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NAVAL POSTGRADUATE SCHOOL

Monterey, California



THESIS

ROLES, STRATEGIES, AND PROGRAM
BUDGETING
WITHIN THE OPERATIONS AND MAINTENANCE,
NAVY
APPROPRIATION ACCOUNT

by

Jack B. Housley

December 1986

Thesis Advisor

Jerry L. McCaffery

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Roles, Strategies, and Program Budgeting
Within the Operations and Maintenance, Navy
Appropriation Account

by

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Lieutenant, United States Navy
B.S., University of Arizona, 1981

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

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December 1986

ABSTRACT

This thesis is an analysis of the budgetary roles and strategies used in the Department of the Navy by Major Claimants, Office of the Comptroller of the Navy (NAVCOMPT), Office of the Secretary of Defense, and Office of Management and Budget. The database is a report generated by NAVCOMPT, "Department of the Navy; Operations and Maintenance, Navy (O&M,N); Review of the FY1987 Budget."

The analysis of the data supplied by NAVCOMPT suggests a plethora of findings on DON budgetary behavior. These include: claimants which request more funds receive more funds; changes in a claimant's budget request by NAVCOMPT are not final; NAVCOMPT frequently restores funds it has cut; NAVCOMPT is just as likely to add to a budget request as to subtract from the request; the OSD/OMB review has a definite cutting bias; the best predictor of a claimant's budget this year is last year's budget; and claimants do not maintain their proportional share of incremental budget changes.

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I. INTRODUCTION

In 1961 Robert McNamara, then Secretary of Defense (SECDEF), introduced the Planning, Programming, and Budgeting System (PPBS) in the Department of Defense (DOD). "The general idea is that budgetary decisions should be made by focusing on output categories like governmental goals, objectives, and end products instead of inputs like personnel, equipment, and maintenance" [Ref. 1:p.186]. A systematic analysis of programs is necessary for effective decision-making.

Systematic analysis . . . {forges} links between general values and specific program characteristics. It forges these links, first, by determining social production functions that relate program inputs to program outputs, and, second, by translating general values into operationally specific objectives against which outputs can be evaluated. [Ref. 2:p.74]

The objective of PPBS is to enable top "civilian" management to link programs to money through systematic analysis. However, many writers on budget theory believe that PPBS cannot work. They argue that all alternatives must be investigated for all programs. Furthermore, all programs within the government must be compared to determine the best use of a budget dollar. Program budgeting's greatest fault is man's limited ability to make a comprehensive analysis of all the programs and alternatives under consideration.

Aaron Wildavsky proposes aids to help budget reviewers analyze budgets. The chief aid to budget calculation is incrementalism, or "the largest determining factor of the size and content of this year's budget is last year's budget" [Ref. 1:p.12]. Incrementalism is not the only budgeting strategy available to budget participants. Two closely related strategies are maintenance of the "base" and "fair share." Under the fair share strategy a claimant " . . . will receive some proportion of funds, if any, which are to be increased or decreased below the base of the various governmental agencies" [Ref. 1:p.17]. Maintaining the base is less of a strategy than an expectation that programs will be maintained close to current budget levels [Ref. 1:p.17].

This study is based on the work that Lance Leloup and William Moreland conducted utilizing Department of Agriculture (DOA) data between 1946 to 1971. Incrementalism, maintaining the base, and fair share budgeting theories maintain that

stability is a dominant characteristic of the budgeting process. Leloup and Moreland questioned the stability of the budgetary process. They studied agency budget requests to the DOA to determine if stability at the departmental level was hiding irregularities at the component stages. They found several roles and strategies used by budget participants not proposed by traditional budgeting theorists.

1. Agencies do not pursue a unitary strategy of moderation in the budget process.
2. The most assertive agencies received the largest cuts in their budget requests, but still came away with the most substantial, nonincremental changes in appropriations.
3. The role of the DOA appears to be more oriented towards, "balancing the extremes" of the agencies' requests.
4. The role of the Office of Management and Budget (OMB) emerges as one primarily concerned with reducing requests. Also, OMB appears to be the main obstacle to agency budget growth.
5. Congress cuts large requests most severely but large requests result in greater absolute growth for the requesting agency. [Ref. 3:pp.185-189]

This study attempts to determine if the conclusions that Leloup and Moreland made about DOA could also be made about the Department of the Navy (DON), or if traditional budgeting theories more accurately describe the DON budgeting process.

This thesis analyzes the ability of budget participants to use program budgeting as a rational alternative to incremental budgeting. Using data supplied by the Office of the Comptroller of the Navy (NAVCOMPT) for fiscal year (FY) 1987, the Operations and Maintenance, Navy (O&M,N) appropriations account was explored. The strategies and roles used by the four major participants (Major Claimants, NAVCOMPT, Office of the Secretary of Defense (OSD) and OMB) in the DON budget process were postulated. This thesis is limited due to the following two factors: past budget data is not available at the major claimant level and only the O&M,N account is analyzed.

After analyzing the data supplied by NAVCOMPT, an attempt to explain the DON budgeting process is made by answering the following questions. If a claimant requests more funds, will it receive more funds? What effect does NAVCOMPT have on the budget process? Is NAVCOMPT neutral when acting on budget requests or does it carry out the role of moderator? Is there a definite cutting bias in the joint review conducted by OSD and OMB? What is the best predictor of this year's budget levels? And finally, how well does incrementalism, maintaining the base, and fair share budgeting theories explain claimant budget changes?

Chapter II provides additional background on budget strategies and roles of budget participants, their ability to use PPBS, and a summary of the DON budget process. Chapter III presents the data and the study conducted to make comparisons of various budgeting behaviors. Chapter IV concludes the thesis with an assessment of the various roles and strategies used in the DON budgeting process.

II. BACKGROUND

A. ROLES, STRATEGIES AND PROGRAM BUDGETING

Major claimants, NAVCOMPT, OSD, and OMB all have responsibilities to carry out during the budgeting process. By adopting predictable patterns of behavior, the participants can limit their areas of budget responsibility. Wildavsky suggests that a claimant's proper role is that of an advocate. Budget reviewers expect agencies to pad their budget request, while at the same time being careful not to overstate their needs [Ref. 1:pp.21,23]. As long as claimants can be expected to ask for all they need, plus a little extra, the budget reviewers only have to worry about where to cut a budget request. Otto Davis, Michael Dempster, and Wildavsky state that OMB "... acts ... with a cutting bias" towards all programs [Ref. 4:p.530]. These budgetary roles are basically the same as proposed by LeLoup and Moreland minus the departmental role [Ref. 3]. According to this model, NAVCOMPT should take on the departmental task of stabilizing the claimant's budget requests. OMB, along with OSD, retains the role of budget cutter.

Strategies are developed by budget participants to protect their interests "... ordinarily neglected in the political system" [Ref. 1:p.173]. The process of "muddling through" has been proposed as a method to assist man's limited cognitive powers in the budgeting process. To simplify complex decisions, muddling through suggests "... it is necessary only to study those respects in which the proposed alternative and its consequences differ from the status quo" [Ref. 5:p.84]. Wildavsky has proposed other aids to budget calculation, in addition to incrementalism. Budget participants use past budget experience to modify previous consequences as necessary. Budget reviewers "strain at gnats" and attack only budget areas they understand. And budget officials "satisfice" by choosing not the best alternative but definitely not the worst [Ref. 1:pp.11,12]. An expansionist strategy by a claimant is assertiveness. "Assertiveness may be defined as the tendency for agencies to pursue an active strategy of expansion in their programs and fundings" [Ref. 3:p.182]. An assertive strategy is not available to all claimants. A claimant must have a continuing political mandate to achieve an increasing share of the budget.

Reviewing authorities have strategies not available to claimants. Reviewing authorities can specialize in areas to become experts in a field, concern themselves with only small parts of a budget request, make marginal adjustments to existing programs, and realize that they will never be able to solve all the problems with a budget, so why try [Ref. 1:pp.57-60].

A proponent of program budgeting can logically argue that roles and strategies used by budget participants are unnecessary. It should simply be decided which ends are to be achieved, and then the best alternative to reach the desired goal should be implemented.

But budget officials soon discover that ends are rarely agreed upon, that they keep changing, that possible consequences of a single policy are too numerous to describe, and that knowledge of the chain of consequences for other policies is but dimly perceived for most conceivable alternatives [Ref. 1:pp.147-148].

Charles Lindblom has stated that "non-incremental policy proposals are . . . typically not only politically irrelevant but also unpredictable in their consequences" [Ref. 5:p.85].

Why look beyond incrementalism to explain budgeting? Charles Schultze states that "while incremental decisions make up by far the largest proportion of governmental decisions, they do not encompass the universe of decisions" [Ref. 2:p.77]. Schultze and others state that incrementalism merely covers up the considerable variation in funding levels of programs. Incrementalism shows stability at the aggregate level, but fails to show the instability at the component level. [Refs. 2,6,3:pp.77,955&962,180&181]

If incrementalism does not explain the entire budgeting process, can program budgeting help explain the variations between program funding levels? First, what is program budgeting?

The hallmarks of the program budget, . . . are (1) restructuring of the budget in terms of intermediate outputs or missions, and (2) the presentation of proposed costs for several years ahead. [Ref. 7:p.20]

Program budgeting allows top-level determination of what objectives to achieve. Once the objectives have been chosen, low-level managers provide cost information necessary to achieve the objectives. Program budgeting directly associates the "ends" with the

"means" to achieve them [Refs. 2,8,9:pp.38,25,50]. PPBS in DOD allows the nation's political leaders to compare defense needs among all competing claimants.

The PPB{S} process can be summarized briefly: (a) Collect intelligence. (b) Appraise the threat. (c) Based on national policy, develop strategy to meet the threat. (d) Determine force levels to support the strategy. (e) Program weapon systems, manpower and support over a period of time to attain fiscally constrained force levels. (f) Budget annual allocations of funds to procure men and materials required to carry out programs. [Ref. 10:p.1-1]

The defenders of PPBS point to budget analysts who are ". . . champions of efficiency and effectiveness as criteria in decision making" [Ref. 2:p.101]. PPBS has allowed policy objectives to be coordinated into the budget cycle [Ref. 11:p.3]. David Novick and others state that program budgeting has allowed budget participants to use the old budget strategy of incrementalism to evaluate programs in a new light. PPBS remains incremental, but the trade-offs are based on a long range plan and are more comprehensive in nature [Refs. 12,13:pp.90,94]. Schultze has defended program budgeting as a necessary decision-making process:

Systematic analysis, applied to program evaluation, provides - for complex social programs - the necessary feedback ingredient that justifies the incremental, sequential, Lewis and Clark decision-making process [Ref. 2:p.64].

Critics of PPBS are many and quick to point out its flaws. PPBS ". . . did not change budgetary decisions in DOD to any significant degree" [Ref. 1:p.195]. PPBS had to conform to fiscal policies which caused a significant impact on its long range programs. Wildavsky claims that ". . . only two of nine program categories used in the Defense Department appear to be genuine programs in the sense of pointing to end purposes or objectives" [Ref. 14:p.306]. Congress passes budgetary legislation by appropriations accounts (e.g., O&M,N) not by programs (e.g., Strategic Forces). The indirect association between funding and programs obscures the policy implications of a particular program. Therefore, ". . . program decisions {do} not imply budgetary decisions" [Ref. 11:p.73]. Even if PPBS promotes efficiency within programs, it is suggested that ". . . the program budget as such provides no clues to the effectiveness or benefits from increments to alternative program elements" [Ref. 7:p.134]. Without establishing the marginal benefits available among programs, it is impossible to know which program would create the greatest benefit from the next dollar increase in

funding. Thus, there is no way to maximize the benefit of the defense budget. Additionally, Charles Hitch, former Assistant Secretary of Defense (Comptroller), points out that the ". . . programming phase regularly ran into, and overlapped with, the budget review" [Ref. 11:p.75]. This action often caused serious program decisions to be delayed until the budgeting phase of PPBS [Ref. 11:p.4].

Not only must PPBS be concerned with how to choose the best program, the politics of which policy will be adopted must also be addressed [Refs. 14,15:pp.304,127]. Proponents point out that PPBS ". . . does not seek to replace the political decision-making process, it will- if successful -modify that process" [Ref. 2:p.34]. PPBS would modify the system by presenting program choices ". . . aided by information and technical analysis concerning the probable consequences of" choosing a program [Ref. 8:p.51]. Therefore, ". . . program budgeting is a neutral tool. It has no politics" [Ref. 16:p.370].

The attempt to substitute the efficiency criteria for political consensus causes PPBS opponents to attack its political feasibility. Lindblom would attack PPBS on the grounds that it is ". . . an undesirable decision system A 'good' decision is one which gains consensus rather than one which meets outside criteria of efficiency or effectiveness" [Ref. 2:pp.36,52]. Budget officials are unable to absorb the entire decision as a whole system. ". . . They cannot find any objective method of judging priorities among programs" [Ref. 1:p.10]. The ability to consider the entire decision process is contrary to Herbert Simon's theory of "bounded rationality" in decision-making.

The first consequence of the principle of bounded rationality is that the intended rationality of an actor requires him to construct a simplified model of the real situation in order to deal with it. He behaves rationally with respect to this model, and such behavior is not even approximately optimal with respect to the real world. [Ref. 17:p.199]

Again, the politician is unable to maximize the defense capabilities at a given level of inputs. Even if the politician could maximize all programs, this behavior would "not fit political reality" [Ref. 2:p.42].

It has been reported that not a ". . . single example of successful implementation of PPB{S} . . ." can be found [Ref. 1:p.196]. Furthermore, program budgeting has had ". . . little impact on the format or substance of the political debate" [Ref. 13:p.93]. Program budgeting is out of step with federal budgeting practice. "Federal budgeting

today is incremental rather than comprehensive, calculated in bits and pieces rather than as a whole, and veils policy implications rather than emphasizing them" [Ref. 1:pp.135,136].

Is there a middle ground upon which program budgeting can operate effectively?

It may, indeed, be necessary to guard against the naivete of the systems analyst who ignores political constraints and believes that efficiency alone produces virtue. But it is equally necessary to guard against the naivete of the decision maker who ignores resource constraints and believes virtue alone produces efficiency. [Ref. 2:p.76]

Program budgeting is a forum for the debate of connecting ends to means. Program budgeting lies in the middle ground between "purely incremental budgeting and an annual zero-base review of all programs" [Ref. 2:p.81]. Even though a program output cannot be measured precisely, it is still meaningful to determine if a program should be increased, decreased, or remain the same. "If this is possible, the efficiency of the program at any level can be examined separately" [Ref. 8:p.49]. Given today's budgetary environment, a possible recipe for a successful PPBS would include providing decision-makers with meaningful analysis of the issues under consideration. This action would allow decision-makers to focus on marginal program changes, therefore leaving the majority of budget decisions as incremental changes to last year's budget.

B. DON BUDGETING PROCESS

PPBS is a budgeting technique. Until now, it has been described in broad general characteristics. To appreciate the effect of PPBS on Navy budgeting decisions an understanding of how it works within DON is required. The intent of this section is to examine planning and programming only briefly. A more detailed analysis of DON budgeting practices is conducted to determine what organizational roles and strategies are mandated by DON officials.

DON operates under the PPBS rules promulgated by DOD. Basically, PPBS operates on an eighteen month schedule "simultaneously budgeting for one year, programming for the following year and planning for succeeding years" [Ref. 10:p.I-1]. The planning, programming, and budgeting phases are brought together in DOD by updating the Five Year Defense Program (FYDP) through the Program Objective Memorandum (POM) process. The following describes these three phases in more detail:

1. Planning

PPBS for DON starts at the highest levels in the government. Planning " with the assessment of the threat to the security of the US and, when combined with national policy, culminates in the development of force objectives to assure the security of the United States" [Ref. 10:p.II-1]. The President, National Security Council, SECDEF, Joint Chiefs of Staff (JCS), Operational Commander-in-Chiefs, service secretaries, and others make threat assessments. The input of the JCS into the planning phase, the Joint Strategic Planning Document, is a key starting point for placing national objectives into a military strategy [Ref. 10:p.II-8]. Strategies to meet the threat are translated into program elements (PE). "The PE is the basic building block of the FYDP. It describes the mission to be undertaken, identifies the organizational entities who will perform the mission assignment, and estimates costs" [Ref. 18:p.3-1].

TABLE 1
MAJOR PROGRAMS IN DOD

- 1- Strategic Forces
- 2- General Purpose Forces
- 3- Intelligence & Communications
- 4- Airlift & Sealift
- 5- Guard & Reserve Forces
- 6- Research & Development
- 7- Central Supply & Maintenance
- 8- Training, Medical, & Other Personnel Activities
- 9- Administrative & Associated Activities
- 0- Support of Other Nations

Table 1 identifies the ten major programs in which all program elements are distributed [Ref. 10:p.A-1].

To make planning useful, fiscal constraints must be considered. SECDEF provides each military department with fiscal guidance. This guidance " . . . is arrayed in a programmatic format . . . for which the FYDP program elements are the basic building blocks" [Ref. 19:p.II-1]. Using SECDEF guidance, the military departments propose defense programs to meet national objectives. This is an interactive process with OSD which results in the Defense Guidance (DG). "The DG serves as an

authoritative statement of the fundamental strategy, issues and rationale underlying the Defense programs as seen by leadership of the Department" [Ref. 20:p.2-4]. The DG is not only a military strategy document, it also provides fiscal guidance to military departments. Using the FYDP as a baseline, the DG requires three budget levels to be identified: minimum, basic, and enhanced [Ref. 10:pp.II-11,12 & III-3]. After the DG has been issued by SECDEF, the military departments are ready to start the programming phase of PPBS.

2. Programming

The purpose of programming is to ". . . translate Department of the Navy approved concepts and objectives into a definitive structure expressed in terms of time-phased resource requirements including personnel, monies and material" [Ref. 10:p.III-1]. The basic output of the process is the POM. The Navy POM is developed in three phases: the planning phase, the program formulation phase, and the final development phase [Refs. 10,21:pp.III-7,5].

During the planning phase, the Navy translates the DG into meaningful objectives. The DON Policy and Planning Guidance injects Navy influence into the DG [Ref. 18:pp.3-2,3-3]. The Chief of Naval Operations (CNO) Policy and Planning Guidance lays out the CNO's ". . . ground rules for the development of more detailed alternative ways of meeting . . ." the DG objectives [Ref. 10:p.II-13]. The CNO Program and Fiscal Guidance (CPFG) provides fiscal and manpower guidance to develop the CNO Program Analysis Memorandum (CPAM) and the initial policy guidelines for the FOM development. The CPAM assesses the ". . . Navy's capability to carry out overall goals and objectives . . ." proposed in the approved FYDP [Ref. 10:p.III-10]. CPAMs are developed for several issue areas. Anti-Submarine Warfare, Strike and Amphibious Warfare, and General Support and Logistics are examples of recurring CPAM issues. "Claimants and other interested organizations are invited to submit issues of Navy-wide interest which address major resource allocation or policy issues . . . during the summer months preceding the CPAM" [Ref. 10:p.III-10]. After a review by the Program Development Review Committee, the CNO Executive Board, and the SECNAV, Summary CPAMs I are released. Completion of the Summary CPAMs I signals an end to the Navy planning phase of programming. The Navy must now decide how to allocate resources to programs.

After the Summary CPAM I is issued, the CPFG II is released documenting the CNO's CPAM decisions and providing fiscal guidance for Sponsor Program

Proposals (SPPs). SPPs are developed by resource sponsors. A resource sponsor is ". . . a Deputy CNO or Director, Major Staff Office responsible for an identifiable aggregation of resources which constitutes inputs to warfare and supporting warfare tasks" [Ref. 19:p.I-8].

The SPPs allocate the obligational authority provided to the Navy by the DG. The resource sponsors are granted a great deal of flexibility concerning the manner in which they program their priorities ("Directed Programs"), as set forth in CPMG and must balance at all levels (Min/Basic/Enhanced) within . . . fiscal controls [Ref. 10:p.III-11]

Major unresolved issues, SPPs, and CPAM decisions are presented in the Summary CPAM II. The Summary CPAM II is reviewed by the same participants as the initial CPAM. Program formulation concludes at the end of this review.

The final development phase begins when the CNO releases the Summary CPAM II. After the Summary CPAM II issues are resolved, the resulting document becomes the DON's POM, which is then ready to be submitted to SECDEF. The POM is not simply the practice of matching programs with the DG, it is ". . . also the primary means of requesting revisions to the SECDEF approved programs as published in the FYDP" [Ref. 10:p.III-5]. This action by the services causes SECDEF to re-evaluate the FYDP after the POMs are submitted. The JCS review the services' POMs and issue the Joint Program Assessment Memorandum (JPAM), which is a risk assessment of the POMs developed under fiscal constraints [Ref. 10:p.III-1]. Using an internal DOD review and the JPAM, SECDEF issues the Program Decision Memorandum (PDM), which is the final fiscal guidance for programs within each service. Once the PDM is received by DON, the end game commences. The end game is ". . . an interactive process involving program trade-offs to accommodate necessary repricing of procurement programs and the establishment of appropriation controls to enhance balance and budget feasibility" [Ref. 10:p.III-11]. Programming is completed at the conclusion of the end game.

3. Budgeting

DON budgeting starts well before the programming phase has been completed. The DON budget formulation process is a bottom-up affair that starts at the ship or shore activity level and proceeds up the chain of command to the appropriate headquarters level which reports directly to the CNO [Ref. 20:p.2-27]. Budget formulation is facilitated by a "budget call" document that provides ". . .

substantive guidance and technical direction for all stages of the budget formulation process" [Ref. 20:p.1-23]. The initial budget call is received from NAVCOMPT while POM issues are still being debated at SECDEF level. NAVCOMPT must base its budget call guidance on Congressional, OMB, OSD, and Secretary of the Navy (SECNAV) actions [Ref. 20:p.1-23]. However, low-level commands must start gathering budget information months prior to the NAVCOMPT budget call. [Ref. 20:p.2-27].

Once the POM is completed, NAVCOMPT issues detailed control numbers for final budget submission to the appropriate claimants [Ref. 19:p.II-2]. These control numbers, budget allowances by type of expenditure, are based on ". . . the first year of the POM FYDP, as modified by the PDM" [Ref. 20:p.2-2]. Utilizing control numbers "NAVCOMPT . . . prescribe{s} the content and format for budget estimates and promulgate{s} the required budget relationship to the POM" [Ref. 13:p.IV-4]. This document is the formal budget call from NAVCOMPT.

The individual commands must use the budget call information to submit budget estimates to their claimants, who in turn submit budget estimates to NAVCOMPT. Budget estimates will be prepared and submitted based on the approved program as well as economic assumptions related to pay and pricing policies which will be contained in separately prescribed detailed budget guidance [Ref. 22:p.8]. Pricing changes are based on guidance supplied by the Office of the Assistant Secretary of Defense (Comptroller) and "fact-of-life" changes at the command level [Refs. 23,19:pp.212-2,II-29]. Reviewing authorities are very interested in the yearly changes of budget requests. For example, the Bureau of Naval Personnel requires all commands submitting budgets to ". . . identify and explain all program increases, decreases and realignments between prior year and current year {budgets}" [Ref. 24:Encl(2) p.5]. NAVCOMPT, OSD, OMB and Congress require claimant submissions "to display a summary of dollar and program changes, by type of purchase, for O&M appropriations" [Ref. 19:p.B-66]. It is not prohibited for programs not identified in the FYDP POM to be included in a budget estimate; however, the change must represent a "newly emergent critical unfunded deficienc{y} which cannot be absorbed within controls" [Ref. 19:p.II-29].

One of the foundations of PPBS, economic analysis, is not completely forgotten during budgeting. NAVCOMPT's policy is not to perform economic analysis on all programs, but to limit analysis to specific areas where it will contribute to the

decision-making process [Ref. 20:p.2-6]. DOD conducts cost/benefit analysis for programs meeting the following criteria: (1) the first time funding appears in the FYDP, and (2) when estimated funding requirements are significantly altered by program changes or projected plans [Ref. 23:p.212.1].

After the claimants accumulate and review individual commands' budget estimates, they submit their budget estimates to NAVCOMPT. Upon receiving the claimants' budget requests, NAVCOMPT conducts its budget review.

This is an in-depth review of all Navy appropriations and programs to identify problems and realign budget estimates as necessary to improve the overall budgeting of DON resources, and to make necessary adjustments to DON-approved programs in order to remain within adjusted financial levels provided by SECDEF. [Ref. 20:p.1-23]

NAVCOMPT has no responsibility to make program decisions [Ref. 20:p.2-31]. NAVCOMPT's reviewing responsibilities are to evaluate budget estimates on the following criteria:

(1) Appropriation and fiscal status and implications, (2) financial feasibility and balance, (3) validity and reasonableness of cost and pricing, (4) validity and relationship to planned objectives, and (5) legality. [Ref. 10:p.III-7]

NAVCOMPT's recommended changes to a budget request are commonly referred to as the "mark-up."

NAVCOMPT provides its budget reviewers with techniques to analyze budgets. Reviewers are to judge estimates based on past experience, established standards, program changes by SECDEF or Congress, pricing changes, and employment trends [Refs. 19,20:p.II-133&II-134, 2-31]. NAVCOMPT states that the O&M,N account should reflect incremental changes in funding. The analyst is told that "to the extent that a program's obligation and/or expenditure rate in the prior year deviates significantly from the past appropriation pattern, a funding profile problem is indicated" [Ref. 19:p.II-134]. Another interesting rule of thumb for the budget analyst is that he should ". . . make a 'downward bias' assessment when initially reviewing program estimates" [Ref. 19:p.II-132]. In fact, this initial downward bias has been named the "Nemfakos Assumption," after a NAVCOMPT budget analyst.

A mark-up will become the final budget decision unless the claimant challenges the mark-up with a reclama [Ref. 19:p.II-131]. NAVCOMPT tells claimants

that reclamation should “. . . address the specific issue and rationale used in the Mark-up” [Ref. 19:p.II-135]. NAVCOMPT allows reclamation to be submitted “. . . based on differences in judgment” but these types of reclamation are frowned upon since it could waste the sponsor’s and the analyst’s time [Ref. 19:p.II-135]. Differences between NAVCOMPT and the claimant’s budget will be resolved by the Director, Navy Program Planning [Ref. 10:p.IV-5]. When all budget issues are resolved, NAVCOMPT submits the final budget to OSD.

After receiving the budget estimate from DON, OSD and OMB conduct a joint review of the Navy’s budget. “On the basis of this review, tentative budget decisions, Decision Package Sets (DPS), are made by SECDEF” [Ref. 10:p.IV-5]. SECNAV can respond to the DPS “. . . by submitting to SECDEF a position paper or reclamation prepared by the responsible DON organization” [Ref. 10:p.IV-5]. DPS reclamation are discouraged by both DOD and SECNAV. General guidance is to submit a reclamation “. . . only if the impact is considered to be sufficiently serious to warrant the personal reconsideration of the SECDEF” [Refs. 23,25:pp.219.2, Encl(1)p.10].

After the Program Budget Decisions (PBD) are resolved, final control numbers are issued by NAVCOMPT. This action marks the end of the Navy’s PPBS for the fiscal year [Ref. 19:pp.I-9,II-136]. Figure 2.1 depicts the overall sequence of PPBS actions.

PPBS

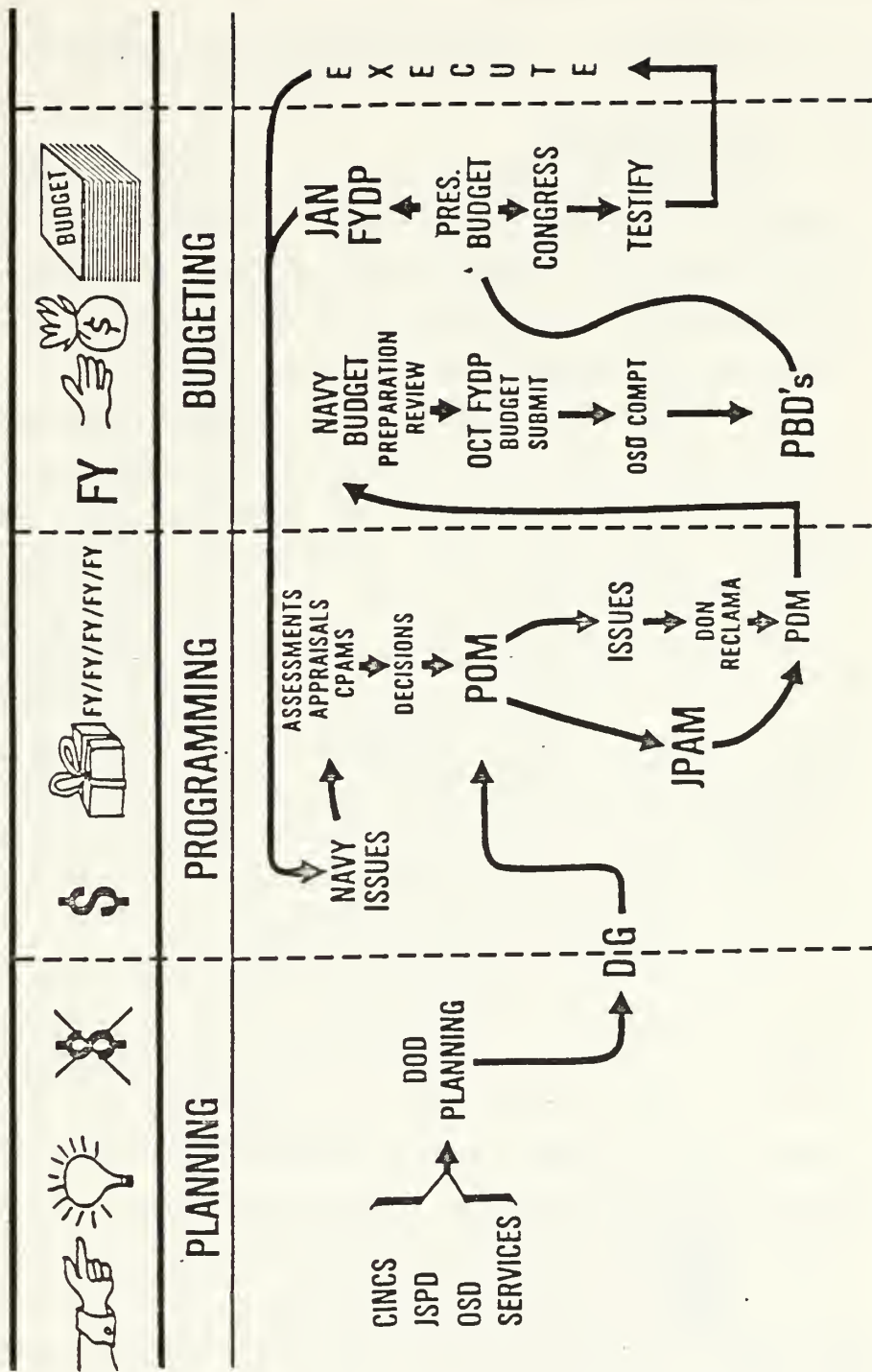


Figure 2.1 The PPBS Process (Source: DON).

III. DATABASE AND STUDY

A. THE DATABASE

The budget data for this study is an automated report produced by the NAVCOMPT Budget Evaluation Group (NCBG). The report "Department of the Navy; Operations and Maintenance, Navy; Review of the FY1987 Budget" [Ref. 26] provides budget data for nineteen major DON claimants. Figure 3.1 identifies the claimants and provides the claimant code used by NCBG.

The O&M,N budget review report is divided into nine segments. Segment 0 is the claimant's budget in accordance with POM guidelines. Segment 1 contains administrative corrections to the POM. Segments 0 and 1 together represent the claimant's total budget request submitted to NAVCOMPT. Segment 2 is NAVCOMPT's mark-up of the claimant's budget. Segment 3 reflects claimant funding changes caused by SECDEF's PDM. Segment 4 is an internal review conducted by NAVCOMPT to bring budget submissions in line with the latest economic changes. Segment 5 contains successful reclaims to NAVCOMPT's mark-ups. The summation of Segments 0 through 5 represents the budget submitted to OSD. Segment 6 is the OSD/OMB mark-up of the budget. Segment 7 reflects successful reclaims to the OSD/OMB mark-up. Segment 8 is a miscellaneous section to show NAVCOMPT adjustments made during the OSD/OMB review.¹

The report, which was originally completed in the fall of 1985, contains seven years of budget data, FY1985 to FY1991. Data after FY1987 represent predicted budget levels for the claimant if the FYDP as currently stated is continued. These years are not used in the study due to their predictive nature. FY1985 data is used to evaluate budget changes in preceding years. FY1986 data is used in some analyses since FY1986 budget changes do represent actual dollars to the claimants. However, FY1987 provides the lion's share of data for this study's analyses. No attempt was made to adjust the budget amounts for inflation. This is because inflation adjustments were available only for FY1985; inflation adjustments for other years would be predictions of questionable value.

¹Mr. Wess McNair of the Office of Budget and Reports (NCB) provided definitions for the various report segments via a telephone conversation.

<i>Claimants</i>	<i>NCBG Code</i>
Chief of Naval Operations (OP-09B)	11
Assistant for Administration, Under Secretary of the Navy	12
Naval Intelligence Command Headquarters	15
Commander, Naval Medical Command	18
Naval Air Systems Command	19
Naval Military Personnel Command	22
Naval Supply Systems Command	23
Naval Sea Systems Command	24
Naval Facilities Engineering Command	25
Strategic Systems Project Office	30
Assistant Secretary of the Navy (Shipbuilding and Logistics)/ Space and Naval Warfare Systems Command/ Office of the Chief of Naval Operations	37
Space and Naval Warfare Systems Command	39
Commander-in-Chief, U.S. Atlantic Fleet	60
Commander-in-Chief, U.S. Naval Forces, Europe	61
Chief of Naval Education and Training	62
Naval Telecommunications Command Headquarters	63
Naval Oceanographic Office	65
Naval Security Group Command Headquarters	69
Commander-in-Chief, U.S. Pacific Fleet	70

Figure 3.1 Major DON Claimants.

The budget data presented in this study represents an approved budget through SECDEF. Many budget changes occur before the budget is finalized. These include Presidential changes, new economic adjustments, and Congressional budget changes. Also, the summation of the claimants' budget requests does not fully represent the

budget approved by SECDEF. The O&M,N account total is different because NAVCOMPT maintains five administrative accounts which have zero or negative ending balances. These administrative accounts are not considered in the study.

B. THE STUDY

The purpose of this study is to contrast the traditional budgeting theories proposed by Wildavsky and Lindblom with the results Leloup and Moreland found at the DOA [Ref. 11]. Budgeting theories are tested against the database to help illustrate the budgeting process within DON.²

TABLE 2
TOTAL O&M,N BUDGET LEVELS BY CLAIMANT

all numbers in 000's

NCBG code	FY 1985	FY 1986	FY 1987
11	971,670	1,069,378	930,137
12	180,097	187,749	210,154
15	125,940	141,617	147,166
18	740,885	775,873	805,220
19	2,996,723	2,773,706	2,571,766
22	317,002	475,613	526,546
23	1,321,636	1,274,620	1,357,512
24	3,943,737	4,413,566	4,704,803
25	341,087	406,592	389,756
30	813,641	844,088	928,042
37	283,436	57,083	62,217
39	661,236	756,692	834,491
60	5,748,726	5,634,938	5,702,113
61	138,526	145,026	178,038
62	995,427	1,039,255	1,050,080
63	359,423	371,749	376,455
65	182,870	215,963	207,792
69	75,724	79,071	89,026
70	5,292,009	5,343,525	5,393,803

Table 2 provides the data to make judgements about the claimants use of incrementalism, fair share budgeting, and the ability of each claimant to protect its budget base.

²Statistical analysis was conducted using the Minitab macro-computer system. [Ref. 27]

1. Incrementalism

To determine if incrementalism helps explain the DON budgeting process, a model developed by Davis, Dempster, and Wildavsky is used [Ref. 4:p.533]. The model is strictly linear and predicts next year's budget directly from the previous year's budget result.

$$x_t = B\alpha x_{t-1} + p_t \quad (\text{eqn 3.1})$$

x_t = budget request of a claimant

$B\alpha$ = slope of the budget request line

x_{t-1} = previous year's budget request

p_t = a random variable

The claimants' budget totals in FY1986 were regressed against the FY1985 budget totals. The result:

$$\text{FY1986} = 1.00_{\text{FY1985}} + 22683$$

R-square = 99.4%

The claimants' budget totals in FY1987 were regressed against the FY1985 budget totals. The result:

$$\text{FY1987} = 1.02_{\text{FY1986}} + 3198$$

R-square = 99.7%

R-square is the coefficient of determination, which indicates the proportion of x_t variability explained or accounted for by x_{t-1} [Ref. 28:p.424].

The high R-square values for the DON budget, FY 1985 through FY 1987, reveals that next year's budget result is highly related to the previous year's budget. This finding indicates strong support for incremental budgeting within DON.

2. Fair Share

To determine if budget participants retain a fair share of the DON budget, a model suggested by James Danziger is used as a guide. "The fair share model is based on a *constant percentage of change* in total expenditures, and estimates the changes in service expenditures as a function of the change in total expenditures" [Ref. 15:p.133].

This model predicts this year's changes in budget allocation by multiplying the claimant's previous proportion of the budget by the total change in expenditures.

$$\Delta \text{Allo}_t \text{ Claimant}_i = \beta (\text{Allo}_{t-1} \Delta \text{TEC}) + \alpha \quad (\text{eqn 3.2})$$

$\Delta \text{Allo}_t \text{ Claimant}_i$ = change in the claimant's budget level

β = slope of the budget line

Allo_{t-1} = last year's budget proportion

ΔTEC = change in total O&M,N expenditures

α = random variable

Using this model FY1985 and FY1986 budgets were compared using regression analysis. The result:

$$\Delta \text{Allo}_t \text{ Claimant}_i = 0.225(\text{Allo}_{\text{FY1986}} \Delta \text{TEC}) + 22683$$

$$\text{R-square (adjusted)} = 0.0\%$$

The same analysis was conducted on the FY1986 and FY1987 budgets. The result:

$$\Delta \text{Allo}_t \text{ Claimant}_i = 0.868(\text{Allo}_{\text{FY1987}} \Delta \text{TEC}) + 31987$$

$$\text{R-square (adjusted)} = 2.9\%$$

R-square values are very low. Fair share changes to the claimant's budget levels are not related to the actual budgeting outcomes in DON. Claimants do not maintain their proportional share of incremental budget changes.

3. Budget Base

Budget participants expect their programs to be maintained close to the current funding levels. To evaluate this expectation, a linear model developed by Danziger is used. "Operationalizing the base as the proportion of total expenditure allocated to Service_i , this model assumes that the change pattern will maintain an allocation as a constant percentage of total expenditure" [Ref. 15:p.133]. To use this model, last year's budget proportions is multiplied by this year's O&M,N budget to predict a claimant's funding level.

$$\text{Base Allo}_t = \beta (\text{Base Allo}_{t-1}) + \alpha \quad (\text{eqn 3.3})$$

Base Allo_t = this year's percent budget share

β = slope of the line

Base Allo_{t-1} = last year's percent budget share

α = random variable

Claimants' budgets for FY1985 were divided by the total O&M,N budget for FY1985. The same procedure was conducted on FY1986 budget data. Regression analysis was conducted on the FY1986 findings using the FY1985 data as a predictor. The results:

$$\text{Base FY1986} = 0.983(\text{Base Allo}_{\text{FY1985}}) + 0.00087$$

$$\text{R-square} = 99.4\%$$

The same analysis was conducted using the FY1986 and FY1987 budget data. The result:

$$\text{Base FY1987} = 0.998(\text{Base Allo}_{\text{FY1986}}) + 0.00012$$

$$\text{R-square} = 99.7\%$$

Again, R-square values are very high. The previous year's budget base has a very strong relationship to the following year's budget base. The support for a base determined budget is just as strong as the support for incremental budgeting. Budget base and incrementalism R-square values are exactly the same independent of the budgeting strategy attributed to the claimants. This result illustrates the high degree to which incrementalism and budget base models are related.

The fair share model did not support the theory that budget participants receive budget changes in proportion to their previous budget levels. The fair share model is the only traditional budgeting model investigated that attempts to explain budgeting behavior by investigating marginal budget changes. Incremental and budget base models explain budget behavior by examining aggregate budget changes. Apparently, the models based on aggregate spending levels are hiding the marginal funding changes that are taking place among the claimants.

4. Leloup and Moreland Study

The Leloup and Moreland study attempts to prove that different agencies receive different budget proportions based on their aggressiveness and the support they receive from the reviewing bodies [Ref. 3]. Table 3 shows the distribution of the

TABLE 3
CLAIMANT ASSERTIVENESS: INCREASE IN CLAIMANT REQUEST
TO NAVCOMPT FROM THE PREVIOUS YEAR'S REQUEST

Request Decrease	0%- 4.9%	5%- 9.9%	10%- 14.9%	15% & Above	Total
10	3	17	3	5	38

agency requests to NAVCOMPT as a percentage change from the previous year's budget request.³ Interestingly, more claimants requested cuts from their budgets than requested a budget increase greater than 10 per cent. The data suggests that most claimants are moderate in their requests for additional funds.

To assess the impact of claimant assertiveness, the bivariate correlation coefficients between the percent change in requests, the proportion of requests approved, and the percent change in the final budget is analyzed.⁴ Only the FY1987 budget data was utilized to assess the correlation between the claimant's request, budget changes by NAVCOMPT, budget changes by OSD/OMB, and the total change in the budget. The highest correlation with the ultimate budget change is with the change requested by the claimant ($r=.505$). There is also a positive correlation between the changes made by OSD/OMB and the final budget ($r=.404$). NAVCOMPT changes have almost no correlation with the changes in the final budget ($r=.050$). Not surprisingly, the change in the budget requested by the claimant is negatively correlated with NAVCOMPT changes ($r=-.136$) and OSD/OMB budget changes ($r=-.174$). Caution must be used in inferring from this data that the most important final budget determinant is the claimant's budget request.

³O&M,N budget review report segments 0 and 1 will always be combined to reflect the budget request by a claimant.

⁴O&M,N budget review report segments 2 through 5 will be used to show the total changes made by NAVCOMPT. Report segments 6 and 7 will be used to show the total changes made by OSD/OMB.

The bivariate correlation coefficients were also checked dependent on the claimant's assertiveness and the reviewing body's support. Again, the correlation between the change in claimant requests, proportion of the request approved by the reviewing body, and the percent change in the final budget is the basis for analysis. Assertiveness in a budget request is set at 10 per cent. Reviewing body support is indicated by not cutting the budget request.⁵ Research data for FY1986 and FY1987 is used to establish the correlation coefficients.

An assertive claimant's budget request is negatively correlated with the budget result ($r = -.868$) if NAVCOMPT's support is received. The claimant's budget request is significantly related to the final budget. The proportion of the request approved by NAVCOMPT is highly correlated to the final budget result ($r = .980$). NAVCOMPT's budget action is a more reliable determinant of the claimant's final budget than the original budget request. NAVCOMPT's action suggests that it wishes to determine the budget levels for an assertive claimant even if it supports the claimant.

For an assertive claimant receiving negative NAVCOMPT support, its highest positive correlation to its final budget is the budget approved by NAVCOMPT ($r = .700$). NAVCOMPT's budget action significantly determines the final budget. The claimant's budget request correlation to the final budget is $r = -.193$. There is only a small negative relationship between the budget requested and the final budget result. The claimant's budget request is negatively correlated to the proportion of the request approved by NAVCOMPT ($r = -.757$). Again, NAVCOMPT is attempting to dictate budget outcomes, this time by making cuts.

A non-assertive claimant receiving NAVCOMPT support has a moderate positive correlation with its budget request ($r = .618$) and proportion of the request approved by NAVCOMPT ($r = .547$). The claimant's budget request is the strongest determinant in the final budget. However, the relationship is not much different than the proportion of the request approved by NAVCOMPT and its effect on the final budget.

If a claimant is not assertive and receives negative NAVCOMPT support, there is a **very high** correlation that the claimant's budget request accurately reflects the final budget ($r = .997$). NAVCOMPT appears to let these claimants cut their own budgetary throats.

⁵There was only one instance of high claimant assertiveness and high OSD/OMB support, therefore, no correlation coefficients are possible for this observation.

An assertive claimant with negative OSD/OMB support has a high correlation between the proportion of request that is approved by OSD/OMB and its final budget ($r = .971$). OSD/OMB has a strong desire to determine the budget outcome of these claimants. A small negative correlation exists between its budget request and the final budget ($r = -.113$). The claimant's request does not resemble its final budget.

A non-assertive agency with OSD/OMB support has a moderate positive correlation with its budget request and the final budget ($r = .457$). Its request is negatively correlated with the proportion of the request approved by OSD/OMB ($r = -.581$). OSD/OMB's influence on the non-assertive claimant's budget is only slightly stronger than the claimant's budget request.

Finally, a budget request by non-assertive agency with negative OSD/OMB support is highly correlated to its final budget ($r = .998$). The final budget outcome is only moderately correlated to the OSD/OMB action on its budget request ($r = .204$). Like NAVCOMPT, OSD/OMB is willing to let these claimant's determine their budget levels.

Caution must be used in interpreting these correlations; however, two general observations can be made. First, reviewing bodies greatly influence the final budget outcomes of assertive claimants. Second, reviewing bodies are willing to let non-assertive claimants have greater control over their budgets.

Table 4 shows the changes in claimant requests made by NAVCOMPT and OSD/OMB.⁶ The effect of claimant assertiveness on budget outcome emerges. Claimants which request a decrease in their budget are in for a substantial cut. A claimant asking for a modest increase of less than 5 percent will find its budget being cut. The most substantial budget increases occur with the group requesting 10 to 15 percent budget increase. The small number of claimants in this category make this result statistically insignificant, when compared to the group requesting increases greater than 15 percent. However, there is a difference in the average change in budget requests of claimants asking for less than 10 percent budget increase when compared to claimants requesting more than a 10 percent budget change.

$$H_0 : \mu \text{ Claimants Requesting } < 10\% = \mu \text{ Claimants Requesting } > 10\%.$$

⁶Budget data for FY1986 and FY1987 was used to make Table 4. The average percent change by NAVCOMPT is the total budget changes made by report segments 2, 3, 4, and 5. The average percent change by OSD/OMB is the total budget changes made by report segments 6 and 7.

TABLE 4
CHANGES IN AGENCY REQUESTS MADE BY REVIEWING BODIES

Change in Claimant Request from Previous Budget	Number of Cases	Ave % Change NCOMPT	Ave % Change OSD/OMB	Ave % Change Budget
Request Decrease	10	0.01	-0.03	-0.31
Increase 0-4.9%	3	-0.02	-0.02	-0.03
Increase 5-9.9%	17	0.01	-0.02	0.06
Increase 10-14.9%	3	0.09	-0.02	0.18
Increase > 15%	5	-0.01	-0.06	0.11

H_0 can be rejected at $\alpha = .05$. Probability of error is 0.0003.

Claimants which received the largest budget increases, asked for the largest increases.

NAVCOMPT's total budget behavior is independent of the budget changes requested by claimants. Consistent with these findings, NAVCOMPT is not stabilizing the claimants' budget requests as Leloup and Moreland found in their study. Furthermore, NAVCOMPT's final budget outcome is just as likely to increase the requested budget as to decrease the request.

$$H_0 : \mu \text{ NAVCOMPT budget change} = 0$$

H_0 cannot be rejected at any meaningful level of significance.

$$\mu = 0.0004 \quad \text{Standard deviation} = 0.0918$$

Since NAVCOMPT is not conducting across the board cuts or cutting budgets based on the size of the increase requested, maybe the budget review techniques directed by

NAVCOMPT are working as advertised. NAVCOMPT's budgeting role could be simply checking claimants for budget feasibility, verifying the accuracy of estimates, and evaluating if the budget reflects PPBS decisions.

As Leloup and Moreland found, "the patterns of cuts point to {OSD/}OMB as a consistent obstacle..." to the claimant's budget expansion [Ref. 3:p.185,186].

$$H_0 : \mu \text{ OSD/OMB budget change} \geq 0$$

H_0 can be rejected at $\alpha = .05$. T-value = -1.83. Chance of error is 0.042.

$$\mu = -0.0226 \quad \text{Standard deviation} = 0.054$$

The role of OSD/OMB emerges as primarily a budget cutter. As in Leloup and Moreland's study, moderation in budget requests appears to have no advantage in securing support from the OSD/OMB budget review.

A different pattern of budget review behavior emerges when comparing NAVCOMPT with OSD/OMB. NAVCOMPT acts with more variation than OSD/OMB on claimant requests, as shown by the much greater standard deviation of the NAVCOMPT budget actions when compared to OSD/OMB. "This suggests that . . . {OSD/}OMB is more mechanical and regular in its budget cuts than" NAVCOMPT [Ref. 3:p.186]. Claimants receiving the largest cuts from OSD/OMB requested the largest budget increases. However, NAVCOMPT changes appear not to be motivated by the size of the budget request. Apparently, reviewing bodies do not cut the claimant's budget solely dependent on the size of the budget increase requested.

The above data appears not to support traditional budgeting theory. Claimants which ask for budget increases get those increases. Moderation in budget requests will result in either a small budget increase or decrease. The budget base of the claimants is changing. And finally, claimants are obviously not receiving a proportional share in all budget changes.

Figure 3.2 shows mean requests and appropriation patterns for the five categories of assertiveness.⁷ OSD/OMB behavior in the mark-up is very similar to its final budget action. All categories of assertiveness receive negative support from OSD/OMB during the mark-up. The most aggressive category received the largest cuts during this phase.

⁷Figure 3.2 changes to the claimants' budget requests, include only the original mark-up of the reviewing bodies.

Claimant Assertiveness Categories	Average Claimant Increase Requested	NCOMPT Request Mark-up Increase	OSD OMB Request Mark-up Increase	Average Growth	N
Decrease	-0.29	-0.08	-0.02	-31%	(10)
0-4.9%	0.03	-0.02	-0.02	-3%	(3)
5-9.9%	0.07	-0.06	-0.02	6%	(17)
10-14.9%	0.13	0.08	-0.02	18%	(3)
Over 15%	0.17	-0.08	-0.07	11%	(5)

Figure 3.2 Request Patterns by Categories of Assertiveness.

The results of NAVCOMPT's original mark-up is much different than its final budget action. NAVCOMPT's original budget mark-up has a decidedly negative bias.

$$H_0 : \text{Ave. NAVCOMPT mark-up is } \geq 0$$

H_0 can be rejected at $\alpha = .05$. T-test = -2.20. The probability of error is 0.02.

The Nemfakos Assumption appears to be alive and well during the initial budget mark-up.

Table 5 shows the average budget changes of claimants dependent on their assertiveness and the support they receive from the reviewing bodies.⁸ The largest budget increases are achieved by the assertive claimants. Support by the reviewing bodies helps maintain requested budget increases. However, no large increases in the budget will occur without the claimant asking for an increase. An analysis of the variance between the different group populations reveals that no statement about group differences can be made conclusively.

$$H_0 : \mu A = \mu B = \mu C = \mu D$$

⁸See footnote 4.

TABLE 5
 ASSERTIVENESS AND SUPPORT FROM REVIEWING BODIES

Claimant Assertiveness

NAVCOMPT Support	Hi	Low
Hi	n = 3 $\mu = 0.2064$ A	n = 11 $\mu = 0.0154$ B
Low	n = 5 $\mu = 0.0997$ C	n = 19 $\mu = -0.1236$ D

Claimant Assertiveness

NAVCOMPT Support	Hi	Low
Hi	n = 1 $\mu = 0.1107$ E	n = 7 $\mu = 0.0273$ F
Low	n = 7 $\mu = 0.1439$ G	n = 23 $\mu = -0.1030$ H

H_0 cannot be rejected at $\alpha = .05$. F-ratio = 0.58. F-ratio necessary to reject H_0 is 2.92.

$$H_0 : \mu F = \mu G = \mu H$$

H_0 cannot be rejected at $\alpha = .05$. F-ratio = 0.70. F-ratio necessary to reject H_0 is 3.32.

At this point, general observations on budgetary roles and strategies can be theorized.

a. Claimants

Claimants "do not pursue a unitary strategy of moderation in the budgetary process;" initial requests vary from severe cuts to significant increases in previous budget levels [Ref. 17:p.188]. Claimants' requests most closely resemble their final budgets when they are requesting a budget decrease. Lastly, the average claimant asks for more money.

$$H_0 : \text{Change in FY1986 budget request} \leq 0$$

H_0 can be rejected at an $\alpha = .05$. T-test = 5.22. The probability of error is less than 0.000.

b. NAVCOMPT

NAVCOMPT is not playing the role of "balancing the extremes," which Leloup and Moreland found in DOA [Ref. 17:p.188]. NAVCOMPT appears to be basically a budget checker. The NAVCOMPT budget review has the same likelihood of increasing as decreasing a claimant's budget request. However, the budget mark-up will likely have a negative impact on the original budget request.

c. OSD/OMB

OSD/OMB does not appear to be the main obstacle to budget growth as Leloup and Moreland found. A decreased budget is more likely the result of a claimant's request than subsequent action by OSD/OMB. OSD/OMB is much more likely to cut a budget than NAVCOMPT. OSD/OMB appears to be very mechanical in their budget review with little variation in their actions. As Leloup and Moreland found, there is no category of assertiveness for which OSD/OMB did not cut the requested budget.

5. Other Roles and Strategies

The DON budgeting process is different from the budgeting processes described by traditional budgeting theorists or Leloup and Moreland. This section will discuss budgeting behaviors that are peculiar to DON. Only data from FY1987 is used for the analyses.

One major difference in the DON process is the two different budget mark-ups that the DON budget experiences. Total budget changes during the two budget mark-ups were discussed in the previous section; however, specific budget behavior was not mentioned. Does NAVCOMPT or OSD/OMB make more budget cuts? Which reviewing body restores more budget cuts? To test which reviewing body makes more line-item cuts, the number of NAVCOMPT cuts is compared to the number of OSD/OMB cuts.

$$H_0 : \mu \text{ No. of NAVCOMPT cuts} = \mu \text{ No. of OSD/OMB cuts.}$$

H_0 cannot be rejected at $\alpha = .05$. T-test = -0.10. The probability of error = 0.92.

$$\mu \text{ NAVCOMPT cuts} = 43.8 \quad \mu \text{ OSD/OMB cuts} = 44.7$$

Therefore, there is no meaningful difference in the number of NAVCOMPT cuts compared to the number of OSD/OMB cuts. The percentage of line-item cuts restored holds a different outcome.

$$H_0 : \mu \text{ Per cent NAVCOMPT restores line-items} = \mu \text{ Per cent OSD/OMB restores line-items.}$$

H_0 can be rejected at $\alpha = .05$. T-test = 5.72. There is almost no probability of error with this statement.

$$\mu \text{ NAVCOMPT restorals} = 0.398 \quad \mu \text{ OSD/OMB restorals} = 0.168$$

Why are there more NAVCOMPT restorals when compared to OSD/OMB? First, DOD and DON discourage reclaims to OSD/OMB cuts. Next, most OSD/OMB cuts are conducted on line-items for which the claimant has very little input. OSD/OMB makes a significant number of their cuts based on Congressional action, revised services rates, revised economic assumptions, and repricing of commodities (i.e. fuel). Finally, NAVCOMPT screens out the unsupportable budget requests.

If NAVCOMPT was successful in screening out the unsupported requests, OSD/OMB should not have to make entire line-item budget changes. Therefore, it is expected that OSD/OMB would make fewer 100 percent program restorals than NAVCOMPT. But this does not occur.

H_0 : μ 100% restorals NAVCOMPT per line-item restored = μ 100% restorals
OSD/OMB per line-item restored.

H_0 cannot be rejected at $\alpha = .05$. F-ratio = 1.00. The required F-ratio to reject H_0 is 4.17.

μ 100% restorals NAVCOMPT = .1873

μ 100% restorals OSD/OMB = .2500

How the two reviewing bodies restored cuts during the reclama process is also interesting. NAVCOMPT actually gave back to claimants more than it took in the mark-up. OSD/OMB gave back to claimants less than half of what was taken during its mark-up. It cannot be stated conclusively, however, that NAVCOMPT gives money back during the reclama process at a greater rate than OSD/OMB.

H_0 : μ Per cent NAVCOMPT funds are restored = μ Per cent OSD/OMB funds are
restored.

H_0 cannot be rejected at $\alpha = .05$. T-test = 1.30. T-test necessary to reject H_0 is 1.316. Projected error is 0.22.

μ Per cent NAVCOMPT funds restored = 1.34.

μ Per cent OSD/OMB funds restored = 0.48.

Based on the 100 percent restoral rate and the rate at which cuts are restored, it is questionable that NAVCOMPT is successfully screening unsupported budget requests before OSD/OMB submission. Additional data is necessary to substantiate this role for NAVCOMPT.

Consistent with this data, the following general statements can be made concerning NAVCOMPT and OSD/OMB budget review behavior. Although NAVCOMPT's original budget mark-up is downwardly biased, NAVCOMPT is willing to make significant changes to its mark-up during the reclama process. NAVCOMPT makes as many line-item cuts to budgets as OSD/OMB, but NAVCOMPT receives significantly more reclamation to its cuts. NAVCOMPT probably receives more reclamation because they restore more funds, and OSD/OMB cuts are made on more secure political ground, and updated price and economic assumptions.

The following section does not consider what roles and strategies are involved in the budget process, but rather what budget actions have the most influence in changing a claimant's budget. Multiple regression, stepwise regression, and simple linear regression were conducted on many variables. Only the five variables that were found with some predictive value are examined.

An obvious place to start is to determine if the claimant's request and subsequent action by reviewing bodies predict budget changes. NAVCOMPT changes are reflected in report segments 2 through 5. OSD/OMB changes are reflected in report segments 6 and 7. A stepwise regression was conducted on these predictors with the following results:

1. A change in the claimant's budget request is the best predictor of the budget change. R-square from claimant action only is 25.52%.
2. The next best predictor is the changes requested by OSD/OMB. R-square increases to 50.48% with the inclusion of OSD/OMB action.
3. Adding the changes made by NAVCOMPT increases R-square to 57.5%, adjusted to 49.0%.

A less obvious relationship to budget changes is the rate at which the NAVCOMPT and OSD/OMB cuts are restored. Multiple and simple regression were conducted on these predictors with the following results:

1. The percentage by which cuts are restored by NAVCOMPT and OSD/OMB is a better predictor of the changes in budgets than budget changes requested by claimants and subsequent actions by reviewing bodies. R-square adjusted is 55.4%.
2. The best single predictor is the rate at which OSD/OMB restores their cuts. R-square adjusted is 35.8%.

This section does not help predict which claimant will receive an increased budget next year. However, during the DON budgetary process the best determinant of which claimant receives the greatest budget increase is the claimant which successfully reclaims OSD/OMB cuts.

IV. CONCLUSIONS

The purpose of this thesis was to assess the ability of DON to utilize PPBS. Roles and strategies of budget participants were first proposed as a means for them to decrease the complexity of their tasks. During the study phase, a search was conducted to highlight possible roles and strategies in use at DON. The extent to which the traditional budgeting theories help explain the budgeting results in DON was also investigated. This chapter combines these budgetary relationships in a final assessment of the effectiveness of PPBS in DON.

Traditional budgeting theories of incrementalism, maintenance of a fair share, and maintaining the budget base were assessed using models proposed by Wildavsky and Danziger. The incremental and budget base models are very powerful in predicting future budgetary outcomes and the models are elegant. However, problems exist with these models. "John Wanat has argued persuasively that the 'success' of such models usually reflects the mathematical domination of the new figure over the old figure and that they provide little information about the actual nature of the incremental process" [Ref. 15:p.135]. The fair share model supports Wanat's argument. This model is based on marginal budget changes. When the old figure was unable to dominant the new figure, the fair share model failed to correctly predict changes in claimant funding levels.

Wildavsky also cautions against using his model to predict outcomes " . . . because the budget process is only temporally stable for short periods. A sudden change may be the result either of a change in the underlying process or a temporary setting aside of the usual decision rules in light of special circumstances" [Ref. 4:p.542]. With this background, do incrementalism, fair share, and budget base help explain the DON budgeting process? The easy answer is yes and no. These models help in understanding the aggregate budget levels claimants receive, but the models do not help explain which claimant will receive a budget increase or decrease next year. Finally, the short time period to which this study was constrained may make the predictive power of the incremental and budget base models appear much greater than is actually the case.

One of the leading arguments against program budgeting is the lack of roles and strategies available to budget participants to simplify their tasks. During the study various possible roles and strategies were investigated based on the work of Leloup and Moreland. The study reveals that DON budget participants are using roles and strategies during the budget process.

A. ROLES

1. Claimants

Claimants fill the advocacy role. This finding is consistent with traditional and non-traditional budgeting theories.

2. NAVCOMPT

NAVCOMPT's original budget mark-up is biased downward, but its final budget action is just as likely to result in a budget increase as in a budget decrease. There is no evidence to suggest that NAVCOMPT attempts to moderate budget requests. This outcome is different than what Leloup and Moreland found at DOA. The outcome in DON suggests that claimants' budgets are the result of programmatic decisions made at the SECNAV or SECDEF level. These decisions cannot be easily altered by NAVCOMPT.

3. OSD/OMB

OSD/OMB has a decided cutting bias. The success of their budget actions appears to be based on pricing revisions, new economic assumptions, and superior political clout. During the FY1987 budgeting year, inflation was being brought under control. The heavy negative bias attributed to OSD/OMB may be a by-product of a lowering inflation rate, not a true indication of OSD/OMB's budgeting role. However, budgeting theorists have consistently given OMB the role of budget cutter. There is no evidence to refute this role for OSD/OMB within the DON budget process.

B. STRATEGIES

1. Claimants

The most important strategy available to a claimant is to ask for a budget increase. Budget changes are most closely related to the budget requested by the claimant than to the budget changes made by NAVCOMPT or OSD/OMB. The support of the reviewing bodies helps maintain budget changes requested. But first a claimant must request an increase or no budget increase will be forthcoming. Next, claimants appear to be very willing to reclamation cuts made by NAVCOMPT in

comparison to cuts made by OSD/OMB. This suggests that claimants have a strategy to fight NAVCOMPT changes while generally accepting OSD/OMB changes.

2. Reviewing Bodies

NAVCOMPT and OSD/OMB have reviewing strategies that depend on the claimant's assertiveness. The final budget change of an assertive claimant is most dependent on the actions taken by the reviewing bodies. Changes in a non-assertive claimant's budget request can be very accurately predicted by the original budget request. Apparently, reviewing bodies have a strategy to restrict their budget reviews to claimants requesting significant budget increases. This strategy allows them to concentrate their efforts where they are most needed.

C. SUMMARY

The study tends to support PPBS as a rational decision-making process for budgeting. However, pure program budgeting does not exist within DON. Obviously, the budgets presented to NAVCOMPT are not directly related to programs. All claimants have more than one major program element in their budgets. "As long as some decisions are made in terms of specific input categories, cutting across program elements, they can on occasion disrupt program budget system, vitiate particular program change decisions, and cause considerable confusion" [Ref. 16:p.293]. Also, PPBS is not a complete assessment of the costs and benefits of every program in DON, much less DOD or the entire Government. NAVCOMPT's policy forces claimants to submit explanations only to the extent that their budget has been changed from last year's budget. The analysts of NAVCOMPT are told to look for incremental changes from the previous year's budget. Therefore, incremental budgeting is the norm in DON. Incremental budgeting does not correspond to the goal of a holistic analysis of the cost effectiveness of every program in DON. Finally, if budgeting under PPBS was simply a matter of costing out previously approved programs, an assertive claimant would have the same probability of receiving a budget change from NAVCOMPT as a non-assertive claimant. This does not happen. This is just a small list of why PPBS is not "pure" program budgeting.

If PPBS is not "pure" program budgeting, what is the purpose of this complex and costly system? PPBS allows top management to make ". . . broad, strategic, budget decisions . . ." [Ref. 2:p.93]. Although these decisions are marginally altered as they proceed through the PPBS process, the basic decision is supported. PPBS also

allows participants to be selective in reviewing programs. "Selectivity in the issues raised, in the programs reviewed, and in the range of alternatives examined is crucial to the success of PPB{S}" [Ref. 2:p.80]. PPBS not only helps participants to be selective in choosing issues, it helps keep analysts focused on marginal budget changes. This action provides the analyst a key tool in determining if budget changes are caused by program decisions or unwarranted claimant desires. Lastly, PPBS allows the majority of budgeting decisions to be incremental changes. There is an expectation that budgets will change incrementally unless a programmatic decision is made during the prior phases of PPBS.

In summary, PPBS has evolved into a budgetary process in which participants have developed roles and strategies to limit their responsibilities. "Muddling through" and incrementalism are still very much part of the decision-making process. However, NAVCOMPT and OSD/OMB have been able to isolate claimants to be supported based on planning and programming decisions. The rationality of PPBS lies in its ability to support the inherent rationality of traditional budgeting with meaningful analysis to increase budget efficiency on the margin.

This study does not attempt to explain all facets of the DON budgeting process. Future studies are necessary to achieve this objective. A good starting place for future studies is to address the shortcomings of this study. The greatest drawback to this study of the DON budgeting process is the short time period over which the study was conducted. It would have been improved greatly if the data covered time periods with different economic conditions, varying support of Defense programs, and a different Presidential administration. The roles and strategies that were found in DON may vary significantly dependent on these and other variables. In any case, more years need to be analyzed to improve the study's time-series analyses. Looking at other appropriations might also illustrate new and different strategies used within DON. (Example: The funding cycle of Ship Construction is vastly different from the funding cycle of the O&M,N appropriation account.) A comparison of strategies and roles among different appropriation accounts could validate the findings of this study or reveal that different accounts require modified behavior by budget participants. These are just two areas in which this study can be improved and expanded.

APPENDIX

ABBREVIATIONS

CNO (Chief of Naval Operations)

CPAM (CNO Program Analysis Memoranda) - An overview of the approved Five-Year Defense Program as modified by budget decisions.

CPFG (CNO Program and Fiscal Guidance) - Fiscal guidance targets for use in the preparation of fiscally constrained CPAMs and to provide initial programming policy guidance for POM development.

DG (Defense Guidance) - Authoritative statement of fundamental strategy, issues and rationale, as well as the guiding document for Services and Defense Agencies in the preparation of their Program Objective Memoranda.

DOA (Department of Agriculture)

DOD (Department of Defense)

DPS (Decision Package Sets) - Tentative budget decisions made by the Secretary of Defense after a budget review with the Office of Management and Budget.

FY (Fiscal Year)

FYDP (Five-Year Defense Program) - The official program which summarizes the Secretary of Defense approved plans and programs for the Department of Defense.

JCS (Joint Chiefs of Staff)

JPAM (Joint Program Assessment Memorandum) - A document prepared annually by the Joint Chiefs of Staff and submitted to the Secretary of Defense which provides recommendations on the joint force program within the fiscal guidelines.

JSPD (Joint Strategic Planning Document) - Provides the advice of the Joint Chiefs of Staff to the President, National Security Council, and the Secretary of Defense on the military strategy and force structure required to attain the national security objectives of the United States.

OMB (Office of Management and Budget)

OSD (Office of the Secretary of Defense)

NCBG (Budget Evaluation Group)- Responsible for the preparation of Department of the Navy Budget guidance and the control and coordination of budget submission.

NAVCOMPT or NCOMPT (Comptroller of the Navy)

PBD (Program Budget Decision) - A Secretary of Defense decision in prescribed format authorizing changes to a submitted budget estimate and the Five-Year Defense Program.

PDM (Program Decision Memorandum) - A document which provides decisions of the Secretary of Defense on Program Objective Memorandums and the Joint Force Memorandum.

PE (Program Element) - Describes the mission to be undertaken, identifies the organizational entities who will perform the mission assignment, estimates costs.

POM (Program Objectives Memorandum) - A memorandum submitted to the Secretary of Defense by the Secretary of a Military Department or the Director of a Defense Agency which recommends the total resource requirements within the parameters of the published Secretary of Defense fiscal guidance.

PPBS (Planning, Programming, and Budgeting System) - Strategy is developed in consideration of threat and policy. Force objectives are developed to support the strategy. Programs are developed to provide, on an orderly basis, ships, aircraft, weapon systems and manpower over a period of time, with due consideration of the total cost to the nation. Lastly, funds are budgeted in such a manner as to obtain the forces and weapon systems within the resources that the Congress provides.

RDT&E (Research, Development, Test, and Evaluation)

SECDEF (Secretary of Defense)

SECNAV (Secretary of the Navy)

SSPs (Sponsor Program Proposals) - Assignment of funds to programs by resource sponsors using fiscal and program guidance.

Source: Department of the Navy

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