

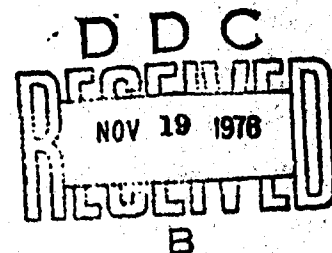
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LOGISTICS--ITS PLANNING, PROGRAMMING AND BUDGETING
IN THE OFFICE OF THE SECRETARY OF DEFENSE
1968-1970

Bernard Rostker

August 1972



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LOGISTICS--ITS PLANNING, PROGRAMMING AND BUDGETING
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* This paper relies upon the author's personnel experience within OSD during the period 1968-1970. Any firsthand evaluation of a system such as this must be to some degree subjective. To control for this, earlier drafts were reviewed for content by members of the OSD and Office of Management and Budget (OMB) staffs. However, the views presented here are those of the author. Furthermore, they should not be interpreted as reflecting the views of The Rand Corporation or the official opinion or policy of any of its governmental or private research sponsors. Papers are reproduced by The Rand Corporation as a courtesy to members of its staff.

INTRODUCTION

This paper describes the workings of the PPB system in the Office of the Secretary of Defense (OSD) as it pertains to logistics during the period 1968-1970. This review does not recommend specific changes, nor does it endorse present procedures. The existing system has many shortcomings, and in theory many improvements can be made, but any changes must be made in view of the institutional structure of the Department of Defense (DOD). In reality, the Secretary of Defense is not the omnipotent executive leading the Department down the road of rational and efficient utilization of scarce resources. More correctly the Secretary and his staff (OSD) can be compared with a shepherd and his dog. At best, if the dog is well trained, if the herder is experienced in his use, if the sheep are not too independently minded, then given patience, the sheep may end up where the herder intended. Under such a system of management improvements depend upon the quality of proposed changes as well as the ability of the system to adapt to change. Under the present system there are many factors which reduce the potential for rational decisionmaking. The following discussion will point up some of these factors.

WHAT IS LOGISTICS?

The general frame of reference for all discussions of Planning-Programming-Budgeting System (PPBS) resource allocation in the Department of Defense is the Five-Year Defense Program (FYDP). This document provides the basic framework from which OSD views the entire DOD establishment, and the major accounting-data base received by OSD. The FYDP is divided into ten major programs and over 1400 program elements (PE). Ideally, each PE is a specific sub-program with an identifiable mission-oriented end product. In concept, each PE contains those resources, physical (weapon systems), financial and human, required for the PE's force units to accomplish its assigned mission. In practice, the concept breaks down in the area of operating support. Such centrally organized and funded services as training, administration, command, and logistics provide support for many different weapons

systems and program elements. In some cases the cost of these services can be traced back to individual program elements. In many areas attempts to allocate costs to weapons systems are completely arbitrary.

There have been two approaches to the problem of joint costs of support services. The first argues that all support costs should be allocated forward to the "operational units" in the "primary-mission program elements." A second approach, the one currently incorporated in the FYDP, places only those costs "directly" associated with the weapons systems in the primary program elements and lumps all like indirect costs in a separate program element. This approach has the advantage that it closely resembles the internal organization of the Services and thus provides a basis for increased communication between OSD and the Service staffs.

In logistics the division between direct and indirect logistics support results in base and squadron supply and maintenance activities being considered primary costs. Therefore, such items of expense as squadron maintenance, replenishment spares and POL are recorded as direct operating costs in such primary program elements as "B-52" and "F-4." Logistics support accomplished at the Air Materiel Areas, such as central inventory control, depot maintenance and central procurement services are considered indirect costs and are recorded in FYDP Program VII, Central Supply and Maintenance Activities.

The effect of breaking logistics into its base and depot components is to deprive OSD of a total view of logistics. Several examples are noteworthy: (1) Base repair capabilities and policies have important effects upon depot repair actions and vice versa. Yet in OSD information is collected, analysis is undertaken and decisions are made without reference to the interface between base and depot maintenance. (2) In supply, the dollar volume of the retail stock fund is recorded as direct costs in the primary mission elements. However, the manpower and administrative expenses of the wholesale/stock fund are carried in Program VII and are programmed without reference to the level of activity of the retail stock fund. Within the FYDP framework logistics includes only the following activities:

Air Force Logistics FY 71	TOA (\$M)	Manpower (000)	
		Mil	Civ
Central Supply Operations			
Supply Depot Operations	237.0	1.4	16.5
Inventory Control Points	321.8	.8	16.8
Procurement Operations	81.0	.8	5.4
Maintenance			
Depot Maintenance	1,231.9	1.4	45.4
Logistics Support			
Printing Services	15.9	--	.9
Laundries	8.9	--	2.0
Second Destination Transportation	352.7	--	--
Industrial Preparedness	36.1	--	--
Log Support Activities	31.3	--	--
Total	2,317.2	4.4	87.0

In FY 71, these central logistics activities account for 8.51 percent of Air Force manpower and 9.97 percent of the total Air Force budget.

The Planning-Programming-Budgeting System

Before examining the PPB process for logistics it is useful to review the development of PPBS in the Department of Defense. Prior to 1961 the Secretary of Defense lacked the organization, concepts and tools needed to effectively direct the nation's military program. Rational decisionmaking was hampered because military requirements were not systematically developed and related to cost; the annual budget, the only Department-wide planning document, was organized by category of resource rather than by force or mission; and there was no integrated system of management information on forces, manpower and costs. In addition, the basic framework of allocating an arbitrary fixed budget by Service rather than mission made it difficult to achieve a balanced profile. (For example, the airlift furnished by the Air Force was inadequate to meet the Army's requirement for transports.) When President Kennedy took office, he instructed Mr. McNamara to develop a military force necessary to meet the nation's worldwide commitments, without regard to budget limitations, and to procure and operate this force at the lowest possible cost. It was these instructions that ushered in the era of requirements calculations and cost effectiveness.

To initiate this new guidance, Secretary McNamara instituted the so-called Planning-Programming-Budgeting System (PPBS). PPBS was designed to tie long-range military planning to the formulation of the budget by means of a programming system. The major feature of the system was the division of the Department into major mission programs. This concept recognized the complementarity of major defense missions and the substitutability of individual weapons systems within major programs. PPBS made it possible to obtain a better balanced military profile, while eliminating unnecessary Service duplication.

To implement the PPB system, a yearly planning cycle was established. The cycle started with the Joint Chiefs' (JCS) Joint Strategic Objective Plan (JSOP). This plan provided the JCS' assessment of the forces required to meet the President's general strategy. The JSOP was reviewed by OSD and was an input to the series of major force memoranda (DPM/DGM/MPM) prepared by OSD (Systems Analysis). After review by the Secretary, these force memoranda were issued "for comment" to the Services. The Services and the JCS reviewed these papers and submitted reclamas. The Secretary and his staff reviewed the reclamas and issued "tentative program decisions" which served as a basis for the Services' detailed budget requests.

While this system seems to provide adequate chances for the JCS and the Services to participate in top decisionmaking, this was seldom the case. More often than not the JSOP was ignored by the OSD staff in the development of the DPM/DGMs. In fact OASD(SA) authored the major policy memoranda, reviewed the reclamas and wrote the tentative program decisions. While in the end it was the Secretary's own decision, this decision seldom differed from that recommended by his staff.

The PPB system was also unrealistic in that it did not provide adequate strategy guidance nor force structure and budget alternatives for consideration by top defense decisionmakers. It lacked explicit financial guidance and as a result it lead to planning unrealistically expensive defense programs which had to be cut drastically during the annual budget review. By necessity, these cuts, sometimes as great as 20 percent, were often made without regard to the long-range impact on military capability.

Under Mr. Laird and Mr. Packard many aspects of PPBS were significantly altered. Most noteworthy, is the introduction of financial reality to the PPB process. Clearly, the total resources available to the Federal Government are limited by the state of the economy and the revenue policy of the Government. Within the total Federal program, Defense is only one of many competing claimants for funds. The President has always, implicitly or explicitly, provided budget ceiling on Defense. Under the Nixon Administration the ceiling is explicit and is made after a Government-wide review of alternative defense and domestic strategies and budget and revenue policies. To implement this new PPB system the Secretary of Defense issues strategic and fiscal guidance, which set the planning parameters for the programming process. Within the limits set by these documents the Services and the JCS submit their detailed proposals on the forces and manpower needed to meet the strategy guidance. (It is interesting that Mr. Packard has indicated that if the available resources are not sufficient to meet the strategy guidance, he will change the strategy.) Based upon a review of the Service proposal by OSD, the Secretary will decide upon a defense program which will serve as a basis for the annual Services budget submits.

Programming and Planning Logistics

Until 1969, logistics was not included in the Planning and Programming (PP) portion of the PPB system. In general, the OSD force planning memoranda (DPM/DCM) were reserved for consideration of weapons systems/force issues. (While there was a "Logistics Guidance Memorandum" it exclusively considered war reserve materiel requirements, a direct cost item and not included in the FYDP definition of logistics.) It was expected that the Services would individually update their FYDP to reflect major force issue decisions made during the programming process and that the resulting budget would provide an "appropriate" level of logistics support.

The effect of not including logistics and other general support activities in the planning and programming process was to deprive top DOD management of an opportunity to review long-range logistics planning.

An examination of the FYDP during this period reveals that, while projections of outyear force units and their direct resources fluctuated, logistics activities were projected to continue at their previously programmed budget level. This created the illusion that logistics was insensitive to changes in force levels or their utilization. In addition, by excluding general support from the DPM/DGM process the Department never knew the magnitude of the total Services' budget requests until the actual budgets were submitted in late October. This left little time for OSD to examine the efficiency of the support establishment and the overall force/support mix. The seriousness of this is indicated by the fact that general support accounts for over 30 percent of defense TOA and 50 percent of defense manpower.

In 1969, an attempt was made to introduce the programming and planning process to the area of General Support. *The Manpower and General Support Major Policy Memorandum* represented an attempt to provide outyear projections of support requirements consistent with the forces proposed in the force planning memorandum. It was the first time that top management was exposed to a resource plan for general support, and the first time that the entire Department was examined as an integrated whole. While the immediate value of the 1969 planning and programming cycle was lessened by the budget exercise Project 703, the concept of total force-support planning was firmly established and played an important part in the "Fiscal Guidance" planning and programming process of 1970. (Budget Project 703 was an attempt to cut the "current year," FY 70, expenditures by three billion dollars to reduce a projected Government budget deficit.)

The original object of the Manpower and General Support MPM was to provide a support program consistent or balanced with the long-range program proposed in the major force memorandum. This was accomplished by building resource allocation models based upon the existing support system. For example, in the area of logistics, if the Air Force budget contained \$981 million for aircraft maintenance, and if the normalized depot costs of maintaining an F-4 was \$.330 million, the elimination of an F4 squadron of 18 U.E. aircraft from the force inventory would result in a projected maintenance program of \$975 million [$981 - (.330 \times 18) = 975$]. Therefore, a balanced logistics

program was implicitly defined in relation to a specific point in time and the average historical cost per weapon system. Balance was defined as providing the same relative level of logistics support in the out-year as existed in the base year.

Under the pressure of substantial DOD budget reductions the concept of balance was replaced by the concept of sufficiency. This recognized that the existing levels of relative logistics support were not necessarily optimal and that a relative reduction in support was a viable alternative to reduce combat forces in a fixed budget environment. Clearly, if logistics activities are inefficient or if logistics requirements are overstated, the Defense Department may be misled into buying less combat forces than it can actually afford. Conversely, if logistics requirements are underestimated, or if a logistics system more efficient than is really possible is projected, essential logistics service may not be provided and the effectiveness of existing combat force may be reduced.

Operationally, the sufficiency concept is difficult to handle. Ideally, one would like to be able to specify how a reduction in the relative level of logistics support will effect the operational characteristics of the Air Force. However, there are many reasons why a definitive statement of the precise relationship between logistics support and operational proficiency cannot be made. Nevertheless, in one year long-range logistics planning and programming at the OSD level progressed from a state of neglect, to programming a "balance" logistics establishment, to searching for a "sufficient" logistics program.

Working the Planning and Programming Process

Although, since 1969 a system to plan and program logistics resources has been developed there are many factors which limit its effectiveness. In the first place, it is questionable how effective the entire PPB system has been over the past two years. In 1969, the Project 703 budget reduction exercise interrupted the PP cycle after the OSD force memoranda were published. The 703 reductions projected into FY 71 resulted in budget levels below those originally envisioned in the OSD force memoranda. OSD prepared an "omnibus" programming

decision which validated the 703 reductions and the FY 71 budget levels and projected them into the outyears. One of the interesting things about the 703 budget exercise was that the Services were given the responsibility for reducing the budget. In previous budget drills (Project 693, for example, during the summer of 1968) OSD initiated the budget reduction proposals. The significance of this should not be lost. This was the first example of the Laird-Packard "participatory management" concept, whereby the JCS and the Services are expected to accept a greater responsibility for detailed management. Project 703 had three immediate effects. First, it was a bloody affair within the Services. After ten years of presenting unconstrained requirements the Services were unprepared to make the hard allocation decision among competing programs. Second, it marked a change in System Analysis (SA) role from that of a proponent to that of a reviewer. It took SA out of the "micro" analysis business. Clearly, the burden of proof concerning major force and support issues was no longer on the Services. It was now up to SA to present a strong case to overturn a Service recommended position. Third, it resulted in a five-year defense program derived from short-run budget requirements.

The 1970 PP process was the first under the new PPB system. A great deal of effort was expended in an attempt to improve the PP process by providing the JCS and Services with an effective voice and by eliminating the end year rush to reduce program levels to realistic budget levels during the budget cycle. Early in 1969 the White House, as part of an overall review of the role of the Government, reviewed alternative defense strategies and budgets. A one and one-half war strategy and appropriate five-year budget levels were decided upon. By January this guidance had been passed to the Services in the Secretary's strategic and fiscal guidance memoranda. About the time the Services' Program Objective Memoranda (POM) were published it was discovered that the original financial guidance was unrealistically high by an order of magnitude. Apparently the original Government-wide expenditure and revenue projections had not sufficiently accounted for the slowing down of the economy. The entire planning and programming process halted as the Department awaited new guidance. In late

August the Secretary instructed the Services to use their POMs as the basis for their annual budget submit. For the second year, the PPB cycle was reversed. The budget was submitted and was decisioned without an approved FYDP. Sometime after the budget process was completed, OSD and the Services developed an appropriate plan and five-year program consistent with the FY 72 budget.

Short of the overall PPBS problems the quality of logistics and general support programming is reduced by the fragmentation of overall responsibility within OSD. Basically, there are three offices within OSD which should be interested in long-range logistics programming: Systems Analysis as the general force planning unit in OSD, the Comptroller as the financial manager of the Department, and OASD (Installations and Logistics) as the staff office concerned with the logistics functions. Unfortunately, at present only SA participates in the PP process. In general, the Comptroller's office is concerned with only the budget. Given the Services budget submits and guidance from the Secretary, the Comptroller produces a Defense budget which is incorporated into the President's Executive Budget. Basically, the Comptroller is unconcerned with force planning and by the fact that, if the PP process was to work, the Services budget submits would be constrained by programming decisions.

On the operating level there is a breakdown in communication between the SA and Comptroller staffs. This may stem from the different viewpoints each has of the PPB systems. The SA staff views the Department in terms of broad aggregates and is constantly searching for gross planning relationships which can be used to project outyear resource requirements. The Comptrollers look at the Department in terms of the detail of the budget. The Comptroller fails to see how meaningful decisions can be made at such high levels of aggregation. In return, SA accuses the Comptroller of "bean counting" and fails to recognize that the detailed knowledge and experience of the Comptroller's staff can be very useful in the planning and programming exercise.

OASD(ISA) generally is not involved in the programming and planning process. ISA seems to believe that its role as the Secretary of Defense's resident expert on logistics does not extend to making specific recommendations concerning outyear funding of the logistics

establishment. It has attempted to influence logistics not through the planning system, but by issuing general logistics policy guidance in the form of Department of Defense Instructions (DODIs). The effect of these policy statements is questionable because they tend to be overly general, vague and sometimes inconsistent. The DODIs are often issued without any meaningful timetable for implementation or the guarantee that resources will be available to carry out policy guidance.

The Budget

The concept of a planning, programming and budgeting system is relatively new. However, at least one component of the system is well based in tradition -- the budget. There are very few absolutes in the Department of Defense; one is that the Defense Department's budget must be ready by the beginning of January for inclusion in the President's executive budget. The DOD Comptroller, to complete the budget on time must receive the Services' budget submit by November. In turn, the Services should obtain firm program guidance no later than September, if they are to meet the Comptroller's deadline. As already noted, during the last two years the Services have submitted their budgets without an approved Defense program.

To a great extent the budget process is an exercise in political gamesmanship. At a minimum each program tries to protect its "fair share." As new events result in added leverage, programs attempt to increase their relative and absolute share of the total budget. The budget submits are reviewed by the Comptroller incrementally and by exception. The budget is divided into appropriation categories, i.e., O&M, R&D, investment, and then by program. As a result, the budget is submitted, reviewed and decisioned with the most informal coordination between appropriation -- program areas. Decisions are often made in one area without regard to possible implications in other appropriation -- program areas.

Within each program area the budget submit is "marked" or specific action is taken if the budget examiner has reason to believe that the budget estimates are inflated, or if a given item of expense is relatively greater than last year and a plausible explanation is not available. This is a common occurrence since the people required to defend

the submit generally are not the ones who prepared the budget estimates. In most cases budget items, not specifically addressed by a programming decision and which are "in line" with past experience, are approved intact.

The logistics budget is usually reviewed by three teams of examiners. Separate "hearings" are held for supply and general logistics support activities, purchased equipment maintenance funding, and depot maintenance activities. Each budget team is led by an examiner from the DOD Comptroller's office. The teams also includes a representative of the Office of Management and Budget (OMB) and any other interested OSD personnel. The budget alternatives presented to the Secretary for decision are written by the Comptroller's shop with the advice, but not necessarily the consent, of the OMB or the other OSD offices. If major disagreements exist, the other OSD offices may present a dissenting position paper. It is noteworthy that DOD is the only government department or agency which does not submit its budget to OMB for separate review. While OMB personnel partake in the internal Defense budget process the final budget decision is made by the Secretary of Defense. The Director of the OMB has not unilaterally overruled the Secretary's decision since 1961. He can and has on occasion raised his objections with the President.

Reviewing the Supply Activities Budget

The supply activities consist of central supply depot, inventory control and procurement operations. The budget submit contains information on the past, present and budget years. The operations budget shows requests for funds and civilian manpower and contains some workload data. Requests for military manpower and investment funds, while used by the central supply activities, are examined in separate hearings.

The usefulness of workload data presented during the operations hearing is questionable. The budget contains data on line items shipped and received, tons shipped and received, items cataloged, and requisitions processed. However, it is not clear if the workload indicators are used to generate the "required" funds and manpower or vice

versa. If the workload data are to be meaningful, they should establish a bridge between the forces requiring support and the resources needed to provide that support. Unfortunately, the Air Force has been unwilling or unable to specify the relationship between forces and workload. When the Air Force budget team was pressed on why they supplied workload data they replied, simply to meet the budget format required by the Comptroller.

One reason the budget often is internally inconsistent, and workload data and requested funds do not track, is the disconnect between the programming and budget process. Theoretically, the budget is the final review of the first program year. The program costs are developed by applying statistical cost factors to force and activity levels, i.e., F4 replenishment spares equals number of F4 times flying hours per aircraft times replenishment spares per F4 flying hour. The budget, on the other hand, supposedly contains detail cost, manpower and workload estimates built up from base to command to headquarters, on a line-item appropriation basis. The process of collecting this detailed information takes many months and begins before final force, activity or fiscal guidance is available. Sometimes in the late summer the programming and budget processes clash. The Services are required to squeeze the detail budget estimates into the mold constructed by aggregate programming decisions. Generally detailed workload data is "massaged" to fit the cost factored manpower and funds of the approved program.

Reviewing the Maintenance Budget

The Air Force maintenance program is carried out under the industrial fund concept. This provides for separate budgets for the consumer and producer of maintenance services. Theoretically, the consumer can choose between organic depot and contract facilities in an attempt to obtain the best repair price. The in-house depot supposedly becomes cost conscious, as it must compete for the customer's business. In reality, the Air Force's industrial fund operation does not vaguely resemble a competitive market. First, the customer and the major producer are one and the same. The customers are the individual item and

system managers of AFLC. The major producer is the organic depots of the same command. Second, the cost consciousness of the depots is impaired because the customers must place their business with the designated repair activity. Unfortunately, repair worklines are established with little regard to cost. Such factors as politics, available capacity, and the long-range plans of AFLC play a dominant role in the establishment of repair activities and the assignment of work.

The customers' maintenance budget is reviewed in three parts -- airframes, engines and components. Again, there is no explicit connection between the overall force level and the budget request. This is partly explained by the fact that the budget submitted to OSD does not represent the "total" requirement for maintenance funds. The budget reflects the Air Force's internal decision that, within the limits of its total budget, it cannot fully fund its depot maintenance program. For example, during FY 71, based upon detailed budget requirement calculations undertaken by the individual item and system managers of the Air Force Logistics Command (AFLC), full funding of the Air Force's maintenance program would result in an expenditure of \$1,413 million. This requirement is based upon repairing enough on-hand components to replenish depleted base, depot and war reserve stocks. In addition, all aircraft requiring MOD/IRAN and all engine reworks would be funded.

The Air Staff and AFLC attempted to reduce the total requirements by taking specific management action. Their "minimum funding level" requirement of \$1,214 million was based upon their decision to provide no supply depot stocks to hold base stocks at the 10-day level, to reduce requirement equal to the historical actual-programmed workload discrepancy, to take an optimistic view of the long-range trend of base level repair productivity, to reduce government furnished material (spare parts) stockage levels at contractors, and to reduce the IRAN work packages.

Although the above funding level was considered by the Air Force as their minimum funding level, the FY 71 budget contained \$981 million for the depot maintenance program. As a result, there were approximately 1100 aircraft on extension at the end of FY 71. The Air Force stated that this reduced funding level would result in a

decrease in their operational readiness. However, they have been unable to quantify the loss in force effectiveness which results from not performing recommended maintenance on airframes, components and engines.

The depot maintenance-producers budget submit presents the request of civilian maintenance manpower and the consolidated income and balance sheets of the maintenance industrial fund. Final manpower authorizations are coordinated with the overall level of funding approved for the maintenance customer. The financial reports do not portray the full extent of depot maintenance activity. They omit military pay and allowances, depreciation on capital and the cost of major new equipment.

The main purpose of the industrial fund hearing is to examine the depot maintenance rate and the solvency of the fund. The repair rate charged customers is expressed as dollars per direct man-hour of work, and includes actual cost of the direct laborer and a prorated portion of the depot's overhead. The rate is set so that at the end of the fiscal year the fund will not have incurred a loss nor made a profit. Unfortunately, there is no attempt to examine the true efficiency of the maintenance activities. OSD attempts to pressure the depots to keep their overhead to direct manpower as low as possible, i.e., in line with past performance. However, productivity, i.e., man-hours to accomplish a given task, is not addressed.

CONCLUSION

The institution of program budgeting into the Federal Government marked a victory for such economists as Hitch, Enthoven, Smithies and Burkhead who argued that governmental resource allocation could be made more rational by an introduction of economic concepts. There were those, however, Lindbloom and Wildavsky most noteworthy, who argued that the sociology of the budget process was an important factor to consider. After 10 years of PPBS the promised rational decisionmaking is yet to arrive. This paper, while concentrating on the PPD process for logistics, has pointed up many factors which have resulted in a less than optimal implementation of PPBS in the Department of Defense. For example, the system has faulted because it has:

- (1) Failed to deal with the Defense Department as an integrated whole.
- (2) Not provided realistic guidance.
- (3) Given undue attention to the details of the programming cycle at the expense of carrying out analysis.
- (4) Allowed a fragmentation of responsibility which resulted in poor coordination.
- (5) Lacked analytic talent, and concentrated what talent existed in one organization and gained the hostility of the rest of the Department.
- (6) Attempted to impose a new process on an old system without making major personnel or organizational changes.

In sum, the goal of PPBS may be achievable and the system may be operable, but it can only be implemented with an understanding of the institution and sociology of government.