting practices must be established. Real spending data must be disclosed so that problems can be identified and fixed before they get out of control. Instead of simply taking an axe to the budget, defense policy planners must respond by setting priorities, making choices and managing soundly to ensure greater national security within the context of dwindling defense resources.

I. The Fiscal Legacy of President Reagan’s First Five Years

Since 1981, the United States has experienced one of the most rapid expansions of defense spending in its history. From a fiscal perspective, DoD’s implementation of rapid growth in defense spending has been short-sighted. The key problem lies in the composition of the military buildup. Since FY 1980, defense budgets have focused heavily on investment programs: research and develop-

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\(^5\) Although the Defense Department requested defense budget authority for FY 1987 of $320.3 billion, Congress provided $292.2 billion, an amount equivalent to FY 1986 appropriations, but actually constituting a slight budget reduction after the effects of inflation are considered. 132 Cong. Rec. H4,407-89 (daily ed. June 26, 1986). See also Gamble, ‘‘DoD Suffers Sharpest Budget Cut Ever as Congress Heads Home for Elections,’’ Armed Forces J. Int’l. 14 (Nov. 1986). This amount is $4 billion below what a 3.5% inflation rate would provide. There is some disagreement about the final amount provided in the budget resolution, since Congress also provided an additional $7 billion for defense. Revenue changes and domestic spending cuts were enacted which would make such funds available: Office of Management and Budget, Mid-Session Review of the 1987 Budget 9-14 (1986) [hereinafter OMB Review].
Defense Choices and Resource Constraints

opment of new weapons, procurement of hardware, and military construction. By mid-decade, this commitment to investment had already created a significant and dangerous fiscal legacy: a large backlog of appropriated but unspent funds, persistent findings of excess funds in accounts where costs proved to be lower than anticipated, and the likelihood of high levels of uncontrollable future defense outlays.

A. The Perceived Threat and the Budgetary Response

The new Administration's strong commitment to a major defense buildup stemmed from the perception of an urgent need to compensate for a "decade of neglect" of the nation's defenses.6 By the end of the 1970s, the defense debate was dominated by the argument that U.S. defenses had declined, that Soviet military strength surpassed that of the United States, and that the USSR's military superiority strengthened its influence around the globe.7 Military conflicts in Afghanistan, Iran, Angola, Ethiopia and Nicaragua further worried those who feared American weakness. The Carter Administration had already responded to the situation by requesting larger increases in the defense budget.8 The Reagan Administra-

6. There is some disagreement about the reality of this neglect. First, although defense spending generally did decline in constant dollars from FY 1970 through FY 1979, DEFENSE BUDGET PROJECT, DEFENSE SPENDING IN THE 1980's: ANALYTICAL TABLES AND GRAPHICS, at Table III (Mar. 31, 1986) [hereinafter DBP ANALYTICAL TABLES] this reflected the withdrawal of the U.S. from the war in Vietnam more than any actual neglect. Post-war spending is invariably lower than wartime levels. Second, defense budgets and outlays began to grow during the last two years of the Ford presidency, continued increasing through the Carter presidency, and were projected to grow rapidly thereafter. See Komer, supra note 1, at 76-77. Third, dollars are not an adequate measure of the quality and composition of military forces.

Former Secretary of Defense Melvin R. Laird notes that the Nixon and Ford Administrations made major commitments to strategic programs and conventional forces, despite lower spending, because the end of the Vietnam war freed resources from wartime draining. As Laird put it: "in our conventional force structure after Vietnam, we responded to severe constraints with personnel cuts, increased security assistance, and reserve strength which brought us, in my estimation, to a leaner but still strong force posture . . . ." Laird, supra note 1, at 8.

7. Critics argue that weak U.S. conventional forces and low defense spending in the 1970s encouraged the Soviet Union to attempt to expand its overseas influence. As some critics note: "The point is not that the Soviet Union has been particularly successful in seeking an enduring influence, but rather that it judged, at least until President Reagan entered office, the evolving correlation of forces in the 1970s to be supportive of a bold foreign policy with a military cast." Gray & Barlow, supra note 1, at 47.

8. In his last month in office, President Carter proposed a five year defense plan involving spending levels significantly above earlier projections, allowing for 5.8% average annual growth after inflation. Since it was assumed that inflation rates would remain high, as they had been during the late 1970s, these budget projections appear similar to those actually carried out by the Reagan Administration. However, as noted below, actual inflation rates have been substantially lower than projected. The Weinberger De-
tion came into office with a commitment to increase defense budgets even more rapidly, which it accomplished basically by simply increasing the amounts in all the programs for which Carter had requested funds. Although Congress made some changes in the Reagan Administration’s first few requests, by and large it approved these defense budgets.

The growth in the defense budget in the first half of the 1980s was startling. Defense budget authority more than doubled, rising from $143.9 billion in FY 1980 to $294.7 billion in FY 1985, while actual defense spending or outlays nearly doubled. By 1986, this dra-

9. Initially, the Defense Department added $6.8 billion to the Carter Administration’s defense budget for FY 1981, the fiscal year then in progress. Rapid revisions added $25.8 billion to the FY 1982 defense budget requested by outgoing Secretary of Defense Harold Brown. Congress agreed to add $4.8 billion to the FY 1981 budget and $15.2 billion to the FY 1982 amount originally requested by Secretary Brown. These congressional actions meant that the FY 1980 to FY 1982 growth amounted to $35.6 billion in FY 1980 constant dollars (after inflation) or an average annual real growth rate of roughly 12%. Carter had projected real growth rates of 7.0% and 5.3% for these two fiscal years. See Maroni, CRS Study, supra note 2, at 6; DBP Analytical Tables, supra note 6, at Table IV.


David Stockman emphasizes the speed of this process and the desire to make dollar increases the symbol of the incoming Reagan Administration’s commitment to a stronger defense. See Stockman, The Triumph of Politics: Why the Reagan Revolution Failed 105-09, 284-98 (1986).


11. Removing the effects of inflation, national defense budget authority rose 55.9% between FY 1980 and FY 1985. Defense outlays rose dramatically from $134 billion in FY 1980 to $252.7 billion, an increase of 88.1% after inflation. The average annual rate of growth in defense budget authority between these years was 9.3% while outlays rose 6.7%, after inflation. Defense Budget Project calculations of growth after inflation are based on data contained in Office of Management and Budget, Historical Tables.
matic growth in the budget brought military spending to historically high levels\(^2\) that had been unimaginable in the 1970s.

The impact of this spending on American military strength has been marginally positive; American armed forces are stronger and more capable than they were in 1980. It is less clear, however, that such extraordinary levels of spending have added \textit{in equivalent measure} to the quality, fighting capability, training or readiness of the military services. Nor is it clear that record defense spending has significantly altered the military balance between the United States and the Soviet Union.\(^3\) Although the legacy of the military buildup for U.S. national security is not entirely clear, its legacy for the fiscal management of defense in the remainder of the decade is more certain.

B. \textit{Investment-Driven Defense and the "Appropriations Mountain"}

The heart of the fiscal dilemma lies in the change in the composition of defense budgets since 1980. DoD’s military buildup has emphasized rapid growth in funding for defense investment as

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  \item National defense outlays in FY 1985 surpassed those of all peacetime years since FY 1946 in constant dollars; only the peak years of the wars in Korea (1953 and 1954) and Vietnam (1968 and 1969) saw higher spending levels. \textit{See} 1987 \textit{Budget Analysis}, \textit{supra} note 10, at Table II.

  \item While it is not the purpose of this article to evaluate in detail the changes in U.S. forces or to make comparisons with the USSR, it is worth noting that while U.S. forces are clearly stronger than in 1980, several analysts have pointed out the relatively minimal improvements that have resulted from that buildup to date: e.g., improvements in quality of personnel, but not in numbers; equipment expenditures that do not result in a proportionate amount of equipment added to units; ship retirements offsetting additions to the fleet; some marginal increase in steaming, flying and training hours. \textit{See} Aspin, Defense Budgets Up—Whither Security?: What Have We Gotten For a Trillion Dollars?, \textit{House Armed Services Comm. Press Release}, (Oct. 7, 1985); U.S. DEP’T OF DEFENSE, IMPROVEMENTS IN WARFIGHTING CAPABILITY, FY 1980-1984 (1984).


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opposed to defense consumption. This investment spending has included significant increases in the procurement of weapons initiated during the previous Administration as well as dramatic growth in research and development funding.

The initial step toward an investment-driven defense budget took place when the new Administration revised the final Carter defense budget. The sharpest contrast between the Carter budget and the Reagan revision lay in plans to purchase dramatically greater numbers of weapons whose development was initiated in the late 1970s. Rather than outline a new defense strategy and acquisition plan, Defense Secretary Casper Weinberger's first budget simply expanded and accelerated the procurement "bow wave" begun under Carter’s Defense Secretary, Harold Brown. In this first Reagan defense budget, for example, the Carter plan to buy 569 M-1 tanks was expanded to 720 M-1 tanks and planned procurement of the F-16 fighter rose from 96 to 120 planes. These initial procurement decisions created the framework for subsequent DoD budget requests. As a result, the investment side of defense spending (research and development, procurement and military construction) would continue to grow far more rapidly than spending for operations and maintenance or personnel.

Overall, between FY 1980 and FY 1985, investment grew 95 percent after inflation, while budgets for operations and maintenance grew 37.1 percent and personnel grew only 13.2 percent.

14. The Defense Department uses the term “investment” to mean spending on weapons and other hardware, research and development, and military construction. The term “consumption” is used here to refer to DoD spending on personnel and operations and maintenance.

15. A procurement "bow wave" occurs when a large number of research and development programs are up for a production decision at the same time. When these programs are approved, they require major spending for production, causing significant pressures to increase procurement spending in the defense budget.

16. Other significant increases over the initial Carter plan included: 464 v. 600 Bradley fighting vehicles; 30 v. 42 F-15 fighters; 2 v. 3 G-47 guided missile cruisers; 4 v. 12 A-6 attack planes; 58 v. 63 F-18 fighters; 130 v. 364 Patriot missiles; 480 v. 1800 Sidewinder missiles; 1 v. 3 guided missile frigates. See U.S. DEP'T OF DEFENSE, DEFENSE DEPT BUDGET FOR FY 1982: PROGRAM ACQUISITION COSTS BY WEAPONS SYSTEM FOR FY 1982 (1981); U.S. DEP’T OF DEFENSE, DEFENSE DEP’T BUDGET FOR FY 1982: PROGRAM ACQUISITION COSTS BY WEAPONS SYSTEM FOR FY 1982 (revised March 1981 by the Weinberger Defense Department). The only major new program undertaken by the Weinberger Defense Department was the revival of the B-1 Bomber program, production of which had been cancelled by President Carter in June 1977.

Defense Choices and Resource Constraints

rapid growth drove the investment share of the defense budget from 37.7 percent in FY 1980 to 47.8 percent in FY 1985.\textsuperscript{18} The change in the composition of the defense budget laid the basis for the strong structural pressure to continue to seek rapid growth in future defense budgets.

The most important by-product of the emphasis on investment spending has been DoD's accumulation of an unprecedented backlog of appropriated but unexpended funds. When the defense budget is comprised of a rapidly rising share of investment spending, actual outlays tend to lag well behind budget authority, since weapons programs take several years to complete. In contrast, virtually all funds allocated for personnel are spent in the first year for which they were appropriated. The backlog grows out of the way in which investment programs are funded in the defense budget. When approved by Congress, an investment program is "fully funded" in the appropriations act; Congress provides the full amount of funds that DoD anticipates the proposed program will require through completion. Congress does not reconsider each annual outlay for a fully-funded program, then, because it has already provided the necessary budget authority at the start.

For example, in FY 1985, Congress appropriated $7.48 billion for 34 B-1B bombers. This amount was intended to cover the full costs of building those aircraft, the last of which might be delivered as late as 1988.\textsuperscript{19} Although a contract for these bombers was signed in the first year for which funds were appropriated, obligating part of those funds, actual spending on the program will occur over time. A certain proportion of appropriated funds will be obligated in the same year in which they were appropriated; however, another portion of these funds will not be spent until future years, since the outlay rate is lower than the obligation rate.\textsuperscript{20}

\textsuperscript{18} The investment share reached 48.5\% in the FY 1986 defense budget. See DBP ANALYTICAL TABLES, supra note 6, at Table VI.


\textsuperscript{20} On average, more than 80\% of appropriated procurement funds will have been obligated in the first year. Changes in obligation rates can reflect the ease (or difficulty) with which DoD is locating contractors for a given program. Current law requires that funds for specific programs be obligated (usually through contracts) within a given period of time: military personnel—one year; operations and maintenance—one year; research and development—two years; procurement—three years; ship construction—five years; military construction—five years. Funds not obligated by the end of these time periods normally revert to the Treasury Department. Appropriated funds that have not yet been obligated to a contract are counted as part of the Defense Department's "unobligated funding balances." See J. COLMAN & R. MADRID, supra note 19, at 5. See infra notes 24-28 and accompanying text for further discussion of these balances.
The outlay rate is considerably lower for procurement programs than the rate of spending on operations and maintenance or personnel. Only 13 to 14 percent of procurement outlays occur during the first year for which the funds were appropriated; 75 percent are spent by the end of the third year.\textsuperscript{21} While total national defense budget authority more than doubled in current dollars between FY 1980 and FY 1985, the Defense Department's "appropriations mountain" of unexpended funds actually grew 165 percent, rising from $92.2 billion to $244.4 billion.\textsuperscript{22}

Another major fiscal consequence of large appropriations for investment programs (most of which are obligated to existing contracts), is a significant increase in the share of annual defense spending which is uncontrollable. In planning a defense budget, Congress projects an outlay level for a given fiscal year. When a substantial portion of prior appropriations is obligated to contracts which require spending in subsequent years, Congress' ability to control outlay levels is diminished.

In 1980, the Office of Management and Budget estimated that just over a quarter (27 percent) of defense outlays were "uncontrollable" because they flowed from funds appropriated in previous years and obligated to contracts. By 1985 the uncontrollable share of annual defense outlays had risen to 36.4 percent due to the shift to investment programs and the subsequent growth of the appropriations mountain. Combined with outlays devoted to salaries and wages for uniformed and civilian personnel (roughly 50 percent annually), well over 80 percent of defense outlays are now basically uncontrollable, unless serious reductions in personnel are made.\textsuperscript{23}

\textsuperscript{21} Outlay rates are provided in U.S. Dep't of Defense, Defense Dep't Budget for Fiscal Year 1987: Financial Summary Tables for FY 1987 (1984) [hereinafter Summary Tables]; See also DBP Analytical Tables, supra note 6, at Table XII.

\textsuperscript{22} The bulk of the backlog (more than 70%) is committed to investment programs. See J. Colman & R. Madrid, supra note 19 (calculations based on DoD data supplied by the Office of the Assistant Secretary of Defense, Comptroller). See also J. Epstein, supra note 17, at 6-9. It is important to note that this "mountain" does not represent actual funds held in reserve or earning interest. As a result of prior appropriations, the Defense Department has the right to request funds from the Treasury up to the total amount distributed by program, as those funds are required for DoD outlays.

\textsuperscript{23} See G. Adams & J. Colman, supra note 4; 1987 Budget Estimates, supra note 17, at 18, which notes growth in uncontrollability based on budget documents. See also J. Epstein, supra note 17, at 7. In theory, existing procurement contracts could be cancelled. The savings from such terminations, however, are uncertain, since virtually all major procurement contracts contain cancellation clauses which reimburse contractors for the effect of premature cancellation. The total dollar value of such clauses is unknown.
C. The Pentagon's Dollar Digestion Problem

There is some evidence that the growth in DoD's backlog is also due to the Department's inability to digest its large investment-driven mountain as rapidly as the funds have been appropriated. The backlog of unexpended funds for procurement programs is growing more rapidly than the actual addition of new procurement funds to the defense budget. Since FY 1982, the ratio of obligated but unexpended procurement funds to new procurement appropriations has grown steadily from rough parity (1.05:1) to a large overhang of obligated but unexpended balances in FY 1985 (1.24:1).24

The growth in the backlog of funds obligated to a contract but not yet spent has been accompanied by similar growth in the backlog of funds which have not been obligated to any contract — the "unobligated funding balances." Although continually requesting higher appropriations, the Defense Department has been unable to accelerate the rate at which it obligates funds to new contracts. Unobligated balances increased 154 percent, from $24.2 billion to $61.5 billion, between FY 1980 and FY 1985.25

Some growth in the backlog of unobligated funds might be considered normal. Defense spending increases in the past, however, have not led to growth in the unobligated balances of the sort experienced during the first five years of this decade, suggesting that the Pentagon is having difficulties managing the funds it has received. In fact, Reagan's Department of Defense has not been able to obligate funds any faster than previous administrations, although it has requested greater increases in appropriations.26

There is also mounting evidence that the Defense Department is not able to spend its obligated funds as fast as it has in the past. DoD clearly overestimated what it could purchase in the years be-


26. The GAO calculated that historical trends suggest the obligation rate for FY 1984 should have been 84.8%. The actual rate — 85.4% — was consistent with this historical trend, but also well below DoD's projected rate for that year, 88.6%. The Air Force appears to have a particular problem with obligations. From FY 1980 through FY 1985, unobligated funds in Air Force programs increased from $4.2 billion to $19.7 billion, a growth rate of 369%. See SUMMARY TABLES, supra note 21, at Report 9. Such large unobligated balances do give the Defense Department an unusual degree of flexibility. Although the unobligated funding balances have been appropriated for specific programs and much of them will be spent for those purposes, through reprogramming actions the Pentagon can redirect those funds to other programs for which there was no initial appropriation or for which appropriated funds were inadequate.
tween FY 1982 and FY 1986, and one result has been the systematic stretchout of weapons purchases since FY 1983. A stretchout generally occurs when costs have risen and/or budget resources are inadequate to fund the number of units of a given program that were originally planned. Stretchouts can also occur, however, when production rates are slower than expected and/or the Department simply cannot obligate and spend as quickly as predicted. Rather than set priorities among programs in order to produce some weapons at higher, cost-efficient levels, DoD (or Congress) reduces the number to be bought in a given year and pushes the remaining units into future budget years. Stretchouts have a significant impact on the ultimate cost of a program. The decision to purchase the remaining units in the future raises total program costs since, ceteris paribus, prices will be higher in the future and the new, slower rate of production is likely to be less economically efficient.

D. Excess Funds and the Inflation Dividend

The emphasis on investment of defense budgets of the mid-1980s has left yet another difficult legacy for defense budget planners. Some proportion of the “appropriations mountain” consists simply of excess funds which proved to be unnecessary for their original purposes. DoD has argued since 1981 that its budget requests are free of such excess or unneeded funds and consequently that Congress cannot make cuts without doing severe damage to the defense program. In fact, from FY 1982 on, the Department and Congress have repeatedly found significant excess funds in the procurement accounts. Some of the funding excess results from an “inflation dividend,” which grows directly out of the defense budget’s emphasis on investment programs. For such programs, budget planners seek

27. Published Defense Department data show that the Pentagon is spending its appropriated funds at slower and slower rates since the defense buildup began. Rates for defense spending have declined steadily since FY 1980. In the investment categories, 31.8% of the appropriated funds available for procurement spending were actually spent in FY 1980, a rate which had declined to 28.3% in FY 1985. More dramatically, research and development spending rates fell from 65.1% in FY 1980 to 56.6% in FY 1985, while military construction spending rates fell from 39.9% to 30.9%. See J. Colman & R. Madrid, supra note 19, at Table IV (calculations based on DoD-reported outlay data).

28. See Weapons Buildup, supra note 17, at Table 10. See also General Accounting Office, Underestimation of Funding Requirements In Five Year Procurement Plans (Mar. 12, 1984) (briefing paper).

funds to be spent over several years based on a prediction of the future rate of inflation. If inflation is higher than planned, as in the late 1970s, available funds are inadequate and more must be sought.

When inflation is lower than anticipated, as has been true for much of the early part of the 1980s, the "inflation dividend" is the difference between the amount appropriated for projected inflation and the amount required to cover actual inflation.\textsuperscript{30}

In times of lower-than-anticipated inflation, an investment-driven defense budget leaves a large inflation dividend. Such a gap does not occur with personnel spending because a pay increase is built into initial budget planning and provided largely in the first year in which appropriated funds are spent. Nor does a dividend occur with spending for operations and maintenance (O&M). Roughly three quarters of the funds appropriated for O&M are spent in the first year for which they were appropriated. Incorrect estimates of inflation are therefore less serious in these parts of the defense budget.\textsuperscript{31}

Since recent defense budgets have emphasized investment and inflation has been lower than anticipated, the Defense Department has regularly received a sizeable inflation dividend. The actual size of the dividend since 1982 is not clear; Defense Department accounting practices make it hard to separate excess funds resulting from inflation overestimates from funds that were not needed for other reasons. The General Accounting Office has estimated that the in-

\textsuperscript{30} This is exacerbated by the fact that starting in FY 1983, the Defense Department was provided with a special inflation index for major weapons systems, permitting it to add a 30\% premium to annual inflation projections for these systems. For example, if the GNP price index projected inflation of 10\% for a given year, DoD could budget for 13\% in weapons inflation. DoD argued that the additional 30\% premium was necessary because costs rose faster for major systems than for other items. The allowance was used by the Pentagon through the FY 1986 defense budget. For a detailed analysis of and data on the inflation dividend, see \textit{General Accounting Office, Report No. 85-145, Potential for Excess Funds in DOD (1985); General Accounting Office, Potential for Excess Funds in DOD — March 1986 Update (1986); Congressional Budget Office, Budgeting for Defense Inflation (1986); 131 Cong. Rec. 2277-79 (1985) (statement of Rep. Aspin); Hearing in Connection With Defense Inflation Before the Economic Subcomm. on Resources, Competitiveness, and Security of the Joint Economic Comm., 99th Cong., 2d Sess. (July 18, 1986) (statement of Robert W. Helm, Assistant Secretary of Defense, Comptroller).}


The principal inflation dividend in the operations and maintenance account has resulted from far-lower-than-anticipated fuel costs due to the drop in the price of oil. \textit{See GAO, supra note 30, at 22-23 (noting that fuel cost increases in 1979 and 1980 cut operations and maintenance funding).}
flation dividend between FY 1982 and FY 1986 amounted to $44.52 billion.\textsuperscript{32}

Inflation savings and other excess funds have become a regular feature of the debate over the recent military buildup. In May of 1985, for example, Secretary of Defense Weinberger announced $4 billion in savings resulting from lower-than-anticipated inflation in the FY 1984-FY 1986 budgets.\textsuperscript{33} Later that year, the House and Senate Appropriations Committees found additional savings in excess funds of between $1.5 and $3.7 billion. In conference, the two committees compromised on $6.3 billion in savings of funds no longer needed for the programs for which they were originally appropriated. The funds were transferred to other programs, including military pay and retirement, the Coast Guard, and a maritime shipbuilding subsidy program.\textsuperscript{34}

The existence of this inflation dividend has given both the Defense Department and Congress greater flexibility with respect to defense programs. Each year since FY 1983, the Armed Services and Appropriations Committees have reduced the Administration's budget proposal, citing, in part, the inclusion of excess funds in the request.\textsuperscript{35} Such reductions have not caused major changes in the Defense Department's programs. This result seems to confirm Congress' assertion that some excess funds were requested. For FY 1985, for example, Congress appropriated $21 billion less than the Defense Department requested. Yet OMB Director David Stockman testified that "about 30 percent of the cut that was made can be said . . . to involve significant program differences, but even there you will see nothing big, nothing major, nothing with longterm cost implications that was seriously cut."\textsuperscript{36}

\textsuperscript{32} GAO \textit{UPDATE}, \textit{supra} note 30. $16-32 billion of the inflation dividend could not be identified due to unclear DoD accounting practices. This figure includes $14.7 billion from the 30\% kicker. Aspin, \textit{Coverage, supra} note 29, at 2.

\textsuperscript{33} Towell, \textit{Midnight Surprise Sparks Questions in Congress}, \textit{51 CONG. Q} 1065, 1066 (1985).


\textsuperscript{36} \textit{First Concurrent Resolution on the Budget — Fiscal Year 1986}: \textit{Hearings Before the Senate Comm. on the Budget}, 99th Cong., 1st Sess. 17 (1985) (testimony of David Stockman, Dir., OMB). Stockman noted that $5.5 billion involved "minor or modest quibbles" about procurement; $8.8 billion was saved in updated, lower cost estimates, and $6.2 billion involved actual program changes. \textit{Id.} at 32-33.
Defense Choices and Resource Constraints

Excess funds, which are to be found in both the obligated and unobligated shares of the appropriations mountain, also provide the Defense Department with flexibility to expand the defense program beyond what was originally approved by Congress. In every fiscal year DoD reprograms some of these funds, applying them to existing weapons programs which require additional funds or to new programs for which funds had not originally been requested. The battleship Wisconsin, for example, is being refurbished and modified using unneeded funding balances from other shipbuilding accounts.

The General Accounting Office concluded that such excess funds have continued to appear in the Defense Department's accounts. Through the first half of FY 1986, for example, DoD itself identified $3.9 billion in new excess funds, some part of which was, again, an inflation dividend. The availability of such excess funds adds to the resources the Pentagon can obligate and continue to spend in coming years, putting further upward pressure on defense spending.

E. Summary

By the beginning of FY 1986, DoD budget and spending practices of the first half of the decade had left a legacy of systematic upward momentum in defense spending. The shift in defense priorities from consumption to investment had created a huge spending backlog, or "appropriations mountain." The large backlog, much of which is tied to existing weapons contracts, has made each year's defense outlays increasingly uncontrollable. In addition, the backlog has contained significant amounts of excess funds, adding to the Department's flexibility to make additional spending commitments. Moreover, the Department has encountered persistent problems in

37. Reprogramming allows the Defense Department to move funds to other accounts or other programs within the same account. If such actions add to the number of units of a weapon already appropriated by Congress, they require the approval of the appropriate committees of Congress — Armed Services and Appropriations. Above given thresholds ($10 million for procurement and $4 million for research and development), these committees must be notified of reprogramming actions.


obligating and spending its funding balances as fast as they have accumulated. The slower outlay of funds has added further to the spending pressures, because the stretchout of major weapons purchases raises total program costs.

The immediate effect of the Defense Department's investment-driven budget has been that actual defense spending has continued to rise in FY 1986 and FY 1987, despite congressional action which has essentially frozen defense budget authority. In FY 1986, national defense budget authority actually fell nearly 6 percent (after inflation) from FY 1985 levels, while actual defense outlays rose by 2.3 percent. Moreover, defense outlays for FYs 1987-89 will continue to be fueled by outlays which flow from the backlog.40

II. Pressures on Future Defense Spending

A. The Legacy of the First Five Years

The fiscal legacy of the defense buildup is now creating pressures on future defense spending. Investment programs continue to absorb a large share of the FY 1986 and FY 1987 defense budgets, and Defense Department projections indicate that future requests will continue this trend.41 Since these investment programs will contribute to the existing appropriations mountain, the Department anticipates that the backlog will continue to grow and that a large share of total defense spending will remain uncontrollable.42 The backlog

40. 1987 BUDGET ANALYSIS, supra note 10, at 2-3. National defense outlays for FY 1987 are projected to rise by at least $6 billion, while budget authority may actually be roughly $2 billion below the FY 1986 level. According to DoD data, roughly 41% of a given year's outlays are the result of prior-year appropriations, while the other 59% are the first-year outlay results of new budget authority, primarily for personnel and operations and maintenance. Defense Budget Project calculations are based on data in SUMMARY TABLES, supra note 21, at Report 9. See also ANALYTICAL TABLES, supra note 6, at Table 10, and sources discussing the growing portion of the defense budget that is uncontrollable, supra note 23.

41. Based on the Defense Department's FY 1987 budget request of $320.3 billion, roughly 48.5% would be for investment, while the FY 1988 budget projects a figure of roughly 45%. The balance within the investment category shifted somewhat from procurement, which grew slightly in the FY 1987 budget request, to research and development, for which growth over 20% (after inflation) was requested. Congress has somewhat slowed the investment trend by reducing the FY 1987 budget requests for procurement and R&D more sharply than the requests for personnel and O&M. See Aspin, House Armed Services Committee Approves FY 87 Defense Authorization Bill, House Armed Services Comm. Press Release (June 26, 1986). See also J. COLMAN & R. MADRIS, supra note 19, at Table III (calculations based on DoD data); 1987 BUDGET ANALYSIS, supra note 10, at Table IV.

42. DoD projects growth in its backlog from $270.6 billion at the end of FY 1986 to $304.1 billion by the end of FY 1987. This estimate is based on the Defense Department's FY 1987 budget request of $320 billion in budget authority and thus precedes the impact of FY 1986 cuts under Gramm-Rudman-Hollings and the final congressional
Defense Choices and Resource Constraints

will be exacerbated by the Pentagon's continuing inability to oblige and spend funds.\textsuperscript{43} Weapons stretchouts will also continue to be proposed either by the Pentagon because it cannot obligate funds quickly enough or by Congress as it sets budget authority below levels requested by the Administration. DoD will continue to find and use excess funds to expand programs in other areas.\textsuperscript{44}

The fiscal legacy from the early 1980s is now being joined by new pressures which originate in the investment-driven defense budget. A new wave of weapons reaching the procurement stage, rising requirements for personnel and for operations and maintenance, and renewed growth in the cost of weapons programs will create new pressures for increased defense budgets for the rest of the decade and into the 1990s.

B. Research and Development: The Next "Bow-Wave"

The most serious pressure on future defense spending will be the forthcoming procurement bow wave, which has been foreshadowed by rapid growth in research and development (R\&D) spending over the past five years. While the bulk of defense investment funds during that period was devoted to producing weapons, R\&D spending also grew rapidly, rising from $13.6 billion in FY 1980 to the FY

\textsuperscript{43} DoD data show that the Department's spending rates for procurement are projected to fall to 28.3\% by FY 1987; research and development to 47.6\%; and military construction to 27.7\%. See J. Colman & R. Madrid, supra note 19, at Table IV. There are also indications that the Defense Department may be underestimating its outlays over the next few years, in part, perhaps, to keep overall federal budget deficit projections low. Comparing DoD's forecasts to the spending of the Pentagon backlog that is likely to result (based on numbers generated when historical outlay rates are applied to DoD's projected budgets), both the Congressional Budget Office and the Brookings Institution have suggested that outlays in the next three years may be significantly higher than forecast. See J. Epstein, supra note 17, at 1-4 (estimating that FY 1987 outlays may be underestimated by $14.3 billion, while outlays between FY 1987 and FY 1991 could be underestimated by $62 billion). See Congressional Budget Office, An Analysis of the President's Budgetary Proposals for Fiscal Year 1987, at 23 (1986). See also GAO, supra note 28, at 1. OMB implicitly acknowledged in its midseason review of the FY 1987 budget that DoD outlay forecasts were underestimated. OMB Review, supra note 5, at 34-36. See also Feuerbringer, White House Says Deficit is Rising Above Estimates, N.Y. Times, July 15, 1986, at A1, col. 4.

\textsuperscript{44} DoD continues to find excess funds, reporting almost $4 billion in the first half of FY 1986 alone. See supra note 39. See also S. Rep. No. 446, supra note 35, at 11.
1987 request for $41.9 billion, or 87.1 percent after inflation. As the House Armed Services Committee concluded in its review of the Pentagon's FY 1987 R&D request, one dollar of funding for advanced or full scale engineering development generates ten or more dollars in procurement, operations and support spending within five to ten years. In other words, the Pentagon's current research and development program will likely dictate huge defense budget requests for the 1990s.

As these R&D programs move through advanced and full-scale engineering development toward production decisions, spending on them will grow. Once in production, these programs will require additional spending for training, personnel, and operations and maintenance in the 1990s. A significant number of R&D programs are nearing production decisions in the late 1980s. The Defense Department has set few priorities among these programs to accommodate growing constraints on the overall defense budget.

As a result of the Administration's strategic modernization program, many of the new strategic nuclear weapons systems are moving rapidly toward production decisions: the stealth bomber (first deployment due around 1992), the Trident II missile (first production funds provided in FY 1987 budget), a small, single-warhead land-based ICBM ("Midgetman") (flight test in 1989 and initial deployment in 1992), the Air Force's advanced air-launched cruise missile (production just under way), and a new short-range attack missile for the strategic bomber force (production decision in late 1980s).

While the strategic nuclear buildup has been the most visible aspect of growing research and development spending over the past five years, several less-noticed conventional weapons programs are also entering advanced or full-scale engineering development, with

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46. See H.R. Rep. No. 718, supra note 45, at 109. The Congressional Budget Office has argued that without appropriate attention to priorities, a new wave of "investment driven" defense budgets could emerge in the 1990s. "Unless enough discipline is placed on the weapons development process, current R&D expenditures could become precursors to higher weapons development budgets in the future." Congressional Budget Office, Research and Development Funding in the Proposed Fiscal Year 1985 Budget, at 25 (Special Study, Mar. 1984).
Defense Choices and Resource Constraints

production decisions scheduled between 1986 and the early 1990s. These include: the Air Force's C-17 cargo plane, the advanced, medium-range air-to-air missile (AMRAAM), and the advanced technology fighter (which may also be a stealth fighter); the Navy's SSN-21 submarine and advanced technology aircraft; the Marines' V-22 Osprey aircraft; the Army's LHX light helicopter, new air defense system and anti-armor weapons; and such joint programs as the JSTARS radar system and the JTACMS tactical cruise missile program. In addition to these full systems, each service is also conducting research and development on a large number of electronics and communications systems, such as SUBACS for the Navy's SSN-21 submarine and the SINGCARS communications system for the Army, which will enter production at the same time.

While these strategic nuclear and conventional systems already raise significant spending problems for the next decade, the budgetary problems are compounded by the Strategic Defense Initiative. DoD plans to request more than $40 billion between FY 1984 and FY 1991 for research and development of SDI. In addition, there is growing concern in Congress that R&D spending on SDI will be costly for other R&D programs; funds which could be used for the development of the defense technology base or for new conventional weapons will increasingly be diverted to SDI.

SDI could be a major force driving up defense budgets in the 1990s. It is currently estimated that, should SDI reach the point of production and deployment in the next decade, the system (including full development, deployment and ten years of maintenance) would cost from $160 billion for a limited site defense to as much as $770 billion for a fuller population defense. Simply put, produc-


48. SDI funds would rise from 4.5% of the total DoD budget for R&D in FY 1984 to an estimated 15% by FY 1989. ANALYTICAL TABLES, supra note 6, at Table XII (Defense Budget Project calculations). The problem of R&D competition within the defense budget was noted by both the House and Senate Armed Services Committees in their reviews of the FY 1987 R&D budget, and provisions were made to transfer some SDI research funds to a Conventional Defense Initiative. The House authorized $462 million for this purpose in FY 1987, while the Senate authorized $453 million. See H.R. REP. NO. 718, supra note 45, at 148-53; S. REP. NO. 331, supra note 45, at 182-83.

49. B. Blechman and V. Utgoff, Fiscal and Economic Implications of Strategic Defenses, 4-6 (July 1986) (unpublished paper prepared for The Johns Hopkins Foreign Policy Institute). SDI might cost more than $1 trillion to deploy and maintain. 132 CONG. REC. S10,257-60 (daily ed. Aug. 4 1986) (statement of Sen. Proxmire). There is growing evidence that cost concerns have even generated urgings that the Strategic Defense Initiative Organization concentrate its efforts on the short-term goal of protecting
tion and deployment of strategic defenses could begin to absorb as much as 10-15 percent of defense spending per year in the mid-1990s.

Research and development spending increased dramatically between FY 1981 and FY 1987. Although the Pentagon projects that R&D budgets themselves will remain stable for the next five years, the legacy of R&D increases for the early 1980s can be seen in procurement budget forecasts. DoD now projects that procurement spending, which leveled off in FY 1987, will rise $30 billion above the FY 1987 level over the next five years, reflecting the movement of new systems into production during that time. This five-year increase in procurement spending is equivalent to the increase in such spending between FY 1982 and FY 1987, years of rapid growth in the defense budget.50

The tendency of R&D programs to move automatically into production has been reinforced by trends inside recent R&D budgets which make it more difficult for Congress to give these new programs close scrutiny. As the R&D budget becomes dominated by more sophisticated electronics and communications devices, Congress and its staff simply lack adequate time and expertise to evaluate the technical characteristics of and the need for such programs.51

Moreover, in the past five years, the cost of “black” or secret programs, such as the stealth bomber, stealth fighter, and the advanced air-launched cruise missile, has grown 300 percent, from $5.5 billion in FY 1981 to an estimated $22 billion in DoD’s FY 1987 budget request.52 Only a few Members of Congress and their staffs have the necessary clearance to review such programs, and information is lacking to evaluate them in public debate. The increasing sophistication of the R&D budget will exacerbate Congress’ tendency to approve defense programs without setting priorities among them.

Even though many current R&D programs will soon move into production, the Defense Department’s management of the R&D ac-

the survivability of U.S. missile sites and focus relatively less on population defense. See, e.g., S. REP. NO. 331, supra note 45, at 181-82.
50. See DBP ANALYTICAL TABLES, supra note 6, at Table VI. Between FY 1982 and FY 1986 the defense procurement budget rose $28 billion. Calculations based on data in id.
51. The number of programs costing less than $100 million (many of which are electronics and communications systems) has risen from 594 in FY 1976 to 734 in FY 1987. H.R. REP. NO. 718, supra note 45, at 109.
Defense Choices and Resource Constraints

count itself will also encourage continued high R&D outlays in the coming years. As noted, the spending rate for the first year of R&D appropriations has declined sharply in the 1980s, from 65.1 percent in FY 1980 to a projected 47.6 percent in FY 1987. The R&D backlog (obligated funding balance) has, as a result, risen from $6 billion in FY 1980 to a projected $30.7 billion in FY 1987, a growth of 412 percent in current dollars.\(^{53}\) The mounting backlog means that R&D outlays will continue to grow in the remaining years of the 1980s. Increased R&D outlays will in turn spur higher production spending and higher overall defense budgets.

C. Underestimated Weapons Costs

The anticipated bow wave of procurement in the next decade, growing out of current R&D commitments, carries with it another potential source of upward pressure on future defense spending: rapidly increasing weapons costs. There have been few instances of rapid increases in weapons costs in the first half of the decade, in part because of the Weinberger Defense Department’s basing of its initial procurement needs on the weapons procurement plans already laid out by the Carter Administration. Most of the weapons programs in the Carter budgets had already gone through the initial, less predictable stages of production and could be classified as “mature,” with fairly stable cost expectations. Only such relatively new programs as the Navy’s F-18 fighter showed unusual cost growth in the early Weinberger years.\(^{54}\)

The inflation dividend also helped to lessen the rapid increases in weapons costs during the first years of the decade. The Defense Department regularly overestimated projected rates of inflation in its budgets. As a result, the costs of some weapons systems (such as the Air Force’s C-5B) have actually been lower than anticipated.\(^{55}\)

Nonetheless, there are some indications that rising weapons costs and DoD and contractor underestimates of expected costs will drive up future defense spending. In 1983, the General Accounting Office projected higher-than-anticipated spending on major weapons programs. It estimated that the major weapons programs initiated between 1984 and 1988 could actually cost as much as $324 billion

\(^{53}\) See J. Colman & R. Madrid, supra note 19, at Part I. Growth will be slightly lower as a result of congressional reductions in the FY 1987 DoD R&D request.


\(^{55}\) Kolkul, Low Inflation Enables USAF to Cut C-5B Production Costs By $600 Million, Aviation Week, Aug. 4, 1986, at 127-131.
more than the Defense Department anticipated.\textsuperscript{56} These projections also reflect a rise in weapons costs that is caused in part by the stretchout of weapons programs.\textsuperscript{57} The ultimate impact of the postponement of spending on these programs (implemented by DoD and Congress) will be an increase in unit costs in the future, given lower efficiency and regular price increases due to inflation.

Moreover, the procurement reforms undertaken by the Weinberger Pentagon have not eliminated the root causes of cost growth. A sweeping review of DoD structures and practices concluded in 1985 that program cost growth for weapons has consistently averaged between 50 and 100 percent of the original estimate.\textsuperscript{58} Contractors continue to have an incentive to "buy in" to a program, bidding at a price which is below anticipated real costs in order to acquire the initial contract. Once the program is under way, cost growth is virtually axiomatic,\textsuperscript{59} especially as contract profit rates are calculated on the basis of costs as reported by the contractor.\textsuperscript{60} In addition, the Armed Services have relatively little motivation to request full budgets for weapons programs, since those programs with lower projected costs are more likely than those with high ones to win Office of Management and Budget approval.\textsuperscript{61} These incentives to underestimate initial costs contribute to an increase in weapons costs.

In sum, although the stretchouts and procurement incentives which fuel rising weapons costs were present at the beginning of this decade, a rapid growth in weapons costs was offset by the inflation dividend and the relatively stable cost estimates of the mature weapons programs provided for in the early Weinberger budgets. In contrast, the coming production decisions involve systems with

\begin{footnotesize}
\textsuperscript{56} GAO, supra note 28, at 1.
\textsuperscript{57} For a discussion of "stretchouts," see supra notes 27-28 and accompanying text.
\textsuperscript{58} Report of the Working Group on Weapons Acquisition, in Toward a More Effective Defense, supra note 13, at 89. This finding seemed to be confirmed in Air Force Systems Command, The Affordable Acquisition Approach Study (1983).
\textsuperscript{59} The rare exception to the automatic cost growth phenomenon occurs where inflation expectations are dramatically below those forecast in the original contract, as appears to have happened with the C-5B program in the 1980s. Kolkul, supra note 55, at 127-31.
\textsuperscript{60} The Defense Procurement Improvement Act of 1985, Pub. L. No. 99-145, Title IX, reprinted in 1985 U.S. Code Cong & Admin News (99 Stat.) 587 required detailed disclosures of raw material and labor costs by defense contractors in order to establish a baseline for what weapons production "should cost." The Defense Department and industry lobbyists made efforts in 1986 to have that legislation repealed.
\end{footnotesize}
Defense Choices and Resource Constraints

far less stable cost expectations, which, combined with an absence of priority-setting and continued stretchouts, will continue to fuel future defense budgets.

D. Growing Demands for Personnel and O&M Funding

In the first half of the decade, budgets for personnel and for O&M lagged well behind funding for investment. The new equipment introduced in military units, however, requires skilled operators and expanded force strength. Moreover, the new hardware, such as the M-1 tank, Bradley fighting vehicle, or Maverick missile, is increasingly sophisticated, requiring greater funding for O&M than its predecessors. The investment-driven budget of the early 1980s thus creates pressures for increased funding to staff, operate and maintain the additions to the military inventory, especially if readiness levels are to be maintained.

While military wages have risen since 1981, personnel growth in the Armed Services has been relatively slow. The number of Army active duty personnel in 1985 was the same as in 1981. Air Force active duty personnel rose by 32,000, but since the Air Force plans to add new air wings, its personnel needs will continue to grow. The Navy faces the most serious personnel shortages, given plans to add two new carrier battle groups and to expand the overall fleet beyond 600 ships. Although the Navy added 42,000 people between 1981 and 1985, this growth rate was below that required to fully staff the growing fleet. In addition, shortages clearly exist in all three major services in those skill areas most needed to staff the

63. 1987 BUDGET ESTIMATES, supra note 17.
64. Despite the fact that overall personnel numbers remained the same, Senator Gary Hart and defense analyst William Lind conclude that all of the services are suffering from shortages of non-commissioned officers who "are the repository of a military service's technical expertise." G. HART & W. LIND, supra note 13, at 61.
65. See Dep't of Defense Authorization for Appropriations for Fiscal Year 1986: Hearings Before the Senate Comm. on Armed Services, 99th Cong., 1st Sess., pt. 5, at 2252-59 (1985) (statement of Vice Adm. William P. Lawrence). Vice Adm. Lawrence, Deputy Chief of Naval Operations for Personnel, testified that the Navy had fallen significantly below the anticipated growth curve it would require in order to fully staff the new ships and submarines entering the force. Based on Admiral Lawrence's testimony, the author calculates that Navy military manpower has fallen 20,000 people short of the anticipated growth curve. Id.
new equipment acquired by military units: repair technicians, skilled operators, and engineers.\textsuperscript{66}

Funding for operations and maintenance has also lagged since 1981. In its debate over the FY 1984 defense budget, the House Armed Services Committee staff warned that the services were falling far behind the anticipated O&M needs of the weapons buildup:

O&M will have to support larger forces, more installations and activities, employ a greater number of civilians, maintain a growing inventory of equipment while maintaining readiness and increasing sustainability. And there is real concern that if the O&M base proves to be too limited to support this burden, it cannot be corrected in the face of a growing “outlay bulge” created by the production of the increasing number of weapons we have authorized over the past two years.\textsuperscript{67}

The increasing sophistication of the new systems entering the inventory has also created growing needs for higher O&M spending. In 1983, for example, then Congressional Budget Office (CBO) Director Alice Rivlin estimated that the operating and support costs for six new Army combat systems would exceed those of the antecedent versions by 45 to 70 percent in constant dollars. Rivlin concluded that the Army was underestimating its O&M needs.\textsuperscript{68}

The O&M problem remains serious, and the DoD budget planning clearly reflects attempts to recognize the need for spending increases.\textsuperscript{69} In its FY 1987 budget request, for example, DoD requested an $11 billion increase in the O&M account, more than twice the average annual growth rate since 1981. Budget constraints, however, led Congress to reduce this amount (though less sharply than it reduced investment programs) leaving the Pentagon still behind on the O&M growth curve.\textsuperscript{70}

A shortage of personnel, especially those with critical skills, inadequately maintained forces and insufficient backup spares, repair de-

\textsuperscript{66} See M. Binkin, Military Technology and Defense Manpower (1986) for a detailed discussion of the difficulty the services experience with maintaining adequate skilled personnel for their sophisticated equipment.


\textsuperscript{68} FY 1984 Hearings, supra note 62, at 174 (statement of Alice M. Rivlin, Dir., Congressional Budget Office).

\textsuperscript{69} Congressional Budget Office, Reducing the Deficit: Spending and Revenue Options: A Report to the Senate and House Committees on the Budget, part II, at 66 (1986).

\textsuperscript{70} 1987 Budget Analysis, supra note 10, at 6, Table IV; OMB Historical Tables, supra note 11; DBP Analytical Tables, supra note 6, at Table VII. For a chronology of congressional action regarding specific defense accounts, see generally H.R. Rep. No. 718, supra note 45; S. Rep. No. 331, supra note 45.
Defense Choices and Resource Constraints

pots, and trained personnel does not make for a ready military. These problems are clearly worsening, and this realization has been reflected in DoD budget planning. With current fiscal constraints, however, it becomes increasingly difficult to meet the funding requirements of ambitious procurement plans while adequately staffing and maintaining the equipment now being deployed. Defense planners will be forced to face the fiscal conflict and to choose between these requirements.

E. Summary

The investment-driven defense budgets of the first half of the decade have already created upward pressures on defense outlays over the next five years. New problems are now added to this fiscal legacy: the budgetary requirements of a new generation of weapons programs about to enter production (among which no priorities have been set), the unpredictable costs of these new systems, and additional demands for personnel and operations and maintenance spending. All of these trends are on a collision course with growing pressures to hold down defense spending.

III. Downward Pressures on Defense Resources

After five years of unprecedented buildup, recent defense budgets have come under severe pressure. This pressure has two sources: the public and congressional reaction to wasteful defense spending and the larger congressional commitment to control the federal budget deficit. The waste and deficit issues reflect a major change in the political atmosphere surrounding defense spending policies. Whereas before 1985, Congress and the public dealt with defense budgets in the context of perceived security requirements, starting with the FY 1986 defense budget, the defense debate has been dominated by the issues of waste and resource limitations.

Secretary Weinberger came into office with a strong commitment to improving the procurement process, and initiated a series of reforms which promised significant change but produced limited results. The Weinberger Defense Department has resisted a

71. Richard Gabriel argues, for example, that war stocks and supplies for NATO are “less than half what the Army projects wartime requirements to be.” R. Gabriel, supra note 13, at 26. See also id., at 186.

72. Problems with the weapons acquisition process are not new to this administration and reforms have been difficult to implement for at least two decades. See M. Peck & F. Scherrer, THE WEAPONS ACQUISITION PROCESS (1962); Sims, Spoon-Feeding the Military: How New Weapons Came to Be, in THE PENTAGON WATCHERS 225-265 (L. Rodberg &
number of congressional attempts to reform the acquisition process. Meanwhile, there have also been persistent reviews of DoD management, revelations of waste and performance inadequacies in weapons programs, and a steady stream of Inspector General and congressional reports and hearings revealing defense contractor misconduct.

Public support for the defense buildup, already declining, has been further eroded by revelations of wasteful spending practices. Gallup polling data show that in 1980, public opinion favored a buildup: 58 percent believed that the nation spent too little on defense, 25 percent believed the U.S. spent about the right amount, and 11 percent believed that the U.S. spent too much. By 1982, a significant shift had occurred: 41 percent believed we spent too much on defense, 31 percent believed the U.S. spent about the right amount, and 16 percent believed too little was being spent. By Janu-

D. Shearer eds. 1970). In 1986, the General Accounting Office reviewed the implementation of the Carlucci initiatives and noted that "overall, most program managers . . . reported that the Acquisition Program has made little or no difference in the acquisition process." See Capaccio, Little Impact Seen for Reforms, DEFENSE WEEK, Nov. 10, 1986, at 7.

73. These reforms included the creation of an independent Inspector General and independent testing office in the Pentagon, a requirement for contractor warranties on weapons systems, legislation obliging contractors to report on real costs for raw materials and labor ("should cost" legislation), and constraints on defense contractor hiring of former Defense Department employees and uniformed personnel. See G. ADAMS, P. MURPHY & W.G. ROSENAU, CONTROLLING WEAPONS COSTS: CAN THE PENTAGON REFORMS WORK? (1981) (discussing how large aerospace firms operate as government contractors, including their lobbying efforts, political action committees, and trade associations).


In 1985, the White House stepped in and created a panel to investigate Defense Department organization and management and to propose reforms. This commission, chaired by former Deputy Secretary of Defense David Packard, produced reports recommending major changes in, among other things, the way DoD managed the acquisition process. See President's Blue Ribbon Comm'n on Defense Mgmt., Interim Report to the President (1986); President’s Blue Ribbon Comm’n on Defense Mgmt., A Quest for Excellence: Final Report to the President (1986).
Defense Choices and Resource Constraints

ary 1985, the shift was more pronounced: 46 percent, too much; 36 percent, about the right amount; and 11 percent, too little.\footnote{77}

The most dramatic change in the context of the defense debate, however, has been the significant and persistent growth in the federal deficit.\footnote{78} In 1985, public and congressional concern about the deficit culminated in the enactment of Gramm-Rudman-Hollings. As Congress considered this drastic remedy, it became clear that the success of the effort depended, in part, on the willingness of the bill's sponsors to include defense spending in the deficit reduction process. The Defense Department argued that its budget, as a matter of national security, ought to be protected from the cuts mandated by Gramm-Rudman-Hollings.

The final version of the bill required that defense and domestic spending share equally in any cuts the new budget law might require. Half of any reduction in outlays required under the Gramm-Rudman-Hollings process would have to be cut from defense spending, the other half from non-defense programs.\footnote{79} Under the new law's procedures, a fixed deficit target was set for the first time, and the three major elements of the federal budget — defense programs, domestic programs and revenues — were each to contribute to meeting that target. The federal budget had become a zero-sum game.

\footnote{77}{The Gallup Poll, Survey No. 234 (Mar. 1985); The Gallup Report, Public Opinion Trends 1950-1986 (Apr. 1986). Since early in the 1980s, moreover, there has been a strong public perception that defense dollars are being wasted. According to Harris surveys, since 1981 significantly more than 80% of the public have consistently agreed with the following two statements: "There is too much waste in defense spending," and "Too often, companies building defense weapons end up spending more than they were budgeted for." Harris Survey, No. 59 (July 22, 1985); Business Week/Harris Poll (Mar. 1985).}

\footnote{78}{High growth in defense spending alone has not been the source of these deficits. Defense spending increases have been largely offset by reductions in spending for domestic social programs enacted by the Administration. Interest payments on the federal debt resulting from the growing deficit have also accumulated quickly. The largest source of the deficit has been on the revenue side of the federal budget: the tax cut of 1981. The Congressional Budget Office found that increases in defense spending since 1981 were the second major contributor to the FY 1985 federal deficit. According to CBO estimates, lower revenues resulting from the 1981 tax cut contributed $111 billion to the FY 1985 deficit while defense spending increases contributed $35 billion and higher interest costs added $21 billion. Lower nondefense spending helped reduce the deficit by $38 billion. See Congressional Budget Office, The Economic and Budget Outlook: Fiscal Years 1986-1990, at 153, app. D (1985). See also What's Driving the Deficit, House Comm. on the Budget, 99th Cong., 2d Sess., President Reagan's Fiscal Year 1987 Budget, at 21-23 (1986).}

\footnote{79}{See supra note 4 and sources cited therein for a discussion of the functioning of Gramm-Rudman-Hollings as it applies to defense spending practices. See also H.R. Doc. No. 433, 99th Cong., 1st Sess. (1985); A. Maroni & R. Foelber, supra note 31.}
The impact of Gramm-Rudman-Hollings on the defense budget is clear. In FY 1986, Congress basically froze defense budget authority at FY 1985 levels. Once the first round of Gramm-Rudman-Hollings cuts went into effect in March 1986, budget authority for defense was actually reduced from the FY 1985 level by nearly 6 percent, to $296.8 billion.\footnote{G. Adams \& J. Colman, supra note 4, at 1-4; 1987 Budget Analysis, supra note 10, at 2.}

The new political atmosphere, shaped by revelations of fraud and waste and by mounting federal deficits, also affected consideration of the FY 1987 defense budget. Secretary Weinberger attempted to make up for the FY 1986 budget cuts by requesting $320.3 billion, which represented, in his judgment, 3 percent growth after inflation above the budget authority level originally provided in the congres- sional budget resolution of August, 1985. Congress made it immediately clear that this amount (which was actually 8 percent growth, after inflation, over the post-Gramm-Rudman-Hollings levels for FY 1986) was not realistic given available resources. After considerable negotiation, the House and Senate Budget Committees agreed on a budget resolution providing for $292.2 billion in budget authority for national defense, a sum scarcely covering inflation above the FY 1986 level. Action by the Appropriations Committees further reduced this figure, leaving final defense appropriations for FY 1987 at $290 billion, scarcely above the FY 1986 level.\footnote{The FY 1987 budget resolution passed by Congress assumed that national defense budget authority in each of the next three fiscal years would be $292.15 billion, $304.1 billion, and $316.7 billion. OMB Historical Tables, supra note 11; 1987 Budget Analysis, supra note 10, at 1. OMB projected the following for the same years: $299.0 billion, $318.4 billion, and $338.8 billion. OMB Review, supra note 5. Calculations of inflation rates in text are based on data in DBP Analytical Tables, supra note 6, at 1.}

Congress does not appear to be willing or able to continue to provide defense resources at the rate desired by DoD budget planners. The stage is now set for a defense budget crisis because the Pentagon’s plans require resources far in excess of those Congress is prepared to appropriate. The Defense Department, when planning the defense budget, must begin to set priorities, change management practices, and lower expectations if security needs are to be met in the context of limited resources.

IV. Conclusion

The curve of resources has definitively crossed the curve of security in defense budgeting. For the past two years, Congress has basi-
Defense Choices and Resource Constraints

cally rejected the Defense Department’s budget requests, and has been able to make the cuts on the margins of the budget. Several techniques have allowed Congress to make these cuts without greatly affecting program content: using excess funds drawn from previous inflation overestimates, stretching out major procurement programs, trimming operations and maintenance funds, freezing personnel levels for some of the military services and legislating “undistributed cuts” (left up to DoD to allocate) in the investment accounts.

Although the Defense Department has resisted these reductions, it has not yet had to make major changes in its buildup plans. Instead, spending cuts have been cushioned by the large backlog and the budgetary momentum of the early 1980s. DoD has so far avoided making choices and setting priorities. Congressional projections of future defense budgets now significantly diverge from those being used by the Department in its own budget planning. While DoD budget projections for the next five years assume that resources will grow at an average annual rate of 3 percent after inflation, congressional planning is now based on the assumption that defense resources will only grow with inflation. As a result, the Pentagon’s estimate of available national defense funds over the next three years is $50 billion greater than the amount Congress anticipates appropriating.82

These differing expectations will become evident in the debate over the FY 1988 defense budget. DoD’s budget presumes that the fiscal pressures created by the investment-driven budget will not be resisted and that new requirements for personnel, O&M and production will be funded. Congress will resist these pressures, but it is unlikely that marginal changes will suffice to bring the defense budget within Gramm-Rudman-Hollings limitations. Pressures on the legislature to spend are growing while resources are increasingly constrained. The Pentagon will be faced with either across-the-board cuts required by Gramm-Rudman-Hollings or significant reductions mandated by an unhappy legislature. Either solution could do serious damage to sound planning for national security.

It is now urgent for the Defense Department to recognize resource limitations and to rethink the national security program in that context. Multiple policy goals are currently being pursued

82. Defense Budget Project calculations based on data from Office of Management and Budget, Historical Tables, Budget of the United States Government, FY 1988, and unpublished data collected by the Congressional Budget Office.
through the defense budget: rapid expansion of strategic forces, extensive conventional force spending in Europe, significant growth in the Navy, and the development of larger rapid mobility forces. DoD needs to take a close look at these program priorities, consider them in light of such policy options as major arms control agreements, and scale down weapons purchase plans by identifying and focusing on higher priority missions and systems.

DoD must also scrutinize its internal budgeting and policymaking processes. Given the large buildup of the first half of the 1980s, it is now time to find a proper balance between weapons programs and adequate funds for personnel and operations and maintenance. In particular, DoD must devote adequate attention to making informed choices among new projects at this crucial stage in the research and development process, before these projects enter production and add to the upward pressure on the budget. Questions DoD should consider include, for example: do the Air Force and the Navy each truly require new, advanced fighter aircraft at this point in time? Do airlift requirements make necessary an immediate decision on a new cargo plane? Does the Army really need another light helicopter program? Is a new attack submarine required now and, if so, is the current candidate the best option? Such basic questions must be asked immediately, before the next budget becomes locked in and is then subjected to across-the-board reductions.

The Defense Department also needs to make a commitment to careful fiscal management. The first step should be to address major resource management issues. Do requests for continued rapid growth in defense spending make sense when there is clear evidence that the current managers of the Pentagon are no more able than their predecessors to spend the resources the Pentagon has received? Are inflation estimates in weapons costs projections accurate or might they be revised? Can cost control mechanisms and cost projections be improved so that future weapons production decisions will not result in further upward pressures on spending?

Congress also must be prepared to tackle a more ambitious defense agenda than it has to date. Although Congress has found it difficult to face the problem of relating defense policy to mission and to budget constraints, it must now begin to do so. Moreover, Congress needs to find the will to use fiscal constraints to force the Defense Department to face these same issues. Finally, Congress should enhance its oversight of Pentagon budget planning and re-
Defense Choices and Resource Constraints

source management in order to avoid the surprises of excess funds or underestimated costs.

Fiscal constraints are creating the necessity for explicit policy choice, improved priority-setting and sound budget management. “Trimming the fat” no longer suffices as a defense budget strategy, either for the Pentagon or for Congress. Unless more fundamental questions about defense resource allocation are asked and the answers found, national security needs could well be sacrificed on the altar of deficit reduction.