which could be supported by the economy. Vietnam, in contrast, and to some extent Korea, are examples of conflicts in which our uncertainties have included both our own as well as enemy actions.

1. *The Diem Coup in 1963.*—From 1954 through early 1963, the U.S. role in South Vietnam was limited to providing training and military advisory activities. Fewer than 1,000 members of the U.S. armed forces were stationed in South Vietnam during the period 1954–1960. This number rose slightly in 1961, to 1,364. During 1962, an expansion occurred to almost 10,000 [3] (see Table 1). In early 1963, the situation seemed relatively stable. In February, Secretary McNamara stated, "The drive of the Vietcong supported by the North Vietnamese against the established government in South Vietnam has been blunted . . . There are a number of factors that are favorable, a number of indications that the South Vietnamese are stronger in relation to the Vietcong than they were a year ago." [4]

TABLE 1.—*U.S. military personnel in South Vietnam*

Date	*Number*
1954–60 (average)	650
Dec. 31, 1960	773
Dec. 31, 1961	1,364
Dec. 31, 1962	9,865
Dec. 31, 1963	16,575
June 30, 1964	21,000
Dec. 31, 1964	[1] 23,300
June 30, 1965	[1] 103,000
Dec. 31, 1965	184,314
June 30, 1966	[1] 322,000
Dec. 31, 1966 (estimated)	[1] 455,000

[1] Total of U.S. military personnel in southeast Asia.

Source: U.S. House of Representatives, Committee on Appropriations, *Department of Defense Appropriations for 1967,* Part 1, p. 378; *1968 Budget,* p. 77.

However, later in the year Buddhist agitations against Diem increased markedly. Combined with the continued deterioration of Diem's governmental support, these events culminated in his death and the overthrow of his government in November 1963. There followed a very substantial increase in Vietcong activity and a weakening of the fabric of the South Vietnam society. In commenting on this period, Secretary McNamara stated that, "the political control structure . . . has, in certain cases, practically disappeared following the November 1 coup . . ." [5]

Nevertheless, the position of the Administration remained, in the words of the Secretary of Defense, "This is a Vietnamese war, and in the final analysis it must be fought and won by the Vietnamese." [6] Several weeks after the coup, the Secretary announced that, upon completion of certain training missions, "small numbers of the U.S. personnel will be able to return by the end of this year." About 1,000 U.S. soldiers were returned to the U.S. during that period.

2. *The Vietcong Initiative in 1964.*—In 1964, the Vietcong stepped up their rate of attack, especially against the rural population. During the year, they killed an estimated 436 hamlet chiefs and other government officials at all echelons and kidnapped an additional 1131.[7] To put that in perspective on the basis of relative populations, we can multiply the figures by 12 and think of 18,800 mayors, governors, and legislators in the United States being murdered or kidnapped in the space of one year. Also, it was reported that the Vietcong were using weapons of higher calibre than previously noted and that these weapons were being supplied by the North Vietnamese. These included 75 milli-

[3] These figures are taken from a tabulation provided by General Harold K. Johnson, Chief of Staff of the U.S. Army, and published in U.S. House of Representatives, Committee on Appropriations, *Department of Defense Appropriations for 1967,* Part 1, 1966, p. 378.

[4] Remarks by Secretary McNamara before a press conference on February 28, 1963, and published in U.S. Senate, Committee on Armed Services, *Supplemental Defense Appropriations for Fiscal Year 1966,* 1966, pp. 64–65 (hereafter referred to as *Senate Armed Services Hearings*).

[5] Testimony by Secretary McNamara before the Appropriations Committee of the House of Representatives on March 24, 1964, published in *Senate Armed Services Hearings,* p. 70.

[6] Testimony by Secretary McNamara before the Armed Services Committee of the House of Representatives on January 27, 1964, published in *Senate Armed Services Hearings,* p. 67.

[7] Department of State, *Aggression From the North, The Record of North Viet Nam's Campaign to Conquer South Viet Nam,* Washington, D.C., February 1965.

meter recoilless rifles and large stocks of machine guns and ammunition of Chinese manufacture.[8]

By the end of 1964, the number of U.S. troops in South Vietnam had risen to 23,300. Even so, the U.S. involvement was still only that of support. The military budget presented in January 1965 actually projected a small decline in total U.S. defense spending for the fiscal year ahead. However, the Tonkin Gulf Resolution approved by Congress in August 1964 authorized all necessary measures "to repel any armed attack against U.S. forces and . . . to prevent further aggression in Vietnam."

3. *The North Vietnamese Infiltration in 1965.*—A significant change in the nature of the conflict occurred in 1965—the intensification of infiltration of arms and personnel into South Vietnam. The increase in infiltration gave the Vietcong increased capability, enabling them both to operate in larger units and to increase the number and intensity of attacks.[9]

The resulting expansion in the U.S. role in Vietnam is explained by the following dialogue between a member of the House Appropriations Committee and Secretary McNamara in April 1965:

Question: "Is our stepped-up effort there, our direct intervention and air strikes, motivated to some extent by the feeling that time is of the essence?"

Answer: "Our increased effort is motivated by the fact that the North Vietnamese were greatly increasing their infiltration of men and equipment into South Vietnam. We recognized if they continued that they will just overwhelm the nation." [10]

In February 1965, the United States Air Force began bombing targets in North Vietnam. The decline in total uniformed personnel of the U.S. Army halted in March. In April, the U.S. buildup of troops in South Vietnam rapidly accelerated. In May, the Administration asked for and Congress quickly approved a $700 million military supplemental appropriations bill for the fiscal year 1965.

The estimated ratio of 4 Vietnamese military forces to 1 Vietcong was considered highly unfavorable for successful South Vietnam prosecution of guerrilla warfare, particularly in view of the ratio of at least 10 to 1 found necessary for successful anti-guerrilla operations in Malyasia, the Philippines, and elsewhere. Accordingly, a major expansion of U.S. armed strength in South Vietnam was underway in 1965, reaching a total of 184,314 by the end of the year. This represented an expansion of sevenfold over the previous year.

During the monsoon season of 1965 the Vietcong attempted to cut South Vietnam in half and thus bring about a signal victory. The sharply-increased U.S. capability was instrumental in blunting this drive. This led the Secretary of Defense to state in November 1965, that ". . . we have stopped losing the war." [11]

4. *The Reliance on U.S. Combat Forces in 1966.*—By early 1966, the U.S. forces were conducting the bulk of the offensive military actions against the Vietcong. This can be inferred from Secretary McNamara's analysis of the four major types of military operations against the Vietcong during that period.[12] A schematic presentation based on his Congressional testimony follows:

Type of military operation	Purpose	Primary responsibility
Search and destroy	Destroy known or suspected Communist forces and their base areas. Excludes seizing and holding territory permanently.	United States and other free world forces and strike elements of South Vietnamese Armed Forces
Clear and secure	Permanently eliminate Communist forces from specified areas. Includes conducting pacification measures.	South Vietnamese forces.[1]
Reserve reaction	Relieve Provincial capitals and district towns under Communist attack and reinforce friendly forces when needed.	Do.[1]
Defense of Government centers.	Protect Provincial capitals, district towns, and key Government installations.	Do.

[1] With assistance from U.S. forces and other free world forces.

[8] *Ibid.*, pp. 14–20.
[9] Cf. Interview with Secretary McNamara, *U.S. News and World Report*, April 12, 1965.
[10] Testimony by Secretary McNamara before the Appropriations Committee of the House of Representatives, published in *Senate Armed Services Hearings*, p. 77.
[11] Statement by Secretary McNamara at a planeside interview upon departure from Saigon, published in *Senate Armed Services Hearings*, p. 91.
[12] Testimony by Secretary McNamara, House of Representatives, Committee on Appropriations, *Department of Defense Appropriations for 1967*, Part 1, 1966, pp. 134–135.

During 1966, the regular Army, Navy, Marines and Air Forces of South Vietnam numbered about 320,000,[13] and were primarily responsible for the more passive missions, such as pacification and defense. Total U.S. forces in South Vietnam exceeded 300,000 in 1966, the bulk of them assigned to the active "search and destroy" mission.

It should be noted that various paramilitary forces also are available to South Vietnam. According to recent estimates, these include approximately 150,000 in regional forces, 150,000 in popular forces, and 110,000 in national police, armed combat youth, and civilian irregular defense groups.[14]

Clearly, during 1966 the nature and extent of U.S. involvement in Vietnam were altered fundamentally. Subsequent chapters will trace through the consequences of these changes on the U.S. military budget and the economy.

5. *An Overview. It is clear that the U.S. role in Vietnam changed from support to combat when the South Vietnamese government and armed forces no longer could withstand the combined onslaught of the Vietcong and massive infiltration of North Vietnamese equipment and manpower.*

It is futile to speculate as to anyone's ability to have precisely forecast these developments prior to their occurrence. In any event, *the uncertain nature of future developments in Vietnam continually clouded the public and private analyses of their unfolding impact on the U.S. Budget and the American economy.*

A historical review—admittedly an armchair analysis—is undoubtedly easier now than any contemporaneous effort. Two types of statements by the Department of Defense increased the difficulty: (1) extremely firm statements on the limited nature of the U.S. role which did not turn out to be that limited and (2) optimistic statements which were technically accurate but which nevertheless ended to mislead regarding future prospects.

For example, on various occasions in 1963 and 1964 the policy was expressed that the war was to be fought not by U.S. troops but by Vietnamese, a policy position that later became inconsistent with the changed military and political situations. Indications of this can be found in the following excerpts from a series of quotations, which Secretary McNamara presented to Congressional committees early in 1966 in connection with press reports concerning "the reliability of my statements with respect to the outlook in South Vietnam." [15]

January 27, 1964. "This is a Vietnamees war, and in the final analysis it must be fought and won by the Vietnamese." [16]

May 6, 1964. "We can provide advice; we can provide logistical support; we can provide training assistance, but we cannot fight the war itself." [17]

And then, after U.S. troops were engaged in combat on a large scale:

August 9, 1965. "They [South Vietnamese forces] are bearing the brunt of the fighting; they will continue to bear the brunt of the fighting." [18]

The relatively optimistic appraisals of the outlook was retained from 1963 to 1965, as reflected in the statements of the Secretary of Defense (taken from the same report).

July 19, 1963. "The military operations in South Vietnam have been proceding very satisfactorily and this is true no matter what method you apply to them. We are quite pleased with the results." [19]

November 21, 1963. ". . . we are equally encouraged by the prospects for progress in the war against the Vietcong." [20]

December 21, 1963. "We reviewed in great detail the plans of the South Vietnamese and the plans of our own military advisers for operations during 1964. We have every reason to believe they will be successful." [21]

May 14, 1964. "The path to victory will be long and it will take courage and imagination for both the Vietnamese and for our forces who are assisting them to assure success, but I firmly believe that the persistent execution of the political-military plans which the Government of Vietnam has developed to carry out that war with our assistance will lead to success." [22]

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[13] U.S. Senate, Committees on Armed Forces and Appropriations, *Supplemental Military Procurement and Construction Authorizations, Fiscal Year 1967*, January 1967, p. 17.
[14] *Ibid.*
[15] *Senate Armed Services Hearings*, p. 63.
[16] *Ibid.*, p. 67.
[17] *Ibid.*, p. 73.
[18] *Ibid.*, p. 86.
[19] *Ibid.*, p. 65.
[20] *Ibid.*, p. 66.
[21] *Ibid.*, p. 67.
[22] *Ibid.*, p. 73.

November 10, 1964. "So I think that today, as compared to a month or two ago, we can look ahead with greater confidence." [23]

May 9, 1965. "I think in the last eight weeks there has been an improvement." In response to the question, then you, yourself, are more optimistic? "Yes, I am. . . ." [24]

However, by 1966, a new note of caution had entered into official statements. In February, the Secretary of Defense testified to the House Appropriations Committee that "we must assume that the number of North Vietnamese Regular Army troops in South Vietnam will continue to increase substantially in the months ahead . . ." [25]

In January 1967, he stated at a joint hearing of the Senate Appropriation and Armed Services Committees, "I do not know of any war of any substantial size that anyone has ever been able to predict the end of it accurately, and we cannot do it here." [26]

To repeat, the purpose of reviewing these statements is to demonstrate and underscore the difficulties in analyzing the impacts of these developments on the American economy at the time they were occurring.

II. HOW A MILITARY BUILDUP AFFECTS THE ECONOMY OVER TIME

Many of the difficulties that have been encountered in analyzing the impact on the American economy of the Vietnam military buildup step from long-term deficiencies in our theoretical knowledge or in our statistical information. This chapter indicates the nature of these deficiencies and briefly analyzes an earlier similar situation—the Korean mobilization program.

A. Leads and lags in Government spending impact

While each of the numerous steps of the Federal Government spending process need not be examined, it seems useful to highlight the ones that are most relevant to the purposes of the present study in order to detect the problems involved in measuring the economic impact of a military buildup.

As a starting point, we may take the Presidential budget which is transmitted to the Congress each January and covers the 12-month period beginning the following July 1. The Presidential recommendations are subjected to many months of detailed Congressional scrutiny and to numerous revisions before the funds are appropriated. Following quarterly apportionment of the funds by the Bureau of the Budget, the various Federal agencies commit the funds appropriated to them for their various authorized activities. Thus the funds are "obligated". For many government programs, disbursements follow rather quickly. Pension payments to veterans, interest payment to holders of the national debt, and wage and salary payments to government employees are made simultaneously with or very soon after funds are obligated.

However, obligations for major items of equipment purchased from the private sector are in the form of orders awarded or contracts placed; such transactions are not soon followed by equivalent amounts of expenditure. Particularly in the case of military weapon systems, a considerable amount of time is necessary for the design, production, and delivery of the items ordered. On the larger items, so-called "progress payments" are made to provide working capital but these are less than the cost of the resources currently being utilized by the defense contractors (about 70 percent). Also, these partial payments lag behind the actual disbursements by government contractors to their employees, suppliers, and subcontractors. The delays involved are hardly trivial. During the Korean War, it was estimated that the lag between ordering and delivering typical military items varied from six months for uniforms to fifteen months for tanks to over two years for combat aircraft. The leadtime for procurement of aircraft for Vietnam has been estimated by the Department of Defense at 18 months. The estimate for ammunition is six months.[27]

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[23] *Ibid.*, p. 75.
[24] *Ibid.*, p. 80.
[25] Cf. Committee on Appropriations, House of Representatives, *Department of Defense Appropriations for 1967*, 1966, p. 137.
[26] U.S. Senate, Committee on Armed Services and Appropriations, *Supplemental Military Procurement and Construction Authorizations, Fiscal Year 1967*, January 1967, p. 46.
[27] M. L. Weidenbaum, "The Economic Impact of the Government Spending Process," *Business Review*, The University of Houston, Spring, 1961, p. 11; U.S. Senate Committees on Armed Services and Appropriations, *Supplemental Military Procurement and Construction Authorizations, Fiscal Year 1967*, January 1967, p. 163.

In the case of military procurement programs, it is clear that the placement of orders with defense contractors and their commencement or expansion of production generate demands for resources, which are evidenced by the hiring of manpower and the acquisition and utilization of raw and semi-processed material. The key problem here, however, is that all such activity shows up in the private sector and not in the public sector.

The progress payments, of course, are recorded in the administrative and cash budgets at the time they are made. However, the newer and supposedly more sophisticated measure of Government finance—the so-called national income budget—takes acount, not of these progress payments, but only of the actual delivery of the completed weapons. Because this point is so basic to understanding developments in the American economy during the last few years, some elaboration seems desirable.

Table 2 shows the impact of a hypothetical government expenditure program involving the purchase of $50 million worth of goods produced in the private sector of the economy. For purposes of simplicity, the Gross National Product is divided among Government Purchases, Business Inventory Accumulation, and All other.[28]

TABLE 2.—*Illustrative impact of the major stages of the Government spending process ($50,000,000 procurement program)*

[In millions of dollars]

Stage	Government purchases	Business inventory accumulation	All other	GNP
1. Appropriation				
2. Contact placement				
3. Production		+50		+50
4. Delivery	+50	−50		

NOTE.—Only direct effects are shown.

Sources: Adapted from M. L. Weidenbaum, "The Timing of the Economic Impact of Government Spending," National Tax Journal, Mar. 1959, p. 82.

The process begins with a Congressional appropriation of $50 million. No direct effect occurs on the level of economic activity. The Federal agency receiving the appropriation then places a contract with a private firm, which prepares to produce the order.

Actual production then follows. The total cost (including profit)—here estimated at $50 million—initially shows up in business inventories. Progress payments do not change this because they are not entered into the GNP accounts. Such payments are excluded because they are not considered to represent the flow of resources but are merely financial transactions. When the work is completed and the items are delivered to the Government, the $50 million transaction is then recorded as a government purchase—*and* a corresponding decline occurs in business inventories. As can be seen in Table 2, *the delivery stage has no impact on GNP; the expansive effect of the government purchase occurred earlier, following the receipt of the government order and the commencement of production.*

B. *Problems of measurement and data availability*

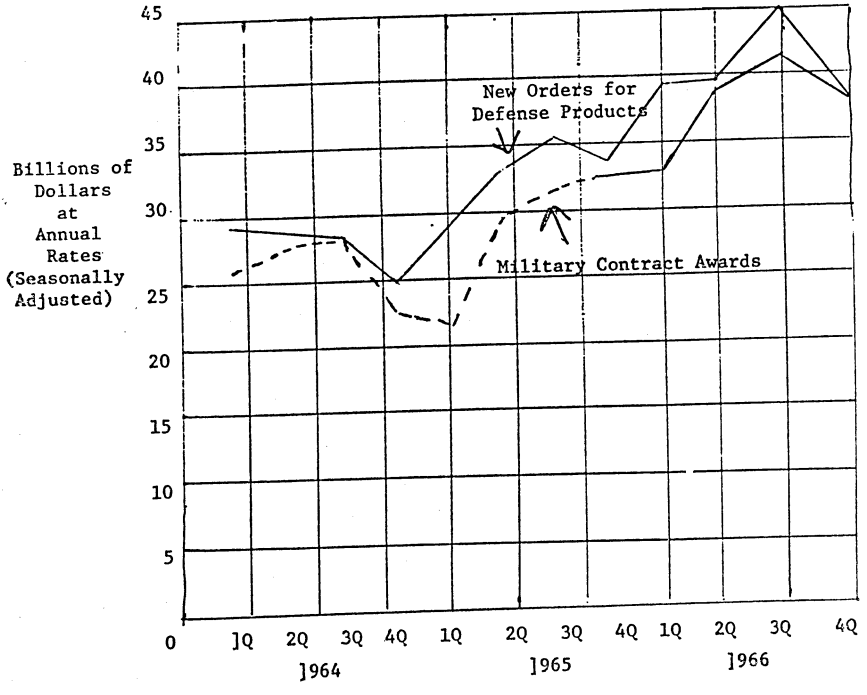
Interpretation of the spending figures for a military effort such as the Vietnam buildup is particularly difficult because the great bulk of the publicly available detail on actual and prospective defense spending is in terms of standard budget categories, which do not show how much in each category is being devoted to the limited war (Vietnam). Similar problems occurred in the contemporaneous interpretation of Korean War developments.

[28] For analysis of indirect effects and more complicated cases, see M. L. Weidenbaum, "The Timing of the Economic Impact of Government Spending," *National Tax Journal*, March 1959, pp. 79–85.

Hence, *much of the difficulty in interpreting the economic implications of the Vietnam buildup are not really unique but stem from long-term deficiencies in statistical reports by the various Federal agencies.*

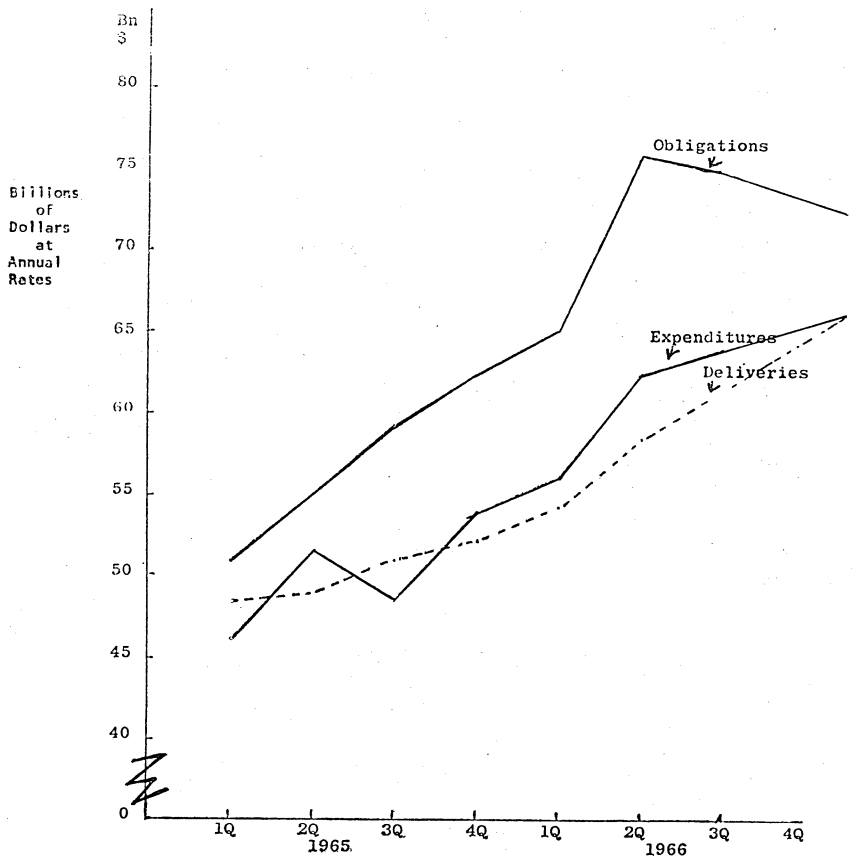
For example, the Department of Defense data on the amount of defense contracts awarded to American business firms often do not closely correspond to the widely circulated Department of Commerce data on new orders received by American business firms for defense products during the same period (see Figure 1). Much of the explanation lies in the fact that the Commerce Department does not have precise data on the subject but must make do with rough approximations. As a result, the Commerce data contain, for example, the total contracts received by aircraft companies, including airline orders for commercial jet transports.

Figure 1: Military Contract Awards to American Business Firms and New Orders for Defense Products



Source: U.S. Departments of Commerce and Defense

Figure 2: DEFENSE OBLIGATIONS, EXPENDITURES AND DELIVERIES[a]



Source: Departments of Commerce and Defense.

a/ Seasonally Adjusted

Other difficulties arise, of course, from a factor emphasized earlier—the different rates of military resource utilization that are obtained by using lead indicators (obligations) or more coincident indicators (expenditures) or lagging indicators (deliveries or purchase). Figure 2 shows the different time patterns yielded by these three series.

The statistical appendix to this paper brings together various measures of U.S. military spending to provide the reader with additional insights into the impacts on the American economy. Unfortunately, no standard pattern emerges either from the raw data or from the analysis of the rates of change. The need for fundamental improvements in the economic information system as it relates to the public sector and its impacts on the private sector becomes more urgent. Typical is the plea of Professor Arthur Burns, a former chairman of the Council of Economic Advisers, for "information on prospective federal revenues and expenditures, quarter by quarter, similar to the information that the government now compiles on business sales expectations and investment intentions." [29]

[29] Arthur F. Burns, *The Economic and Financial Outlook*, Manufacturers Hanover Trust Company, December 1966, p. 8; see also testimony of Paul W. McCracken in U.S. Congress, Joint Economic Committee, *The 1967 Economic Report of the President*, Part 1, February 1967 (hereafter referred to as *Hearings on 1967 Economic Report*).

C. Some prior experience: The Korean period

A previous military buildup—the Korean mobilization—posed problems of identifying the timing of the economic impact which provide a direct parallel to the current Vietnam experience.

Using conventional measures, Federal fiscal policy during the period of the initial buildup, fiscal year 1951, seemed appropriately restraining. Federal expenditures rose a modest 11 percent and the overall budget showed a $3.5 billion surplus. However, a different story emerges from an examination of the statistical data used to measure the earlier stages of the government spending process.

The amount of appropriations granted by the Congress in fiscal year 1951 was 68 percent above the 1950 total. The aggregate amount of contracts let and other obligations entered into by the Federal agencies in 1951 rose 92 percent above the level of the previous year.[30] The interplay during that period of the opposite ends of the Federal spending process was clearly brought out in the following comment on this period by the Joint Committee on the Economic Report:

"The ineffectiveness of the governmental cash surplus, normally a deflationary force, was, in large part, attributable to anticipatory forces on the inflationary side arising from the current or expected placement of orders for future deliveries." [31]

The Wholesale Price Index jumped from 100.2 in June 1950 to 103.2 in July. It reached 107.1 by September. The Consumer Price Index rose from 101.8 to 104.4 (1947–49=100) during this period. This was described as, with the exception of the decontrol period following the close of World War II, "the most rapid and the most widely pervasive inflationary movement" in recent American history.[32]

The following year, fiscal 1952, was the period of the actual major increase in Federal defense expenditures; it was one of comparative stability in the American economy. An examination of the Korean mobilization program discloses several interesting points:

1. The acceleration in economic activity occurred at approximately the *same time* as the announcement and authorization of the program, and while the most rapid increase in defense orders was taking place.
2. The acceleration in economic activity *ceased* when the rise in appropriations and obligations (new contract awards) ended.
3. The rise in economic activity *virtually ceased* when the level of appropriations and obligations began declining.
4. The major rise in government expenditures occurred *after* the most rapid expansion in economic activity and continued until after the decline in appropriations and contract awards.

As it turned out, the direct price, wage, and material controls were imposed after much of the inflationary pressures were over. We may speculate as to whether prompter imposition of tighter monetary and fiscal policies—during the fiscal year 1951—would have avoided much of the inflationary pressures, as well as obviating the need for direct controls.

However, in the Korean case the initial inflationary pressures were partly attributable to the overstocking in the civilian sector in the fear of renewed wartime shortages. As defense spending rose, a substantial correction of civilian inventories took place.

It has been fashionable to compare the Vietnam buildup with the Korean experiences in the hope of discerning parallels that would provide a firmer basis for forecasting purposes. However, important differences need to be acknowledged, although they tend to balance each other out.

The first set of differences relates to the smaller relative scale of the present buildup. The recent expansion of the armed forces from 2,700,000 to 3,200,000 seems modest indeed when compared to the spurt from 1½ million in 1950 to over 3½ million in 1952. Also, the defense budget doubled during the first year of the Korean War, while, as noted, the increase during the past year was about 16 percent. All this reflects the fact that Vietnam marks the first that the

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[30] M. L. Weidenbaum, "The Economic Impact of the Government Spending Process," *op. cit.*, pp. 35–36.

[31] U.S. Congress, Joint Committee on the Economic Report, *National Defense and the Economic Outlook for the Fiscal Year 1953*, 1952, p. 49.

[32] U.S. Congress, Joint Committee on the Economic Report, *Inflation Still a Danger*, 1951, pp. 12–13.

United States has entered a major war with a very large existing defense establishment.

The second set of differences relates to the fact that, unlike Korea or World War II, the present military buildup was superimposed on an economy which was rapidly approaching full employment. Using June 1950 and July 1965 as the respective beginning points, a comparison shows that unemployment was higher in the earlier period (5.4 percent versus 4.5 percent) and the operating rate of industry was lower (80 percent versus 90 percent).

Summarizing these two conflicting tendencies, it may be concluded that even though the current defense program utilizes a smaller fraction of the nation's resources, it represents to a considerable extent a displacement of civilian demand rather than a total addition to actual production of goods and services. Hence, in the absence of direct controls over materials, wages, and prices, it is not surprising that inflationary pressures should have accompanied the rapid shift of resources from civilian to military use.

The Korean experience showed that the strongest inflationary pressures occured during the first year of the buildup, while the economy was initially adjusting to the new level of military demand. The actual peak in defense spending a few years later occurred shortly before the onsent of recession. *If there is any lesson to be gained from the Korean experience, it is that the Nation particularly needs to understand the timing of the impact of the different stages of a defense buildup (and subsequent cutback). Otherwise the United States can find itself fighting yesterday's inflation with a tax increase that will compound tomorrow's recessionary problems.*

III. THE U.S. MILITARY BUILDUP FOR VIETNAM

A. The expansion of U.S. military spending for Vietnam

The relatively minor American involvement in Vietnam during the 1954–63 period was hardly visible in the U.S. military budget. However, applying the average annual cost per U.S. soldier ($23,000) to the number of American troops in South Vietnam during that time yields a rough order of magnitude of the demand on U.S. resources.

On that basis, the American commitment was costing about $15 million a year during 1954–60 and rose to somewhere around $18 million in the fiscal year 1961. In contrast, total U.S. defense spending was $43,227 million in fiscal 1961. By the crude estimating technique used here, U.S. defense spending in South Vietnam was around $31 million in fiscal 1962, $227 million in fiscal 1963, and $381 million in fiscal 1964, still quite minor amounts compared to the military budget totals.

An official estimate is available for "special support of Vietnam operations" in fiscal 1965, $103 million.[33] That figure seems low in view of the fact that U.S. troops in South Vietnam rose from 23,300 to 103,000 during that year. Presumably, a high proportion of the costs was financed from regular operations or by drawing down inventories of weapons and supplies previously purchased.

The significant impact of Vietnam on the Federal Budget and hence on the American economy began in the fiscal year 1966. The January 1966 Budget Document estimated that $14.0 billion of the requested appropriations and $4.4 billion of the estimated expenditures for the fiscal year then in progress—the year ending June 30, 1966—resulted from Vietnam. The actual amounts turned out somewhat higher, $14.9 billion in appropriations and $5.8 billion in expenditures. A review of the data in Table 1 confirms the fact that the fiscal year 1966 was the period of major expansion of American armed forces in Vietnam. Prior to July 1, 1965, U.S. armed strength stationed there had risen to 103,000. Between July 1965 and June 1966, there was an increase of over 200,000 American troops in Vietnam. To date, further increases have been somewhat in excess of 100,000.

As pointed out earlier, the basic detail in the defense budget is not broken down to show the Vietnam components of each item separately. Hence, it is necessary to infer the impact of this commitment from movements in the more

[33] *Budget of the United States Government for the Fiscal Year Ending June 30, 1968*, 1967, p. 77 (hereafter referred to as *1968 Budget*).

aggregate figures.[34] Thus, the escalation of the U.S. commitment in Vietnam, can, to some extent, be translated into economic impact by looking at the changing overall pace of military demand.

The data on total U.S. defense expenditures on a fiscal year basis show that the Nation's military spending was declining from $54.2 billion in fiscal 1964 to $50.2 billion in fiscal 1965 and did not turn up until fiscal 1966. A more precise pattern emerges when the annual data are divided into 3-month periods. It shows that the decline in military spending ended by January 1, 1965, the middle of the fiscal year, and that the last two quarters (January–June 1965) were higher than in the same period of the preceding fiscal year (see Table 3).

Moreover, the data on defense obligations—which include commitments currently being incurred for pay of the armed forces as well as defense contracts being awarded to private industry—show that the upturn began in January 1965. By the fourth quarter of 1965, defense obligations were running at about $9 billion higher than the last quarter of 1964, at seasonally adjusted annual rates. By June 1966, defense obligations were running $22 above the rate of the end of 1964. The January 1966 Budget Message stressed restraint in Federal fiscal policy, a theme that became even stronger in later public statements.

TABLE 3.—*Selected measures of U.S. military spending*

[In billions of dollars at annual rates]

Calendar year and quarter	Defense obligations		Defense expenditures (budget basis)
	Actual	Seasonally adjusted	
1964:			
1st quarter	52.0	55.2	49.2
2d quarter	61.0	54.8	56.8
3d quarter	55.0	53.3	43.1
4th quarter	51.8	53.3	48.1
Total	55.0	54.2	49.3
1965:			
1st quarter	48.2	51.0	46.8
2d quarter	62.2	55.0	51.6
3d quarter	60.6	59.0	48.6
4th quarter	62.1	62.1	54.1
Total	58.3	56.8	50.3
1966:			
1st quarter	60.5	64.6	56.4
2d quarter	86.4	75.9	62.4
3d quarter	77.0	75.2	63.4
4th quarter	68.9	72.9	65.8
Total	73.2	72.0	62.0

Source: Departments of Defense and Commerce.

The January 1967 Federal Budget greatly clarified the pace of the military buildup resulting from Vietnam. It estimated that Vietnam spending would reach $19.4 billion in fiscal 1967 and $21.9 billion in 1968. By then the magnitude of the U.S. involvement in Vietnam, as well as its impact on the Budget

[34] This point is brought out vividly in the following dialogue between Secretary McNamara and Senator Karl Mundt:

"Senator Mundt: . . . What is it you are recommending in terms of Vietnam?

"Secretary McNamara: We talked some yesterday about Vietnam cost estimates, and I said then it was very difficult to make them on any rational basis. The best we can give you is a range of something between $17 billion and $22 billion for fiscal year 1968, the $22 billion being the more commonly used figure.

"Now, if it is $22 billion for the year, it is on the order of $2 billion a month for fiscal year 1968, and we are, I would guess——

"Senator Mundt: You can tell us how much per month is being spent now, though?

"Secretary McNamara: Not really for Vietnam alone, sir. It is almost impossible to do it on a yearly basis, and it is really impossible to do it on a monthly basis. I can tell you how much we are spending in total for defense per month of course, but splitting that into Vietnam and non-Vietnam is honestly almost impossible." *Military Procurement Authorizations for Fiscal Year 1968.* (Hearings before the Committee on Armed Services and the Committee on Appropriations, U.S. Senate, 1967, p. 265.)

and on the economy, was fairly clearly grasped by the public. The Pentagon estimated that it would spend $72.3 billion in the fiscal year 1968, for all military operations—a figure larger than any earlier period except the peak of World War II. Total military expenditures, excluding military assistance to foreign nations, is estimated to be two-thirds higher than at the Korean War peak and about twice the level reached during the post-Korea low. Nevertheless, the fiscal 1968 estimate represents a leveling of the rapid upsurge in military demand which has occurred since the Vietnam War escalated in the summer of 1965.

In retrospect, it appears that the latter part of 1965 and most of 1966 constituted the period where the domestic consequences of this nation's commitment in Vietnam were not fully or generally understood. The year 1967 does not seem to be a period of equal uncertainty, although the possibility of another fundamental escalation in the level of the U.S. commitment persists. Hence, it seems both necessary and useful to review the earlier period in considerable detail, particularly in the hope of identifying some lessons for future economic policy.

B. The economic policy response in 1966

The January 24, 1966 Budget message of the President estimated that Department of Defense expenditures would rise from $46.2 billion in fiscal year 1965 to $52.9 billion in 1966 and $57.2 billion in 1967. On both a cash and national income accounts basis, the Federal Budget was estimated to be in approximate balance in fiscal 1967; on the administrative budget basis, the deficit of $1.8 billion estimated for 1967 would be a reduction from the $6.4 billion deficit envisioned for fiscal 1966.[35]

On this basis, the President stated in the January 1966 *Economic Report* that, "The fiscal program I recommended for 1966 aims at full employment without inflation." [36]

The January 1966 Budget Message called for several steps that would increase Federal revenues, notably putting personal and corporate income taxes more nearly on a pay-as-you-go basis and temporarily reinstating the excises on passenger automobiles, and telephone service which had just been reduced.[37]

On the expenditure side of the budget, despite statements on economy and efficiency, the customary items were found in the details of the document. For example, it was recommended that the Department of Agriculture start construction of 35 watershed projects and 1600 miles of forest roads, that the Bureau of Reclamation start work on three new projects with a total cost initially estimated at $1 billion, that the Corps of Engineers start building 25 new rivers and harbors projects and begin designing 23 more, that the General Services Administration finance construction of 33 government office buildings and design 10 more, and that the Government Printing Office acquire additional buildings.[38]

The January 1966 Budget did not contemplate the firm policy of no new starts on public works projects that was maintained during the Korean War. It appeared, at least to many observers, that the Nation could afford simultaneously to wage a two-front war without raising taxes, the domestic war against poverty and the war in Vietnam. That theme was clearly stated in the Budget Message:

"We are a rich nation and can afford to make progress at home while meeting obligations abroad—in fact, we can afford no other course if we are to remain strong. For this reason, I have not halted progress in the new and vital Great Society programs in order to finance the costs of our efforts in Southeast Asia." [39]

Secretary McNamara's testimony on the military budget in February 1966 clearly showed that the Administration was discounting any inflationary impact of the Vietnam buildup:

"As you can see, by itself, the defense program should not be a major factor contributing to inflationary pressures. I say this even though you are now considering a $12.3 billion supplemental to the fiscal year 1966 defense budget . . . defense expenditures will, in effect, be no more of an inflationary element in

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[35] *Budget of the United States Government for the Fiscal Year Ending June 30, 1967* (hereafter referred to as *1967 Budget*), p. 11.
[36] *Economic Report of the President, January 1966*, p. 10.
[37] *1967 Budget*, p. 9.
[38] *Ibid.*, pp. 192–322.
[39] *Ibid.*, p. 7.

fiscal years 1966 and 1967 by virtue of their relative demand on the economy than they were in the period from 1960 to 1964, and therefore by themselves are not sufficient cause for predicting inflation." [40]

In retrospect, things did not work out so well as anticipated. Although the unemployment rate declined below 4 percent, *the year 1966 witnessed the most rapid period of price inflation since the Korean War.* In striking contrast to the virtual stability during the period 1958–64, the wholesale price index, which had been rising by about 1½ percent annually in recent years, mainly due to the rising cost of services, climbed more than 3 percent in 1966.[41]

The second, related result of economic pressures in 1966 was the virtual collapse, at least temporarily, of the Council of Economic Advisers' wage-price guideposts. These were designed to reduce or avoid inflationary pressures in the economy by encouraging management and labor to hold wage increases to the trend increase in productivity in the economy as a whole. The CEA's guidepost of 3.2 percent was widely violated during the year, and prices rose even in the absence of cost pressures.

The basic explanation would appear to be that—despite the assurances in the Economic Report—*the increases in government civilian and military demand, coupled with the continued expansion in business expenditures for new plant and equipment, exceeded the capability of the economy to supply goods and services in 1966 at then current prices.*

Some perspective may be helpful prior to attempting to identify the specific factors which help to explain the 1966 circumstances. The United States has been engaged in a large-scale war; but it has not shifted to a war economy. Ours is truly a mixed economy: the Nation literally is concerned with social security as well as national security. The controls or runaway inflation often associated with war-time experiences are not present. Yet, the economy has been pressing very closely to the limits of available capacity and the nation is making choices somewhat analogous to guns versus butter, but not quite so. In a sense, as a country, we are choosing both more guns and more butter. However, we are also choosing less private housing and fewer automobiles while we are voting for more urban redevelopment and additional public transportation—thus simultaneously increasing both the military and civilian portions of the public sector in both relative and absolute senses (see Table 4).

TABLE 4.—*Changing proportions of GNP*

	1964 4th quarter	1966 4th quarter
National Defense purchases	7.5	8.6
Consumer durables and residential housing construction	13.2	12.1
All other	79.3	79.3
Total	100.0	100.0

Source: U.S. Department of Commerce.

An evaluation by the Federal Reserve Bank of New York of the role of military demand in the American economy was typical of that of many observers during the period: "The rapid growth of defense requirements was the largest single factor shaping the course of economic activity in 1966." [42]

The Bank pointed out that although the share of GNP directly attributable to defense requirements was still only a relatively modest 8½ percent at the end of 1966, the significance of defense is suggested by the fact that enlarged *defense outlays for goods and services accounted for nearly 25 percent of the increase in GNP in 1966.* This represented a striking shift from the earlier years of the current economic expansion when such spending contributed little or nothing to the overall growth of demand.

To cite again the words of the Federal Reserve Bank of New York, "The military buildup and the demand pressures associated with it affected virtually every

[40] U.S. House of Representatives, Committee on Appropriations, *Department of Defense Appropriations for 1967*, Part 1, 1966, pp. 4–5.
[41] *Economic Report of the President*, January 1967, pp. 262, 264.
[42] Federal Reserve Bank of New York, *Annual Report, 1966*, 1967, p. 13.

sector of economic activity." [43] The armed forces, in adding more than 500,000 men during the year, took over two-fifths of the total increase in the nation's available manpower, contributing directly to the tightening of civilian labor markets. A substantial share of the remaining expansion in the nation's work force was absorbed by the many firms with rising backlogs of defense orders.

The surge of military demands was obviously a sharp spur to activity in a number of industries, especially aircraft, ordnance and electronics, where employment during the year rose between 10 and 20 percent. This in turn led to intensified pressures on productive capacity. These industries reported some of the most rapid increases in expenditures for new plant and equipment. The result was further stimulus to the already high level of capital spending.

Also, the rapid rate of business inventory accumulation during 1966 was in good measure related to the expansion of defense demand. *About one-fourth of the increase in manufacturers' inventories during the year occurred in the aircraft, ordnance and electronics equipment, industries alone.* (See Appendix tables.)

C. The underestimate in the military budget

One major factor helping to explain the emergence of inflationary factors in 1966 not anticipated in the January Budget and Economic Messages was the underestimate in military spending. The January 1966 Budget projected the cost of Vietnam at $10.2 billion in the fiscal year 1967. The current official estimate is almost double that—$19.4 billion (see Table 5).

TABLE 5.—*Estimated appropriations and expenditures for special support of Vietnam operations*

[In billions]

Fiscal year	Appropriations		Expenditures	
	Estimated in 1967 budget	Estimated in 1968 budget	Estimtted in 1967 budget	Estimated in 1968 budget
1965	$0.7	$0.7	$0.1	$0.1
1966	14.0	14.9	4.4	5.8
1967	8.7	22.0	10.2	19.4
1968	(1)	20.6	(1)	21.9

[1] Not available.

Source: 1967 Budget, pp. 73–75; 1968 Budget, p. 77.

There are several facets to this substantial change in the direct expansion of Vietnam military demand. The January 1966 Budget Message contained what seemed at the time to be a very straightforward statement to the effect that "It provides the funds we now foresee as necessary to meet our commitments in Southeast Asia." The Message went on to state that if efforts to secure an honorable peace bore fruit ". . . these funds need not be spent." It appeared to the public observer that the U.S. role in Vietnam was fully funded. If there were any doubt about the matter, it seemed to be resolved by the statement, ". . . it would be folly to present a budget which inadequately provided for the military and economic costs of sustaining our forces in Vietnam." [44]

In his testimony on the military budget, Secretary McNamara stressed that the budget was based on ". . . a somewhat arbitrary assumption regarding the duration of the conflict in Southeast Asia." This assumption—which was not mentioned anywhere in the January 1966 Budget—was that U.S. combat operations in Southeast Asia were to be budgeted only through June 30, 1967. "Should it later appear that combat operations will continue after that date at relatively high levels, it may be necessary to amend this budget request or supplement it later with additional funds," stated the Secretary of Defense.[45]

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[43] *Ibid.*

[44] *1967 Budget*, p. 7.

[45] Same as footnote 40, p. 70. "The budget is not misleading once the rather sophisticated assumptions are understood, and the Administration has not made much of an effort to see that they are." William Bowen, "The Vietnam War: A Cost Accounting," *Fortune*, April 1966, p. 259.

The explanation for the need for a supplemental to the fiscal 1967 budget if the war were to extend beyond the fiscal year lies in the long lead-time of military procurement. In many cases, weapons required in the fiscal year 1968 would need to be ordered during 1967. This helps to explain also why the military appropriations requested for 1967 were lower than those for 1966 ($58.9 billion versus $61.8 billion).

Another factor revealed in the Congressional hearings was that, in order to avoid the buildup of surplus inventories that occurred during the Korean War, Secretary McNamara reduced the estimates of certain supply requirements below the consumption levels predicted by the services for the force levels then being planned for. He pointed out that if the services' initial estimates later proved to be correct, inventories could be drawn down to cover the difference or additional funds could be requested. The Secretary of Defense emphasized his concern that the Nation avoid the situation that occurred at the end of the Korean War when a vast quantity of surplus military stocks were on hand, far beyond any need at the time.[46] The Department of Defense had unexpended balances of about $32 billion at the end of 1953. It took about five years to work the unexpended balances down to more reasonable levels.

It was estimated in the January 1966 Budget Document that the Department of Defense would end the fiscal year 1967 with unobligated funds totalling $10.4 billion and unexpended funds totaling $43.8 billion.[47] Hence, it appeared that the Pentagon would be able to support a level of defense spending for Vietnam $10 billion above the original estimate for fiscal 1967.

During much of 1966, it was becoming clear that the military spending rate was exceeding that implied in the January budget. However, the Administration did not issue the traditional Midyear Review of the Federal Budget in the Fall of 1966, which would have updated the estimates contained in the January budget. The reasons given were the uncertainties in Vietnam and the delay of Congressional action on budgetary legislation.[48]

Nevertheless, *the lack of current estimates of military spending requirements made more difficult any intelligent public debate over appropriate economic policy.* Statements such as the following one by the Secretary of the Treasury in March 1966 indicated the difficulties faced by nongovernmental observers:

"At the same time let me emphasize that our current estimates of Vietnam expenditures remain, in the view of those most qualified to judge, an accurate evaluation of our needs so far as we can now foresee, and I would hope that, when the need for responsible restraint is so great, no one will base his economic decisions on the purely speculative assumption that our Vietnam needs will exceed current expectations." [49]

A slowdown also occurred in the release of the most detailed public source of historical defense expenditure and obligation information, the Defense Department's *Monthly Report on the Status of Funds.*[50] Through the Fall of 1966, when most business, financial, and other private observers were preparing and issuing economic forecasts for the calendar year 1967, the latest available issue of the *Monthly Report* was that for June 1966. The July and August issues never did appear; the September issue appeared too late in December to be useful for most of the forecasting work for 1967. More recently, the reports have been issued with only the customary lag.

The Budget for the fiscal year 1968, transmitted to the Congress in January 1967, did not contain any arbitrary assumption as to the termination of the fighting in Vietnam. The President's budget message, in discussing the Vietnam requirements, stated that the 1968 Budget ". . . provides for those requirements on a continuing basis, including the possibility of an extension of combat beyond the end of the fiscal year." [51]

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[46] Same as footnote 40.
[47] *1967 Budget,* p. 49.
[48] The discussion of this point between Congressman John W. Byrnes and Budget Director Charles J. Schultze is quite fascinating. At first the Budget Director stated that in no year when the Congress adjourned as late as it did in 1966 was a midyear review issued. In the face of numerous citations to the contrary, the Budget Director then modified his position to the effect that in no year that the budget legislation was enacted as late as it was in 1966 was a review issued. See U.S. House of Representatives Committee on Ways and Means, *Temporary Increase in Debt Ceiling,* January 1967, pp. 53–55.
[49] Quoted in *Hearings on 1967 Economic Report,* Part 1.
[50] U.S. Department of Defense, Office of the Assistant Secretary of Defense (Comptroller), *Monthly Report on the Status of Funds by Functional Title* (processed).
[51] *1968 Budget,* p. 19.

In the early February of 1967, the annual hearings before the Joint Economic Committee on the President's Economic Report were the occasion for some attempts at clarification of the earlier budgetary procedure. Senator William Proxmire, the Committee Chairman, opened the discussion of the underestimate of Vietnam expenditures with the following statement:

". . . in 1966 our Government made a serious economic policy blunder. Our fiscal policy was established early in 1966 . . . on the assumption that the Vietnam war would cost $10 billion . . . it is clear to me that we would have reduced spending and/or increased taxes—possibly both—if we had better and more accurate information."

The initial reply was given by Gardner Ackley, the chairman of the President's Council of Economic Advisers. He stated that one half of the difference between the original estimate of the cost of Vietnam during the fiscal year 1967 ($10.2 billion) and the revised estimate ($19.4 billion) reflected the assumption that the war would terminate by June 30, 1967. "The other half reflects the fact that there was a more rapid and efficient buildup of forces in Vietnam than had been initially considered possible, and second, increased requirements resulting from more intensive hostilities than had been initially assumed." [52]

Mr. Ackley contended that the problem was "not a failure of communication," but due to the "uncertaintly of the situation." The tenuous nature of the assumed June 30 termination was brought out during the subsequent dialogue between Senator Proxmire and Budget Director Charles J. Schultze:

"*Chairman Proxmire* . . . This assumption that the war would end on June 30, 1967, becomes more fantastic as I think about it, because, of course, the war could end on May 1 or June 1, and we still would have been $10 billion off, or very close to it. So we not only assumed that the war would end on June 30, but we assumed we would know about it well in advance, and we could have slowed down our procurement so we couldn't have procured anything to fight in the period subsequent to July 1, 1967, isn't that correct?"

"Mr. Schultze . . . I can't answer that yes or no." [53]

D. The underestimate of the initial economic impact of Vietnam

The second factor explaining the growth of inflationary pressures in the American economy in 1966 relates to the point developed earlier in this study—the leads and lags in measuring the impact of government spending, and specifically in understanding how a military buildup affects the economy.

The key point is that, under our private enterprise system, the great bulk of military production is carried on in the private sector of the economy. As a result, when there is a large expansion in military orders, as occurred in fiscal 1966, the immediate impact is *not* felt in the government budget.

The initial impact—in terms of demand for labor, materials, and resources generally—is felt by the government contractors in the *private* sector. Hence, particularly during the early stage of a military buildup, we have to look at the private sector to see the expansionary effects. As pointed out earlier, this is hardly a new phenomenon. This timing relationship was the factor that contributed so greatly to the inflation that accompanied the first year of the Korean mobilization.

By just looking at the Government's budget during fiscal year 1951, it seemed that the public sector was following a policy of fiscal restraint. Policy officials generally overlooked the almost doubling in the volume of defense orders to private industry during that same period. Unfortunately, the same mistake was repeated during the first year of the Vietnam buildup. *The most rapid period of expansion in military contracts to private industry occurred in 1966; so did the most rapid rate of price inflation in recent years.* But that was the period when the Nation and particularly the Administration's economists were still congratulating themselves on the success of the 1964 tax cut and little need was felt, at least officially, for greater fiscal restraint.

Some detailed analysis of this point seems to be in order. As a benchmark, it may be recalled that in fiscal year ending June 30, 1965 total contracts placed, orders let, and other "obligations" incurred by the Department of Defense were about $54 billion. The concept of obligations is used here because it is a generic term, including both government payrolls and contracts with private firms. In

[52] *Ibid.*
[53] *Ibid.*

the January 1966 budget, it was estimated that this rate of making new commitments would rise to well over $63 billion in fiscal year 1966. In retrospect, the January budget underestimated the rise in military demand during the fiscal year which was then in progress.

The actual amount of new obligations incurred during fiscal year 1966 was somewhat in excess of $67 billion, or almost one-fourth greater than in 1965. Actual expenditures increased at a much slower rate during the same period—17 percent. In other words, *obligations* are the more sensitive or leading indicator. Unfortunately from the viewpoint of analyzing business conditions, the supposedly most sophisticated measure of government finance, the so-called national income accounts budget, uses a concept that even lags behind actual government outlays—the delivery of completed military equipment. To compound the problem, the national income accounts budget picks up government revenues on an accrual basis, which precedes the actual receipt of cash by the government.

As was pointed out earlier, much of the impact on employment, production, an income of a military buildup occurs primarily at the points in time that budget recommendations are made, increased appropriations are enacted, and orders placed with military contractors. *However, the statement of Federal receipts and expenditures on national income account—the national income accounts budget—confines the measurement to the actual delivery of completed weapons and other military "hard goods."*

The policy implication of all this is that the official budget and economic reports were very slow to pick up the expansionary impact of the Vietnam buildup, but very quick to take account of the deflationary impact of the expansion in revenues. *The net result is that the Federal Government, though apparently following a non-inflationary economic policy in 1966, was actually a major source of inflationary pressure in the American economy during that time.*

Some statistical support for the foregoing is contained in Table 6.[54] On the far left in Table 6 is the officially reported surplus or deficit in the so-called national income accounts budget. This, the Administration economists have contended, is the best measure of the economic impact of fiscal policy. On that basis, the Federal budget shifted from a position of ease in the second half of calendar 1965 (a deficit of $1.4 billion) to some restraint in the first half of 1966 (a surplus of $3.1 billion).

TABLE 6.—*Federal surplus or deficit: Some variations on the national income accounts budget*

[Billions of dollars at annual rates]

Calendar year	Federal surplus (+) or deficit (−) official basis	Adjustments for defense obligations		Federal surplus (+) or deficit (−) adjusted basis	
		A	B	A	B
1964:					
1st half	−4.3	−0.1	−0.1	−4.4	−4.4
2d half	−1.8	−4.4	−2.2	−6.2	−4.0
1965:					
1st half	+4.4	−2.0	−1.0	+2.4	+3.4
2d half	−1.4	−5.2	−2.6	−6.6	−4.0
1966 estimated:					
1st half	+3.1	−8.4	−4.2	−5.3	−1.1
2d half	−2.0	−5.2	−2.6	−7.2	−4.6

Source: Data from U.S. Departments of Commerce and Defense. Adjustments are described in the text.

The next two columns in the table contain two alternative sets of rough adjustments for the fact that new contracts awarded may be a better indicator of the impact of a military buildup on the economy than delivery of completed weapons. The A series is essentially the excess of military obligations over expenditures during the period, seasonally adjusted and converted to an annual basis. One further change has been made. Over the years, about two to three

[54] For an earlier attempt along these lines, see M. L. Weidenbaum, *The Federal Budget and the Outlook for Defense Spending,* Washington University Working Paper 6610, November 1966.

billion dollars worth of obligations each year do not seem to result in actual expenditures. A number of technical factors are at work here, including some double counting of contracts awarded by one military agency in behalf of another military agency. Such a case might be Air Force procurement of aircraft for the Army, which may show up as an Army obligation to the Air Force, as well as an Air Force obligation to the airplane manufacturer. In computing both the A and B adjustment series, the annual obligation figures were reduced by $3 billion in each case to take account of the double counting and to assure that any error is on the conservative side.

It can be seen, referring to the A column on the right hand side of Table 6, that adjusting for defense obligations by this method results in some significant changes in the usual measure of Federal fiscal impact. The second half of 1965 is now seen to be a period of much more substantial expansionary effect in the Federal budget than shown on the official basis. Of greater interest of course is the indication that the first half of 1966 was not a period of fiscal restraint but instead one with a substantial excess of outgo over income.

The B adjustment is a more conservative effort. It is a statistical compromise between the two approaches, the result of an arithmetic averaging of military obligations and expenditures for each period. The theoretical rationale that can be offered is that a more proper counterpart to the liability basis of the corporate revenue computations might be somewhere between the extremes of contract placement and governmental disbursement.

As would be expected, the B results are somewhat more moderate than the A series. The adjusted Federal deficit for the latter part of 1965 is rather large, but, on this basis, the first half of 1966 witnessed a deficit of somewhat reduced proportions. The adjusted deficit rises in the second six months of the year. Even the B series provides a very weak case for the widely made claim that fiscal restraint occurred during 1966.

E. Monetary and fiscal policy complications

The mild fiscal policy restraints recommended in the January 1966 budget turned out to be inadequate to stem the inflationary pressures that were building up. Some private observers were more concerned over the inflationary impact of the January 1966 budget recommendation. A report prepared at Washington University in early February 1966, stated:

"* * * the inflationary impact of the January 1966 Budget submission has been underestimated and that fiscal policy measures may need to be modified substantially * * * the current, immediate inflationary potential—during the fiscal year 1966—has been virtually ignored." [55]

This report was picked up by a number of publications at that time, including the *Wall Street Journal* and *Business Week*. The latter referred to "skepticism of the degree of restraint that the Federal budget in fact provides for the economy." [56]

To some extent, the inflationary pressures of the Vietnam buildup were accentuated by a rather liberal monetary policy in 1965, some of the results of which were continued to be felt in 1966. It has been pointed out that the rate of monetary expansion should have decelerated as early as 1965 as the economy regained reasonably full employment. Nevertheless, the rise in the money supply was allowed to pick up speed from an 8.0 percent annual rate in the first six months of 1965 to a 10.6 percent rate in the second half.[57] Beginning in December 1965, the Federal Reserve Board undertook a series of steps to tighten the availability of credit. By April 1966, the steep rise in the money stock was halted and a slight decline occurred through the remainder of 1966.

The most dramatic, early action was the Fed's raising the discount rate from 4 to 4½ percent. Effective December 6, 1965, the interest rate charged member banks for borrowing from their district Federal Reserve Banks was increased in an effort to "maintain price stability." Simultaneously, the Federal Reserve Board increased the maximum rates that member banks were permitted to pay their depositors to 5½ percent on all time deposits and certificates of deposit

[55] M. L. Weidenbaum, *The Inflationary Impact of the Federal Budget,* Washington University, Department of Economics Working Paper, February 10, 1966.
[56] *Business Week,* February 19, 1966, p. 29; George Shea, "The Business Outlook," *Wall Street Journal,* February 21, 1966, p. 1.
[57] Testimony of Paul W. McCracken in *Hearings on 1967 Economic Report.*

having a maturity of 30 days or more.[58] The latter action was to have serious repercussions on the savings institutions in 1966, a subject beyond the purview of this study.

A member of the Federal Reserve Board, J. Dewey Daane, explained shortly afterwards that the actions were taken because of "increasing evidence that aggregate demands were rising at an unexpectedly rapid pace and absorbing the remaining margin of unutilized capacity" of the national economy. He specifically noted that "over the summer, a step-up had been announced in the United States' participation in Vietnam, presaging on acceleration in defense outlays."[59]

The Fed's action was sharply criticized at the time. Some Administration spokesmen contended that the Board should have waited until the January 1966 Presidential messages which would indicate both the expected future level of military spending and the degree of restraint in its fiscal policy. At least two members of the Board itself, Governors George W. Mitchell and Sherman J. Maisel, appeared to agree with the criticism in public testimony before the Joint Economic Committee in December 1965.[60] Some Administration reaction was more general. Secretary of Labor W. Willard Wirtz stated, "There can be no tolerance for the suggestion that expansion of the economy must be slowed down, by increasing interest rates or in any other way, while there is still so much to be done."[61]

At first, monetary policy was only mildly restraining. Member bank reserves continued rising, reaching a peak of $21.7 billion in April 1966, compared to $20.7 billion during the preceding Fall. Monetary policy tightened further in the Spring of 1966, with the total of member bank reserves remaining at the April figure through the middle of the year. The increased financial tightness also showed up in the money supply, which reached a peak of $171 billion in April and then declined, irregularly, to a low of $169 billion in November.

In the Summer and Fall of 1966, the Federal Reserve System took additional steps to slow bank lending. These included the unusual letter of September 1, requesting commercial banks to limit their loans to business. The letter indicated that the discount windows at the Federal Reserve Banks were open to banks conforming to these guidelines.

Other measures were taken to limit the ability of the commercial banks to compete for time deposits, including increasing reserve requirements against these deposits of over $5 million from 4 percent to 5 percent in July and to 6 percent in September 1966. By the end of September it appeared that the peak monetary stringency had passed. Most interest rates declined somewhat and bank reserves rose again. Late in December 1966, the monetary authorities rescinded their September 1 letter, once again encouraging banks to lend in their customary fashion.[62]

In September 1966, the President proposed the suspension of the 7 percent investment tax credit and of accelerated depreciation on commercial and industrial buildings for a period of 16 months. The tax measure was passed, with some modifications, in late October 1966.

The January 1967 Budget Message recommended a general and temporary six percent increase in individual and corporate income tax rates, effective July 1, 1967. However, the recommendation was made conditional upon a later examination of economic developments.[63] In March 1967, the President requested the Congress to restore the 7 percent investment tax credit which had been suspended in the Fall of 1966 as an anti-inflationary move.[64] Apparently, the worst of the inflationary pressures resulting from the Vietnam buildup were over, barring another major escalation.

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[58] Press Release of the Board of Governors of the Federal Reserve System, reprinted in *Recent Federal Reserve Action and Economic Policy Coordination,* Hearings before the Joint Economic Committee, Congress of the United States, Part 1, December 13 and 14, 1965, pp. 13–14.

[59] J. Dewey Daane, "A Review of Recent Fed Actions," *Banking,* December 1966 (reprint, p. 1).

[60] Cf. *Recent Federal Reserve Action and Economic Policy Coordination,* pp. 21–34.

[61] "Wirtz Criticizes Credit Tightening—Attack Strongest Yet," *Washington Post,* December 2, 1965.

[62] Cf. "The Great Squeeze—Lessons for the Banking System," *Business in Brief,* Chase Manhattan Bank, February 1967.

[63] *1968 Budget,* p. 9.

[64] "Johnson Asks Restoring of 7% Investment Tax Credit, Cites Signs Capital Goods Industry Has 'Calmed Down'," *Wall Street Journal,* March 10, 1967, p. 3.

F. Resultant economic policy problems for 1967

The previous criticisms notwithstanding, some positive impacts of governmental economic policy during this period also need to be acknowledged. A fundamental requirement on such policy was most successfully achieved—the large and rapid shift of resources from civilian uses or idleness to military programs.

In this vein, Budget Director Charles J. Schultze stated recently to the House Ways and Means Committee:

"Our military effort in Vietnam has not suffered in any way from a shortage of funds. We have provided every plane, every gun, and every cartridge needed to support operations in Vietnam." [65]

At the same time, direct controls over prices, wages and materials generally were avoided (set-asides were in force for copper and a few other key materials). Moreover, economic growth and real improvement in the living standard of the average American continued despite the defense spending increases and the inflation.

In real terms—that is after making allowance for price rises—U. S. Gross National Product rose from $614 billion in 1965 to $648 billion in 1966 (in 1958 dollars), a growth rate almost equal to that of 1965. Increases also occurred in 1966 in real disposable income per capita and in personal consumption expenditures per capita.[66]

In commenting on economic trends in the American economy in 1966, Gardner Ackley told the Joint Economic Committee the following:

"It is far from a perfect record. But I think if one looks at it in the large, in terms of the outcome for the year as a whole, it is a record of which we can be pretty proud." [67]

Nevertheless, in retrospect, it can be argued that a major error occurred in domestic policy in the United States during 1966. In this era of sophisticated information systems, it still seems that a parallel can be drawn with the prehistoric brontosaurus whose internal communication system was so primitive that when another animal started chewing on the end of its tail, it lost its entire tail before the news reached the brain.

Somewhat analogously, *during much of 1966, especially the first half, the Nation and its economists were occupied with congratulating themselves on the success of the 1964 tax cut—when the problem suddenly had become combatting inflation rather than unemployment.*

A three-fold dilemma resulted from the various developments already covered in this study:

1. The Nation was not fully aware of the economic implications of the U. S. buildup in Vietnam.
2. Economists were not generally cognizant of the timing problems in evaluating the economic impact, and
3. Neither public officials nor private opinion were agreed as to either the need for or the nature of additional public policy measures to be taken.

Many, of course, were not convinced of the need for tighter fiscal policy, particularly in view of the Federal Reserve's tightening monetary policy. Others who would have preferred a tax increase to the extreme credit stringency did not believe that the Nation would accept so sharp a turn in fiscal policy—from tax reduction to tax increase—so quickly. Finally, even those who preferred the route of reducing government expenditures seemed to think that the Federal budget only contained two high-priority categories, defense programs and Great Society endeavors, overlooking the vast array of outmoded subsidies and special benefits.

It became clear also that, although the wage-price guideposts might be effective during a period characterized by mild cost-push inflationary pressures in an environment of some economic slack, they did not work as well during periods of demand-pull inflation such as characterized 1966.

Other negative results of the 1966 experience may be in terms of the legacy bestowed upon the future. To what extent will cost-push inflationary pressures dominate the American economy in 1967 after the aggregate demand-pull

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[65] U.S. House of Representatives, Committee on Ways and Means, *Temporary Increase in Debt Ceiling*, January 1967, p. 10.
[66] *Economic Report of the President*, January 1967, pp. 214, 232.
[67] *Hearings on 1967 Economic Report*, Part 1.

pressures may have subsided? Given the conditional tax increase recommended in the January 1967 Budget, to what extent does the Nation face the possibility of a tax increase coming after the major impact of the Vietnam buildup has occurred and the economy softened?

Perhaps more fundamentally, *the failure of the Nation either to understand how a military buildup affects the economy, much less to take prompt and effective action to curtail the excessive demand that results, does not augur well for a smooth economic adjustment to the hoped-for downturn in military spending after a successful termination of hostilities in Vietnam.* In such a case, the deflationary impact of defense contract cancellations and layoffs of defense workers might occur while defense expenditures and/or deliveries were still rising. If tax reduction or monetary ease or expansion in selected non-defense spending were to wait until sizeable declines in defense purchases showed up in the GNP, governmental economic policy once again would be too slow and too late.

IV. A CROSS-SECTIONAL ANALYSIS OF THE CURRENT MILITARY BUDGET

The 56 percent increase in the level of U.S. military spending scheduled to take place within the three-year period July 1, 1965–June 30, 1968 is, of course, dramatic and having a major impact on the national economy. No doubt less dramatic but of substantial importance to individual communities, companies, and workers is the simultaneous changes which are taking place in the composition of the military budget.

A. The changing composition of military spending

Changes taking place within the military budget have been affecting the extent to which different industries and regions are participating in the defense program. The key to understanding the developments is analyzing the shifting "product mix" of military spending. The fundamental change is the shift of emphasis away from (a) developing and maintaining in being the potential capability to deal with hypothetical world-wide or general-war situations and towards (b) operating a military establishment actually waging a difficult but limited war whose dimensions keep on evolving. Table 7 shows the extent to which funds for U.S. combat forces have been shifting from general war to limited war programs. It is striking to note that general war forces now receive less than half of the share of the military budget that they received a few years ago.

TABLE. 7.—*U.S military budget: General versus limited war (total obligational authority)*

Category of combat forces	Amounts (in billions)		Percent of total	
	Cold war (fiscal year 1962)	Vietnam (fiscal year 1967)	Cold war (fiscal year 1962)	Vietnam (fiscal year 1967)
General war capability:				
Strategic offensive forces	$8.9	$7.1	29.8	16.5
Continental air and missile defense forces	2.3		7.7	
Subtotal	11.2		37.5	
Limited war capability:				
General purpose forces	17.5	34.3	58.5	80.0
Airlift and sealift	1.2	1.5	4.0	3.5
Subtotal	18.7	35.8	62.5	83.5
Total [1]	29.9	42.9	100.0	100.0

[1] The remainder of the military budget is devoted to support of the combat forces, research and development, military assistance, and retired pay.

Source: U.S. Department of Defense.

A related development, but one not as readily discernible in the available data, is the capital-intensity of the U.S. military effort in Vietnam. The Congressional hearings present numerous instances of the tremendous amount of airborne and

infantry munitions expended by or for the protection of each American soldier fighting in Vietnam. For example, in the fiscal year 1966, 5.1 million tons of supplies and other cargo were shipped from the United States to South Vietnam.[68] This comes out roughly to almost 16 tons per U.S. soldier stationed there at the end of the fiscal year. In comparison, the Vietcong is fighting a very labor-intensive war. The result of this different emphasis is two-fold. Primarily, of course, it indicates *a fundamental decision to use up equipment and supplies in order to save the lives of American soldiers.* The secondary result then is the costliness of the war to the American economy and the Treasury in dollar terms (in real terms, in effect we are trading dollars for American lives). One very crude indication of the great capital-intensity of the war effort is the 82 percent increase in military procurement expenditures during the same three-year period as the 56 percent overall increase in military spending.

Detailed breakdowns of the military procurement budget are useful in order to illuminate the regional and company impacts of the fundamental budget changes. Table 8 shows the shifting product mix of all military procurement (on an obligations basis). Three major shifts are taking place: (1) a more than doubling in the amount of funds going to tanks, weapons, ammunition and similar conventional battlefield ordnance, (2) a massive reduction in the relative as well as absolute importance of missiles, and (3) the reorientation of the military aircraft budget away from long-range strategic bombers and to tactical aircraft, particularly supersonic fighters and helicopters. The latter point of course only emerges from analyzing the details of the budgetary reports (see Appendix Tables for details). In general, *the military budget is looking much more like it did during the Korean War and less than during the more recent period of cold war confrontation with the Russians.*

TABLE 8.—*The changing product mix of military procurement*

	Amounts (in billions)			Percent of total		
	Korea (fiscal year 1952)	Cold war (fiscal year 1962)	Vietnam (fiscal year 1967)	Korea (fiscal year 1952)	Cold war (fiscal year 1962)	Vietnam (fiscal year 1967)
Sophisticated equipment:						
Aircraft	$13.1	$6.4	$9.8	45.7	35.7	39.8
Missiles	.4	4.7	2.1	1.4	26.3	8.5
Electronics	1.3	1.5	1.2	4.5	8.4	4.9
Subtotal	14.8	12.6	13.1	51.6	70.4	53.2
Conventional equipment:						
Ships	1.8	2.2	2.4	6.3	12.3	9.8
Ordnance	9.2	2.3	6.5	32.1	12.8	26.4
Other	2.9	.8	2.6	10.0	4.5	10.6
Subtotal	13.9	5.3	11.5	48.4	29.6	46.8
Total	28.7	17.9	24.6	100.0	100.0	100.0

Source: Department of Defense data on obligations incurred.

Hence, the Nation is witnessing a reversal of the shift that occurred in military purchasing in the mid-1950's. Once again, the automotive, mechanical, textile, clothing, and rubber companies are becoming important suppliers of war material. The most dramatic increases have occurred in ammunition (up 270 percent during the past fiscal year), clothing and textiles (up 240 percent), tanks and vehicles (up 80 percent), and food (up 60 percent).[69] The large aerospace and electronics firms, although still significant defense contractors, are finding their shares of the military market to be declining. For example, the ten firms with the largest amounts of defense contracts in the fiscal year 1966 (nine out

[68] U.S. Senate, Committee on Armed Services, *Investigation of the Preparedness Program,* Report by Preparedness Investigating Subcommittee on Airlift and Sealift to South Vietnam, March 1967, p. 2.

[69] U.S. Department of Defense, *Military Prime Contract Awards and Subcontract Payments,* July 1965–June 1966.

of the ten being aerospace and electronics firms) received 26.6 percent of the total awards compared to 35.8 percent in 1964.

Unlike the period of large weapon systems—such as ICBM's which could only be supplied by a few of the industrial giants—the demands of Vietnam result in numerous smaller contracts involving a great many and variety of medium-size firms as defense suppliers. Small business firms increased their share of defense contract awards from 19.6 percent in fiscal 1965 to 21.4 percent in fiscal 1966.

B. *Geographic shifts in defense activity*

There is also a geographic dimension to the changes in the military product mix. Large proportions of the companies working on Vietnam orders are located in the Upper Midwest and in other relatively older industrial states in the East. The Far West, which has been receiving so large a share of defense orders during the past decade, is experiencing some absolute as well as relative declines. Table 9 shows the highlights of these changes.

Several states received defense contracts in 1966 at rates of 40 to 50 percent above the previous year's levels. These include Connecticut, Illinois, Indiana, Maryland, Michigan, Minnesota, Ohio, Pennsylvania, and Texas. In contrast, Washington State, Utah, and Colorado have seen their defense contracts virtually cut in half during the past two years. California has remained at the 1963 level, despite the substantial growth in the overall military market which has occurred since then.[70]

TABLE 9.—*The changing geographic distribution of defense contracts*

[Percentage distribution of dollar volume]

Census region	Korean war (fiscal year 1952)	Cold war (fiscal year 1962)	Vietnam (fiscal year 1966)
Northeast:			
New England	8.1	10.9	11.9
Middle Atlantic	25.1	18.7	17.6
Subtotal	33.2	29.6	29.5
Midwest:			
East north-central	27.4	12.6	15.3
West north-central	6.8	6.7	7.6
Subtotal	34.2	19.3	22.9
South:			
South Atlantic	7.6	10.4	12.5
South central	6.4	7.8	12.2
Subtotal	14.0	18.2	24.7
Far West:			
Mountain	.7	4.7	2.5
Pacific	17.9	28.2	20.4
Subtotal	18.6	32.9	22.9
Total	100.0	100.0	100.0

Source: Computed from Department of Defense data.

The economic impacts of this shift in the location of the defense industry may not be as simple as would appear. The midwestern states have large, well diversified industrial bases and these recent increases in their defense orders, although dramatic, may be taken in stride as they will require relatively small proportions of existing manufacturing capacity. On the other hand, defense work in recent years has accounted for a proportionately large share of the total manufacturing employment of many western states and in several cases for virtually all the growth of such employment in the major metropolitan areas. The adjust-

[70] U.S. Department of Defense, *Military Prime Contract Awards by Region and State*, 1966.

ment to the changing military market may be especially difficult for those western states that are not participating in the simultaneous expansion in the commercial aircraft market.

On balance, it would be expected that the reorientation of defense spending toward greater emphasis on limited war equipment, which seems likely to outlast the current Vietnam buildup, will have important differential effects on the relative rates of growth in population, income, and tax bases in the various regions of the country—effects which should primarily be favorable to the Midwest, Southern, and New England areas.

C. Balance of payments effects

Another and special aspect of the impact of Vietnam expenditures on the American economy is the effects on our balance of international payments. The direct, adverse balance-of-payments impact of Vietnam has grown with the size of operations there. It has been estimated that Vietnam-related foreign exchange costs in the fiscal year 1967 will run over $1 billion higher than in the pre-buildup year of fiscal 1965.[71]

Table 10 shows the direct impact of military activities on the U.S. balance of payments. Vietnam has also had an indirect impact as well, by stimulating total domestic spending, including purchases of imported goods. Although there are no precise measures of the indirect effects, it has been estimated that they could be as large as, or even larger than, the direct impact.[72]

TABLE 10.—*Effects of national defense programs on the U.S. balance of payments*

[Fiscal years, billions of dollars]

	1961	1962	1963	1964	1965	1966
Expenditures:						
Vietnam-related increases			0.1	0.1	0.2	0.7
All other	3.1	3.0	3.0	2.8	2.6	2.6
Total	3.1	3.0	3.1	2.9	2.8	3.3
Receipts	.3	.9	1.4	1.2	1.3	1.2
Net adverse balance	2.8	2.1	1.7	1.7	1.5	2.1

Source: U.S. Department of Defense.

V. IMPLICATIONS FOR THE FUTURE: PROBLEMS OF TRANSITION

A. The ability to support the level of military spending

From time to time the question has been raised as to how much national security spending the economy can afford. The companion concern is that short-run considerations may impair the long-term capability of the economy to support a large and sometimes expanding array of national security programs.

Recent hearings on the military supplemental appropriations for the fiscal year 1967 showed congressional concern over the ability of the U.S. economy to withstand the costs of the war in Southeast Asia. The following excerpt is illuminating:

"*Senator Symington* . . . My question is, how long can this Nation afford to continue the gigantic financial cost incident to this major ground war in Asia, without its economy becoming nonviable?

"*Secretary McNamara* . . . I think forever, and I say it for this reason. That there are many things many prices we pay for the war in South Vietnam, some very heavy prices indeed, but in my opinion one of them is not strain on our economy." [73]

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[71] "Defense Budget Highlights," *Defense Industry Bulletin*, Vol. III, No. 2, February 1967, p. 3.

[72] *The Voluntary Program for Direct Investments: Status and Prospects*, Remarks by Gerald A. Pollack, Deputy Asst. Secretary of Commerce, before the National Industrial Conference Board, February 16, 1967, p. 8.

[73] U.S. Senate, Committees on Armed Services and Appropriations, *Supplemental Military Procurement and Construction Authorizations, Fiscal Year 1967*, January 1967, pp. 96–97.

There is no simple or generally agreed on method to measure or determine the "burden" of military programs on the economy, much less what, if any, economic ceiling exists on such programs. Yet, available economic analysis tends to support the Secretary's statement.

Using the GNP comparison, the portion of our national sources devoted to the production of military goods and services tended to diminish rather than increase prior to the Vietnam buildup, from 10.5 percent in 1957 to 8.4 percent in 1964. During much of that period, considerable unutilized or under-utilized capacity existed in the economy, far more than was generally desired. Price inflation was not particularly troublesome in those years; the wholesale price index fluctuated within the narrow range of 99.0 to 100.7 from 1967 to 1964 (base of 1957–50=100).[74]

The real cost to society of allocating productive resources to military programs may be said to be that these resources are unavailable for other purposes. Yet, such resources may not be entirely diverted from other uses in practice. Some or all of the resources so used might have remained unemployed but for the expansion of defense activities. On the other hand, if there is any such sacrifice in a given time period, and if the loss is in investment, additional sacrifices will accrue in subsequent time periods as society forgoes the returns on the absent investment.

Even where resources utilized by defense programs are diverted from other sectors, the value of the resultant output does not necessarily measure the value of the output diverted from the civilian sectors. For example, when resources shift from production of comparatively low-valued products such as agriculture to high-valued products such as military research and development, the increment of GNP so absorbed exceeds in value the output yielded by the private sector.

Conversely, the Selective Service System tends to result in substantial economic losses to many men who otherwise would be holding higher paid positions in civilian life. The cost to the economy and to society as a whole is substantially above the direct cost to the Department of Defense of paying, feeding, and clothing these people; it is the opportunity cost of the higher priced goods and services which otherwise they would be producing.

Overall, analyses of the "burden" of defense expenditures have generally concluded that, if necessary for military or political reasons, the American economy could handle, with a minimum of dislocation or hardship, a far higher level of such spending than has been experienced in recent years. These studies or statements have been made by such diverse groups as the Committee for Economic Development, the National Planning Association, a panel of the United States Arms Control and Disarmament Agency, and a group of outstanding university and research economists appearing before the Joint Economic Committee of the Congress. However, many such analyses also concluded that the long-term growth and prosperity of the United States do not require even the current level of national security spending.

Hence, economic constraints do not appear to be an important limitation on the level of defense spending—directly. Indirectly, and essentially through the Federal budgetary process, financial constraints have and are likely to continue to restrict the portion of the Nation's resources devoted to these purposes. This, of course, reflects the fact that governmental appropriations for military items are not made in isolation, but result from the interplay of many conflicting requirements and demands, including those of numerous other Federal programs and of taxpayers who wish to reduce the portion of their incomes taken by the Federal Government.

B. Adjusting to changes in military spending: Peace in Vietnam

The Nation's past experience testifies to the ability of the economy to adjust successfully to major reductions in national security spending. Demobilization after World War II was extremely rapid, and no sizable unemployment problem

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[74] An earlier version of this analysis appears in M. L. Weidenbaum, "Cost of Alternative Military Strategies," in David Abshire and Richard Allen, editors, *National Security, Political, Military and Economic Strategies in the Decade Ahead*, New York, Frederick A. Praeger, 1963, pp. 785–802.

developed. Between June 1945 and June 1946, over 9 million men were released from the armed forces, about three times the present total of military personnel. Between 1945 and 1946, national defense purchases of goods and services were reduced by 75 percent. This reduction was equivalent to more than 25 percent of the GNP in 1945, about three times the present proportion of GNP represented by defense.

The end of the Korean conflict involved a much smaller reduction in defense spending, which in turn started from a much lower peak than at the end of World War II. Tax reductions helped to maintain aggregate consumer income and personal consumption spending. As the total of defense spending leveled off in 1963–64, the national unemployment rate declined, clearly indicating the capability of the American economy to adjust rapidly at least to moderate changes in defense expenditures.[75]

Numerous studies of the economic impact of arms control and disarmament have concluded that the United States is fully capable of making the necessary economic adjustment to fundamental reductions in the level of national security expenditures; the limitations are considered to be mainly in the political sphere—the willingness of the Nation to take measures of sufficient magnitude and promptness to utilize the resources that would be released in such eventuality. The termination of hostilities in Vietnam and/or the reduction in the level of U.S. military spending there would raise such questions once again.

The President's Committee on the Economic Impact of Defense and Disarmament stated, in its July 1965 report, "However, neither the shifts from one kind of defense spending to another (for example, from strategic weapons to weapons of limited war), nor the resumption of the gradual shift away from defense presents major problems to our economy. Even general and complete disarmament would pose no insuperable problems . . ." [76]

At this point, it is extremely difficult to speculate as to the dimensions of a cutback in U.S. defense spending following peace in Vietnam. Perhaps, it would be useful to recall an earlier study which sketched out the budgetary implications of a hypothetical limited war.[77] That study, published in 1963, analyzed a possible limited war beginning in the fiscal year 1965.

It was hypothesized that the assumed conflict occurs in an area somewhat peninsular or restricted in nature geographically. Moreover, an adjacent critical national boundary limited the freedom of action of our forces. It was further assumed that the conflict ended with a truce in 1967, followed by a continuation of high state of limited war readiness.

A rough approximation of the cost of additional military expenditures under these assumed limited war conditions was on the order of $18–20 billion for 1967, the peak year. This raised total national security outlays to about $72 billion (in terms of 1962 dollars). After the postulated truce in the hypothetical limited war, procurement of weapon systems would be reduced from the wartime peak (see Figure 3). However, maintenance and periodic replacement of a force-in-being larger than that prior to the conflict would be required because of an unstable international situation. If the general dimensions of this hypothetical war correspond to the Vietnam experience, it would be expected that U.S. military spending might decline about $15 billion during a 12 to 24 month period following the cessation of hostilities. The new level of military spending would then still be in excess of $50 billion a year and require a large industrial base to support it.

Along the lines of adjustment to a cutback in the military budget, the President, in the January 1967 Economic Report, instructed the Federal agencies to give increased attention to planning for the eventuality of peace in Vietnam. His instructions included the following six steps:

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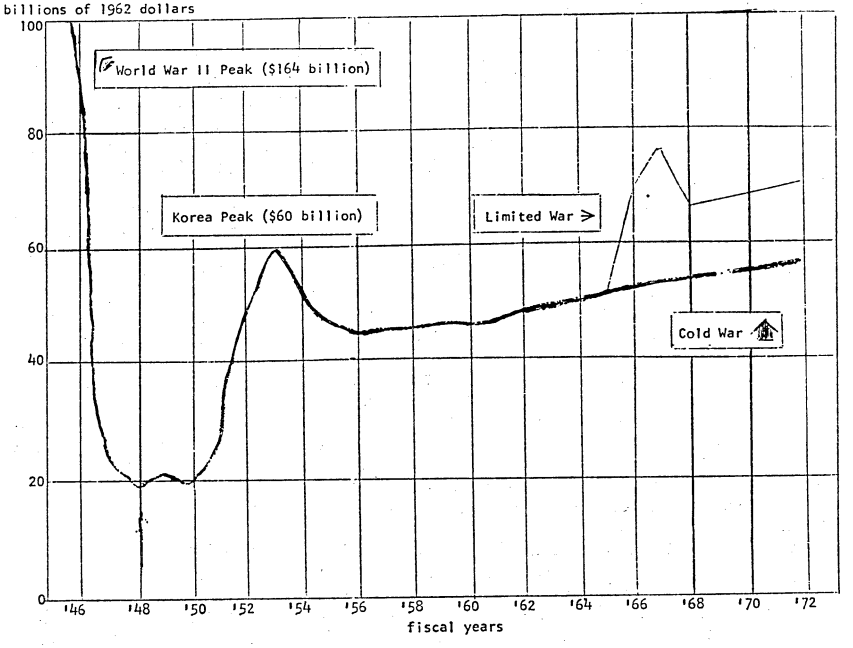
[75] See M. L. Weidenbaum, "Could the U.S. Afford Disarmament?", in John R. Coleman, editor, *The Changing American Economy,* New York, Basic Books, Inc., 1967, pp. 172–174.

[76] *Report of the Committee on the Economic Impact of Defense and Disarmament,* Washington, U.S. Government Printing Office, July 1965, p. 1.

[77] M. L. Weidenbaum, "Cost of Alternative Military Strategies," in David Abshire and Richard Allen, editors, *National Security, Political, Military and Economic Strategies in the Decade Ahead,* New York, Frederick A. Praeger, 1963, pp. 785–802.

Figur 3

PROJECTIONS OF NATIONAL SECURITY EXPENDITURES



Source: Footnote 75

1. Consider possibilities and priorities for tax reduction.
2. Prepare, with the Federal Reserve Board, plans for quick adjustments of monetary and financial policies.
3. Determine which "high priority" programs can be quickly expanded.
4. Determine priorities for the longer range expansion of government programs, both new and existing ones.
5. Evaluate the future direction of Federal financial support to State and Local governments.
6. Examine how the transition can be smoothed for the workers, companies and communities now engaged in supplying defense needs, and the men released from the armed forces.[78]

A number of specific possibilities (as well as problems) come to mind in examining the Presidential list. Table 11 is a preliminary attempt to indicate the range of options and alternative policy mixes which may become available.

It is apparent that the specific and essentially short-term question of the economic adjustments to the cessation of hostilities in Vietnam also involves many longer-run and perhaps more fundamental considerations of national social, political, and economic policy.

1. *Tax Reduction.*—For example, there are various methods of reducing taxes and thereby pumping additional purchasing power into the national economy. Prior to the Vietnam buildup, there had been some public discussion of focusing the next round of tax adjustments on the lower brackets. Such action could have

[78] *Economic Report of the President,* January 1967, pp. 23–24.

TABLE 11.—*Possible post-Vietnam economic adjustment actions*

Category	Some alternatives	Policy issues
Tax reduction	(1) Across-the-board reductions in rates; (2) major reductions in lower brackets; (3) increased investment incentives; and (4) institution of a negative income tax.	Stabilization versus growth versus income redistribution objectives.
Monetary and financial policies.	(1) Changes in discount rates, reserve requirements, and Federal Reserve open market transactions; and (2) increases in Federal lending and loan guarantee operations.	Primarily a matter of promptness in timing; also question of appropriate monetary-fiscal mix.
Rapid expansions in Government programs.	(1) Those using similar resources—anti-missile-missile, supersonic transport, planetary, and other space exploration; and (2) conventional programs, such as unemployment compensation, public construction.	Questions include (1) transfer payments versus Government purchases; and (2) prompt utilization of specific defense resources versus concern with aggregate demand.
Longrun expansions in Government programs.	(1) Human-resource types: education training, health investment; (2) physical environment types: transportation, air and water polution control, housing; (3) technologic applications: oceanographic research, development and operations.	Primarily a matter of identification of longrun goals and objectives, then a question of identifying most economical and acceptable methods.
Federal aid to State and local governments.	(1) Expansion of existing program grants; (2) initiation of new grant programs (e.g. environment improvement); and (3) block grants, with few if any Federal "strings."	(1) The extent to which the States are to determine the areas to which they allocate Federal funds; (2) if the determination remains at the Federal level, the choice among program.
Aid to defense workers, companies, communities, and veterans.	(1) Rely on existing welfare programs and aggregate demand measures; and (2) institute specific adjustment and benefit programs.	(1) The extent to which defense companies, their workers, and communities, should be treated more generously than others affected by economic dislocation; (2) the desirability of World War II type of veterans' benefits, in view of recent expansion in education, training, and social services.

an important impact on income redistribution. It would also constitute a decision to emphasize consumption at the expense of investment, insofar as the lower income groups spend an above-average share of their income for current consumption items and save proportionately less.[79]

Conversely, if major attention were given to increasing tax incentives to business investment, this too would be more than a short-term policy to offset the deflationary impact of the military cutback; such action would also serve to reduce or slow down the rate of growth of the public sector and, also, to favor investment and a more rapid long-term rate of economic growth at the expense of current consumption and a quick increase in consumer living standards.

Similarly the institution of a negative income tax would constitute a rather fundamental change in the role of the Federal Government in relation to individual citizens, above and beyond any reduction in the government's cash take from the economy. Perhaps, an across-the-board reduction in income tax rates would be most neutral in terms of these other considerations: It would mean foregoing many of the other economic policy objectives; yet, its relative simplicity and neutrality would tend to shorten substantially the lead times involved in preparing detailed Executive Branch recommendations and in obtaining congressional approval.

2. *Monetary and Financial Policies.*—If there is any lesson to be learned from recent experience, it is the need to take prompt action to offset the economic impacts of large and abrupt shifts in military demand. The key question that would be faced is the appropriate mix of monetary and fiscal policies, such that

[79] For a more general analysis along these lines, see U.S. Congress, Joint Economic Committee, *U.S. Economic Growth to 1975: Potentials and Problems,* Washington, U.S. Government Printing Office, 1966, pp. 31–32.

they independently do not overcompensate nor is the Nation witness to the performance of an act of "After you, Alphonse,". "No, after you, Gaston."

3. *Rapid Expansions in Government Programs.*—Important policy choices will have to be made both within as well as between the major categories of post-Vietnam economic adjustment actions. Certainly, tax reduction and government expenditure increases represent alternative routes. The choices are not likely to be either-or ones but some combination of the two. Hence, the public sector is not likely to contract by the full amount of the military cutback (which would be the result of primary reliance on tax reduction) but some tendency in that direction would result from most of the likely tradeoffs between tax reduction and government spending increases.

Within the expenditure category, there are various programs which may be selected. Liberalized unemployment compensation, public assistance, and similar income-maintenance types of transfer payments might be among the actions most quickly implemented. However, an array of government purchase type programs is also available and will compete for funding.

Of necessity, the latter will be programs already underway and for which expenditures can be increased rapidly. For example, the backlog of authorized civil public works is substantial. It is estimated that, as of June 30, 1968, planning will be complete on projects totalling $3.1 billion, for which construction contracts could be awarded promptly. For another $5.9 billion of projects, planning would be underway, but not completed.[80]

Another category of potential expenditure increases would be for those programs using resources similar to those released by the military cutback. Expansions in civilian space exploration, such as manned exploration of nearby planets, and completion of development of a civilian supersonic transport aircraft immediately come to mind.

4. *Long Run Expansions in Government Programs.*—The funds which would be made available from a reduction in military spending in Vietnam could be used for a variety of government programs, the expansion of which might take considerably longer than either transfer payments or ongoing construction projects.

In this category of possible adjustment actions are three major types of programs: (1) those primarily in the nature of investment in people, such as education and training; (2) those designed primarily to improve the physical environment, such as air pollution control; and (3) those which most readily apply the advanced technology of military contractors, such as oceanographic research and development.

Of course, these three groups are not entirely mutually exclusive. The systems approach developed in defense and space programs may well have important applications in education or urban redevelopment programs; improvements in the physical environment may also increase human productivity, etc. The kinds of public policy choices to be made here primarily are a matter of identifying and selecting among long-run goals and objectives, a consideration which current budgeting and other resource-allocation mechanisms in the public sector do not as yet come to grips with.

5. *Federal Aid to State and Local Governments.*—Were the short-term post-Vietnam adjustment efforts to emphasize expansion in direct Federal operations, such action might effectively result in the inability of the Federal Government to embark upon the block grant, tax sharing or related long-term efforts which have been proposed to aid state and local governments in their fiscal problems.

Several key policy issues are involved here. To what extent should the Federal Government, rather than the States, determine the specific program areas to which state and local governments allocate Federal funds? Either expanding existing "tied" program-specific grants or embarking upon new ones would maintain the influence of the Federal government in this regard. In contrast, the proposals for block grants would have rather few strings attached to the Federal aid. Tax sharing and tax credit proposals involve less if any Federal determination as to how the Federal aid is to be spent by the recipient governmental units.

On the other hand, if program grants are continued to be relied upon, decisions at the Federal level will then have to be made as to which program areas are to be favored.

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[80] *Budget of the United States, Special Analyses, Fiscal Year 1968,* 1967, p. 76.

6. *Aid to Defense Areas and Veterans.*—The last category of adjustment actions mentioned in the Economic Report was aid to veterans and to the workers, companies, and communities involved in defense work. To some extent, the more general measures discussed above would provide help to those directly and adversely affected by the economic consequences of a military cutback.

However, certain special actions are to be expected. Certainly there is ample precedence for generous assistance to disabled war veterans and to the dependents of those who lost their lives in the conflict. In addition, a Vietnam "GI Bill" would provide assistance for a rapid and successful transition to civilian life for returning servicemen generally.

The question then remains as to the extent of specific aid to the portion of the civilian economy directly affected by a reduction in defense production. Two factors tend to limit pressures from this sector. First of all, as pointed out earlier, it is likely that a high level of military spending—perhaps $50 billion a year—will be maintained after a military cutback. In addition, so much of the expansion in Vietnam requirements was met by production of civilian-oriented industries which should experience relatively minor difficulties if aggregate demand is maintained in the economy as a whole.

Certainly, the choices among the six adjustment routes analyzed here may be neither easy nor their implementation quick. Nevertheless, the official attention to the basic problem of post-Vietnam economic adjustment during the continuation of active hostilities is an important sign in itself.

C. Adjusting to Changes in Military Spending: Further Escalation.

The possibility of substantial further increases in U.S. military spending, either in Vietnam or elsewhere, needs to be acknowledged. There is little indication, in the dat aavailable to date, that any slow down in military spending is imminent. It recently has been estimated by the Deputy Assistant Secretary of Defense for Procurement that defense procurement orders to private industry will increase $7 billion from fiscal 1966 to a peak of $45 billion in the fiscal year 1967.[51]

The $45 billion estimate also indicates that the Pentagon's rate of placing orders with domestic industry will accelerate in the remaining months of the current fiscal year, from an average of $3.2 billion during each of the first eight months to an average of about $4.0 billion during March–June 1967. However, the traditional tendency to concentrate government procurement in the latter part of the fiscal year (so-called "June buying") obscures the underlying trend.

Should another major expansion occur in U.S. military spending once again it would be important to analyze accurately the domestic economic impact and to take offsetting economic policy measures promptly.

VI. SUMMARY

An evaluation of U.S. expenditures for Vietnam and their economic impacts must of necessity be based upon a review of the events in South Vietnam itself and of the changing nature of the U.S. involvement there. From 1954 through early 1963, the U.S. role was that of providing relatively minor amounts of training and military advisory assistance. Fewer than 1,000 American troops were involved.

Beginning in November 1963, with the overthrow of the Diem government, the extent of the U.S. commitment increased, but quite slowly at first. By the end of 1964, the total of American troops stationed in South Vietnam was 23,300. A significant change in the nature of the conflict occurred in 1965, the intensification of infiltration of arms and personnel into South Vietnam from North Vietnam. The buildup of U.S. troops there accelerated rapidly, reaching 184,314 at year end. According to the Pentagon, the U.S. involvement was necessary in order to blunt the Vietcong monsoon drive of 1965 which was attempting to dismember South Vietnam.

By early 1966, American forces apparently were conducting the bulk of the offensive "search and destroy" military actions against the Vietcong. The South

[51] "Defense Buying Bill to Climb to $45 Billion, Up $7 Billion, in Fiscal '67, Official Predicts," *Wall Street Journal*, April 13, 1967.

Vietnamese were primarily responsible for the more passive missions, such as pacification and defense of Government centers. Total American troops in South Vietnam exceeded 400,000 by the end of 1966.

In restrospect, it appears that the U.S. role in Vietnam changed from support and advisory to active combat when the South Vietnamese no longer could defend themselves successfully against the combined onslaught of the Vietcong and massive infiltration of North Vietnamese equipment and manpower.

It is futile to speculate as to anyone's ability to have forecast these developments prior to their occurrence. However, it is necessary to note that the uncertain nature of future developments in Vietnam continually clouded the public and private analyses of their enfolding impact on the Treasury and on the American economy.

The evolution of the U.S. role in Vietnam could scarcely be inferred from the day-to-day statements of Administration spokesmen such as Secretary McNamara. On various occasions in 1963–64 he stated that the war was to be fought by Vietnamese and not U.S. troops. In 1965, after U.S. troops were in combat, he stated that the South Vietnamese would bear the brunt of the fighting. The purpose here is not to criticize the inability to make accurate forecasts under extremely difficult conditions, but to emphasize the great uncertainty that existed in evaluating the impact on our domestic economy of the expanding U.S. commitment in Vietnam.

From the point of view of demands on the resources of the American economy, the Vietnam war really had its initial impact in the fiscal year 1966, the 12-month period July 1, 1965 to June 30, 1966. Prior to that time, the Budget Bureau estimated that the additional costs of Vietnam were $100 million or less a year, a rather insignificant factor in a $50 billion military budget or a $700 billion economy.

The January 1966 Budget Message, in constrast, estimated that the Vietnam war would require $14 billion of appropriations in fiscal 1966 and $4.4 billion of expenditures. It appeared at the time, at least to many observers, that the Nation could afford to wage a two-front war without raising taxes, the domestic war on poverty and the war in Vietnam. That theme was clearly enunciated in the Budget Message and in the President's January 1966 Economic Report. In the later document, he stated that, "The fiscal program I recommend for 1966 aims at full employment without inflation" and that "this budget provides . . . for the maintenance of basic price stability."

In retrospect, things did not work out so well. Although the unemployment rate declined below 4 percent, the year 1966 witnessed the most rapid period of price inflation since the Korean War. The basic explanation would appear to be that—despite the assurances in the Economic Report—the increases in government civilian and military demand, coupled with the continued expansion in business expenditures for new plant and equipment, exceeded the capability of the economy to supply goods and services at then current prices. Several factors help to explain the circumstances. One factor was the underestimate in defense spending. The January 1966 budget projected the cost of Vietnam at $10 billion in the fiscal year 1967 and the current estimate is almost double that.

Another factor is a bit more sophisticated. It relates to the lack of understanding of how a military buildup affects the economy. The key point is that, under our private enterprise system, the great bulk of military production is carried on in the private sector of the economy.

As a result, when there is a large expansion in military orders, as occurred in fiscal 1966, the immediate impact is *not* felt in the government budget. The initial impact—in terms of demand for labor, materials, and resources generally—is felt by the government contractors in the *private* sector. Hence, particularly during the early stage of a military buildup, we have to look at the private sector to see the expansionary effects. This is hardly a new phenomenon. This timing relationship was the factor that contributed so greatly to the inflation that accompanied the first year of the Korean mobilization.

By just looking at the Government's budget during fiscal year 1951, it seemed that the public sector was following a policy of fiscal restraint. Policy officials generally overlooked the almost doubling in the volume of defense orders to private industry during that same period. Unfortunately, the same mistake

was repeated during the first year of the Vietnam buildup. The most rapid period of expansion in military contracts to private industry occurred in 1966; so did the most rapid rate of price inflation in recent years. But that was the period when the Nation and particularly the Administration's economists were still congratulating themselves on the success of the 1964 tax cut and little need was felt, at least officially, for greater fiscal restraint.

To some extent, the inflationary pressures of the Vietnam buildup were accentuated by a rather liberal monetary policy in 1965, some of the results of which were continued to be felt in 1966 (the money supply rose by 6.2 percent from April 1965 to April 1966, a rate considerably above recent prior experience). Beginning in December 1965, the Federal Reserve Board undertook a series of steps to tighten the availability of credit. By April 1966, the steep rise in the money stock was halted and a slight decline occurred through the remainder of 1966.

Some positive impacts of governmental economic policy during this period also need to be acknowledged. The Nation achieved a large and rapid shift of resources from civilian uses to military programs. Direct controls over prices, wages, and materials generally were avoided. Moreover, economic growth and real improvement in the living standard of the average American continued despite the defense spending increases and inflation.

In a sense, this post mortem is too late. There is little that can be done about the 1966-induced inflation at this late stage. The demand-pull inflationary pressures of 1966 seem to have run their course. We do have a legacy of cost-push inflationary pressures which are likely to plague us later in 1967, particularly as major collective bargaining agreements come up for renewal.

However, it is quite likely that in the near future the Nation may once again find itself in a situation when aggregate economic and fiscal policy measures fail to take proper account of the timing of the economic impact of government spending, especially for goods produced in the private sector. If that turns out to be the case, avoidable inflation or recession may occur once again.

Should another major escalation occur in the level of the U.S. commitment in Southeast Asia, it would be important to *promptly* develop the *restraining* fiscal measures needed to offset the inflationary impacts.

Conversely, should peace come to Vietnam it would be essential to *promptly* put into action the *expansionary* fiscal measures needed to offset the immediate deflationary effects of a defense cutback. Most authorities are agreed as to the capability of the economy to successfully adjust to a defense cutback (or an expansion). The concern mainly relates to our political willingness and capability to act promptly enough.

STATISTICAL APPENDIX

Aggregate Measures of U.S. Military Spending

1. Measures of U.S. Military Spending, Billions of Dollars at Annual Rates.
2. Measures of U.S. Military Spending, Percentage Change from Previous Quarter.

Detail on U.S. Military Spending

3. Detailed Measures of U.S. Military Spending, Billions of Dollars at Annual Rates.
4. Detailed Measures of U.S. Military Spending, Percentage Change from Previous Quarter.

Geographic Measures of U.S. Military Activities

5. Distribution of Defense Employment and Labor Force by State.
6. Defense Dependency by State.
7. Percentage Distribution of Surveyed Defense Employment by State and Product Group.
8. Changes in Defense Generated Employment by State.
9. Surveyed Employment Generated by Defense Subcontracts by State of Performance.

APPENDIX TABLE 1.—*Measures of U.S. military spending*

[Billions of dollars at annual rates]

Calendar year and quarter	Defense obligations		Military contract awards		Defense expenditures	Cash national defense	National defense purchases, seasonally adjusted		Defense products			
									Seasonally adjusted			Unfilled orders
	Actual	Seasonally adjusted	Actual	Seasonally adjusted			Actual	Deflated	New orders	Total inventories	Shipments	
1964:												
1st quarter	52.0	55.2	26.1	25.7	49.2	52.5	50.1	44.9	29.0	5.5	26.0	19.3
2d quarter	61.3	54.8	30.5	27.4	56.8	60.1	51.6	46.2	28.7	5.4	26.4	19.7
3d quarter	55.0	53.3	24.2	28.1	43.1	46.8	49.8	43.9	28.5	5.4	25.6	20.3
4th quarter	51.8	53.3	20.4	22.5	48.1	51.5	48.5	42.4	24.3	5.5	25.9	20.2
Total	55.0	54.2	25.3	25.9	49.3	52.7	50.0	44.4	27.1	5.6	26.0	20.1
1965:												
1st quarter	48.2	51.0	22.5	21.3	46.8	49.9	48.2	42.1	29.1	5.6	26.8	20.2
2d quarter	62.3	55.0	34.0	29.6	51.6	54.8	49.1	42.8	33.1	5.8	27.4	21.5
3d quarter	60.6	59.0	27.9	31.7	48.6	51.4	50.7	43.8	35.5	6.0	28.3	22.7
4th quarter	62.1	62.1	30.1	32.7	54.1	56.9	52.5	44.5	33.5	6.2	29.3	24.5
Total	58.3	56.8	28.6	28.8	50.3	53.3	50.1	43.3	32.5	6.4	28.0	24.6
1966:												
1st quarter	60.5	64.6	30.1	32.9	56.4	59.5	54.6	45.8	39.2	6.6	31.3	25.9
2d quarter	86.4	75.9	48.0	38.8	62.4	65.8	57.1	47.8	39.6	7.2	32.8	27.6
3d quarter	77.0	75.2	40.2	41.1	63.4	66.7	62.0	51.4	45.3	7.7	34.2	29.7
4th quarter	68.9	72.3	33.0	39.1	65.8	68.7	65.5	54.2	37.6	8.4	36.6	31.5
Total	73.2	72.0	37.7	38.0	62.0	65.2	60.0	50.0	40.4	7.5	33.2	31.8

Sources: Departments of Commerce, Treasury, and Defense.

APPENDIX TABLE 2.—*Measures of U.S. military spending*

[Percentage change from previous quarter, at annual rates]

Calendar year and quarter	Defense obligations		Military contract awards		Defense expenditures	Cash national defense	National defense purchases, seasonally adjusted		Defense products			
									Seasonally adjusted			Unfilled orders
	Actual	Seasonally adjusted	Actual	Seasonally adjusted			Actual	Deflated	New orders	Total inventories	Shipments	
1964:												
1st quarter	−3.8	+1.6	+21.9	+10.7	−2.3	−2.0	−.4	−2.8	+34.9	0	+.4	0
2d quarter	+17.9	−.7	+16.9	+6.6	+15.4	+14.5	+2.9	+2.9	−1.0	−1.8	+1.5	+2.0
3d quarter	−9.8	−2.7	−20.6	+2.5	−24.1	−22.1	−3.4	−4.9	−.8	0	−2.9	+3.0
4th quarter	−5.8	0	−15.7	−19.9	+11.6	+10.0	−2.6	−3.4	−14.7	+1.8	+1.1	−.9
Total [1]	+3.2	+2.8	−5.8	−3.7	+.6	−1.4	−1.5	−5.5	+3.0	+1.8	+3.2	+3.6
1965:												
1st quarter	−6.9	−4.3	+10.3	−5.3	−2.7	−3.1	−.6	−.7	+19.8	+1.8	+3.5	0
2d quarter	+29.3	+7.8	+51.1	+38.9	+10.2	+9.9	+1.9	+1.6	+13.7	+3.5	+2.2	+6.4
3d quarter	−2.6	+7.3	−17.9	+7.1	−5.8	−6.2	+3.2	+2.3	+7.2	+3.4	+3.3	+5.5
4th quarter	+2.5	+5.3	+7.9	+3.2	+11.3	+10.7	+3.5	+1.6	−5.6	+3.3	+3.6	+7.9
Total [1]	+6.0	+4.8	+13.0	+11.2	+2.0	+1.1	+.2	−2.4	+19.9	+14.3	+7.6	+22.3
1966:												
1st quarter	−2.6	+4.0	0	+.6	+4.2	+4.6	+4.0	+2.9	+17.0	+6.4	+6.8	+5.7
2d quarter	+42.8	+17.5	+59.5	+17.9	+10.6	+10.6	+4.5	+4.4	+1.0	+9.0	+4.8	+6.5
3d quarter	−10.9	−.9	−16.2	+5.9	+1.6	+1.4	+8.6	+7.5	+14.4	+6.9	+4.2	+7.5
4th quarter	−10.5	−3.9	−17.9	−4.9	+3.8	+3.0	+5.6	+5.4	−17.0	+9.1	+7.0	+6.1
Total [1]	+25.7	+26.1	+31.8	+31.9	+23.3	+22.3	+19.8	+15.5	+24.3	+17.2	+18.6	+29.3

[1] Percent increase for total is increase from previous year.

Source: Table 1.

APPENDIX TABLE 3.—*Detailed measures of U.S. military spending*

[Billions of dollars at annual rates]

Calendar year and quarter	Defense obligations							Defense expenditures				
	Operations		Procurement			R.D.T. & E.	Military construction	Military personnel	Operations maintenance	Procurement	R.D.T. & E.	Military construction
	Military personnel	Maintenance	Aircraft	Ordnance and vehicles	Total							
1964:												
1st quarter	14.4	12.5	8.3	1.7	15.0	6.2	2.2	13.9	11.4	14.1	6.6	.8
2d quarter	14.9	13.9	8.1	2.3	19.7	8.1	1.7	15.3	13.1	17.6	7.3	1.0
3d quarter	15.2	15.2	4.5	1.5	13.1	9.3	1.0	14.6	11.2	11.2	6.7	1.0
4th quarter	14.7	13.6	6.7	2.1	14.6	5.7	1.6	14.8	12.2	13.7	6.4	1.1
Total	14.8	13.8	6.9	1.9	15.6	7.3	1.6	14.6	12.0	14.1	6.8	1.0
1965:												
1st quarter	14.8	13.0	4.9	1.3	11.1	6.0	1.5	14.4	11.7	11.5	5.8	.8
2d quarter	15.2	15.3	8.4	4.1	19.8	7.0	1.9	15.4	14.3	11.0	6.1	1.1
3d quarter	16.3	16.9	7.1	4.7	16.5	8.8	.8	15.0	12.0	13.4	6.4	1.1
4th quarter	16.7	16.3	7.1	5.5	19.1	6.2	1.9	16.8	15.0	13.8	6.3	1.4
Total	15.7	15.4	6.9	3.9	16.6	7.0	1.5	15.4	13.2	12.4	6.1	1.1
1966:												
1st quarter	17.3	16.0	7.3	4.8	17.5	6.1	1.7	16.6	14.2	14.6	6.3	1.2
2d quarter	18.7	19.7	12.9	10.8	33.4	7.9	3.8	18.8	17.2	15.5	6.0	1.6
3d quarter	20.0	21.7	10.5	4.3	21.5	10.9	1.5	18.2	17.7	17.6	7.6	1.6
4th quarter	19.9	18.9	8.4	5.8	21.1	6.4	1.4	19.2	17.1	17.1	7.1	1.8
Total	19.0	19.1	9.8	6.5	23.6	7.8	2.9	18.1	16.5	16.1	6.7	2.0

Source: Department of Defense.

APPENDIX TABLE 4.—*Detailed measures of U.S. military spending*

[Percentage change from previous quarter, at annual rates]

Calendar year and quarter	Defense obligations							Defense expenditures				
	Operations		Procurement			R.D.T. & E.	Military construction	Military personnel	Operations maintenance	Procurement	R.D.T. & E.	Military construction
	Military personnel	Maintenance	Aircraft	Ordnance and vehicles	Total							
1964												
1st quarter	−.7	−3.1	+38.3	− 5.0	−10.7	−10.1	+120.0	+2.0	−2.0	−5.4	−5.6	−27.2
2d quarter	+3.5	+11.2	−2.4	+35.3	+31.3	+30.6	−22.7	+10.1	+14.1	+24.8	+10.6	+25.0
3d quarter	+2.0	+9.4	−44.4	−34.8	−33.5	+14.8	−41.2	−4.6	−14.5	−36.4	−8.3	0
4th quarter	−3.2	−10.5	+48.4	+40.0	+11.5	−38.7	+60.0	+1.4	+8.9	+22.3	+4.2	+10.0
Total [1]	+8.0	+5.1	+9.5	−5.0	−4.8	−1.4	+23.0	+16.5	0	−13.5	−2.8	−27.2
1965												
1st quarter	+.7	−4.4	−26.8	−38.1	−23.9	+5.3	−6.2	−2.7	−4.1	−16.0	−9.1	−27.2
2d quarter	+2.9	+17.7	+71.4	+215.4	+78.4	+16.6	+26.6	+6.9	+22.2	−4.4	+5.2	+37.7
3d quarter	+7.2	+10.5	−15.5	+14.6	−16.7	+25.7	−57.8	−2.6	−16.	+30.8	+4.9	0
4th quarter	+2.4	−3.5	0	+17.0	+15.6	−29.5	+137.5	+12.0	+25.0	+2.9	−1.6	+27.2
Total [1]	+6.0	+11.5	0	+105.3	+.6	−4.1	−6.2	+5.4	+10.0	−12.0	−10.3	+10.0
1966												
1st quarter	+3.6	−1.8	+2.8	−12.2	−8.4	−1.6	−10.5	−1.2	−4.1	+5.8	0	−14.3
2d quarter	+8.2	+23.1	+79.4	+125.0	+90.8	+29.5	+123.5	+13.3	+21.1	+6.2	−4.7	+33.3
3d quarter	+16.0	+10.2	−19.1	−60.1	−35.6	+39.9	−60.5	−3.1	+2.9	+13.5	+26.6	0
4th quarter	−.5	−12.9	−20.8	+34.9	−1.8	+41.3	−6.1	+5.5	−3.4	−2.8	+6.6	+12.5
Total	+21.0	+24.0	+42.0	+66.6	+42.2	+11.4	+93.3	+17.5	+25.0	+29.8	+9.8	+81.8

[1] Percent change in total from previous year.

Source: Table 3.

APPENDIX TABLE 5.—*Distribution of defense employment and labor force by State, June 1966*

State ranking [1]	Percentage distribution			Index of relative concentration		Number (in thousands)	
	Defense-generated employment [2]	Labor force	Military personnel	Defense-generated employment (2)÷(3)	Defense-generated employment and military personnel [3]	Defense-generated employment	Military personnel
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1. California	17.0	9.5	13.5	1.8	1.6	405.0	246.6
2. Texas	5.8	5.1	11.3	1.1	1.6	139.6	206.9
3. New York	5.7	10.1	1.8	.6	.4	138.0	33.2
4. Pennsylvania	5.4	6.0	.8	.9	.6	129.8	14.9
5. Virginia	5.2	2.1	3.6	2.4	2.1	125.6	66.3
6. Ohio	3.7	5.3	1.1	.7	.5	88.7	19.8
7. Maryland	3.6	1.7	2.6	2.1	1.8	85.3	47.5
8. Massachusetts	3.6	3.1	1.5	1.1	.8	85.2	28.2
9. New Jersey	3.4	3.5	2.7	1.0	.9	80.3	48.8
10. Connecticut	3.3	1.6	.2	2.1	1.3	78.9	4.2
11. Florida	3.0	2.9	3.8	1.0	1.2	73.3	69.2
12. Missouri	2.9	2.5	2.1	1.2	1.0	69.8	38.9
13. Georgia	2.9	2.1	6.0	1.4	1.9	69.2	109.4
14. Illinois	2.5	6.0	3.3	.4	.5	60.3	60.3
15. Washington	2.2	1.5	2.6	1.5	1.4	51.5	47.6
16. Alabama	2.0	1.6	1.7	1.2	1.2	48.1	32.1
17. Indiana	1.8	2.6	.5	.7	.5	43.6	9.8
18. Oklahoma	1.6	1.2	2.1	1.3	1.5	38.6	37.9
19. Michigan	1.5	4.1	1.0	.4	.3	36.0	18.3
20. Utah	1.5	.5	.2	3.0	2.0	35.7	4.5
21. District of Columbia	1.4	.5	3.9	2.8	4.0	32.8	70.5
22. Tennessee	1.3	2.0	1.2	.7	.6	29.9	21.9
23. North Carolina	1.2	2.5	5.1	.5	1.1	29.1	92.7
24. Colorado	1.1	1.0	2.2	1.1	1.5	25.6	40.5
25. Kansas	1.1	1.1	1.9	1.0	1.3	25.6	34.8
26. Mississippi	1.0	1.0	1.5	1.0	1.2	23.9	28.0
27. South Carolina	1.0	1.3	3.3	.8	1.5	23.2	60.2
28. Hawaii	1.0	.3	1.6	3.3	3.0	22.8	28.7
29. Minnesota	.9	2.0	.3	.5	.3	21.5	5.1
30. Arizona	.8	.7	1.1	1.1	1.4	19.3	20.7
31. Kentucky	.7	1.4	2.8	.5	1.1	16.7	51.9
32. New Mexico	.6	.5	1.0	1.2	1.6	15.1	18.7
33. Louisiana	.6	1.6	2.2	.4	.8	14.6	40.1
34. Wisconsin	.6	2.3	.2	.3	.2	14.6	3.4
35. Rhode Island	.6	.5	.5	1.2	1.2	13.8	9.5
36. New Hampshire	.6	.3	.3	2.0	1.3	13.5	5.2
37. Iowa	.4	1.5	.1	.3	.2	9.9	1.6
38. Alaska	.4	.1	1.6	4.0	9.0	8.8	29.2
39. Arkansas	.3	.9	.5	.3	.4	8.1	9.2
40. Maine	.3	.5	.5	.6	.8	7.2	10.8
41. Oregon	.3	1.1	.2	.3	.2	6.6	3.6
42. Nebraska	.3	.8	.7	.4	.6	6.5	12.4
43. West Virginia	.3	.8	.0	.4	.2	6.4	.5
44. North Dakota	.2	.3	.7	.7	1.3	4.2	12.2
45. Nevada	.1	.2	.3	.5	1.0	3.3	6.3
46. Delaware	.1	.3	.4	.3	.7	3.0	7.1
47. Vermont	.1	.2	.0	.5	.5	2.6	.3
48. South Dakota	.1	.3	.3	.3	.7	1.9	6.2
49. Montana	.1	.4	.5	.3	.9	1.7	9.4
50. Wyoming	.0	.2	.2	0	.5	1.3	4.0
51. Idaho	.0	.3	.2	0	.3	.9	4.0
Undistributed	3.9		2.2			90.4	39.4
Total	100.0	100.0	100.0			2,387.3	1,832.5

[1] Arrayed in descending order based on State's percent of defense-generated employment.
[2] Includes defense-generated employment in prime plants and civil service employment at DOD installations.
[3] Percent distribution of total of defense-generated employment (col. 7) plus military personnel (col. 9) divided by percent distribution of total of labor force (col. 8) plus military personnel (col. 9).

Source: U.S. Department of Defense, Office of Assistant Secretary, Systems Analysis (Economics).

APPENDIX TABLE 6.—*Defense dependency by State, June 1966*

State ranking [1]	Work force (in thousands)	Defense-generated employment (in thousands)	Percent defense dependency 3÷2
(1)	(2)	(3)	(4)
1. Alaska	90.4	8.8	9.7
2. Utah	390.5	35.7	9.1
3. Hawaii	273.3	22.8	8.3
4. District of Columbia	396.0	32.8	8.3
5. Virginia	1,638.6	125.6	7.7
6. Maryland	1,307.3	85.3	6.5
7. Connecticut	1,236.8	78.9	6.4
8. California	7,459.0	405.0	5.4
9. New Hampshire	274.0	13.5	4.9
10. Washington	1,217.7	51.5	4.2
11. New Mexico	357.4	15.1	4.2
12. Georgia	1,684.9	69.2	4.1
13. Oklahoma	961.2	38.6	4.0
14. Alabama	1,273.1	48.1	3.8
15. Rhode Island	372.3	13.8	3.7
16. Missouri	1,965.9	6.98	3.6
17. Texas	4,024.6	139.6	3.5
18. Massachusetts	2,432.1	85.2	3.5
19. Arizona	544.4	19.3	3.5
20. Colorado	778.8	25.6	3.3
21. Florida	2,264.3	73.3	3.2
22. Kansas	834.6	25.6	3.1
23. Mississippi	786.3	23.9	3.0
24. New Jersey	2,753.7	80.3	2.9
25. Pennsylvania	4,747.3	129.8	2.7
26. South Carolina	998.8	23.2	2.3
27. Indiana	2,019.5	43.6	2.2
28. Ohio	4,153.3	88.7	2.1
29. Tennessee	1,584.5	29.9	1.9
30. Maine	375.4	7.2	1.9
31. New York	7,965.0	138.0	1.7
32. Nevada	189.9	3.3	1.7
33. North Dakota	267.7	4.2	1.6
34. Vermont	166.5	2.6	1.6
35. Kentucky	1,126.2	16.7	1.5
36. North Carolina	1,994.0	29.1	1.5
37. Minnesota	1,591.3	21.5	1.4
38. Illinois	4,730.0	60.3	1.3
39. Delaware	226.7	3.0	1.3
40. Arkansas	685.4	8.1	1.2
41. Michigan	3,187.9	36.0	1.1
42. Louisiana	1,302.5	14.6	1.1
43. Nebraska	650.0	6.5	1.0
44. West Virginia	620.9	6.4	1.0
45. Wyoming	144.6	1.3	.9
46. Oregon	826.4	6.6	.8
47. Iowa	1,194.9	9.9	.8
48. Wisconsin	1,787.5	14.6	.8
49. South Dakota	262.9	1.9	.7
50. Montana	263.7	1.7	.6
51. Idaho	277.7	.9	.3
Undistributed		90.4	
Total United States	78,658.0	2,387.3	
U.S. average			3.0

[1] Arranged in descending order based on percent of defense dependency.

Source: U.S. Department of Defense, Office of Assistant Secretary, Systems Analysis (Economics).

APPENDIX TABLE 7.—*Percentage distribution of surveyed defense employment by State and product group, June 1966*

Region and States	Defense product groups								
	Aircraft	Missile and space	Ships	Vehicles and weapons	Ammunition	Elect. and Comm.	R.D.T & E.	Other	Total
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
New England:									
Maine			3.8	5.8					0.4
New Hampshire						1.4			.4
Vermont				10.3					.3
Massachusetts	2.4	5.7	9.9	.9		8.4	6.0	15.3	5.1
Rhode Island					.6	.4			.2
Connecticut	14.2		23.1	7.6	2.9	2.0			7.8
Subtotal	16.6	5.7	36.8	24.6	3.5	12.1	6.0	15.3	14.1
Middle Atlantic:									
New York	8.2			.9	2.5	14.0	8.7	4.2	7.2
New Jersey	1.7	3.2	.9		.6	7.0	.9	1.7	3.9
Pennsylvania	3.8	1.0		6.7	4.6	8.3		.8	3.6
Subtotal	13.8	4.1	.0	7.6	7.7	29.3	9.6	6.7	14.7
East north-central:									
Ohio	8.4		.8	7.6	2.5	.4		2.5	3.6
Indiana	3.2	.6		4.5	9.6	1.6			2.5
Illinois	.5				3.9	2.0	3.5	10.2	1.2
Michigan	.5	1.3	1.7	22.9		2.0			1.6
Wisconsin			1.2		3.5	1.0			.6
Subtotal	12.6	1.0	3.7	35.0	19.5	7.0	3.5	12.6	9.5
West north-central:									
Minnesota				9.4	8.6	3.3			1.9
Iowa					4.1	2.2			.9
Missouri	10.4	.7			12.8	.6			5.1
Nebraska					1.8				.2
Kansas	4.				4.5				2.2
Subtotal	15.3	.7	0	9.4	31.8	6.1	0	0	10.3

South Atlantic:									
Delaware	.2								.1
Maryland	.1	6.8	2.3		.3	6.5			2.8
District of Columbia									.0
Virginia		3.7	25.8			1.1	10.4		3.0
West Virginia		.7		11.2					.4
North Carolina		.2				2.7		4.2	.8
Georgia	7.1				1.5				2.6
Florida	3.0	7.1				1.6	1.7	9.3	2.7
Subtotal	10.4	18.5	28.1	11.2	1.8	11.9	12.1	13.5	12.4
East south-central:									
Tennessee	1.0	.7			11.8			4.2	1.5
Alabama	1.7	.7	1.8		.8				.9
Mississippi	.2		8.7						.8
Subtotal	2.9	1.4	10.5	0	12.7	0	0	4.2	3.3
West south-central:									
Arkansas					.8			1.7	.1
Louisiana	.4		1.5		3.4				.5
Oklahoma	1.1	.4				.1			.5
Texas	10.6	.8			9.8	3.7		4.2	5.8
Subtotal	12.1	1.2	1.6	0	14.0	3.8	0	5.9	6.8
Mountain:									
Colorado	.3	4.3							.8
Arizona	.7	2.3			.4	1.0			.9
Utah		5.1							.8
Subtotal	1.0	11.6	0	0	.4	1.0	0	0	2.6
Pacific:									
Washington	.5	12.4	7.3	.9					2.7
Oregon			2.3						.2
California	15.1	42.6	8.9	11.2	8.5	28.6	68.7	41.5	23.0
Subtotal	15.6	55.0	18.4	12.1	8.5	28.6	68.7	41.5	26.0
U.S. total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Surveyed Defense employment (in thousands)	304.5	136.4	65.5	22.3	71.1	228.1	11.5	11.8	851.2

NOTE.—May not add due to rounding.

Source: U.S. Department of Defense, Office of Assistant Secretary, Systems Analysis (Economics).

APPENDIX TABLE 8.—*Changes in defense-generated employment by State, June 1965–June 1966*

[In thousands]

State	Defense-generated employment [1]		Net changes in employment June 1965–June 1966				
			Defense civilian employment			Military personnel assigned	Total defense-generated and military (5)+(6)
	June 1965	June 1966	Industrial plants	DOD installations	Total (3)+(4)		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Alabama	47.2	48.1	1.0	−.1	.9	8.1	9.0
Alaska	8.8	8.8	−.3	.3	0	−1.7	−1.7
Arizona	14.9	19.3	3.6	.8	4.4	−.5	3.9
Arkansas	5.4	8.1	2.2	.5	2.7	−.7	2.0
California [2]	349.1	405.0	36.4	19.5	55.9	33.7	89.6
Colorado	24.2	25.6	.2	1.2	1.4	5.1	6.5
Connecticut [2]	66.3	78.9	12.1	.5	12.6	.5	13.1
Delaware	2.1	3.0	.8	.1	.9	.1	.8
District of Columbia	33.2	32.8	−.7	.2	−.5	5.7	5.2
Florida	68.2	73.3	2.6	2.5	5.1	.8	4.3
Georgia	58.3	69.2	4.6	6.3	10.9	15.4	26.3
Hawaii	20.8	22.8	.2	1.8	2.0	11.5	−9.5
Idaho	.6	.9	.2	.1	.3	−1.4	−1.1
Illinois [2]	47.9	60.4	11.1	1.4	12.5	12.9	25.4
Indiana	34.5	43.6	6.7	2.4	9.1	1.3	10.4
Iowa	7.3	9.9	2.4	.2	2.6	.2	2.8
Kansas	19.2	25.6	5.6	.8	6.4	5.0	11.4
Kentucky	13.2	16.7	.3	3.2	3.5	3.0	6.5
Louisiana	10.5	14.6	2.9	1.2	4.1	5.8	9.9
Maine	5.6	7.2	1.5	.1	1.6	−1.4	.2
Maryland [2]	69.3	85.3	11.5	4.5	16.0	8.2	24.2
Massachusetts	78.7	85.2	6.4	.1	6.5	−2.3	4.2
Michigan	29.7	36.0	5.2	1.1	6.3	−1.6	4.7
Minnesota	16.2	21.5	5.1	.2	5.3	−.1	5.2
Mississippi	23.2	23.9	−.5	1.2	.7	6.7	7.4
Missouri [2]	53.6	69.8	12.7	3.5	16.2	10.3	26.5
Montana	1.5	1.7	0	.2	.2	−.1	.1
Nebraska	5.1	6.5	1.7	−.3	1.4	−4.0	−2.6
Nevada	3.0	3.3	.2	.1	.3	−1.3	−1.0
New Hampshire	12.1	13.5	1.1	.3	1.4	−2.5	−1.1
New Jersey [2]	67.5	80.3	9.6	3.2	12.8	11.9	24.7
New Mexico	15.3	15.1	−1.0	.8	−.2	−2.9	−3.1
New York	130.2	138.0	17.0	−9.2	7.8	−1.9	5.9
North Carolina	25.9	29.1	2.1	1.1	3.2	5.9	9.1
North Dakota	2.7	4.2	1.7	−.2	1.5	−.1	1.4
Ohio	80.1	88.7	7.6	1.0	8.6	1.1	9.7
Oklahoma	31.2	38.6	1.6	5.8	7.4	3.9	11.3
Oregon	5.5	6.6	1.0	.1	1.1	−1.4	−.3
Pennsylvania [2]	108.0	129.8	16.8	5.0	21.8	−.7	21.1
Rhode Island	13.5	13.8	−.2	.5	.3	2.9	3.2
South Carolina	18.7	23.2	2.1	2.4	4.5	10.0	14.5
South Dakota	2.1	1.9	−.2	0	−.2	−.4	−.6
Tennessee	23.1	29.9	6.3	.5	6.8	3.5	10.3
Texas [2]	116.7	139.6	13.0	9.9	22.9	41.8	64.7
Utah	28.8	35.7	−.8	7.7	6.9	−.1	6.8
Vermont	2.0	2.6	.6	0	.6	0	.6
Virginia [2]	112.8	125.5	3.6	9.1	12.7	10.3	23.0
Washington	45.9	51.5	3.4	2.2	5.6	1.9	7.5
West Virginia	6.0	6.4	.4	0	.4	0	.4
Wisconsin	11.6	14.6	2.8	.2	3.0	−.8	2.2
Wyoming	1.1	1.3	.2	0	.2	−.6	−.4
Undistributed	54.8	90.4	35.6	0	35.6	14.6	50.2
U.S. total	2,033.4	2,387.3	259.9	94.0	353.9	190.8	544.7

[1] Defense-generated employment in prime contractor plants and civil service employment at DOD installations.

[2] 9 States with largest absolute increases, accounting for 52 percent of the 353,900 increase in col. 5.

Source: U.S. Department of Defense, Office of Assistant Secretary, Systems Analysis (Economics).

APPENDIX TABLE 9.—*Surveyed employment generated by defense subcontracts, by State of performance, June 1966*

State ranking	Number (thousands)	Percent	State ranking	Number (thousands)	Percent
1. California	37.8	25.9	20. Missouri	1.5	1.0
2. New York	20.9	14.3	21. Iowa	1.1	.8
3. Massachusetts	9.4	6.4	22. West Virginia	.8	.6
4. New Jersey	9.0	6.2	23. Georgia	.7	.5
5. Connecticut	7.6	5.2	24. Colorado	.6	.4
6. Texas	6.7	4.6	25. Maine	.6	.4
7. Ohio	6.4	4.4	26. North Carolina	.5	.3
8. Florida	5.4	3.7	27. Louisiana	.5	.3
9. Kansas	4.8	3.3	28. Oklahoma	.4	.3
10. Indiana	4.7	3.2	29. Alabama	.4	.3
11. Pennsylvania	4.1	2.8	30. Mississippi	.4	.3
12. Tennessee	3.9	2.7	31. Vermont	.2	.1
13. Michigan	3.4	2.3	32. Washington	.2	.1
14. Maryland	2.9	2.0	33. Wyoming	.2	.1
15. Minnesota	2.7	1.9	34. Wisconsin	.2	.1
16. Arizona	2.3	1.6	35. Delaware	.1	.1
17. Utah	2.2	1.5	Other 15 States	0	0
18. Illinois	1.8	1.2			
19. Virginia	1.6	1.1	Total	146.0	100.0

Source: U.S. Department of Defense, Office of Assistant Secretary, Systems Analysis (Economics).

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ECONOMIC EFFECT OF VIETNAM SPENDING

THURSDAY, APRIL 27, 1967

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The joint committee met, pursuant to recess, at 10:05 a.m., in room 4200, New Senate Office Building, Hon. William Proxmire (chairman of the joint committee) presiding.

Present: Senators Proxmire, Javits, Miller, and Percy; and Representatives Bolling, Curtis, Rumsfeld, and Brock.

Also present: John R. Stark, executive director; and Daniel J. Edwards, staff economist.

Chairman PROXMIRE. The Joint Economic Committee will come to order. This morning we continue our hearings on the Vietnam war and its impact on the economy. This morning we are considering the "Vietnam Deescalation and Military Manpower Alternatives."

We are delighted to have as our first witness a very distinguished economist, a man I have known for some time. Of course, all of us know of his great reputation—Dr. Wassily Leontief, professor of economics, of Harvard University.

Dr. Leontief?

STATEMENT OF DR. WASSILY LEONTIEF, PROFESSOR OF ECONOMICS, AND DIRECTOR, HARVARD ECONOMIC RESEARCH PROJECT, HARVARD UNIVERSITY

Mr. LEONTIEF. Mr. Chairman, you have asked me a rather straightforward question, and I will attempt to give you a straightforward answer; as straightforward, I might add, as a small research group, which has no access to any privileged information, can give under the circumstances. I don't know whether it is a consolation for me or not to have found out that even on the Hill you don't have always privileged information. Apparently, information does not flow always freely along Pennsylvania Avenue from one end to another.

The question was: "What would the possible implications of deescalation of military efforts in Vietnam be under a variety of alternative assumptions concerning the allocation of resources which might be and would definitely be released from satisfaction of military needs, if these military needs of procurement were reduced?"

Essentially, what we have to engage in is a cost-benefit analysis, which I suppose is a fashionable word now, and what we try to do is to apply the cost-benefit analysis to the problem of allocating resources between military and civilian uses.

The cost of materiel, military materiel of weapons, all kinds of supplies, of moving with supplies a long distance, of maintaining manpower; military and associated manpower, of course, are essentially not simply dollar costs, but are costs in labor-hours spent in various parts of the American economy, in tools, in plants, in natural resources, such as oil pumped out of the ground, and so on.

The costs can more meaningfully be described in terms of things which we do not do because we allocate our resources to military needs. In other words, these costs can be described in terms of a private consumption which does not take place because military consumption takes over. By "public consumption" I mean allocation of resources destined to serve public needs of different kinds, which very often are satisfied directly out of public budgets.

The story which I have to tell can be best presented if one does not read in detail the rows of figures which are included in our written report, on these four charts, and from now on my comments really will be comments on these four charts.

The basis of our computation was an assumption which I received essentially from your committee that the military expenditures might be reduced by a certain number of billions of dollars. We took a reduction of expenditures on the Vietnamese operation by $19 billion, and we computed through implication of two alternative policies, so far as the alternative use of these resources is concerned.

One is, I must admit, not a realistic one, at least not in my opinion, although, of course, there are some people, some very prominent people in this country, who I think would favor that alternative. For example, Professor Friedman of Chicago would, I think, be very happy with it.

Let's look at this chart. (See chart, exhibit 1, p. 248.) The base line, the length of which represents really the total output based on the use of all resources. We are more or less in a full employment situation now in the American economy in the year 1967. That long stretch is private consumption, household consumption, and investment by private business. This is what is governed by private business. This is Government. This is the nonmilitary part of the Government. This is the military, this stretch, and this is divided, the general military versus the Vietnam operation as such.

Now with this going up and down in each case described in percentage figures, it shows what would happen in case you do have a shift.

First of all, the downward movement here means reduction. Now this column had to be terribly long, were it to represent the reduction of $19 billion, so I just cut it off here. Actually, it would be rather long. As a result of that, we can push up on the other side. The first thing is essentially where you allocate these resources essentially to the private sector.

Let them through fiscal policy, tax policy, and so on, permit them to buy more. Private consumers, if their income taxes are reduced, and

private business the same. They would increase by nearly 3.9 percent above the present level. You could really increase the delivery and services.

We have permitted here a slight increase to be realistic in non-Vietnam military expenditures, in a savings which they might make themselves, and a slight increase in Government expenditures.

The other alternative is a different one. It also permits an increase, provides for an increase in private spending, but still concentrates the allocation of a saving afforded through a reduction of military spending on satisfaction of so-called public needs. Essentially, to use one word for it, it is the Great Society program.

From the ceiling of $19 billion, which is about 25 percent of our total military budget, at least as much as I know about it, it would permit us to increase the private consumption, not only the standard of living but also investment, by about 1.3 percent, and by about 11 percent could be allocated to Government expenditures serving civilian needs.

I think it is very important to realize that what we are saving in the military expenditure is hard earned money, hard earned by the Government. For the Government, it is very difficult really to get money, you know. It has to tax. It has to borrow. Consequently, it is very valuable money from the point of the public, so naturally it should be spent, I think, on very important valuable objectives, such as are included in the Great Society program.

On the chart on the other side (chart 1, p. 248), I give you a closeup view. You know, you have a big map when you show a whole region, and then you have a more detailed map of a particular region which interests you. This is the region which is a particular concern of the Government. So on the chart on the left there, essentially it is a blowup of this part, the private sector. You can see there, of course, a reduction in national defense—this appears as a saving. It appears larger.

Here is the Government program. This is what we could afford in essentially the Great Society, international affairs such as foreign aid, 40 percent; natural resources, about 40 percent; housing for military development; education, 60 percent. This is what the Government provides for, and, of course, veterans' expenditures.

So here you have, I think, a relatively realistic picture of what could happen. Now the choice between the two alternatives, as a matter of fact, any other alternative, if you were to give it to me as an assignment to compute it through and give a little money to compute it through, we could do it, but many people really are concerned in this country, not about these things, but about the problem of transition.

It is very well to say, "Who cares about transition?" but it is the transition with strains and stresses which might be imposed on our economy in the process of shifting from one situation to another, which I would like to comment upon now.

Mind you, in our analysis, obviously, you must consider the picture as a whole. When you compute these things through, you really do accompany either one or the other value so far as the allocation of resources is concerned.

Again the baseline describes the total level at the present time, with blocks up and down describing increases and decreases. In case we deescalate the war, you can see you could have expected what would happen, but here the figures are specific and more accurate.

A reduction in output and employment in a small group of industries, rather concentrated, but with changes. You see here the percentage figures. You have over 30 percent for ordnance, aircraft, the general defense establishment, communications, electrical equipment, and so on down the line. Some place in here is the steel industry. It will change slightly in a negative direction.

On the other side a large front of industries will increase, will be required to satisfy the civilian needs which will be permitted to be satisfied better. Here you have a scale of industries, food, leather, livestock, apparel, medical, educational, other, agricultural, trade. Naturally, the percentage rise is much less than the reduction here because the total volume in each is larger and is more wisely spread.

It is noteworthy that a similar analagous picture for the second area, in which you allocate a higher proportion of resources released from military use to service of the Great Society programs, you will have a distribution of increases which are not as even. There will be certain industries, naturally direct Government activities, new construction, lumber, wood, stone, and so on, these industries which will experience a rather sharp increase in the level of employment and production.

This is quite understandable because in a sense you can say military demand is rather concentrated on particular groups of commodities, so is the demand for a produce of the sectors of the economy which specifically serve public civilian needs.

Let me come to the last aspect of that picture. The original distribution of adjustments is certainly at least as important as the industrial, and should I say from a political point of view, possibly even more important, because in our system of government, there are no Congressmen at large and Senators at large and people at large. Each lives in some State or comes from some State, and naturally, he is interested to know not what happens to the country as a whole but what happens in his particular region. So we translated that computation in regional terms.

Mind you, it is not a separate job. Obviously, you must simultaneously consider all these factors as we did, and the translation of industrial figures into regional figures essentially consists of taking into account the distribution of industrial activities of each kind between different regions of the country, and here I come to my last chart. (Chart, exhibit 4, p. 252.)

Again we have 19 regions. We group the States, and let me explain this. The left part of the little graph in each instance refers to this value, the emphasis on private consumption and investment exclusively, as a matter of fact, and the right to be more balanced, in my opinion, from the point of public needs distribution of the use of these resources with emphasis on social needs and Great Society programs.

your computation in terms of specific outputs in specific industries, and as you presently will see, in specific regional parts of the country.

Now here is what we did, we showed here changes in employment, which is, of course, the most important part, and output in different sectors of the economy, in different industries which would have to

Now what does this indicate? Whenever this adjustment will take place, some people in each State will lose their jobs. On the other side there will be new jobs created. Obviously, those industries which will contract jobs will be lost, and those industries which will expand, new job opportunities will be created. And since we saw from those charts some industries will expand and some contract, and each State has some of both, you will find on the one side new jobs created, and some jobs lost.

From the point of the workingman, it is, of course, very important: What he is interested in, will he have to move for his job or not? Even if there are some other industries in the State which expand, other than the one in which he works which contracts, he has to change his job.

Furthermore, if in a particular State the number of additional jobs is smaller than the number of jobs lost, then people will have to move out and look for jobs in other States. The total job picture, of course, will remain balanced, because all these computations are based on the assumption, and may I add on a firm belief, that we will maintain full employment at all costs. We cannot afford to do anything else.

But full employment doesn't mean that everybody will keep his present job. Adjustment is really shifting people around.

Responding to this value in California—upward, these additional jobs will be created; downward, is the jobs that will be lost. As you can see, the loss would exceed the gain and there will be a net reduction of employment opportunities in California. If you ask me why, those industries which will contract are concentrated there.

Now the right two blocks correspond to the second value. I cannot comment in detail on these figures, but in my statement you have this. However, let me make one observation which you can check. The remarkable thing is this. In all the regions which are located somewhere near the oceans, on three sides, there will be a slight reduction in job opportunities.

In all the regions which are in the heart of the country, between the Great Lakes and here, where you see the blocks looking upward are higher than those looking downward, there will be a gain in jobs.

I am pleased to say, Senator, that in your particular region there will be a gain in jobs; so by serving the right ideals you will also serve your constituents, while the Senator from California will have to work more for morality in general.

This indicates where measures must be taken if necessary, to prepare for the necessary adjustments. Adjustments here will be more difficult than adjustments there. Here we will have to attract labor. Here we will have to find jobs for them.

In concluding, let me make one remark. If you look at the percentage figures in all these cases, particularly here, they are small—3 per-

cent, 2 percent, 4 percent seem to be very small. Let us not forget, however, that small percentages employmentwise socially are very significant.

A 4-percent unemployment is all right, quite high, 5 percent we already consider really a serious situation; 6 percent begins to be nearly an emergency situation. Now as you can see in the appendix, the figures which correspond to this chart, in California, according to the basis of this assumption, you might have an increase in unemployment of 3.7 percent, which is definitely a problem.

Chairman PROXMIRE. When you say "an increase of 3.7 percent," you mean if it were, say, 3 percent now, it might go to 6.7 percent?

Mr. LEONTIEF. Right; this is what it means. So a small percentage of figures from the point of significance are really very important here. With this I would like to conclude my statement, and I would be glad to elaborate on any points which you would care to ask me about.

(The prepared statement, appendix, and charts attached, referred to, follow:)

PREPARED STATEMENT OF DR. WASSILY LEONTIEF

Mr. Chairman, in inviting me to testify on the alternative uses to which this country might be capable and willing to put the resources that could be set free by de-escalation of military action in Vietnam, you raised a straightforward question. I will endeavor to give you as straightforward an answer as a small group of University researchers, with no privileged access to official information, can produce in two-week's time.

I

The rising costs of the steadily expanding war are usually described in terms of so many billions of dollars. They can more meaningfully be expressed in millions of man-years, millions of square-yards of plant space filled with a kinds of industrial equipments, millions of barrels of oil pumped from the earth. In short, the real costs of war are measured in terms of human and natural resources and stocks of productive capital accumulated over a period of many years, absorbed in production, transportation, maintenance, and replacement of weapons, equipments, and supplies of all kinds now shipped in a steady stream to distant battlefields. To these we have to add the hundreds of thousands of man-years of military and civilian personnel, directly engaged in military operations and their direct support.

This translation of dollar cost into real terms has been performed by us. But such computations still do not answer the $19 billions' question. I assume that you want to know what this country gives up in terms of private consumption and investment, in terms of schools and research laboratories, of hospitals and highways, of unpolluted rivers and clear air, so long as it maintains the present level of military operations. The computations, the result of which are summarized on the charts that are displaced here, are based on the use of the well-known method of cost-benefit analysis—now widely applied to the evaluation of all kinds of governmental operations—for assessment of the cost of the Vietnamese war. Whether the hospitals and roads and private consumption and investment should be considered as cost and the result of military operations as benefit, or vice-versa, is not for me to judge. All I can say is that in a full or nearly full-employment economy like ours, if you have the one, you have to forego the other.

II

A full technical description of the methods of so-called input-output analysis that enabled us to give a rough and ready—but nevertheless reasonably concrete—

preliminary answer to the question raised by you, has been presented elsewhere (see appendix to this statement). Now it suffices to say that these methods permit us to translate any "bill of military final demand," that is, any given combination of planes, helicopters, munitions, and so on, into thousands of man-years employed in all the different sectors of the U.S. economy that do in fact contribute either directly or indirectly to the production of these goods.

To measure the possible alternative, non-military uses of these resources, we have computed in the same way the manpower requirements generated by typical bundles of non-military, civilian demand. Among these, distinction was made between final deliveries to the private sector (comprising consumption expenditures of private households and investment of private business) on the one hand, and deliveries to the public sector, that is, to the Federal and local government. These are intended to serve so-called public needs, such as health, labor and welfare, education, highways, public housing, and so on. Veterans' expenditures, space, and last but not least, defense expenditures belong, of course, to this later group.

The bar chart in the upper part of exhibit 1 shows by how much private consumption would have been increased if the man-power resources released by a 19 billion dollars, i.e., by an hypothetical 26% cut in the 1967 military expenditures, were used exclusively to satisfy increased private civilian demand, while deliveries serving non-military public needs remained the same as they were before.

This picture is, of course, based on an extreme and quite unrealistic assumption: While some rise in the level of private consumption would be obviously desirable, pressing public needs should and most likely would have the first call on tax dollars now spent on the Vietnam war.

The picture on the lower part of Exhibit 1 shows that by keeping the extra dividend paid out to the private sector to 1.3%, it would be possible to increase the deliveries serving the so-called public sector by 11.2%

Exhibit 2 gives a close-up picture of advances in various Great Society programs which would become possible in this second case. The particular distribution between the different types of public expenditures shown on that chart is incorporated into it only for illustrative purposes. The implications of any other allocation could, of course, be computed in the same way.

III

While the choice among alternative uses of productive resources released through reduction in military spending leads directly to the essentially political questions of cultural, social and economic national goals, the shift itself from one allocation pattern to another is bound to be accompanied by all kinds of strains and stresses. The fact that these difficulties can be called transitional does not make them less painful.

All that I have said up to now and what I will say from now on, is predicated on the assumption that full employment must and will be maintained. The computations, the results of which constitute the gist of this statement, are based on the assumption that the man-power released from direct or indirect military uses as a result of the hoped for de-escalation of the war in Vietnam should be fully re-employed in the service of increased civilian demand. This does not mean that jobs will not be lost. It only means that an equal number of new jobs has to be created. These new jobs will, however, appear in different industries, in different occupations, and in many instances they will be located in a different state. This means that many blue collar, white collar and professional workers will have to look for a new job in another region.

The input-output computations referred to above permit us to estimate the changes in distribution of the total U.S. labor force by industries and regions that would have to accompany any given pattern of shift from military to civilian demand.

Exhibits 3a and 3b show which industries can be expected to expand and which to contract if and when some of our resources will shift from the production of swords to the manufacture of ploughshares, or should one say, from napalm to cosmetics.

The expansion, or, respectively, the contraction of the levels of output, and the corresponding levels of employment in all the different industries shown in the bar chart on Exhibit 3a, can be expected to occur if Alternative 1 were chosen, *i.e.*, if the resources released from military use were devoted entirely to an increase in private civilian consumption and investment.

The bar chart in Exhibit 3b depicts the corresponding picture if Alternative 2 were realized.

Without entering into detailed analysis of these figures, I can only observe that in either case, the cutbacks will be large and concentrated in a few industries—such as, Ordnance, Aircraft, Communication, Electronic Equipment—while the expansion will be spread much more widely and distributed more evenly. This is explained by the fact that military demand is concentrated on a relatively small group of specific items, while private civilian demand is spread all across the board. For the same reason, the expansion will be less even, that is, it will be concentrated in a smaller group of industries under the second of the two alternatives: Employment serving directly and indirectly the demand generated by public needs—such as, education, health, or road building—not unlike that generated by military spending, is concentrated on a small number of goods and services.

Exhibit 4 completes the picture by showing the distribution of new jobs created and old jobs lost among the different regions. On the schematic map of the United States, two small bar charts are inscribed in each of the 19 regions, one corresponding to the first and the other to the second of the two alternative allocations of resources released through a $19 billions cut in military procurement. The bar extending up from the base-line represents in each instance the additional employment opportunities created in the industries that can be expected to expand in that particular region; the bar extending downward measures the number of employment opportunities lost in industries expected to contract in the same region. The difference between the two obviously represents the net regional loss or gain in employment opportunities.

Time does not permit me to interpret in detail the resulting picture region by region. A general pattern seems to be emerging very clearly: The "heart land," that is, the central area extending from the Great Lakes to the Rockies will in either case experience a net gain in output and employment, while the regions adjoining the western, southern, and eastern shores, from California to New England, will show losses in output and employment opportunities. It is in these areas that remedial action will be called for to mitigate the effects of potentially rising unemployment.

In judging the significance of the small percentage figures in Exhibits 3 and 4, we should remember that the average rate of unemployment for the American economy as a whole stands now below 4%. Thus a net increase of 3.7% shown under Alternative 1 for California, should be considered so perilous as to call for drastic action. In this connection, it is interesting to note that in Alternative 2, with higher priority given by public than to private civilian consumption, the dislocation of the employment pattern would be markedly smaller than under Alternative 1, under which all military savings would be passed to private civilian spenders. In any case, the structure of government spending does not exhibit the rigidity characteristic of private sector purchases, and it is clear that government programs could be adjusted with the objective of reducing sectorial and regional employment shifts to a minimum.

In conclusion, I call your attention again to the preliminary nature of all the figures presented in this statement. Considering the magnitude of the economic shifts which were described and the importance of the social problems which will be created or solved, substantial additional research in this general field, not only by private, academic groups, but by the government itself seems to be warranted. Some of this research has been recently initiated by such agencies as the Bureau of Labor Statistics in the Department of Labor, the Input-Output Unit and the Economic Development Administration in Commerce, as well as by the new Department of Transportation.

APPENDIX

[Prepared by André Daniere]

The study compares the distribution of employment by sector, and of employment by region, corresponding to three alternative final demand vectors. The method of analysis is that followed in "The Economic Impact—Industrial and Regional—of an Arms Cut," published in *The Review of Economics and Statistics* of August, 1965. As in the earlier study, the "percentage change in employment" is in fact measured by the corresponding percentage change in the sum of labor earnings and income of unincorporated enterprises generated in each economic sector or region.

The three final demand vectors, described more fully below, include:

(1) Actual final demand estimated for the calendar year 1967.

(2) Alternate final demand I, consisting of—

Military (government) demand under (1) reduced by $19 billion of specific goods and services, on the assumption of de-escalation in Vietnam. This represents a 26% reduction in military demand;

Same non-military government demand (and same net exports) as under (1);

Private sector demand under (1) increased uniformly by 3.9% to bring total employment (earnings) back to their level under (1).

(3) Alternate final demand II, consisting of—

Military government demand under (1) first reduced by $19 billion of specific goods and services, on the assumption of de-escalation in Vietnam, then increased by $1 billion of general (mostly strategic) defense, for a net reduction of $18 billion, or 24.1%

Same non-military government demand (and same net export base) as under (1), plus $11.5 billion absorbed in Federal "Great Society" and Foreign Aid programs, representing an 11.2% increase in non-military government demand;

Private sector demand under (1) increased uniformly by 1.3% to bring total employment (earnings) back to their level under (1).

The estimate of GNP components for 1967 is based on extrapolation of recent National Accounts, published economic reports concerning the first quarter of 1967, and the U.S. Budget for fiscal 1967 and 1968. So as not to overemphasize the weight of Vietnam obligations, total of 1967 GNP was estimated at an optimistic $775 billion.

COMPOSITION OF VIETNAM DE-ESCALATION VECTOR

The 1967 military demand of $72.7 billion was decomposed into a "basic defense" bill of $53.7 billion and a "Vietnam de-escalation" bill of $19 billion. This does not imply that the Vietnam war consumes only $19 billion of goods and services. The $19 billion figure measures the amount by which annual purchases of goods and services could be reduced, were we to return to the 1965 level of military activity. The figure, and its breakdown by categories, were supplied by Mr. Daniel James Edwards, of the Joint Economic Committee's Research Staff.

The "basic defense" bill was assumed to have the same composition as the defense bill of 1963 (estimated by Clopper Almon).

The "Vietnam de'escalable" bill is specified in terms of the following components:

	Billion
Ammunition procurement	$3.0
Aircraft procurement	4.6
Weapons, vehicles, other support equipment	1.2
Electronics and communications procurement	.5
Contract transportation	1.0
Military personnel	3.5
Operations and maintenance (excluding contract transportation)	3.0
Overseas constructon	1.0
Research, development, test and evaluation	1.2
Total	19.0

The detailed composition of given categories by supplying industry was available only for the four procurement categories. (Research Analysis Corporation: "Economic Impact Analysis: A Military Procurement Final Demand Vector," prepared for the Department of Defense March, 1967.) In breaking down the remaining categories we had to rely on our own uninformed judgment.

COMPOSITION OF ADDITIONAL GOVERNMENT DEMAND

Under alternative II, the federal defense budget is reduced by a net of $18 billion, and the federal non-defense budget is increased by $12.5 billion. Because $1 billion is assumed to be spent in transfer payments to persons under Education and Welfare programs, this budget figure is $1 billion more than the purchase of goods and services (final demand) announced on page one.

The "additional budget" breakdown was again supplied by Mr. Daniel James Edwards, of the Joint Economic Committee's Research Staff:

	Billion
Space	$1.0
Foreign Aid	2.0
Health, Labor, and Welfare	2.5
Education	2.0
Veterans	1.0
Crime Control	1.0
Air and Water Pollution Control	1.0
Big Cities Redevelopment	1.0
Natural Resources	.5
GSA Construction	.5

Because of the time factor and because no comprehensive distribution of Federal and State purchases by supplying sector is available on a program basis, extremely rough estimating procedures had to be used in obtaining the final commodity breakdown. A basic source was Clopper Almon's 1963 estimate of final demand composition.

COMPOSITION OF OTHER ELEMENTS OF FINAL DEMAND

Clopper Almon's 1963 estimates were used.

SOURCES OF INPUT-OUTPUT AND OTHER COEFFICIENTS

1958: 60-order matrix of input-output coefficients.

1958: Matrix of regional distribution coefficients for "national industries" (Lack of time prevented re-computation for a more recent year.) As a result, Hawaii and Alaska had to be excluded from the analysis.

Matrices of regional distribution coefficients for final demand to local industries: computed for twelve separate final demand components on the basis of eight distributions by state available in the 1967 Satistical Abstract, and three distributions by state (federal program expenditures) supplied by Mr. Daniel James Edwards.

SPECIAL FEATURES OF THE MODEL

Pay and allowances received by military personnel were assumed spent by them or their families on various commodities and services in the same proportions, as earnings from any other sector. Private consumption out of such pay and allowances was distributed by region in proportion to D.O.D. obligations for military personnel by region, without reference to the stationing of personnel abroad.

On the assumption that drafted military personnel is, on the average, undervalued (in terms of alternative earnings in civilian employment), the military personnel released under de-escalation was valued at $4.5 billion, or $1 billion more than its actual pay and allowances. However, as noted in the previous paragraph, private consumption originating from military earnings was related to (i.e., the consumption coefficients applied to) actual receipts rather than alternative earnings.

Federal outlays under the proposed "additional budget" were distributed among states in roughly the same proportion as corresponding programs were distributed in the last four years.

ALTERNATIVE I

Percentage change in employment by sector—Vietnam deescalation (1967 base)

[Selected sectors—All 39 unlisted sectors show an employment increase between 0 and 3 percent]

Food	+3.8	Ordnance	−36.6
Leather	+3.8	Aircraft	−24.1
Livestock	+3.7	Government defense	−15.6
Apparel	+3.7	Communications and electronics equipment	−8.2
Real estate rentals	+3.4	Nonferrous metals	−3.7
Medical and educational services	+3.4	Instruments	−3.6
Other agriculture	+3.3	Electrical apparatus	−2.8
Tobacco	+3.2	Iron and steel	−0.8
Trade	+3.2	Nonelectrical machinery	−0.8
Finance and insurance	+3.2	Transportation and warehousing	−0.1
Fabrics and yarns	+3.0		
Personal repair services	+3.0		

ALTERNATIVE II

Percentage change in employment by sector—Vietnam De-escalation (1967 base)

[Selected sectors—All 35 unlisted sectors show an employment increase between 0 and 1.3 percent]

Government nondefense	+5.6	Ordnance	−35.1
New construction	+5.5	Aircraft	−22.2
Lumber and wood products	+2.8	Government defense	−12.9
Stone and clay	+2.7	Communication and electronics equipment	− 8.1
Tobacco	+2.1	Instruments	− 3.6
Other agriculture	+1.9	Electrical apparatus	− 2.9
Livestock	+1.6	Non-ferrous metals	− 2.5
Food	+1.5	Nonelectrical machinery	− 1.0
Maintenance and construction	+1.5	Rubber	− 0.7
Apparel	+1.4	Amusements	− 0.6
Leather	+1.4	Transportation and warehousing	− 0.5
Trade	+1.4	Motor vehicles	− 0.3
Finance and insurance	+1.3		
Real estate rentals	+1.3		

Percentage change in employment by State, Vietnam deescalation (1967 base)

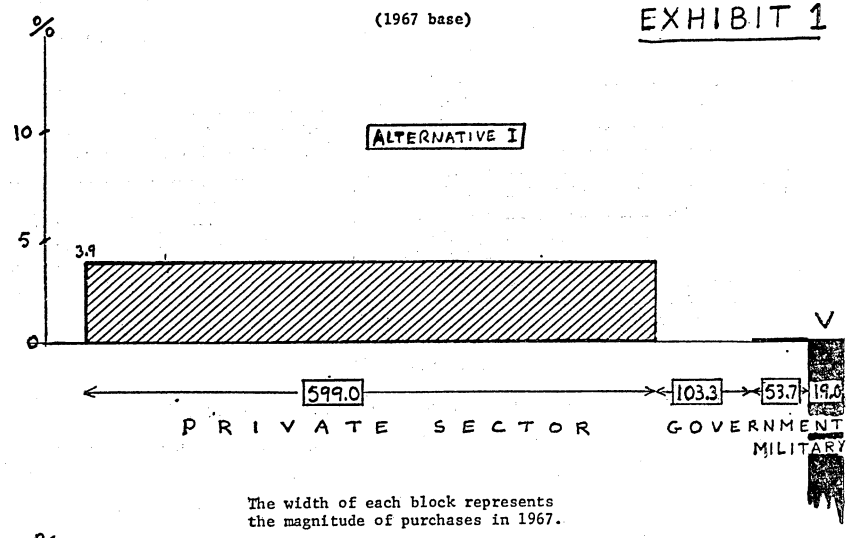
	Alternative I			Alternative II		
	Increase	Decrease	Net	Net	Increase	Decrease
1. New England	1.6	1.9	−.3	−.6	1.5	1.8
2. New York	2.1	1.4	+.7	+.4	1.6+	1.3−
3. New Jersey, Pennsylvania	2.3−	1.0+	+1.2	+.6	1.5	.9
4. Michigan, Ohio	2.3	.9	+1.4	+.6	1.4	.8
5. Indiana, Illinois, Wisconsin	2.4−	.9+	+1.4	+.6	1.5	.9
6. Minnesota, North and South Dakota	2.8+	1.1−	+1.8	+1.7	2.7	1.0
7. Iowa, Missouri, Nebraska, Kansas	2.5	1.8	+.7	+.4	2.1	1.6
8. Georgia, North and South Carolina	2.1	2.7	−.6	−.5	2.0	2.5
9. Virginia, West Virginia, Maryland, District of Columbia, Delaware	1.0+	2.4−	−1.3	−1.0	1.0+	2.1−
10. Florida	1.4	3.2	−1.8	−.7	2.1+	2.9−
11. Tennessee, Kentucky	2.3	1.4	+.9	+1.2	2.5	1.3
12. Alabama, Mississippi	2.1	1.6	+.5	+2.1	3.4+	1.4−
13. Oklahoma, Louisiana, Arkansas	2.2	1.6	+.6	+2.7	4.1	1.4
14. Texas	1.6−	2.6+	−1.1	−.7	1.7	2.4
15. Montana, Wyoming, Idaho	2.4	1.5	+.9	+1.7	3.0	1.3
16. Colorado, New Mexico	.9	3.5	−2.6	−.6	2.4	3.0
17. Arizona, Nevada, Utah	1.2	2.6	−1.4	+.4	2.6	2.2
18. Oregon, Washington	1.5	2.7	−1.2	−.7	1.8	2.5
19. California	.6	4.3	−3.7	−2.8	1.4	4.2

NATIONAL PRODUCT DISTRIBUTION

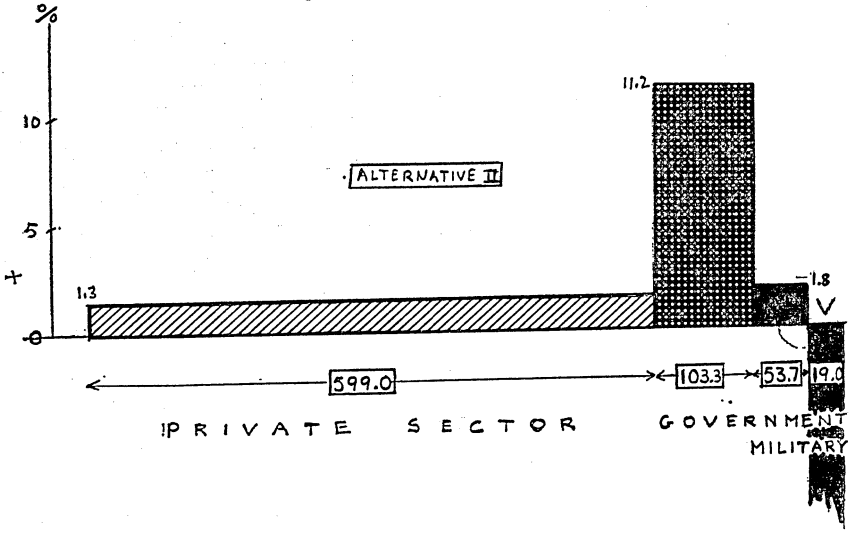
VIETNAM DE-ESCALATION

(1967 base)

EXHIBIT 1



The width of each block represents the magnitude of purchases in 1967.



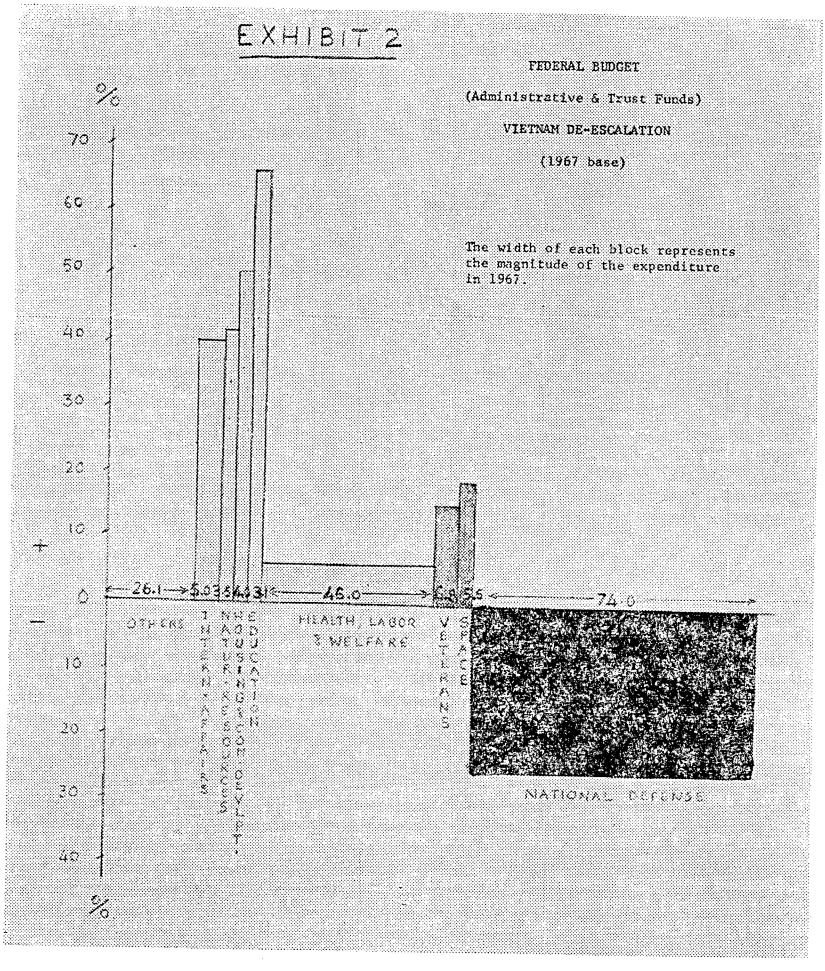


EXHIBIT 2
FEDERAL BUDGET
(Administrative & Trust Funds)
VIETNAM DE-ESCALATION
(1967 base)
The width of each block represents the magnitude of the expenditure in 1967.
%
70
60
50
40
30
20
10
+
0
−
10
20
30
40
%
26.1
5.0
3.5
4.3
46.0
6.8
5.5
74.0
OTHERS
TRANSPORTATION
AGRICULTURE
NASA
EDUCATION
HEALTH, LABOR & WELFARE
VETERANS
SPACE
NATIONAL DEFENSE

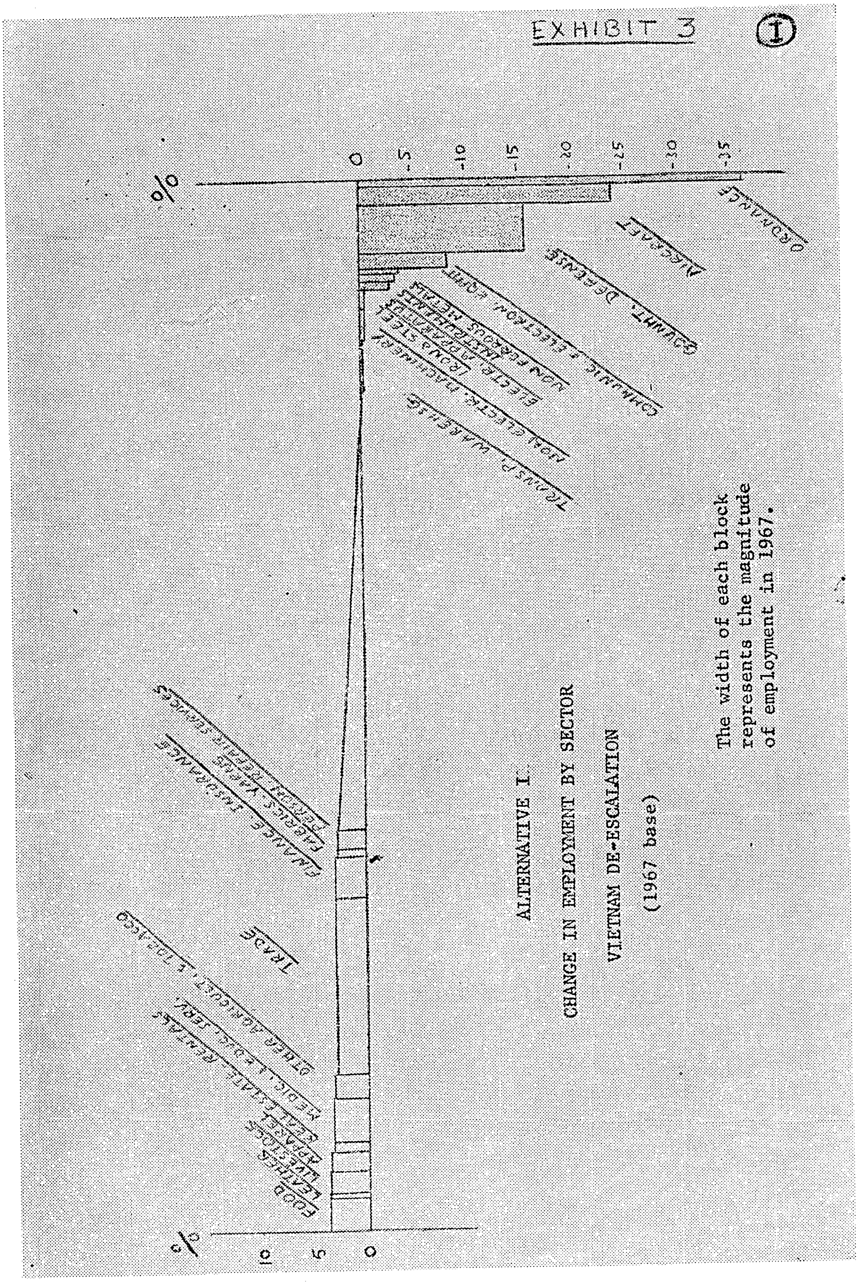


EXHIBIT 3
ALTERNATIVE I
CHANGE IN EMPLOYMENT BY SECTOR
VIETNAM DE-ESCALATION
(1967 base)
The width of each block represents the magnitude of employment in 1967.
ORDNANCE
AIRCRAFT
TRADE
FOOD

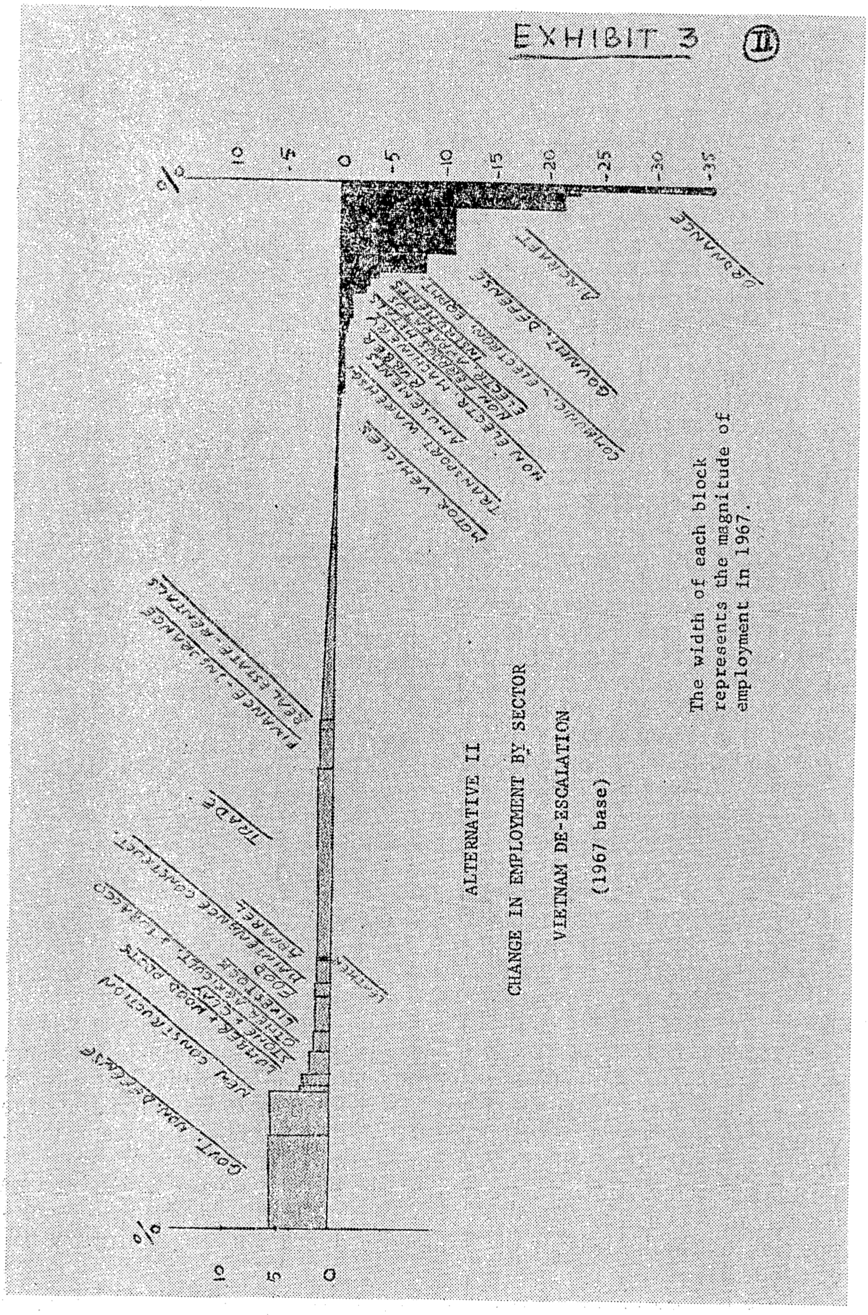
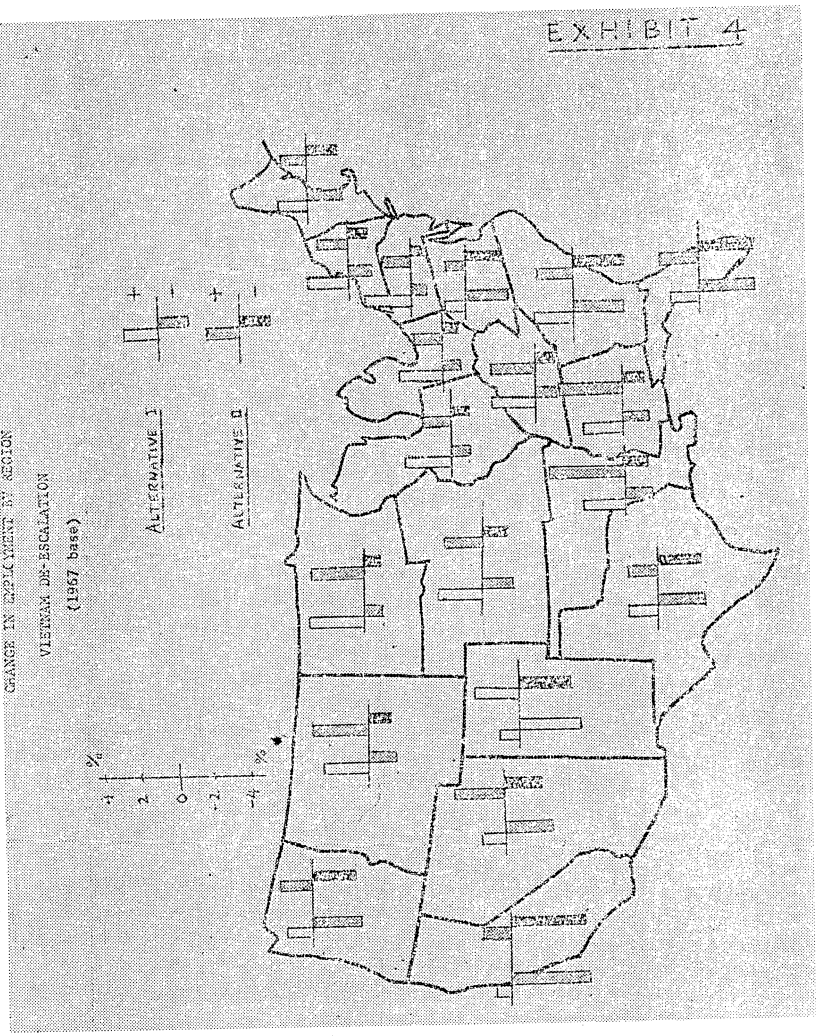


EXHIBIT 3
II
ALTERNATIVE II
CHANGE IN EMPLOYMENT BY SECTOR
VIETNAM DE-ESCALATION
(1967 base)
The width of each block
represents the magnitude of
employment in 1967.
%
10
5
0
-5
-10
-15
-20
-25
-30
-35
ORDNANCE
AIRCRAFT
MOTOR VEHICLES
TRADE
APPAREL
NEW CONSTRUCTION



Chairman PROXMIRE. Professor Leontief, is this analysis based on specific information with regard to what the Vietnam deescalation might mean, or is it based on an assumption that if you reduce the whole Defense Establishment by $19 billion from its present level, that, in general, it would have the effect that you spell out?

Mr. LEONTIEF. In the appendix, at the bottom (see p. 245). I give a list which was conveyed to us from Washington, specifying the composition of the hoped for or assumed reduction in the "military bill of goods."

There is a $3 billion cut, for example, in munition procurement, a $4.6 billion drop in aircraft procurement, and so on down the list. As I said before, some privileged information might make these figures

more realistic but I am of the opinion that the overall picture would not be greatly modified if some details were changed in this list.

With a large expenditure for munitions, replacement of lost aircraft, and so on, the product mix in it is typical for active military operations, as contrasted to a peacetime maintenance of military forces where the product mix is different.

Chairman PROXMIRE. How did you arrive at the $19 billion, the assumption that deescalation in Vietnam or a cease-fire in Vietnam——

Mr. LEONTIEF. This is a figure which we received from Washington. Prevailing here, the opinion seems to be that this is about the magnitude which might be involved in case the Vietnamese operations were deactivated. Actually, the net reduction dealt with in our computations amounts to $18 billion not $19 billion, because we cut the Vietnamese operations by $19 billion but added $1 billion to other military expenditures.

If a different figure were given, one could recompute the whole thing in accordance with it, too. The same applies, of course, to alternative assumptions concerning the composition of the civilian bill of goods.

Chairman PROXMIRE. You make a basic assumption, as I understand it, that these figures reflect the notion that we would have about the same level of employment that we have at the present time?

Mr. LEONTIEF. Yes. The idea is that we will maintain the same level of employment as we have at the present time. My feeling is that this will be the very firm objective of the policy pursued by our Government under all possible circumstances.

Chairman PROXMIRE. What are the total real costs of our Vietnam hostilities? You lived through the Russian revolution. You saw the Chinese revolution. My staff informs me you will soon be going to Greece as a neutral observer. With your broad theoretical economic background and your broad practical experience, will you attempt to place our Vietnam commitments in broader perspective in the "short and long run," as you economists say?

Mr. LEONTIEF. Yes. Mr. Chairman; as I said in my statement, we are engaging here in a cost-benefit analysis of the Vietnamese war. The question I myself would like to ask is this: Of the two sides of the ledger spread before us on my graphs, which represents the costs and which the benefits?

I suppose, as things go now, the benefits are the war in Vietnam. At least, the State Department acts as if these were benefits. What then are our costs? Our costs are a nearly 2-percent reduction in the standard of living of the average American, and a nearly 11-percent, $12-billion cut in funds allocated to the satisfaction of all kinds of urgent public needs. These are the direct immediate prices that we pay for the benefits which this country allegedly derives from the Vietnamese war.

It is my own personal opinion that, in addition to this, we are paying other terrifically high costs which ultimately will also be translated into material burdens that we will have to carry for years to come. As you know, this is a war supported by the people whose support, under ordinary circumstances, we wouldn't wish to have at all, and which, on the other hand, has alienated, throughout the world,

those people whose support we badly need. These, Mr. Chairman, are the staggering additional costs not shown in my figures.

Chairman PROXMIRE. As you know, Professor Leontief, the administration wouldn't supply the staff of the Joint Economic Committee with a numerical value to conduct your analysis. We understand that if hostilities ceased tonight the administration would not have domestic economic contingency plans to put into operation tomorrow. What do you feel about that inadequate advance planning?

Mr. LEONTIEF. I hope very much that unpreparedness for peace will not be permitted to last much longer. Advance planning is not a simple thing; it is, moreover, time consuming and expensive. You cannot remedy the situation by putting a couple of guys to work with pads and pencils.

Economic analysis nowadays is an exacting operation. It requires an investment of large resources in information gathering and painstakingly programed large-scale computations.

A substantial investment in the preparation of this type of plan would pay off handsomely in higher output and employment and consequently in fewer bottlenecks, larger tax collections.

If the Federal Government had at its disposal a large, well-staffed, and generously financed organization for basic but, at the same time, practical economic research, we would not have to set up a special organization just to study the effect of deescalation. The same basic data, the same fundamental logic can, and in fact should be, used to analyze the problem of, say, the effects of technology on employment, or to answer the effects of a hypothetical escalation or of the present escalation in Vietnam.

To answer the latter question you just have to turn these charts upside down. The columns which go down will go up, and the columns which go up, will go down: We will have to cut down on consumption, we will have to cut down on social services, we will have to cut down on education, and so on, to produce more planes and more munitions and to send more boys to Vietnam.

Chairman PROXMIRE. What you are using here is what is called input-output analysis?

Mr. LEONTIEF. Yes, I do.

Chairman PROXMIRE. And what would be the total employment displacement under alternatives one and two over here?

Mr. LEONTIEF. Displacement might amount to possibly one million people having to shift into different jobs. It might be still larger because our computations tend to underestimate the amount of displacement in that we count as displacement only movements out of one into another of the 80-odd sectors in terms of which these figures are presented. But within each sector there are many subdivisions. Shifting out of one department of the steel industry into another might be quite a displacement for a worker, although statistically it does not appear as such. The same, of course, applies to shifts between regions.

Chairman PROXMIRE. I have just one final question. This is a question that I would appreciate it if Mr. Brock would permit me to ask, because my time is up.

Yesterday, we had very helpful testimony by four fine economists. The last one was Professor Weidenbaum, who as you know has made

a very specific study of Vietnam. He directed his constructive proposals not only to the possibility of deescalation, but the prospects for escalation, which as you know, seem to be quite serious right now.

He indicated that there were a series of specific data which he said is unclassified, is available, but is usually available late, is scattered all over the map in the Defense Department, so that economists can't put it together for months, and if we could get this data promptly, he said we would be in a far better position to evaluate what is going to happen to the economy in the future.

I would like to very briefly summarize what he said we should get and see if you think this is about it, and if you think there is other information we should have.

(1) Data on military obligations and expenditures by programed category.

(2) Data on military manpower, including draft calls.

(3) Data on defense contracts by product group, industry and geographic area.

(4) Data on defense and materials set-asides.

(5) Data on orders, sales, inventories, and backlogs of defense industries.

(6) The latest official forecasts of military programs, as well as comparable historical numbers.

(7) Seasonally adjusted as well as raw or actual figures.

He felt, and we all feel, that last year we were in a most unfortunate situation because we had this sharp escalation and we didn't provide adequate compensatory action by the Government either with a tax increase or other spending reduction to compensate for it, so we had inflation, we had high interest rates, and so forth.

My question is, do you think that this is a fair listing of the kind of data we need so that we will be in a better position to act, and second, if you think there is anything else that should be added to it?

Mr. LEONTIEF. I think it is a fair list. I would add to it some additional items. These figures will give a better picture of the operation in those sectors of the economy that are immediately engaged in production of goods delivered to the Military Establishment, but, of course, all the other sectors of the economy, such as mining, chemical industry, power production, and so on—while they don't deliver directly to the Military Establishment—deliver their respective inputs to other industries that hold defense contracts. A large part of militarily committed employment really is found in the industries which cannot be classified as war industries.

So I would suggest that better information on the rest of the economy—such, for example, as is provided by the input-output charts issued by the Department of Commerce—could greatly increase the usefulness of the data included in Professor Weidenbaum's list.

Chairman PROXMIRE. Fine.

Mr. LEONTIEF. I think that it is most important to improve our entire information system, rather than just to build one information system for answering a particular question.

Mr. Chairman, the request to testify before this committee was addressed to me just 3 weeks ago. I had quite a struggle with myself and my staff in deciding to accept, on this very short notice, such a major

assignment. Now we were able to perform all these computations in a few days with a very small staff, because we had all the basic information pretty well organized. We also had excellent cooperation from the people in Washington, particularly from your office, supplying to us information, whenever we needed it. This demonstrates how a centralized storage system for basic economic information enables a small but well-organized group of trained analysts to answer all kinds of questions which you gentlemen might want to ask.

Chairman PROXMIRE. Congressman Brock?

Representative BROCK. Thank you.

I have been fascinated, Professor. I appreciate your testimony. Your assumptions are based upon a decrease in Vietnamese spending, specifically of $19 billion. They are also based upon a maintenance of what we now consider to be accepted as full employment, no real variation in total employment throughout the Nation.

Mr. LEONTIEF. No.

Representative BROCK. It is sort of interesting to me that I have pinned in my own mind a minimum figure of a deficit for this year of something in the neighborhood of $19 billion, and I may be off $4 or $5 billion. I am certainly a long way in this hearing from the administration projections. But, if I am correct, what effect will this deficit have on the economic situation in the country, specifically as it relates to prices of goods and services? What I am saying is, What does a $19 billion deficit do in a full employment situation?

Mr. LEONTIEF. The financing of purchases by the private and the public sector involves many more factors than just the Federal deficit. For example, you might balance the Government budget, but, at the same time, expand credit and get exactly the same result so far as the total level of purchasing power is concerned.

If the Government, for one reason or another, wants to reduce the deficit or increase the deficit, which ever is its desire, it could rely on other means, bookkeeping means and persuasion in the financial sector, to maintain essentially the same balance between the total purchasing power and the available supplies.

Representative BROCK. What I am getting at, as most of us here would admit, it is much more politically difficult to have a $19-billion deficit for domestic spending than it is for Vietnam spending.

Mr. LEONTIEF. You certainly are right. Because of that value of the dollar which is in the hands of the public authorities is in a certain sense considerably greater than the value of the dollar in private hands. It is difficult for the Government to get hold of a dollar, and consequently, I would suggest, it should think twice before giving it up.

Representative BROCK. But you are using a dollar you don't have.

Mr. LEONTIEF. How come?

Representative BROCK. Because this is a deficit dollar. This is not a tax dollar. This is a borrowed dollar.

Mr. LEONTIEF. Borrowed dollars can buy goods too. In my first illustration, if you stop governmental borrowing, simply eliminating the deficit, the private sector can increase its borrowing and spend as well as you.

Representative BROCK. That is right.

Mr. LEONTIEF. You will be able to increase the private consumption and spending by this amount, 3.9 percent, if they really spend it, and keep your Government program at the present level. In this case, you would, of course, have no expansion in the direction of the Great Society.

Representative BROCK. If I may interrupt, sir, I don't see how you turn back a deficit that you didn't take in the first place. If we had a balanced budget situation and our income equaled our outgo, you could turn back in the form of a tax cut, but how do you turn back to the economy money that you simply just don't borrow in the first place.

A $19 billion deficit is borrowed money and there is a great deal of difference between that and income. How does that feed into the private sector? I don't see how you get your increase in the private sector in alternative one, by a simple reduction——

Mr. LEONTIEF. You see, Mr. Congressman, if I am not mistaken, this is really a question of bookkeeping. The Government can borrow less. The banks can lend more, release more money and so far as the balance in purchasing power is concerned, it will remain exactly the same as it was before.

The Government, if it wanted to, could even begin to redeem the Government debt, it would put more money in somebody's hands and the net effect would depend on what the sectors of the economy that would get that money would do with it.

My opinion is that this is really a bookkeeping operation.

Representative BROCK. If the Government doesn't borrow the money and other private borrowers do borrow the money and the money is actually created and used, obviously you would have an increase in the private sector. That is also an assumption that the money would be borrowed by somebody in the private sector.

Mr. LEONTIEF. In the total amount of borrowing that takes place in this country, the Government borrowing is just one item. There is a great amount of borrowing going on all around, so if we discuss the balance between borrowing and not borrowing, you can shift from one item to another.

Representative BROCK. You are saying—and this is where I disagree with you—that if the Government were to reduce its borrowing, this $19 billion deficit, if we wiped out the deficit simply by not involving ourselves in Vietnam anymore, that you would have a commensurate increase in private borrowing, and I can't follow the logic, because it seems to me that if the Government stopped this $19 billion expenditure, it would be a drag on the economy and there would be a tendency for private borrowers to borrow even less. I do not see private borrowing taking the place of public borrowing, if we were to get out of Vietnam.

Mr. LEONTIEF. Oh, Mr. Congressman, I think we can now get together on that. I see now what you have in mind. If the Government actually decided to reduce its expenditures by so much, and if there were no increase in other spending, this country would be plunged into a very serious depression.

Theoretically, if all the prices were cut, you could maintain the old level of effective demand, but, of course, as we know, such things don't happen nowadays, so we would really have a serious depression. This is why I think the Government would have to go pretty carefully about doing that, if it wants to maintain full employment.

Representative BROCK. In other words, if I can summarize you now, you are saying that you would very much oppose alternative No. 1, the hope that the private sector would assume the burden, that you would rather go through alternative No. 2, and maintain a $19 billion deficit on through the transition stage, in order to preclude such a depression; is that correct?

Mr. LEONTIEF. Yes; my feeling is that if the American people felt that it was worthwhile for them to undertake this deficit in order to achieve whatever objectives they are pursuing in Vietnam, it certainly should be worthwhile for them to enter into that deficit, in order to achieve the objective which I described by this public expenditure block there on graph 1, refined in greater detail on graph 2 showing the advance of Great Society programs. This, of course, is my personal opinion.

Representative BROCK. I think, Professor, what I am trying to say is that in trying to assess not only what might happen in the future, but what we ought to do today, we are posed with a number of alternatives, each of which is impractical or unfortunate in its result.

If we take your second alternative and spend the money at the Federal level, affecting a $19, $20, or $25 billion deficit, and that results under full employment, as I think it would, and a tremendous increase in the level of prices in this country and inflation, then you are affecting our balance-of-payments problem, and we are back on the other horn of the dilemma.

I am not quite sure how we get around this dilemma. I am not quite sure how we address ourselves to the problem that is affecting the ordnance, aircraft, and related industries in this transition period. I am not sure how your Government spending would allow us to get through this phase.

Mr. LEONTIEF. In this second variant, as shown on exhibit 1, while expanding various Government programs, we also turn back a very large amount of money to the private sector.

Representative BROCK. If it is spent. You are turning back a deficit that they have to borrow.

Mr. LEONTIEF. All right; but nobody seems to object to private borrowing. I never heard anybody attacking the banking operations of this country, releasing credit in the same way as sometimes the public——

Representative BROCK. Private borrowers are going to base their borrowing decisions upon whether or not they think the economy is in good shape, and they are not going to borrow if they think it is.

My time has expired. You can answer in those terms.

Mr. LEONTIEF. Yes. My feeling is that at the present time the private sector has a greater confidence in the ability of our economy to manage itself, through cooperation between the private and the public sector, than it used to be in the old times.

From this point of view, I am rather confident that if the type of analysis presented in our statement is elaborated upon, worked out in full detail and made public, so that the people know what they are facing, it will be possible to maintain the confidence of the private sector and its full readiness to play its part in the simultaneous realization of both private and public goals.

According to our computations, in many industries, we can expect a considerable increase in demand, in output, and employment.

The result of that will be that private business will have confidence, and whenever private business has confidence, and faces increasing demand, it will naturally turn to private sources of credit, and since the bankers will have confidence they will readily provide the money.

Here, indeed, the posture which the Government will take in formulating and revealing its plans—and in answering the type of questions which you have raised—will affect the chances of a smooth transition, too.

In presenting the two possible alternatives, I gave only an illustration. Other more effective variations could be worked out.

Chairman PROXMIRE. Congressman Bolling?

Representative BOLLING. No questions.

Chairman PROXMIRE. Senator Javits?

Senator JAVITS. Mr. Chairman, I have just arrived to find the witness and the charts and the testimony which he prepared already underway. If I ask a question which has been asked before, I hope that he will so inform me.

Did the witness make any estimate of the increase in the unemployment rate—which is now roughly a little under 4 percent—which would result by a cessation of the Vietnam war?

Chairman PROXMIRE. He made the assumption, in response to a question which I asked, that it would be the same level.

Senator JAVITS. The same level of unemployment.

Mr. LEONTIEF. Senator Javits, the presentation which I made is based on the assumption—suggested to me by the chairman of this committee—that all necessary measures will be taken to reemploy the resources released from military uses in supplying to a greater extent our pressing civilian needs, so that full employment will be maintained.

If we simply dropped the military part and did not provide for an increase in other demand, we would have, of course, a rather substantial increase in unemployment. However, even if we maintain full employment, a considerable change in the employment pattern and a shift from one region to another will have to be expected.

There will be some parts of the country in which, despite the fact that the total employment for the country as a whole is maintained, a considerable drop is bound to occur. California is a very typical case.

As you can see on exhibit 4, in many regions the downward looking bar is larger. In other words, there will be a net loss in employment. Let us see what happens in New York. New York apparently still has a civilian-oriented economy. So far as New York is concerned, under the first assumption, you see that this block directed upward, which measures the increase in employment, is longer than the downward stretching bar that measures losses in employment. However,

many States, such as California and Florida, will face serious problems.

Senator JAVITS. I gather you think we ought to provide for mobility of such people? In other words, if there is better opportunity elsewhere we must provide for this.

Mr. LEONTIEF. Yes. I think first of all, we should estimate what the situation is likely to be, and then begin to provide to take care of it, both on the Federal and the local government levels.

I think local government should be alerted to the situation, since the burden very often of decision and action will be there. For example, it is very important to translate these employment figures in greater and more detailed figures by types of jobs. Figures are actually available which will show us what kind of people—will it be technicians, foremen, will it be mostly semiskilled labor—might be affected by this shift.

When we relase some people from the Army, these people have certain skills and don't have some other skills. There will be quite a problem finding the most effective use for them.

Senator JAVITS. Do you have any concrete recommendations for us, or are you just telling us that there are two alternatives, and what will happen?

Mr. LEONTIEF. Senator, just a short time before you came in, under questioning of the chairman, I discussed what action should be taken. In this case, obviously, action must be preparatory. The country usually has war plans. The country should also have peace plans.

Senator JAVITS. Thank you very much.

Thank you, Mr. Chairman.

Chairman PROXMIRE. Senator Miller?

Senator MILLER. Thank you, Mr. Chairman.

Dr. Leontief, yesterday the committee received some testimony from Professor Suits of Michigan. I am going to quote from his statement. He said:

> The rise in war spending from an annual rate of $48.2 billion in the first quarter of 1965 to the rate of $65.5 billion in the last quarter of 1966 represented a total increase of $17.3 billion. Taking account of induced consumer expenditure, this increase was responsible for a total rise of $32 billion in annual GNP, and for roughly 3.2 million additional jobs.

Would you agree substantially with that statement?

Mr. LEONTIEF. I did not have the benefit of studying the underlying computations, so I could not really say yes or no. I think that the general order of magnitude involved sounds plausible. Of course, I did not hear anything in it about the price level, and this is one of the important things, because whenever we speak of increased expenditure or increased income, we would like to know what it means in real terms.

In my computations, all inputs and all outputs were measured in constant base-year prices. In other words, all changes shown on the charts depict increases and decreases in the actual amounts of goods and in levels of employment. If prices were to go up or down, the dollar figure will be larger or respectively, smaller.

Senator MILLER. More specifically, his approach was this. He said that according to Michigan University studies, they reached the conclusion that each dollar of war outlay stimulates about 85 cents of

additional output in the GNP, and that is how he got the $17.3 billion additional Federal expenditures resulting in an increased GNP of $32 billion.

Then he suggested that for each $10,000 of additional GNP, there is one job, and that is how he arrived at the 3.2 million additional jobs generated by the Vietnamese war expenditures. Does this approach sound reasonable to you?

Mr. LEONTIEF. You know, a professor from Harvard should not criticize a professor from Michigan, but the statement impresses me as being rather broad. I would say it makes a very great difference whether 10,000 of additional dollars were spent on planes or on school buildings, on munitions or on wearing apparel. And the number of jobs created per $1 million of output differs from one type of final demand to another. It is this differentiation that my analysis brings out. As a matter of fact, I would be very skeptical of the success of policies which were designed with all attention centered on the very broad averages which you quote.

For example, the total employment could remain constant, but you might have very serious unemployment in California, and at the same time run into labor shortages in the States which, like Montana, seem to be depending on civilian rather than military demands.

As you know, most transitional situations are bottleneck situations. Averages conceal bottlenecks. When you go from a peacetime to a wartime economy, it is not enough to transfer the dollars, one must have the specific industrial capacities in the right places with the right people to man them. The same is true of an anticipated shift in the opposite direction—a shift from war to peace.

This is why I say that the statement you quoted is all right as far as it goes. But my concern would not be with these average figures, but with the discovery of and preparation for dealing with bottlenecks, and there I would urge a much more detailed and specific type of analysis. Many of the practical measures aimed at securing full employment will have to be quite specific too.

I happen to believe that deficit spending is not a cure-all. As likely as not, you will run into bottlenecks, and if you are pumping out money and hit bottlenecks, what do you have? A price rise.

The difference between inflation and an orderly adjustment has its counterpart in the difference between analysis and economic reasoning which centers all attention on aggregated purchasing power, overall fiscal policies, and, on the other hand, more detailed specific analysis that takes into account the differential impact of alternative bills of goods.

Senator MILLER. May I say I agree that a more specific detailed analysis is preferable. Do you have any estimates as to how many additional jobs have been generated as a result of the $17.3 billion additional cost, through defense expenditures?

Mr. LEONTIEF. I do not have these figures here on hand, but I would think that the number of jobs would be between two and a half and three and a half million.

Senator MILLER. If you would care to, would you do a little further research on that, put a few figures together, and submit them to the committee? Would that be feasible for you to do that.

Mr. LEONTIEF. I would certainly endeavor to supply you with these figures. I will have to go abroad in 3 days, and I will be back only at the end of May. However, I will ask one of my collaborators to make the computation and send you the results.

(The material requested had not been received at time of publication of these hearings.)

Senator MILLER. May I say, Mr. Chairman, I can see where he might have a problem getting his computations to the committee in time for the hearings, but I think we would appreciate it if you could perhaps contact Professor Suits and find out what kind of research they did. I am sure this would not be unusual for you to do so. And give us a little evaluation, and possibly, if you have a more detailed approach, you may be able to give us some more refined figures on the unemployment, or the employment generated by the $17.3 billion of additional defense expenditures. I, for one, would appreciate getting something like that from you.

Mr. LEONTIEF. May I ask whether you have by any chance the advanced text of my statement before you?

Senator MILLER. Yes, I do.

Mr. LEONTIEF. In the appendix, you will find a table of percentage changes in employment by sector (p. 247).

Senator MILLER. I see that.

Mr. LEONTIFF. Here you see the anticipated changes in employment computed for each industry in percents of the base-year, that is, 1967 figure. To translate these percentages in man-years, we only need the total base-year figures.

In some industries, employment will tend to increase, in some others to decline. You see there is an increase of around 3 percent across the board, while the decreases are rather unevenly distributed. This gives us a clue to the anticipated answer.

I certainly will be glad, Senator, to give you the missing base-year figures.

Senator MILLER. I would appreciate it if you could do that.

Mr. LEONTIEF. Certainly.

Senator MILLER. One last question. Is there any significance on the map that you have up there as far as my State of Iowa is concerned? It appears to be about half size.

Mr. LEONTIEF. You see, Senator, we worked not by separate States, but by groups of States. Iowa is a part of such a group. So far as my horoscope can tell, Senator, you should really vote and work for immediate deescalation, because, as you can see from my map (exhibit 4) if the first variant is used, in your State many new jobs will be created and few will be lost. By contrast, a Senator from California or New Mexico would have to be very public spirited to be against the war.

Furthermore, I am sorry to see that—so far as Iowa is concerned—the first variant is employmentwise somewhat better than the second: If the entire expansion in civilian demand is allocated to the private sector, your State will gain relatively more jobs than in the second case, where the Great Society programs get a bigger bonus.

On the other hand, Iowa might possibly gain a little less in jobs, but with your help, Senator, it might get a lot of Federal money for education, health, and so on, which under the first variant could not happen.

You see, by this type of analysis, one could open an office to give special voting advice to Senators and Congressmen.

Senator MILLER. I just wanted to make sure this wasn't a Harvard view of Iowa.

Mr. LEONTIEF. No, I don't think so. As a matter of fact, I very often go to lecture and help with the regional economic work being done in the Middle West. Some of my former students and best friends teach at Ames.

Senator MILLER. Thank you very much.

Chairman PROXMIRE. We have taken a great deal of time, but with a most distinguished and enlightening as well as entertaining witness. We have two other gentlemen coming before us. Before you conclude, Professor Leontief—and I would like you to stay at the witness table—I want to just for the record say that Professor Suits yesterday made it absolutely clear that this projection that he showed for what would be the situation on employment or unemployment in the fourth quarter of 1966, which I think he had at 7.7 percent, absent Vietnam, was strictly on what he called an "absolutely hypothetical and artificial assumption," that we would not change our tax policies, our other spending policies, or our monetary policy. He did this only to show as dramatically as he could the effect of Vietnam on employment under those circumstances. He agreed that we certainly would not follow such policies if absent Vietnam, and he agreed with me on the basis of questioning that there was no reason at all why we shouldn't have the same low level of unemployment absent Vietnam that we have at the present time.

I want to say that you have been a great witness in many ways, and I want to thank you especially for this tremendous work that you did. I don't know if the art work would be rated A by you, but certainly the substance is rated A-plus by us.

I want you to stay at the table. Our next two witnesses are Mr. Madden, of the U.S. Chamber of Commerce, who is a friend of the committee and a distinguished economist, and I know he will be very helpful to us, and Mr. Goldfinger, another great friend of the committee and a fine economist, who represents the AFL-CIO.

We are delighted to have you gentlemen here. Mr. Madden, you may proceed. I apologize for detaining you so long, but that is the way these things go.

STATEMENT OF CARL MADDEN, CHIEF ECONOMIST, CHAMBER OF COMMERCE OF THE UNITED STATES

Mr. MADDEN. It is a pleasure to be here before the Joint Economic Committee. I thank you for the opportunity.

COMPARISON WITH KOREAN WAR

In seeking to assess the economic repercussions of the recent increase and future decrease in defense spending incident to Vietnam, comparisons with the Korean war are inevitable. Outbreak of the Korean war in 1950 boosted our annual spending for defense and related programs, as measured in 1963 dollars, by $25 billion to a rate of $45 billion in 1951 and a maximum of $65 billion in 1953.

Most of the increased spending went for military equipment and other goods and services bought from the business sector. Reduction in 1953–54 by $11 billion in this type of spending was a leading factor in the 1954 recession. So concern about a recurrence of a similar business setback following cessation of hostilities in Vietnam is both understandable and justifiable.

But there were significant differences during our Korean engagement compared to Vietnam that greatly reduce the likelihood of such a recurrence of recession following termination of the "hot war." The list of these differences is quite impressive. The pace of military buildup was considerably faster during the Korean conflict, causing severe shortages. Despite last year's acceleration of defense spending, our buildup in Vietnam has been gradual and has not as yet precipitated any drastic economic dislocations, aside from some inventory pileup and skilled manpower shortages.

Consumer prices rose more sharply during the Korean war, despite the controls enacted early in 1961. Increases in industrial production were also more marked as compared to the period since mid-1964. Corporate profits and business capital spending fell during the third year of the earlier conflict, while both of these important economic variables have recently only begun to level off. Personal income, on the other hand, has behaved in a similar fashion—rising steadily during both escalations. Finally, compared to a Korean war peak of 13.5 percent, national defense expenditures are still only about 9 percent of gross national product, despite the intensification of hostilities in Vietnam. This ratio has been rising—but only slowly—since early 1964.

In short, barring a considerably greater commitment of resources to defense purposes than seems likely, our growing economy should be able to handle comfortably both the economic demands of the war in Vietnam and a deescalation. An orderly adjustment to military deescalation will be even more likely if, as is widely anticipated, a Marshall plan type of foreign aid to Vietnam is substituted for military expenditures following the termination of the war.

The Dislocation Problem

The foregoing does not mean that the national chamber of commerce is unmindful of dislocations in particular communities and regions heavily dependent on defense orders that would necessarily result from order cancellations or cutbacks. This is the 'disaggregated" kind of deescalation effect that certain cities and regions went through with varying degrees of success following cancellation of the Skybolt and Dyna-Soar projects in 1963, the phaseout of production of the F–105 fighter-bomber, and the closing of many military installations.

Subsequent studies done for the U.S. Arms Control and Disarmament Agency[1] have borne out the earlier conclusion, arrived at by general economic analysis, that these kinds of adjustment differ only in degree from those constantly facing the economy in connection with

[1] See attached list.

adjustment to technological change and structural shifts in the demand for various labor skills.

This was one of the major conclusions reached in a national chamber of commerce study entitled, "The Economics of Defense Spending," published in February 1965, and subsequently verified by the report of the Ackley committee on "The Economic Impact of Defense and Disarmament" that appeared in July 1965.

Each of these reports recognized the regional and local economic dislocations precipitated by changes in both the level of defense spending and in the procurement mix. But each study also indicated that if there is a national problem associated with a decrease in defense outlays, it relates more to economic growth than to business cycle developments. A growing economy provides the best environment for an orderly transition from wartime to peacetime production for the more heavily involved communities.

Although these reports were written 2 years ago when defense spending played a smaller relative role in the economy than at present and the private sector was growing more rapidly, the conclusions arrived at still appear to be valid. This is because the current softness of the economy is traceable to developments in the private sector primarily—a slower rate of consumer buying in the housing and durable goods markets, an inventory overhead, and a sharp deceleration of fixed investment spending by business.

Mr. Chairman, I would like to submit for the record at this point a copy of the national chamber study, "The Economics of Defense Spending."

Chairman PROXMIRE. Without objection, that will certainly be very valuable to us.

(The study referred to follows:)

THE ECONOMICS OF DEFENSE SPENDING*

INTRODUCTION

During the past decade the American people as a whole and a segment of the economy in particular have grown accustomed to national defense expenditures ranging between $48 billion and $56 billion a year. An uptrend from 1960 to 1963 was partly reversed in 1964, foreshadowed by certain headline-catching program cancellations, especially the Skybolt and Dynasoar projects in 1963. Prospects are for a levelling-off, followed by a slow decline in defense spending in the next ten years or so.

Over time, society will benefit from having some of its scarce resources now devoted to defense transferred to the civilian economy to satisfy proliferating needs for more and better schools, housing, highways, medical service, and the like.

But it is understandable that questions have been raised about the economic effects of defense cutbacks. For example, how serious have the economic adjustments been so far? Will a levelling-off and possible decline in overall defense outlays precipitate a business recession? What of the implications for unemployment? Will companies and localities heavily involved in defense activities be able to adjust to civilian production? Can defense/space research and development resources and output be adapted to civilian uses?

This report, primarily the responsibility of Dr. Richard Landry of the National Chamber staff, is a summary of the views of leading authorities on the questions posed above, and it suggests the relative importance of the questions.

ROBERT S. MACFARLANE,
Chairman, Committee on Economic Policy.

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Defense Spending and the Economy

At their peak in World War II, defense requirements absorbed almost half of total and 80 per cent of durable goods output.[1] Understandably, apprehension was widespread that post-war reconversion of industry to civilian production would plunge the economy into deep depression, especially since most of the wartime increase in production had come from previously unemployed manpower and machinepower.

But the opposite was the case.[2] Instead of deflation and depression there was inflation and a boom in business; and unemployment stuck at 4 per cent of the civilian labor force until the brief recession of 1949. The ease of the 1946–48 economic adjustment to reconversion and the buoyancy of the civilian economy during the Korean War presumably accounted for the absence of similar worries about reconversion at the War's end in 1953.

Discussion has recently flared up, however, regarding the economic problems of defense spending, evoked in part by the attainment of "overkill" capacity by both the United States and the USSR and by the 1963 Nuclear Test Ban Treaty between these two powers. The current debate stresses certain features of our present defense program, some of which are encouraging and some are not.

Among the encouraging aspects are the facts that (1) defense expenditures are a much smaller proportion of total economic activity currently as compared with 1945, accounting for less than 10 per cent of Gross National Product (in 1945 the figure was 40 per cent); and (2) between 1945 and 1946 national security expenditures were reduced by 80 per cent (measured in 1960 dollars), whereas current indications are that there will be a gradual tapering of such outlays on the order of 30 per cent over a twelve-year period and from a smaller relative base.

On the other side of the picture, however, current defense procurement is highly concentrated with respect both to type of industry and geographical region. Furthermore, a large share of defense work is being done by specialized contractors who have never produced for the civilian market. Thirdly, unlike the 1946–48 situation, since 1959 the national unemployment rate, until quite recently, regularly exceeded 5½ per cent. Finally, according to the calculations of the President's Council of Economic Advisers the economy has grown at a slow rate since 1955, causing it to fall 5 per cent short of its full-employment potential.[3]

The first two points invite a favorble comparison with the post World War II readjustment to disarmament. Although the remaining points imply a novel type of readjustment problem, different in character from the 1946–48 and 1953–54 transitions, their magnitude is questionable. For example, regarding economic growth, real GNP is likely to show a gain of 5 per cent in 1964 from the 1963 level serving to narrow the gap between actual and potential GNP.

The purpose of this booklet is to discuss these problems and assess their importance in the light of the current literature on the subject.

The Nature and Extent of Defense Expenditures

Outbreak of the Korean War in 1950 boosted our annual spending for defense and related programs in 1963 dollars by $24 billion to a rate of $45 billion in 1951 and to a maximum of $65 billion in 1953. Most of the increase went for military equipment and other goods and services bought from the business sector. Reduction in 1953–54 by $11 billion in this type of spending was a leading factor in the 1954 recession. Since that time Cold War tensions have caused these outlays to rise from $49 billion in 1955 to $56 billion in 1963, with only slight fluctuations in the intervening years.[4] The rate in the first half of 1964 was substantially unchanged from 1963.

The trend of defense expenditures (in dollars of 1963 purchasing power) for the period 1947–64 is shown on Chart I, below:

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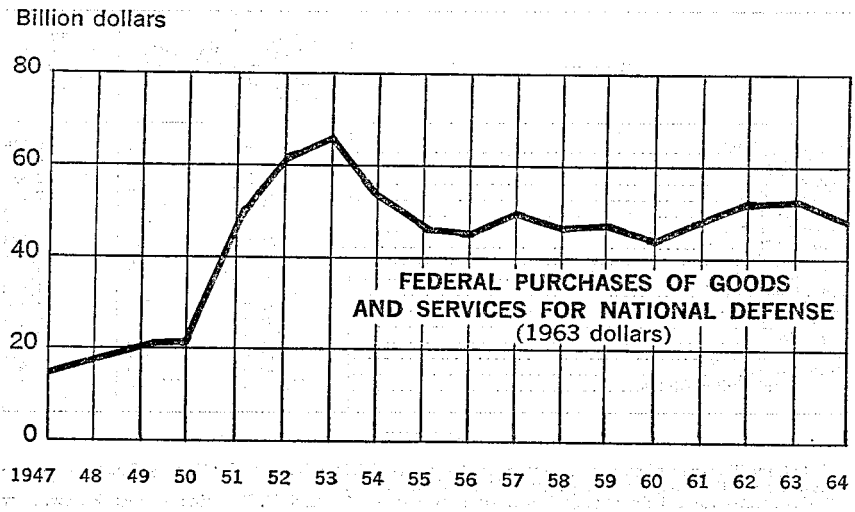
[1] Herman E. Krooss, *American Economic Development,* Prentice-Hall, Inc., New York, 1955, p. 463.

[2] For an evaluation of this development, see W. S. Woytinsky, "What Was Wrong in Forecasts of Postwar Depression?" in *Journal of Political Economy,* April 1947.

[3] *Economic Report of the President,* Washington, D.C., January 1964, Chart 4, p. 38.

[4] Emile Benoit and Kenneth Boulding, Eds., *Disarmament and the Economy,* Harper & Row, New York, 1963, pp. 272–273; *Manpower Report of the President,* Washington, D.C., March 1964, pp. 155–156; U.S. Arms Control and Disarmament Agency, *The Economic and Social Consequences of Disarmament,* Part II, Washington, D.C., July 1962, pp. 7–8; *Econ. Report of Pres., op. cit.,* p. 209.

Chart I



SOURCE: U. S. Department of Commerce.

About four-fifths of defense prime contracts of $10,000 or more awarded by the Defense Department in fiscal 1962 went for military hardware, including missiles, electronic devices, and transportation equipment, along with associated developmental costs.[5] The resulting concentration of defense procurement in five industries—aircraft and parts, communications equipment, electronic components, ordnance, and shipbuilding—makes each especially vulnerable to shifts in the defense product-mix or a cutback in overall procurement. By the same token, because all of these industries, excepting communications, equipment, cluster in specific regions, the local and regional impact of such changes could be severe.

In 1960 all of the employment in ordnance work, 93 per cent in aircraft and missile construction, 60 per cent in ship and boat building, and 38 per cent in communications equipment was attributable to defense procurement. In 1963, compared to 1958, employment was 17 per cent lower in the aircraft industry, but 90 per cent higher in ordnance, 48 per cent higher in electronic components, and 46.5 per cent higher in communications equipment.[6]

Geographically, the areas most affected by defense industry (accounting for over 10 per cent of state nonagricultural employment) are Alaska, California, Washington State, Virginia, Connecticut, New Mexico, and Utah, Massachusetts and Hawaii also have close to 10 per cent of their nonagricultural employment so involved. Table I, below, shows a finer breakdown by counties, although on the different basis of dollars of prime contracts per capita.

A caution is in order regarding prime-contract data: they can be misleading. Not only do they fail to indicate the extent of subcontracting, but also much of the work is subcontracted to companies in other states. These considerations imply a lesser geographical concentration of defense work than is suggested by Table I and the industry and company concentration suggested by Appendix Table I.

As Dr. Murray Weidenbaum has recently pointed out, the Federal Government is trying to improve information on the economic impact of defense/space programs in the following ways:[7]

[5] *Manpower Report, op. cit.*, p. 156.
[6] Joseph F. Fulton, "Employment Impact of Changing Defense Programs," *Monthly Labor Review*, May 1964, p. 510.
[7] See Murray L. Weidenbaum, "Measuring the Economic Impact of Defense/Space Expenditures," a paper presented at the Eleventh Annual Conference of the Missouri Research and Development Council, Denver, Colorado, October 20, 1964 (processed), pp. 5–6. See also *Productive Civilian Uses of Former Defense Department Installations*, U.S. Department of Defense, Washington, D.C., November 1964, (a 32 page pamphlet).

TABLE I.—*15 counties most heavily dependent on defense prime contracts, 1960*

County	Prime contracts per county (millions of dollars)	Population (thousands)	Prime contracts per capita dollars
Box Elder, Utah	72.9	25	2,916
Fairfield, Conn	228.7	97	2,357
Tioga, N.Y	88.3	38	2,323
Ellmore, Idaho	39.1	17	2,300
Stephens, Tex	17.6	9	1,955
Newport News, Va	220.6	114	1,935
Montgomery, Ala	54.6	33	1,654
Arapahoe, Colo	178.9	113	1,583
Sedgwick, Kans	488.0	343	1,422
Santa Clara, Calif	775.9	642	1,208
Morris, N.J	289.9	262	1,106
Coffee, Tenn	31.0	29	1,068
Cobb, Va	115.0	114	1,008
Burlington, N.J	221.3	224	987
Grant, Wash	43.8	46	953
Total United States	21,004.3	179,323	117

SOURCE

Data from Walter Isard and James Ganschow, "Awards of Prime Contracts by County, State and Metropolitan Area," Philddelphia: University of Pennsylvania, 1962.
"Disarmament and the Economy," eds., Emile Benoit and Kenneth E. Boulding, Harper & Row, New York, 1963, p. 48.

1. The Census Bureau is asking a sample of companies at the three or four-digit level in the Standard Industrial Classification Code to estimate their sales to DOD, NASA and AEC, among other agencies, and the resulting employment. The sample includes both prime and subcontractors.
2. The U.S. Arms Control and Disarmament Agency is financing studies on the impact of adjustments to changes in defense/space spending in the electronics and shipbuilding industries and in certain regions, including New Mexico and the Baltimore and Seattle areas.
3. The ACDA is sponsoring case studies of previous attempts to adapt defense technology to civilian use.
4. The U.S. Department of Labor, with ACDA assistance, is studying the patterns of defense worker adjustments to particular defense cutbacks, such as the Dynasoar cancellation at Boeing and the phase-out of production of the F–105 fighter-bomber by Republic Aviation in the Nassau-Suffolk area of Long Island.

ESTIMATES OF THE SIZE OF THE NATIONAL PROBLEM

In the rapidly growing literature on the economic effects of disarmament there are writers, like Dr. Weidenbaum, who have considered the probable consequences of "a total elimination of the defense program in the 1960's, in the absence of compensating or offsetting programs."[8] Operating with this admittedly unrealistic assumption, Dr. Weidenbaum has concluded that, because of a less exuberant business climate than in 1946 and a greater concentration of defense contracts in specialized facilities not convertible to civilian production, "the adjustment to disarmament would be even more difficult than the reconversion following World War II."

On the other hand, the 1962 Report of the Panel on Economic Impacts of Disarmament, chaired by Emile Benoit of Columbia University, projected a gradual reduction in defense spending of $32 billion over a 12-year period, starting in 1965, with about $6 billion of decrease each year during the first three years and an even spreading of the remaining $14 billion over the 9 years following.[9] However, if account is taken of the offset provided by costs of inspection forces and buildup of the National Aeronautical and Space and Civilian Atomic Energy programs, the total reduction becomes $22 billion instead of $32 billion.

[8] Murray L. Weidenbaum, "Industrial Impact of Disarmament," *The American Journal of Economics and Sociology*, October 1963, p. 526.
[9] E. Benoit and K. Boulding, *Disarmament and the Economy, op. cit.*, pp. 36–38.

Based on potential real GNP of $645 billion in 1965 and $970 billion in 1977,[10] a defense reduction of $22 billion would amount to considerably less than 4 per cent of GNP, although such a reduction could represent about 7 per cent of the growth in GNP during the period. This would be true even if the Council of Economic Advisers' estimates of GNP were on the high side due to the building into their projections of too large defense outlays.

The Benoit group's estimates were made on the assumptions that disarmament would begin in 1965 and that military spending would be approximately $60 billion that year. The $32 billion cutback would break down into a $22 billion reduction in government procurement and a $10 billion decrease in payrolls. The multiplier effect could magnify this spending decline into a GNP decrease of as much as $48 billion over the entire 12-year period. The corresponding decline in employment would be 5 million.

In a more recent analysis [11] Dr. Benoit has stated that in contrast with the post World War II conversion, "the economy has become much more vulnerable to the deflationary influences that would be generated by any major defense cuts." He holds the following factors responsible for this circumstance: (1) a lower ratio of money supply to GNP than in 1945—27 percent in 1962 compared to 47 percent in 1945; (2) greater vulnerability of consumer indebtedness, which has risen to almost 16 percent of disposable personal income from 5 percent in 1945; (3) greater vulnerability of stock market prices to corporate income declines, because of high and rising stock price-earnings ratios; (4) "substantial" excess capacity throughout the economy; and (5) a "troublesome amount of continuing, stubborn unemployment."

At the opposite extreme from the Weidenbaum-Benoit position, Dr. Grampp of the University of Illinois estimates that federal government spending under disarmament conditions would not decrease by anything like $32 billion in the next twelve years. His "guesstimate" is $8 billion. This figure is calculated as follows: (1) an upswing from $18 billion to $27 billion in U.S. spending on its national force and contribution to the United Nations; (2) increase from $10 billion to $20 billion in spending on space projects and atomic energy; and (3) a rise of $5 billion in expenditure on "other forms of rivalry" resulting in total annual defense spending of $52 billion, compared to an estimate for 1965 of about $60 billion.[12]

THE REGIONAL AND LOCAL ECONOMIC PROBLEM

A 1963 survey by the Seminar on Industrial Conversion at Columbia University that covered concerns in New York, New Jersey, Massachusetts, Colorado, California, and Washington State found that close to 67,000 workers had recently been laid off or were scheduled for layoff by 19 major defense contractors. In commenting on the results of the survey, Professor Seymour Melman pointed to the concentration of layoffs among highly skilled workers as indicating "the special problems of converting from military to civilian work." [13]

Illustrative of this problem are the results of a study also made in 1963 of four large firms that had recently succeeded in making the transition from defense work to civilian production. The authors' general observation was that "at best it is difficult to make such a transition." [14] Identified as success factors were: picking a product with which the company was familiar; establishing a separate organization for the civilian product; and giving greater emphasis to sales activities and customer service than previously (when Uncle Sam was the only customer).

Distinguishable from but related to the problems of a privately initiated conversion from government work to output for the civilian market, are the instances of shorter-term community "crash" programs that have attempted to offset the effects of suddenly terminated defense contracts or military installations. Donald Bradford, Director of the Office of Economic Adjustment in the Department of Defense, in testimony before a Senate Subcommittee on November

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[10] Estimated on the basis of the Council of Economic Advisers' 3½ per cent trend line through the middle of 1955.

[11] Emile Benoit, "Defense Cutbacks and the U.S. Economy," *Business Scope*, Cambridge, Massachusetts, May 2, 1964.

[12] William D. Grampp, "False Fears of Disarmament," *Harvard Business Review*, January-February 1964, p. 179.

[13] *New York Times*, March 26, 1964, p. 10.

[14] Harold E. Fearon and Ralph C. Hook, Jr., "The Shift from Military to Industrial Markets," *Business Topics*, Indiana University, Winter 1963, pp. 50–51.

7, 1963, cited several such cases—among them Presque Isle, Maine; Wichita, Kansas; Farmingdale, Long Island; and Roswell, New Mexico—all of which adjusted successfully to sharp and sudden cutbacks in local defense activity, primarily through the development of industrial parks and attraction of new firms. To this list should be added the lesser successes of Santa Monica, California, in connection with the sudden cancellation of the Skybolt program in January 1963, and Seattle, Washington, with regard to the December 1963 cancellation of the Boeing Company's Dynasoar project.

Citing the experiences of Wichita, Kansas, and Los Angeles, California, one writer has noted that "large diversified cities are inherently less vulnerable to major shifts in industrial activity than smaller cities overly committed to a narrow range of industries and skills." [15] But he considers the outlook bright even for small cities, provided they have a skilled labor force, good public services, and vigorous community leadership.[16]

THE CURRENT READJUSTMENT PROCESS

Mention of these instances of economic dislocation to which accommodation was made with varying degrees of success points to the fact that there is already underway a readjustment to the changed pattern of defense/space procurement. Emphasis in the procurement process has shifted from manned aircraft and ships to nonmanned craft and missiles, to aerospace and now space exploration vehicles. Although the national impact of such procurement changes is not appreciable because reduced economic activity in closed-down areas is offset by expansion in opened-up areas, local dislocations are similar to what might be expected from an overall cutback in defense spending.

Even should total defense spending decline, however, overall federal spending probably will not.[17] Witness the Johnson Administration's effort to use the "savings" of defense cutbacks in the fiscal year 1965 budget for its $1.9 billion antipoverty and Applachian regional programs.

The implication of this point is clear: it is impractical to talk about the economics of disarmament in a vacuum. Our present knowledge of the Defense Department's plans suggests the reasonableness of making the following three assumptions as to the economic effects of cutbacks in defense spending:

1. The process will be gradual.
2. The economic problems involved are more likely to be local and regional rather than national in scope.
3. The principal economic problems will not differ in kind, though they may in magnitude, from those facing the economy in its continuous adjustment to technological change and structural shifts in the demand for various labor skills.

Support for this view is found in the March 1962 United States reply to the inquiry of the Secretary-General of the United Nations regarding the economic and social consequences of disarmament, which notes that, "in the absence of specific details on the timing, phasing and duration of a disarmament program it is . . . not possible to discuss the problems of adjustment except in general terms." [18]

The report then proceeds to discuss the "two basic problems of adjustment:" (1) maintaining aggregate demand for the economy's output despite declines in demand for defense items, and (2) minimizing "hardships and waste as the human and material resources now devoted to defense find new uses." With respect to the first problem, the report notes that "a dollar reduction in defense spending would cause . . . about a dollar reduction in personal consumption." This estimate is based in part on recognition of certain of the built-in stabilizers of personal income in the economy, notably a lesser income-tax drain and higher unemployment transfer payments as national income declines.

Posing the aggregate demand question, however, appears to beg the question whether this will indeed be a problem, as we have already indicated. In fact, the report notes that [19]

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[15] C. T. Stewart, Jr., "Peace Trend Will Bring Better Business," *Nation's Business*, June 1964, p. 72.

[16] Stewart, *loc. cit.*

[17] This focus on Federal spending is not intended to play down the desirability of stimulating spending in the private sector—through further tax reductions, for example.

[18] United States Arms Control and Disarmament Agency, *The Economic and Social Consequences of Disarmament*, Part II, *op. cit.*, p. 7.

[19] *Ibid.*, p. 10.

". . . the very fact that the timing, phasing, and likely duration of a disarmament program would be known well in advance to policy makers places the whole problem of providing for adequate demand offsets on a considerably more certain and favorable basis than is normally available for the development of countercyclical policy."

In connection with the problem of structural adjustment the report is equally realistic:[20]

"Actually the economy is constantly experiencing structural changes as a result of technological developments, the introduction of new products and services, population developments, and other factors."

Apparently this is also the view of Gardner Ackley, Chairman of the Cabinet-level Committee on the Economic Impact of Defense and Disarmament. In testimony before the Senate Commerce Committee on June 22, 1964, Dr. Ackley said,[21]

"Some people misunderstood and exaggerate the potential impact of changes in defense spending, whether major or minor, and—particularly—underestimate our ability to deal with them."

THE SPECIAL PROBLEM OF RESEARCH AND DEVELOPMENT

About 15 per cent of our defense outlays are for research and development (R & D), and more than half of R & D expenditures (including AEC military outlays but excluding NASA work) is financed by defense agencies. This is a novel and potentially disturbing aspect of the present defense program, since not only would a significant slide-off in defense outlays curtail employment of highly skilled manpower but also a sizeable cutback could deprive the civilian economy of the external economics flowing to it from military research with peacetime applications.[22]

Based on the relative importance of governmental R & D expenditures, Dr. Richard Nelson has estimated that the percentage drop in R & D outlays would be about half as great as any drop in military expenditures. He has estimated further that "while a 50 per cent decline in defense spending would lead to a 23 per cent cutback in R & D spending, it would lead to only a 12 per cent cutback in employment of scientists and engineers," since the defense R & D dollar hires a lesser number of R & D scientists and engineers than the nondefense R & D dollar, the difference being accounted for by a heavier materials outlay in military research.[23]

As an additional optimistic note, Dr. Nelson has called attention to the fact that the impact of disarmament is likely to be considerably less on basic research (carried on outside government) than on applied R & D and that "the freeing of R & D resources would be one of the most important economic benefits of disarmament."[24] This latter point reflects Dr. Nelson's belief that

"a significant increase in R & D resources could be used in the civilian sector, with large benefit to society. . . . The civilian economy would benefit especially from increased long-range research and experimentation with advanced technological possibilities of the sort that the research teams presently employed by defense industries have conducted so succesfully."

In this connection a 1963 University of Denver Research Institute study on the value of space-related technology to the civilian economy showed that intangible spin-off (the transfer of technical information) is far more important than tangible spin-off (the transfer of products, processes, or materials).[25]

This same optimism is sounded by Dr. Charles T. Stewart, Jr. of George Washington University who declares that "reduced spending for defense should release resources and income to satisfy a great number of nondefense wants, both private and public."[26] He also makes the significant point regarding transferability of scientists and engineers from defense to civilian production that they are younger, better educated, more mobile, and, therefore, more adaptable to job conversion than are workers in other industries. However, as is mentioned

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[20] *Ibid.*, p. 11.
[21] *Washington Post*, June 23, 1964, p. D–6.
[22] Richard R. Nelson, "The Impact of Arms Reduction on Research and Development," *American Economic Review*, Proceedings, May 1963, p. 435.
[23] *Ibid.*, p. 439.
[24] *Ibid.*, p. 446.
[25] J. G. Welles and R. H. Waterman, Jr., "Space Technology: Pay-Off from Spin-Off," *Harvard Business Review*, July–August 1964, p. 106.
[26] Stewart, *op. cit.*, p. 67.

elsewhere in his article, experience in the Los Angeles area following layoffs in the ordnance, electronics, and aircraft industries there, implied that although displaced aircraft workers found jobs it was probably at the expense of less skilled and experienced workers.

Private Planning for Conversion

Hearings held in the fall of 1963 by the Senate Subcommittee on Employment and Manpower regarded the civilian application of technology involved in defense and other government sponsored programs. The testimony touched on the question of industrial conversion from defense to nondefense work. Industrial representatives of companies with heavy defense commitments who testified were understandably cautious about the extent to which it would be possible for them to switch completely from defense to nondefense production. One company thought it would take many years before it could substitute commercial for defense work, although all of the companies that appeared had attempted to diversify into civilian lines.[27]

Representatives of the Department of Defense (DOD) and the United States Arms Control and Disarmament Agency (ACDA) described a plan enabling DOD and ACDA to keep up to date on principal defense plants and Project 9–A that supplies current information on 150 plants in 75 communities accounting for about 40 per cent of procurement expenditures, the type most likely to feel the effect of defense cutback. It was also brought out that questions in the 1965 Census of Manufacturers will be asked of key companies on the economic impact of defense contracts.

What is the state of private planning for conversion, aside from that undertaken by the companies that answered the Subcommittee's invitation to participate in its hearings—Westinghouse, United Aircraft, Northrup Aviation, Lockheed, Hughes Aircraft, Aerojet-General, Martin Company, and Republic Aviation?[28] Posing this question makes two sizeable assumptions: (1) It assumes that private planning is possible or even meaningful to meet an event of unknown timing and size; and (2) it assumes that conversion of defense-oriented resources to civilian production is indeed feasible.

The results of a survey of large prime defense contractors made by Stanford Research Institute late in 1963 illustrates the difficulties of private planning for conversion.[29] The replies indicated that few of the companies surveyed had blueprints for diversification into civilian production in the event of Government contract termination. But it should be noted that the "planning" envisaged by the survey was quite precise. It meant a detailed description of alternative courses of action, identification of trigger points at which to initiate new plans, work on prototypes of new products, and assignment of at least one senior executive to this activity. (The slight extent of government planning is indicated on page 268.

Why was this so? The most frequent reason given was the inability "to plan for a catastrophe." It was frequently noted in the replies that the Federal Government should do more to advise industry well in advance of its intention to cancel contracts. The most important reason, however, appeared to be an expectation, *based on experience*, that cold war and space program requirements would prevent any drastic slash in defense and related procurement.

Strengthening this view has been the success of the major defense companies in shifting from aircraft to missile production.[30] Along this same line, Richard Rutter, writing in the *New York Times* for August 16, 1964 (Sec. 3, p. 10), indicates that "on the whole . . . the aerospace-defense industry is not only very healthy but still growing." A projection of 1964 sales at $20.9 billion (compared to $20.5 and $20.6 billion in the two preceding years) breaks down into $8.6 billion for aircraft, $5.5 billion for missiles, $4.9 billion for space vehicles and $1.9 billion for nonaerospace products.

Small dips in aircraft and missile sales are being more than offset by small rises in space-vehicle and nonaerospace sales, including exports. Furthermore,

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[27] Betty Goetz Lall, "Congress Considers Impact of Defense Reductions," *Bulletin of the Atomic Scientists*, February 1964, pp. 31–32.

[28] See Appendix, below, for the relative importance of defense to total sales for 35 major defense contractors.

[29] Referred to by Murray L. Weidenbaum in a talk at Brookings Institution, Washington, D.C., on July 28, 1964.

[30] See Murray L. Weidenbaum, "Can Defense Technology Be Used?" *Business Scope*, Cambridge, Massachusetts, July 1964, p. 2.

the presence of long-term projects in the work programs of some of the big prime contractors, such as North American, Lockheed, and Douglas, insulates them to some extent from annual fluctuations in the DOD budget.

TRANSFERABILITY OF RESOURCES FROM DEFENSE TO NONDEFENSE USE

Underscoring the foregoing is the fact that despite frequent forays into diversified commercial markets, defense-oriented companies have had disappointing sales and profits. The reasons may be summarized as follows: [31]

1. Low capitalization of defense contractors;
2. Little marketing capability;
3. Limited experience in high-volume, low unit-cost output;
4. A technical workforce unaccustomed to producing for a competitive market.

As Dr. Weidenbaum testified before the Senate Subcommittee on Employment and Manpower on November 21, 1963, aside from the handful of companies producing commercial aircraft (at little profit), the large defense suppliers have not been producing commercially beyond 1 or 2 per cent of total sales: [32]

"The surviving efforts continue generally at marginal levels—either actually losing money, barely breaking even, or showing profit results considerably below military levels."

He noted the almost complete absence of personnel transfer from military to commercial work within the same company. The commercial departments of a defense company might be hiring engineers at the same time as its military department was laying off experienced technicians. There has been an inward movement of professionals and technicians from other industries and universities but no appreciable outward movement. In the aerospace industry, for example, between 1959 and 1963 production workers declined from 673,000 to 653,000 while the number of white-collar workers rose from 455,000 to 600,000.[33] In the six months ended March 1964, employment was down 10 per cent in missiles production and 1 per cent in aircraft, but up 11 per cent in space equipment over the preceding year.[34]

It will be recalled that Dr. Stewart, in the *Nation's Business* article previously cited, referred to the "bumping" process that occurred in Los Angeles defense plants resulting from contract cancellations: less skilled workers lost their jobs as higher skilled workers took their places. Although some slack will be taken up by increased spending on the space program, a recent canvass of leading defense contractors indicated that this type of procurement was also expected to taper off.[35]

THE LOCAL VS. THE NATIONAL PROBLEM

What is the principal economic problem of disarmament? Is it a problem of the level of national economic activity, or of local readjustments? The literature surveyed and the evidence available strongly suggest that it is the latter; and the prospect is that, with continued economic growth, the national problem will wane but not the local one. If there is a national problem, it is that of promoting vigorous growth while the local-regional problem will be to overcome barriers to the mobility of capital and the mobility and quality of labor so that these resources can be shifted to civilian use.

Resource transfer has both a local (regional) and national dimension. When Dr. Grampp writes [36] that the unemployment caused by curtailed defense production would cost society nothing if the labor and capital employed in defense industries had no alternative use, he is clearly referring to the national economy. Along this line he has noted that if labor, as the transferable resource involved, were to be absorbed into expanding civilian industries, the gain to the national economy would be about 5 percent of GNP.

Actually, the problem to which Dr. Grampp is addressing himself is the level of resource-use, not its industrial and regional pattern. As previously pointed out,

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[31] *Ibid.*, p. 3.

[32] "The Transferability of Defense Industry Resources to Civilian Uses," a statement prepared for the Subcommittee on Employment and Manpower of the Committee on Labor and Public Welfare of the U.S. Senate, November 21, 1963, in the *Nation's Manpower Revolution*. Hearing of the Senate Subcommittee on Employment and Manpower, Washington, D.C., 1964. Part 9, p. 3146.

[33] Richard Rutter, *New York Times*, August 16, 1964, Sec. 3, p. 10.

[34] "Defense: Bad, But How Bad?" *Forbes*, July 15, 1964, p. 15.

[35] *Wall Street Journal*, July 7, 1964, p. 18.

[36] William D. Grampp, "Defense and Disarmament: Some Economic Surprises," *Michigan Business Review*, January 1964, p. 12.

it is the industry and regional patterns with their community industrial location overtones that appear to be the significant problem.

One influence neglected in the impact discussion so far has been the role of noneconomic factors. Political elements in defense prime contract awards have probably had some influence in setting the industrial location pattern of defense industry along with economic factors. Sub-contracting, on the other hand, undoubtedly reflects economic factors to a heavier extent.[37] Military strategic considerations have also played a role, of course. These considerations imply that where noneconomic factors have been significant in prime contracting, termination of these contracts may more seriously dislocate local industry than otherwise.

But from a purely economic viewpoint, the resource-impact effects of shifts in government demand for defense goods are indistinguishable from the effects of changing civilian demand for various products and services. If there is anything distinctive, it is the abruptness and relative magnitude of defense contract cancellations as compared to the gradualness of changes in civilian demand and the possibly lesser free-market competitiveness of production facilities utilized for defense purposes.

If national security considerations permit, a reduction in defense spending is clearly desirable. Society will benefit from having the resources presently employed in defense production shifted to producing more and better producer and consumer goods.

But what is the state of regional development plans that might serve to ease the transition from defense to nondefense activity?

Planning for Readjustment

A study of such programs by the Committee for Economic Development (CED) revealed that privately financed expenditures on economic surveys were $127 million and public expenditures were $93 million in 1957. Yet, according to this study, local economic development is still in its infancy, and more money is being spent on promotion than on research and planning for better resource use. There is some evidence, though, of replacement of the time-honored industrial development approach by multipurpose, comprehensive programs.[38]

A recently completed three-year study of the Pittsburgh metropolitan area indicates the scope and type of undertaking likely to produce results useful for regional development and economic growth of the kind implied in the CED study. As described by Professor Edgar M. Hoover of the University of Pittsburgh, the study director, the project is "in process of being translated into programs of action by appropriate agencies in the community."[39] Some of the more significant findings of the Pittsburgh study were:

1. The area's steel industry is overgrown relative to current comparative costs of delivered steel.
2. As a result, Pittsburgh steel mills must absorb more of transportation costs to compete at points of consumption with newer plants of competitors.
3. Compared to other industrial regions, Pittsburgh suffers from a relative lack of service industries.
4. The area has certain structural handicaps to new industry: the dominance of a few large firms providing their own services and a tendency for these firms to export capital to other areas.
5. Similarly, the area is handicapped by the export of industrial research findings to distant plants of the industrial giants located in Pittsburgh.
6. Industrial wage levels have been high compared to other regions, but service wages have been low.
7. Utilization of women in the labor force has been consistently low.
8. Unemployment has been chronic and above the national average.

Certain characteristics of the Pittsburgh metropolitan economy stand out when contrasted with the findings of the New York Metropolitan Regional

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[37] Murray Weidenbaum has estimated that about half of prime contract work is subcontracted: "Measuring the Economic Impact of Defense/Space Expenditures," a paper presented in Denver, Colorado, October 20, 1964 (processed), p. 3.

[38] Donald R. Gilmore, *Developing the "Little" Economies*, Committee for Economic Development, New York, 1960, "Summary," pp. 11–26.

[39] The *Nation's Manpower Revolution, op. cit.*, 1963, Part 7, p. 2375.

Study, completed in 1960. Not only is the New York region six to seven times as large as Pittsburgh and much more diversified industrially and commercially, but it also has grown at approximately the national rate since the 1930's, whereas Pittsburgh has grown at less than half the national rate.[40]

Dr. Chinitz, an associate of Dr. Hoover at the University of Pittsburgh, has made the following points in assessing the different factors that contribute to economic diversity in a region and, by indirection, explaining the lack of economic diversity in Pittsburgh:[41]

1. The more numerous the firms in a region, the greater the chance of industrial diversification because of a good supply of risk-taking business managers. The Pittsburgh region apparently represents the converse of this proposition.
2. Availability of capitay locally is much more important to small than to large business firms. (This relates to point 4 in the preceding summary.)
3. The geographic dispersion of the labor force—as in the Pittsburgh region—and the variable scheduling of the work of married men in heavy industry, like steel, is a partial explanation of the low labor force participation of married women in that area.

The results of the Pittsburgh study have provided the foundation for a three-pronged private development program to enable the Pittsburgh area to become "a fertile germinating ground for the industries of tomorrow."[42] The first element in this program is upgrading manpower. Element two is making the community a more desirable place in which to live and work. Element three is providing a local clearinghouse for technical information to promote the development and utilization of new products and productive methods, finding markets for new products, and seeking out sources of local venture capital.

A similar study of economic trends in the Upper Midwest (coinciding with the Minneapolis Federal Reserve District) is close to completion. The Upper Midwest Economic Study was started in 1959 to provide background for an as yet unspecified action program of the Upper Midwest Council, a private committee established to promote economic growth in the region. Professor John R. Borchert of the University of Minnesota, who served as Urban Research Director for the Study, testified before the Senate Subcommittee on Employment and Manpower on October 31, 1963.

Highlights of his testimony were:[43]

1. The Upper Midwest is in transition from a highly agricultural to a primarily service-industry economy.
2. Growth in nonfarm employment 1950–60 barely offset the sharp drop in agricultural employment.
3. As they have expanded, farm services, retail trade, government and other service activities have concentrated in urban centers.
4. Manufacturing and services supplied to national markets have concentrated in the Twin Cities and southeastern part of the region, serving as a "hinge area" that provides access to the region's surplus labor.
5. Within the region, population has gravitated toward the "hinge area."
6. Unemployment, below the national average in 1950, is now above it.
7. Per capita income rose in the decade, but not as much as for the nation.
8. The region has had a high expenditure on education relative to income.

Although the final report of the Study has not yet appeared, a forthcoming Urban Report No. 4, "The Why and How of Community Planning—Comparative Studies of Problems and Actions in 14 Upper Midwest Cities," may offer suggestions as to useful community programs for coping with some of the problems of an agricultural and mining economy in transition.

That the Pittsburgh, New York, and Upper Midwest studies are not isolated examples is indicated by the results of a 1963 survey of urban and regional research at U.S. universities. This survey, which was sponsored by the Committee on Urban Economics of Resources for the Future, Inc., in Washington, D.C., covered a five-year period.[44] Of the 698 studies reported, 257 were of metropolitan areas and 196 were regional or statewide. Of the total, 218 involved economic analysis. Over half were in process, suggesting the growth in academic interest in this field.

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[40] Benjamin Chinitz, "Contrasts in Agglomeration: New York and Pittsburgh," *American Economic Review, Papers and Proceedings*, May 1960, p. 281.
[41] *Ibid.*, pp. 284–287.
[42] The *Nation's Manpower Revolution, op. cit.*, p. 2380.
[43] See *ibid.*, pp. 2381–2387.
[44] See Committee on Urban Economics of Resources for the Future, Inc., *Urban and Regional Studies at U.S. Universities*, The Johns Hopkins Press, Baltimore, Maryland, 1964.

SUMMARY

As stated at the outset, if there is a national problem associated with a tapering-off and change in direction of defense outlays, it relates more to economic growth than to business cycle developments. Changes in the level and mixture of defense requirements have already affected individual industries and communities. But there has been no noticeable effect on the strength of our overall economy.

It can be argued, of course, that the national economic growth rate is too low—the Council of Economic Advisers believes that the economy is producing 5 percent less than its capacity, for example. On the other hand, as already noted, the real growth rate of 5 percent in GNP in 1964 suggests that this problem may not be so serious as previously contemplated.

Economic development programs at the local and regional level, as illustrated by the Pittsburgh and Upper Midwest experience, have an encouraging implication for economic growth in general and offer a better adjustment to local dislocations resulting from defense program changes than so far achieved.

APPENDIX

TABLE I.—*Importance of defense-space orders to 35 major contractors, fiscal year 1962*[1]

Company	Defense contracts (1)	NASA contracts (2)	Total (1) + (2) (3)	Company sales (4)	Ratio of orders to totalsales (3)/(4) (5)
	Millions	*Millions*	*Millions*	*Millions*	*Percent*
75-100 percent:					
Republic Aviation Corp	$332.8	$6.9	$339.7	$295.8	100.04
McDonnell Aircraft Corp	310.9	68.5	379.4	390.7	97.11
Grumman Aircraft Engineering Corp	303.6	24.6	328.2	357.1	91.91
Lockheed Aircraft Corp	1,419.5	5.0	1,424.5	1,753.1	81.27
AVCO Corp	323.3	1.4	324.7	414.3	78.37
North American Aviation, Inc	1,032.5	199.1	1,231.6	1,633.7	75.39
Hughes Aircraft Corp	234.2	9.2	243.4	(2)	(3)
50-74 percent:					
Collins Radio Co	150.1	3.7	153.8	207.8	74.01
Thiokol Chemical Corp	178.3	0.8	179.1	255.8	70.02
Ratheon Co	406.6	----------	406.6	580.7	70.02
Newport News Shipbuilding & Dry Dock Co	185.0	----------	185.0	267.3	69.21
Martin Marietta Corp	802.7	1.8	804.5	1,195.3	67.31
Boeing Co	1,132.8	15.6	1,148.4	1,768.5	64.94
General Dynamics Corp	1,196.6	27.9	1,224.5	1,898.4	64.50
Curtiss-Wright Corp	144.6	----------	144.6	228.7	63.23
United Aircraft Corp	662.7	34.1	696.8	1,162.1	59.96
Douglas Aircraft Co., Inc	365.6	68.4	434.0	749.9	57.87
25-49 percent:					
American Machine & Foundry Co	187.3	----------	187.3	415.4	45.09
General Tire & Rubber Co	366.1	66.4	432.5	959.8	45.06
Northrop Corp	152.5	1.3	153.8	347.5	44.26
Hercules Powder Co	181.6	----------	181.6	454.8	39.93
Sperry Rand Corp	465.6	2.2	467.8	1,182.6	39.56
Bendix Corp	285.9	19.4	305.3	788.1	38.74
FMC Corp	160.4	----------	160.4	506.5	31.67
Pan American World Airways, Inc	146.7	----------	146.7	503.9	29.11
0-24 percent:					
International Telephone & Telegraph Corp	243.6	2.2	245.8	995.5	24.69
General Electric Co	975.9	23.0	998.9	4,792.7	20.84
Radio Corporation of America	339.6	20.2	359.8	1,742.7	20.65
Westinghouse Electric Corp	246.0	3.4	249.4	1,954.5	12.76
International Business Machines Corp	155.5	12.6	168.1	1,925.2	8.73
American Telephone & Telegraph Corp	467.7	10.8	478.5	11,742.4	4.07
Ford Motor Co	269.1	----------	269.1	8,089.6	3.33
General Motors Corp	449.0	1.4	450.4	14,640.2	3.08
Standard Oil Co. (New Jersey)	180.1	----------	180.1	9,537.3	1.89

[1] Net sales for fiscal year ending during 1962.
[2] Not available.
[3] Estimated from other sources to be in excess of 75 percent.

NOTE.—In some cases, it appears that the ratio of defense-space orders to total sales in fiscal year 1962 is not an accurate indicator of the actual ratio of military-space sales to total sales.

Source: M. L. Weidenbaum "Stanford Research Institute November 1963."

Short-Term Versus Long-Term Considerations

Mr. Madden (resuming). The current "rolling readjustment" of the economy from its superheated condition of last year shows signs of being modest and capable of completion within the year, although the pickup in the second half may not be as strong and rapid as the Council of Economic Advisers predicted in its annual report last January.

Our short-term problem is to prevent the leveling of business activity that started in the second half of last year from developing into a downturn. A crucially important factor at this juncture is confidence—both among businessmen and consumers. If business retains its confidence about long-term prospects, the effects of recent trends on business fixed investment outlays could be moderate. Similarly, if consumers do not continue for much longer to save a larger percentage of personal income than last year, in part because of an anticipated tax increase this year, consumer durable sales may soon quicken.

But we should not permit the problems of the near term to obscure the more fundamental long-term issue of economic growth and how best to promote it.

Promoting Economic Growth

By definition, stable growth will take place if aggregate demand rises in step with productivity gains. But our unhappy experience with the unbalanced monetary-fiscal policy mix of last year demonstrated that this general condition for stable economic growth does not occur automatically. By being too easy, fiscal policy forced monetary policy to be unduly restrictive. The Federal spending component of fiscal policy has been rising steadily—quite apart from spending for defense.

From 1960 until fiscal 1967, the rise in nondefense spending outpaced defense spending increases. In some years, such as fiscal 1961, 1963, 1964, and 1966, nondefense spending rose considerably faster. Although in the current fiscal year defense spending is rising more rapidly than nondefense spending, even for fiscal 1968 the percentage increases are quite comparable. Federal nondefense spending has also been rising faster than the GNP. This type of spending has risen on a cash basis from 10.4 to 11.7 percent of current dollar GNP, fiscal 1960–66, and to 12.8 percent estimated for fiscal 1968.

This inexorable rise in Federal nondefense spending has not only contributed to inflation by concentrating on the service industries where productivity rises slowly, but it also has limited fiscal policy flexibility to changes in taxes.

Far from needing a tax increase for fiscal flexibility this year, as proposed, we need expenditure control of nondefense programs for long-range balance among national priorities. More of the economic "growth dividend" should be made available to the private sector or to State and local governments.

A simple and effective way to do this is through Federal tax cuts whenever inflation is not a threat. When inflation threatens, monetary policy will be more effective and less harsh if Federal nondefense spending is controlled more than it has been since fiscal 1960.

The national chamber of commerce does not believe that fiscal flexibility should be achieved through tax policy.

(The attachment above referred to, follows:)

CONTRACT STUDIES DONE FOR THE UNITED STATES ARMS CONTROL AND DISARMAMENT AGENCY

The Dyna-Soar Contract Cancellation, The United States Arms Control and Disarmament Agency (U.S.A.C.D.A.), Washington, D.C., July 1965.

Community Readjustment to Reduced Defense Spending, (Case studies of Potential Impact on Seattle-Tacoma, Baltimore, and New London-Norwich), done for the U.S.A.C.D.A. by the National Planning Association, Washington, D.C., December 1965.

Adjustments to Reduced National Defense Expenditures in New Mexico, a study done for U.S.A.C.D.A. by Kirschner Associates, Albuquerque, New Mexico, December 1965.

Industrial Conversion Potential in the Shipbuilding Industry, a study done for U.S.A.C.D.A. by Midwest Research Institute, Kansas City, Missouri, March 18, 1966.

Chairman PROXMIRE. Thank you very much for a concise and a very excellent statement.

Mr. Goldfinger?

STATEMENT OF NATHANIEL GOLDFINGER, DIRECTOR OF RESEARCH, AMERICAN FEDERATION OF LABOR AND CONGRESS OF INDUSTRIAL ORGANIZATIONS (AFL–CIO)

Mr. GOLDFINGER. Thank you, Mr. Chairman.

The possibility of a leveling off or decline of defense expenditures should be viewed as an opportunity, rather than a problem. But the opportunity will be missed—and economic problems could arise—if we fail to plan for an eventual leveling off or decline of military spending.

The issue was appropriately stated by this committee in announcing these hearings—the exploration of "contingency plans to insure full employment growth in the event of deescalation in Vietnam." It seems to me that this issue can be divided into two somewhat related parts:

(1) Preventing a recessionary decline of economic activities, in the shortrun, and

(2) Preventing economic stagnation in the longer run.

I might add here that I do not believe that sustained full employment is guaranteed. Furthermore, as I see it, it cannot be achieved mechanically. It requires a will to act, and it requires policies to offset the economic impact of the leveling off or decline of military expenditures.

Moreover, a simple aggregate offset, as I see it, is not enough. There are additional policy issues involving the demand mix, both in economic terms and in social policy terms, such as the degree of emphasis on business investment as part of the demand mix, and how much emphasis should be placed on Government investment as against the private sector.

The magnitude of the issue is considerably smaller than in 1945–46 or in 1953–54. At present, defense expenditures account for 9 percent of the gross national product and expenditures for the war in Vietnam are about 3 percent of GNP.

In contrast, defense expenditures accounted for 41 percent of gross national product in 1944, during World War II, and 13.4 percent of GNP in 1953, the year the Korean war ended.

After the end of World War II, the massive economic adjustments were accomplished without a recessionary drop of economic activities and precipitous rise of unemployment. The sharp decline of defense expenditures and the size of the Armed Forces was offset by the backlog of pent-up demand for goods and services—by consumers, business, States and local governments—backed up by wartime savings.

In addition, the GI bill succeeded in helping large numbers of veterans in upgrading their education, vocational, and technical skills. The economic problem was an inflationary rise of civilian demand, with a premature elimination of wartime controls and regulations, rather than a lack of sufficient demand relative to productive capacity.

However, the adjustments to the end of the Korean war ran into greater obstacles, despite the much smaller economic impact of that conflict. By 1953–54, there was little backlog of demand that could be supported by earnings and savings. Output declined and unemployment rose from 2.9 percent of the labor force in 1953 to 5.6 percent in 1954.

Moreover, the end of the Korean war was followed by three successive recessions, relative economic stagnation and a rising trend of unemployment and underemployment. Between 1953 and 1960, real GNP increased at an average yearly rate of only 2.4 percent—substantially less than the potential growth rate of approximately 4 percent. Actual growth of the economy was merely about three-fifths of its potential. On a per capita basis, real GNP increased only about seven-tenths of 1 percent per year. Social and economic problems festered, along with rapid technological change in agriculture and industry, urban growth, and the rising trend of joblessness.

The deflationary gap of 1954 was unnecessary. The $7.5 billion reduction of defense expenditures, in that year, was accompanied by a moderate tax reduction in January, under previously adopted legislation—which helped to offset part of the deflationary gap. But the drop of military expenditures was also accompanied by a $2.2 billion decline of nondefense expenditures, rather than the increase that was needed to meet the requirements of a growing population for improved public facilities as well as to create job opportunities.

And the tax revisions of mid-1954 placed major emphasis on the savings of business and wealthy families—which contributed substantially to the lack of balance between productive capacity and lagging demand for goods and services in the ensuing years.

Moreover, the relative economic stagnation that followed these events was likewise unnecessary. With idle manpower and productive capacity, the task of national economic policy should have been to add sufficiently to private and public demand to reach and sustain full employment and balanced economic growth. Instead, there was a concentration on balancing the administrative budget, with little regard for the impact of restrictive fiscal policy—and restrictive monetary policy, as well—on the level of economic activities.

We know a good deal more about the management of the national economy, at present, than we did in the 1950's. But the improved in-

formation and knowledge will have to be backed by advance planning and a will to act promptly, when military spending levels off or declines.

Even a leveling off of monetary spending will require some changes in national economic policy if full-employment expansion is to be reached and sustained. At present tax rates and under conditions of high employment, Federal revenues are expected to increase by about $8 billion to 12 billion or more per year in the coming decade.

But increased social security payments, salary increases for Federal employees and the normal development of existing Federal programs probably will account for expenditure increases of approximately $5 billion to $6 billion per year. During the course of the next decade, therefore, the fiscal dividend from high employment economic expansion will build up at a rate of some $3 billion to $6 billion or more per year, if international tensions subside enough to permit a leveling off of defense expenditures.

Here is an opportunity to improve the quality of American society—to expand and improve public facilities and services, to rebuild our cities, to provide greater equity in the tax structure—while, at the same time, providing the foundation for balanced full-employment expansion of the economy.

At this point, no one can predict the course of the Vietnam conflict, the timing of any change in direction of military expenditures or the magnitude of such change. However, we should be prepared with some guides and priorities.

The AFL–CIO Executive Council declared on February 27, 1967: "America must be prepared with detailed plans to substantially step up Government investments for public facilities and services as soon as the objective of an honorable settlement of the Vietnam conflict becomes a reality." Top priority should be given to stepped-up Government investment.

If the magnitude of the change in direction of defense expenditures is great enough to warrant tax reduction, as well as stepped-up Government investment, major emphasis should be placed where it is most urgently needed in the tax structure—to reduce the relative tax burden of low- and moderate-income families, as well as to eliminate whatever Federal tax liability still remains on the poor.

In addition, an improvement of the unemployment insurance system, with the inclusion of more adequate Federal standards, is long overdue. And an improvement in the GI bill, adopted last year—to increase the educational assistance allowance and extend the time period for such allowance, as well as inclusion of provisions for apprenticeships and on-the-job training, such as were included in the GI bill after World War II—would greatly assist veterans, and upgrade the education and skills of the work force.

Additional measures should be adopted to assist workers who wish to move to jobs in other parts of the country—through improved interarea operations in the U.S. Employment Service and an expansion of Federal financial assistance to unemployed workers who wish to relocate their jobs and homes.

In the longer run, however, if we are fortunate enough to enjoy a reduction of international tensions, the fiscal surplus provides the op-

portunity to speed up the Nation's progress toward greater social equity and improved facilities and services.

Such potential expansion of Federal funds will permit increasing investments in human and material resources, as well as some reduction of the relative tax burden on low- and moderate-income families, if the international situation does not require a substantial further boost of military spending. Indeed, unless Federal fiscal policy moves in that direction, the Government will take too much money out of the spending stream and the Nation will not be able to achieve and sustain high-level economic activities.

Top priority should be given to stepped-up Federal investments in job-creating measures to improve and expand facilities and public services—rebuilding the cities, for example, education, health care, pollution, recreation. Government investment is the most effective means the Government possesses for lifting economic activity and creating jobs. Moreover, as Prof. Alvin Hansen, of Harvard University, states, "Social priorities unmistakably tell us that we should rely more heavily on increased expenditures than on tax cuts, if we wish to pursue the rational road to full employment and our potential growth goals."

And, as we move ahead in this direction, a complete overhaul of our woefully inadequate public assistance system should be undertaken and the development of contributions from Federal general revenue to the social security trust fund for a system of adequate social security retirement benefits.

There is a need for more detailed information on the economic impact of defense expenditures. Such greater detail is required for advance planning for a leveling off or decline or military spending or for the possibility of a step-up, as well.

At present, our information is essentially in the form of aggregate dollar amounts. However, there is a need, if advance planning is to be effective, for greater detail on regional, industry and occupational impacts.

For example, where is the industry and employment impact, at present—by region, industry, skill, and occupation? Which areas, industries, skills, and occupations would probably be affected most by a leveling off or decline of defense expenditures? It seems to me that such estimates can be developed by Government agencies and made available to State and local government authorities, as well as to private groups.

While advance planning at the national level is a prerequisite, community planning is also essential—not only in terms of the defense impact, but also in terms of future needs for facilities and services to provide a sound base for sustained full-employment growth. In this regard, the Federal Government should step up its planning assistance to local governments.

The AFL–CIO is convinced that advance planning is essential for sustained full-employment expansion of the economy. More than a year ago, when defense expenditures were accelerating at a considerable pace, the AFL–CIO Executive Council stated:

> Just as the Government should be prepared for the contingency of a rise in military expenditures, it should also be prepared to offset a weakening of business investment and a leveling-off or decline of military spending.

We do not want an economy based on spending for destruction. Military expenditures are a necessity for the defense of freedom; they must never be the bedrock of our national economy.

Therefore, the Government must plan at once for a rapid rise in its investment in the public services that should be instituted, expanded and improved—not only for the public good but also to provide necessary employment and consumer buying power. (February, 1966.)

Chairman PROXMIRE. Thank you for a very eloquent paper. It is great to have you gentlemen, who are both very able and who have different views on how we should adjust hopefully to an end of hostilities in Vietnam.

Dr. Madden, couldn't the adjustment to the Vietnam situation be tougher than Korea, in spite of the fact that the expenditure in Vietnam is so much less in relationship to our overall economy, tougher in this sense that both in Korea and in World War II, we had great pent-up demands.

We had controls during Korea, as you know.

You referred to the shortages during Korea. Now, there are no shortages. As a matter of fact, we are having trouble selling what we can produce. The automobile industry has been in trouble until the last few weeks. The indicators until a few weeks ago all indicated a leveling-off of production, indicated that inventories were growing rapidly while sales were level.

Under these circumstances, if you take out the Vietnam expenditure without a direct compensation either in tax reduction or in Government programs, or some kind of combination of the sort that Professor Leontief has given us this morning, aren't you likely to have a situation that could lead to a recession?

Let me just say one more thing on this, because I think you also indicated that we would have some kind of Marshall-type aid to Vietnam. In his Baltimore speech, President Johnson proposed a $1 billion reconstruction, $1 billion for us over a period of years in the Mekong River area, which as you know, is peanuts compared to what we are spending on military hostilities.

Our economic aid to Vietnam is now about $500 million. If you add these two up they are dwarfed by the strictly military expenditures over there, indicating that that source of stimulation for our economy is likely to be pretty meager compared to the stimulating effect of Vietnam.

Mr. MADDEN. Generally speaking, my answer is "No." I think that the ending of the Vietnamese war might require a reassessment of national economic policy looking toward the last third of the 20th century, and the problems that the United States faces in that last third of the 20th century.

But I think that that reevaluation would also be affected by the foreign military strategic outlook, and I think there is a real possibility that when Vietnam ends, there may be some other trouble spot in the world which might prevent the reduction of military expenditures as much as in Korea. And so I would question in my own thinking against assuming that the end of the Vietnamese war necessarily introduces a period of world stability and peace.

But leaving aside that questionary note, the study of the President's Commission on Automation and Technology, the studies of the

Rand Corp., studies of the Hudson Institute, all suggest that we face in the last part of the 20th century a tremendous impulse to economic growth through the accelerating technological revolution through which we are passing.

This accelerating technological revolution will certainly require massive investments by private industry in new equipment, in new plants, in skilled manpower, more scientists, more engineers, more technicians.

It will be accompanied by a continuation of the shift away from blue-collar jobs and toward more skilled jobs and superimposed on this great trend, which the experts expect to continue to the year 2000, and further, and that will be acocmpanied by remarkable technological changes that are perhaps as dramatic, if not more dramatic, than those we have seen so far in this country, there is of course the great world struggle in the underdeveloped countries, of keeping pace with production and the growth of the population.

While I think these two massive historic developments may very well require reassessment of national policy, both domestic and foreign, but I think that as far as the short-run problem is concerned that the Vietnamese deescalation should not present as difficult a problem as Korea, even though there may not be pent-up demands resulting from World War II, because I think there are equally strong demands for raising the quality of life in the United States, through private expenditures as well as public expenditures.

Chairman PROXMIRE. Let me ask you at this point: as I understand it, you are relying on two forces to compensate for the absence of a policy of either a very sharp tax cut or expanding the Great Society programs. One is automation. It seems to me that automation could have the reverse effect.

After all, it means that you can accomplish a lot more, produce a lot more, with fewer people. In the last 3 years, well, possibly 1964, 1965, and 1966, we had a massive expansion, as you know, of business investment in plant and equipment. Much of this was to increase the productivity of our economy, and I think it has probably increased very greatly.

Now, automation, I would agree with you, is going to mean innovation, it is going to mean change, and it very well might lead to a greater demand, but only, it seems to me, if there are other monetary policies and tax policies, and spending policies, and so forth.

Mr. MADDEN. I quite agree.

Chairman PROXMIRE. That would tend to encourage it.

Mr. MADDEN. Right. I think that was an argument for a tax cut, when deescalation came, in order to create the demand.

Chairman PROXMIRE. That would tend to encourage it.

Mr. MADDEN. Right, I thought that was an argument for a tax cut when deescalation came, in order to create the demand.

Chairman PROXMIRE. Perhaps I misunderstood you.

Mr. MADDEN. Yes.

Chairman PROXMIRE. Your answer, then, is that we should select the second alternative Professor Leontief proposed, more or less. I beg your pardon—the first alternative. The one of a tax cut in the private sector.

Mr. MADDEN. I think that, with all due respect to the analysis Professor Leontief presents, it is a fairly static kind of analysis, and it is rather difficult for me to choose either one of the alternatives without a more detailed knowledge of the benefits and costs of the various programs that he suggests.

For example, a letter to the editor of the Washington Post this morning by Prof. George Hilton of the University of California advocates Postmaster General Lawrence O'Brien's solution to the postal problem, by proposing that we could get more efficiency from the Post Office if we first provided a nonprofit corporation instead of the present arrangement, and, secondly, if we provided for private competition.

Well, here is an example where, as you know, by semantic designation the second alternative looks very fine. You spend money on education and that sounds wonderful. But if the spending of the money on education is no more efficient than some of the programs that we have, such as the Job Corps, which spends $8,000 or $9,000 per man per year, why then, I think we——

Chairman PROXMIRE. I think that is a very well spent $8,000 or $9,000.

Mr. MADDEN. Yes; then I think we should get below the easy semantics of spending more on education, and see what benefits-to-cost ratio is. So I couldn't very well answer the question as to the choice between alternatives in such a general way.

I do think that my general preferences and the preferences of the chamber of commerce are in the direction of strengthening the private sector, after 50 years of Government growth, as against strengthening the Government sector, which now takes 27 percent of the national income in taxes.

Chairman PROXMIRE. You see, the other part which you said we have this revolution throughout the world, especially in the underdeveloped countries, a massive job to do. Now, if you proposed a substantial, and a very substantial, increase in foreign aid of one kind or another, that would be, I think, consistent. But if we don't do that, and I am not saying that we should or should not on a very massive basis, it seems to me that this does not mean we are going to have any stimulation in demand, just because there is that discontent and because they need capital.

Mr. MADDEN. I think you get, again, into the semantic trap, because when the Government spends money abroad, you see it as foreign aid. When private business spends money abroad, you don't consider it foreign aid.

Chairman PROXMIRE. I think I would agree that if private business can do the job, they certainly out to do it, but I think you would agree with us that as far as the underdeveloped countries are concerned that private business is unlikely to do a great deal for some time, for many, many reasons.

Now, there are some things they can do and do very well. The Rockefeller people have done a lot in South America, and others. But the limitations on the private business in the underdeveloped countries will be severe for some years.

Mr. MADDEN. I think that depends, however, on what kind of a re-evaluation the Congress makes of foreign economic policy that might encourage private business investment—in underdeveloped countries, that is. Don't you?

Chairman PROXMIRE. Oh, yes; yes, indeed.

I would like to ask Mr. Goldfinger what, if any, effect will your program of tax cuts and increased Government programs have on the deficit, on the national debt, on prices, and on interest rates?

Mr. GOLDFINGER. First, before I reply directly to your question, there was a moment when I thought Carl was going to advocate private ownership of roads and turnpikes and, perhaps, some private competition there. But your question poses, by implication, a kind of feel of inflationary pressure, and I don't think that that need be true at all.

I think if we focus on the growth potential indicated by the staff publication [1] of the Joint Economic Committee a few months ago, the great need is for rising demand to meet the potential increases in rising productivity, and the growth of the labor force.

I am not advocating anything in terms of dollar amounts in this paper, because I don't know what the dollar amounts are in terms of leveling off, or decline of military expenditures. But I do believe strongly that the much greater danger is not inflation, but rather deflation and/or stagnation.

Certainly, if there is excessive demand, and if there are general shortages, then I would go easy on the fiscal policy push. But I don't see that as the great danger.

It seems to me that we are talking about some form of deescalation and, hopefully, subsiding of international tensions, which would have to be offset by an increase in civilian demand.

For that reason, I would generally go with Dr. Leontief's second alternative, in terms of a mix, with priority emphasis on Government investment, and secondary emphasis on a tax reduction. On the issue of a possible tax cut I would insist strongly that we should be talking not simply of some kind of aggregate tax reduction, but on the shape of the tax reduction, both for social policy reasons and for economic reasons.

I think that for both reasons, the emphasis should be on a tax reduction to reduce the relative tax burden among the low- and moderate-income families.

Chairman PROXMIRE. My time is up. Senator Miller.

Senator MILLER. Thank you, Mr. Chairman.

I would like to ask Dr. Madden and Mr. Goldfinger whether or not this comparison between the present Vietnamese costs with those in Korea and those in World War II, on the basis of a percentage of gross national product, is particularly meaningful.

I have the feeling that we are not using a good basis for comparison. For example, it would seem to me that a comparison of the percentage of real increased GNP would be more meaningful, if we were going to use a comparative set of statistics. I would appreciate your comment.

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[1] *U.S. Economic Growth of 1975: Potentials and Problems*, staff study prepared for the Subcommittee on Economic Progress of the Joint Economic Committee. December 1966.

Mr. MADDEN. I don't understand the last part of your question.

Senator MILLER. What I am getting at is this: If, for example, you should agree that use of a percent of GNP as a basis of comparing the relative demands upon our economy with the war in Vietnam, the war in Korea, and after World War II, if you would agree that that is not particularly helpful or meaningful, might you agree that to use a comparison on the basis of the relative percentages of real increased GNP per year would be more meaningful?

Mr. MADDEN. Real increases in GNP that are allocated to the war?

Senator MILLER. The percentage, yes. It might even be more than 100 percent, but assume that it is a percentage, assume that real increased GNP was $30 billion, and the cost of the war in Vietnam was $15 billion. Then you say that was 50 percent of the real increased GNP that went to the war in Vietnam, and make a similar comparison for the Korean war, a similar comparison for World War II.

Don't you think that would be a more meaningful approach than to just talk glibly about 3 percent of GNP for the war in Vietnam and 8 percent for the Korean war? I have a feeling that a percentage of GNP is not giving us anything that is particularly meaningful.

Mr. MADDEN. I agree that I think both comparisons are useful. The first comparison measures the relative size of the war and the current GNP; but the second measure which you suggest, it seems to me, takes into account the timing of the shift from peacetime to wartime production, and that timing question is very important, as I tried to bring out in the testimony, by saying that the Korean war was much more sharp and sudden than the Vietnamese war has been.

Senator MILLER. It also takes into account the inflation factor, which can be quite large, and it seems to me that that ought to be taken into account.

Mr. MADDEN. I agree.

Senator MILLER. If we are going to get into a meaningful comparison.

Mr. MADDEN. I would agree with that.

Senator MILLER. Mr. Goldfinger?

Mr. GOLDFINGER. I would agree that both of these comparisons are important, but I wouldn't push aside or ignore the relationship of the Vietnam expenditures to the GNP itself.

I think that the point you are making is an important addition. As Dr. Madden indicated, it is an important comparison when you are looking at the economic impact of the step-up, the escalation in military expenditures, and perhaps we should have addressed ourselves to it. Perhaps we should have addressed ourselves to the same kind of comparsion in terms of a decline in military expenditures, and the impact of such a decline on GNP in a given year, although such exercise would be guessing at this point.

But I think that on an overall basis, Senator Miller, the ratio of some 3 percent or so of GNP being affected by the Vietnam war is an important comparison, in terms of the size of the overall aggregate impact. I am not suggesting that it is more important than that.

Senator MILLER. Just as a layman, it would seem to me that if that 3 percent were translated into 50 percent of the increased GNP, the real increased GNP, then that would be more important.

Mr. GOLDFINGER. Well, it certainly is important when you look at the situation from 1965 to 1966, and you see the rise in real GNP and the rise in military expenditures, and you can see the relationship there. I would agree with you on that.

Mr. MADDEN. If I may add a point, though, if the Vietnamese war is only 3 percent of the GNP, then one can with some confidence say, that in the light of our growth during the period from 1960 to 1966, at a rate of around 5 percent a year, and if we can assume that our policies are as sensible over the next half decade as they were during this period in stimulating growth—such things as the investment tax credit, the tax cut, and so on—that we can expect to see the disruption caused by a decline in Vietnamese spending, when the total is only 3 percent of the GNP, to be fairly minor.

Senator MILLER. Yes, but if we are concerned about how we are doing in a particular year, then we are interested in the increased GNP, the real increase.

Mr. MADDEN. Yes.

Senator MILLER. And if we find out that the war expenditures are taking 50 or 75 percent, or perhaps all of the increased GNP, then we have a pretty good indication of the nature of our economic advances.

Mr. MADDEN. Indeed so. I think you are absolutely right, and it is true on the downside as well. The question of how fast the expenditures taper off is essential in setting fiscal and monetary policy.

Senator MILLER. Do you have a comment?

Mr. GOLDFINGER. I was going to say that some of the things Dr. Madden just indicated are rather troublesome as I look ahead, particularly if and when we get a leveling off or a decline of military expenditures. I am firmly convinced, as I have stated to this committee a number of times in the recent past, that the policies of the past 12 or 13 years have placed undue emphasis on private savings and private business investment, which have generated two unsustainable capital goods booms, one very recently, where business investment as a percentage of GNP went far beyond any sustainable rate. This is one of the longer-run difficulties in the economy.

I am firmly convinced that one of the very important policy issues before us is the creation of a new balance in the economy between business investment and productive capacity on the one hand, and the demand for goods and services on the other hand.

Senator MILLER. Do I detect from your answer to Senator Proxmire's question, Mr. Goldfinger, that you are not particularly concerned about inflation?

Mr. GOLDFINGER. Oh, no; I am concerned about inflation in general, but I do not think that there is an inflationary threat in the leveling off or a decline of military expenditures.

I think that the possible problems related to a leveling-off or a decline of military expenditures are deflationary rather than inflationary; that the possible problems are inadequate demand relative to the labor force, productivity and productive capacity, rather than the reverse.

Senator MILLER. Why would you say that in face of what happened after World War II, as far as inflation was concerned?

Mr. GOLDFINGER. Oh, because there was a huge backlog of pent-up demand after World War II, backed up by wartime savings, which moved quickly into the market, as soon as the war was over, and it moved in fast. The controls and regulations were dropped in 1946, and they were dropped before productive capacity was coming on-stream, so that there was an inflationary outburst for a period of about a year and a half or 2 years, running into the end of 1947 or early 1948.

I do not think those kinds of conditions exist now. We don't have that backlog of pent-up demand. We don't have the backlog of wartime savings, certainly nothing to compare with the World War II situation.

Senator MILLER. Well, if, as you said in your statement, we must be concerned about preventing economic stagnation in the longer run I am sure you would agree that we must therefore be careful about inflation, even though you recognize or even though you say deflationary results may be the major threat. At the same time if we are interested in preventing stagnation, it would seem to me that we must be interested in preventing inflation.

Mr. GOLDFINGER. I would agree with you, sir, that we shouldn't push demand to the point of creating widespread general shortages of manpower, productive capacity and goods, but I do think that the possible problem of any kind of deescalation and subsiding of international tensions would be inadequate demand rather than excessive demand.

Senator MILLER. Whether it is inflation induced by excessive demand or any other factor, you would agree that we should, among other things, do what we can to prevent stagnation arising as a result of inflation, would you not?

Mr. GOLDFINGER. I am not sure that I follow you on the subject of stagnation resulting from inflation.

Senator MILLER. I have always been told that inflation, certainly serious inflation, can result in a decline in business activity and unemployment, and I would consider that, certainly, economic stagnation.

Mr. GOLDFINGER. Well, that is true, and I would agree with you there, but I don't think that this is a realistic look into the future. When you look back at the postwar period, Senator, or at least when I look back, I find just two very brief periods of inflation after the end of World War II, and it lasted for about a year and a half or 2 years. Then, I find about 8 months of an inflationary rise in the price level after the outbreak of the Korean war.

In your statement you recommend going to the general fund of the its tremendous flexibility and tremendous productive capacity, are inflationary shortages.

We showed, only within the past year or year and a half, the great flexibility of this economy in adapting to sharp increases in demand.

Senator MILLER. I certainly hope you are right, but it seems to me that in outlining a program which, among other things, is going to prevent economic stagnation in the longer run, that even if this is not the major threat, we ought to, among other things, make sure that the inflation—the prevention base, is covered.

Mr. GOLDFINGER. I would agree with you there, sir.

Senator MILLER. Now, one last question.

In your statement you recommend going to the general fund of the Treasury as a source for additional social security retirement benefits. Does this mean that you are advocating a departure from the concept of insurance to one of the concept of welfare?

Mr. GOLDFINGER. No, Senator, not at all. Our views on this issue were presented in great detail to the House Ways and Means Committee a few weeks ago. We are supporting pretty much the administration's bill, for a 15- to 20-percent increase in the level of social security benefits, based on a step-up in payroll taxes.

However, we strongly urge a move as rapidly as possible to a 50-percent increase in the level of social security benefits, because in our view, the current level of benefit payments is most inadequate.

So that we see the current bill, which is before the Congress, as a first step in the direction of what we think is needed.

However, to move much beyond the administration's proposal, we are convinced would require contributions from general revenue. This was a proposal way back in the midthirties and this has been considered in detail by the actuaries and the experts in the social security area. I don't think that it destroys the concept of insurance. It would make the insurance concept a three-way insurance concept, rather than a two-way insurance concept.

In other words, instead of simply basing the insurance trust funds on contributions from employees and employers, the trust fund build-up would be based eventually—this is one way of doing it—on a three-way contribution, from employees, employers, and the Federal general revenue.

Senator MILLER. And to that extent, the extent that the third way, since that third way is largely financed according to the ability to pay, you would then depart from the insurance concept, would you not?

Mr. GOLDFINGER. Well, I guess one could argue about that. I wouldn't consider it a departure from the insurance concept. I would say that it would be a change in the insurance concept.

Senator MILLER. To me—maybe I don't have the same concept of insurance that you do, but to me this increase that you advocate, I might say I am sorry I haven't heard the testimony, and I will make it a point to read your testimony——

Mr. GOLDFINGER. I will send you a copy of it.

Senator MILLER. I would appreciate it if you would do that. To me, the insurance concept would be carried through, if this was financed by increases in the employer and employee contributions.

Now, I don't say I favor that. As a matter of fact, I introduced a proposal 2 years ago to provide for automatic increases in social security payments to reflect increases in the cost of living, and to have that increase come out of the general fund of the Treasury, but I point that out to you as an indication that I don't necessarily disagree with you.

But my point is that if we are going to talk about social insurance, then we are not going to be able to talk about social insurance if we have to finance a third of it, at least, by contributions according to

relative ability to pay. I have never heard of any insurance policies based upon, or premiums based upon, relative ability to pay.

I have no further questions or comments.

Chairman PROXMIRE. I just have a very brief question for Mr. Goldfinger, and then I want to ask Professor Leontief a windup question.

Dr. Madden contends, and I think his figures are accurate, that nondefense spending, Mr. Goldfinger, has been increasing—nondefense that is.

Mr. GOLDFINGER. Yes.

Chairman PROXMIRE. Increasing rapidly, and increasing more rapidly than before, and that the projected 1968 budget shows a particularly sharp increase.

Now, you advocate even more substantial programs.

How much more rapidly would we increase our nondefense spending, roughly, if we follow your prescription? As I understand it, the figures given by Dr. Madden were something like 12.3 percent increase in the 1968 budget, something in that order, and you are advocating a sharper increase.

Mr. GOLDFINGER. I haven't worked out the figures in any detail, sir, but I would suggest that they probably should increase by somewhere on the average, over the next decade, of perhaps 4 to 7, or 8 percent a year, on an average, and somewhat faster if our military obligations level off or subside.

Chairman PROXMIRE. Four, to 7 or 8 percent. In other words, you said the present increase projected for this year would be extraordinary by your judgment.

Mr. GOLDFINGER. I don't know what the increase—the projected increase—is for this year. Offhand, I have forgotten those figures, but I doubt the accuracy of Dr. Madden's figures.

Chairman PROXMIRE. Dr. Madden, you gave figures of, I think, 9, 10, and 12 percent in successive years, or something in that order.

Mr. MADDEN. Yes. Well, the expenditures were, in 1963, just to take a year, nondefense spending was 11.4 percent of GNP. This next fiscal year, 1968, the estimate is 12.8 percent.

Chairman PROXMIRE. Yes, you were referring to something else. But there was also a substantial increase in nondefense spending projected for 1968.

Mr. MADDEN. Yes, that is correct.

Chairman PROXMIRE. Especially if you include the proposed social security benefits.

Mr. MADDEN. That is correct.

Mr. GOLDFINGER. Senator, it seems to me that in recent years we have been living through some radical changes in our society, with very rapid urban growth, a technological revolution, changes in race relations, and the pressing demands of the peoples of the less developed countries of the world for a share in the fruits of economic progress. These changes present great needs for increased Government investment.

Chairman PROXMIRE. What you are saying is that the Congress has enacted a very ambitious program of aid for education, which we didn't really have before, it didn't amount to much, we had something

but very little—an antipoverty program, a whole series, a number of other things that do represent a sharp departure from what we have had before.

I was for all these programs, but what I am saying is that I would like to get your judgment as an economist, and a very responsible economist, as to the dimensions of this kind of increase.

Mr. GOLDFINGER. Senator, the last Congress, as you have indicated, made tremendous strides forward in all kinds of social programs, and I might add that many of these programs were needed maybe 5 or 10 years before. But at long last, the Congress, back in 1965 and 1966, did make tremendous strides forward, in laying the base for moving ahead to begin to meet some of these social problems.

However, the problems are very great. The amounts of money allocated to them are relatively small in terms of the need, but we have begun to make some progress and should continue on this road.

Now, sure, there are all kinds of administrative problems. Certainly, there is a lack of trained personnel and experience in many areas, along the lines of meeting these problems. Nevertheless, what I am suggesting is that with the release of funds from a possible leveling-off or decline of military expenditures, we should be able to make much greater progress in moving ahead.

Chairman PROXMIRE. Professor Leontief, having given us your very excellent and helpful testimony on the input-output analysis, and what it means, I would now ask you to put on your other hat as an eminent economist and man with strong value judgments, and tell us what alternative you would choose, and why; and the consequences that this might have not only in terms of building a stronger and better country, but also in terms of these very real and significant problems—what it does to inflation, and what it does to interest rates.

Mr. LEONTIEF. Among these two alternatives?

Chairman PROXMIRE. That is your choice. You have given us some fine alternatives. We want to know how you feel about it.

Mr. LEONTIEF. Yes, Mr. Chairman. My preference would be for alternative No. 2. If we look at the past history of this country from the point of view of the role of public organizations—Government is one of them—we find that the proportion of our total national economic resources allocated to serve the common needs of citizens through public organizations was rising steadily.

A choice of alternative No. 1 would mean a reversal in that trend.

Acceptance of alternative No. 2 would be much more in line with our national aspirations and historical traditions.

To be more specific, as the economy grows, as the human needs and technology expand; that is, the methods of satisfying these new needs change: it happens that these needs and these technologies require for their satisfaction and their implementation collective rather than purely individual action. Whether we like it or not, government, Federal and local, is bound to play a greater and greater role in our economy. Education requires more and more resources. Roads require more and more resources. Preservation of natural resources and provisions for protection from the negative effects of industrialization—such as pollution of air and water—and should I add of minds—require more and more centralized public action.

There is a large payoff from a dollar spent on Great Society programs or on foreign aid—which advances our standing in the world and protects us from potential foreign enemies at least as much as military weapons—more, I believe. This is the reason why I feel it would be preferable, nay, necessary, to choose the second alternative rather than the first.

The benefits which the country could derive, not tomorrow but today, from spending money; that is, from using our economic resources in this way, are greater, much greater, than the problematic benefits that we can possibly derive from investing billions of dollars and thousands of lives in demonstrating our military superiority in Vietnam.

Chairman PROXMIRE. Thank you, Professor Leontief, and thank you, Mr. Madden and Mr. Goldfinger. You have been very, very enlightening and helpful, and we do appreciate it. This is one of the best sessions we have had. We have certainly learned a lot about how we can best adjust to a deescalation and negotiations, and peace in Vietnam.

This afternoon we will reconvene at 2 o'clock in this room to hear three distinguished economists discuss the manpower problems involved. We are looking forward to that.

Thank you.

(Whereupon, at 12:30 p.m., the committee recessed, to reconvene at 2 p.m. the same day.)

AFTERNOON SESSION

(Present: Chairman Proxmire, and Senator Percy; and Representatives Curtis, and Rumsfeld.)

(Also present: John R. Stark, executive director; and Daniel J. Edwards, staff economist.)

Chairman PROXMIRE. The Joint Economic Committee will come to order.

We conclude our hearings on the impact of the Vietnam war on the economy with three most distinguished gentlemen who are experts in the area of manpower, and who have some interesting and provocative ideas about how we can solve this serious military manpower problem.

I might say, gentlemen, that although some of the committee members haven't arrived who will be here, I think we had better go ahead. Incidentally, some members from the minority side were very helpful in suggesting this meeting, suggesting this emphasis in our hearings. I am sure they are going to be here, but they are a little tardy.

Mr. Oi, will you lead off. You are, as I understand it, in the Department of Economics of the University of Washington.

STATEMENT OF WALTER Y. OI, DEPARTMENT OF ECONOMICS, UNIVERSITY OF WASHINGTON

Mr. OI. Yes. I think the basic problem begins with the fact that the Nation presently allocates substantial quantities of its labor and material resources in maintaining a large Defense Establishment.

The Department of Defense has followed a practice of acquiring its material resources on the free market through a system of com-

petitive defense contracts. Only in times of war has the Department of Defense seen fit to requisition strategic materials at below market prices.

Chairman PROXMIRE. Mr. Oi, could I just interrupt for a minute to say that as I understand it, you are going to abbreviate the article you have here.

Mr. OI. Yes, I am.

Chairman PROXMIRE. The entire text will be printed in the record, and in addition, of course, your summary which you will give orally.

(The complete prepared article of Mr. Oi, above referred to, follows:)

THE DUBIOUS NEED FOR A DRAFT

(By Walter Y. Oi, University of Washington)

The Selective Service System through compulsion and coercion has supplied the Armed Services with personnel for over twenty-five years. In times of war when nearly all qualified men must serve, Americans willingly accepted the compulsion of a draft as a practical short-run means of obtaining enough men to insure the defense of the nation. However, as the draft became more selective (due to smaller demands by the Armed Forces), the inequities of involuntary military service became apparent. The Marshall and Clark Commissions were both established in the last ten months to study these inequities and to recommend possible changes in the draft law. The reports of both Commissions conclude that a military draft is *needed*. In previous papers (some of which have been reproduced in the Congressional Record),[1] I have argued that the economic cost of a draft is substantial, and the inequities are largely borne by men in the lower-middle classes of the socioeconomic strata. Moreover, my studies of the military manpower problem lead me to the conclusion that conscription is *unnecessary*. In the light of the postwar population growth, military manpower needs can be fulfilled on a voluntary basis.

The first issue is to identify and estimate the real economic cost of the draft. If a draft is continued into the decade ahead, a minority of youths will be forced into involuntary military service. The hidden tax which is placed on them is conservatively estimated to be three times greater than the Federal income tax burden placed on all citizens. The inequity of this hidden tax could be mitigated by enacting pay legislation to raise the entry-level pay of enlisted men.

In Part IV, attention is directed to the feasibility of meeting our military manpower needs without the compulsion of a draft. Pay, living conditions, and fringe benefits would all have to be enhanced to attract enough recruits to sustain prescribed military manpower objectives. I estimate that the cost of staffing an active duty force of 2.7 million men is around $4 billion a year.

The lower personnel turnover of an all-volunteer force has two salutary effects. One is that fewer men are in a "training" status; consequently, the same effective strength (of men not in training) can be achieved with a smaller overall strength. The other benefit is that fewer initial recruits are demanded to maintain a given strength. Under a draft, with its high personnel turnover (only 7 per cent of draftees reenlist), it is estimated that 27.0 per cent of all males must be demanded by the Armed Forces. However, a voluntary force with greater personnel retention will demand only 19.3 per cent of all youths. In Part V, we briefly examine how adoption of the lottery system of induction is likely to influence the involuntary participation rate of youths in active military service. Finally, Part VI presents some recommendations for a military manpower procurement bill.

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[1] The papers which I have written include (a) "The Costs and Implications of an All-Volunteer Force" (Congressional Record of March 9, 1967) pp. H2442–52; this paper was read before the Draft Conference at the University of Chicago, Dec. 6, 1966, and is to be published by the University of Chicago Press (May 1967); (b) "The Economic Cost of the Draft." Papers and Proceedings of the American Economic Association (forthcoming, May 1967); this paper was presented to the meetings of the American Economic Association on Dec. 27, 1966, San Francisco, California; and (c) "The Hidden Tax of the Draft," a comment on an article by Congressman Thomas B. Curtis; my comment appears in the appendix to the Congressional Record of March 12, 1967, pp. A1236–7.

DEMAND, SUPPLY, AND A SIMPLE MODEL OF THE MARKET FOR MILITARY PERSONNEL

The manpower needs of the Department of Defense (DOD) are described by force strength objectives—the number of men in the active duty forces or the stock demand for labor. A more meaningful concept of demand is, however, provided by the gross flow demand for new accessions A_t to replace losses during the year L_t and to achieve prescribed changes in force strength $(F_t - F_{t-1})$.[2]

$$A_t - L_t + (F_t - F_{t-1}). \tag{1.1}$$

The losses L_t are determined by personnel turnover and the size of the force F_{t-1}. Changes in strength objectives $(F_t - F_{t-1})$ also account for variations in the gross flow demand. The demand A_t is tacitly assumed to be completely inelastic; that is, the price or cost of military service has no effect on the number of men demanded.

Military service can surely be regarded as one of the occupational pursuits available to qualified youths. The motives which prompt individuals to enter particular occupations are varied, but an important factor is the pay of an occupation in relation to the pay in competing jobs.[3] The supply of new recruits would surely be larger, the higher the level of first term military pay M. Other things equal, the relation between the supply of recruits and first term pay M can be described by a supply curve S as in Fig 1. The demand for new accessions in year 0 is indicated by the vertical line at A_0. At the current low level of first term pay M_0 (estimated to be around $2,500 for the first 3.5 years of service), the supply of regular enlistments B falls short of requirements A_0. The gap BA_0 is filled by inducting that number of draftees. A higher demand meaning a rightward shift of A_0 would thus entail a larger gap to be supplied with involuntary inductions.

The supply curve of recruits S depends on four factors: (1) the population base of qualified youths, (2) alternative civilian pay C, (3) the unemployment rate U, and (4) draft pressure. As the population base of qualified youths grows, the entire supply curve is shifted to the right.[4] Such a shift moves the point B to the right thereby reducing the deficit BA_0.

The financial attractiveness of military service vis-à-vis civilian employment is measured by the relative pay of the two, namely M/C. A rise in civilian wages tends, therefore, to shift the supply curve to the left. The availability of jobs as well as the civilian pay C which is received if a job were available, is an equally important factor. The unemployment rate U provides a measure of job availability. According to DOD projections, if civilian unemployment rates were to fall from 5.5 to 4.0 per cent, voluntary enlistments are expected to fall by 16 per cent.

Finally, the coercive threat of a draft affects the supply curve in two ways. Spokesmen for the Selective Service System have testified before Congress that the uncertainty created by a draft liability accounts for substantial numbers of volunteers. College graduates volunteer for officers' commissions because they might be drafted into the Army enlisted ranks. Other youths enlist as regular

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[2] Losses from the active duty strength arise because of failure to reenlist upon termination of obligated tours; discharges for medical/unsuitability reasons; retirement; and death. Voluntary separation at the end of the first term of service account for the largest part of these losses.

[3] In the Hearings before the House Armed Services Committee in June 1966 (hereafter referred to as *House Hearings*), the Department of Defense presented data from a survey of civilian males in the draftable ages. According to the DOD survey (confer *House Hearings*, p. 10047), only 8.6 per cent of the surveyed youths indicated that pay was "the most important factor" in choosing a career. The research staff of DOD seems to place considerable weight on these responses when they conclude that pay hikes would not elicit sufficient flows of new recruits. I most heartily disagree with the DOD staff. Survey questionnaires on monetary matters are highly unreliable because people are embarrassed to admit to acquisitive traits. Most teachers would, in all probability, insist that "higher" motives rather than pay attracted them into the teaching profession. Interestingly enough, when the pay of elementary and secondary teachers was sharply advanced in the early 1950's, the supply of new teachers rose dramatically. As I shall argue later, available evidence suggests that the supply of recruits is responsive to pay changes. DOD is, however, reluctant even to give higher entry-level pay a try.

[4] Over the last fifteen years, the Armed Forces have varied the mental fitness standards requisite to qualify for military service. When supplies of enlistment applicants were large in relation to demands (meaning that draft calls were small), mental standards were raised to ration the available billets to the more highly qualified males. An upgrading of mental standards operates to reduce the supply by denying enlistment to men with low mental-test scores. I shall, in this paper, assume that the Armed Services will maintain constant qualification standards in the years ahead.

enlisted men in order to avoid the uncertainty of possibly being drafted. The extent to which the draft motivated men to volunteer was gauged from a survey administered in the fall of 1964 to men on their first tour of duty. The following percentages responded that they "definitely" or "probably" would *not* have volunteered if there had been no draft obligation:

First-term regular enlisted men	38.0
First-term officers	41.3
Enlistments to Reserves	70.7

If the draft were abolished, it is probable that the Armed Services would lose the draft-motivated enlistments. Put in another way, the supply curve of new recruits to enlisted ranks in Fig. 1 would fall from S to S'—a 38 per cent reduction.

There is a second way in which the pressure of a draft affects the short-run supply of recruits. The time series data shows that high draft calls are associated with larger flows of voluntary enlistments.[5] When the likelihood of induction climbs as it does in times of strength build-ups to meet brush-fire wars or international tensions, many youths elect to discharge their draft obligations by enlisting in a Service or component of their choice. Indeed, these rightward draft-induced shifts in supply are largest for the non-combat Services, the Air Force and Navy.

According to Fig. 1, military manpower requirements A_0 could be supplied with true volunteers (the curve S') if first-term pay were raised to M_2. The necessary pay increase (M_2—M_0) will, of course be smaller, the smaller is the demand for new recruits. The demand for new accessions in an all-volunteer force is analyzed in Part V where I estimate the necessary pay increase.

The Incidence of Involuntary Military Service

The draft and its attendant military service obligation have affected the lives of nearly all Americans. Some men have been involuntarily inducted into the Army while still others reluctantly volunteer for service in enlisted and officer ranks of the active-duty forces as well as for positions in Reserve and Guard units. This is not to deny that there are many men who of their own volition choose military service over civilian employment. However, through coercion and compulsion, the draft law has exacted two or more years of involuntary military service from the draftees and reluctant volunteers. The incidence of involuntary military service has not been uniform, nor is it likely to be so under virtually any draft scheme short of all-out universal military service. The question posed in this section is, "Who will be chosen for involuntary service in the years ahead when only a small fraction of all youths will be demanded by the Armed Forces?"

If the present Selective Service System is extended for four years, I have estimated the probable age and educational distribution of reluctant service participants.[6] To avoid duplication, I shall not describe the methods used to arrive at the distribution shown in Table 1. The current deferment policies, which the Marshall Commission has shown to be so blatantly unfair and arbitrary, favor men with college education. The high school graduates who are bright enough to qualify for military service are the ones who bear the brunt of involuntary military service. They are less informed about the ways in which to beat the draft and reluctantly volunteer before they are drafted.

The Marshall Commission recommended the adoption of a lottery system for selecting draftees. The lottery will produce yet a different composition of involuntary military service. My preliminary analysis of the Marshall lottery reported in Part V indicates that the number of reluctant volunteers will decline. However, the increase in draft calls will more than offset the fall in reluctant

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[5] An analysis of the time series data can be found in an unpublished paper by Anthony Fisher, Institute for Defense Analysis, Arlington, Virginia. Fisher's study shows that voluntary enlistments in mental groups I to III are positively related to draft calls, unemployment rate, and relative military/civilian pay. He obtains a higher elasticity of supply with respect to pay than we do with the cross-sectional data.

[6] See my paper in the Congressional Record of March 9, 1967, pp. H2442–52. The figures appearing in Table 1 assume an active-duty strength of 2.65 million men and an unemployment rate of 5.5 per cent. If the average unemployment rate in 1970–75 should fall to 4.0 per cent, draft calls are projected to climb from 55.3 to 101.7 thousand men per year.

volunteers, so that the total of reluctant service participants (draftees plus reluctant volunteers) will rise quite substantially. The difference in voluntary service participation across educational groups is likely to be smaller.[7] The Marshall

	Percent
Less than high school graduate	36.4
High school graduate	54.2
Some college no degree	28.6
College graduate	18.9
Total	38.5

Commission's lottery entails a higher overall involuntary participation rate because the loss of one regular enlistment (who serves an initial tour of 3.5 years) necessitates drafting at least two more men.

The Hidden Tax of the Draft

In his statement before the House Armed Services Committee, Assistant Secretary of Defense T. D. Morris stated that the additional budgetary cost of an all-volunteer force of 2.7 million men would be between 4 to 17 billion dollars per year. This is just another way of saying that the present low level of military pay (M_o=$2,500 per year in Fig. 1) is too low to attract enough men on a voluntary basis. The implication of Morris' statement is that we as a nation *cannot afford* the additional cost of a voluntary force and must instead rely on conscription to meet our military manpower requirements.

At suffciently high levels of military pay, a majority of youths could be induced to become true volunteers for active military service. There is, in principle, some minimum supply price for each individual M′ at which he would be willing to volunteer for the Armed Services even without the threat of a draft. The supply price M′ would clearly be higher the greater is the individual's aversion for the discipline and related conditions of military service life. Moreover, the higher is the alternative civilian pay C which he could command, the higher will be his minimum supply price M′. The supply curve of Fig. 1 is a convenient way of summarizing the schedule of supply prices.

To fix ideas, attention is directed to projections of future manpower demands and supplies. According to DOD projections, if the present draft is extended into the years ahead, 1970–75, the annual demand for new accessions to enlisted ranks will be 472 thousand men (assuming a force strength of 2.7 million men and unemployment rate of 5.5 percent.) Given the threat of being drafted and the growth in the population base, it is estimated that B=416.7 thousand men will volunteer as regular enlistments. However, CB=153.7 thousand regular enlistments can properly be regarded as draft-motivated enlistments who would not have enlisted in the absence of a draft. In a sense, these men were coerced to enlist at the low level of military pay M_o. If we assume that these reluctant volunteers had the lowest supply prices in the absence of a draft (i.e. they were next in line above the point F in Fig. 1), the cost of involuntary military service for these men is given by the triangle FEG. To amplify, Mr. X might have been willing to volunteer even without a draft liability if first term pay were M′=$3,000. However, with a draft liability, he is coerced to enlist at a pay of $2,500 lest he be drafted. The differential of $500=$3,000—$2,500 is the cost to X of involuntary military service. If these costs are summed for all reluctant volunteers, a lower bound estimate is given by the area FEG in Fig. 1. Using a liberal estimate of the supply elasticity, the area FEG is seen from Table 3 to be $141 million. This cost is surely an implicit or hidden tax that is levied against those reluctant volunteers who were coerced to serve by a draft liability.

The implicit cost of involuntary service by draftees is harder to assess. The Selective Service System does not overtly try to draft men with the lowest supply prices. Hence some individuals with high alternative civilian incomes C or with great aversion for service life pay a substantial implicit cost when they are inducted. A lower bound estimate of this implicit cost, can, however, be obtained by assuming that drafters had the lowest supply prices above the point G in Fig. 1. The annual implicit cost borne by draftees is thus given by the guadrangle GEDH or 175 million dollars.

[7] The percentage of involuntary service participants in relation to the base of qualified males indicates the incidence of involuntary service. Under a continued Selective Service System draft, these percentages will be:

The pay raises legislated by Congress over the last fifteen years have mainly applied to the career force. Entry level pay for the first two years of service was kept low because the draft could guarantee an adequate supply of new accessions. As a result, the military pay profile as a function of years of service exhibits a sharp discontinuity; confer Table 2.[8] Annual military income rises by 39.6 per cent between the second and third years as compared to an average annual percentage increase of only 4.7 per cent between the fifth to eighth years. The inordinately low levels of first term pay magnify the size of the hidden tax that is paid by reluctant service participants.

The hidden cost of involuntary military service can thus be measured by the difference between M′, the supply price at which the individual could be induced to become a true volunteer, and M_0, the current level of first term pay. If these hidden costs or taxes are summed, we obtain the annual implicit costs of $141 million for reluctant volunteers and $175 million for draftees. The reluctant service participants from an age class (a cohort born in a specific year) are obliged by the draft obligation to serve from two to four years. The aggregate implicit costs shown in the third panel of Table 3 are obtained by multiplying the annual costs by the average length of involuntary service.[9] The aggregate hidden tax of $826 million assumes that each reluctant service participant would be compensated in a discriminatory fashion, thereby neglecting the rents that would otherwise have been earned by the true volunteers. Thus, if the hidden cost of involuntary service were $1,000 for a particular reluctant volunteer, this $1,000 would not be paid to true volunteers as it would be if labor were procured in a competitive labor market. Hence, failure to compensate the reluctant volunteers entails a foregone income loss for the true volunteers who enlist at the low first term pay of $2,500 per year.

The magnitude of the hidden tax that is levied against each reluctant volunteer and draftee is shown in the last two panels of Table 3. The financial inequity of the draft is truly shameful when these hidden taxes are compared to the burden of the Federal individual income tax. Table 4 presents the data on income tax receipts by the Internal Revenue Service in relation to four populations. The burden of the Federal income tax was only $646 per year for each adult over 18 years of age, while the hidden tax that was implicitly paid by each draftee was $3,169 per year. The draftee is thus compelled to pay a hidden tax that is 4.9 times as large as the tax burden placed on all citizens.

It should be remembered that my procedure for estimating the hidden tax of involuntary service tends to under-estimate the real cost since it assumed that reluctant service participants had the lowest supply prices in the absence of a draft. Moreover, the costs of Table 3 apply only to men in the enlisted ranks. Fully 41 per cent of newly commissioned officers and 71 per cent of enlistments to reserve units were estimated to be draft-motivated volunteers. These men also were coerced to serve at below market rates of pay because of the draft obligation.

The inequity of draft is accentuated by the absurdly low levels of entry level pay. Even including the imputed value of board and keep, the typical private earns a monthly income of $158 per month—far below the minimum wage legislated by Congress. In 1964, the typical reluctant volunteer could have earned $287 per month in the civilian economy, while the draftee who is older could have earned $317 per month. If a draft must be continued, I strongly recommend that entry level pay be sharply advanced to eliminate the financial cost of involuntary military service. When only a fraction of all youths must be involuntarily put into military service (and bear the risks coincident with such service), why should we insist that they also suffer financial losses during their period of service? That the entry level pay of an American soldier is below that of the Canadian and Australian recruit, is, in my opinion, inexcusable.

The Cost and Feasibility of an All-Volunteer Force

Recent discussions on the draft question have devoted little attention to the basic issue of the *need* for a draft. The Marshall Commission in its 219-page report allotted two pages to establish the *need* for extension of some form of draft

[8] The annual military incomes of Table 2 include the following pay items: (1) base pay, (2) quarters and subsistence allowances if received in money, or their imputed value if provided in kind, and (3) an implicit tax advantage due to the fact that some pay items are regarded as non-taxable income.

[9] Because of attrition during the first term, the average length of service is only 1.9 years for draftees and around 3.5 years for regular enlisted men.

law. The transcript of the House Hearings in June 1966 suggests that the members of the House Armed Services Committee are not terribly interested in studying the cost and feasibility of meeting our military manpower requirements on a voluntary basis. The arguments against an all-volunteer force can be put in capsule form as follows:

1. It would be too costly.
2. It could not achieve the *requisite flexibility* in force strengths to insure the defense of the nation and to meet our international obligations.
3. It would have possibly undesirable social consequences such as a military class or an all-Negro army.
4. It is inconsistent with the American heritage of a citizen militia.

The reader could undoubtedly supply other arguments against the adoption of a voluntary manpower procurement system. The last two criticisms listed above can, I believe, be more forcefully refuted by others—Congressman Thomas Curtiss and Professor Milton Friedman for example. I shall briefly examine the flexibility issue in Part VI below. In this section attention is directed to the cost of an all-volunteer force.

Under any procurement system, the demand for new recruits A_t is determined by the losses during the year L_t and planned changes in force strengths ($F_t - F_{t-1}$). If peacetime force strength objectives are stabilized, $F_t - F_{t-1}$ will be equal to zero. Hence demand A_t will depend only on losses L_t which, in turn, are determined by personnel turnover and the size of the active duty force. The losses due to personnel turnover can be estimated from a retention profile describing the proportion of men remaining in service N years after initial entry. The retention profile for a mixed force of conscripts and volunteers (38 per cent of whom were reluctant volunteers) was estimated from the experience of the late 1950's and is shown in the first two columns of Table 5. A perusal of Table 5 reveals that voluntary separations upon completion of the first term of three to four years account for the largest part of personnel turnover. Over the period FY 1957–64, the average first term reenlistment rate of voluntary enlistments was 25.6 per cent, while that of draftees was only 7.7 per cent. The retention profile of the mixed force implies an annual turnover rate of 18.9 per cent for enlisted men; this turnover rate climbs as the fraction of two-year draftees increases.

If all initial accessions were true volunteers, the Armed Services would enjoy a substantially lower turnover rate. The first term reenlistment rate of Negroes is around 49 per cent as compared to a Regular Army reenlistment rate of only 22 per cent. The reason for this large difference is apparent. Negroes do not suffer from pay discrimination in the Armed Services. In the civilian economy, they earn substantially less than their white counterparts because of job and pay discrimination by civilian employers. Military service is a far more attractive alternative to the Negro who can meet the mental qualification standards. They are more likely to volunteer, and once in service, far more likely to reenlist. If all initial inputs were true volunteers (as indeed most Negro volunteers presently are), we could expect a similar climb in reenlistment rates especially if recruits do not suffer from the wage exploitation that they now do. I estimate that the first term reenlistment rate in an all-volunteer force would be 36.6 per cent as compared to an average of only 25.6 per cent in the preceding eight years. Hence, the retention profile of enlisted men should shift toward greater retention as indicated by the last two columns of Table 5. From the estimated retention profile applicable to a voluntary force, I estimated the required accessions for alternative force strengths. The required accessions for a mixed force were taken from the Marshall Commission report, p. 14.

Required accession to enlisted ranks in voluntary and mixed forces

Active duty force strength	Enlisted strength	Voluntary force	Mixed force [1]
2,500,000	2,175,000	314	452
2,650,000	2,310,000	334	500
3,000,000	2,658,000	384	609
3,300,000	2,937,000	426	732
3,500,000	3,115,000	452	812

[1] Figures for the 2,500,000, 3,000,000, and 3,500,000 strengths were taken from the Marshall Commission report, p. 14. The estimates for the strengths of 2,650,000 and 3,300,000 were interpolated.

The mixed force which includes inputs of draftees and reluctant volunteers has a higher personnel turnover accounting for the larger flows of required accessions. The required accessions to the voluntary force contain an upward bias, since I have not adjusted the data for the savings which obtain from lower personnel turnover. These savings derive from fewer men being in a training status. Men engaged in training others can be reassigned to other duties, and the total force strength can be cut while retaining the same number of men in an effective (non-training) status.

The required accessions of 334 thousand recruits to sustain a voluntary force of 2.65 million men is far smaller than the required accessions of 500 thousand for the mixed force. Hence, the line A_0 in Fig. 1 is to the left of where it is now drawn. To determine the necessary pay level M to attract 334 thousand recruits on a voluntary basis, we had to estimate the supply curve S'. I shall not, in this paper, repeat the methods by which we estimated this supply curve. The supply curve which I used in my calculations is essentially the same as that used in the DOD study.

If the estimated supply curve is juxtaposed to the demand, I estimate that first term pay must be raised by 68 per cent, from $2,500 to $4,200 per year. The entry level pay of recruits in their first year of service would climb from $1,900 to $3,900 per year, or a monthly pay hike of $167 per month. The sharp projected rise in first term pay would, moreover, create a pay inversion wherein men in their fourth and fifth years of service would be earning less than new recruits. To prevent such pay inversions, the pay of the career force was raised by 17 per cent. In addition, the pay profile of officers was adjusted to eliminate the low level of entry pay; this adjustment raised the pay of newly commissioned officers by 21 per cent.

The pay schedules that would be needed to attract enough recruits on a voluntary basis were applied to the anticipated age structure of the voluntary force. For an active duty force strength of 2.65 million men, I estimate that income payments to active duty military personnel would have to rise by $4 billion per year.

The methods by which I arrive at an estimate of the cost of an all-volunteer force can be criticized on several grounds. Some of the more important criticisms which I have received include the following:

(a) Steady state requirements: The demand for new recruits presumes a steady state in which the retention profile of a voluntary force applies. During the transitional period, losses will be larger with a corresponding rise in required accessions. My failure to acknowledge the transitional demands thus imparts a downward bias to my cost estimate. However, if force strengths are to be reduced to 2.65 million (from their FY 1966 level of 3.1 million), the transition poses only a minor adjustment in my cost estimates.

(b) Army requirements: The shortfall between voluntary supplies and demands is projected to be largest for the Army. In estimating the necessary pay increase of 68 percent, I used the deficit in Army requirements. As a consequence, the other three Services are projected to enjoy excess supplies of enlistment applicants. If there is any spillover of enlistment applicants across services, (i.e. if a man who is denied entry into the Navy tries later to enlist in the Army), my procedure overstates the cost of meeting military demands on a voluntary basis.

(c) Method for implementing the pay increase: I have tacitly assumed that the 68 per cent pay increase will redound to recruits in the form of higher base pay. The annual base pay of a private in his first year of service is projected to rise from $1,200 to $3,200. That is, his pay climbs from $100 per month now to $267 per month. Some critics have correctly argued that this is a rather inefficient means of distributing higher pay, especially when the other Services have too many enlistment applicants. A system of variable enlistment bonuses or pay differentials across Services could produce substantial savings, thereby lowering my cost estimate of $4 billion.

(d) Savings from lower personnel turnover: I have completely ignored the savings from lower personnel turnover resulting in fewer men in a training status. If the active duty force can be cut by as little as 5 per cent because more men are in an effective, non-training status, the military pay budget would fall by $0.8 billion. Inclusion of this saving thus lowers the cost of an all-volunteer force from $4.0 to $3.2 billion.

(e) Civilian substitutions: Many jobs which are presently staffed with uniformed personnel could be equally well performed by civilians. If military pay is sharply advanced (as I estimate it will be), it becomes economical to substitute a civilian for a Serviceman thereby lowering total labor costs. In addition to the

direct reductions in labor costs, the Armed Services will realize an indirect savings, namely fewer recruits will be demanded. Hence, the necessary pay increase to attract recruits can be lowered. The potential savings from the substitution of civilians for uniformed men could be substantial.

(f) Validity of the cross-sectional complement supply curve: The supply curve S′ which was used to estimate the necessary pay increase was derived from cross-sectional regional data on voluntary enlistment rates for men in mental groups I to III. It is essentially the same supply equation as that used in the DOD study.[10] The underlying data pertained to the enlistment experience in calendar year 1963, the only year for which such data were available. I agree with the skeptics that it is a slim piece of evidence. There are, however, some other bits of evidence which confirm the implications of the estimated supply equation. An economy which is quite similar to ours, namely Canada, has sustained a voluntary military establishment that is roughly half the size of the U.S. in relation to the population base. The entry level pay of the Canadian recruit is around 20 per cent higher than that of the U.S. soldier. Given the growth in the population base, the force strength of 2.65 million men corresponds to a force that is between 25 and 33 per cent larger than Canada's on a per capita basis. We should be able to staff a force of that size if pay is increased by 68 percent. Until we raise entry level pay, there is no real test of whether our estimated supply curve is correct. I have reasonable confidence in it because of my observations of the Canadian experience and of the enlistment behavior of Negroes. If the pay of military service can be put on a footing comparable to pay in the civilian sector, it should not be difficult to attract one man in five—and that is all we need to staff a force of 2.65 million men.

Only one of the six criticisms listed above implies that my cost estimate is too low. The DOD estimates of $17 billion imply that we would have to pay men over $7,000 per year to attract but one man in five. I grant that the cost estimate may contain some random error, but not an error of +$13 billion.

I have made some rough calculations on the cost of sustaining an active duty force of 3.0 million men—the active force strength as of 30 June 1966. According to the complement supply curve, the necessary pay increase climbs from 68 to 94 per cent. The average annual first term pay (over three years of service) climbs from $4,200 to $4,850. Defense expenditures for active duty military personnel would, of course, be higher for both the voluntary force and the mixed force of conscripts and volunteers. The budgetary cost to sustain a voluntary force of 3.0 million men is estimated to be $6.7 billion higher than that of a mixed force.

In closing this section, is should be repeated that the budgetary cost of military personnel is *not* the *real* economic cost of labor resources allocated to the defense establishment. With a force strength of 3.0 million men, the incidence of involuntary military service climbs dramatically. More men from each age class are coerced or compelled to serve against their wishes. The real cost is high for those who are selected to serve, while those fortunate or slippery enough to avoid military services are subsidized by the inordinately low pay awarded to the draftee.

Impact of the Lottery on Voluntary Enlistments

The lottery (fair and impartial random selection system) has been recommended by the Marshall Commission as the most equitable means of conscripting men. Equity here is construed to mean that every individual bears the same risk of involuntary military service. In evaluating the desirability of the Marshall Commission's lottery, I would like to raise the question of "How will the adoption of a lottery influence the need for a draft?" Equity meaning equal probability of indication can surely be achieved by a lottery, but what will be the level of that probability or risk? This issue was only briefly raised in the Commission's report and never answered.

The larger is the flow of voluntary enlistments, the smaller is the need for draftees. A rough estimate of the impact of a lottery on voluntary enlistments can be obtained from the age distribution of enlistments and the extent of draft-motivated enlistments. Special tabulations prepared by the DOD statistical office provide estimates of the age at entry of voluntary enlistments in FY 1960–64; these are shown in Table 6. Fully 32 per cent of all enlistments were nineteen

[10] A fuller discussion of the methods by which this supply curve was estimated can be found in "The Supply of Military Personnel in the Absence of a Draft," by A. Fechter and S. Altman (to be published in Papers and Proceedings of the American Economic Association, May 1967).

years of age, and 71.5 per cent were nineteen or older at the time of enlistment. There is a slight trend toward older ages in periods of high draft calls, but the trend is slight. The uncertainty of being drafted motivates many of these men to enlist for tours of three to four years. According to the 1964 DOD survey, the percentage of draft-motivated enlistments who were 20 or older at time of entry was 59.5 per cent as compared to only 31.3 per cent for men who were 17 to 19 years of age.

According to the Commission's lottery proposal, men would be examined at age 18.5. Qualified males reaching the age of nineteen would then be arrayed into an order of call by some random selection system. We can imagine that each man is assigned a number, say from 1 to 2 million if there were 2 million men in the pool. The lowest numbers would be called first. The status of student deferments has not been resolved, but for the sake of this paper, I shall assume that they are put into the qualified I–A pool and assigned numbers.

The size of the draft call in any year, D_t, is determined by the gap between requirements A_t and voluntary supplies of enlistments E_t. Personnel turnover will, moreover, influence requirements A_t. The loss of one regular enlistee who serves for three or four years, necessitates the induction of two or more men each serving only two years. By eliminating the uncertainty of being drafted, the Armed Services are likely to lose some of the draft-motivated enlistments who must be replaced by two-year draftees. If men with low numbers are permitted to volunteer, some fraction of them will do so.

Under a continued Selective Service draft, the DOD projections for FY 1970–75 indicate annual flows of 416.7 thousand voluntary enlistments, of whom 71.5 per cent, or 298 thousand men, will be nineteen or older. At most, only 15 to 20 per cent of the qualified pool will be affected by the lottery if peacetime force strengths revert to their pre-Vietnam levels. Hence, we can conservatively estimate to lose 80 per cent of the draft-motivated enlistments who were 19 or older.[11] This loss of 112 thousand enlistments would result in a rise in the size of the draft calls from 55.3 to 279 thousand men per year.

By reducing the uncertainty of being drafted, the lottery is anticipated to result in larger draft calls. The decline in voluntary enlistments could be offset if pay were advanced to make military service competitive with civilian jobs. Such a pay increase would have the added merit of mitigating the financial inequity of involuntary service for those who are drafted by the lottery.

Some Recommendations for a Military Manpower Procurement Bill

The expiration of the present draft law on June 30, 1967, means that Congress must enact legislation within the next six weeks. The Universal Military Training and Service Act of 1951 and its subsequent extensions are almost exclusively concerned with the problem of manpower procurement. There is little if any attempt to integrate the manpower procurement system into an overall military manpower policy of the Department of Defense. The reports of the Marshall and Clark Commission are guilty of this same myopia. I have argued in the preceding section that the adoption of the lottery implies a greater need for the draft because it entails higher personnel turnover. That younger men are more desirable for the combat positions is not being questioned. However, one should also inquire about the supply of men for the highly technical positions which require long training periods. The voluntary force with its greater retention can achieve this latter objective more efficiently.

All proposals which have been put before Congress entail radical changes in military manpower procurement practices. The Vietnam War is not a global conflict requiring the services of nearly all qualified males. The manpower procurement bill which Congress enacts should not, therefore, be dominated by short-run considerations. Instead, it should address itself to the peacetime military manpower needs of the defense establishment. In the light of these considerations, I would like to make some recommendations with the following objectives in mind:

(a) To design a system of military manpower procurement which places maximum reliance on volunteers;

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[11] The DOD survey of first-term enlisted men indicates that the pressure of a draft liability accounted for 46.9 per cent of voluntary enlistments who were 19 or older at the time of entry. In the projection years 1970–75, it is estimated that 298 thousand volunteers will be 19 or older. Multiplying .469 x 298 yields 140 thousand draft-motivated volunteers. Since 80 per cent of these will be bypassed in the lottery, $0.8 \times 140 = 112$ thousand is the estimated loss of voluntary recruits.

(b) To raise first-term pay, thereby alleviating some of the financial inequity of involuntary military service;

(c) To examine the overall military manpower policies of the Department of Defense with the aim of achieving greater efficiency in the utilization of the nation's scarce labor resources.

With these objectives in mind, I propose the following recommendations to be considered for possible inclusion in the military manpower procurement bill which will replace the present draft law.

1. *Two-year Extension of a Draft.*—A draft law which includes as a minimum recommendation 2 and 3 below, should be extended for a period of only two years rather than the four years proposed by the Marshall Commission.

Since all the alternatives proposed to date entail radical changes in the nature and implementation of a draft liability, Congress should exercise some caution and allow for possible revision in the light of experience under any new draft law. During the first year, data on its operation can be assembled. In the second year, these data can be studied to determine its strengths and weaknesses. If the law operates in an efficient and reasonably equitable fashion, Congress could easly extend it in 1969. On the other hand, if serious shortcomings are uncovered, youths in the vulnerable draft ages need not be subjected to four years of an inequitable draft law. The two-year extension is sufficiently long to permit compilation and analysis of relevant data while not causing a prolongation of a badly conceived law.

2. *Lottery of the 21-year-olds.*—Under the current draft law, an individual can remain in a draft-vulnerable status for seven and one-half years. To alleviate costs to the individual arising from the possibility of his being drafted, the Marshall Commission has proposed a lottery of 19-year-olds to shorten the period of draft uncertainty. However, as argued in Part V above, the uncertainty of a draft is not an unmitigated evil. To eliminate nearly all such uncertainty (as the present lottery proposal would do) leads to the loss of substantial numbers of voluntary enlistments. This loss necessarily entails a more than twofold increase in draft calls, thereby increasing the fraction of each age class that must be subjected to involuntary military service. The objective of placing maximum reliance on volunteers suggests an intermediate method of selecting draftees which would entail a smaller loss of reluctant volunteers, thereby lessening the need for a draft. Its essential features can be summarized as follows:

(a) All qualified youths are to be classified at the age of 18 into three draft classifications: (1) I–A and available for service, (2) II–S student deferments, and (3) hardship and conscientious-objector exemptions. Hardship deferments will be granted on an individual basis, using criteria similar to those of eligibility for the poverty program.

(b) Men who obtain a student deferment are placed in a state of suspended animation at a draft age of 19. Upon termination of their student deferments, they are returned to the I–A pool and assigned a draft age of 19. Thereafter, their chronological age is ignored, and their draft status within the I–A pool is entirely determined by their draft age.

(c) The period of maximum draft vulnerability will be limited to two years. Men whose draft age exceeds 21 are placed into a lower order of call for five years and can be called only when the I–A pool is depleted.

(d) The order of call within the I–A pool will begin with the oldest. Recall that the oldest men in the I–A pool have a draft age of 21. If monthly requirements are less than the pool of men reaching their 21st "draft birthday" in a particular month, a random selection of birthdates determines the ranking within that month.

(e) All occupational and dependence deferments (other than hardship) will be discontinued.

This lottery of 21-year-olds has the advantage of retaining the flows of reluctant volunteers in the 19- and 20-year-old groups. Hence, the loss of reluctant volunteers in this system of induction is only 42 thousand men per year as compared to the estimated loss of 112 thousand enlistments under the Marshall Commission proposal. If the pay hike of recommendation 3 is adopted (and I hope that it is), the financial cost of involuntary service by the reluctant volunteers will be far smaller. Indeed, the pay raise will attract larger flows of volunteers, so that there may not even be a loss of voluntary enlistments under this proposal.

3. *Overdue Adjustments in Military Compensation.*—That the absurdly low levels of first-term military pay are an embarrassment, is manifest in the myriad of post-service veteran benefits. The G.I. Bill, subsidized home mortgages, medical care, and life insurance policies for veterans all exemplify attempts to remedy the financial burden of military service. The high time preference of youths suggests that these post-service benefits are highly discounted in any calculation of the financial rewards of active military service. I strongly recommend that the military pay profile be adjusted upward according to the schedule proposed below:

Proposed adjustments in the compensation of enlisted men

Years of service	Present pay [1]	Proposed pay	Percentage increase
1	1,830	3,130	71.0
2	2,143	3,380	57.7
3	2,991	3,630	21.4
4	3,344	3,880	16.0
5	4,130	4,130	----

[1] Figures represent annual military incomes consisting of (1) base pay, (2) quarters and subsistence allowances, and (3) implicit tax advantage. The data pertain to the pay scales as of fiscal year 1963.

If these pay increases are adopted, the budgetary payroll cost for an enlisted strength of 2.31 million men (corresponding to a total strength of 2.65 million) would climb by $1,368 million. Moreover, the pay increase is estimated to increase Army enlistments in the absence of a draft by 48 per cent. Finally, the hidden tax of the draft would be sharply reduced, thereby lessening the financial cost of service for the reluctant service participants. Whatever else is done, this one recommendation deserves serious consideration and, I hope, adoption.

4. *Flexibility and the Role of the Reserves.*—A professional voluntary army has been severely criticized on the ground that it does not have the requisite *flexibility* to meet short-run demands for active-duty personnel. What amount of flexibility is required of a voluntary force has never been specified. Within FY 1954–65, the largest year-to-year increase in the active-duty strength has been under 350 thousand men. In the recent Vietnam build-up when *no* reserves were activated in significant numbers the active-duty force strength climbed by 438 thousand men. (See footnote 11.)

During the Berlin crisis of FY 1962, substantial numbers of reserves were recalled to active duty. The political aftermath of that incident seems to have neutralized the Reserve and National Guard units as a source of manpower for the active-duty forces. Presently around 1.3 million men are on a ready, paid-drill, reserve status. If this reserve strength were reduced to 700 thousand men who were paid competitive wages, they could provide the needed flexibility for an all-volunteer force. The present organization of reserve units defies rational explanation. A careful study of the role and function of reserve units should. I believe, be undertaken as part of an integrated study of military manpower utilization. It should, moreover, be linked to the initial procurement policies. A truly ready reserve can, in my opinion, supply the desired degree of flexibility.

5. *Toward an Integrated Military Manpower Policy.*—The procurement, retention, and utilization of manpower should logically fit into an integrated military manpower policy. To the best of my knowledge, there is no overall conceptual framework within which one can evaluate specific policy proposals. The draft, for example, is largely examined with only passing reference to the utilization and retention of uniformed personnel. The techniques of systems analysis, which have been so widely used in cost-effectiveness studies of weapons systems, have not been carried over into manpower problems. In evaluating alternative manpower policies with these techniques of systems analysis, care must be taken to use the appropriate cost of labor resources. Because of the low levels of first term pay, the DOD budgetary costs are *not* the real economic costs of labor resources allocated to the Armed Services. I believe that further studies should be made of (a) qualification standards for enlisted men, (b) qualification standards for junior officer ranks, (c) adjustments in the retirement program to permit separation bonuses after ten to twelve years of service, (d) variable enlistment

bonuses for men who sign for longer initial tours of duty, and (e) possibilities of substituting civilians for uniformed personnel, especially in the para-medical and clerical fields.

In order to maintain a large defense establishment, the nation must allocate substantial flows of labor and material resources to the Armed Services. The Department of Defense has followed a policy of acquiring its material resources (armaments, ships, planes, etc.) via the free market through a system of defense contracts. Only in wartime and periods of true emergency has the Department seen fit to requisition strategic materials at noncompetitive prices. However, when it comes to recruiting labor resources, the Department of Defense assumes an altogether different posture, refusing to place greater reliance on the competitive labor market and continuing to pay servicemen at below market rates of pay. Conscription and coercion (the counterparts to wartime requisitions) thus persist in peacetime. The *need* for a peacetime draft has *not* been established, nor is it likely to be established. The facts of the matter are that we do not need a peacetime draft. Our military manpower needs can be met on a voluntary basis if we as a nation are prepared to pay competitive wages to new recruits, rationalize the role of the reserves, and initiate efficient manpower utilization practices.

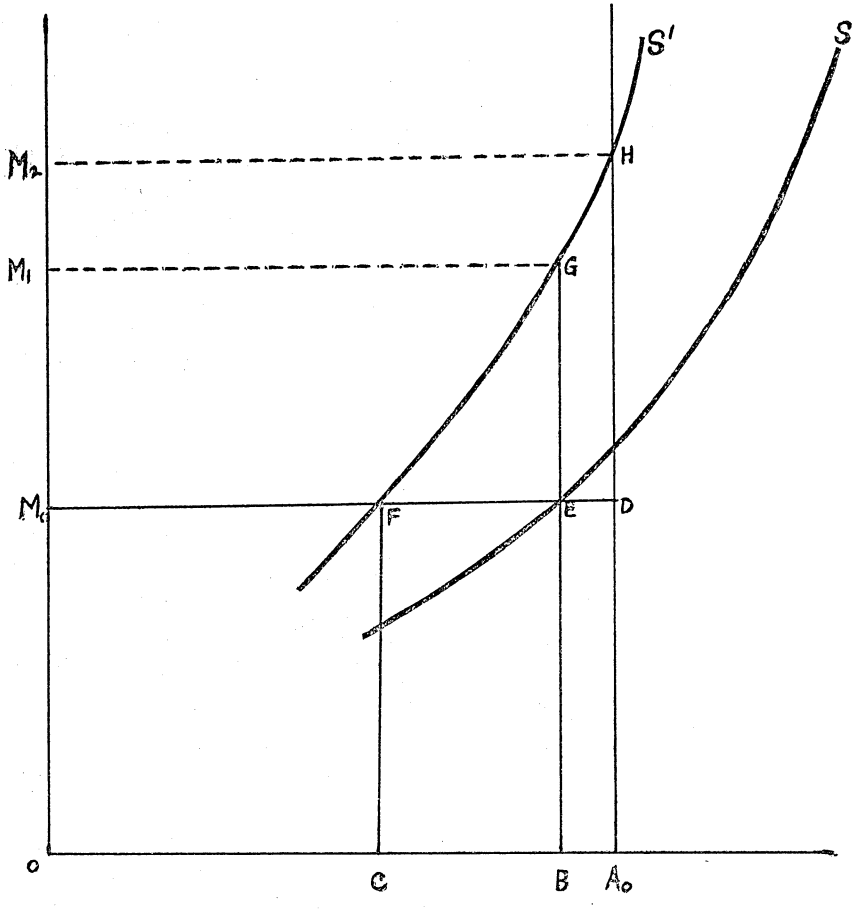

Figure I

TABLE 1.—*Projected accessions to enlisted ranks under a continued draft, fiscal years 1970–75*

[By age at entry, education, and draft motivation]

	Years of school completed					
	Total	0 to 8	9 to 11	12	13 to 15	16 and over
Voluntary enlistments under a continued draft:						
17 to 19 years	328.5	15.0	107.2	188.0	18.3	0
20 years and older	88.2	1.4	12.9	42.8	25.8	5.3
All ages	416.7	16.4	120.1	230.8	44.1	5.3
Reluctant volunteers:						
17 to 19 years	102.4	3.0	23.0	68.3	8.1	0
20 years and older	51.3	0.4	5.3	24.7	17.8	3.1
All ages	153.7	3.4	28.3	93.0	25.9	3.1
Inductions	55.3	4.3	15.2	21.9	10.5	3.4
Reluctant military service participants:						
17 to 19 years	102.4	3.0	23.0	68.3	8.1	0
20 years and older	106.6	4.7	20.5	46.6	28.3	6.5
All ages	209.0	7.7	43.5	114.9	36.4	6.5

TABLE 2.—*Annual military incomes of enlisted men (for pay scales of fiscal year 1963)*

Years of service	Total income, DOD	Army			Base pay as percent of total income
		Total income	Taxable income	Base pay	
1	$1,830	$1,900	$1,058	$1,055	55.5
2	2,143	2,304	1,359	1,382	60.0
3	2,991	3,247	2,199	2,002	61.7
4	3,344	3,711	2,392	2,433	65.6
5	4,130	4,248	2,691	2,575	60.6
6	4,462	4,465	2,792	2,725	61.0
7	4,649	4,596	2,937	2,858	62.2
8	4,741	4,797	3,037	3,003	62.6
9 to 12	5,235	5,377	3,409	3,280	61.0
13 to 16	5,926	6,043	3,918	3,885	64.3
17 to 20	6,387	6,414	4,245	(1)	

[1] Not applicable.

TABLE 3.—*The hidden cost of involuntary military service*

	Low estimate (β=0.402)	Middle estimate (β=0.315)
Annual 1st-term pay (for 3.5 years):		
M_0	$2,500	$2,500
M_1	4,700	5,600
M_1'	5,900	7,450
Annual cost excluding rents (in millions):		
Reluctant volunteers	141	192
Draftees	175	243
Aggregate cost for members of an age class (in millions):		
Reluctant volunteers	493	672
Draftees	333	462
Total	826	1,134
Total per capita cost excluding rents: [1]		
Reluctant volunteers	3,208	4,372
Draftees	6,022	8,354
Total	3,952	5,426
Annual per capita cost: [2]		
Reluctant volunteers	917	1,249
Draftees	3,169	4,397
Total	1,317	1,809

[1] The per capita cost assumes that there were 153,700 reluctant volunteers and 55,300 draftees.
[2] The annual per capita cost is the total per capita cost divided by average length of service· 3.5 years for relucrant volunteers and 1.9 years for draftees.

TABLE 4.—*Federal individual income taxes, 1962–66*

	1962	1963	1964	1965	1966
Aggregates:					
Individual income-tax receipts (in millions)	63,358	67,992	71,593	70,765	81,534
Number of tax returns filed (in thousands)	62,487	63,679	65,154	66,965	69,724
Civilian labor force (in thousands)	71,854	72,975	74,233	75,635	77,041
Population 21 years of age and over (in thousands)	110,876	111,513	113,133	114,224	[1] 115,355
Population 18 years of age and over (in thousands)	119,206	119,824	121,280	123,387	[1] 126,151
Per capita Federal income taxes:					
Per return	1,014	1,068	1,099	1,057	1,169
Per member of labor force	882	932	964	936	1,058
Per adult over 21	571	610	633	620	707
Per adult over 18	532	567	590	574	646

[1] Estimated by extrapolation.

Sources: Treasury Department; Internal Revenue Service, annual report of the Commissioner; and Statistical Abstract of the United States.

TABLE 5.—*Retention profiles of enlisted men in mixed and voluntary forces* [1]

Years of service, N	Mixed force		Voluntary force	
	Survival rate	Cumulative percent	Survival rate	Cumulative percent
0	1.0000	18.9	1.0000	13.9
1	.9149	36.1	.9161	27.7
2	.6494	48.4	.8326	38.2
3	.4710	57.3	.5742	46.2
4	.1631	60.4	.2868	50.2
5	.1563	63.3	.2673	53.9
6	.1456	66.1	.2490	57.4
7	.1407	68.7	.2406	60.8
8	.1365	71.3	.2334	64.0
9	.1281	73.7	.2191	67.0
10	.1125	75.8	.1924	69.7
15	.1002	85.7	.1703	82.1
20	.0818	94.5	.1391	93.1
25	.0283	98.1	.0481	97.7
30	.0150	100.0	.0255	100.0
Total	5.2981		7.1875	

[1] Data are based on the experience of the late 1950's. The survival rate is the proportion of men remaining in service N years after entry. The cumulative percentage of men with N or fewer years of service in a steady state is shown in the 2d and 4th cols.

TABLE 6.—*Distribution of voluntary enlistments by age at enlistment* [1]

[Total DOD, fiscal year 1960–64 in thousands]

Age at enlistment	1960	1961	1962	1963	1964	Average
Number of voluntary enlistments:						
17	19	15	14	13	13	14.8
18	88	85	81	65	68	77.4
19	99	114	115	98	91	103.4
20	50	60	66	61	61	59.6
21	21	28	32	30	39	30.0
22 and over	24	33	54	31	49	38.2
Total	301	335	362	298	321	323.4
Percentage distribution:						
17	6.3	4.5	3.9	4.4	4.0	4.6
18	29.2	25.4	22.4	21.8	21.2	23.9
19	32.9	34.0	31.8	32.9	28.3	32.0
20	16.6	17.9	18.2	20.5	19.0	18.4
21	7.0	8.4	8.8	10.1	12.1	9.3
22 and over	8.0	9.9	14.9	10.4	15.3	11.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

[1] The age at time of enlistment is estimated by year of birth. Men who were born in calendar year 1940 and who enlisted in fiscal year 1960 were classified as being 20 years old. However, because of the 6 months overlap between calendar and fiscal years, they could have been between 18.5 and 20.5 years of age.

Mr. Oi. It has only been in times of war that the Department of Defense has requisitioned material resources. However, when it comes to acquiring the necessary manpower resources, the Department of Defense has assumed an altogether different posture.

Conscription and coercion, which are the counterparts of requisition, have been the principal means of acquiring the necessary flows of labor.

I propose to argue that a draft and its compulsion are unnecessary in the light of the growing population pool, if we return to a strength of between 2.7 to 3 million men and if we raise pay substantially.

The four principal issues to which I have addressed myself in this paper are: No. 1, Who bears the burden of involuntary military service?

No. 2, What is the real cost of military service to those who are coerced to serve?

No. 3, What is the budgetary cost of meeting military manpower needs on a voluntary basis?

No. 4, and lastly, In the light of the current Vietnam situation, what steps can we take to formulate a rational military manpower procurement policy?

First and foremost, the draft imposes a burden on American youths in four ways: Most obviously, some men are drafted.

Second, many youths reluctantly volunteer for enlisted ranks, officer commissions, and Reserve positions, in order to avoid being drafted. DOD surveys indicate that 38 percent of voluntary enlistments, 41 percent of officers, and 71 percent of enlistments to Reserve units can properly be regarded as reluctant participants who would not have volunteered in the absence of a draft.

The incidence of active military service has largely rested with the lower middle classes, men who do not have the wherewithal or the capabilities of continuing on to college, and, in this sense it has been a regressive incidence.

The two other burdens implicit in the draft, which I will mention and leave, are first, the uncertainty caused those youths who, rather than volunteer, would choose to wait and take their chances with the draft; and lastly, that because of the inordinately low pay levels associated with compulsory service, the true volunteers who want a military career are denied the higher pay they could have received under a voluntary system.

What is the real cost of service to those who are coerced or compelled to serve? Many of these costs cannot be put into dollars-and-cents terms. However, there is one undeniable fact.

The youth who is presently drafted earns a basic pay of somewhere in the neighborhood of $96 a month, including the value of his keep, his monthly income is in the neighborhood of $160, far below the minimum wage. If we went to a voluntary force, my estimate suggests that a pay of $325 a month would attract sufficient flows of volunteers.

The difference between that figure and $160 a month—or something over $1,900 a year—is a hidden tax borne by those men who are in our active duty forces, a tax burden some three times greater than the Federal income tax burden per average adult over 18 years of ago, which is less than $650 per year. So we are taxing those who

serve at a rate three times greater than the rate of taxation placed on all citizens, and this is a regressive redistribution of income.

Let me turn to the third question. What is the budgetary cost of meeting the manpower needs on a voluntary basis? If we move to a voluntary force, which will experience greater retention and consequently a lower personnel turnover than the present mixed force of conscripts and volunteers, we shall need fewer men to staff our forces.

DOD states that about 500,000 men per year are needed to sustain a force of 2.7 million men. With a lower personnel turnover of the voluntary force, I estimate that we will need only about 335,000 men per year in a steady state.

Under present circumstances, if by abolishing the draft we lose the draftees and the reluctant volunteers, there will be deficits between the supply of voluntary enlistments and the required accessions to maintain the force strength.

However, I estimate that we can attract enough men by increasing recruitment incentives, offering better housing, and most importantly, better pay. With the draft, we will need 27 percent of the male population to sustain a force of 2.7 million. Without a draft, and with lower personnel turnover, we will need only 19 percent of the population.

The necessary pay increase which I estimate is about 68 percent, which should give the private an entry level pay of about $325 a month. The budgetary cost of this is about $4 billion.

My cost estimates can be criticized on a number of grounds, most of which are included in the full text; but I believe if anything these estimates err toward the high side. I have not taken account of potential savings in turnover. The one cost which I have omitted is the higher retirement benefits accruing to men reaching their 20th year.

However, from the data I have examined, I see no reason why we cannot meet our manpower needs on a voluntary basis.

Fourth, and finally, what steps do we now take? I am first proposing a 2-year extension of the draft, in the light of the Vietnam situation and the high replacement demand that will be confronting us within the next 2 years.

My second recommendation is that first-term pay be advanced sharply. It is inexcusable, I believe, to tax those who serve at a rate three times greater than that impose on other citizens.

Third, I propose that under any system of induction we must be selective, given the growing manpower pools. Even with a draft, only 27 percent must serve in the active duty forces. Consequently, for every one who serves, there will be at least two qualified men who do not serve.

I am proposing, therefore, a lottery at age 21, rather than at age 19 as the Marshall committee stipulates, because according to may way of estimating, the Marshall Commission proposal to discharge the draft liability at age 19 would result in the loss of 112,000 voluntary enlistments.

The loss of each enlistment—who serves 3½ to 4 years on the average—means that two men must be drafted. Consequently, moving the lottery to age 19 would create a greater need for the draft. More men would have to enter the service, run through the inefficient 2-year tour, and then be shoveled back into the civilian economy.

In suggesting a lottery at age 21, I estimate that without the pay increase, we would lose 40,000 enlistments. Given the proposed increase to eliminate the financial inequity of military service, I do not anticipate any loss of voluntary enlistments.

Lastly, I recommend that we thoroughly reexamine the role of the Reserves. During the entire Vietnam buildup, we have not activated the Reserves. If the Reserves are used to bolster the active duty strengths, the voluntary force can achieve the requisite flexibility that it needs. For these reasons I believe that the need for the draft has not been established, and I strongly endorse an intermediate program, advocating that we extend the draft for 2 years only, pending the course of events and with the ultimate objective of abolishing the draft.

Thank you, sir.

Chairman PROXMIRE. Thank you, Professor Oi.

Our next witness is Prof. Thomas Schelling, who is with the Department of Economics and head of the Institute of Politics at Harvard University.

Professor Schelling, we are glad to have you.

STATEMENT OF THOMAS C. SCHELLING, AFFILIATED WITH DEPARTMENT OF ECONOMICS AND KENNEDY INSTITUTE OF POLITICS, HARVARD UNIVERSITY

Mr. SCHELLING. Thank you, Mr. Chairman.

If I read very rapidly, I might get through my statement in 10 minutes. I think I would be wiser to put it in the record and talk more slowly for 10 minutes.

Chairman PROXMIRE. Without objection, your entire text will be printed in the record.

(The complete prepared statement of Dr. Schelling, above-referred to, follows:)

PREPARED STATEMENT OF THOMAS C. SCHELLING

Mr. Chairman, members of the committee, as you know, many teachers in American colleges and universities have been concerned about the draft. Naturally they are, not only because the draft is related to war in general, and to the war in Vietnam in particular, but also because the draft raises some fundamental questions about democratic government and the obligations of citizenship, and moreover because most of the students we teach, and even many of the teachers among us, are qualified by age, health, and education to perform military service.

A few months ago, several of my colleagues and I—holding among us quite a variety of views on this controversial subject—agreed that the subject deserved more than argument, more than expressions of opinion, and composed ourselves into a faculty study group under the auspices of the John F. Kennedy Institute of Politics. Because of the diversity of views among us, we needed some ground rules, and these were simply that we should explore the subject patiently, raising all of the issues we could before trying to settle them, searching for all the agreement we could find but sharpening up the remaining differences in order to know just where we differed, and not jumping hastily to conclusions. We kept to the rules and have not jumped hastily. But your invitation to testify, Mr. Chairman, prompts me to anticipate where I think we shall come out—or at least where I shall come out—and I welcome the opportunity to express a judgment on these issues. I can speak only for myself, but I am sure that my dozen colleagues in the fields of economics, political science, philosophy and law, will

at least let me acknowledge that my views have been formed in the course of many Saturdays of discussion with them.

To keep my original statement brief, I shall formulate merely the conclusions I have reached and let the Committee, in its questions, probe my reasons on the points that most interest it.

(1) Potentially there is bound to be some form of compulsory service. No matter how far we go in making voluntary enlistment attractive, the government cannot deny itself the means, in an emergency, of meeting its military manpower requirements. We are bound to have a system that combines voluntary enlistment with some form of potential compulsory service, even though there may be times, as there were in recent years, when nobody has to be drafted.

(2) That does not dispose of the question, how far should we go in providing incentives towards voluntary enlistment? The National Advisory Commission on Selective Service was concerned with the question, "Who serves when not all serve?" Establishing that some kind of draft would be necessary, the Commission went on to examine what kind of compulsory service system there should be. That is a crucial question; but for this Committee I think the other is equally important. How far can our country afford to go, and how far does it wish to go, in providing the incentives for voluntary enlistment and re-enlistment, in reducing the number who have to be drafted (and who probably serve for short periods), and in separating the financial burden from the obligation to serve?

(3) Too often the question of military compensation is raised in all-or-none form: what would it cost to achieve an all-volunteer force? Too often the questions of fairness and discrimination relate to who shall serve, with little attention to how we might reduce the burdens of service on those who serve. The draft is not merely a way of getting needed manpower; it is a way of getting manpower cheaply. Those of us who do not serve, because we are too old or because we are otherwise not selected, should be careful not to use the draft as a way of holding military wages down while civilian wages, inside government and out, are higher and continue to rise. The financial cost is there, whether we pay it through the budget or not; the more of that financial burden we taxpayers assume, the less we have to impose on those who do our fighting for us.

(4) The questions of how much to compensate in the interest of fairness, and how much to compensate in the interest of greater voluntary enlistments, come closely together of course. Raising pay for either purpose tends to meet the other purpose. Selective increases, like re-enlistment bonuses or pay increases for highly specialized personnel, can of course achieve selective results.

(5) As an economist, I might be expected to estimate for you what it would cost to meet a military-manpower goal of, say, 2.75 million through voluntary enlistments, with or without some additional number to be acquired through the draft. I cannot. All estimates are bound to be indirect, based on interpretations of dubious evidence in a changing world. The study presented by the defense department two years ago was based on data that lend themselves to a variety of interpretations. My interpretation of those same data leads me to a much lower estimate of the extra cost of achieving a large volunteer component in the armed forces; but I can have no great confidence that my interpretation is correct or that the original evidence is adequate to permit an estimate or that, if it was at the time, it will remain pertinent in the aftermath of Vietnamese hostilities.

(6) I am emphasizing mlitary pay as much in the interest of sound business management as in order to reduce our future reliance on the draft. Drafting a man and training him in a specialty may be poor economy if the same specialty could be induced by higher pay to enlist. Inducing the re-enlistment of people who have been expensively trained, through the use of more discriminating pay scales, may be good economy. And draftees should never be permitted to become cheap substitutes for civilian employees where civilians could do nearly the same jobs. The long run advantages of using more economic incentives in a military career service ought to weigh heavily in the balance against habit, tradition, and the costs of transition. The aftermath of the war in Vietnam may provide an exceptional opportunity to incur the transitional costs of moving more in the direction of a career service based on economic incentives.

(7) Turning now to the form of compulsory service. I am strongly attracted to a lottery that is nearly universal within a fairly narrow age group. I can see almost no reason for exempting or deferring anybody at age 19 or 20 on grounds

that his career plans and educational intentions make him too valuable a civilian to go into the army or make it a national interest that his service be postponed a few years. In saying this, I have in mind a level of armed forces of about the present magnitude or as it may be in the aftermath of the Vietnamese war, that is, something closer to 3 million than to 6 million men. If the armed forces were very substantially larger for a prolonged period, I would have to reconsider the need for a national manpower program that paid explicit attention to the educational base of our population and to the need for particular skills and professions. For the present level of manpower, the economic benefits of discriminating among young men will be so modest, and so largely confined to the young men who benefit, as to be outweighed by the greater simplicity and fairness of a lottery. (The only profession for which I might have to make an exception would be the medical profession, and I am not qualified to make any specific proposal on that.)

(8) It should be possible to design a lottery that, without becoming too complicated, permits a young man some freedom of personal choice in the year that he chooses to be placed in the lottery. I would make any such freedom of choice equally available to all young men. And I am attracted to a national lottery without quotas or any sort, by state or otherwise.

(9) I endorse the idea of special training and rehabilitation programs for those who are rejected either as enlistees or as draftees, both for the sake of more nearly universal service and for the social and economic benefits; but I am not qualified to offer any specific advice. At the same time I am wholly unsympathetic to the notion of universal national service, civilian and military, both because compulsion in our society ought to be limited to real national emergencies and because I am dismayed at the thought of the federal government trying to find civilian service for millions of young people, most of whom have a pretty good idea of what to do with themselves in a free society.

(10) A final conclusion, perhaps not as urgent but of long-lasting significance, relates to veterans' benefits. This Committee might well undertake a study that the long-term cummulative effects of G.I. and other benefits, state as well as federal, involving job preference, tax concessions, educational and unemployment benefits, insurance and cash bonuses. It is natural that state governments as well as the federal government should want to reward those who have served in the armed forces, particularly those who have served in combat, perhaps especially those who served out of the country's need rather than the individual's choice, and served with inadequate compensation by ordinary civilian standards. There is some tendency for benefits to be haphazardly related to income and property taxes, to civil service preference, and to things of that sort. The consequences, in both equity and economic efficiency, are not guaranteed to be favorable. What we end up with is a system of partially deferred compensation, often on a contingent basis, that may make less sense altogether than each particular piece of legislation makes by itself. A study conducted by this Committee might provide some valuable long-run guidance for those who wish to legislate deferred compensation in the most effective way.

Thank you, Mr. Chairman.

Mr. SCHELLING. I both agree and disagree with Mr. Oi, and it may be helpful to you, in keeping continuity, if I attach some of my remarks to his.

First, I think it is a mistake to orient this discussion toward whether or not there ought to be some kind of a draft. There is bound to be a potential draft, that is to say, the Government will reserve to itself the right, through compulsion, to get military manpower in an emergency. And if the Government is wise, it will have at least a legislative basis laid for any such drafting in an emergency.

The real question is, how far do you want to rely on a draft, in contrast to other incentives, including the economic incentives?

Here, there are even more reasons than Mr. Oi gave us for taking seriously the advantages in paying for what we get. One that he did not mention, but that I hope Mr. Wool will talk about, is that merely in managing military manpower, it is good for people to

realize how costly young men are, to avoid letting drafted soldiers be cheap substitutes for civilian labor, to avoid letting drafted soldiers look like cheap substitutes for what machines can do, and to avoid letting a draft make all soldiers look equally cheap, so that in their allocation among tasks within the services, the better educated and better trained fail to get allocated to the jobs that they are best suited for.

In terms of cost accounting and business management and in providing incentives to get things done in the most economical way, it is worth while to have soldiers look as expensive as they really are.

Second, I very much appreciate Mr. Oi's emphasis on the question of fairness and equity in compensation. I have heard a lot of discussion among faculty and students about the unfairness of the draft, yet hardly anyone appears concerned about the unfairness of the way these young men are compensated once they have been drafted. On top of what is sometimes called the burden of service and the risks that go with it, we add a financial burden that is borne solely by the young men who get drafted, not by those who are not drafted.

Here I think we must avoid being too appalled by some of the cost estimates. If an argument for paying soldiers more is that they are being unfairly taxed as well as obliged to serve, we should not get in the position of saying we can't afford to eliminate the unfairness if it is expensive. If the tax is unfair, those of us who avoid taxing ourselves in order to get soldiers cheap, through the draft, shouldn't continue enjoying that unfairness merely on account of how much we benefit.

Turning to the draft itself, I am very much attracted to a nearly universal lottery. The two most difficult manpower problems, in converting to a nonselective form of draft, are how to make sure of an adequate supply of officers, how to make sure of an adequate supply of doctors. I am not going to try to solve those problems for you, but aside frm getting officers and getting doctors, I am doubtful whether at age 19 or 20, or even 21 as Mr. Oi preferred, we have any good national or economic grounds for exempting or deferring anybody, in terms of what his educational plans and his career plans are.

At that age young men differ in terms of their talents, their interests, and so forth. But if we are talking about armed forces on the order of 3 million rather than 6 or 12 million, I doubt whether we have to worry about spoiling the economy, unbalancing the civilian manpower reserve, hurting the educational basis of our society, by having a draft that does not discriminate with respect to skills, professions, talents, or career intentions.

On the question of the age at which to put young men through the lottery, I think it possible to make this a little flexible, leaving it to the personal choice of the young man, but making it equally available to all young men. We could have a scheme that says everybody who has not been in the lottery yet goes into it at age 22, but if the 22-year-olds and those who volunteer for the lottery at earlier ages don't fill the year's quota, then the 21-year-olds go into the draft. If they don't fill it, the 20-year-olds. So there could be a sliding scale, giving every young man, within a narrow range of years, some choice about when to run the lottery risk, but making sure that if not enough

volunteered to get into the lottery early, they would be automatically picked up.

We should avoid State quotas under a lottery. A young man's risk of being chosen should not differ according to what State he lives in and how many people in that State are qualified or unqualified for service.

Thank you very much, Mr. Chairman.

Chairman PROXMIRE. Thank you, Mr. Schelling.

Our last witness this afternoon is Director Harold Wool, in charge of Procurement Policy and General Research on Manpower, of the Department of Defense.

STATEMENT OF HAROLD WOOL, DIRECTOR, PROCUREMENT POLICY AND GENERAL RESEARCH (MANPOWER), DEPARTMENT OF DEFENSE

Mr. WOOL. Mr. Chairman, at the outset, I would like to differentiate my posture here from that of my two colleagues. As a civil service employee of the Department of Defense, I do not have quite the same scope in recommending policies as they may have as private citizens. The policy position of the Department of Defense, as well as of the administration, is on record in the recent Presidential message on the draft and in recent legislation recommendations.

As you know, in 1964, at the direction of President Johnson, the Department of Defense initiated a study which had as one of its principal objectives an assessment of the feasibility of meeting military manpower needs in the coming decade on a completely voluntary basis. The results of this study were submitted to the House Armed Services Committee by Secretary Morris last year, together with a large volume of supporting information. Its main conclusions, with respect to the all-voluntary-force alternative, may be summarized as follows:

First, it found that in the absence of a draft, military strengths would decline to a level of about 2 million or slightly higher in contrast to force levels of about 2.7 million required immediately prior to Vietnam, and to a current military strength of about 3.4 million.

Secondly, that the net budgetary cost of *attempting* to maintain military strengths at the pre-Vietnam level of 2.7 million on a completely voluntary basis would be very high, probably ranging from $4 billion to $17 billion, with $8 billion as the most probable estimate under a 4-percent unemployment rate level.

Third, that even these outlays would not assure an adequate supply of better educated manpower for the many professional and technical specialties needed by the Armed Forces, nor would it provide for adequate manning of our Reserve Forces.

Fourth, and perhaps most important, that there would be very limited flexibility under an all-voluntary system to increase military strengths even moderately within a short time period should the need arise.

It may be helpful to discuss briefly some of the basic research findings and assumptions which resulted in these conclusions. In particular, I would like to address myself to the question of the inherent reliability of the estimates and the reasons for expressing them in a rather broad range of possible costs.

The policy officials who initiated the study addressed some fairly simple questions, they thought, to the group of economists assigned to this particular task. First, would it be feasible to maintain military forces of the size required in recent years on a completely voluntary basis, in the coming decade?

Second, if so, how much will it cost.

It would have been tempting to submit simple, unqualified responses to these questions. However, in spite of intensive research efforts, in which my copanelist, Dr. Oi, participated in the first year, this did not prove possible.

To do so, in my judgment, would have entailed a serious risk of grossly oversimplifying the many uncertainties and variable factors inherent in any projections of this type. The risks involved were the greater for the very reason that the problem we were dealing with was no theoretical exercise. It is directly related to our national security and to the ability of our Armed Forces to meet their commitments in future years.

It also clearly affects the lives of millions of young men in our country, and has significent implications for our civilian economy as well.

These uncertainties can be illustrated by examining two of the key steps in our estimating procedure, and there were many, Mr. Chairman.

These were: first, the projections of military recruitment capabilities in the absence of a draft.

Secondly, the estimates of the responsiveness of recruitment to increases in military compensation.

In the first area, I would like to emphasize particularly that our analysis of past recruitment trends in the Army, which always had the capability of accepting enlistments, showed a significant relationship between enlistment rates and the unemployment situation in normal years. We found that, for example, a given percentage change in unemployment rates would result in a closely corresponding percentage change in the Army enlistment rate.

Our initial estimates, which were developed in 1964, were based upon experience in a preceding period of years between 1956 and 1964, when the average unemployment rate was about 5½ percent. As we moved into the 1965 period, our experience, as you well know, was that unemployment declined significantly to a level which is now below 4 percent.

We subsequently, therefore, found it not only desirable but absolutely essential to present our estimates in some range of possible variation in unemployment rates. In addition to the 5½ percent assumption, we showed what recruitment would be under the lower 4 percent level of unemployment. These ranges were not designed to reflect either a desirable or possible variation in unemployment. They simply were designed to illustrate the implications for military recruitment of even limited variations in the level of civilian job opportunities.

The second and more difficult forecasting problem was to estimate the responsiveness of military recruitment under a voluntary system to increases in military pay.

I should note in this connection that increases in pay were only one of many management incentives explored in this study as a means of increasing volunteering, or eliminating reliance upon the draft. However, increases in pay are the conventional methods followed in

the civilian economy, in attempting to attract additional labor supply, and particular interest has been expressed in the feasibility and cost of meeting our requirements voluntarily in this way.

In attempting to derive a supply curve for military recruits, our economists were in many ways moving into unexplored territory. It seemed almost self-evident that an increase in pay would produce some increase in enlistments. The precise relationship was much more difficult to forecast, particularly under conditions of a dynamic labor market.

The available research evidence drawn largely from studies by psychologists and sociologists indicates that many factors, in addition to pay, have influenced many young men in the choice of a job or career. An incomplete list of such factors, as listed by one leading psychologist, include: the person and his biological inheritance, parents, peers, relatives, teachers, social class, educational experience, geography, minority group status and location of opportunity.

Our own surveys of civilian youths have confirmed the fact that pay alone is a less potent factor in career choice than might be expected. We found that occupational values varied greatly with educational level.

Generally, the high school dropout or graduate who did not go on to college placed greatest emphasis on the training and job security aspects of jobs, whereas the college man placed much greater emphasis upon his inherent interest in the type of work and in various job status factors.

Pay, as such, was listed as the most important factor by less than 9 percent of those surveyed—pay, directly, as distinct from many of the indirect relationships which do exist.

With regard to military service, we found wide variations in basic likes or dislike for military service, even among men with similar educational backgrounds.

Nevertheless, it was evident that, at the margin, substantial increases in military compensation would produce some increase in volunteering.

In order to measure this relationship, we compared Army enlistment rates in 1963 in each of the nine census geographic regions with two key economic variables: the median civilian income of young men, aged 16 to 21, and their unemployment rates in the regions.

We found a statistically significant correlation among these variables. As shown in the accompanying chart, the percent of qualified youth who enlisted in the Army—excluding those who reported they were influenced to enlist by the draft—was highest in the southern region where civilian income was lowest and unemployment rates relatively high. It was lowest in the Great Plains States where civilian earnings were slightly above the national average.

When geographic regions with similar unemployment rates were grouped together and compared, in all cases those with the lower civilian income had the higher enlistment rates.

This basic relationship, and a similar study for officers, based on ROTC voluntary enrollments, provided the limited empirical basis for the estimates of response of enlistments to pay used in our study.

I assure you that Dr. Oi and many of his colleagues strained very hard to find other meaningful data. This was the most meaningful relationship in this context which could be found and which did

establish a certain statistical relationship between earnings and the propensity to volunteer.

However, I think it is very important to emphasize the limitations of these estimates, which were the best we could derive.

First, the relationship rests upon the inference that the differences in regional enlistment rates are in fact entirely due to differences in economic factors, such as income and unemployment, rather than to other influences such as regional differences in ethnic or racial background among these regions. We do not know, in other words, whether the young man from the Great Plains region would enlist at the same rate as the southern youth if his earnings and job opportunities were the same.

Secondly, the rates shown apply to one point in time. They refer to conditions as they existed geographically in the year 1963. In a dynamic society, with changing opportunities and values, we do not know whether these relationships would equally apply in future years.

Finally, it is particularly doubtful whether any assumed change in relative military pay, based on a cross-sectional relationship, would produce a short-term increase in enlistments as great as that indicated by this supply relationship. We do know that attitudes towards occupational careers, including military service, are often formed early in adolescence, and that—as noted above—pay has not played a major role in shaping these attitudes.

For these reasons, it appeared essential that the resulting estimates be expressed in terms of a probability range, based upon the standard error of the regression coefficient derived from this analysis.

Although we cannot, therefore, place any great reliance upon any single cost estimate for an all-volunteer force, there are other relevant facts which—in my judgment—do clearly militate against this alternative as a viable method of maintaining our military force, at levels similar to those experienced in the recent past.

First, the proportion of volunteers who were motivated to enter service because of the draft was found in our surveys to be highest among men with the higher levels of educational achievement. Among enlistees with some college education, 58 percent stated that they would not have volunteered in the absence of a draft, as compared to 23 percent of high school dropouts. The greatest loss of volunteers, in the absence of a draft, would therefore occur among men who are best qualified for training in our many technical specialties.

Second, our Reserve enlistment programs would be particularly hard hit since 70 percent of those who were in these programs in 1964 stated that they had enlisted simply in preference to being drafted. In the event of any requirement for rapid augmentation of trained manpower, our Reserves would not be in very great shape to deliver.

Finally, military pay policy—or any similar combination of financial incentives—is a relatively inflexible recruitment method. Even if the Department of Defense were granted wide authority to adjust pay scales to changing market conditions and recruitment needs, it would be very difficult, if not impossible, to move pay rates up and down in response to these market factors. In effect, there would be a built-in tendency for a continued long-term escalation in relative military pay levels and related costs under such a policy.

The limitations of military pay policy as a recruitment method are perhaps best illustrated by recent experience in Australia. Australia

has had a boom economy with the lowest unemployment rate of any of the countries we surveyed in 1964—0.8 percent. It discontinued its draft in 1960. Entry pay for privates was increased to $163.50 per month by 1964, in American dollars, about twice the basic pay for privates at that time in the United States.

In spite of this high entry pay, Australia found it difficult to maintain a regular force of about 52,000, a strength corresponding to 1.9 percent of its 15-to-49 male population. This was less than one-third the relative size of the U.S. military force, and would correspond to a U.S. strength of only 860,000 men, based on our population in the same age groups.

Particular difficulty was experienced in recruitment of officers, technicians, and reservists. When a decision was made to increase Australian military strength by 14,000, or 25 percent, in 1964, it was therefore necessary to reinstitute a draft system, incidentally, with a lottery.

In conclusion, I would like to emphasize that the estimates discussed above relate to the feasibility of maintaining an all-volunteer force in the future at a level of about 2.7 million, corresponding to that period immediately before our military force buildup for Southeast Asia.

I have personally seen no responsible study which even suggests the feasibility of maintaining the current military force of about 3.4 million without reliance upon the draft, and would consider this to be grossly unfeasible.

For these reasons, much of the emphasis in recent studies has been directed to the immediate issues of assuring increased equity in selection for service, and of reducing the hardships and inconvenience of involuntary military service for those who must serve.

Further, the continuing objective of the Department of Defense has been, and will be, to minimize reliance upon involuntary induction through a wide range of career incentives and management efforts as described in recent official statements.

Mr. Chairman, this completes my prepared statement. I will be pleased to answer your questions.

(The table referred to above follows:)

Army voluntary enlistment rates and civilian earnings and employment, males ages 16 to 21, by region, 1963

Regions	Army enlistments without a draft [1]		Median civilian income, males 16 to 21 [2]		Unemployment, males 16 to 21 [2]	
	Rate (percent)	Index	Amount	Index	Rate (percent)	Index
New England	3.36	96.3	$3,567	98.5	11.3	99.1
Middle Atlantic	2.97	85.1	3,748	103.5	14.2	124.6
South Atlantic	4.65	133.2	2,849	78.7	9.4	82.5
South	4.93	141.3	2,441	67.4	13.9	121.9
Western South	4.25	121.8	3,148	86.9	9.2	80.7
Great Lakes	3.10	88.8	4,184	115.5	11.1	97.4
Great Plains	2.05	58.7	3,725	102.9	6.0	52.6
Mountain	3.25	93.1	3,640	100.5	9.8	86.0
Pacific	3.35	96.0	4,257	117.5	16.2	142.1
U.S. average	3.49	100.0	3,621	100.0	11.4	100.0

[1] Army enlistments in mental groups I-III, excluding those motivated by the draft, per 100 civilian out-of-school males, ages 16 to 21, who meet minimum enlistment standards.
[2] Derived from Department of Defense survey of civilian men, 16 to 34 years old, October 1964.

Chairman PROXMIRE. Thank all of you, gentlemen, for a very, very interesting presentation. It is good to have this difference in viewpoint expressed by so many competent people.

These hearings are concerned with the impact, the economic impact, of Vietnam, past, present, and future, and I think you have discussed a very fascinating and interesting aspect and one that I want to get into with questions, as I am sure the others do.

I wonder if you have any views from the standpoint of manpower on two different problems; one, whether escalation of the kind that has been suggested by Senator Stennis before this committee yesterday, escalation involving, say, 60,000 additional troops, 50,000 above that planned on the one hand; or deescalation, with negotiations and substantial demobilization of, say, 500,000 troops over a period of a little more than a year—what kind of economic impact do these two possibilities suggest?

Will we have such a shortage of manpower, in the event of escalation, that we will have problems, or if we have demobilization of the kind I have described, will this involve serious economic problems with which we should be familiar?

I am not at all critical of what you have presented. That is fine, and I am sure we can ask a lot of questions about it, but I am wondering if any of you gentlemen would like to discuss this particular question.

Mr. Schelling?

Mr. SCHELLING. Mr. Chairman, we are still not drafting such a high proportion of draft-eligible and qualified young men that we need to worry about a national manpower shortage in connection with the kind of expansion you are talking about. There is a manpower emergency ahead for any expansion on the scale you mentioned.

Chairman PROXMIRE. Suppose we should escalate to the extent of the kind of expansion you are talking about. There is a manpower would mean 200,000 more people in the Armed Forces, on the rough assumption that you have one support man for every man you have in Vietnam?

Mr. SCHELLING. There is a problem of supplying them in the short run, if they have to be inducted in an orderly way and put through training, and made available in Vietnam, but in terms of the number of draft-eligible young men who presently are deferred for a variety of reasons, 200,000 I imagine would not cause a severe depression, even on the college campus.

With respect to deescalation——

Chairman PROXMIRE. I am sure it wouldn't cause a severe depression on the college campuses, if we continue our deferment policy.

Mr. SCHELLING. I say, reducing our deferment in order to pick up people who are presently deferred as students would not even take a great fraction of the presently deferred students. There is really no shortage there. The only question is whether there are economic losses through diverting from their education that number of young men for some period of years. I think the economic losses are slight.

Chairman PROXMIRE. How about the deescalation problem?

Mr. SCHELLING. The deescalation problem? It looks to me as though this may be a splendid opportunity, first, to take advantage of what

would otherwise be a rapidly declining defense budget, to make up the deficiency between present soldiers' pay and something like a national minimum wage.

Secondly, if unemployment does rise, Mr. Wool's figures suggest that enlistments are somewhat sensitive to unemployment.

Third, while I can't be sure, I rather imagine that the war in Vietnam reduces the incentive to enlist rather than increases the incentive to enlist, so that there may well be an opportunity to come close to getting away from reliance on a draft.

Chairman PROXMIRE. Let me get back to the emphasis of my question, which is, What economic impact, if any, do you anticipate by this demobilization?

One of the fascinating figures that I saw—and I haven't seen it confirmed—was reported in the Wall Street Journal as coming from the Veterans' Administration, that whereas 29 percent of those of us who were in World War II took advantage of the GI bill of rights to go to college, after the Korean war, 50 percent did, and in this war, the Vietnam veterans are going back at the rate of 84 percent.

I don't know if this is true, but it would suggest that at least a much higher proportion of those who leave the Armed Forces in Vietnam are going to college and, therefore, we don't have the economic problem of unemployment in the sense that we might have, but we do have a serious economic problem of educational adjustment to higher enrollment in our educational institutions.

Mr. SCHELLING. Yes, but this is the same problem we knew we would have. It has only been partly deferred for a couple of years. Some of the World War II baby boom hasn't yet got to us. This is a problem over the next decade, and not seriously augmented by the number of young men who will come out of the Armed Forces.

Chairman PROXMIRE. Did either one of you other two gentlemen want to comment on this?

Mr. WOOL. I would like to, if I may.

Chairman PROXMIRE. Yes, Mr. Wool.

Mr. WOOL. I was with the Department of Labor shortly after the end of World War II when, as you will recall, there was a tremendous concern about the problems of the postwar readjustment, and we followed the trends very closely. As you well know, in spite of the massive demobilization under those conditions, it did not occur.

Now, you have already mentioned, Senator, one of the reasons that is, that a considerable percentage of the returning veterans do not in fact immediately reenter the labor force; in fact, more veterans were collecting readjustment allowances than showed up in our census surveys as actively looking for work in this transitional period; but the point here is that with the overall economic situation, with the huge pentup demand for civilian production, then——

Chairman PROXMIRE. We don't have pentup demands now, do we?

Mr. WOOL. We do not, but at the same time, the demobilization was far greater than anything we are talking about now. It would seem to me that, given the much lower level of volume of separations in a de-escalation than anything we had in the past, that the overall economic situation would be far more important; in other words, other demands generated in the economy in terms of the absorption of, let's say, several hundred thousand more men separating from service——

Chairman PROXMIRE. We have had testimony from other economists that there is a serious shortage in skills in many areas of our country right now, today.

Would you anticipate that a substantial escalation might aggravate that shortage?

Mr. WOOL. Well, I think what is particularly relevant is the fact that the draft age recently has been a median age of just about 20. This means that most of the boys who are not going to college have been coming into service in their 19th year of age. Those above their 20th birthday who have been drafted consist largely, I believe, of men who enter the draft-liable status after having been deferred for college—not necessarily all college graduates.

This means, too, that the drain upon the civilian economy has been least, because these are youngsters who, if they were employed before entering service, did not develop any appreciable degree of skill.

Chairman PROXMIRE. Maybe they were apprentices for a few months, and these are the kinds of people we need.

Mr. WOOL. They could have been in some cases apprentices, but if they were in critical occupations they would have been deferred under the draft regulations. Now, in fact, the recommendations made by the Department of Defense and by the administration have been for stabilizing the draft age at a younger age, such as 19, for those who don't get college deferments, and that, of course, is still an open question.

And we believe that, among other things, the economic impacts of inducting men will be minimized by having them enter service at a point shortly after the time that they complete their schooling or at age 19, as distinct from alternative procedures, such as the one in effect in the past 10 years, of taking the oldest man first and having a median age as high, nearly, as age 24.

We think that given these facts as to the relative young age of the potential draftee, and his relatively limited skill, we do not believe that the drain in terms of skilled manpower, as against unskilled or semiskilled, was particularly noticeable in the past year.

Chairman PROXMIRE. I would like to ask Mr. Oi this question: Mr. Oi, you have given a fascinating presentation, and I think a very persuasive presentation, as to the prospects of at least reducing the impact of the draft, hopefully, sometime.

Do you see that the draft has any value in providing a much larger pool of trained, experienced manpower than we would have if you reduced the turnover as you describe it, and having people serve a longer time, but far fewer who would have this experience?

Mr. OI. I see no danger in that whatsoever, because our policy in the past, which will probably persist into the future, is that once having served, a man will not be recalled to active duty. Except for the officer corps, this has pretty well been held to.

Chairman PROXMIRE. This certainly wasn't the understanding after World War II. As I recall, you were in the Reserves for 6 or 8 years, whether you liked it or not.

Mr. OI. Yes.

Chairman PROXMIRE. If you were an officer, you weren't. You had the choice of getting out.

Mr. Oi. Yes; but of those officers who went into the Reserves some were recalled in 1947 when there was a draft call, but very few of the enlisted men were.

Furthermore, for the kinds of skills needed during a rapid mobilization men can be trained quite quickly, and the potential saving of time through having this "trained personnel" is in the order of magnitude of 4 to 8 weeks, no more than that. Consequently, I see no danger in that.

May I make one comment on deescalation before you continue?

Chairman Proxmire. Yes, indeed.

Mr. Oi. One thing which has been quite noticeable in the President's Economic Report—while the unemployment rate has dropped drastically in 1966, to 3.3 percent, the unemployment rate of youths 14 to 19 has fallen only to 11 percent. There is still a large pool of unemployed youths in this age range.

This is the age in which they are seeking jobs, and finding themselves. The shortage of skills which results from added draft calls does not benefit these people, and I am convinced that we can attract large numbers of them, if we would only make military service a respectable career.

May I make just one last point. Mr. Wool made reference to the Australian situation. Examine Canada, with unemployment experience quite similar to ours. They have managed to sustain a force which, if converted to U.S. standards, would be in the neighborhood of 1.5 million men, and at the same time at a pay scale somewhat higher than ours but below that of Australia.

So, if one plays this game, my feeling is that the Canadian economy is far more like ours than the Australian.

Chairman Proxmire. My time is up.

Congressman Curtis?

Representative Curtis. I have to leave soon and then I am going to come back, because I have a rollcall which Congressman Rumsfeld has alreday gone to answer.

I wanted to take this opportunity to agree with what the chairman has said about the value of this panel discussion, and make a personal comment that having followed Dr. Oi's work over a period of some time, it is a pleasure for me to see him and meet him personally, and that applies of course to the other two gentlemen.

Then, of course, the comment that I have some preconceived notions on this subject myself, and then say that I am so pleased that a dialog is beginning in this area, and am particularly pleased to know that the Kennedy research group—what is the official title?

Mr. Schelling. Kennedy Institute of Politics.

Representative Curtis. That the Kennedy Institute of Politics is going into this area, in this kind of depth. My concern has come, really, from the studies of manpower utilization in the civilian sector.

My questioning is going to be somewhat along those lines.

I have seen some studies in the Department of Labor which suggest that today there is upward of 80 percent comparability of skills needed by the military, with the skills that exist in the civilian society.

To put this in context, during the Civil War, it was below 50 percent. In World War I it was up around 60 percent. As technological

advancement continues, both in the civilian society and in the military, these comparability figures will probably continue upward.

Another way of expressing it, for the man who actually is skilled in the use of military weapons and has to use them, a skill peculiar to the military becomes less and less a portion of the manpower utilization.

I argue that skills peculiar to the military accounts for only about 10 percent today. And when we talk about the 2.7 or the 3.4 manpower in uniform, we ought to relate this to skills that are not military at all, or are not military in the sense that makes it peculiar to the military, but actually are civilian-type skills.

We have had a buildup, I understand, of 750,000 additional men in uniform. Am I corect in that figure, Mr. Wool?

Mr. WOOL. Approximately.

Representative CURTIS. I am curious to know what the same buildup is in civil service in the Military Establishment. Do you know what that would be?

Mr. WOOL. Not offhand.

Representative CURTIS. You see, that is what we need to know. Incidentally, I have asked administrative witnesses this and they don't know either—demonstrating the key thing, they aren't even looking.

I asked how many people are in the munitions industry, using the definition of "munitions industry" to mean, for example, it could be the textile industry that is supplying needs for the military. So I mean those industries that are tied in. I suspect the increase is around 1.5 million. I don't know that. But as I asked for these figures of the Secretary of Labor, I get nowhere.

The other point that I have tried to get to is this. We have a manpower utilization commission. I don't know what it is now called. It was the Manpower Board in World War II.

The object of that is to coordinate those skills within the civilian sector and the military. I asked Secretary Wirtz earlier this year what changes this commission might have made in occupational deferments, as a result of the Vietnam buildup, and found out that they hadn't made any changes of any sort since 1963.

I do have to leave, but I will come back. Thank you for letting me interpose briefly, Mr. Chairman.

Chairman PROXMIRE. As I understand it, Mr. Wool, one difficulty is that you were asked to talk on military manpower, and it would be a pretty broad sense to include people in the munitions industry, although I think Congressman Curtis is right in suggesting that we consider the impact of the Vietnam war on manpower, all manpower.

Pursuing a question I was asking Professor Oi, you said you did not think there was as much of a need for a trained pool of veterans, and I think you make a pretty strong case. This next question isn't meant to be loaded in any way, but at the same time, I guess it sort of depends on our value judgment pretty completely.

Isn't there a sociological impact and a political impact from a draft system of no mean proportion in having millions and millions of veterans in our Nation, people who had served in the Armed Forces on the one hand, on the other hand with a volunteer, professional army

of having a much smaller proportion of people who have had military service of one kind or another in the general population?

Wouldn't you agree that this does have an impact on one's views on military policy, foreign policy generally, the attitude towards the country, and so forth, good or bad; but it does have a significant impact. You can see it for one thing in our veterans' organizations, the American Legion view, the VFW view, and so forth. I was asking you, Professor Oi, if you would like to comment on that, because you take the position in favor of a professional force, and of getting away from——

Mr. Oi. There are two contexts in which we ought to discuss this. One is that if we continue the draft, we are necessarily going to be pushing more men through for shorter tours of duty. We are going to have more veterans; that fact is undeniable.

But in spite of this, we are still going to have a majority of the youths reaching the age of 17 and 18 today not serving in the military in the years ahead, providing that the Vietnam situation stabilizes or deescalates.

Now, if Vietnam continues its upward trend of increasing the active duty strength by 300,000 to 400,000 a year, then we are going to get back toward the Korean war situation. Now, whether this is a good or a bad thing, I have difficulty evaluating.

My own feeling is that I would prefer a system wherein people who have been in service do not view it as some period in which they have given years of their lives to their country, but rather should view it more as a defeated Congressman would—that these were enjoyable years that he chose to invest in the service of his country.

Chairman Proxmire. You have raised quite a haunting specter. It will take me a while to adjust to that one. While I am adjusting—and I must adjust because I have more questions—I will yield to you, Senator Percy, and then Congressman Rumsfeld.

Senator Percy. Thank you, Mr. Chairman.

Gentlemen, I have been on a number of college campuses in recent weeks, and talked with college students about the desirability of developing more flexibility and voluntary aspects into the draft. And, of course—meet with universal acceptance on that concept.

I have asked them specifically, whether, if a lottery was held at age 19, how they would react to a choice being given them as to what age they would like to serve, and if they had that choice, when would they like to serve.

I found universal acceptance of the idea of the choice, and a good scattering of those who would want to serve early and get it over with, and then come back; those who would like to get their education first, or part of it, and then come back; those who would want to finish their education and then go.

Could you each comment on this particular aspect of the proposal that I think was in the Commission's report? It was not embodied, I do not believe, in the President's report itself.

Mr. Wool. On the question of choice of service, let me summarize, if I may, the feeling of the majority of the Marshall Commission on this issue.

The majority on that Commission felt that offering some young men at a given age, such as 19, a choice as to when to serve, particularly when we were engaged in active hostilities, and not making that same choice available to other young men, did give them a privileged status which could only be justified if there were a clear-cut national need for continuing college student deferments.

The majority of that Commission did not feel that there was such a clear-cut national or educational need.

The position of the minority and of General Clark's panel might be paraphrased as follows: that at least under normal conditions, if the young man going to college has the same exposure, the same probability of serving when he completes college, as the young man who does not go to college, equity is achieved.

It has some advantages in terms of continuity of education, perhaps debatable, but at least the individual would be making that judgment.

So that this was the feeling of those who felt that undergraduate college student deferments should be continued, so long as the pyramiding of deferments, the opportunities which had been available to move easily from undergraduate to graduate to occupational deferments or to dependency deferments is eliminated.

I think there was a unanimous conviction that that should be done away with on the part of all those who studied it, and so the President approved it.

The only issue is this rather knotty one, particularly during a Vietnam conflict period, the moral issue as to choice of time of service in relation to age. I am just summarizing the points of view as I have seen them.

Chairman PROXMIRE. Mr. Schelling.

Mr. SCHELLING. On flexibility, we have to distinguish between flexbility under the kind of lottery system that has been recommended and flexibility under something like the present deferment system.

As I mentioned earlier, I am attracted to a lottery that would provide some flexibility. I think it better if the flexibility has to do with the year in which one submits to the lottery rather than, having been chosen at the earliest age, choosing then the year to serve.

My strongest caution would be, keep the flexibility to within a narrow range of years. It is not healthful to have young men speculating on just when a war is going to start or stop, or when the law may change again, and make their decisions on these grounds.

If a young man decides it in terms of whether his mother needs him at home, whether he would like to get 2 years of college before taking off for the Army, I would say this is his business.

You would probably discover that people are more able to hope for deescalation than to anticipate emergencies that may arise; and a lot of the flexibility would simply be taken advantage of on what you might call speculative military grounds, rather than personal grounds. If those are going to be the grounds on which they do it, then I would be inclined to take them in at the earliest possible age.

I doubt whether the age range should be wide enough to allow a boy the choice between completely finishing college or going in before college. If you allow a 4-year span, these questions of what is going

to happen in the world and when is the safe time to be in the Army, will loom too heavily for them.

Senator PERCY. Mr. Oi?

Mr. OI. I am in favor of holding to rigid rules on this matter. I have been favoring a lottery with 2-year liability between the ages of 19 to 21, the oldest being drafted first, 21 down. All students who want deferments can have them, but their age is held say, at a draft age of 20. No matter what their chronological age is upon completion of the bona fide educational program that they signed up for, they enter the pool at a draft age of 20 and take their chances in the pool with no opportunity for occupational or dependency deferments, other than hardship.

This is a stand I would propose.

Senator PERCY. The next question I would like to address myself to is the question of the quality of our military forces. Do you think that the volunteer Army would mean a lower quality Army, and do you think that a lottery pool Army would mean a lower quality Army? Mr. Wool?

Mr. WOOL. I believe there would be a strong likelihood that an all-volunteer Army, with the pressures to try to somehow accomplish this in terms of some numerical objectives, would have a lower educational level distribution and a lower mental aptitude level distribution if you measure quality in these ways, as we would, than would an Army which is staffed in part at least on a more representative basis of the population of military age.

The survey data I cited in my statement showed clearly, and for obvious reasons, that the young men who have the greatest opportunity in civilian life, the most training, the most education, are the least likely to volunteer for service as enlisted men.

To some extent the same principle applies to officers. The most acute problem of trying to maintain an army voluntarily would be in the case of our physicians, where at least 70 to 80 percent of those who enter service do so because of the draft, and this is the precise analogy in the officer corps to the problem, we would have at the enlisted level.

Senator PERCY. Mr. Schelling?

Mr. SCHELLING. I do not altogether disagree with Mr. Wool, but part of the answer to your question is that you will get the quality you pay for. We do not worry about whether we can get the quality of motor-pool managers in a civilian agency. If we need good ones, we pay for them.

A lot of the skills that the military services need, if they try to acquire them the way they would try to acquire civilian skills, will prove to be available.

If, in addition to the skills that get induced into the young men after they are in the Army, we can have a system that keeps people for longer periods of time so that we do not put them through a 2-year period in which in the first 6 months they are in training and in the last 3 months they are lameducks, we may get more quality through a greater career service than we get with a draft system.

I suspect that under the lottery, if by quality you mean general education, mental ability, probably yes, because at the present time

deferments tend to be highly correlated with some of the things that at least in the civilian society are called quality.

I would emphasize that through being better able to keep the people you have trained, keeping them around for longer than the 2-year stint, and through being willing to pay for specific kinds of quality, it may be that the military services can do just as well with military manpower as with civilian manpower. The real question is whether we taxpayers are willing to let them pay for it.

Now, there is a sense in which we have to recognize that they will lose quality. I wish they would lose it. There are a lot of splendid yeomen stenographers who are being used to do what lady GS-7's could do, but we do not permit the Navy to hire as good quality stenographers as they can get if they use men under military discipline. There are a lot of high quality jobs in which drafted men and enlistees are being used to do what, in the old days, used to be called women's work.

Senator PERCY. Mr. Oi, do you want to give a short answer to this question?

Mr. OI. All I want to say is I agree with Mr. Schelling, and I believe that Secretary Morris, in his statement before the Kennedy Senate Labor Committee, stated uneqivocally that the Army can take into a specialized training and enlistment program up to 100,000 men with mental test scores between the 15th and 30th percentile, and that these have been shown to fill many of the requirements equally well. I think that for such tasks our qualification standards are too high, and we are not utilizing civilians sufficiently.

Senator PERCY. One last question, please.

Would you favor a pay bonus to men who enlist or to those who are drafted in order to try to encourage more enlistments? Do you think it would be effective?

Mr. OI. Yes, if tied to a longer period of service. I would like to base the size of bonus on the length of commitment. But I would first like to eliminate the financial inequity of the draft. I think to tie a bonus on now would be adding insult to injury.

Senator PERCY. Mr. Wool, I presume you dissent?

Mr. WOOL. Well, no, I would rather not comment on pay policy matters, because an intensive pay study is underway in the Department of Defense.

Senator PERCY. But it has been your feeling that pay is not a major motivating factor in military service; is that right?

Mr. WOOL. I would say that is always a factor in any pursuit. I think that it is much too easy to exaggerate its influence in terms of getting people to choose a career as different as military service is from most civilian pursuits.

Senator PERCY. Mr. Schelling?

Mr. SCHELLING. I substantially agree wtih Mr. Oi on this.

Senator PERCY. Thank you, sir.

Chairman PROXMIRE. Congressman Rumsfeld?

Representative RUMSFELD. Mr. Chairman, first I want to join you in welcoming all three.

Chairman PROXMIRE. I want to interrupt at this point to say that this very interesting panel this afternoon is very largely a result of

Congressman Rumsfeld's initiative and imagination. He was the one who suggested this to the committee, and I think it has already made a very susbtantial contribution to these hearings and he deserves full credit.

Representative RUMSFELD. I do want to express my thanks to all three of you for coming and for the very interesting testimony that has been given.

I would be interested in knowing what you feel the impact of the existing selective service law is having with respect to the colleges and universities. It has been alleged by some that the draft's presence, and the threat of the draft, has been a determining factor in a great many young men's decision to attend college, and that, as a result, the academic community is being burdened to some extent by the number of individuals who, faced with options of either the draft or college, have opted for college, who might have, absent the alternative of the draft, worked for a period or done something different and gone to college later.

Do you, from your experience in universities, feel that this is a problem at all? Can you substantiate it or rebut this allegation?

Mr. SCHELLING. My experience is with Harvard University, which probably tends to have a student body that, when it comes, expects to stay the full course, and is financed for the full course, so the impact may be less at Harvard.

My main impression is that it depends very much where the young man's draft board is. Draft boards differ in the way they will deal with a temporary dropout, a change of college, working during the day and taking a half schedule at night. Even at Harvard, since draft boards depend on where you are from, rather than where your school is located, one finds variation in the need for a student to pay attention to this.

My second observation is that graduate schools do appear to be affected. Last September, in many departments at Harvard, there was an unprecedented acceptance rate from those to whom we offered admission to graduate school. And while it is hard to draw general conclusions from one instance, there is a strong suspicion that some increment here was due to a belief that this is not the year to leave college.

My third observation is that for most students it does not make much difference. It is only the student who is facing one of these decisions. Do I really want to go to graduate school? Do I really want to drop out for a year and work? Do I really want to reduce my schedule to half time? These are the students whose decisions seem to be affected by the nature of the draft.

Representative RUMSFELD. Dr. Oi?

Mr. OI. The only comment I would like to make is that the graduate student enrollment in my department climbed in the last 2 years from 80 to about 135 students, in the light of about a 20-percent increase in total enrollment, and I suspect that that difference is largely the draft avoiders.

Representative RUMSFELD. Mr. Wool, do you have any comment?

Mr. WOOL. We probed into that to the extent that we could. The only evidence that we could obtain was from some earlier surveys of the National Opinion Research Center made in a very different con-

text where they did happen to ask college graduates the extent to which their decision to go to graduate school had been influenced by their draft status, and this survey applied to a period in the early 1960's.

My recollection is that at that time their analysis suggested that about 10 percent of the graduate students in that survey indicated that their decision then was influenced by their draft liability. This is the only tangible bit of data. The extent to which it reflects a true picture, I cannot judge.

Representative RUMSFELD. You, Mr. Wool, in your testimony, used the phrase "at these levels," implying that you used a fixed military manpower level and your comments evolved around that fixed level. Is it correct that you used 2.7 million?

Mr. WOOL. It is more precisely something like 2,650,000, which was approximately the strength we had had immediately prior to the current force buildup.

Representative RUMSFELD. I am interested in your statement where you say:

> Further, the continuing objective of the Department of Defense has been and will be to minimize reliance upon involuntary induction through a wide range of career incentives, management efforts, as described in recent official statements.

Does that mean that the Department of Defense favors a voluntary system?

Mr. WOOL. I can say categorically—and this is on the record—that the Department of Defense has had as its objective to obtain as many or all of its personnel through voluntary means.

The various statements made in the context of reviews of the draft legislation have repeated that.

Representative RUMSFELD. I find that statement that the objective of the Department of Defense has been and will be to minimize reliance upon involuntary induction, because of the incredible lack of succcess that you have had. It is beyond me how, when the pay offered is substantially less than anything approximating a competitive position, with respect to the private sector, you can say that your policy has been to minimize the involuntary inductions.

Mr. WOOL. I think from the record we cannot really talk about an incredible lack of success. Our own projections as to what could be maintained under certain assumptions in the 1970's suggest a capability of maintaining 2 million men under uniform on a voluntary basis, which I believe is far greater than any other power in the world would hope to maintain on a voluntary basis.

The record is clear that given the facts, that there was a draft motivation there, three military services—the Air Force, the Navy, and the Marine Corps—with limited exceptions, have met all of their requirements without resort to the draft. The fact is clear, too, that the Army, the fourth service in question, which has used the draft almost continuously, has at many times had minimal draft calls, when they have been successful in enlistments.

Representative RUMSFELD. I think you missed my point. I was not saying that the number of volunteers has been incredibly unsuccessful. I am saying that it is incredible that you can say that the policy

has been to minimize reliance upon involuntary induction, when you are paying the unrealistically low wage scales that are being paid. So, in addition, not only are you requiring people to serve through the compulsory system, you are in addition taxing them as has been testified on, and requiring them to serve for less than they could be earning in the private sector.

What is interesting to me, is that you can say that is your intention and still yet have a pay policy that is premised so much lower than the competitive situation.

Do you follow me?

Mr. WOOL. All I can say in that regard is that the levels of military pay are not uniquely established by the Department of Defense. They are established by the Congress in the last resort, and I think this in fact has been the pay policy of the Government over a period of years.

Representative RUMSFELD. Has the Department of Defense made recommendations to the Congress to the effect that the pay curve should be straightened out so that we would pay people during their early year periods of service a wage that would roughly approximate a competitive position with respect to the private sector?

Mr. WOOL. No, I do not think so, but, on the other hand, Congress has always had the discretion of making its own decisions in that respect.

Representative RUMSFELD. Let me assure you I am hopeful the Congress will exercise that discretion. I am also hopeful that the Department of Defense will show a little initiative in the area.

My time is up. I have dozens of questions, but I will yield.

Chairman PROXMIRE. Congressman Curtis?

Representative CURTIS. Thank you.

Let me see if I can continue on this theme of manpower utilization. Possibly, Mr. Wool, you have some comments to make on what work might be in being or has been done in this area of correlating military skills with the skills that exist in the private sector?

Mr. WOOL. I am pleased that you did quote from an article appearing in the Monthly Labor Review, which I wrote, referring to this 80-percent relationship. I should clarify this, and the article did.

Although there is a broad relationship among the type of skills performed for perhaps 80 percent of our personnel, and types of skills in the civilian economy, that the distribution of these skills is very different indeed in the military service. We require a far higher ratio of our personnel to be mechanics—aircraft mechanics, for example—to be electronics maintenance personnel and other types of skills of a specialized type, than are found proportionately in the civilian labor force.

Moreover, the specific content of these skills, the equipment they work with, the operating procedures, are in many cases significantly different, although some, of course, are very common.

Representative CURTIS. Let me comment here that the Seabee enlistment system in World War II was along the line of trying to compare the skills that existed in civilian society. If they had need for a bulldozer operator, instead of sending a young kid of 18 years old for 6 months of training and then to bulldozer operating school for 3 months, they got a fellow even if he was fat and 40, and put a uniform

on him, if he had been operating a bulldozer for 20 years. The rating of that skill, a first class petty officer or even chief in some instances, was then offered to him. This was somewhat revolutionary.

I remember Admiral Morrell had a hard time fighting to get it through. Then after World War II this kind of what I thought was a very rational system was abandoned and as near as I can determine there has been very little effort to do this kind of matching skills.

Mr. WOOL. Things may seem revolutionary in the short term, but during the 19th century, for the tradesmen needed in the military service, the conventional procedure was to go on the civilian labor market and to hire these tradesmen.

Representative CURTIS. That is right.

Mr. WOOL. This was particularly true of the Navy which had the merchant marine as a source for its skills. However, there are these fundamental differences, that although there are skills of the type——

Representative CURTIS. I should interpose. I said revolutionary as far as the military in 1940 was concerned, but go ahead.

Mr. WOOL. Right.

Now, during the World War II mobilization, when the draft age range was as high as it was, and when motivation to serve, even apart from the draft, was quite high, there is no question but that the Seabee program was eminently successful.

You may be interested to know that this program was reinstituted by the Navy this past year, and I believe some 5,000 men were recruited at advanced rates of pay.

Now, I do not know their ages, but I would be willing to hazard a guess that a very large percentage of these men were under age 26 and were men who were in fact draft vulnerable, and given the choice between being drafted into the Army or volunteering to serve in their trade——

Representative CURTIS. I am interested in that, but I think you are missing the point I am driving at, or, if anything, you are substantiating the point that the system certainly has worked in the past. What I am really trying to find out is what the Military Establishment might be doing right now in attempting to look into this comparability aspect to utilize this kind of system. Instead of this the miltary is procuring freshly caught young people and setting up their own vocational education programs, when there is evidence to demonstrate that what has been done in the civilian educational system can produce these same kinds of skills at much less cost and then let the military utilize those.

I am trying to find out what studies have been or are in being or might be put into being in the military along these lines.

One way of getting to it, has the military developed a dictionary of occupational titles similar to the one that exists in the civilian sector so that we at least have nomenclature for the skills that the military need? Have they got such a thing?

Mr. WOOL. Yes, sir. Each of the occupational dictionaries of the military services shows the equivalent civilian D.O.—dictionary of occupational title or code—and permits for a direct conversion. In fact right now the Labor Department is exploring some additional work on the converting of their new dictionary in considerable detail to military job titles.

Representative CURTIS. That is just what I was going to ask. We had a dictionary in 1949, and one of the things we wrote into the Manpower Development Training Act of 1962 was to update that dictionary. It finally came out, the updated dictionary, in February, or late January, 1967.

Now, what the military had done before had been related to the 1949 dictionary of occupational titles?

Mr. WOOL. They inevitably used the existing version, the operating tool which was being used at any particular time by the Labor Department people.

Representative CURTIS. Well, sure.

Mr. WOOL. And we have met with the Labor Department people just very recently, in terms of a more elaborate conversion, based upon their current dictionary. This is an ongoing effort.

Representative CURTIS. We have also had some studies made into the other aspect of the vocational training that the military provides by asking people in the civilian labor force "Where did you learn your skill," and one of the items, of course, is in the Military Establishment.

So it comes back that way to some degree. But it also would be a study of the efficiencies of utilizing the civilian educational system instead of setting up duplicate vocational educational programs, again relating to the broad question, What is going on in the Military Establishment in this respect?

Mr. WOOL. I think there are two very pertinent facts. Our studies have shown—and every recruiter in the field knows—that the most important single inducement for a young man to volunteer for service, other than the pressure of the draft itself, is the opportunity to learn a trade or skill which may be useful to him not only in service—and many of them look to service, of course as an outlet for the skill—but in subsequent civilian careers. Our surveys show that.

Now, as a consequence of this, and as part of this situation, the typical enlistee who does volunteer is a young man who does not have a skill, an acquired skill. We do have procedures whereby men who enter service are classified, their occupational background is identified, and those who have a usable skill for which there is a military requirement will be assigned to that.

Now, our experience has been that in fact a very small percentage of the volunteers do come to us at a typical age of 18 or 19 with such a usable skill, and partly it is a consequence of the fact that our vocational training system in civilian life, as you know, is not all it should be. It is being changed, but this has not been the case in the past.

Representative CURTIS. It is a pretty good one. I could say this. I think it would be very interesting to have some comparisons made between the military vocational schools and the civilian, and I would give a much higher grade, a much higher grade, to the civilian, particularly in regard to motivation. This is because in the military you are apt to disregard motivation and send a boy who wants to be a bulldozer operator to a baking school and a boy who wants to be a baker would go to a bulldozer school. We could get into that.

Let me get to another thing.

In the 1920's and in the 1930's we did have a military program in our high schools to do just this. Instead of having the military bring a boy in and put him in uniform if they had a need for a particular skill, they would utilize vocational classes that could be taken in high schools and in schools around the country. This proved to be a very efficient method of not only recruitment but also getting the skill that the military needed at a much lesser cost.

And yet this came in as a subject back in 1950 and 1951 when we were talking about universal military training, as to why this kind of a system was not developed.

At that time the Military Establishment—these are my words—without even studying the problem, just assumed, "Well, we can't do that kind of thing."

Now, has there been any thought given in the Military Establishment toward utilizing or building up the vocational systems in the private sector to get these skills that the military needs?

Mr. Wool. There is one specific project I might refer to. We have supplied the Jobs Corps with the information as to our requirements in various types of skills, which enrollees in the Job Corps might possibly qualify for upon completion of their training. Many of them have in fact entered military service anyway. They are currently studying those vocational courses of a type for which there is a significant military requirement and looking at the curriculum content, the proficiency requirements, and so forth, in considerable detail to see whether for those young men there who look forward toward enlistment, and many do, the training they receive in the Job Corps may help them in a specific assignment, in an occupation they are interested in, once they enter military service.

This is underway, sir.

Representative Curtis. I see my time is up, but I would only make this comment: I am glad to hear about the Job Corps. Every industry or almost every industry in the United States is heavily in the vocational educational school system working right now, procuring the skills they need, so it is disturbing to me that the only thing apparently that the military might be looking at are in effect, the dropout areas.

I am talking about a manpower system for the total society and hopefully that the military would be trying to get the best manpower they could rather than go scraping the bottom of the barrel.

Mr. Wool. This was at the initiative of the Job Corps We are cooperating with the program.

Representative Curtis. That makes it even worse. In other words, it was not even a military initiative that moved there.I guess I am not getting through to you.

Mr. Wool. I think that the facts of life are—and there have been recent studies by eminent educators which have pointed to this, and here I think these studies do not quite jibe with some of your impressions—that the vocational training in the military services is far superior to that available in most civilian institutions. This is obviously arguable.

Representative Curtis. You are darn right it's arguable.

Mr. Wool. But I could cite these authorities.

Representative Curtis. It is arguable; and I will tell you the thing that disturbs me. If this were so, why would the military fight public

hearings instead of conducting these executive commission kind of things behind closed doors where you do not even make your working papers available to the Congress or anyone else?

If you are so sure of your system, then let us see a few of your working papers, and I hope the Kennedy study group will start getting some of these working papers and getting into this area. Even our Armed Services Committees had commissions of their own conducting these same kinds of studies behind closed doors. This today is one of the few dialogs conducted in public.

Yes, I challenge your fine opinion of your own organization, although I compliment you for having that esprit de corps.

Chairman PROXMIRE. Professor Oi, I would like to ask you, How did you arrive at this $325 a month figure?

Mr. OI. I used the same supply curve that the Department of Defense did. On the assumption that the relevant measure of first-term pay is the measure of base pay, the value of quarters and subsistence——

Chairman PROXMIRE. When you say $325 a month, are you talking about pay alone?

Mr. OI. No; $70 of that is subsistence, quarters, allowance, and an implicit tax advantage, so that the cash money that the man gets is $255.

Now, the reason why I disagree with the DOD high estimates is that these impute values to medical care, dental care, et cetera. Their reckoning of first-term-pay percentage increases implies that the first-term pay of a recruit over his first 3 years of service must be from $7,100 per year to as high as $13,000 per year to attract 20 percent of the youth, and I have difficulty swallowing that. It just does not go down.

I estimated the necessary pay increase from the estimated supply curve, and then applied this pay increase across the estimated age distribution of the force to arrive at my cost figure.

Chairman PROXMIRE. As I compute the figures here, even if you simply paid the recruit the minimum wage of $1.60 an hour, and you assumed that the hours—which is quite an assumption judging from the experience I had in the Army, especially as a recruit—that you only work 40 hours a week and 4½ weeks a month, this comes out to $288 a month.

Mr. OI. Right.

Chairman PROXMIRE. If you assume that the average factory wage in this country would be competitive, you come out with a figure of $505. The average weekly wage was $144.25, which was in March of this year.

That would seem to me to be fairer than the minimum wage.

After all, in the city of Milwaukee, for example, we have very low unemployment. This is true in many parts of our country. There is no problem at all for a man to go out and get substantially more than the average factory wage, but the average factory wage would give him far more than you suggest here.

I am just wondering if $325 a month would be competitive in the sense that they could do better financially by taking these jobs.

Mr. Oi. The 19-year-old and the 20-year-old who is having difficulty finding a job is getting below the factory average; also, my figures relate to a 1964 base, so they are a bit low.

The average income—full-time income—of the typical recruit, when weighted by educational attainment, was about $270 per month.

Chairman Proxmire. We are in an area that is very, very hard to pin down, I am sure, because the average 19- to 20-year-old has an easier time getting a job if he has got a high school education or any kind of trade training at all in many parts of our country, I think you would agree, easier than a man of my age, for example. A fellow 50, 45, or even 40 years of age would have difficulty. This is not true of minority groups or it is not true in some parts of our country or even in my State, but in general a man 19 or 20 years old, especially if he is willing to move to a city where he can get the best opportunity, and heaven knows he is going to have to move when he goes into the military service, would not have much difficulty in doing a lot better than $325 a month.

Mr. Oi. But remember this sword cuts both ways. If that is true, the tax we are placing on these kids becomes even more shameful.

Chairman Proxmire. That is right. I am not raising this because I think your budget estimates are necessarily wrong. On a $325 assumption you say that to do this would cost $4 billion more a year.

Mr. Oi. Yes.

Chairman Proxmire. And you do not allow for the reduction in cost because of reduction in turnover?

Mr. Oi. No, I do not.

Chairman Proxmire. You do not allow for that.

Mr. Oi. No, I do not.

Chairman Proxmire. Can you give us any estimate of that?

Mr. Oi. My hunch is that the simple training estimates—this is a rough calculation—is in the neighborhood of $0.8 billion.

Chairman Proxmire. About $800 million?

Mr. Oi. Right.

Chairman Proxmire. What other possible savings have you not included?

Mr. Oi. Substituting GS–3 typists for specialist sixth class Army typists.

Chairman Proxmire. Let us get into that. That has not been discussed. I notice that the Marshall Commission went into that to some extent, and some of the other critics or some of the other constructive proposals did, too. They went not only into that possibility of using more civilian personnel, but also of a much more imaginative and aggressive policy of taking people who were rejected, especially volunteers who were rejected, for military reasons and for mental reasons, and either giving them several months' education on the one hand, or giving them medical attention, which in many cases would be rather brief, in order to qualify them.

How about this aspect of the problem? Do you think this would be promising, too?

Mr. Oi. I think it deserves careful study. I have not had the data made available to me to do this, but my feeling is that if we used the realistic wage—or the real cost—of the labor now being used in

uniform, we would find that a lot of military jobs not needed for rotational purposes are now being staffed by military personnel simply because the relevant price has not been used when making cost-effectiveness studies.

Chairman PROXMIRE. I want to come back to Mr. Wool later on this, but I want to ask you, if you increase the pay of your inductees to $325 a month, how much do you have to increase the pay of everybody else in the armed services in order to provide the differential? You obviously are going to have to do this for the Navy, the Marine Corps, and so forth.

Mr. OI. Right.

Chairman PROXMIRE. You are also going to have to do it, I presume, for your noncoms, for your officers, and so on, right up the line, is that not true? Is that included in your estimate?

Mr. OI. Correct. The $4 billion estimate includes that; and I am estimating that the pay of the career force will rise by about 16 to 17 percent.

Chairman PROXMIRE. You should have a lot of supporters for your position on the basis of that calculation.

Mr. OI. A minority though—only 3.4 million.

Chairman PROXMIRE. I would like to have that many votes.

Do you care to comment or not comment on the effect that this would have on the attitude of our people toward Vietnam? Would it not be more objective? I recognize that it is not necessarily completely pernicious for people to say that the draft does have the effect of hitting people where they live on what the Vietnam situation is doing. At the same time, it also undoubtedly has a very negative effect in the most volatile section of our society in many ways, the college campuses, our young people—that is, because they are forced to go into our Armed Forces, they take and their parents take and their friends take a far more negative attitude toward Vietnam than they would if it were on a voluntary basis, is that not true?

Mr. OI. I really feel that the connection is not that strong. There is a lot of complaining about the Vietnam issue on many campuses, but the threat of being drafted is a small part of the whole.

Chairman PROXMIRE. I am sure, but is there not also involved in this, Professor Oi, the feeling on the part of many conscientious people that, after all, that student deferment they are getting is one that they feel psychologically guilty about or concerned about, and they feel it is unjust to a considerable extent, and at the same time it is the reason that they are not in the Armed Forces, and this is one reason perhaps why many of them vocally and outspokenly rationalize their feeling of guilt perhaps in criticism of our position in Vietnam?

Mr. OI. I really feel not qualified to answer that question.

Chairman PROXMIRE. I do not know that any of us are qualified.

Mr. OI. Let me take refuge in the simple fact that I am speaking as an economist and have no strong convictions on these aspects. Perhaps one of the other two panel members does.

Chairman PROXMIRE. Professor Schelling?

Mr. SCHELLING. I am struck with how variegated student attitudes are on this. On the one hand, there are those who say nobody should

be obliged to fight a war he does not believe in: eliminate the draft. There are also those who say the Government should not be free to have any war it can hire people to fight: keep a draft and make it a universal lottery. I believe there are many whose views about the draft flow, not in a direct way but in an important way, from their feeling about the war in Vietnam. I doubt whether there are many whose feelings about the war in Vietnam are related to the kind of military manpower system that we have.

Chairman PROXMIRE. I would like to get back to your initial testimony, Dr. Schelling. Are you saying that you favor the draft, but also favor adequate pay? That it would be fine if we did not have to have a draft, but if we have to have it, we also ought to have pay that is comparable and competitive?

Mr. SCHELLING. When I say we have to have it——

Chairman PROXMIRE. I mean you ought to have it in terms of equity, in terms of size, affluence of our economy, in terms of any kind of value judgment that you think is justified.

Mr. SCHELLING. I do not think we ought to feel obliged to use it. Nobody can guarantee that we will not need 6 million men in the services sometime in the next decade, and if we need 6 million men, I have a hunch that we are going to have a draft no matter who wins the argument between Mr. Oi and Mr. Wool.

I also think that we ought to lay the legislative base for that kind of draft, so that we do not have to improvise it rapidly.

Therefore, in principle, there potentially is a draft. If it is not on the law books, we will get it in a hurry. There is no constitutional provision against it, and there it is. The Government will get the men it needs.

I also suspect that the market system, even within the range of say up to 4 million men, may frequently just be not quickly adaptable. I doubt whether Congress is going to leave it up to the executive branch to reexamine several times a year just what the market requires, and to raise pay as flexibly as a business firm might.

So we are bound to have a system that is at least somewhat rigid. And there may be months, quarters, even years, when we do not use the draft we have. I anticipate that we shall have a draft on the books, that it may have to be used, and that it probably will be used.

Then I would turn around and say it would be a splendid idea, irrespective of these supply questions, to pay the men the Federal minimum wage. It is not easy to calculate—you have to calculate the tax advantage, how to handle subsistence, and so forth—but there is an opportunity here to make an experiment. That is, if for reasons other than getting more soldiers we think it makes sense to raise military pay, we have an opportunity to do it, and see what results it leads to.

As a byproduct, we will get some new data for Mr. Wool and Mr. Oi. And since this problem is going to be with us for 10 or 15 years, we can watch and see what happens in the next 2 or 3 years. If there should be a significant change in military pay, we may be able to draw some conclusions about how much further to go in the interest of inducing a greater supply to come forward.

Chairman PROXMIRE. Of inducing what?

Mr. SCHELLING. Inducing more enlistees to come forward. If we find that having raised pay for independent reasons we did not get many more enlistees, then we know something.

If we find we get a lot more, then we can raise it a little more on grounds that, in addition to the advantage of paying these people a decent minimum wage, we find we can get away from a lot of the nuisance of the draft and improve efficiency.

Chairman PROXMIRE. My time is up. I am going to have to go for a rollcall. I will ask Congressman Curtis to take the Chair. I hope I will have a chance to come back and ask a few more questions.

Representatives CURTIS (presiding). Mr. Rumsfeld?

Representative RUMSFELD. Mr. Schelling, what you have said early in your prepared statement is essentially a comment on the response you just gave to Senator Proxmire. I want to say that I find myself very much in agreement with your—what seems to me—very reasonable approach to this.

You suggest in your response, however, that there is somewhat of a difference between you and Dr. Oi. I would like to give Dr. Oi an opportunity to comment on exactly what his position is, because your position, as I see it very simply, is that we are going to have to have in this country for the foreseeable future a compulsory system to recruit military manpower. It has to be available; that we should use it as little as possible, and that at that point where we for national security reasons need a certain level and we cannot recruit it through voluntary means, we should then trigger it in, and that it should be the best possible system, and that parenthetically we should also pay the people who serve in the military a wage that does not amount to a tax on them while they serve, but rather should be something that is close to the Federal minimum wage.

Finally, you stated that during this period of time, having raised the salaries to a reasonable level, having resolved to try to maximize volunteers, we could during the next year or two gain experience and fill some of these very serious information gaps, information gaps, I might say, which even Mr. Wool refers to in his statement.

He says we do not know.

Well, if he does not, who does?

I think this is very important.

Dr. Oi, could you comment on whether or not you agree or disagree with that general approach?

Mr. OI. I agree with the approach. I would like to see the day in which we announce that we will place maximum reliance on a voluntary force. I would then like to keep a draft on the books as a backup in case of an all-out emergency in which force strengths would have to be built quickly up to 4 million.

In the meantime, if we are talking about foreseeable force strengths of from 2.7 to 3.1 or 3.3 million, I believe that so long as our military requirements lie within that range, we can achieve the goal on a voluntary basis.

Now, in the interim, whether I am right or whether Mr. Wool's high estimates of the costs are right we can determine by making the appropriate adjustments in the pay scale; and I agree completely with Mr. Schelling on this. For the present, I would like to see the pay

raises enacted, data collected and analyzed, and the draft extended for the 2-year interim.

Representative RUMSFELD. Fine. Now Mr. Wool, following this line of questioning, we have had in your statement indication that you fully agree that we are going to have a compulsory system, and in your statement you specifically say it should be used as little as possible, that we should maximize volunteers.

Do you agree with the first part that both the other gentlemen stated? With respect to the pay, you have commented that that is for the Congress and for the administration to work out and we have set that aside and recognized that to the extent anyone believes that pay should be increased, that the blame must be shared by the Congress and the administration for the fact that it is not being done.

On the third point you again fully agree, as you did on the first, that we need more information, that we should try to fill the information gaps; correct?

Mr. WOOL. Correct, sir.

Representative RUMSFELD. In your statement you make your fourth point which says:

Fourth, and perhaps most important—

These are your summaries of Mr. Morris' testimony—

that there would be very limited flexibility under an all voluntary system to increase military strengths even moderately within a short period, should the need arise.

Now I must say you have said this much better than the President did in his message to the Congress, where he said he would not want to gamble with the Nation's security, but it is the same point.

You and the President are suggesting that having a volunteer system is inflexible, might not meet our national security needs, and to use the President's words, is "gambling with the Nation's security."

I don't believe that is the case, if you have, as Mr. Schelling suggested, as Dr. Oi suggested, as anyone I know who has suggested moving toward a voluntary system has suggested, retained a compulsory conscription mechanism to be available, to be triggered in to the extent it is needed, but not as a crutch and not as a need, solely because we are paying salaries that are considerably lower than necessary. Now do you see any flexibility in the problem or do you stand on this statement in your testimony?

Mr. WOOL. I think that we in part have a semantics problem. The President's message and the statements of the Department of Defense are in the context of legislation requesting extension of the authority to induct men into service. In other words, now if you are talking about——

Representative RUMSFELD. You mean to not pass the act would be gambling.

Mr. WOOL. Certainly.

Representative RUMSFELD. To not provide any mechanism.

Mr. WOOL. The authority for induction, which is the context in which these statements were made.

Representative RUMSFELD. Ah, thank you.

Mr. WOOL. In other words, not to have the authority to draft men when and if you needed it would be gambling with the Nation's se-

curity, because we do know, and I think we have every reason to believe, that just from the sheer arithmetic of the thing, assume we needed a relatively moderate increase in strengths in the Armed Forces of perhaps 10 percent in a given year's time. Assume we were in a situation which would happen, of a depleted Reserve force, because you wouldn't be getting the volunteers into it, and you wouldn't be getting the turnover of active-duty military personnel who had a Reserve obligation in a voluntary situation.

This in fact is what we have in countries like the United Kingdom, Canada, and Australia. Not Australia now, but they had it a few years ago. You would have to rely upon the only method available, the market mechanism for increasing your strengths.

A 10-percent increase in strength, given the turnover situation, means something like a 50-percent increase in recruitment. Using the curves developed by Dr. Oi and his colleagues, to get that kind of increase in a short period of time, given the lags involved in any decisionmaking process, not only in the Congress or the Department of Defense, but in terms of changing people's attitudes toward service, and you can't push a pay button and get people to jump up and change their minds about what they are going to do about their lives, it just doesn't happen that way, I think that that would create that kind of inflexibility.

Now our record shows that when we didn't need draft calls we didn't have them. We didn't have them in 1949 to 1950. There were 2 months in 1960 when there were zero calls. There were other months when there were 3,000 calls, because at that time—and, incidentally, in a period of economic recession—the Army was able to get a relatively large number of volunteers in relation to a 2½-million-overall-strength level.

Now it is quite possible that, perish the thought, if we have a relatively high level of unemployment or, conversely, if we are successful in many of these management initiatives which are being pressed—it is completely possible that there may be periods in the future, that with the authority to induct, we might not need to draft people and we would be delighted.

Representative RUMSFELD. Let me see if I can summarize that in a sentence. Then you agree that the proposal that Dr. Schelling and Dr. Oi are putting forward is flexible and is not gambling with the Nation's security, as long as that compulsory system is available. It is sufficiently flexible to be triggered in, and there is no allegation that their proposals are inflexible. This argument disappears.

Mr. WOOL. I think that, first of all, I am not talking about pay policy.

Representative RUMSFELD. No; I am talking about how you answer my question.

Mr. WOOL. Secondly, as far as the extension of the induction authority and using it as little as is needed, if this is the essence of their recommendations, and of a continuing positive effort to maximize volunteering, if this is the thrust of the argument, I don't think there is any issue.

Representative RUMSFELD. Then the argument about flexibility goes out the window.

Mr. Wool. Because you have the draft authority and you have a draft system, so we have that flexibility and we want to continue it.

Representative Rumsfeld. Right. Now you talked about the problem of semantics, and I guess maybe that is a problem, because you say when we didn't have draft calls, and you used the word "need." The trouble that comes to my mind, did you need them then as badly as you thought, or if by adjusting pay and other things, that need might have been moved farther in the distance.

In other words, at a certain manpower level, you decided, the Department, the administration, you are their spokesman here today and a very able one, but somebody decided that the need was there, and admittedly it was, given that pay policy.

Now don't you agree that revising those pay policies will change the point where need can in fact be demonstrated?

Mr. Wool. I think our own estimates show that a substantial increase in pay should produce some increase in volunteering.

Representative Rumsfeld. Right.

Representative Curtis. And retention. You keep talking about volunteering in your papers but you never say anything about retention or staying with it and making a career of it. This is where your savings and your quality go up. Pardon me, I couldn't restrain.

Representative Rumsfeld. I would like some comment from Mr. Wool or Dr. Schelling or Dr. Oi on the estimates and the study figures that were cited by Mr. Wool with respect to the impact that pay policies can or cannot have.

Isn't it true that your studies were based on all below a level that had any relationship at all with what the Federal minimum wage or what the private sector is paying?

I don't see how you could get a good study, if you are dealing substantially below a competitive level. Do you follow me?

Mr. Wool. I think we should clarify the pay question to this extent. That so often what is cited as pay for the enlisted man is the basic pay or even the total compensation of the private when he first enters service in his first few months of service.

Now this pay is for the private at pay grade E–1. Now the typical time for advancing from that grade to the next one is 3½ months.

Representative Rumsfeld. I am not talking about that. I am talking about your studies.

Mr. Wool. Yes. Now actually, the facts of life are that if the true compensation of military service was so terribly low we would not be getting even the numbers that we estimate would be available as true volunteers. We say that about 60 percent of the volunteers among enlistees whom we were getting in during the previous few years came in without draft motivation, based upon our surveys, and that is a substantial number of young men in this country. Thus it may be that the alternatives available to them were much worse than these comparisons suggest, in other words, that they could not really earn as much money in civilian life.

There is a tremendous range of earning potential in civilian life, and that many of the young men who in fact volunteer, either because of economic reasons or other reasons, found that the economic opportunities in military service, even under existing pay scales, were better for them.

Representative RUMSFELD. Let me stop you there. My time is up, but I would like to pursue this. Say for 1 year's service the actual pay in 1963 was $1,830 on this chart, and Dr. Oi is proposing $3,130 for the first year. The studies you recited in your testimony I assume were based on asking questions and trying to determine what an increase from that $1,830 would do with respect to retention or attraction of people to the military; is that correct?

Mr. WOOL. It was based upon the observed behavior of how many men actually enlisted, given a fixed uniform military pay scale, and differences in civilian earning opportunities for them. From that relationship, based upon their behavior, we developed certain estimates. In other words, it wasn't based simply upon asking them in an opinion poll.

We found this is often of limited value in this context. We did have observed behavior to go on, but very limited observations.

Representative RUMSFELD. But at any time, did your studies approximate the $3,130 figure for the first year that Dr. Oi is suggesting, so you could evaluate what impact that would have?

Mr. WOOL. No. We had to——

Representative RUMSFELD. They were all substantially below that.

Mr. WOOL. We were looking at the actual behavior under existing military pay scales and under existing civilian earnings as they differed throughout the country.

Representative RUMSFELD. Right. This is where I want to arrive. It sounds to me like what we were saying then. We were saying in your policy or in your survey, your study, you were saying to people "Okay, the competitive rate roughly is $3,130. Now we would like to have you work for $1,830 and we want to see how many will do it for that figure that we are presently paying, but let's see what maybe $2,000 would do," all of which is way below the figure of $3,130.

I don't see how you could get very accurate figures or studies, if you are asking a person whether he wants one worm, or two worms, or three worms in his apple. Or asking him if he wants 50, 55, or 60 percent of what he could earn elsewhere.

Mr. WOOL. I think the true value, the economic value of the military service for the young men, in this country, is not truly measured by these cash comparisons.

Representative RUMSFELD. I am trying to understand your studies. You are citing them in your pay program.

Mr. WOOL. Yes. In our studies we simply said this. In fact, given current military pay levels and current civilian earnings levels, what happened. What proportion of our men did volunteer, and of these, how many volunteered purely on a voluntary basis without draft motivation?

We found that a certain percentage did it at the prevailing military pay level, and we had to extrapolate from the changing relationship as we found it among parts of the country, with their different civilian earnings levels, what might happen if in fact we moved up on this curve to a higher level of military pay. It was a forecast.

Representative RUMSFELD. Nowhere near $3,130.

Mr. WOOL. Yes. It went up to the possibility as you can see for the average of 4 years of service, for example, of $8,700 as an average in the first 4 years of service, under the high probability range.

Now this was a judgment. It was a judgment made by Dr. Oi and his colleagues as to the pattern of the supply curve. It was one of the biggest we had to make. And Dr. Oi found it convenient not to show these standard errors. But we felt it essential that we show both the range below our best estimate and the range above it, because there is a great deal of uncertainty as to these responsiveness factors.

Representative RUMSFELD. I will stop there. I do think we owe Dr. Oi and Dr. Schelling a chance to comment on that, because I think this is an important question.

Representative CURTIS. Proceed.

Representative RUMSFELD. Yes, could you two comment on it? Dr. Schelling, would you comment, or Dr. Oi.

Mr. OI. First of all, you state your high estimate as $8,700?

Mr. WOOL. For the first 4 years.

Mr. OI. Because your paper lists the average first term pay as $3,415 and we would need a 200-percent increase on that for the high estimate. To reach your high figure I would have to add $7,830 to the $3,415. I am having some trouble trying to reconcile the two figures. The reasons I did not use the high estimate are: first, it led to very implausible results; second—and this is a technical point implicit in the very method by which we are estimating—within the regression equation our independent variable contains some observational errors giving it a bias toward zero. Consequently, if anything, we should take either the point estimate or the point estimate plus one standard deviation—certainly not less.

Therefore, I believe that the high estimate is just implausible.

Representative RUMSFELD. Thank you, Dr. Oi.

Now, just to conclude this, Dr. Schelling, the question that Dr. Oi has responded to and the question I am interested in is would you comment on the assumptions that Mr. Wool's study and the citations are premised on. As I understand it, they are based on a 4-year pay, is that correct?

Mr. OI. Three and a half.

Mr. WOOL. The base figures used were the average pay on the first tour of duty. From these, we developed other relationships for career people, too.

Representative RUMSFELD. It seems to me that the critical years are the first two or the first one.

Mr. WOOL. The first term of enlistment is up to 4 years. The standard tour of enlistment in the Navy, Air Force, and Marine Corps is approximately 4 years, so we looked at that total.

Representative RUMSFELD. Dr. Schelling?

Mr. SCHELLING. If we had time, I should like to hear Mr. Wool repeat some of his very cautious remarks about the scarcity of pertinent data and the need to make very crude estimates based on what data we have. Those expressions of cautious uncertainty were more worthwhile than arguments over figures that, it has now been established, are barely worth arguing over.

On this question of the range of error, while I think it is always worthwhile to provide us a range of error, Mr. Wool's range is based on the standard error of a regression coefficient calculated from a very small number of observations of barely pertinent data, and I am not

sure that the accuracy of the limits of the range are worth quite all that attention.

I do have the impression as I look at his data that he may have underestimated some of the savings, due to reduced training cost, lower required accession rates, and so forth, and that in interpreting what it is that attracts a young man, he used the total pay plus services in kind, whereas it may be that services in kind needn't be increased at all and we can apply his percentage figures to a smaller base; namely, the cash figure, rather than the larger total.

This would cause me to put his best estimate at a figure perhaps half the size it is. On the other hand, I think we should recognize that aside from the fact that the data are in many cases very circumstantial and indirectly relevant only, that it isn't just pay and unemployment that matters.

The job changes. If you make an estimate of what it would take to get half a million men in the Army when it means going to Europe for 2 years, that may be different from getting half a million men in the Army when it means going to South Vietnam and being shot at for a couple of years. Therefore, even if Mr. Oi or Mr. Wool were exactly right about what the data show you could have done in 1962 or in 1964, this is 1967. We are talking about the next half dozen years and the character of Army, Navy, and Air Force life is going to be very different.

In addition to that, when we superimpose changes in the character of society through poverty programs, and so forth, we may also be affecting, in the half dozen years to come, the incentive to stay out of the Army, the incentive to go in the Army, the alternative opportunities available, so we are in a range of uncertainty that I think is even wider than Mr. Wool himself has asked us to accept.

We just don't know, and I don't know any way to find out, but if we were convinced that, for other reasons, a significant pay increase made sense, then we could get at least one experimental observation—again limited to the time it occurred—but at least one more important observation from which to make judgments.

Representative RUMSFELD. Thank you very much.

Representative CURTIS. I am very pleased to see the unanimity on the general proposition that Mr. Rumsfeld was able to develop.

Let me revert then to the resolution that I have been proposing in the Congress since 1963 that the Pentagon successfully subverted. This resolution would merely create a joint committee of members of the Armed Services Committee and Labor and Education to study this area. That is all.

I felt that it needed study, and that it couldn't be done by the Armed Services Committee alone. It had to tie in with those who were familiar with the manpower situation in the civilian sector; namely, those on Labor and Education Committees. I said at the time that I felt that we had to keep the draft or the compulsion on the shelf, even if something did come out that was feasible, and I still feel this way.

I have already said that the time is too late to do a study. The Pentagon has been successful in sabotaging an honest study in public, in order to get something done by June 30. It is impossible. This is why I have a little bit of impatience with such testimony. Yet I am

glad to have Dr. Wool here, and these remarks are by no means directed to him, but to the situation.

When we started to get some momentum toward creating this joint committee, the President appointed an executive commission, which the Pentagon then controlled, and that commission was supposed to report, I think it was in 1965. But there was a delay and there never was a report made. All we got was a report on a report.

Even before that was completely out of the picture, another commission was appointed. Again we don't have any working papers from that commission. It is not just the Congress, it is any group of citizens in this country that would like to follow this who are now unable to do so.

At that point, I made the probably unfortunate remark that I would rather see a lottery system than what we have. People thought I meant that I wanted a lottery system. I don't. I think we have got it within us to have a rational system. But I said I would rather have one that is just completely by chance than the one that we have got, which is so irrational. I still feel quite strongly this way.

Now all of this ties in with some other studies. One of the things that I developed in this area—again it is in economics—was the McCormack amendment, which has to do with the basic procurement system of the Military Establishment. Here I could give Mr. McNamara some plusses. But part of this, too, was trying to implement the second Hoover Commission recommendations in getting the military out of a lot of civilian-type activities. Get the uniform off of it, because the kind of functions like roasting and distributing coffee among other things didn't require military skills.

It gets back to the problem of what do we need to have performed in uniform and what out. What do we need to have performed under a system of martial and military law and what can be performed by human beings for the military under civilian-type law, or maybe a stepped up kind of law which might be necessary.

I said in my first remarks by you three gentlemen appearing and preparing these papers we are at least starting to talk about the things that I think should have been talked about a long time ago.

Maybe, Mr. Wool, if the Pentagon were not so secretive about all of this, maybe some people around the society could be giving you studies and information on these areas where we don't have complete information.

I am not going to ask any further questions. Just two other comments. As one who serves on the Ways and Means Committee that tries to figure out how to raise the money for all these things, I have felt for some time we never have really calculated the cost of war, including the shifting in and shifting out. Veterans' pensions I agree with you ought to be a part of the cost of war, and they ought to be a part of the cost that is being imposed on us by this system that creates such a turnover that, as Dr. Oi said, only 7 percent reenlist.

The amount of increase in veterans' pensions, because of this kind of low reenlistment is extreme. Believe me, we are talking in terms of billions of dollars.

You mentioned the GI bill of rights, which I happen to feel is one of the great things that has come out of all of this. But that is a

poor way of getting young people educated, I would say. It is fine that they do get the education, but again with the turnover in your system, this is part of the cost.

Now the final point I wanted to discuss has been mentioned but I wish to repeat it because what I have been talking about has been so often misconstrued. Many say oh, you want a large standing Military Establishment and I say no, because I recognize the dangers in our society along those lines.

I think our wars essentially are going to have to be fought by the citizen soldier, just as I was in World War II and many of us were. It means though a small professional group with a real Ready Reserve. Again, the Ready Reserves are paid, but attention must be given to matching those skills with the skills of military needs and keeping them up to date. Compare this with the system we have got right now.

Here we have heated up into a war, and the Ready Reserves haven't even been used. In fact, there are many people in the Armed Services Committee, and here is where I do agree with some of their comments, who say you can't use them because they aren't ready, that they haven't even been trained, and there has been no attempt or very little attempt to relate the skills that are in the Reserve components with the skills that the Military Establishment would need in he event of a heat up such as we have now.

One of the Reserve units that I happened to look into and know about is located at Lambert Airfield, or St. Louis Municipal Airport, which consists of employees who operate the airport. If you ever called that unit up, we would have to shut the airfield down, which would be needed for military as well as civilian travel.

The only significance is that the Manpower Commission, which is supposed to concern itself with occupational deferments, isn't on top of this at all, and there is apparently no coordination between the skills needed in the civilian society in the event of a heat up, and the skills that might be taken out through the Ready Reserve system if it were used.

Now all of these subjects that we have just been discussing upon here briefly are the kind of things that a congressional committee would probably take a year or so to really get into the full depth of the problem. So here we are with the rain falling on the roof, and we have done nothing in the 16 years I have been in the Congress to try to take a rational approach on it.

I hope that we can start doing it, because as near as I can figure, I think our studies would reveal, in spite of your fine statements, Mr. Wool, that we can have a volunteer system that would eliminate the inequities, the inefficiencies, and we would end up with a much less cost in our society if we could to it.

Thank you.

Chairman PROXMIRE. I would just like to ask a very few questions. I think you can give short answers. As I was questioning last time, Mr. Schelling, you were saying something about how, disregarding equity, that there was a good argument for higher pay for enlistees and for those coming into the service at this time. I am sure you wouldn't disregard equity.

Mr. SCHELLING. I meant to say the opposite—that on equity grounds there is good reason for raising pay whether or not it would bring in enough extra soldiers to reduce greatly our reliance on the draft.

Chairman PROXMIRE. You said one reason why we need student deferments, one reason why it is helpful to get people after they have had the chance to be in college, is because we need officers. I would like to ask you this.

I am prejudiced because I got promoted to second lieutenant after 3½ years as an enlisted man in World War II, including more than 2 years as a master sergeant. Why can't our officers come from the ranks? It is my feeling, prejudiced as I say, that the best officers do come from the ranks. The fellow who had some years of experience, even though he had less education as an enlisted man, was likely to make a better officer than one who hadn't had any.

Of course, I think there is this feeling in general around the country. Those who read the comic strip Beetle Bailey are familiar with Lieutenant Fuzz. He is the second lieutenant who looks as if he just climbed out of the crib. I think there is a feeling on the part of men in the armed services that they have more confidence in those who have gone through the ranks and have had a chance to serve as enlisted men. So what is wrong with that as a source of our officers? Wouldn't it be better for morale too?

Mr. SCHELLING. It is hard to disagree with the notion of promoting men from the ranks. One might go further and say that if what the men whom you would promote from the ranks lack is a college education, give them a couple of years of the right kind of education to make up for what is either a professional or perhaps even a social deficiency.

I was going on the assumption that the services do need officers who have appreciable schooling beyond high school. They tend to get it as a result of the college education of a lot of people. If this is what they need, if that is the pertinent kind of education, then I was only indicating that there may need to be some way of inducing people to become officers, when you don't have as powerful a draft to scare them off into the ROTC.

One of the interesting things about a lottery——

Chairman PROXMIRE. Let me interrupt to say wouldn't one of the fallout benefits of the Oi proposals be that you substantially increase the pay of enlisted men and then increase the pay of everybody in the armed services, wouldn't that have the effect to some extent of persuading more people with college educations to come in, if they were qualified to be officers?

Mr. SCHELLING. Yes; but if the Defense Department then says that they can't be assured that they will get anything like the officers they need, I would say then we need some further kind of programs.

One of the things we don't know, you see, if we switch to a lottery, is what odds or chances are required to induce a man to sign up in an officer program rather than run the lottery. At the present time a young man can estimate whether or not he is likely to be drafted. With a lottery, we don't yet know whether a 10-percent chance or a 40-percent chance or a 70-percent chance of being drafted is what

it takes to get a young man to sign up in an officer program rather than run the lottery risk.

On the other hand, if people are selected to serve, they can surely be put through officer programs which entail, let us say, a college education and several years of obligatory service thereafter.

Chairman PROXMIRE. I would go much further than you went just now on the basis of no less authority than Burke Marshall, who was assigned to study this and had a big commission of very competent people working with him who said that anybody with enough brains, and I don't think it takes very much, and enough money, can beat the draft today.

I think that is a terribly serious indictment. It is strictly a class operation. What he means of course, anybody who can get into college, can get into graduate school and then go into teaching or go into some other occupation where there is a deferment, or get married and have a child along the way, can beat the draft. I think that this is perhaps the worst aspect of it.

I would like to ask Mr. Wool what the Defense Department's position is on this.

Mr. WOOL. Are you referring to your last question, sir?

Chairman PROXMIRE. Yes; Burke Marshall's statement.

Mr. WOOL. I should emphasize that the statistics which served as a basis for Burke Marshall's statement were derived from our study. They were published in various ways, and they did highlight particularly the fact, which you mentioned, that among those college graduates who went on to graduate school, the percentage of men who ever saw service was very small.

For the entire age group 27 to 34 years, whom we surveyed, only 27 percent of these men saw military service as compared to 74 percent of the typical high school graduate who didn't go to college at all. We found, incidentally, that the men who had just got a bachelor's degree and typically graduated at 21 or 22 had a relatively high rate of service as compared to the men who went on to graduate school. It was not much lower than the high school graduate. But even that showed a trend in the years immediately preceding Vietnam where that too was dropping off.

At that time we had a married man deferment in effect. So that the answer, in my personal judgment, is that the system which we have had in effect did tend to operate at the upper levels as being class discriminatory, though it was never designed that way. It happened because of these deferments.

At the lower levels it was too, because of the fact that we were rejecting men with limited education in a range which was adequate for many of the more basic skills in service, although not the more technical ones.

We also had a very low percentage of service among the underprivileged in the country. This was a very peculiar form of class discrimination.

Chairm PROXMIRE. Yes, but don't you find—that was an interesting study in Wisconsin. All of our 80 draft boards, were studied on the basis of whether they were located in a high-income, low-income, middle-income area. The study found in the minority group area, in Mil-

waukee, of course, as in many big cities, there is a heavy concentration of Negroes, that whereas those who were physically fit and mentally qualified had a very high rate of induction, that there wasn't a high rate of enlistments.

The Negroes were taken into the armed services in Milwaukee, if this is typical at all, because they were drafted. The prospects of their being drafted not only because of their lack of undergraduate deferments, but also because of the inaccessability for them to have Reserve or National Guard status—discrimination was very conspicuous.

Mr. Wool. I think the Marshall Commission study, again based upon the data which we provided it, highlighted some of these problems. Now in effect if you look at the Negro population as a whole, the facts are that the percentage of men who served was lower than the percentage of whites because their rejection rates for educational reasons were so much higher.

If you look at those who are qualified for service, you find that the percentage who were drafted among those qualified was significantly higher than among white men, and I think you have hit at the reasons.

First of all, our enlistment and our officer programs have tended to be more selective in various ways. Many of the enlistment programs in the past had higher standards than the basic draft standard. There was a significant group, particularly of Negro youths and others who fell in between. They didn't qualify certainly for the more selective enlistment programs, where they had a choice of skill and training, and they therefore fell in the limbo of having ony the draft as a viable alternative.

Second, the percentage of Negroes who qualify for officer programs, because so few graduate from college, was much smaller than for white men. And finally, the percentage who enter the Reserves, which were also in a position to be selective, was much lower than for whites.

Now in the latter area particularly, a number of measures have been initiated as described by the President in his recent message to correct that situation.

Chairman Proxmire. Has the President recommended measures to do as Secretary Wirtz has suggested to take mental and physical rejectees by the scruff of their necks, to have that correction made, that needed medical correction, or those who just barely miss the mental qualifications because they haven't had enough schooling, and give them training of a few months?

Mr. Wool. What we have done is to significantly lower the mental qualification standards.

Chairman Proxmire. I understand that.

Mr. Wool. These men, about half of them whose standards have been lowered have in fact volunteered for service. The other half who have entered have been drafted. The half who have been drafted in this range have in fact, been taken by the scruff of their neck.

Now they have been taken in because there was a realistic potential for using these men, under our existing training system, which does look at the individual and his progress rather than treating him in a completely assembly line fashion, which has from our experience permitted him to qualify as a fully proficient soldier.

We have not initiated any special literacy-type training effort, because at the levels we have established, these men in fact are, with very little exception, basically literate. They have enough to pass basic military training and as we move on to qualify for many of the more basic military occupations. We have not gone below that level.

Chairman PROXMIRE. In giving the Department's position on the opposition to, as you put it, a completely voluntary system, you talked about the risks involved. Why is there any risk involved, especially if you follow the prescription which I doubt that Mr. Oi would contest against, leaving the draft law on the books and giving it a chance the way Mr. Schelling proposes, having a very big increase in pay, to $325 or more, and seeing if this works.

If it works, you have lost nothing because you have all the advantages we have discussed of a voluntary army. If it doesn't work, certainly you have better morale, better equity—you have all these other advantages.

Mr. WOOL. From a technical standpoint, if to paraphrase, you are saying retain all the existing authorities to induct people, if and when needed that we now have, and in addition, if the Congress chooses to enact a law which raises military pay, we will have an opportunity to observe what effects this has, from a technical standpoint there is no risk other than the costs involved in a permanent mortgage to a higher pay level and all its other concomitants. This is something which is clearly a policy and fiscal decision.

Since you are not taking away any authorities but adding an incentive, there isn't any risk. If you are taking away some authorities, there is a risk, and it is a matter of defining terms here.

Chairman PROXMIRE. Wouldn't you agree that this 9-percent figure that you said for whom pay is the reason that they didn't come into the armed services? This 9-percent figure depends very greatly on what kind of service potential enlistees might anticipate?

Obviously, at a time when we have heavy casualties in Vietnam or when the prospect of overseas service is great, a hardship service, the pay would be less important than it would be under peacetime conditions.

Mr. WOOL. I agree completely. Of course, that figure reflected the feeling of young men as to what is important in choosing a career in peacetime.

Chairman PROXMIRE. Isn't it true in asking about service to our country, you wouldn't expect people to say that pay is first. You wouldn't expect an answer like that. Most people would say, according to our values, well, I serve because it offers a challenge and it offers an opportunity to serve my country, and so forth. The pay may be very important to them, but they don't think it is quite right to say so, especially to a stranger who comes up and asks them questions on it.

Mr. WOOL. I feel that all these survey results on attitudes and what you would do if something happened have to be taken with a grain of salt. I think that all the things you have said are true.

I think that is very true, as Dr. Schelling said a moment ago, that the image of service life, the conditions of the services as they exist at given times, and all the practical alternatives which men have available or may have available in the future are all part of this very complicated picture.

I think that when we are talking about pay in relation to job choices, young men think in terms of certain levels of jobs. The college man, for example, is choosing among professional jobs. The high school boy is choosing among those jobs which might be available to him.

A tremendous quantum jump in military income would, over a period of time, certainly contribute to a change in that image, I mean to some extent, and that is the mechanism through which this curve we talk about would work.

Chairman PROXMIRE. I just have one final question. As I recall, the President in his message on the draft said something about the thousands of civilians moved into military jobs; is that correct?

Mr. WOOL. 114,000 in last year and the current year.

Chairman PROXMIRE. What kind of study has been done by the Defense Department to determine what other military jobs now could be taken over by civilian personnel?

Mr. WOOL. Well, this program, incidentally, was again part of the initiatives which started from our draft study, and again this whole matter has been under intensive study within the Department of Defense continuously in the past 2 years.

Chairman PROXMIRE. Are there fiscal limits on it?

Mr. WOOL. No.

Chairman PROXMIRE. In other words, do they say it is too expensive to hire——

Mr. WOOL. No; on the contrary, it was not affected by fiscal considerations. The practical situation is that although the short-term immediate costs of the civilian are higher, the long-term costs of the civilian may well be lower because of the fact that the military man does have a training and turnover cost above his direct compensation. This was done as a policy matter primarily rather than in terms of economy, though I think it has longrun economies associated with it.

Chairman PROXMIRE. In your Quartermaster, in your Finance Department, all that kind of thing, the Pay Department, so many of those jobs can be done strictly by civilians, can't they? Are they still being done by military personnel?

Mr. WOOL. One has to keep in mind that there are many quartermaster troops and even pay troops in Vietnam and all over the world, and on ships at sea. In other words, it is not the occupation involved but where that occupation is performed.

Chairman PROXMIRE. Oh, you have civilians in Vietnam, too, as well as all over the world.

Mr. WOOL. Yes, but as part of combat organizations, no. We have some civilians there, but the typical requirement is that if you have units which are part of operating forces, whether ships at sea, or combat divisions, or similar organizations which are deployable in combat areas, that these must be subject to military discipline; that these types of jobs have been, and in my judgment, always have to be military. That is the very nature of the military job.

Representative CURTIS. Would the gentleman yield on that?

Chairman PROXMIRE. Yes, indeed.

Representative CURTIS. There are company technicians right up in the aviation branch in naval air, at least where I was. We had company technicians right up in the front. This is some of the malarky

you get on this thing when to try to zero in on it. Seriously, I don't mean from you, but I mean for anyone who has been on the frontlines.

For example, in the Battle of the Bulge, all these so-called backup troops were ordered to get out of the way. They are not asked to go in and do any fighting. But when you come to discussions like this, the military say, oh well, they have to be in uniform for this or that reason.

Well, when you zero in on many of them, you find just what I have observed. That they don't at all and aren't used that way, are never intended to be used that way. This is the reason for some of your studies being done in the open, so that people can look at your working papers and your assumptions, and comment. That will make your papers a lot better.

Believe me, this business of squirreling them away and not letting anyone look at them, so we will never know what your assumptions are makes it very difficult to work in this kind of atmosphere and to come up with a good program.

I am sorry, Mr. Chairman.

Chairman PROXMIRE. As I said, I am through and I am about to yield to Congressman Rumsfeld and then I am going to have to leave. Before I do that, I want to ask unanimous consent for a tremendously competent monograph, quite a long one by Professor Weidenbaum, which we heard from yesterday, be put in the record.

I would also like to ask Professor Schelling to supply the answer to this question for the record. I understand you chaired a seminar of a group of scholars from Harvard and a group of other universities in Washington, D.C., to discuss the Selective Service System and alternatives to it. I further understand that your group has made an evaluation. Will you give us a copy of this evaluation, the fruits of your efforts?

Mr. SCHELLING. Indeed, with pleasure, when it is finished.

(The evaluation referred to was subsequently supplied and appears on p. 357.)

Chairman PROXMIRE. Fine. I would like to say that you gentlemen have done, I think, a wonderful job.

I am going to yield the chair to Congressman Curtis; unfortunately, I have another engagement right now.

You have not only been most articulate and interesting, you have also been mighty patient. It is a late hour. I hope you don't have a plane to catch.

Representative CURTIS. Could I join in those sentiments and particularly to you, Mr. Wool, because I have directed a lot of questions to you, and seemingly in a critical way. I have been deeply appreciative.

Chairman PROXMIRE. I am most impressed by all of these gentlemen.

Representative CURTIS. I have no further questions. I will turn it over to Congressman Rumsfeld.

Representative RUMSFELD. To clarify a response, Mr. Wool, that you gave to Senator Proxmire, you said in answer to this question about risk of the proposals that are being discussed here, you said there would be no risk other than cost. You didn't mean that. You don't suggest that cost is to be equated with risk. You were just saying there is no risk but there is the cost factor; is that right?

Mr. WOOL. Yes, the cost in the sense that if one were to say let us experiment, quite apart from any pay raises on equity grounds, let us experiment with what an increased pay level would do above that level and see what happens; as you gentlemen know far better than I do, pay is something you can't experiment with on the downside. You can on the up side. And you are building in therefore the possibility of a very high pay level which would then have to be continued, and of course, the actuarial implications in terms of retirement benefits, and so forth. So there is a very grave fiscal risk.

Representative RUMSFELD. In clarifying your answer to Senator Proxmire, you said if we are taking away the authority there might be risk, but if it were not taking away any authority for the compulsory system, then there is not risk.

What sort of authority are you thinking about that might be taken away, and what sort of risks could flow from the taking away of such authority? I was a little unclear there. Are you suggesting that one of the results of such a proposal might be that for the administration to trigger in the draft it might require coming before Congress?

Mr. WOOL. At the present time, there is a legislative proposal which has certain very specific provisions. One of them is the extension of the authority to induct men into service, which expires this coming June.

Representative RUMSFELD. Right.

Mr. WOOL. Now if there is no change in that authority and related legislation, and simply an expression of sense that it would be a good thing if we could get as many volunteers as possible, all volunteers, or if there were accompanying pay legislation which increased pay, then in fact the Department of Defense with appropriate guidance from the Congress would continue its efforts to maximize its use of volunteers.

That is what they have been trying to do anyway. The only other thing we are talking about as I see it is the possibility of a major increase in pay. Maybe I misunderstand what you are talking about.

Representative RUMSFELD. No.

Mr. WOOL. So on a technical basis, the answer has to be something along the lines of what I have indicated.

Representative RUMSFELD. Dr. Oi, could you comment on Mr. Wool's discussion on the Australian situation? Is that appropriate?

Mr. OI. Yes, it is.

Representative RUMSFELD. Are there different factors?

Mr. OI. I have not examined the Australian situation. I believe he is correct. Australia has a smaller force than Canada on a per capita basis. This is due, I believe, to the hyperlabor shortage coupled with a largely immigrant population—a significant in-migration of Europeans who are not really Australians yet. If we were to reach that sort of situation of a hyperlabor shortage, I think we would have the same difficulties of staffing.

Representative RUMSFELD. Dr. Schelling, what studies do you feel could be usefully undertaken by Congress or the executive branch, assuming the ones done by the executive branch were made available to the Congress and the public, dealing with national military manpower policies? Are there specific gaps in here that from your studies

you feel need to be filled that you could pretty well pinpoint here?

Mr. SCHELLING. I mentioned one in my written statement, which is looking at the whole question of GI and veterans' benefits, particularly in the way they relate to what the States do, to see whether in terms of either equity or efficiency the whole pattern makes sense.

I particularly recommend examining where the line ought to be drawn between men in uniform and civilian employees. This has to be done sympathetically; there is a lot of habit and tradition and way of life that gets disturbed when you begin to shake up the whole system.

One could go further and perhaps distinguish more clearly between those in uniform who ought to be treated as combat available and therefore soldiers in the more traditional sense, and those that may need to be subjected to military discipline but who are not combat troops and don't need to be treated in that fashion.

If we had such a system, we might then have to raise the question which kinds of personnel can you use a draft for.

Part of this I think would require making the services slowly and patiently become much more cost conscious in the real sense. What are they wasting when they use a drafted man, or an enlistee, to do the kind of work that they aren't allowed to hire civilians for?

Then a couple of other related features. It may well be that at the low rate of pay of a draftee there is a tendency to underuse machinery in favor of manpower. There may also be, because of the underpaying of the draftees, an insufficient appreciation of what they are doing to these people when they train them and what it is worth to keep them when they have invested in their training.

If you can draft a replacement and train him irrespective of cost, you are not nearly as concerned about finding a pay system that will somehow induce the man in whom you have made a great investment to stay around. The dramatic example of this at the officer level is the Air Force's problem of keeping pilots with airline wages what they are.

With respect to reenlistment, it ought to be recognized that when the Army has trained a man so he can earn perhaps higher wages outside than he used to be able to, it is going to cost more to keep him, and even though he has enjoyed a lucky windfall, still it is bad economics not to keep these people.

Just a final point, in view of what Senator Proxmire said about duty, honor, and service. It seems to me that a man doesn't have to have less loyalty to his country to care about how he is paid, particularly in relation to how people are paid when they don't get drafted. When we turn not to draftees but to reenlistees, it is going to be hard for a man to explain to his wife why they should plan to raise a family on substandard wages just because he likes Army life.

Representative RUMSFELD. You responded to Senator Proxmire that you would be happy to supply any evaluations that your group comes up with to the committee. In that, will you give some clue as to what you would propose if you were to devise an ideal Selective Service System and an array of military manpower policies?

Mr. SCHELLING. I can't promise that because it depends on whether we can reach enough unanimity in the group to present a single recommendation. I hope we can. It will probably be a compromise. But

we shall try, in addition to sorting out the issues as we see them and settling such issues as we can, to reach some recommendation.

Representative RUMSFELD. Very good.

Mr. Chairman, I have no other questions.

Representative CURTIS. Again, I thank all of you for this very helpful testimony.

This adjourns the hearings. There will be certain days during which the record will be kept open for any material that any of you would like to supply that would be helpful to the committee, and that will be made part of the record.

With that, the committee stands adjourned.

(Whereupon, at 4:55 p.m., the committee adjourned, subject to the call of the Chair.)

(The following letter and statement are made part of the record pursuant to the closing remarks of the chairman:)

NATIONAL ASSOCIATION OF MANUFACTURERS,
Washington, D.C., May 4, 1967.

Hon. WILLIAM E. PROXMIRE,
Chairman, Joint Economic Committee,
New Senate Office Building, Washington, D.C.

DEAR SENATOR PROXMIRE: In accordance with discussions with members of your staff, I am enclosing a brief NAM statement which we hope you will be able to include in the record of your current hearings on the economic effects of the Vietnam War.

Many thanks.

Sincerely,

GENE HARDY.

STATEMENT BY THE NATIONAL ASSOCIATION OF MANUFACTURERS ON CONTINGENCY PLANNING FOR THE TERMINATION OR DE-ESCALATION OF THE VIETNAM CONFLICT*

The National Association of Manufacturers appreciates this opportunity of expressing its views on advance planning for government action at the time of termination, or substantial de-escalation, of the present military action in Southeast Asia. We believe that we have some thoughts to contribute that may be helpful as you contemplate this question.

A few general comments may be in order at the start. First, it is certainly not too early to think about, and plan for, the opportunities and problems that will arise when the present war is settled. But it *is* too early to lay out in precise terms a set of procedural steps to be set in motion at some agreed-upon signal. We do not know what our military needs will be after the end of the war, since they will depend on the terms of the settlement and other circumstances. We cannot know what the cost of subsequent support to the civilian economy of Vietnam might be at that time. We cannot know what the state of the American economy will be—whether it will be suffering from unemployment, inflation or perhaps both. We do not know how certain international economic problems—for example, the provision of monetary reserves and the mutual lowering of tariffs—will be resolved. All these unanswered questions have a bearing on what can and should be done when the Vietnam War is de-escalated.

Still speaking in general terms, it is our belief that the problem of adjustment at a lower level of defense expenditures will be a comparatively minor one. There are several reasons for that conclusion. The level of defense expenditures, in relation to the size of the economy, has risen much less during the Vietnam War than in previous similar incidents. During the Korean War, the increase in defense purchases as a percent of gross national product was from about 5% just before the war to almost 14% at its peak three years later. Thus the incremental war effort demanded about 9% of the national output. By contrast, in 1967 the incremental war effort will absorb less than 2% of national output—the total share going for national defense rising from about 7.5% in 1965 to about 9% in 1967.

*Prepared for the Joint Economic Committee, Congress of the United States, May 3, 1967.

Even with a relatively much larger defense effort at the time of Korea, the problem of transition to a peacetime basis was not really serious or prolonged. The growth of gross national product was interrupted for about a year, but it did not fall more than 2% below its previous high. By the third quarter of 1954, gross product was increasing once again and soon exceeded all previous records. The unemployment rate rose to a peak of 6.1% in September 1954, but a year later it was down close to the 4% now accepted as a desirable norm. Prospects are that termination of the relatively smaller Vietnam effort should involve an even quicker and easier adjustment.

Another fact of consequence is that, even while Vietnam expenditures are still growing, we have experienced a mild economic slowdown in the first quarter of 1967. Perhaps some of the post-Vietnam adjustment has already occurred. In any case, it appears that growing defense expenditures are not a protection against a slowing down of economic activity. It seems reasonable to conclude that, by the same token, declining defense expenditures will not necessarily presage a recession.

Undoubtedly, there will be transitional economic problems for the American economy when the present conflict in Asia subsides. These will affect certain industries, certain occupations and certain localities, rather than the economy at large. The Federal Government has numerous programs for meeting such adjustment problems, whatever may be the cause that brings them about. These include manpower development and training, economic development assistance to localities, and the Labor Department programs for providing information on employment opportunities. In addition, we have seen numerous purely private efforts which have successfully met local problems. There is surely no reason to suppose that the problems of adjustment to the termination of the Vietnam War will be so different in nature, or so much larger in scope, that they cannot be handled by programs already in existence.

While most of the national and local readjustments may be readily surmounted, it is true, of course, that the reconversion period will present difficulties for individual corporations now largely engaged in production of materials and supplies for the Armed Services. Since many of these corporations are members of our Association, you may want our opinions on this subject.

To such companies, and to their communities, the wholesale termination of procurement contracts could be costly and disruptive. The NAM hopes that the principle of fair, fast and final settlement, which was successfully applied in the termination of World War II contracts, again will obtain. A specific problem of current concern is the tendency to deny profit allowances to suppliers for preparations made, and work already performed under subcontracts. In light of the increasing emphasis by the Government on firm fixed-price contracts, in which profit disallowances are most frequently encountered, the impact upon both prime contractors and subcontractors with work in progress in lower tiers could be of substantial proportions. It would seem that the higher risks under fixed-price contracts should require more equitable treatment and, when terminated at the convenience of the Government, such contracts should provide for allowance of a reasonable portion of the profit which the contractor would have earned had the contracts gone on to completion.

As far as broadgauge Government economic action is concerned, in our opinion it would be worse than useless to lay down in advance a program for "fine-tuning" the American economy when the Vietnam War ends. Our ability to forecast economic developments is limited at best. It becomes impossible when we are required to forecast the economic consequences of an event which will occur at an unknown time and under unknown circumstances. Prospects are that the transition to peacetime will not be too difficult, and by pre-planned intervention, we might make it more so rather than less.

We would urge that the thought and study you make in preparation for the end of fighting in Vietnam should be concentrated in another direction. Fine-tuning of the economy, although it seems to dominate current discussion, is not the fundamental purpose of fiscal policy. Fiscal policy is primarily the means by which concrete decisions are made as to what the Government will do and how the burden of paying for it will be distributed. The members of Congress are charged with the responsibility of embodying such decisions in legislation. The end of the Vietnam War would be an appropriate time for a reappraisal of fiscal policy from this point of view. Here are some questions you might consider: Have, or have not, past trends correctly reflected the Nation's preference as to

the way in which its resources are to be divided between government and private purposes? What future steps should be taken to ensure that patterns of Government spending and taxation do genuinely reflect the choices of the citizenry?

Some of the discussion of post-Vietnam prospects assumes that the funds released by reduction of the defense burden can best be applied to an expansion of Government non-defense programs. Such an approach might have been in order if Government spending for non-military purposes had been severely curtailed in order to make room for defense needs. Instead, the very reverse is true. We have witnessed an acceleration in the growth of non-defense spending, at exactly the same time as Vietnam spending has increased. Between fiscal 1964 and fiscal 1968, as projected in the budget, non-defense cash spending will have increased by 45%, and defense spending by 41%. In the preceding four-year period non-defense spending grew by 36% and defense spending by only 19%. Astonishingly, the expansion of the civilian expenditures of Government has been accelerated, rather than retarded, during the Vietnam War. And the increased cost of Government is due more to growth of non-defense programs than to war needs.

This pattern of spending growth does not, we believe, faithfully represent the choice of the American people as to how much of their income should be spent for them by Government. It has resulted largely from the fact that the existing taxation system provides a large annual increase in the revenues available to the Federal Government. The annual increment to Federal revenues from normal economic growth is variously estimated to amount to somewhere between $7 billion and $10 billion.

The almost automatic increase in revenues by this process creates the danger that we will, by an equally automatic process, find ways of spending the additional money. And the release of more than $20 billion at the end of the Vietnam War would strengthen that tendency. The National Association of Manufacturers believes that Congressional thinking on what to do in preparation for the post-Vietnam period should address itself to that problem. And we have a specific suggestion as to how it may be approached.

Our Association believes that the revenue gain from economic growth should be largely earmarked for tax reduction. Specifically, we urge that legislation be enacted to provide a schedule of annual tax reductions over a period of years. To meet unforeseeable contingencies, a procedure should also be provided by which Congress could speed up, or temporarily arrest or reverse, the prescheduled tax reductions.

It is our conviction that such a plan would encourage fiscal trends that are more closely in line with the real desire and hopes of the American people. It would provide more leeway for the growth of the private economy, which must always be the foundation of economic growth generally. In the absence of such a program, the path of least resistance is likely to lead us toward continuation, or even acceleration, of the rapid increase in Federal spending of the past few years.

We hope that you will seriously consider this proposal in your study of measures to be undertaken in the post-Vietnam era.

On Meeting the Nation's Need for Young Men in Military Service

Study prepared by the Institute of Politics of The John Fitzgerald Kennedy School of Government, Harvard University, Cambridge, Mass.

Many teachers in American colleges and universities have been concerned about the draft. They naturally are, not only because the draft is related to war in general and to the war in Vietnam in particular, but also because the draft raises some fundamental questions about the obligations of citizenship in a democracy and the way those obligations are divided among the citizens. Moreover, most of the students we teach, and even many of the teachers among us, are qualified by age, health, and education, to perform military service. A main feature of the present draft is that it singles out college students, and their teachers, as a group especially eligible for deferment; we are bound to be concerned with the wisdom of such an arrangement.

In January of this year several of us on the Harvard faculty, all holding opinions about the draft but not the same opinion, discovered that the strength of our opinions was out of proportion to our knowledge of the present selective service system, our acquaintance with alternatives, and our understanding of the issues raised by a choice among alternatives. Holding widely different views about military and foreign policy, and especially about the war in Vietnam, and differing greatly in the emphasis we attached to different consequences of the military manpower system, we wondered whether we could arrive, through patient exploration and argument, at an agreed set of recommendations. We knew we could not reach agreement on every matter of principle that would arise; we hoped we could reach agreement on a set of recommendations compatible with the differing premises from which we approached the problem.

Under the auspices of the Institute of Politics in the John F. Kennedy School of Government, a faculty study group was organized that met regularly during February, March, and April. Comprising a dozen members, mostly faculty, it brought together not only diverse opinions but diverse fields as well—economics, political science, law and philosophy. We drew on materials contained in Congressional hearings, in the report of the National Advisory Commission on Selective Service, and in other studies done both inside and outside of government. We considered many alternatives, each in the light of several criteria—fairness with respect to who serves, fairness in respect to conditions of service, efficiency in the use of the nation's manpower, efficiency in the use of military manpower within the services, the impact on race relations and on education and poverty, the impacts of alternative systems on politics and on policy-making, the satisfaction or resentment of those rejected and those selected, the technical workability of alternative systems, the uncertainty or disruption in the lives of young men, the career opportunities in military service, and matters of conscience, tradition, and law.

We still differ over the war in Vietnam and over other issues of military and foreign policy. We still differ in the importance we attach to the several criteria we examined. We still differ on a number of guesses and estimates about the results of certain policies for which the evidence is scanty. Somewhat to our surprise, we reached unanimous agreement on what we perceive to be the main policy issues.

If our recommendations carry any claim to attention, it is not because we were, as individuals, specially qualified in the subject nor because three months of collective study have made us experts on military manpower. Nor is it because we in any way represent Harvard University or any other organization, governmental or private; we represent nobody but ourselves. If our recommendations carry any weight it is precisely because we differ in our politics, in our policy preferences and in our professional interests, and yet these recommendations, after our three months of wide ranging discussion and argument, appeal to us all.

These recommendations are addressed to the question, how should the government obtain military manpower, in peace and in war, when the number of men in service is not expected to exceed five or six million men. It assumes an economy not characterized by comprehensive wartime controls. Specifically, we are talking about military manpower when the supply of eligible young men, relative to military needs, raises the question posed in the title of the Selective Service Commission's report, "Who Serves when not all Serve?".

These are our recommendations:

1. All young men whose age, mental and physical fitness, and educational attainment qualify them for military duty should be equally eligible for conscription. Nobody needs to be deferred or exempted at age 19 or 20 on grounds that his career plans and educational intentions make him too valuable a citizen to go into the Army, or make it a national interest that his, and not others', service be postponed a few years. The economic benefits of discriminating among young men are modest, and largely confined to the young men who benefit. It is even doubtful whether, in the interest of a student's education and career, the best time to do his service is after completion of college.

2. If, as should be done, specific deferment of students is abolished, or comparable postponement is made equally available to all young men, the number of men eligible will exceed the number needed by the military services. The means of determining who serves and who does not serve, within this eligible group, must be fair and non-discriminatory and must appear fair and non-discriminatory both to those who are selected and to those who are not. We know of nothing but a random process —a "lottery"—that will meet those conditions. We therefore recommend choice by lottery.

3. Military pay should be increased sufficiently to attract, in the absence of hostilities, at least two and one-half million men. There is no magic in this figure. It corresponds to what, a few years ago, was acknowledged to be the approximate "peacetime" level of the armed forces, less one or two hundred thousand that we believe might be replaced by civilian employees during the coming years. Nobody can exactly estimate the pay scale required to reach this goal; but pay scales must be set with some goal in mind, and this should be the goal. In time of hostilities the additional men neeed, and any short-fall of enlistments below this goal, should be acquired through the draft, preferably by lottery.

4. We have to ask young men to do our fighting for us, involuntarily if necessary; we should not ask the same young men to pay our taxes for us. The draft should not be used as a means of shifting the financial burden of war or preparedness onto the same young men who are selected to carry the burden of risk and disrupted careers. The "cost" of attracting 2.5 or 2.75 million enlistees in peacetime is not really saved when we draft men; it is merely shifted, in the form of lower wages, from taxpayers to the men in the service. Too often the questions of fairness and discrimination are confined to the choice of who shall serve, with little attention to how we might shift some of the burdens of service from those who serve onto those who are served. Those of us who do not serve because we are too old or because we are otherwise not selected, should be careful not to use the draft as way of holding military wages down. And there is no reason to suppose that a man's sense of duty is weakened, or his morale undermined, by having his services appreciated with a decent wage. Surely the federal minimum wage is not too extravagant for a young man serving in the army in either peace or war.

5. Most of the inequity in the present pay scale for draftees could be eliminated, and reasonable pay differentials maintained among servicemen, with pay increases that would total between $2 billion and $3 billion per year. We recommend such increases on grounds of fairness and in the belief that a democracy with a GNP of over half a trillion dollars, and with income-tax rates lower than those prevailing before Viet Nam, has no compelling need to use conscription to keep military wages down. Official estimates of the likely cost of achieving a volunteer force of about 2.7 million men in peacetime appear to us somewhat exaggerated; pay increases on the scale we recommend should have an appreciable effect on enlistments. If so, the net cost will be reduced through reductions in training and other expenses associated with the higher turnover of drafted men.

6. Paying young men more nearly what they are worth in the civilian economy can have other benefits, through a better appreciation within the military services that drafted men are not cheap resources. An energetic and continuous effort should be made to replace uniformed men with civilian employees, male and

female, in all of those tasks in which the discipline, the traditions, and the other qualities associated with uniformed armed forces, are not essential. This may cost more; if so, we have been using the draft to save ourselves money by putting civilians in uniform.

7. The Reserves and National Guard should be considered ready, and should actually be ready, to serve in an emergency. If, however, as recent experience suggests, they are either not ready or not available for a war on the scale of the war in Vietnam, the worth of continuing the present reserve and National Guard system ought to be brought into question.

8. Military service is national service, not service to a state or locality. Eligible young men ought to be equally vulnerable to selection, no matter what state they reside in. Randomized selection should be designed to achieve this and should not be based on state quotas.

9. A lottery can be designed that, without becoming too complicated, permits a young man some freedom of choice in the year that he chooses to serve. Such freedom of choice should be equally available to all young men. One workable arrangement would be to call young men in their twenty-first year in an order of call determined by lottery, but with the lottery taking place in the young man's nineteenth year. At age nineteen a young man would have a good idea of the likelihood of his being called two years later, and could anticipate his service by electing to be drafted at age nineteen or twenty. A longer period of choice might have the unhealthful effect of inducing young men to speculate unduly on changes in the prospects for war and peace or even for changes in the draft law. Young men high in the priority of call would be on notice that two years' service probably awaited them at age twenty-one, and a strict denial of dependency exemption at age twenty-one would not then involve significant hardship. This arrangement would substantially eliminate the issue of college-student deferment: and it would benefit the college student by letting him know at age nineteen the likelihood that he would be called at twenty-one, so that he could make his own choice whether to complete college before or after military service.

10. If, contrary to what we believe best, college students are deferred and others not, college students should become, upon graduation, equally vulnerable to the draft along with younger men who are not deferred. Exceptions should be made only for medical students, officer candidates, and others whose choice of career makes them more liable to military service, not less liable, than others. If college students are not permitted—and they should not be permitted—to avoid eventual liability for military service, the supply of eligible young men will exceed the military demand for them about as much as if nobody were deferred. Thus the need remains for a randomized selection process to determine who shall serve.

11. The pay structure of the armed services should be continually rationalized to improve efficiency, to provide stronger incentives to remain in service and thus to reduce training costs and to preserve the skills created by both experience and training, to achieve the best allocations of skills and qualities among and within the services, and to avoid wasting military manpower on jobs that civilians or civilian contractors can do.

12. Increased pay, along the lines we recommend, should increase the number of men who enlist under the present physical and mental standards. There is a natural tendency, and a commendable one, for the armed services to want the highest quality personnel they can get; and with higher pay they would be able, and might be tempted, to raise standards of acceptance rather than to admit a larger number of enlistees. In order, however, to reduce reliance on the draft and to spread the opportunities for service as widely among the population as is consistent with military needs, standards of acceptance should be kept at present levels and the full effect of higher pay should be allowed to reflect itself in the number of enlistees.

13. We recommend the re-examination by the federal government of the entire structure of G.I. benefits and Veterans' pensions and preferences, state as well as federal. There is some tendency, especially because state and federal efforts are poorly coordinated, for benefits to be haphazardly related to civil service preference, to income and property taxes, and to the state a man resides in. The consequences, in both equity and economic efficiency, are not guaranteed to be favorable.

What we have is a system of partially deferred compensation, often on a contingent basis, that makes less sense altogether than each particular piece of legislation makes by itself.

Gramah Allison, Jr., Graduate School of Arts and Sciences.
Steven L. Canby, John F. Kennedy School of Government.
Jack W. Carlson, economist, Washington, D.C.
John T. Dunlop, Professor of Economics.
Charles Fried, Professor of Law.
Robert E. Herzstein, attorney, Washington, D.C.
Samuel P. Huntington, Professor of Government.
Stephen A. Marglin, Assistant Professor of Economics.
John Rawls, Professor of Philosophy.
Gerald D. Rosenthal, Assistant Professor of Economics.
Henry Rosovsky, Professor of Economics.
Thomas C. Schelling, Professor of Economics.
Lester C. Thurow, Assistant Professor of Economics.
Robert V. Zupkis, Graduate School of Arts and Sciences.
May 23, 1967.

JUNE 7, 1967.

Hon. WILLIAM PROXMIRE,
Chairman, Joint Economic Committee, Congress of the United States, Washington, D.C.

DEAR CHAIRMAN PROXMIRE: During our "Vietnam Hearings," you requested the data-evidence on Defense Department's requested and enacted New Obligational Authority as well as the major Federal tax changes since World War II.

The attached Defense Department data were prepared by the Office of the Assistant Secretary of Defense (Comptroller).

The attached tax changes were prepared by the U.S. Treasury's Office of Tax Analysis.

Sincerely,

DANIEL JAMES EDWARDS,
Fiscal and Monetary Economist, Joint Economic Committee.

DEPARTMENT OF DEFENSE

New obligational authority requested and enacted—Military functions and military assistance, fiscal years 1961–68

[In thousands of dollars]

	NOA requested of Congress	NOA enacted
FISCAL YEAR 1961		
Regular request	40,553,000	41,019,531
Supplemental (H. Doc. 58, Jan. 19, 1961) for—		
Increased pay costs	21,649	21,649
Increased readiness	266,900	264,900
Supplemental (H. Doc. 161, May 15, 1961) for retired pay	15,000	14,500
Supplemental (H. Doc. 180, May 29, 1961) for increased readiness	40,000	
Total, military functions	40,896,549	41,320,580
Military assistance	2,000,000	1,785,000
Total, fiscal year 1961	42,896,549	43,105,580
FISCAL YEAR 1962		
Regular request	41,809,345	
Amendments for increased readiness:		
H. Doc. 124, Mar. 28, 1961	1,954,000	47,804,002
H. Doc. 179, May 29, 1961	237,000	
H. Doc. 211, July 13, 1961	9,568	
S. Doc. 39, July 26, 1961	3,454,600	
Supplemental (H. Doc. 210, July 13, 1961) to cover fire damage to aircraft carrier USS *Constellation*	41,600	40,000
Supplemental (S. Doc. 51, Sept. 18, 1961) for contributions to "USS *Arizona* Memorial Fund"	150	150
Total, military functions	47,506,263	47,844,152
Military assistance	1,885,000	1,577,000
Total, fiscal year 1962	49,391,263	49,421,152

New obligational authority requested and enacted—Military functions and military assistance, fiscal years 1961–68—Continued

[In thousands of dollars]

	NOA requested of Congress	NOA enacted
FISCAL YEAR 1963		
Regular request	49,920,000	49,565,525
Amendment (H. Doc. 493, July 31, 1962) for military family housing, etc.	276,730	
Supplemental (H. Doc. 514, Aug. 13, 1962) for increases in quarters allowance, readjustment payments, and temporary duty per diem	157,759	
Supplemental (H. Doc. 61, Feb. 7, 1963) for increases in quarters allowance, civilian pay, and temporary duty per diem	272,264	220,163
Supplemental (H. Doc. 63, Feb. 11, 1963) for civilian pay increase	9,130	8,673
Total, military functions	50,635,883	49,794,361
Military assistance	1,500,000	1,325,000
Total, fiscal year 1963	52,135,883	51,119,361
FISCAL YEAR 1964		
Regular request	51,280,637	48,918,542
Amendment)H. Doc. 120, June 6, 1963) for provisioning of civil defense shelters	46,900	
Supplemental (H. Doc. 203, January 21, 1964) for—		
Military pay increase	853,000	1,003,200
Maintaining authorized military strengths	234,040	
Supplemental (H. Doc. 197, Apr. 29, 1964) for reductions in supplemental (H. Doc. 203, Jan. 21, 1964)	−45,400	
Total, military functions	52,369,537	49,921,742
Military assistance	1,405,000	1,000,000
Total, fiscal year 1964	53,774,537	50,921,742
FISCAL YEAR 1965		
Regular request	49,708,000	48,433,074
Supplemental (H. Doc. 98, Mar. 2, 1965) for military and civilian pay increases	230,394	230,394
Supplemental (H. Doc. 157, May 4, 1965) for Southeast Asia	700,000	700,000
Total, military functions	50,638,394	49,363,468
Military assistance	1,055,000	1,130,000
Total, fiscal year 1965	51,693,394	50,493,468
FISCAL YEAR 1966		
Regular request	[1] 47,619,557	[1] 49,300,412
Amendment (S. Doc. 45, Aug. 4, 1965) for Southeast Asia	1,700,000	
Supplemental (H. Doc. 362, Jan. 19, 1966) for Southeast Asia	12,345,719	12,345,719
Supplemental (H. Doc. 405, Mar. 8, 1966) for military and civilian pay increases	863,521	863,521
Total, military functions	62,528,797	62,509,652
Military assistance	1,545,000	1,023,079
Total, fiscal year 1966	64,073,797	63,532,731
FISCAL YEAR 1967		
Regular request	58,912,700	59,148,142
Supplemental (H. Doc. 42, Jan. 24, 1967) for Southeast Asia	12,275,870	12,196,520
Supplemental (H. Doc. 83, Mar. 13, 1967 for increases in civilian pay, in salaries of ungraded employees, and in medical service benefits and for homeowners assistance	237,000	
Supplemental (H. Doc. 91, Mar. 23, 1967) for military and civilian pay increases	364,130	
Total, military functions	71,789,700	
Military assistance	917,000	782,000
Total, fiscal year 1967	72,706,700	
FISCAL YEAR 1968		
Regular request	74,632,000	
Proposed for separate transmittal for—		
Quarters and dislocation allowance	24,000	
Federal employee status for civilian technicians of the Army and Air Force National Guard	18,000	
Total, military functions	74,674,000	
Military assistance	596,000	
Total, fiscal year 1968	75,270,000	

[1] Includes $224,556,571 authority utilized under sec. 3732, R.S.

Historical defense expenditures fiscal year and calendar year 1950–68

[Millions of dollars]

Year	Fiscal year basis				Calendar year basis-actual
	Projection in President's budget	Projection in midyear budget review	Projection in subsequent year budget	Actual per budget document	
1950	13,291	12,300	12,785	11,889	12,807
1951	12,873	0	19,364	19,772	29,439
1952	39,517	0	39,000	38,967	42,148
1953	50,000	0	43,400	43,610	43,015
1954	[1] 45,500	41,700	41,600	40,336	36,807
1955	41,850	38,800	37,050	37,824	37,664
1956	37,075	36,150	36,893	38,402	39,102
1957	37,797	38,500	38,600	40,791	41,904
1958	40,600	40,200	41,061	41,249	42,612
1959	41,979	43,000	43,112	43,573	43,492
1960	42,795	42,745	42,745	42,824	42,939
1961	42,745	43,250	43,200	44,676	45,478
1962	44,660	48,350	48,250	48,205	50,142
1963	49,700	49,700	50,050	49,973	50,178
1964	52,450	0	53,200	51,245	49,305
1965	51,200	49,800	49,300	47,401	50,267
1966	49,000	0	54,200	55,377	61,992
1967	58,300	0	67,950	----------	----------
1968	73,100	----------	----------	----------	----------

[1] Revised (Eisenhower) budget projection was $43,200.

NOTE.—Fiscal year 1950 through fiscal year 1954 exclude military assistance since the budget document for these years showed only total "mutual security" expenditures which included both military and economic assistance.

Revenue[1] effect of major tax actions since World War II

[In millions of dollars]

Revenue Act of 1945	−5,925
Revenue Act of 1948	−4,988
Revenue Act of 1950	+4,601
Excess Profits Tax Act of 1950	+3,500
Revenue Act of 1951	+5,438
Revenue Act of 1954:	
Individual income tax	−3,000
Repeal of excess profits tax	−2,000
Excise Tax Reduction Act of 1954	−1,021
Internal Revenue Code of 1954	−1,363
Fiscal year 1956:	
Public Law 466 (Apr. 2, 1956) gas refunds to farmers	−90
Public Law 796 (July 25, 1966) exempt foreign travel	−17
Public Law 1015 (Aug. 7, 1956) exempt transportation of persons (35–60 cents)	−6
Public Law 1010 (Aug. 6, 1956) exempt admission 50 cents to 90 cents	−60
Public Law 429 (Mar. 13, 1956) tax on life insurance companies	+51
Fiscal year 1957: Numerous but no revenue effect known.	
Fiscal year 1958:	
Public Law 85–475 (June 30, 1958) Transportation of property / Transportation of coal	−487
Transportation oil by pipeline	−40
Public Law 85–866 (Sept. 2, 1958) small business	−260
Public Law 85–859 (Sept. 2, 1958) Admission / Club dues	−50
Fiscal year 1959: Public Law 86–69 (June 30, 1959) life insurance	+180
Fiscal year 1960: Public Law 86–422 (Apr. 8, 1960) cabaret—from 20 percent to 10 percent	−20

Revenue[1] *effect of major tax actions since World War II*—Continued

[In millions of dollars]

Fiscal year 1961: Nothing with large tax effect.	
Fiscal year 1962:	
Depreciation guidelines (Administrative sections)	−1,300
Revenue Act of 1962:	
Investment credit	−1,020
Structural changes	+850
Revenue Act of 1964	−11,545
Excise Tax Reduction Act of 1965	−4,676
Tax Adjustment Act of 1966:	
Fiscal year 1966	+1,130
Fiscal year 1967	+4,800

[1] As estimated at time of legislation.
Source: Office of Tax Analysis, U.S. Treasury.

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