

CBO PAPERS

**NATIONAL SERVICE:
ISSUES AND OPTIONS**

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PREFACE

At the request of the Senate Committee on Labor and Human Resources, this paper examines issues pertaining to the design of a national service program, the availability of youth for service, and the implications of alternative options for the labor market, postsecondary enrollment, and the federal budget. In accordance with the Congressional Budget Office's (CBO's) mandate to provide objective and impartial analysis, the paper contains no recommendations.

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SUMMARY

The term "national service" is generally used to describe programs in which youth would perform tasks that might not otherwise be undertaken by either private firms or government. Tasks that are often mentioned in the context of national service include home care for the elderly or disabled, conservation activities, and work in nonprofit human service organizations.

The rationales offered for a program of national service vary. Some options are primarily motivated by the benefits to society of the tasks performed, others by the value of service--either in terms of training or in terms of citizenship--to participants, and still others by the notion of sacrifice on the part of youth as a civic obligation. While these rationales are not mutually exclusive, they have implications for the design of a specific service option. For example, requiring service in exchange for federal benefits such as student financial aid, as some have proposed, might be justified more strongly by the notion of civic obligation than by the value of participants' services.

In designing a program of national service, an array of technical issues needs consideration: What would participants do? Who could participate (and for how long)? Would they be compensated? These issues are examined in this study from the perspective of how they might affect the number and characteristics of participants and the impact they would have on federal costs.

THE AVAILABILITY OF YOUTH FOR NATIONAL SERVICE

For any particular option, the availability of youth for national service would depend on three factors: the size of the youth population; criteria, if any, that determined eligibility; and the number of eligible youth willing to participate. Determining the likely effects of the first two factors on availability is relatively straightforward. Analyzing willingness to participate, however, is quite difficult because it would depend on the costs and benefits of service, both of which would include nonfinancial components that cannot be measured. It is possible nonetheless to examine the attitudes of youth toward service and analyze which categories of youth would find service financially attractive.

Size of the Youth Population

The population ages 18 through 24 is projected to decline until the mid-1990s. This decline is likely to increase competition among institutions that depend on youth: the military and other youth-intensive employers (such as retail establishments), and colleges and universities. Projected declines in military manpower requirements, however, could reduce these pressures somewhat.

Criteria for Participation

In addition to limits imposed by population constraints, the number and characteristics of youth available for national service would depend on criteria specifying who would be eligible to participate. Requiring participants to have graduated from high school, for example, would reduce the number of youth available for service by almost 15 percent--the proportion of civilian youth who are dropouts. Limiting participation to those with family incomes below the official poverty threshold would also reduce the number available by about 85 percent; limiting participation to those with incomes below 150 percent of poverty would reduce the number available by 75 percent.

Youth Attitudes Toward National Service

The attitudes of youth toward national service can be assessed in two ways: by looking at how many now volunteer for community service, or by asking young people directly whether they would participate under various hypothetical options.

Newly available data from the May 1989 Current Population Survey indicate that just over 10 percent of youth had volunteered during the preceding year. The typical 20-24 year old volunteer averaged just under five hours per week for about 12 weeks. Youth volunteering through hospitals, schools, and social welfare organizations--whose activities would be similar to those envisioned by national service proponents--accounted for about 40 percent of volunteers and about 4 percent of all youth.

When asked directly, young people express significant interest in the concept of national service. About 60 percent of those surveyed by People for the American Way in 1989, for example, agreed that volunteering is something that all citizens should do, and almost 90 percent favored rewarding youth with additional education assistance for getting involved in community or military service. Just over half of those surveyed in the 1988 Youth Attitude Tracking Study, which asked youth whether they would participate in a program that required service in return for student aid eligibility, indicated they would participate in a program that provided stipends and education benefits.

Survey data must be interpreted with care. The extent to which youth now volunteer may be a valid indicator of interest in community service among youth, but it does not predict the number who would participate in a formal service program. Analyses of military enlistment patterns, for example, suggest that only about one-third of youth who indicate they are likely to enlist actually do so, whereas those with negative intentions constitute almost one-half of eventual enlistees. Expressions of interest in a particular option may or may not be reflected in actual participation rates, making it important to understand the factors likely to affect the participation decision.

The Financial Impact of Service on Participants

Participation in national service would require youth to give up other activities--such as work, school, or leisure--for the duration of service. These opportunity costs would matter for any option, but would be especially important for options in which service was a full-time activity. The willingness of youth to make this trade-off would be influenced by a number of factors, some of which could be affected by policy and some of which could not.

One variable that policymakers could determine is the reward for service. In general, the greater the compensation paid to participants--whether in the form of stipends, vouchers that could be redeemed to cover education expenses or for the purchase of a home, or student aid linked to service--the less sacrifice that service would entail compared with not participating in the program. Policymakers might also be able to influence potential participants' perceptions of the value to society of the tasks performed. Other things equal, the greater such nonfinancial benefits of service, the more likely that youth would be willing to participate.

One factor outside the direct control of policymakers is the earnings that national service participants would forgo. For youth who continue their education beyond high school, full-time service for a year following high school graduation would essentially mean giving up what they would have earned in the first year after completing their schooling. For others, full-time national service would generally entail giving up current earnings. Part-time service would not necessarily require youth in either group to forgo other employment, but some might have to reduce the number of hours worked at part-time jobs.

Differences in the amount of earnings forgone might make participation more attractive to unemployed youth than to employed youth, to high school dropouts than to graduates, and to future teachers than to future engineers. It is important to note, however, that the nonfinancial benefits of national service to youth could more than offset losses in wages.

What Would Youth Give Up to Participate?

National service options have often been proposed as a solution to high rates of unemployment among youth. The civilian unemployment rate of youth remains relatively high--9.9 percent for those ages 18-24 in 1989, compared with 4.2 percent for people 25-54--but the vast majority of youth have responsibilities for work or school. In October 1987, over 80 percent of civilian non-high school youth (those who had graduated or dropped out) were employed, enrolled in college, or both.

Although most youth either work or attend school, their economic circumstances vary significantly. Differences in employment and earnings--both current and prospective--are particularly important for analyzing which youth might decide to participate in a national service program.

Among youth not enrolled in school, the economic circumstances of high school dropouts are much worse than those of high school graduates and improve only marginally with age. In October 1989, about 45 percent of dropouts were

neither employed nor enrolled. Median weekly earnings for high school dropouts employed full time was about \$180 among youth ages 18-19, rising to \$220 among those ages 23-24.

High school graduates are generally in better economic circumstances and also show more mobility in terms of earnings and educational attainment. Almost 90 percent of graduates were enrolled in college or employed in October 1987. Median weekly earnings for graduates employed full time rose from \$190 among those 18-19 to almost \$280 among those 23-24 who had not completed four years of college. Young college graduates had average weekly earnings of \$390.

Weekly earnings are a measure of opportunity costs for employed youth, but some may work less than they would prefer, either because they cannot find employment or because they can find only part-time or seasonal work. Annual earnings thus provide an additional perspective on opportunity costs.

Among civilian youth who worked at all during 1987, median annual earnings ranged from \$3,200 for high school dropouts ages 18-19 to almost \$13,000 for college graduates ages 23-24. Median annual earnings of year-round, full-time workers ranged from \$8,300 for dropouts ages 18-19 to over \$19,000 for college graduates ages 23-24. A stipend and voucher comparable in real terms to those discussed below for full-time national service participants would have exceeded the annual earnings of 80 percent of youth 18-19 and 45 percent of those 23-24.

The career paths of high school graduates that generate their superior economic circumstances are highly diverse. Data for the high school class of 1980 show that only about 30 percent pursued a "traditional" educational path--entering college immediately after high school and remaining there for four consecutive years--and that only about 10 percent began working immediately after high school and were employed in each of twelve observation periods during the next six years. Most youth made a number of transitions during the first six years after graduation from high school.

Less than 1 percent of 1980 high school graduates delayed entry into college by exactly one year and subsequently enrolled for at least four of the next five years. This finding suggests that participation in a full-time, full-year national service program would entail a significant change in behavior for most college-bound youth. Moreover, the limited numbers of youth who chose this path make it difficult to determine whether national service would raise, lower, or not affect college completion rates.

IMPACTS OF THREE ILLUSTRATIVE NATIONAL SERVICE OPTIONS

This paper analyzes three illustrative service options that incorporate many elements of proposals currently under discussion. Because of variation among youth in economic circumstances, and because preferences for service would be likely to vary even among those in the same circumstances, no attempt is made to predict participation rates. The analysis focuses instead on the likely qualitative effects each option would have if its target participation levels were met.

Option A is a small-scale program in which the primary role of the federal government would be to encourage community service among youth and to serve as a clearinghouse. This option assumes that 25,000 net new full-time equivalent (FTE) service years would be generated annually, that youth would not be required to serve any specified number of hours, and that participants would not be compensated.

Option B is a medium-scale option intended to generate 250,000 FTE service years, with 200,000 full-time participants at 2,000 hours per year and 200,000 part-time participants at 500 hours per year. Full-time participants would serve one year and receive a \$7,500 stipend during service and a \$10,000 voucher upon completion of service. Part-time participants would serve two years and receive a \$4,000 voucher upon completion of service. Participation would be open to all youth, subject to the limitation that enough service positions were available.

Option C is a large-scale option intended to generate a net increase of 500,000 FTE service years. All participants would serve full time for one year, and would receive the same stipends and vouchers as full-time participants under Option B. This option would be open only to high school graduates but, as an entitlement, any graduate who wished to participate could do so. These features reflect the fact that Option C would create an explicit linkage between national service and federal student financial aid: Pell grants would be eliminated--the funds being used to pay for education vouchers--and eligibility for remaining aid would be restricted to youth who had completed a term of service. Thus, the effective cost of postsecondary education would be higher for students who would have been aided under the current system.

Two factors make analyzing the implications of the two large-scale national service programs difficult. First, it is unclear whether the participation incentives provided under Options B and C would attract the desired number of participants. In practice, policymakers would probably need to rely on a combination of research and program experience to determine an appropriate combination of stipends, vouchers, and program activities. Second, even if the planned participation goals were roughly achieved, neither recent history nor state programs provide guidance as to the probable magnitude of the effects those federal programs would have on youth labor markets and enrollment in postsecondary education. Economic analysis does, however, provide some qualitative insights.

Effects on the Labor Market

Because of its relatively small size and flexible terms of service, Option A would probably not have a major impact on the labor market.

To the extent that national service participants were drawn from youth who would otherwise have been employed, the target levels of participation for Options B and C would reduce the youth labor supply by about 1 percent to 3 percent. In the first year either option was in effect, there would be a decrease in labor supply because some who would have worked would choose service instead. Additional reductions would occur in subsequent years at the times when the first wave of participants would otherwise have completed or left their postsecondary schooling.

If full-time participation by youth who did not go on to further schooling was in proportion to their share of the youth population, the initial drop in supply would be on the order of 70,000 workers under Option B and about 125,000 under Option C. The second stage would involve a reduction of about 130,000 workers under Option B and 375,000 under Option C. (The decline would be larger for Option B if youth serving part time also gave up part-time jobs to do so.) As a result, wages (costs from the employer's viewpoint) in youth-intensive industries would rise as competing employers bid up the wages of nonparticipants.

Effects on Postsecondary Enrollment

Because of its relatively small size and flexible terms of service, Option A would probably not have a major impact on postsecondary enrollment.

It is likely that postsecondary educational institutions would experience a decrease in enrollment during the transition period under both Options B and C. Assuming that service took place in the year following high school graduation, postsecondary enrollment would fall in the first year an option was in place by the number of full-time participants who would otherwise have continued their education. If these youth entered full-time service in proportion to their share of the youth population, this decrease would be on the order of 130,000 under Option B (about 1 percent of projected total enrollment) and about 375,000 under Option C.

In contrast to their effects on the labor market, the long-run effects of Options B and C on postsecondary enrollment would probably be considerably smaller. In their last year of postsecondary enrollment, youth in the initial cohort of national service participants would offset the decline in enrollment resulting from new participants. Other things equal, therefore, postsecondary enrollments would return to their preservice levels.

In the long run, however, national service could lower enrollment rates through its effect in delaying entry into postsecondary schooling. However, youth who gained greater maturity during their year of service might be more likely to complete a degree program, and vouchers issued in exchange for service could enable more youth to begin or continue postsecondary schooling than are currently able to do so. The higher price of attending school (for those who receive federal aid under current rules) under Option C, however, could tend to reduce enrollment in the long run.

Federal Costs per Participant

In a steady-state situation--one in which the number of participants was constant from year to year and any start-up costs had already been incurred--budgetary costs per participant would have three components: stipends and benefits paid to participants during service, vouchers issued upon completion of service, and operating costs. Depending on how one defines national service and what the participants would do, total budgetary costs could range from negligible to almost \$40,000 per participant per year. Federal costs would be lower if costs were shared

with state and local governments or private nonprofit agencies or if payment of vouchers reduced federal expenditures for other programs--as would be the case for Option C.

The costs of stipends, benefits, and vouchers would depend mainly on the amounts provided under each option and, if the amount differed for full- and part-time service, on the relative numbers of participants in each category. These costs would not arise under Option A, because participants would not be compensated. For the other options, full-time participants would each receive a stipend of \$7,500 and a \$10,000 voucher. If health insurance was also provided (at an estimated cost of \$1,100 per participant), the costs of stipends, benefits, and vouchers would be \$18,600 for full-time participants. Part-time participants would cost less.

Annual operating costs are difficult to predict because they would depend on the type of activity in which the participants were engaged, but could add substantially to the total cost of supporting a national service participant. For example, CBO estimates that a program in which state, local, or nonprofit agencies sponsored participants would incur operating costs of about \$1,700 per year in 1991; in comparison, a residential conservation corps program would cost about \$19,000. This wide range means that the average operating cost would depend crucially on the numbers of youth in each type of program. Under three possible distributions of national service participants examined in this paper, average operating costs would range from about \$4,000 per participant to about \$9,300 per participant in 1991.

CHAPTER I. INTRODUCTION

During the 101st Congress, significant interest has been shown in the concept of national service--a term generally used to describe programs in which young people would perform "public service" work for little or no pay. The National and Community Service Act of 1990 was passed by the Senate in March and the National Service Act of 1990 was passed by the House of Representatives in September. These bills would authorize school-based service programs, conservation corps, and other youth service programs for two or four years.

National service has been the subject of legislative interest for at least two decades, and will be on the public policy agenda again in the future. One component of the Senate bill, for example, would establish full- and part-time service programs in ten states to serve as models for national service on a larger scale.

This paper discusses issues relevant to the design of a national service program, examines the attractiveness of national service to the nation's youth in relation to their existing alternatives, and analyzes the implications of alternative proposals for the labor market, postsecondary educational enrollment, and federal costs. Three illustrative service options--ranging in scale from 25,000 to 500,000 participants--are examined.

WHAT IS NATIONAL SERVICE?

National service means different things to different people, and proposals vary widely in terms of their objectives, intended participation levels, and implications. Two elements common to most definitions of national service, however, are the types of activities that would be considered public service and the notion of sacrifice on the part of participants.

Proponents of national service often list conservation work, health care, provision of services to the elderly or disabled, and military service as being appropriate public service tasks. Except for military service, however, what defines these activities as public service is not the tasks themselves, but the environment in which they would be undertaken and the intended beneficiaries. Thus, assisting a "meals on wheels" program would usually be considered public service, whereas working in a cafeteria in a government office building would not. Similarly, working in a for-profit hospital would be considered inappropriate, but the same task in a nonprofit hospital might not be.

The notion of sacrifice on the part of participants is more difficult to define. Discussions of national service typically presume that participants would incur personal costs, usually by forgoing earnings or other opportunities. Some analysts take this one step further, however, arguing that tasks for which individuals are compensated at market wage rates are devoid of "civic content." Thus, civilian government employees are not engaged in national service; nor are paid professionals working in health or community services.

In practice, the meaning of sacrifice becomes less clear. Under some proposals, national service would mean "volunteerism"--helping others without reaping personal financial gain. Other proposals would provide participants a level of compensation sufficient to maintain a minimal standard of living, but less than what they could earn elsewhere. Some would provide more generous compensation presumably to attract a greater number of participants. Proposals before the Congress span this range; several would compensate participants with stipends, fringe benefits, and post-service vouchers.

For this study, national service means any voluntary program intended to attract youth between the ages of 18 and 24 to civilian community service activities. Such programs may be broad-based or narrowly targeted, and may or may not compensate participants. School-based programs and those with military components are often included in national service proposals, but are not analyzed here.

RATIONALES FOR NATIONAL SERVICE

Proponents of national service offer three basic rationales. The first is what might be termed the "output-producing" rationale, in which national service would be justified by the benefits to society produced by participants. The second is the "input-enhancing" rationale, in which participants themselves would be the primary beneficiaries. Finally, national service is viewed by some as a civic obligation: youth would make sacrifices in exchange for the benefits that society has conferred (or will confer) on them.

These rationales do not necessarily preclude one another, but the relative importance of each has implications for the design of a service program. For example, a national service program intended primarily to benefit participants financially--or to provide them with training--could also yield benefits to society in general. It is less clear, however, that a service program based on the notion of civic obligation could meet its objectives and provide youth with significant financial benefits as well.

The Output-Producing Rationale

The output-producing rationale--often stated informally as "meeting unmet needs"--would have youth provide services that are too expensive for either the private or public sectors to provide through regular arrangements. This rationale assumes that youth could provide some services at lower cost because national service participants would not be subject to minimum or prevailing wage laws and would not receive market-level wages. The claim has been made that over three million "jobs" could be filled.^{1/}

Critics of the output-producing rationale contend that "needs" are unmet because society--as individuals or collectively--is unwilling to pay for them and,

1. Richard Danzig and Peter Szanton, National Service: What Would It Mean? (Lexington, Mass.: D.C. Heath and Company, 1986), p. 40.

therefore, does not want them. Society might indeed place a positive value on having cleaner parks, for example, but be unwilling to give up other goods and services it now consumes to obtain them. Questions have also been raised about the value of services that could be provided by youth with only minimal work experience.

The Input-Enhancing Rationale

The input-enhancing rationale embodies several concepts, each related to benefiting national service participants themselves. Some people, for example, view national service as a way of reducing "alienation" among youth by instilling them with a greater awareness of the society in which they live. Such awareness could be developed by providing youth of different social or economic backgrounds with shared experiences, or by exposing better-off youth to social problems they might not otherwise see.

A second aspect of the input-enhancing rationale is the notion of national service as a vehicle to promote education and training, particularly for low-income youth and those with educational deficiencies. Under some proposals, training would be provided directly to participants during their service. Other proposals would provide training indirectly by using national service to allocate or expand federal student financial aid. One proposal, for example, would require youth to participate in a national service program to be eligible for federally-guaranteed student loans. Alternatively, participants could be provided with post-service vouchers to pay for part or all of the costs of their continued education.

Finally, national service has also been seen as a means of reducing unemployment among youth. This rationale has received less attention in recent discussion, although youth still have much higher unemployment rates than adults.

The Civic Obligation Rationale

Underlying most national service proposals is the idea that citizens have an obligation to society that extends beyond obeying the law and paying taxes. According to this notion, the benefits society provides to individuals should be earned, and service while young is the best time to "pay" for them.

There is a divergence of opinion, however, on whether such an obligation should be formalized in the context of national service. Some argue that an element of compulsion--such as requiring service in exchange for eligibility for federal student financial aid or imposing an income tax surcharge on youth who did not participate--would be necessary to ensure that all youth fulfilled their obligations. Others argue that compulsion would work against imbuing participants with a sense of community.

EXISTING YOUTH SERVICE PROGRAMS

The federal government allocates only limited resources directly to domestic youth service programs. Outlays for ACTION, the federal agency that oversees Volunteers

in Service to America (VISTA) and other programs, were about \$160 million in 1989, but young people accounted for very few of the participants in ACTION programs. Youth between 18 and 21 accounted for only about 1 percent of the approximately 2,700 participants in the VISTA program in 1989. Persons between the ages of 22 and 26 accounted for another 12 percent.^{2/}

Youth service programs are also operated by state and local governments, and collectively enlist about 7,000 participants annually. Individual programs vary in size (from about 2,000 participants to fewer than 50), in their targeting, and in their activities. The largest is the California Conservation Corps, a residential program that trains youth in conservation skills. Participants enlist for one year and receive the minimum wage during their service.

The activities undertaken in many state programs are similar to those proposed for national service participants and offer some guidance as to what a federal national service program might cost. Their relevance for analyzing other aspects of national service is less clear. None operates on a scale comparable to the most comprehensive federal programs that have been proposed, and many are targeted at a narrower segment of the population than are the proposals for a federal program.

QUESTIONS RAISED BY NATIONAL SERVICE

National service raises important policy questions, but quantitative answers cannot be provided for many of them. Qualitative analysis can provide useful insights, however, even when "hard" estimates cannot be made.

How Many National Service Participants Would Be Needed?

Some national service proposals are intended to attract very large numbers of participants: 500,000 or more per year, or about one-sixth of those reaching the entry age. An important question is whether there would be a sufficient number of "useful" jobs and whether the qualifications of participants would be appropriate for those jobs. Chapter II discusses estimates that have been made of how many national service positions could be created, and how the nature of these positions would affect recruitment.

How Many (and Which) Youth Would Be Attracted to National Service?

The implications of national service for the labor market, postsecondary education, and federal costs would depend crucially on the number and characteristics of participants. The decision to participate in a national service program, however,

2. Some additional support is provided through the college work/study component of the federal student financial aid program. Institutions are permitted to use up to 10 percent of work/study funds to support eligible students in community service positions. Just under \$800 million in work/study funds was available in 1989.

would reside with individual youth, whose decisions would depend on subjective assessments of the costs and benefits--both tangible and intangible--of service. Consequently, estimating participation rates--much less how such rates might vary in response to changes in economic and social conditions or program parameters--cannot be done with any degree of precision.

Although the responses of youth to a national service program cannot be determined precisely, it is possible to assess many of the factors that would influence those responses. Chapter III of this paper examines the attitudes of youth to national service generally, analyzes factors that would enter into youths' participation decisions, and presents data on what youth would give up to participate. The likely qualitative impacts of different service options are analyzed in Chapter IV under the assumption that participation targets would be met or exceeded.

How Would the Military Fit In?

National service could affect the military in two ways. First, some proposals include components that would permit youth to serve in the military, typically for a shorter period than the standard first-term enlistment. Second, most proposals--but especially large-scale options in which participants would be compensated--could compete with the military for available youth.

The potential effects of national service on the military's experience profile and readiness are beyond the scope of this study, and the options considered in Chapter IV do not include military components. The potential implications of national service for military recruiting are more difficult to assess, particularly in view of recent world developments. This paper assumes that, even for the largest option examined here, military manpower requirements would be met. That is, if national service reduced the net supply of manpower available to the military, recruiting would presumably be intensified or pay raised as necessary.

How Much Would a National Service Program Cost?

The costs of a national service program would depend on the number of participants and the costs per participant. The latter would depend in turn on the types of activities undertaken, the amount of training and supervision participants required, and the amount of compensation provided to participants.^{3/}

The number and characteristics of participants and the costs incurred for each are not independent. The level of compensation, for example, would be an important determinant of how many youth would want to participate. Such interactions do not permit a straightforward analysis. Programs targeted toward high school dropouts and low-skill youth might have far fewer participants than programs aimed at college-bound youth, but be far more expensive because of the additional training and supervision required.

3. If national service affected the supply of military personnel, it could indirectly increase the costs of meeting military personnel requirements.

The analysis of federal costs in Chapter IV focuses on the components of costs per participant. The estimates of total costs made there assume that the mix of program elements would be consistent with the intended number of participants; substantial uncertainty surrounds these estimates.

CHAPTER II. ISSUES IN DESIGNING A NATIONAL

SERVICE PROGRAM

Issues that arise in designing a national service program include what participants would do, whether an effort would be made to influence the number and characteristics of participants by establishing eligibility criteria or offering incentives, whether specific terms of service would be required, whether service would be linked to federal student financial aid programs, and how a national service program would be administered.

WHAT WOULD PARTICIPANTS DO?

The types of activities participants would undertake in a national service program would determine the value of their services to society. The types of activities would also be related to the characteristics of participants and program costs. An equally important question would be how to match the participants with the jobs.

Types of Service Activities

Three broad types of activity and related organizational models have been proposed: sponsorship programs, "urban service" programs, and conservation corps programs. These programs would differ from one another in terms of the physical activities involved and in who would provide any training and supervision required.

Sponsorship Programs. This approach would match youth with nonprofit organizations and with state or local governments. Participants would function in low-skill capacities in a variety of fields; they could, for example, serve as orderlies in hospitals or nursing homes, as teachers' aides in schools, or as assistants to day care providers.

Participants in sponsorship programs could free the sponsors' professional staff from clerical and auxiliary tasks and would gain entry-level experience in a variety of fields. Although existing supervisory capacity could be used for participants, sponsors would usually have to provide at least some training, depending on the qualifications of participants. For some service options, sponsorship programs would also entail monitoring costs to ensure that sponsors met applicable requirements and that participants fulfilled their obligations.

Estimates of the number of slots that could be generated (which might not be the same as the number needed) range upward of three million per year. From the narrow perspective of program design, however, the important issue is not the potential number of "jobs" that could be generated--which is virtually unlimited--but the number of participants that nonprofit organizations and state and local governments would accept. Although many organizations would regard participants as free help, others might find that the costs of providing training and supervision outweighed the benefits.

Participants in sponsorship programs might displace paid workers, because the tasks undertaken by participants would be similar to those performed (or that could be performed) by paid employees. Depending on the costs associated with accepting youth, organizations might have an incentive to substitute national service participants for existing workers or for workers they would have hired. Because most national service participants would have limited work experience, the paid employees most likely to be displaced would be those with few skills.^{1/} Strategies that might be used to reduce displacement would include requiring sponsors to pay a fee to the federal government, to maintain effort in hiring paid employees, or to maintain a fixed ratio of paid employees to national service participants. By raising the costs of accepting participants, however, these steps could reduce the number of organizations willing to sponsor youth.

A second issue involves the specification of acceptable organizations and activities. Would all nonprofit organizations be eligible to accept national service participants, or would some--such as church-based entities and advocacy groups--be excluded? What would constitute acceptable duties? The answers to these questions would depend, in part, on the goals of the option in question.

Urban Service. Participants in urban service programs would perform a wide range of tasks, such as assisting with urban revitalization projects and providing care to the elderly or disabled. Two key distinctions between this and the sponsorship approach are that participants would work in teams and that the federal or state government agencies administering the program would need to hire professional supervisory staff. Approximately 50,000 slots might be made available; as with sponsorship programs, the limit on the number of slots would be fiscal, not technical.

The costs of urban service programs could be substantial if large amounts of training and supervision were provided. Limiting costs by restricting participation to those needing the least training and supervision, however, would also limit the benefits available for disadvantaged youth.

Conservation Corps. Many national service proposals include conservation corps programs similar to existing programs run at the state level. Youth would typically be involved in conservation activities, such as planting trees, grading trails, and maintaining parks. It has been estimated that conservation activities might generate between 150,000 and 200,000 slots. Because of their impact on costs, important issues from a program design perspective are whether participants would live on site and whether training would be provided.

In general, conservation corps programs would operate in rural and isolated areas, some distance from the youth who would staff them. This separation means that participants would need to be provided with on-site housing or transportation. Providing housing would be expensive, and raises the question whether youth would be willing to participate in a program that isolated them from their friends and family. Transporting them might not be a great deal cheaper per hour of service, however, if they had to be carried substantial distances.

1. Depending on the nature of the program, some current volunteer workers would also be displaced, raising the question whether there would be a net increase in "volunteerism."

For some conservation corps activities, participants might need to use specialized equipment. As many youth would not have the necessary training, the question arises whether to provide it or whether to limit participation to youth with experience. Costs would be lower if only limited training was provided, and benefits would be higher if training was limited to types that could be used in subsequent employment. These decisions would, however, limit the range of tasks that could be performed.

Matching National Service Participants with Jobs

How would potential national service participants be matched with available positions? The value of participants' output would depend in large measure on how well each was suited to his or her assigned tasks. At a minimum, the participants' suitability for activities would depend on whether they were academically or vocationally qualified. One would not want to send high school dropouts to work as tutors, for example. Possibly more important, however, would be their attitudes. National service is often viewed by proponents as a vehicle to reach "alienated" youth. Such youth might respond better in a structured environment, such as a residential conservation corps, than under a sponsorship program, although it might be more difficult to attract them to the structured environment.

How well the preferences of participants matched the available national service positions would also have an important influence on recruitment. On the one hand, options that left the choice up to participants would be more attractive to youth--and would have correspondingly higher participation rates--than those that did not. On the other hand, the preferences of prospective participants might not match their skills or the areas where the need for service was deemed to be greatest.

Permitting participants to choose the types of program they wished to enter would affect not only the number of youth who signed up, but also the number who stayed. Youth assigned to positions that they considered too onerous would be under no legal compulsion to remain there. A high dropout rate would result in higher costs in relation to the benefits generated by the programs.

PARTICIPATION CRITERIA, INCENTIVES, AND TERMS OF SERVICE

The decision to participate in national service would reside with the young people themselves, whose subjective valuations of the costs and benefits of service could vary widely. In the abstract, there is no way of being certain how many and which categories of youth would want to participate.

This uncertainty could be reduced in several ways. First, criteria could be established that would limit the number or characteristics of youth eligible to participate. Alternatively--or in addition--participation incentives could be structured to attract the desired number of participants. Such incentives could also determine, to some extent, the characteristics of participants. Finally, the terms of service offered to youth would help determine who would participate.

Participation Criteria

If federal costs did not vary with the number of participants--say, because the federal role was primarily one of making youth aware of service opportunities--there would be little budgetary reason to limit the total number of participants. It might still be desirable, however, to establish criteria for admission to ensure that participants were sufficiently qualified.

If the federal role was more extensive, participation criteria might be necessary to limit total program costs, to ensure that participants were engaged in useful activities, or to target the program toward youth having specific characteristics. For an entitlement program, limits could be imposed indirectly, perhaps by requiring participants to be a certain age, to have attained a minimum level of schooling, or to be disadvantaged in some way. For an appropriated program, limits could also be imposed directly by making a fixed number of positions available. In this case, guidelines for selecting participants could be established or responsibility could be delegated to state or local governments.

Participation Incentives

Some altruistic young people would participate in national service without financial compensation, but obtaining a significant commitment of time from a large number of youth would probably require adding incentives to altruism. Incentives could be positive, with rewards for those who participated, or negative, with penalties for those who did not.

National service proposals include both positive and negative incentives. Among the positive incentives that have been proposed are issuing merit awards and citations to participants, paying cash stipends or living allowances, and providing restricted-use vouchers that would be issued upon completion of service. The negative incentives that have been proposed include limiting eligibility for some student financial aid programs to participants in national service, and imposing income tax surcharges on nonparticipants.

The amount of financial compensation provided to participants would have an important influence on the number of people to whom national service would be attractive. In general, the larger the stipend or voucher provided, the larger the number who would be willing to participate in a voluntary national service program. At the same time, however, greater financial compensation would generally mean higher federal costs.

Participation incentives would probably influence not only the number of participants, but also their demographic and economic characteristics. Vouchers that could be redeemed only for education expenses, for example, would probably have little or no value to those who did not desire additional schooling beyond high school. Similarly, withholding eligibility for student financial aid from those who did not participate in national service would be likely to affect a different group of youth than if an income tax surcharge was imposed on nonparticipants.

Terms of Service

For programs in which participants were compensated financially, or in which participation was linked to student financial aid, terms of service would need to be specified. Otherwise, it would not be clear whether participants had completed their obligations. For proposals in which participation would be uncompensated, commitments to serve for a specified time would probably not be necessary, although some limits might be necessary to keep administrative and supervisory costs down. If more stringent limits were imposed, they would be important determinants of who would participate.

Many national service proposals call for participants to commit themselves to the equivalent of from one year to two years on a full-time basis. Although not generally specified, time spent in training would presumably be counted as time in national service.

Some proposals would permit people to participate on a part-time basis, typically for a longer duration of service. Part-time service could make it easier for youth to participate without disrupting work and/or school plans, thus increasing total participation. The costs of administering a program with part-time participants could be higher, however, than for a program with an equivalent number of full-time participants. Moreover, part-time participants might have fewer opportunities for enhancing their skills.

The length of service could be specified. Shorter periods--say six months--could be attractive to a larger number of youth, such as students taking a one-semester break from their studies. Longer periods might justify the provision of more extensive training.

Attrition

It must be expected that some--and possibly many--participants in a voluntary national service program would not complete their terms of service. For example, only an estimated 20 percent to 30 percent of participants in the California Conservation Corps complete a one-year term of service. Data from the Armed Forces indicate that about 10 percent of recruits leave before completing the first six months of service and that about one-quarter do not complete their first enlistment term.

Attrition means that maintaining a given number of positions on average would require a much larger number of entrants. For example, a program with a cumulative annual attrition rate of 25 percent would generate 87,500 service years for every 100,000 new recruits if attrition occurred evenly throughout the year. Moreover, training provided to youth who left might be wasted.

One strategy to reduce attrition would be to defer a part or all of any compensation, perhaps by providing vouchers upon completion of service. Deferring part of any compensation for service until participants completed their terms could have positive results similar to those ascribed to employer-paid pensions: reduced turnover, with a corresponding reduction in training and administrative costs, and

a more stable group of participants than might be attracted to national service otherwise.

Deferring compensation could also have negative effects. First, if benefits were less than fully prorated, people might be less willing to participate for fear of losing benefits if they did not complete their terms. That is, those who were uncertain about their aptitude for national service might value promised benefits at less than the nominal value of those benefits. In addition, for options in which youth could participate on a part-time basis, more might be attracted if education vouchers could be earned and used while in school.

An intermediate option would be partial proration, but with delayed "vesting." For example, participants in a year-long program might receive no post-service benefits until six months of service, but would then gradually acquire rights during the remaining six months. Those who left service for other opportunities would not put all of their post-service compensation at risk to do so.

Finally, it would probably be necessary to specify "acceptable" reasons for leaving service early while still receiving post-service benefits. Such reasons might include accidents, changes in health status, or family crises.

NATIONAL SERVICE AND FEDERAL STUDENT FINANCIAL AID

Some proponents of national service--notably the Democratic Leadership Council (DLC)--have proposed formalizing the civic obligation rationale by explicitly linking service with federal student financial aid programs. The original DLC proposal would replace Pell and other grants with education vouchers for national service, and would condition eligibility for student loans on the successful completion of a term of service.

Linking national service with student aid would raise questions both about broad policy goals and about narrower issues of program design:

- o How many national service vouchers could be funded by abolishing federal student aid grant programs?
- o How would the distribution of aid differ?
- o How would older students be treated?
- o How do proposed voucher levels compare with the "lifetime" amount of Pell grants that individuals receive?

The Number of National Service Positions

Pell Grants and Supplemental Educational Opportunity Grants (SEOGs) accounted for outlays of \$5 billion in 1989. The number of vouchers that could be funded by eliminating these programs can be determined by dividing total outlays for the program by the size (or average size) of the voucher. Thus, if national service

participants were provided with \$10,000 vouchers, for example, about 500,000 vouchers could be funded annually.

Determining the number of national service positions that could be funded without increasing outlays is more difficult, mainly because the average cost of a position could vary widely depending on the level of compensation provided to participants and the mix of position types. Based on the costs--including stipends and vouchers--for the hypothetical option (analyzed in Chapter IV) that links aid with service, funding for the Pell and SEOG programs would support between about 140,000 and 260,000 full-time-equivalent (2,000 hours per year) positions, compared with the 3.9 million Pell Grant and SEOG awards made in 1989.

The Distribution of Aid

Replacing grant programs with vouchers would leave total student financial aid spending roughly unchanged, depending on how other student financial aid programs were integrated with national service.^{2/} This would, however, represent a fundamental change in federal education policy because aid would no longer be allocated on the basis of financial need--which reflects both income and costs of education. Whether such a change would be desirable cannot be assessed analytically, however.

Very different outcomes would be possible, depending primarily on how young people viewed national service--that is, who participated. At one extreme is the possibility that many youth might elect not to participate, thus forgoing federal education assistance. Another possibility is that only those who now receive student aid would want to participate. In that case, education aid would continue to go to low-income youth, but fewer would receive aid--unless more national service positions were made available than simply abolishing grant programs would permit--and all would bear higher real costs because they would have to complete a year of service first. Finally, there is the possibility that a sufficiently attractive national service program could result in those from low-income families being "crowded out" by youth from high-income families.

Treatment of Older Students

Students age 25 and older account for about one-third of both federal student aid recipients and total student aid expenditures. The civic obligation rationale used to link service with aid does not provide much conceptual support for exempting these students, since the idea of a societal obligation presumably extends to all citizens. Moreover, establishing a separate aid program for students age 25 and older could encourage some youth to delay college entry as a means of avoiding service. But many older students have families and might have to make much greater sacrifices to obtain financial aid.

2. Even if spending was held constant, federal support for education would decline to the extent that national service participants were permitted to use (and did use) their vouchers for purposes other than schooling--such as housing expenses.

Comparison with the Current Provision of Pell Grants

A \$10,000 voucher is roughly comparable to the cumulative total that a student would get who received the maximum annual Pell grant (\$2,300) in each of four years of schooling. The average cumulative value of Pell grant aid is likely to be much smaller, however, because most aid recipients do not receive the maximum and most students do not complete four years of school. In 1987--the most recent year for which data are available--average actual awards ranged between \$1,250 and \$1,450 for students in their first through fourth years of school. A youth who received the average grant in each of four years of school would have received a cumulative total of \$5,400; one who received the average grant for two years would have received about \$2,550.

ADMINISTERING NATIONAL SERVICE

Two issues that would arise in conjunction with establishing and administering a national service program concern the choice of an appropriate administrative model and whether to require state and local governments and any other sponsors to pay some of the costs.

Administrative Organization

A national service program could be administered in a variety of ways. For example, management functions might be handled through a new federally chartered corporation similar to the Corporation for Public Broadcasting. Alternatively, these functions might be delegated to existing federal agencies, such as ACTION or the Departments of Education or Labor, which have jurisdiction over broadly similar (if smaller) or related programs.

Establishing a separate agency could entail higher costs than using existing administrative infrastructure, but might also ensure that national service was first among the agency's priorities. In either case, the federal entity could administer all national service activities directly, or could make grants to state or local governments. Having a federal agency administer programs directly could ensure consistent treatment of national service participants among states, but it might be less efficient because of varying circumstances among jurisdictions.

Cost Sharing

Under some national service proposals, state or local governments would be required to pay for part of the costs if they wished to participate. In addition, fees could be charged to nonprofit organizations that accepted participants.

The principal advantage associated with cost sharing is that federal costs would be reduced. In addition, requiring sponsoring organizations to pay a fee could help to ensure that participants' services were put to good use. Cost sharing could, however, lead some states and nonprofit organizations to choose not to participate; and those least able to pay might be in areas of the country where the need for participants' services was greatest.

CHAPTER III. AVAILABILITY OF YOUTH FOR SERVICE

The availability of youth for national service would depend on three factors: the size of the youth population; the criteria, if any, for determining eligibility; and the number of those eligible who would be willing to enlist.

It is easy to analyze how the first two factors--the size of the population and the criteria for participation--would affect the availability of youth for national service. Among eligible youth, however, the willingness to enlist would depend on what they would have to give up--that is, their opportunity costs--and on the benefits they would receive. Because both costs and benefits would include nonfinancial components, which cannot be measured, it is impossible to be certain how many would choose to participate. It is possible, however, to examine attitudes toward national service, to analyze factors that would influence the financial attractiveness of service, and to determine the number for whom national service would be financially rewarding.

This chapter focuses on the implications of various civilian national service options open to youth, defined here as people ages 18 through 24, who have graduated from or dropped out of high school.^{1/} Not all of the data needed to address questions for this broad group are readily available, however. The analysis therefore draws mainly on data for two groups:

- o The civilian youth population, defined as those who have graduated from or dropped out of high school and who are not on active duty in the military; and
- o 1980 high school graduates, defined as people who were high school seniors in the spring of 1980 and who graduated with their class in May or June of that year.

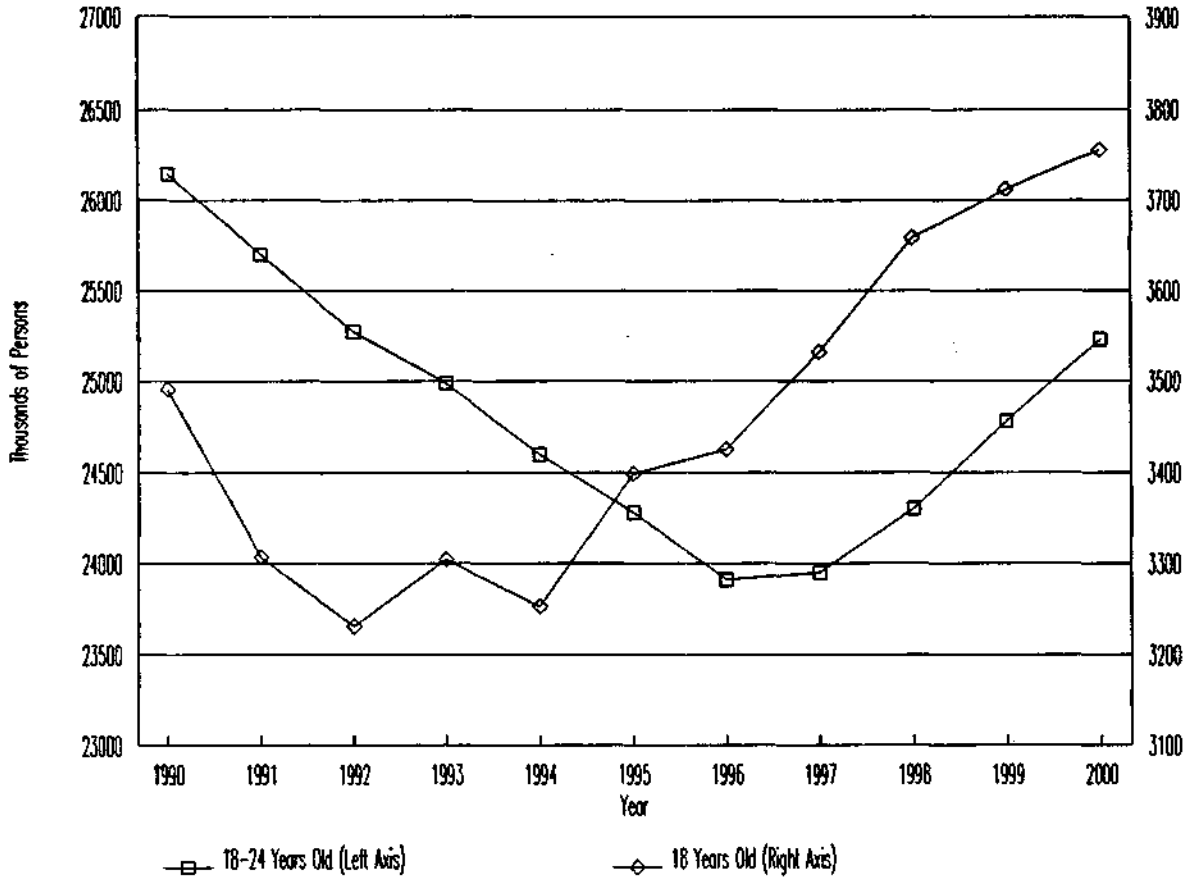
For the civilian youth population, detailed information about college enrollment, employment and earnings, and family status is available from the October 1987 and March 1988 Current Population Surveys (CPS). In addition, the data for this group have been supplemented where possible with information on youth in the military. Longitudinal data for 1980 high school graduates from the 1980 Senior Cohort of the High School and Beyond (HS&B) Survey provide information on career paths during the first six years after graduation.

SIZE OF THE YOUTH POPULATION

There are approximately 26 million youth ages 18 through 24 in 1990, of whom about 3.5 million are 18. The number of 18-year-olds is projected to fall to 93 percent of its 1990 level by 1992, but to begin increasing in 1994 (see Figure 1). As

1. Some national service proposals (including the bills passed by the House and the Senate) also include programs for youth who are still in school. Such programs are not considered in this analysis.

FIGURE 1. YOUTH POPULATION TRENDS, 1990-2000
(In thousands of persons)



SOURCE: Congressional Budget Office based on data from U.S. Bureau of the Census, Projections of the Population of the United States, by Age, Sex, and Race: 1988 to 2080 (January 1989).

NOTE: The data reflect the Census Bureau's Middle Series projections for the total youth population on July 1 of the year indicated.

the number of entrants decreases, the total youth population will decrease steadily through the middle of the decade, but recover slowly thereafter. It will remain below its 1990 level in 2000.

In the late 1970s and early 1980s, national service was seen by some as a solution to persistently high youth unemployment rates. Youth unemployment remains relatively high--9.9 percent for those ages 18 through 24 in 1989, compared with 4.2 percent for people ages 25 through 54--but some analysts contend that youth labor market problems in the 1990s are likely to arise as labor shortages, not surpluses.

Youth will become more scarce during this decade, both in absolute numbers and as a fraction of the entire U.S. population. Consequently, national service would compete with employers--including the military (see Box)--and with postsecondary educational institutions for a shrinking supply of youth. Whether the objectives of national service would justify this additional competition--and the increases in wage rates and labor costs that would probably occur--is an important issue in considering options intended to attract large numbers of participants.

THE EFFECTS OF PARTICIPATION CRITERIA

Eligibility for national service could be limited by establishing criteria for participation on the basis of such factors as graduation from high school, family income, responsibility for children, or health status. Different criteria would have different effects on the number and characteristics of eligible youth.

Limit Participation to High School Graduates

Limiting participation to high school graduates would affect both the size of the eligible population and its demographic composition. High school graduates account for about 85 percent of civilian youth, but there are differences in graduation rates between men and women and between whites and blacks. These differences reflect higher rates of high school completion among women, as well as the fact that many male high school graduates--particularly blacks--are in the military. Thus, assuming no change in graduation rates in response to national service, such a criterion would disproportionately limit the number of men, especially black men, eligible to participate in national service.

Limit Participation to Youth in Low-Income Families

If national service was viewed primarily as a vehicle to provide education and training assistance to low-income youth, participation might be limited to those whose family incomes were below some specified level. The concept of "family" income is difficult to define for persons 18-24, however, because some live with or are supported by their parents, whereas others are independent.

Limiting participation to youth with family incomes below the official poverty threshold--even to some amount above it--would significantly reduce the number of

National Service and the Military

Some analysts and military experts have expressed concern that national service could have deleterious effects on the military. First, some proposals include a military service component that would permit short-term enlistment and could create problems for the military's experience profile and training requirements. Second, some options might affect the costs of recruitment, either directly by attracting participants to civilian service who would otherwise have enlisted, or indirectly by raising the wages of all youth (see Chapter IV).

These issues are beyond the scope of this study and are not addressed here, except to note which youth the military currently attracts. The options considered here would entail civilian service only--so that none would have a direct impact on force structure. Moreover, it is assumed that, to the extent national service would compete with maintaining military manpower, the latter would be given precedence by raising military pay or reinstating a draft as necessary. This is a strong assumption, particularly in view of projected declines in the youth population. But reductions in troop strength proposed for western Europe, and other proposed cuts in defense spending, could significantly ease any prospective competition between the military and a national service program.

National service could influence the demographic composition of military recruits even if their number was held constant at no extra cost. The extent of this influence would depend on a number of factors, including the criteria for participating in national service, the level of compensation, and the types of activities.

The analysis in this paper is based largely on data for civilian youth, who differ in three important ways from youth in the military. First, because the military primarily attracts men--about 7 percent of non-high school male youth--the civilian population is disproportionately female. Second, the armed forces attract relatively more blacks than whites. Finally, youth in the military are more likely than civilian youth to have completed high school.

civilian youth eligible. Approximately 15 percent of all youth 18 through 24 had family incomes below the poverty threshold in 1987 (see Table 1). About 20 percent had incomes less than 125 percent of the poverty threshold; 25 percent had incomes less than 150 percent.

In addition to reducing the number of youth eligible for service, income-based participation criteria would also affect the demographic composition of those eligible (Table 2). White men, for example, account for 41 percent of the civilian youth population, but for only 27 percent of youth with family incomes below the poverty threshold. Black women, in contrast, make up 7 percent of the civilian youth population, but 17 percent of those with family incomes below the poverty threshold.

Limit Participation to Youth Without Children

In addition to possible economic hardship, some national service positions--such as those in conservation corps programs that would involve service away from home--might put undue stress on young families. For options that would condition student financial aid on service, therefore, youth with children in the household might be exempted.^{2/}

Youth without children account for most of the civilian population at ages 18-19 and about 75 percent at ages 23-24. There are, however, significant differences by sex and race. Black women are much less likely than any other demographic group to be childless at every age between 18 and 24. Less than 70 percent of black women 18-19 and less than 45 percent of those 23-24 are childless.

The presence of children is closely related to high school completion. About 40 percent of female high school dropouts are childless, compared with about 80 percent of female high school graduates. The incremental effects of limiting participation on the basis of family status would thus be much smaller if a high school diploma was already required, but greater if participation was limited to youth in low-income families.

Limit Participation on the Basis of Health Status or Disability

It is reasonable to expect that health status would be less important as a qualification for civilian national service than for military service, but it could influence willingness to participate. In addition, conditions that limit labor force participation might mean that participation in a national service program would impose an undue burden. For these reasons, youth with health limitations might be exempted from service required for student financial aid.

2. Alternatively, child care could be provided to participants who required it. The cost estimates presented in Chapter IV, however, do not take this possibility into account.

TABLE 1. DISTRIBUTION OF CIVILIAN YOUTH AGES 18 THROUGH 24 BY FAMILY INCOME LEVEL, SEX, AND RACE, 1987

	Percent With Family Income Below		
	100 Percent Of Poverty	125 Percent Of Poverty	150 Percent Of Poverty
All Youth ^{a/}	15	20	25
White Males	10	14	19
Black Males	27	35	41
White Females	14	19	24
Black Females	35	41	47

SOURCE: Congressional Budget Office tabulations of data from the March 1988 Current Population Survey.

NOTE: Family income is the sum of the total cash incomes of each family member. Families comprise groups of persons residing together who are related by birth, marriage, or adoption, and unrelated individuals.

a. Includes other races not shown separately.

TABLE 2. DEMOGRAPHIC COMPOSITION OF THE CIVILIAN YOUTH POPULATION BY FAMILY INCOME LEVEL, 1987 (In percent)

	Demographic Composition of Youth With Family Income Below			All Income Levels
	100 Percent Of Poverty	125 Percent Of Poverty	150 Percent Of Poverty	
All Youth ^{a/}	100	100	100	100
White Males	27	30	32	41
Black Males	11	11	10	6
White Females	41	41	41	42
Black Females	17	15	14	7

SOURCE: Congressional Budget Office tabulations of data from the March 1988 Current Population Survey.

NOTE: Family income is the sum of the total cash incomes of each family member. Families comprise groups of persons residing together who are related by birth, marriage, or adoption, and unrelated individuals.

a. Includes other races not shown separately.

Information on the number of youth who would be physically unable to perform national service tasks is not readily available, but data for 1980 high school graduates indicate that differences in enrollment and employment between youth with and without disabilities are small on average.^{3/} Approximately 7 percent of all graduates were either in a program for handicapped students during their senior year or reported some form of disability. Of them, 80 percent were enrolled or employed in February 1986, compared with 86 percent of other youth. The data also suggest that youth with disabilities are as likely as their peers to participate in volunteer activities.

ATTITUDES OF YOUTH TOWARD NATIONAL SERVICE

One way of assessing interest among young people in national service may be to look at what they do now: How many volunteer? How much time do they devote to volunteer work? What types of activities do they undertake?

Another approach is to examine youths' responses about their preferences for national service under various hypothetical options: How many youth favor national service? Are they different from those who do not? Survey data indicate fairly widespread interest, but the extent to which such interest would translate into actual participation is less clear.

Current Volunteer Activities of Youth

Data from a supplement to the May 1989 CPS indicate that about one in eight young people participated in formal volunteer work during the preceding year (see Table 3). Youth were about half as likely to volunteer as were adults, and those who did volunteer tended to do so for about half as many weeks during the year.^{4/}

Among youth who volunteered, the median number of hours per week was between 4 and 5, and about 80 percent worked fewer than 10 hours per week. The distribution of hours was very similar for youth and adults, a somewhat surprising fact in view of the differences in the likelihood of their volunteering at all.

About one-third of those who volunteered during the year did so primarily through a church or other religious organization. Hospitals, schools, and social welfare organizations--in which volunteer activities would be most similar to those envisioned by the proponents of national service--accounted for just over 40 percent of volunteers. Put differently, about 4 percent of all youth volunteered for one of these organizations.

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3. This sample excludes youth with disabilities who were unable to complete high school, but it is the relevant population in the context of eligibility for federal student financial aid.
 4. Other surveys show much higher rates for both groups and a narrower gap between them. A 1985 Gallup poll, for example, indicated that over 40 percent of youth 18-24 had volunteered during the preceding 12 months, compared with just under 50 percent for the whole population. Some of this difference may reflect the exclusion of informal volunteer work--work not done through an organization--from the CPS definition.

Preferences of Youth for National Service

The responses of youth to survey questions suggest that their interest in national service is fairly high. A majority of them view service as an obligation of citizenship and favor providing financial incentives for service. Similarly, a majority responded that they would participate in an option that linked service with federal student financial aid.

TABLE 3. VOLUNTEER ACTIVITIES OF CIVILIAN YOUTH AGES 16 THROUGH 24, MAY 1989

	Age	
	16 to 19	20 to 24
Percent Volunteering in Previous Twelve Months	13.4	11.4
Percent Volunteering by Type of Organization		
All organizations	100.0	100.0
Health	9.2	11.9
Education	26.8	18.5
Social welfare	7.0	11.6
Civic or political	8.9	12.7
Recreational	8.2	8.0
Religious	34.4	30.5
Other	5.5	6.8
Median Hours per Week (During weeks volunteered)	4.1	4.6
Median Weeks per Year (Among volunteers)	13.0	12.1

SOURCE: Bureau of Labor Statistics press release, USDL 90-154, March 1990.

National Service Generally. Data from a 1989 survey of youth 15 to 24 by People for the American Way (PAW) suggest that community service is regarded as a civic obligation by a majority: 60 percent agreed that volunteering time to help in the community is something that all citizens should do. The PAW study also found that almost 40 percent of youth had performed some community service during the previous 12 months. Almost a third of those who indicated why they were involved reported that it was through a school or church.^{5/}

Youth responding to the PAW survey favored the use of tangible incentives to encourage service, but only if the incentives were positive. Thus almost 90 percent viewed giving high school students extra credit for community service as a good idea, but only 50 percent favored making service a requirement for graduation from high school. Similarly, almost 90 percent favored giving young people extra benefits--such as student loans or other financial assistance--for getting involved in community or military service. Only 30 percent favored making service a condition of eligibility for government benefits. And only 20 percent thought requiring all youth to give one year of public service would be a good idea.

National Service Linked to Federal Student Financial Aid. In 1988, respondents to the Youth Attitude Tracking Study (YATS) were told that under a proposal then being considered by the Congress, youth could participate in one of three programs and, upon completion of service, receive a \$20,000 voucher that could be redeemed for education or vocational training expenses or a down payment on a house. Respondents were also told that vouchers would replace current federal higher education aid programs (such as Pell grants and student loans).

Three service alternatives were described to respondents: four years of military service with full pay; two years of military service at half pay; and two years of service in a civilian setting, such as the Peace Corps, hospitals, or day care centers, at half the military pay. Respondents could also choose no service.

Among youth ages 16-18, 55 percent chose one of the national service alternatives described.^{6/} Most differences among demographic groups related to differences in the type of service chosen, not whether they wished to serve at all (see Table 4). Service was chosen more often by men than by women and by nonwhites than by whites, primarily because relatively more male and nonwhite youth chose military service. The fraction choosing civilian service was similar for white and nonwhite youth.

The YATS data suggest that educational attainment could influence both whether youth would participate and which option they would select (see Table 5). High school dropouts were more likely than graduates to choose service, for example, primarily because they were more likely to choose military service. Thus, differences in participation rates for civilian service programs might be small.

5. The overall rate was almost three times as high as that indicated by the BLS data--possibly reflecting differences in the definition of volunteer work--but was consistent with a 1985 survey done by the Gallup Organization.

6. Youth age 16-18 were selected because YATS is less representative for older youth.

TABLE 4. VOLUNTARY NATIONAL SERVICE CHOICES OF YOUTH AGES 16 THROUGH 18 BY SEX AND RACE, 1988
(In percent)

Demographic Group	Choosing National Service			No Service
	Military	Civilian	Total	
All Youth	33	22	55	44
Men	46	13	59	39
Women	20	31	51	48
White	31	22	54	45
Nonwhite	40	20	60	37

SOURCE: Congressional Budget Office tabulations of data from the 1988 Youth Attitude Tracking Study, conducted by the Research Triangle Institute for the Department of Defense.

NOTES: "Military" includes youth who chose either four years of service at full pay or those who chose two years of service at half pay. "Don't know" and no response are not shown.

For proposals that would link national service to federal student financial aid, additional insights may be obtained by grouping youth according to their educational aspirations--the level of schooling they would like to complete eventually. The YATS data suggest that educational aspirations have little impact on whether to participate, but a considerable effect on the type of service chosen (see Table 5). The fraction choosing any service was between 54 percent and 58 percent for all levels of educational aspiration, but the fraction choosing civilian service increased with the level of schooling desired--from 17 percent of those wanting to obtain only a high school diploma to 27 percent of those who wished to pursue graduate studies--while the fraction choosing military service decreased correspondingly--from 41 percent to 28 percent.

These data suggest that a national service program could potentially attract as many as 1.5 million youth. How many would actually participate, however, is less clear. Studies of military enlistment intentions, for example, indicate that only about one-third of youth who say they plan to enlist eventually do so; if a similar phenomenon were to occur in the case of national service, the data above could significantly overstate potential participation.⁷ At the same time, however, those who do not initially intend to enlist constitute almost one-half of enlistees. Moreover, interest in a specific hypothetical proposal may not extend to all others, and different patterns of choice would probably be observed for proposals that involved different combinations of incentives and terms of service.

7. See Bruce R. Orvis, "Relationship of Enlistment Intentions to Enlistment in Active Duty Services" (Santa Monica, Calif.: The RAND Corporation, 1986).

THE FINANCIAL IMPACT OF NATIONAL SERVICE ON PARTICIPANTS

What would young people be willing to give up to participate in national service? What would they be likely to receive from national service? The answers could vary significantly among different options. For example, part-time service might allow participants to continue working or attending school, but would often reduce their leisure time. Full-time service, in contrast, would usually require giving up work or school in return for whatever compensation was provided. Examining the factors that would influence this decision provides insight on how different program parameters might affect the number and characteristics of participants, and why forecasting these variables would be so difficult.

TABLE 5. VOLUNTARY NATIONAL SERVICE CHOICES OF YOUTH AGES 16 THROUGH 18 BY EDUCATIONAL ATTAINMENT AND EDUCATIONAL ASPIRATIONS (In percent)

Category	Choosing National Service			No Service
	Military	Civilian	Total	
Educational Attainment (Non-High School Youth)				
High School Graduate	23	25	48	52
High School Dropout	40	17	57	42
Educational Aspirations (All Youth)				
Any Level	33	22	55	44
High School Diploma	41	17	58	40
Some College	35	19	54	46
College Degree	33	23	56	43
Postgraduate Degree	28	27	55	44

SOURCE: Congressional Budget Office tabulations of data from the 1988 Youth Attitude Tracking Study, conducted by the Research Triangle Institute for the Department of Defense.

NOTES: "Military" includes youth who chose either four years of service at full pay or those who chose two years of service at half pay. Educational attainment is that at the time of the survey. Educational aspirations are represented by the highest degree the respondent would like to attain. "Don't know" and no response are not shown.

The willingness of youth to give up work, school, or leisure would depend on the impacts--both financial and nonfinancial--they expected national service to have on their welfare and on that of others. Only some of these impacts could be influenced by policy, however. Policymakers could directly influence the rewards of service by offering stipends, vouchers, or benefits such as training; they might also indirectly affect the nonfinancial aspects of service, perhaps by influencing potential participants' perceptions of the value of their tasks to society. Policy would generally be much less effective in influencing the opportunity costs of participation.

The nonfinancial aspects of service, whether positive (such as possible psychic rewards associated with serving the country) or negative (such as the distaste youth might have for some activities) are difficult or impossible to measure. For that reason, the remainder of this section focuses on how youth might fare in financial terms if they participated in national service.

Comparing Financial Outcomes: A Framework For Analysis

The paper compares financial outcomes for two groups: "college-bound" youth, who pursue (or, more accurately, intend to pursue) a "traditional" four-year college path after high school before entering the labor force, and "non-college" youth, who do not enroll in any type of postsecondary schooling. These groups account for just over half of all youth leaving high school, the remainder being those who receive less than four years of postsecondary training and those who interrupt their schooling--referred to in this chapter as "other-enrolled" youth. Although the same general framework may be used to compare financial outcomes for the latter two groups, space limitations preclude an extensive discussion.

Even though the discussion is qualitative rather than quantitative, it should be interpreted with caution. First, the nonfinancial aspects of service would undoubtedly lead some youth to different decisions than would be suggested by purely financial considerations. Second, the analysis does not indicate whether service would be more attractive to college-bound than to noncollege (or other-enrolled) youth, because the nature and timing of costs and benefits would differ for each group. The discussion should therefore be interpreted as comparing willingness to participate among youth within each group, not between groups. Finally, this framework implicitly assumes that those who would have entered college in the absence of national service would do so given the existence of national service, and conversely. The framework cannot be used to address the extent to which national service would enable some youth to attend college who could not have done so otherwise, and whether delayed entry would reduce college completion rates.

In the absence of national service, the career paths considered here are assumed to generate flows of financial receipts from two sources: earnings from employment and, for some college-bound youth, the subsidy component of student financial aid received while in college.^{8/}

8. The subsidy component is defined here as the amount of Pell grants plus an estimated 40 percent of student loans.

The flow of receipts for a career path that included national service would differ in two ways. Under options in which participants were compensated, receipts would also include some combination of stipends and vouchers redeemable for education or housing. Under options that linked service with federal student financial aid, participants' receipts would be higher by the amount of that aid.^{9/} Options that entailed full-time service would also shift all nonservice receipts into the future. For college-bound youth, post-college earnings would not be received until five, rather than four, years after graduation from high school. For noncollege youth, earnings from the first job after high school would not be received until one year after high school.

Figure 2 illustrates how the level and timing of receipts for a college-bound youth might differ between service and nonservice tracks for an option that entailed full-time service and in which participants received stipends, vouchers, and eligibility for student financial aid in return for service. In this example, the nonservice track assumes earnings of \$4,000 per year during four years of college plus a post-college starting salary of \$22,000. The service track maintains these assumptions (shifting them forward one year) and also includes a stipend of \$7,500 during the year of service, a voucher of \$10,000 received during the first year of school, and \$1,000 per year in aid conditional upon service.

The numbers underlying Figure 2 are arbitrarily chosen, but illustrate that, for some options, differences in receipts between service and nonservice tracks in any given year could be large. In this particular example, a youth who participated in national service would have much higher receipts in the second year after high school--reflecting receipt of the voucher--and substantially lower receipts in the fifth year--when he or she would still be a student, not a full-time worker. The youth's income would also be slightly lower in subsequent years if, as this example assumes, employers valued a year of national service less than a year of work.

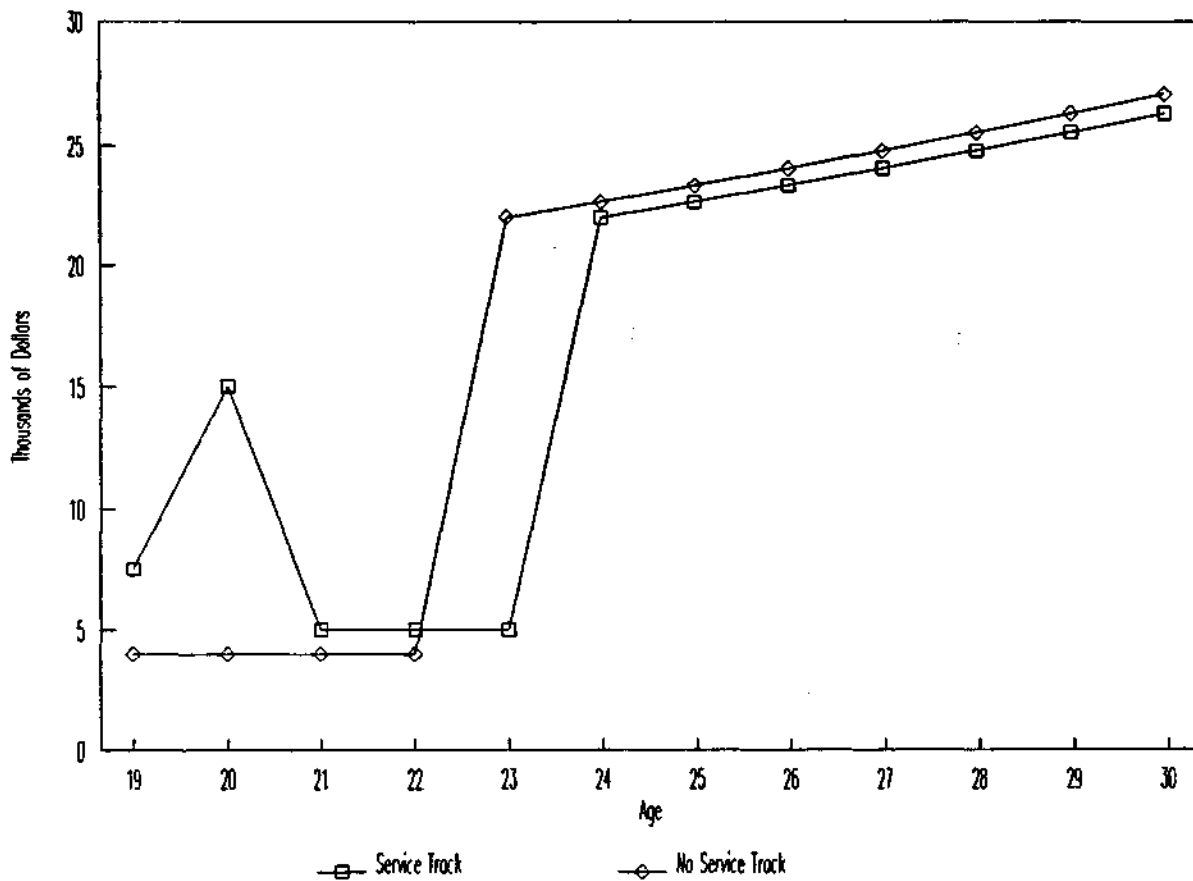
The wages that youth could earn from other opportunities would clearly be a crucial factor in their assessment of the financial attractiveness of national service. College-bound and noncollege youth differ, however, as to which wages would be appropriate for purposes of comparison.

For college-bound youth, the appropriate alternative is the wage that could be earned upon completion of college, not what noncollege youth currently earn. That is, if youth choose college over work, it is fair to assume that, in most instances, the availability of a new alternative (national service) would not lead them to choose work over school.^{10/} For noncollege youth, in contrast, the appropriate comparison wage is what they could earn with their current level of schooling and experience. In making this comparison, however, some youth might attach a premium to national service because they could avoid the risk of being unemployed for the duration of service. Depending on whether post-service compensation was prorated for youth who did not complete service, others might value national service compensation less if service reduced their flexibility in job choice.

9. In comparison with what they are now, however, receipts under these latter options would be lower for nonparticipants.

10. This is not necessarily true for options that would link service with student aid.

FIGURE 2. ILLUSTRATIVE EFFECTS OF A FULL-TIME NATIONAL SERVICE OPTION ON THE LEVEL AND TIMING OF RECEIPTS FOR COLLEGE-BOUND YOUTH



SOURCE: Congressional Budget Office.

NOTE: Both service and nonservice tracks assume earnings of \$4,000 per year in college and a post-college starting salary of \$22,000 per year. The service track also includes a \$7,500 stipend, a \$10,000 post-service voucher, and \$1,000 per year in conditional federal student financial aid.

Factors That Would Influence the Value of Receipt Flows

Even if the financial aspects of participation were all that mattered, a simple comparison of wages (whether current or future) would be inadequate. A number of factors might influence how youth valued the flow of receipts from service and nonservice career paths: differences in the timing of receipts; the value assigned to vouchers that had restrictions on their use; the extent to which training was provided during service; whether "fringe" benefits, such as health insurance, were provided; and the availability of other resources such as parental or spousal income and federal student financial aid.

Differences in the Timing of Receipts. For college-bound youth, the financial rewards of service (if any) would be received up front, but costs in the form of wages forgone would not be incurred until four years later--when these youth would have been working. For options that would require youth to delay entry into college, time must be taken into account by "discounting" future receipts and expressing them in terms of their present value.^{11/}

The market interest rate is often assumed to be appropriate for discounting future receipts because it measures what could be earned currently. At an interest rate of 10 percent, costs of \$1.00 four years hence have a present value of \$0.68. Other things equal, inducing youth to forgo \$1,000 in future wages would require current payment of about \$700.

For some youth, however, future outcomes have little impact on current decisions, and their discount rates may be much higher. Using a discount rate of 20 percent, for example, would reduce the \$1.00 to \$0.48 in present value terms. In this case, less than \$500 would be required to induce youth to forgo \$1,000 in future wages. Other things equal, participation in national service would be more attractive to youth who discounted the future highly.

Value of Vouchers. Some options would provide participants with vouchers redeemable for education or housing expenses. The value of such vouchers to potential participants could be less than their face value for a number of reasons.

First, vouchers necessarily limit--by design--what can be acquired with them. For example, a voucher redeemable only for education costs would have little value to noncollege youth. Because of the potential for changes in career plans, moreover, the value of such a voucher might still be less than its face value even among college-bound youth. Vouchers would also be subject to "satiation" to the extent that youth did not want or need to spend the entire amount available on education, say, because they were able to obtain athletic scholarships.

Second, the value of vouchers would decline over time unless they were indexed to take into account changes in the prices of the goods and services for which they could be redeemed. Education vouchers, which would be redeemed in the first year or two following service, might lose only a small fraction of their value.

11. Roughly speaking, the discount rate is the rate of interest that would yield a given future value if the present value were invested today. The present value of future receipts will be smaller the higher the rate at which they are discounted and the greater the time until they are received.

Housing vouchers, which might not be redeemed for several years, could be worth much less.

Finally, the value of vouchers would vary geographically if the prices of the goods and services for which vouchers were redeemable varied. This factor could be especially important for housing vouchers; people living in areas with high housing prices would be constrained to spending vouchers only on high-cost goods, which might be unaffordable given their incomes. They would also get less in the way of housing services for each dollar of voucher.

Service as Training. The wages of young adults generally increase as work experience is accumulated, partly reflecting the value of skills learned on the job. Whether participants would acquire marketable skills--or other attributes that employers found desirable--while in service would thus have implications for their post-service earnings. Participants whose service was not considered work experience by employers would take several years to catch up with their nonservice peers.^{12/} Other things equal, recognition of this loss by youth would tend to reduce participation.

Employers' views of the comparability of national service with regular employment would be influenced by several factors. First, programs whose tasks required skills similar to those needed in the marketplace might be viewed more favorably than those without market counterparts. Second, evidence that participants' skill levels improved while in service--whether or not the improvement was the result of formal in-service training--could be important. Finally, the average characteristics of all participants in a program would influence employers' views about individual participants. A program that was regarded as an employer of last resort would probably be viewed less favorably than one that attracted high-caliber recruits.

Health Insurance. Any national service option could be structured to provide participants with health insurance coverage or other fringe benefits. The value of such coverage would depend on the circumstances of individual youth: participation would be relatively more attractive to youth who would not otherwise be covered than to those who obtained coverage through their school, employer, or spouse's employer. The relative attractiveness of the components of an option could also be affected by differences in the amount of coverage provided to full- and part-time participants.

Family Income. Youth with access to parental or spousal support have a wider array of career choices than those without such support. Family support would not directly affect the financial impact of national service, but it could affect how youth reacted to a given impact. Youth whose families were willing and able to support them would not have to participate in national service to finance college or to obtain a down payment on a home. At the same time, such youth would be better able to forgo wages to participate.

12. Some research, for example, suggests that in comparison with civilian employment, military service may actually have a negative impact on future earnings. See Joshua D. Angrist, "Lifetime Earnings and the Vietnam Era Draft Lottery: Evidence from Social Security Administrative Records," American Economic Review (June 1990), pp. 313-336.

Federal Student Financial Aid. The subsidy component of federal student financial aid is also relevant for comparing the value of receipts from service and nonservice tracks. Most importantly, options that link financial aid eligibility with national service would essentially create a bonus for participation compared with not participating. This bonus, however, would not exist in relation to current policy where eligibility rules for aid include no such requirement.

The value of eligibility for student aid would depend in part on how long a youth expected to be enrolled in postsecondary education. For example, the reward for participating in service would be greater for youth planning to attend a four-year college or graduate school than for youth planning to attend only a two-year college. If the subsidy component of aid was \$2,000 per year, for example, a prospective four-year degree student would receive \$8,000 (in addition to any stipend or voucher) in nominal terms, whereas a comparable two-year degree student would receive only \$4,000.

WHAT WOULD YOUTH GIVE UP TO PARTICIPATE?

The factors discussed above explain why estimates of willingness to participate could not be derived solely from knowledge of the financial costs that youth would incur--even if financial costs were all that mattered. Nonetheless, the work and schooling choices that youth make in the absence of a national service program can inform policymakers of the relevant magnitudes of opportunity costs and how those costs vary among youth.

Activities of Youth, 1987-1988

The data in this section are drawn primarily from supplements to the October 1987 and March 1988 Current Population Surveys, and cover civilian youth who were not attending high school. Information on military enlistment is drawn from Department of Defense data.

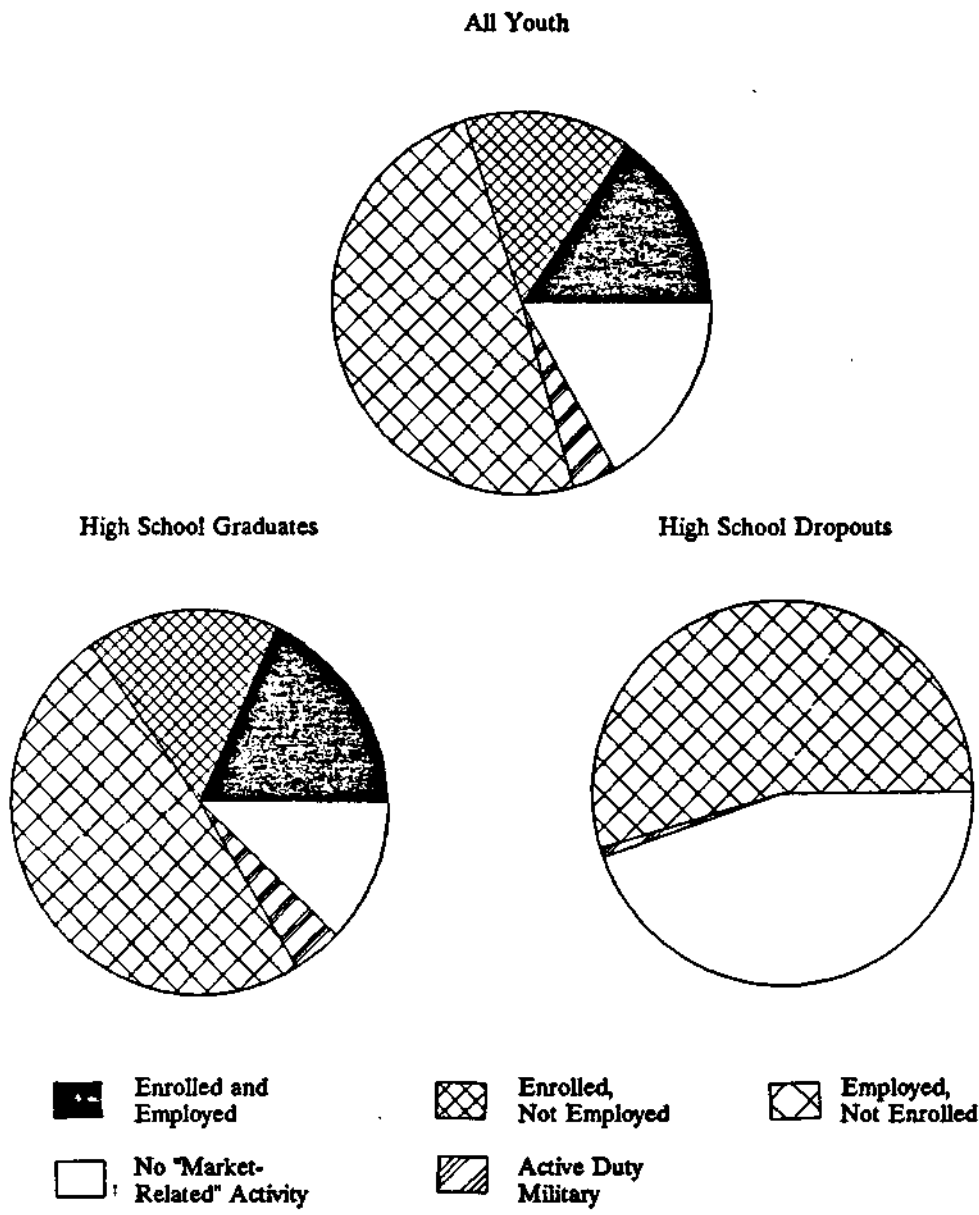
College Enrollment, Employment, and Military Enlistment. About 83 percent of all youth had some "market-related" activity in October 1987: they were enrolled in college, employed, or serving in the military (see Figure 3).^{13/} About 30 percent were enrolled in college--of whom half were also employed--and 50 percent worked either full- or part-time in civilian jobs, but were not enrolled.^{14/} About 4 percent were on active-duty military service, and about 17 percent had no market-related activity.

College enrollment and employment patterns varied significantly among youth, implying that the opportunity costs of service would vary as well. Other things equal, high school graduates would incur higher costs than dropouts because they are much more likely to be employed or, as a matter of definition, enrolled in

13. As defined here, market-related activities do not include job search by unemployed youth.

14. The CPS defines enrollment as attending a four-year or two-year college, university, or professional school in a program that leads to a recognized college or university degree.

FIGURE 3. ACTIVITIES OF YOUTH BY HIGH SCHOOL GRADUATION STATUS, OCTOBER 1987 (In percent)



SOURCE: Congressional Budget Office tabulations of data from the October 1987 Current Population Survey and from the Department of Defense.

NOTE: Enrolled youth are those attending a two-year or four-year college or university and enrolled in classes for which credit would be applied toward a degree. Youth with no "market-related" activity are those who were not enrolled, not employed, and not in the military.

college. Only 12 percent of high school graduates were neither enrolled nor employed in October 1987, for example, compared with almost 45 percent of dropouts (see Figure 3).

College enrollment and employment rates also varied by age, but the fraction with no market-related activity was roughly the same for each age group. Almost 50 percent of youth 18-19 were enrolled in college, compared with almost 15 percent of those 23-24 (see Figure 4, top panel). The fraction employed, but not enrolled, rose correspondingly; just over 30 percent of youth 18-19 were employed either full- or part-time, compared with almost 70 percent of youth 23-24.

Men and women of the same race were about equally likely to be enrolled, with enrollment rates of about 30 percent for whites and 23 percent for blacks. There were, however, differences in employment rates: about 60 percent of white men were employed, compared with about 50 percent of white women (see Figure 4, bottom panel). For both sexes, whites were more likely to be enrolled or employed than blacks; only about 15 percent of whites had no market-related activity, compared with about 30 percent of blacks.

Some of the difference in market-related activities between men and women (and, to a lesser extent, between whites and blacks) is attributable to the presence of children. In March 1988, about 60 percent of women with no market-related activity had children in the household. The fraction with children was higher for black women than white women and increased with age for both races.

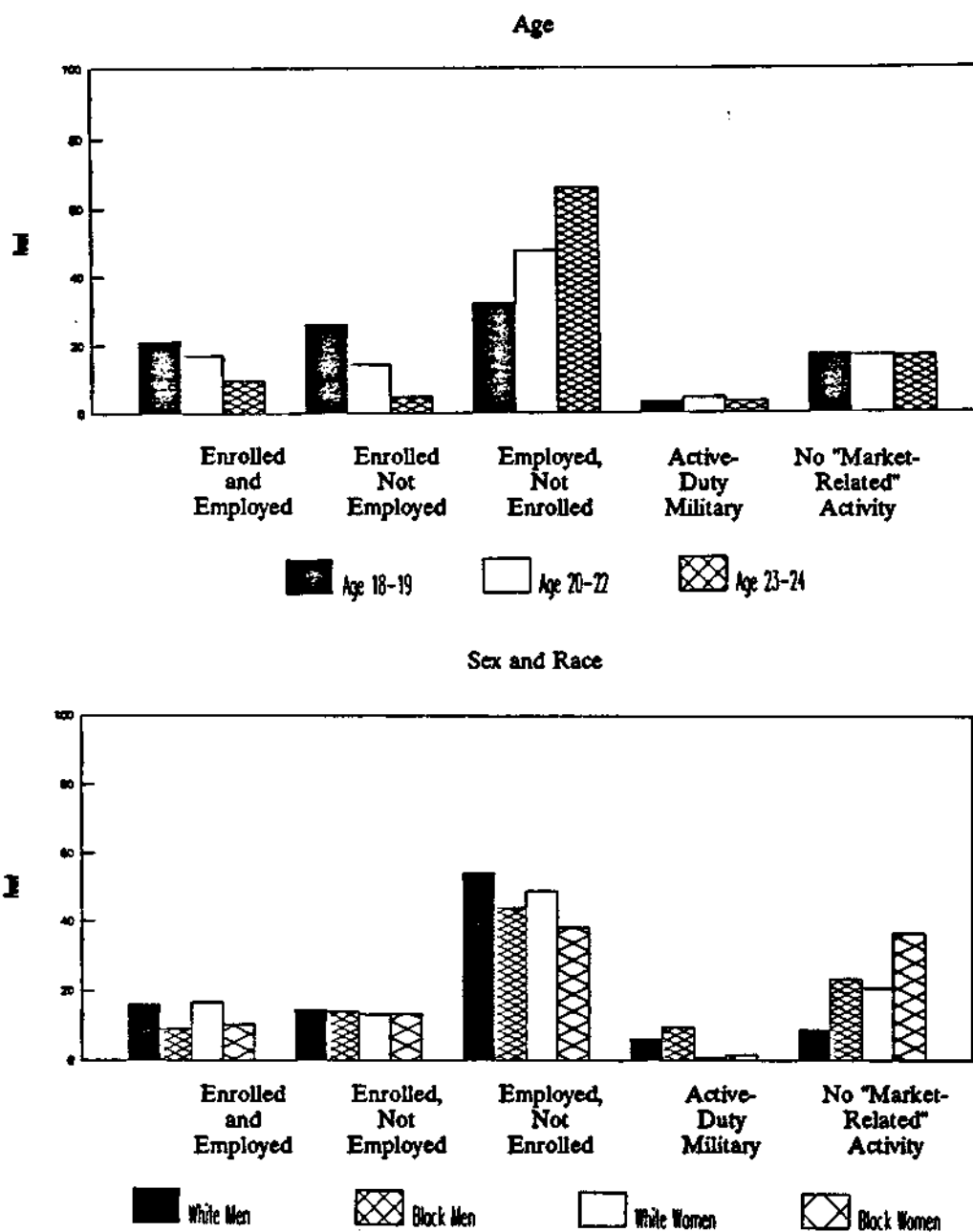
Earnings of Employed Civilian Youth. To the extent that time spent in national service could not be used for paid employment, wage and salary earnings measure part of the financial costs of participation to youth. Information about earnings--both weekly and annual--is thus informative both for placing the level of national service compensation (if any) in perspective and for helping to assess how the attractiveness of service would vary among youth.

Among all employed civilian youth, median weekly earnings--the level at which half earned more and half earned less--was just over \$200 in October 1987. There was considerable variation among youth, however, much of it attributable to three factors: hours worked per week; age; and educational attainment.

Not surprisingly, weekly earnings depend in large measure on whether employment is full or part time (where part-time employment is defined as less than 35 hours per week). For youth 18-19, median weekly earnings of full-time workers were about twice that of part-time workers in October 1987: \$190 compared with \$80 (see Figure 5). Median earnings increased with age for both groups to \$290 and \$120, respectively, at ages 23-24. The wider gap reflects in part greater education and skills among older full-time workers.

Looking at the median weekly earnings of full-time workers avoids differences in hours worked and shows the important influence that educational attainment has on earnings. High school graduates earned more than dropouts at every age, with the gap widening to about 30 percent among youth 23-24 (see Figure 6, top panel). Much of this gap reflects the presence of college graduates in the older group. The median earnings of youth 23-24 who had completed four years of college was \$390

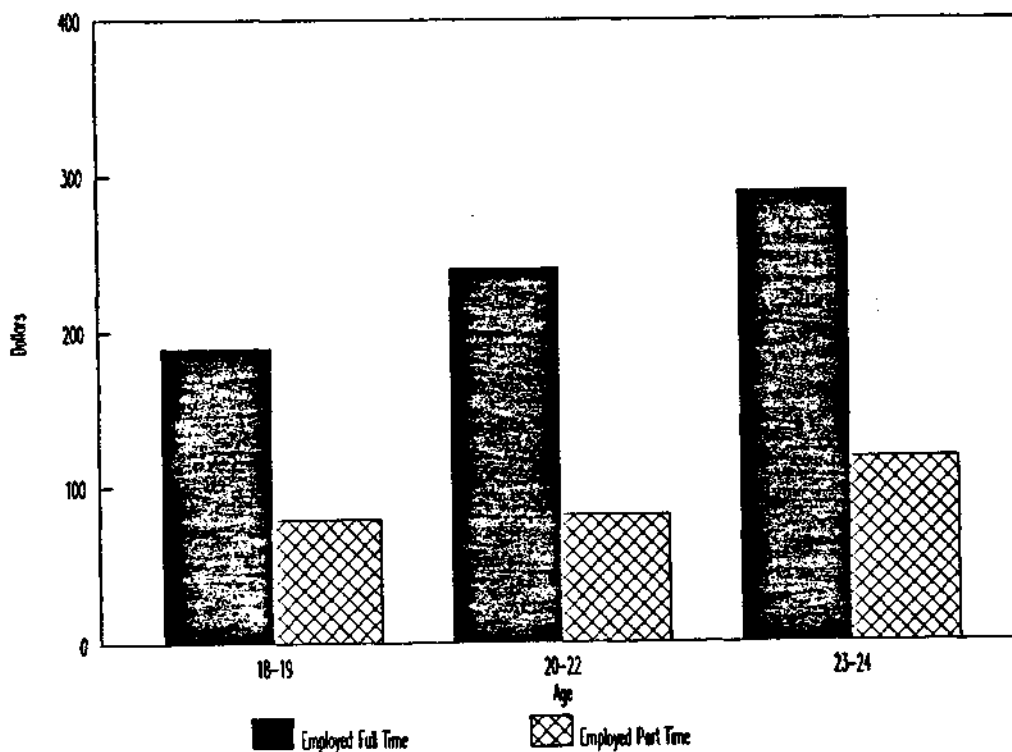
FIGURE 4. ACTIVITIES OF YOUTH BY AGE, SEX, AND RACE, OCTOBER 1987 (In percent)



SOURCE: Congressional Budget Office tabulations of data from the October 1987 Current Population Survey.

NOTE: Enrolled youth are those attending a two-year or four-year college or university and enrolled in classes for which credit would be applied toward a degree. Youth with no "market-related" activity are those who were not enrolled, not employed, and not in the military.

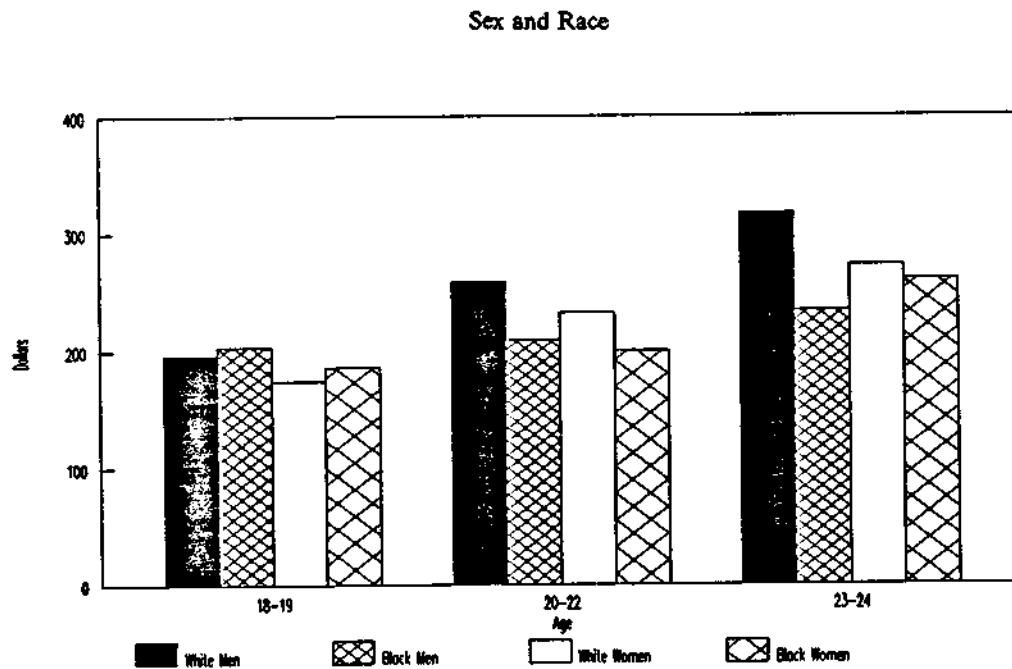
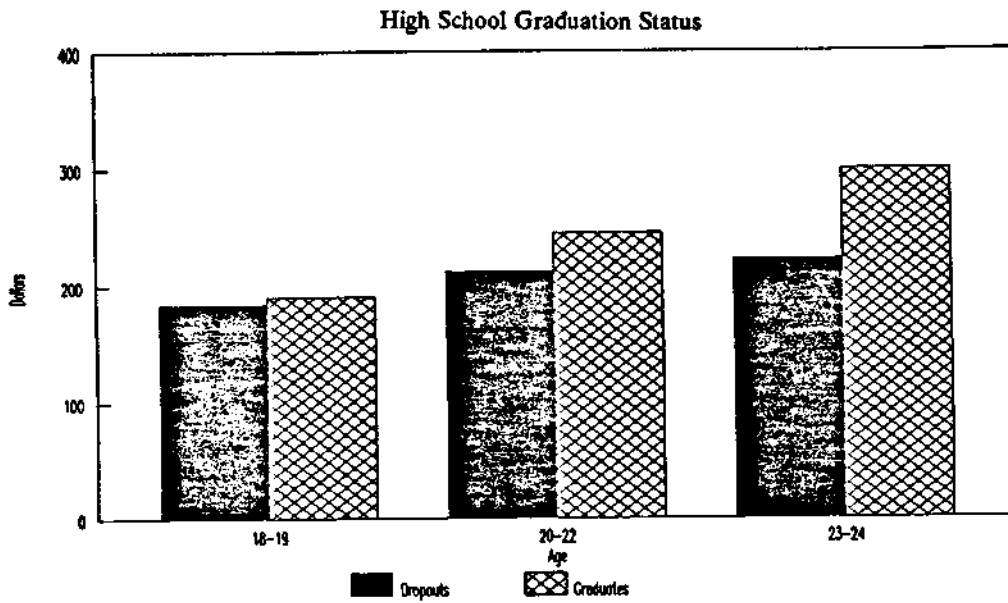
FIGURE 5. MEDIAN USUAL WEEKLY EARNINGS OF EMPLOYED CIVILIAN YOUTH, BY AGE AND HOURS WORKED, OCTOBER 1987 (In dollars)



SOURCE: Congressional Budget Office tabulations of data from the October 1987 Current Population Survey.

NOTE: Full-time work is 35 hours or more per week.

FIGURE 6. MEDIAN USUAL WEEKLY EARNINGS OF CIVILIAN YOUTH WORKING FULL TIME, BY HIGH SCHOOL GRADUATION STATUS, AGE, SEX, AND RACE, OCTOBER 1987 (In dollars)



SOURCE: Congressional Budget Office tabulations of data from the October 1987 Current Population Survey.

NOTE: Full-time work is 35 hours or more per week.

per week, compared with \$280 for high school graduates in the same age group with less than four years of college.

Among youth 18-19, the median earnings of full-time workers differed little by either sex or race (see Figure 6, bottom panel). At older ages, however, variation becomes apparent, in part because of differences in educational attainment. Among youth 23-24, for example, the median earnings of white men was about 35 percent greater than those of black men and about 15 percent greater than those of both white and black women.

Half of the members of any particular group earn less than the median. Alternatively, one can look at the cumulative distribution of earnings, which shows the fraction of youth earning less than any specified amount. If the willingness of youth to participate in national service depended only on current earnings, the cumulative distribution would show how many youth might find a given level of compensation financially attractive and how this fraction would change with additional compensation.

In October 1987, virtually all youth working full time earned between \$125 and \$525 per week. The distribution of earnings within this range varied, however, particularly by age (which, again, picks up the effects of increases in work experience and education). For example, over 40 percent of youth 18-19 earned less than \$175 per week, compared with only about 12 percent of youth 23-24 (see Figure 7). Similarly, almost 90 percent of youth 18-19 earned less than \$325 per week, compared with just over 60 percent of youth 23-24.

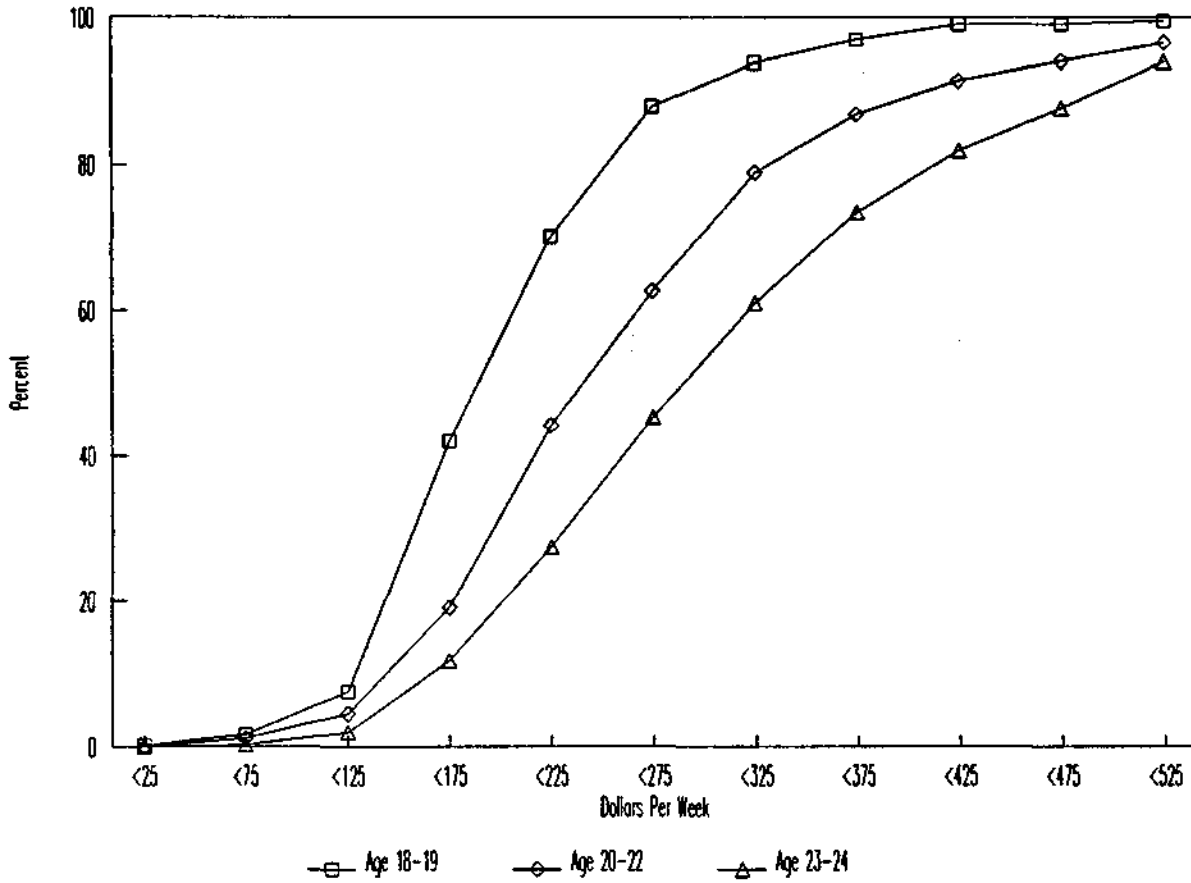
Weekly earnings measure opportunity costs for employed youth, but some youth may work less than they would prefer, either because they cannot find employment or because they can only find part-time or seasonal employment. For these youth, annual earnings may be more appropriate for measuring opportunity costs.

Among all civilian youth--including those who worked as little as one hour during the year--median annual earnings in 1987 ranged from just over \$3,000 for youth 18-19 to almost \$13,000 for college graduates 23-24 (see Figure 8, top panel). As with weekly earnings, older youth earned more than younger youth, and better-educated youth earned more at every age.^{15/}

The earnings of year-round, full-time workers are a better measure of "achievable" earnings: what youth could earn if they chose--and were able--to work at least 35 hours per week for 50 or more weeks. Median annual earnings of year-round, full-time workers in 1987 ranged from about \$8,300--slightly better than the minimum wage--for high school dropouts ages 18-19 to over \$19,000 for college graduates ages 23-24 (see Figure 8, bottom panel).

15. The only exception to this statement is college graduates age 20-22, most of whom did not work year round, full time.

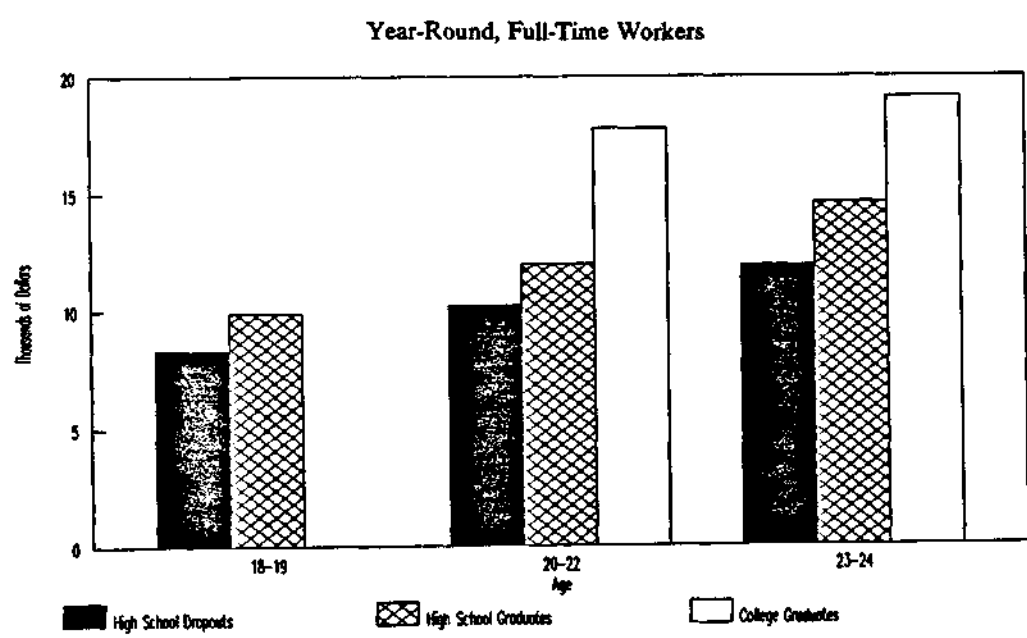
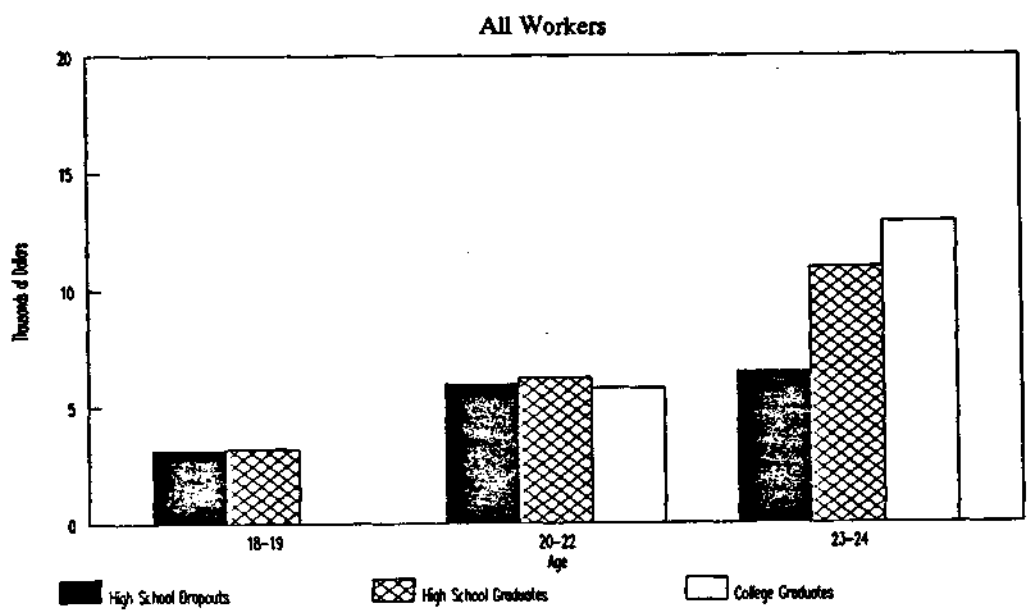
FIGURE 7. CUMULATIVE DISTRIBUTION OF USUAL WEEKLY EARNINGS OF CIVILIAN YOUTH AGE 18 TO 24 EMPLOYED FULL TIME, BY AGE, OCTOBER 1987 (In percent)



SOURCE: Congressional Budget Office tabulations of data from the October 1987 Current Population Survey.

NOTE: Full-time work is 35 hours or more per week.

FIGURE 8. MEDIAN ANNUAL EARNINGS OF CIVILIAN YOUTH BY WORK EXPERIENCE, AGE, AND EDUCATIONAL ATTAINMENT, 1987 (In thousands of dollars)



SOURCE: Congressional Budget Office tabulations of data from the March 1988 Current Population Survey.

NOTE: Year-round, full-time workers are those who usually worked 35 or more hours per week for 50 or more weeks.

As with weekly earnings, looking at the distribution of annual earnings of year-round, full-time workers provides context for the levels of national service stipends that have been proposed. In 1987, a stipend of \$6,000--roughly comparable to \$7,500 in 1991 after allowing for inflation--would have exceeded the annual earnings of almost 20 percent of youth 18-19 employed all year and full time, but less than 10 percent of such youth 20-22 and only about 8 percent of such youth 23-24 (see Figure 9). Similarly, the nominal value of a compensation package that included a \$6,000 stipend and an \$8,000 voucher--comparable to a \$10,000 voucher in 1991--would have exceeded the annual earnings of about 80 percent of youth 18-19 employed all year and full time, 65 percent of such youth 20-22, and 45 percent of such youth 23-24.

Career Paths of 1980 High School Graduates

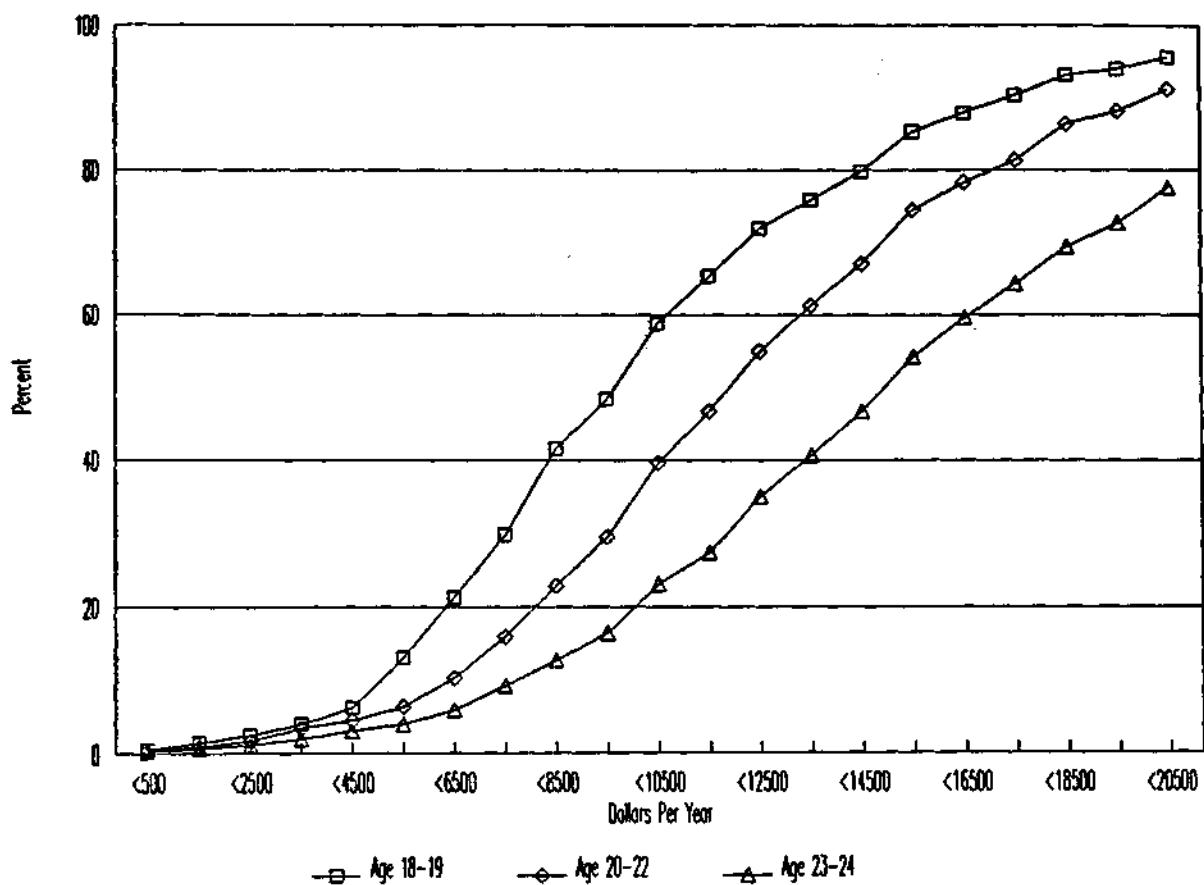
The outcomes discussed above reflect a wide array of post-high school career paths. Data on the career paths of 1980 high school graduates--that is, their employment, postsecondary enrollment, and military enlistment status each February and October between October 1980 and February 1986--permit analysis of questions that the cross-section data do not.^{16/} Among them are:

- o What do youth do during the year after high school graduation--the time when they would be most likely to participate?
- o How much variation is there in career paths during the six years after high school graduation? How common is the traditional college path? How many youth delay postsecondary enrollment, but later attend? How many youth join the military after high school, but later enroll in a postsecondary program?
- o How long are spells without market-related activities (enrollment, employment, or military enlistment)? Do the cross-section data reflect many youth with short-term spells or a few youth with relatively long spells?

Short-Term Career Paths: The Year After High School Graduation. For high school graduates, it is often assumed that participation in national service would occur in the year following high school. For those who do not seek additional schooling, service at this time is presumed to cause minimal disruption to careers, since most have not yet settled into permanent jobs. Compared with participation later, the year immediately after high school graduation could also make sense for youth who intend to further their education, particularly for options that provided compensation in the form of education aid.

16. Enrollment in proprietary and other trade schools is included in postsecondary enrollment. Because of data limitations, youth who were attending school at any point are counted as enrolled only, irrespective of whether they also worked.

FIGURE 9. CUMULATIVE DISTRIBUTION OF ANNUAL EARNINGS OF CIVILIAN YOUTH AGE 18 TO 24 WORKING YEAR ROUND AND FULL TIME, BY AGE, 1987 (In percent)



SOURCE: Congressional Budget Office tabulations of data from the March 1988 Current Population Survey.

NOTE: Year-round, full-time workers are those who usually worked 35 or more hours per week for 50 or more weeks.

The distribution of activities--postsecondary enrollment, employment, and active-duty military service--of 1980 high school graduates in October 1980 was similar to the patterns discussed above for high school graduates ages 18-19 in October 1987.^{17/} Women and whites were more likely than men and nonwhites, respectively, to be enrolled in some form of postsecondary schooling (see Figure 10, top panel). Women of both races were also more likely to have no market-related activity; over 10 percent of white women and over 20 percent of black women were in this category, compared with about 5 percent of men.

Grouping youth according to the level of education they had attained by February 1986--almost six years after high school graduation--suggests that devoting a year to national service immediately after high school would have entailed a significant change in behavior for youth who went on to earn a four-year college degree. Over 93 percent of 1980 high school graduates who obtained a degree by February 1986 were enrolled at the postsecondary level during their first semester after high school (Figure 10, bottom panel). That is, less than 10 percent of those who received four-year degrees within six years of their high school graduation did not enter college immediately upon completion of high school.

The first period after high school is only part of the story, however, as youth are likely to change activities--possibly several times. The fraction of youth in the same activity in February 1981 as in October 1980 was about 90 percent, indicating that at least 1 in 10 youth engaged in at least two qualitatively different activities during the first year after high school.^{18/} Thus, a six-month option might be attractive to many youth as a bridge between activities.

Long-Term Career Paths: The Six Years After High School Graduation. Questions of what youth do after high school should not focus exclusively on the first year. The proportion of youth who ever enter college or other postsecondary training--and how long they remain there--can provide useful information about potential interest in national service options that provide education benefits. Moreover, many national service options would be open to youth at any age between 18 and 24, and the opportunity costs facing youth vary during a longer period.

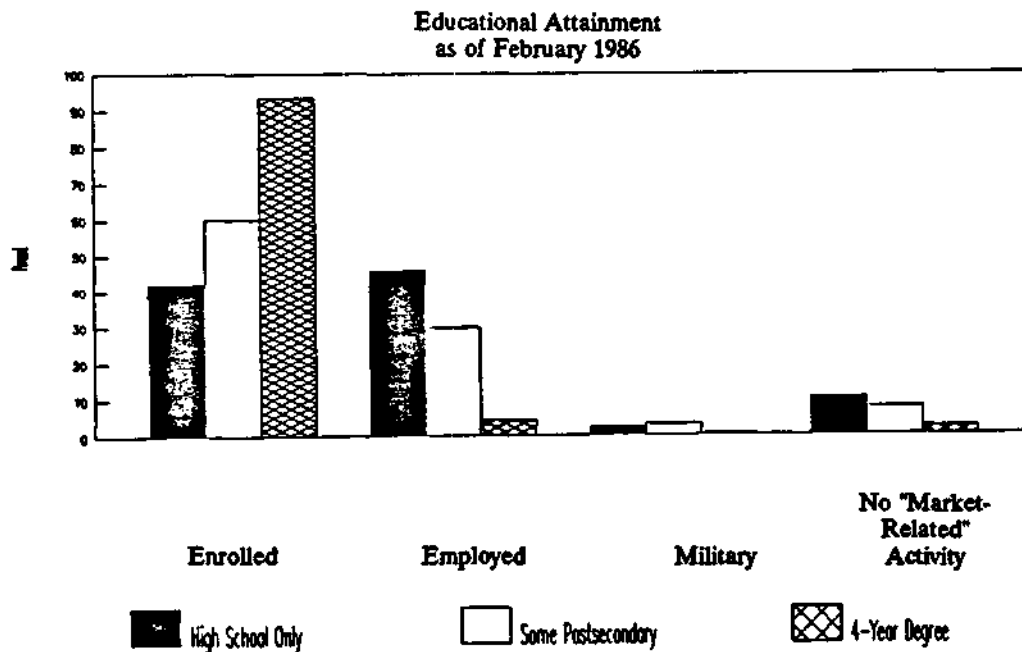
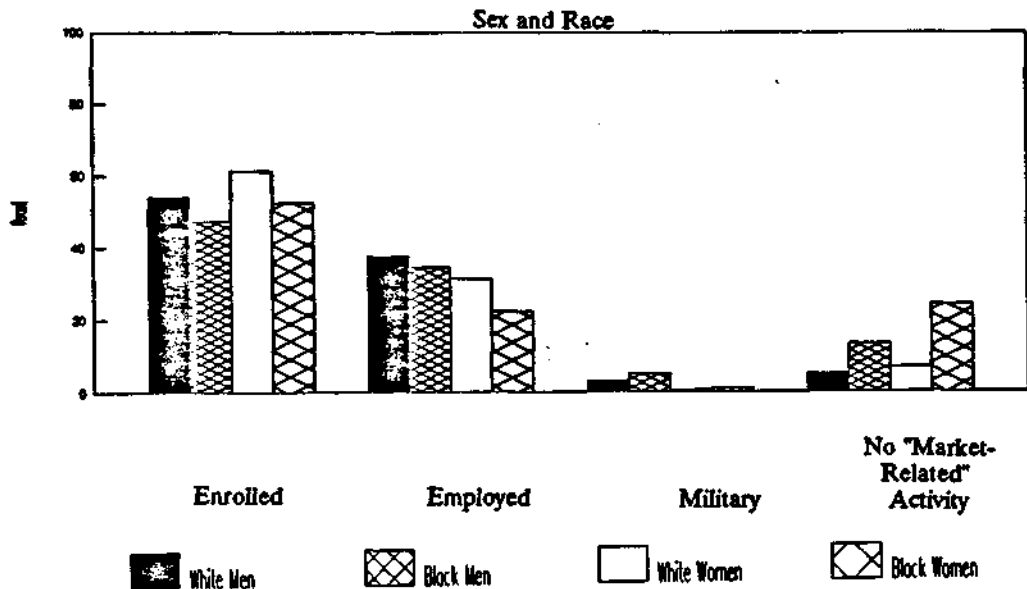
Career paths covering the first six years after graduation are discussed below for two groups: "ever-enrolled" youth--defined as those who had any postsecondary enrollment between October 1980 and February 1986--and "never-enrolled" youth--those who were not enrolled at any point during this period.^{19/} For both groups, paths are further characterized as "civilian" or "military" according to whether they include military service at any point.

17. The term "postsecondary enrollment" is used to distinguish the difference in enrollment concepts between the Current Population Survey and the High School and Beyond Survey; the latter includes proprietary schools.

18. Because activities are measured only twice a year, changes could also occur between observation points.

19. In terms of the previous discussion, ever-enrolled youth comprise college-bound youth and other-enrolled youth.

FIGURE 10. OCTOBER 1980 ACTIVITIES OF 1980 HIGH SCHOOL GRADUATES BY SEX, RACE, AND EDUCATIONAL ATTAINMENT AS OF FEBRUARY 1986 (In percent)



SOURCE: Congressional Budget Office tabulations of data from the 1980 Seniors Cohort of the High School and Beyond Survey.

NOTE: Enrolled youth are those attending a two-year or four-year college and those attending proprietary and other schools. Persons who are enrolled and employed are counted only as enrolled. Youth with no "market-related" activity are those who were not enrolled, not employed, and not in the military.

Ever-enrolled youth accounted for about three quarters of 1980 high school graduates. This is about 15 percentage points higher than the fraction of youth who were enrolled in the first semester after high school.

Just over 40 percent of ever-enrolled youth (less than 30 percent of all 1980 high school graduates) pursued a "traditional" career path--enrolling for at least eight consecutive periods immediately after high school (see Table 6). An additional 18 percent of ever-enrolled youth attended for at least four consecutive periods. To think about national service only in terms of these traditional models is thus to ignore over half of all youth.

For national service options that would entail a year of full-time service, data on youth who delayed entry into a postsecondary program provide insight on the level of compensation necessary to make such a delay worthwhile. Given the opportunities available in 1980, very few youth delayed entry for one year: only 1 percent delayed entry by exactly one year and were subsequently enrolled in eight consecutive semesters, and only 2 percent delayed entry and were then enrolled in four consecutive semesters. Unless employment opportunities have improved significantly since then, inducing large numbers of youth to delay their schooling by one year would appear to require that a national service option provide much greater benefits--financial or otherwise--than those currently available in the marketplace.^{20/}

Youth who were enrolled for at least one semester, but who did not pursue one of the traditional or delayed-entry career paths, accounted for almost 35 percent of ever-enrolled youth. There is tremendous variation in their career paths in terms of the timing, duration, and interruption of enrollment, indicating that a substantial number of job and school transitions take place after high school even among youth who enter postsecondary programs.

Differences in length of enrollment could have implications for national service options that offered education vouchers or that linked service with student aid. Youth who enrolled longer would generally have greater financial need and could receive financial aid over a longer period. Looking only at periods enrolled, and disregarding the timing of enrollment, the most common path entailed eight or more periods enrolled for every demographic group. Women were slightly more likely than men ever to enroll in a postsecondary program, but typically did so for a shorter period of time. Blacks were somewhat less likely ever to enroll than whites and also remained enrolled for a shorter period of time.

About 4 percent of ever-enrolled youth enlisted in the military at some point during the six years after high school. Roughly 7 percent of ever-enrolled men served in the military at some point, compared with 1 percent of ever-enrolled women. Among ever-enrolled black men, 13 percent also served in the military. Interestingly, those youth who served in the military generally did so after enrolling

20. It is difficult to assess changes in labor market conditions specifically for high school graduates who intend to further their education. The past decade has, however, seen a notable increase in the wage and salary rewards associated with greater levels of schooling, which would suggest that the costs to youth of delaying entry have risen. See, for example, Marvin H. Koster, "Wages and Demographics," American Enterprise Institute, November 1989 (processed).

TABLE 6. SIX-YEAR CAREER PATHS OF EVER-ENROLLED YOUTH BY SEX, 1980 HIGH SCHOOL GRADUATES, OCTOBER 1980 THROUGH FEBRUARY 1986 (In percent)

Ever-Enrolled Youth <u>a/</u>	All	Male	Female
All Paths	100	100	100
All Civilian Paths <u>b/</u>	96	93	99
Traditional, four-year <u>c/</u>	41	42	39
Traditional, two-year <u>c/</u>	18	16	19
Delayed, four-year <u>d/</u>	1	1	<u>e/</u>
Delayed, two-year <u>d/</u>	2	3	2
Other paths	35	31	38
All Military Paths <u>b/</u>	4	7	1
Enlisted as of October 1980	1	1	<u>e/</u>
Enrolled as of October 1980	3	5	1
Other paths	<u>e/</u>	1	<u>e/</u>

SOURCE: Congressional Budget Office tabulations of data from the High School and Beyond Survey, 1980 Senior Cohort, conducted by the National Opinion Research Center for the U.S. Department of Education.

NOTE: Details may not add to total because of rounding.

- a.** Ever-enrolled youth are those who indicated postsecondary enrollment in one or more of the 12 periods between October 1980 and February 1986.
- b.** Paths are defined as "military" for youth ever on active duty and "civilian" otherwise.
- c.** Traditional four-year (two-year) paths are defined as paths with at least eight (four) periods of consecutive enrollment beginning October 1980.
- d.** Delayed four-year (two-year) paths are defined as paths with at least eight (four) periods of consecutive enrollment beginning October 1981, exactly one year after the traditional postsecondary entry date.
- e.** Less than 1 percent.

for at least one semester, rather than enrolling upon completion of military service.^{21/}

Sorting youth by their educational attainment as of February 1986 shows once again the importance of the traditional career path. Whereas just over 40 percent of all ever-enrolled youth pursued this path, almost 85 percent of those who earned a four-year college degree within six years did so (see Table 7). Thus, although the traditional career path may not predominate among all youth, it is clearly the norm for those who graduated from college within six years. Of youth who went on to earn a four-year college degree by February 1986, only 1 percent had delayed entry by a year. Another 6 percent, however, interrupted their schooling for at least one semester.

For options in which a substantial portion of the incentive to participate would be linked to education, looking only at those youth who received some type of credential may understate interest. About 40 percent of youth who did not go on to earn a postsecondary credential within six years did enroll in a postsecondary program immediately after graduation, and almost 60 percent enrolled at some point. Many remained there: about 25 percent were enrolled at least eight consecutive semesters, and about 20 percent at least four consecutive semesters. This group is likely to include part-time students, youths who dropped out for academic or personal reasons, and those who dropped out for financial reasons. Although their number cannot be determined, members of this last group could be good candidates for service.

Never-enrolled youth--those with no postsecondary enrollment between October 1980 and February 1986--accounted for just over one quarter of 1980 high school graduates.

For these youth, civilian employment in each period is the most common single career path--almost 40 percent exhibit this profile (see Table 8). There is, however, significant variation in career paths among demographic groups. For example, over 40 percent of never-enrolled men were employed in every period, compared with 30 percent of never-enrolled women. Consistent with their relatively greater likelihood of having children at home, women were also more likely to have worked seven periods or less: over 30 percent of them, compared with less than 10 percent of men.

Among never-enrolled youth who were employed the same number of periods, there was considerable variation in the sequence of employment, indicating a substantial number of transitions into and out of employment. Moreover, the indicators used here probably understate the amount of flux. Even youth who were employed every October and February, for example, could have changed jobs or been unemployed for significant periods of time in the intervals.

21. This pattern could reflect the responses of some youth who did not leave the military during the period covered by these data, but intended to enroll later. It is reasonable to expect, however, that youth whose primary reason for enlisting in the military was to earn benefits for postsecondary education would spend less than six years in the service.

TABLE 7. SIX-YEAR CAREER PATHS OF EVER-ENROLLED 1980 HIGH SCHOOL GRADUATES BY EDUCATION, OCTOBER 1980 THROUGH FEBRUARY 1986 (In percent)

Ever-Enrolled Youth <u>a/</u>	Total	Educational Attainment (As of February 1986)		
		High School	Some Postsecondary Credential	Four-Year Degree
All Paths	100	100	100	100
All Civilian Paths <u>b/</u>	96	95	96	97
Traditional four-year <u>c/</u>	41	23	20	83
Traditional two-year <u>c/</u>	18	20	29	6
Delayed four-year <u>d/</u>	1	1	<u>e/</u>	1
Delayed two-year <u>d/</u>	2	2	5	1
Other paths	35	50	42	6
All Military Paths <u>b/</u>	4	5	4	3
Enlisted as of October 1980	1	1	1	<u>e/</u>
Enrolled as of October 1980	3	3	3	2
Other paths	<u>e/</u>	1	<u>e/</u>	<u>e/</u>

SOURCE: Congressional Budget Office tabulations of data from the High School and Beyond Survey, 1980 Senior Cohort, conducted by the National Opinion Research Center for the U.S. Department of Education.

NOTE: Details may not add to totals because of rounding.

- a. Ever-enrolled youth are those who indicated postsecondary enrollment in one or more of the 12 periods between October 1980 and February 1986.
- b. Paths are defined as "military" for youth ever on active duty and "civilian" otherwise.
- c. Traditional four-year (two-year) paths are defined as paths with eight (four) periods of consecutive enrollment beginning October 1980.
- d. Delayed four-year (two-year) paths are defined as paths with eight (four) periods of consecutive enrollment beginning October 1981, exactly one year after the traditional postsecondary entry date.
- e. Less than 1 percent.

Never-enrolled youth were about three times as likely to have enlisted in the military as college-bound youth, with more than 10 percent indicating military experience. As would be expected, men were much more likely to enter the military; 17 percent of white and 22 percent of black never-enrolled men were in the military at some time, compared with 4 percent of never-enrolled women.

How would national service fit into the career paths of never-enrolled youth? Full-time service would compete directly with either civilian or military employment for many; 40 percent of never-enrolled youth were employed in each of the 12 periods after high school graduation. However, over 30 percent of never-enrolled youth were not employed for at least three periods after graduation. A significant number of never-enrolled youth were thus in a position to participate in national service without interrupting a career.

TABLE 8. SIX-YEAR CAREER PATHS OF NEVER-ENROLLED YOUTH BY SEX, 1980 HIGH SCHOOL GRADUATES, OCTOBER 1980 THROUGH FEBRUARY 1986 (In percent)

Never-Enrolled Youth <u>a/</u>	All	Male	Female
All Paths	100	100	100
All Civilian Paths <u>b/</u>	89	82	96
Worked every period	37	42	30
Worked 10 to 11 periods	19	18	20
Worked 8 to 9 periods	14	15	13
Worked 7 periods or less	19	7	32
All Military Paths <u>b/</u>	11	18	4
Military, every period	3	4	1
Enlisted as of October 1980	3	4	1
Other paths	6	10	2

SOURCE: Congressional Budget Office tabulations of data from the High School and Beyond Survey, 1980 Senior Cohort, conducted by the National Opinion Research Center for the U.S. Department of Education.

NOTE: Details may not add to totals because of rounding.

a. Never-enrolled youth are those who did not indicate enrollment in any of the 12 periods between October 1980 and February 1986.

b. Paths are defined as military for youth ever on active duty and civilian otherwise.

Periods With No Market-Related Activity. National service might be more attractive to youth who spent long periods with no market-related activity than to those who experienced several short periods. The cross-section data for youth in October 1987 measure the average likelihood of being neither enrolled nor employed at a given age, but do not indicate the extent to which many youth spent short lengths of time without market-related activity, or few youth spent much longer periods.

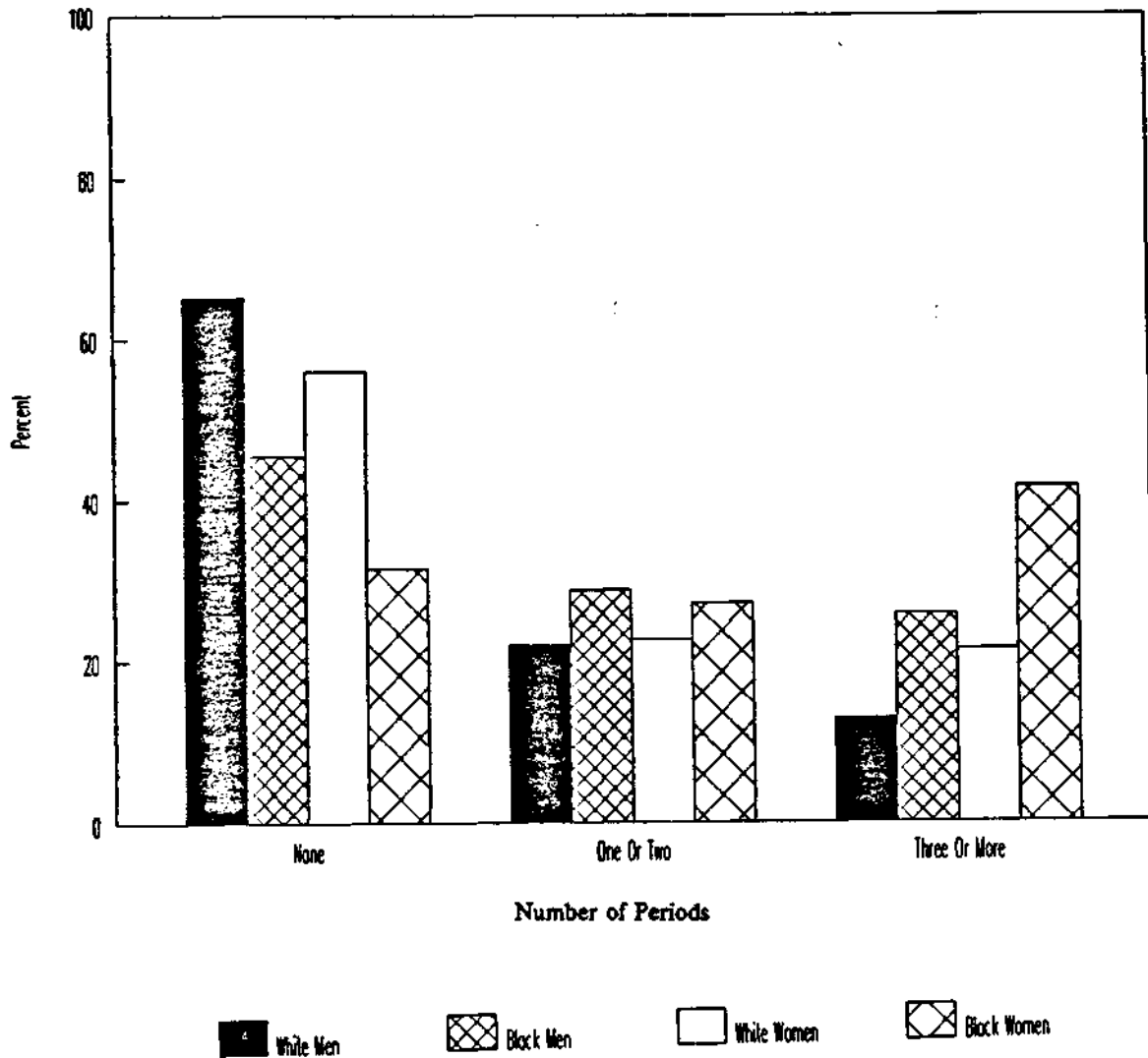
For every demographic group, the single most common career path involved zero periods with no market-related activity between October 1980 and February 1986. There were, however, pronounced differences by sex and by race (see Figure 11). Among white men, about 15 percent had at least three periods with no market-related activity, compared with 25 percent of black men. For white and black women, the corresponding figures are 20 percent and 40 percent, respectively.

The average number of periods with no market-related activity was, of course, lower among all youth than among youth who had at least one period not enrolled and not employed. For the latter group, however, differences among demographic groups in the number of such periods were smaller. For example, black men overall averaged 1.7 periods (out of 12) with no market-related activity, which was about twice as many as the average for white men. Among those with at least one such period, however, the average for black men was 3.2 periods, or only about one-third more than the 2.5 period average for white men.

Youth were more likely to experience a period not enrolled and not employed immediately after high school graduation than at any other one point in time, but periods without market-related activity were spread throughout the six years. Less than 5 percent of white men, for example, were not enrolled and not employed in the first period after high school, but 35 percent were ever in that state (see Figure 12). An even smaller percentage had no market-related activity in both periods following high school, compared with almost 20 percent who ever experienced two consecutive periods without being enrolled or employed.

For college-bound youth and youth who work continuously, service right after high school would probably be most sensible (in financial terms). For youth who experience periods without market-related activity, however, the opportunity costs of participation might be lower at age 21 than at age 18. Thus, even though the wages of employed youth rise with age, youth who are not working may give up less to participate at a later age.

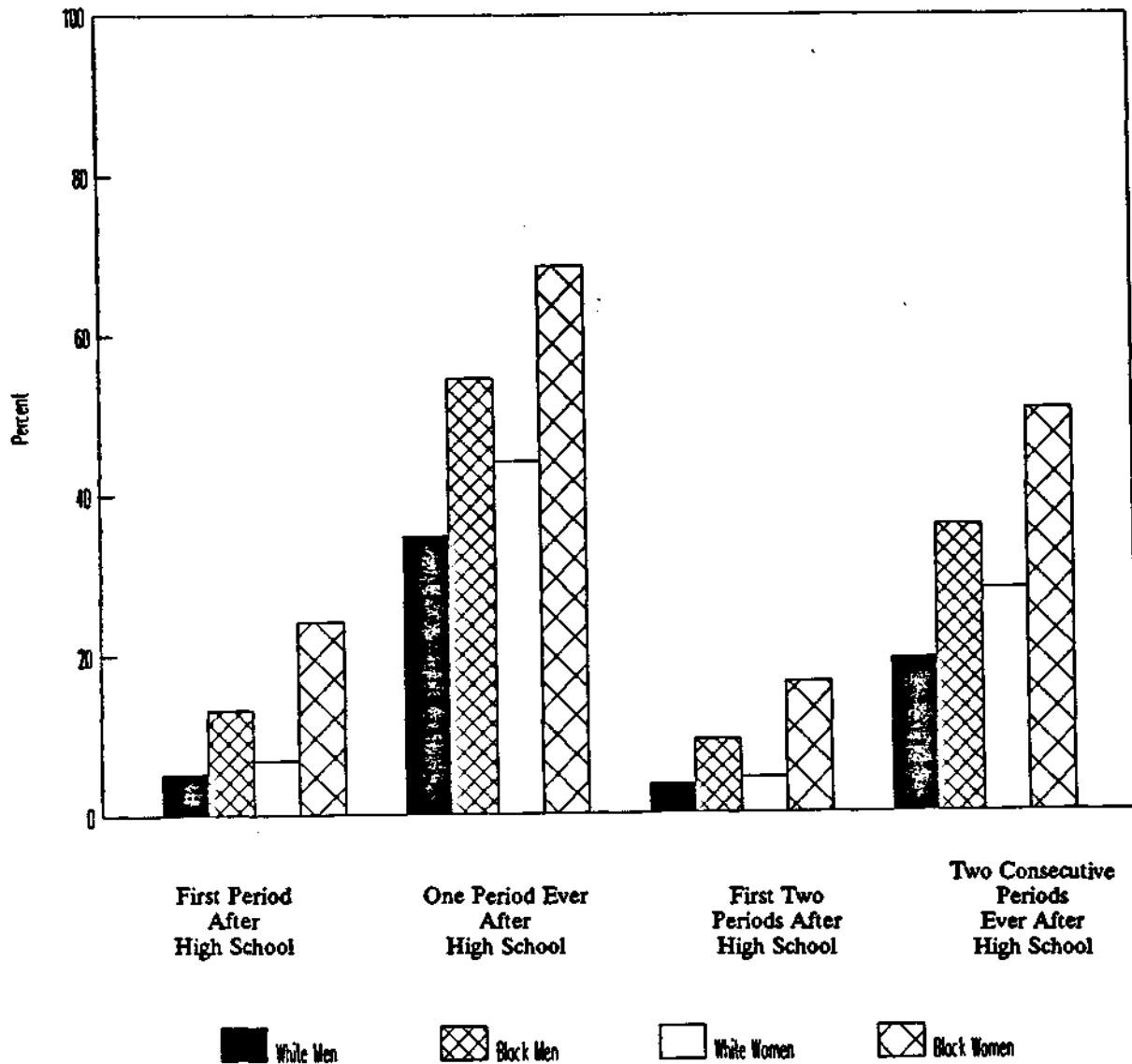
FIGURE 11. NUMBER OF PERIODS WITH NO "MARKET-RELATED" ACTIVITY BETWEEN OCTOBER 1980 AND FEBRUARY 1986, 1980 HIGH SCHOOL GRADUATES (In percent)



SOURCE: Congressional Budget Office tabulations of data from the 1980 Senior Cohort of the High School and Beyond Survey.

NOTE: Youth with no "market-related" activity in a period are those who were not enrolled, not employed, and not in the military. Status is measured as of February and October between October 1980 and February 1986.

FIGURE 12. TIMING OF PERIODS WITH NO "MARKET-RELATED" ACTIVITY BETWEEN OCTOBER 1980 AND FEBRUARY 1986, 1980 HIGH SCHOOL GRADUATES BY SEX AND RACE (In percent)



SOURCE: Congressional Budget Office tabulations of data from the 1980 Senior Cohort of the High School and Beyond Survey.

NOTE: Youth with no "market-related" activity in a period are those who were not enrolled, not employed, and not in the military. Status is measured as of February and October between October 1980 and February 1986.

CHAPTER IV. IMPACTS OF THREE ILLUSTRATIVE

NATIONAL SERVICE PROGRAMS

The economic implications and federal costs of any national service option would depend on the number and characteristics of the young people who would participate. An option that primarily attracted college-bound youth, for example, could be expected to have quite different implications for colleges and universities than one drawing mainly high school dropouts. Moreover, an option that appealed primarily to dropouts would probably entail greater expenditures for the training and supervision of participants.

Two factors make assessment of these implications exceedingly difficult, especially for national service options intended to attract large numbers of participants. First, determining the willingness of youth to participate is problematic because of the variation in economic circumstances--including prospective circumstances--among them (see Chapter III) and because preferences for service would be likely to vary substantially even among those whose circumstances were similar. (Moreover, there is little experience from which to infer participation rates; service programs at the state level provide only limited guidance because of their size.) Second, because of offsetting events, historical experience offers little guidance in analyzing the likely effects of withdrawing large numbers of youth from the labor market and from postsecondary educational institutions.^{1/}

This chapter examines three illustrative national service options, assessing their potential attractiveness to participants and the implications each might have for the labor market, enrollment in postsecondary institutions, and federal costs. The analysis ignores the issue of who might participate and assumes that the target participation levels of each illustrative option would be attained. The emphasis is on the qualitative effects these options would have, both during a transition period and when fully in effect.

THREE ILLUSTRATIVE NATIONAL SERVICE OPTIONS AND THEIR FLOWS OF RECEIPTS

The options discussed below (and summarized in Table 9) reflect the variation among national service proposals being considered in the Congress. They differ from one another in scale, in whether participants would receive financial compensation, and in whether service would be linked to federal student financial aid.

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1. Military manpower increases during wartime could provide some guidance to the external effects, but the nation's most recent experience (the Vietnam buildup) coincided with a significant increase in the youth population. More recently, declines in the youth population have been offset by increases in labor force participation rates among women and by increased school enrollment among adults.

TABLE 9. SUMMARY DESCRIPTION OF ILLUSTRATIVE NATIONAL SERVICE OPTIONS

	Option A	Option B	Option C
Eligibility	Open to All Youth	Open to All Youth	Open to High School Graduates
Participation	25,000 FTE Service Years	250,000 FTE Service Years	500,000 FTE Service Years
Number of Participants			
Full-time (2,000 hours)	0	200,000	500,000
Part-time (500 hours)	100,000	200,000	0
Terms of Service	None	1 Year Full Time or 2 Years Part Time	1 Year Full Time
Linked With Student Financial Aid	No	No	Yes
Stipends (In dollars)			
Full-time participants	0	7,500 a Year	7,500 a Year
Part-time participants	0	0	n.a.
Per FTE service year	0	6,000 a Year	7,500 a Year
Vouchers (In dollars)			
Full-time participants	0	10,000	10,000
Part-time participants	0	4,000	n.a.
Per FTE service year	0	9,600	10,000

SOURCE: Congressional Budget Office.

NOTES: FTE (full-time equivalent) is 2,000 hours per year.
n.a. = not applicable.

Option A: Small-Scale, Noncompensated

Under this option, the federal government's primary role would be to act as a clearing house and to assist state and local governments, educational institutions, and nonprofit organizations in attracting youth to volunteer positions. Participants would not be compensated financially, and the federal government would not specify either the duration or the conditions of participation. There would be no linkage with federal student financial aid programs. The analysis of this option assumes it would attract 100,000 participants, who would average 500 hours per year, thereby generating 25,000 full-time equivalent (FTE) service years annually.^{2/}

Option A would not require a specific time commitment and would generally permit the participants to fit service in with their existing schedules. As a result, they would not have to delay entry into college or the labor market to participate, and the potential financial impact would probably be small for both college-bound and noncollege youth.^{3/}

Given the relatively low costs of participation and the absence of compensation for service under Option A, nonfinancial factors would likely be the most important reasons for service. Because it is difficult to assess how such reasons would vary among eligible youth, the characteristics of likely participants cannot be analyzed.

Option B: Medium-Scale, Compensated

This option is a medium-scale national service program, with a target participation level of 400,000 participants, who would generate 250,000 FTE service years annually. Half of the participants would be full time--2,000 hours per year--and would serve for one year (only). Half would be part time--500 hours per year--and would serve for two years. Only 100,000 part-time positions would be filled in the first year of operation; in subsequent years, part-time participants would be equally divided between those in their first and second years.

It is assumed that full-time participants would receive a stipend of \$7,500 during their term of service and, upon completion of service, a nontaxable \$10,000 voucher redeemable for education or housing expenses. Part-time participants would not be paid stipends, but would receive a nontaxable \$4,000 voucher upon completion of service. Participation would have no bearing on eligibility for federal student financial aid.

An important issue facing potential participants would be how the present value of compensation would compare with the present value of earnings and other receipts lost or deferred to obtain it. Other things equal, the greater the nominal value of the compensation package--whether in the form of a stipend or a voucher--the more attractive service would be to both college-bound and noncollege

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2. Full-time equivalent is defined here as 2,000 hours per year, or 40 hours per week for 50 weeks.
 3. As used in this chapter, college-bound includes both those intending to enroll in four-year degree programs as well as those enrolling in other postsecondary institutions.

youth. (Cash stipends offer greater flexibility to recipients, however, making it likely that increasing the stipend would have a greater impact than increasing the amount of the voucher.)

For any given level of compensation, the financial impact of Option B would depend on the costs of participation in terms of forgone opportunities. The nature of these costs would differ between college-bound and noncollege youth and would also depend on whether service was full time or part time.

To participate on a full-time basis, college-bound youth would have to postpone entry into college for one year, thereby losing the equivalent of one year's post-college earnings--about \$20,000 in 1987.⁴ Option B would thus be more attractive to those who discount the future highly, as the present value of forgone wages would be lower for them. More importantly, the opportunity costs of service would be higher (and hence the attractiveness of service lower) to those expecting relatively high future wages than to those expecting lower wages. Based on their future wages, those planning to major in engineering (for example) would be less likely to participate than those planning to major in the humanities.

For noncollege youth and for college-bound youth serving part-time, the costs of participation would depend more on current than on future earnings. Opportunity costs would thus be higher for employed than for unemployed youth, and would increase with the level of earnings. Other things equal, national service would thus be more attractive to those ages 18-19 (with median weekly full-time earnings of \$190 in October 1987) than to those 23-24 (median earnings of \$290); to high school dropouts (\$210) than to high school graduates (\$260); to black men (\$220) and black women (\$230) than to white men (\$270).

The vouchers issued upon completion of service would have the same nominal value for college-bound and noncollege youth, but their present values could be different for each group. College-bound youth would generally use their vouchers for education expenses, and would thus be able to redeem much of their value immediately upon completion of service. Noncollege youth, in contrast, would (by assumption) use their vouchers for housing expenses. If their earnings upon completion of service at (say) age 20 were inadequate to meet a monthly mortgage payment, vouchers might have little immediate value to them and, unless indexed for inflation, would lose additional value over time.⁵ Other things equal, these factors would make noncollege youth somewhat less likely to participate than college-bound youth.

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4. Even if participants extended their work lives by one year to make up for time spent in service, the earnings from that year--which might not be received until decades later--would be very small in present value terms.
 5. Some might avoid this problem by pooling vouchers with friends. It is also possible that innovative financial arrangements could be devised that would allow people to "cash out" their vouchers.

Option C: Large-Scale, Compensated, Linked to Student Aid

This option is a large-scale voluntary national service program that would differ from Option B in three ways. First, service would be linked with federal student financial aid programs: Pell grants would be eliminated and eligibility for other types of federal student aid--loans and college work/study--would be restricted to those who completed one year of full-time service. Second, participation would be limited to high school graduates. Finally, this option would be an entitlement; any eligible person wishing to participate could do so. This option is assumed to generate 500,000 FTE service years annually, based on 500,000 full-time (2,000 hours per year) participants in each year.^{6/} The stipends and vouchers would be the same as those provided to full-time participants under Option B.

Because all positions would be full time, receipt flows for all those who participated under Option C would be shifted one year into the future. And, as with Option B, college-bound and noncollege youth could differ in their valuations of the vouchers. In contrast to Option B, however, Option C would also affect flows of receipts through its linkage with federal student aid.

Making national service participation a condition of eligibility for federal student aid would have the same effect on flows of financial receipts for college-bound youth as increasing the size of the education voucher and decreasing the value of the nonservice path in comparison with Option B. For noncollege youth, Option C would provide the same benefits as Option B. On average, however, eligible youth would have higher opportunity costs (because eligibility would be limited to high school graduates, who earn more than dropouts).

IMPLICATIONS FOR THE LABOR MARKET

The implications of national service for the labor market would depend on the extent to which labor force participation rates were affected. A small-scale option, or one that drew participants primarily from among youth who would not otherwise have been in the labor force, might have negligible effects. Larger-scale options, in contrast, could result in a permanent reduction in the supply of labor.

Option A: Small-Scale, Noncompensated

This option would probably have a negligible impact on youth labor markets because the number of participants would be small in relation to the youth population and because participants would not have to withdraw from the labor force.

Option B: Medium-Scale, Compensated

Depending on the extent to which this option influenced labor force participation rates, it would have effects on the labor market over both the short and long runs.

6. In comparison, about 700,000 first-year students under age 22 received Pell grants in academic year 1987-88.

Fully implemented, Option B would have 400,000 participants annually, compared with the approximately 19 million youth 18-24 now in the civilian labor force. Assuming that youth did not extend their working lives to compensate for time spent in service, this option would permanently reduce the supply of labor, thereby raising wages to some extent, unless participants were drawn entirely from youth who would not otherwise have been in the labor force (or entered the labor force to replace youth in service).

If all full-time participants would otherwise have been in the labor force, the youth labor force would decline by about 1 percent. The net decline would be smaller if higher market wages drew some youth into the labor force; it would be larger if part-time national service participants also left the labor force while in service.

The reduction in labor supply would occur in two stages. The first stage would occur during the first year Option B was in effect (assuming full implementation), reflecting the withdrawal of youth from the labor market who would have worked, but entered full-time service instead. This stage might also include a reduction in hours by some who entered part-time service. Depending on how many would have worked, this reduction could be on the order of 70,000 full-time labor market participants if participation by noncollege youth--who would account for most of the first-stage reduction--was in proportion to their share of the youth population.^{7/}

The second stage of the decrease would occur during subsequent years Option B was in effect and involve as many as 130,000 college-bound and other-enrolled youth, again depending on how many would have worked. All of this decrease would occur in the fifth year of operation if college-bound and other-enrolled youth would have been enrolled exactly four years (and did enroll four years upon completion of service). As discussed in Chapter III, however, only about 40 percent of high school graduates enroll for four or more years. Thus, the reduction would almost certainly begin earlier and be spread over more than one year.

In the short run, the combined effects of the first and second stages would be to reduce the supply of youth labor by about 200,000 full-time labor market participants each year. The reduction in labor supply would be very small in comparison with the adult labor force, but would be concentrated among new labor force entrants and could exacerbate the effects of declines in the youth population during the next decade. Employers that depend on youth--such as fast food restaurants and retailers--could expect increased labor costs as competing employers bid up the wages of nonparticipants or if they had to hire older, more experienced workers.

Over the longer run, however, it is less clear that these effects should be characterized as a decrease in the supply of youth. Although there would be a permanent decrease in the number of workers under the age of 24, it would be purely a mechanical result of participants spending fewer years in the youth labor force after graduating from or leaving their postsecondary institutions. For example,

7. As noted in Chapter III, high school dropouts and graduates who never enroll at the postsecondary level constitute about 35 percent of the youth population.

youth who once would have graduated at age 22 and worked at ages 23 and 24 would graduate at age 23 and work only at age 24. National service participants who did not extend their careers would lose their last year of labor market experience, however, not their first.

Option C: Large-Scale, Compensated, Linked to Student Aid

Option C would have two and one-half times as many full-time participants as Option B, with the implication that any employment effects would be that much larger. However, relatively more of any reduction in employment would be delayed for four years provided college-bound youth participated in proportion to their share of the population. The first-stage reduction would be on the order of 125,000 youth, and the second-stage reduction would be about 375,000 youth.

As with Option B, the wages of nonparticipants (and the costs to business of hiring them) would rise in the short run in response to the reduced number of youth seeking employment. There would, however, be important qualitative differences.

As an entitlement, Option C would establish, in effect, a minimum annual wage equal to the value of the stipend and voucher (nominally \$7,500 and \$10,000, respectively, for full-time service) to eligible high school graduates. This wage would be available for one year to noncollege youth and to those planning to enroll in some form of postsecondary education. Even though the vouchers could also be used for housing expenses, the value would be relatively higher for college-bound youth, because participation would also establish eligibility for federal student financial aid.

Depending on how youth valued post-service vouchers, this minimum wage could be quite high in relation to current wages. The federal minimum wage is now \$3.80 per hour--potentially \$7,600 on an annual basis--and is scheduled to increase to \$4.25--\$8,500 annually--in 1991. Moreover, the median annual earnings of high school graduates ages 18-19 working year round, full time, was \$9,900 in 1987, and \$3,200 among those who worked at all during the year (see Chapter III).

Option C would also be likely to attract relatively more college-bound and other-enrolled youth than noncollege youth in comparison with Option B--in part because it would be restricted to high school graduates but, more importantly, because service would be linked with federal student financial aid. In comparison with the effects of Option B, earnings and employment rates among nonparticipants would thus increase somewhat more in the short run for high school graduates than for high school dropouts, and the gap in earnings between high school dropouts and graduates would probably widen.

Finally, because financial aid would be limited to national service participants, labor force participation and employment could increase among youth enrolled in postsecondary institutions who previously would have received aid, but who chose to work in lieu of service. This increase could offset, to some extent, the higher wages for high school graduates noted above.

IMPLICATIONS FOR ENROLLMENT IN POSTSECONDARY INSTITUTIONS

The implications of national service could include a temporary decrease in postsecondary enrollment, with the magnitude of the decline depending on the scale of the option, on whether participants were full time or part time, and whether participants would otherwise have gone on to postsecondary institutions. The long-run effects would depend on whether participation in national service altered the ability and interest of youth in pursuing postsecondary schooling.

Option A: Small-Scale, Noncompensated

This option would likely have a negligible impact on postsecondary educational institutions because the number of participants would be small in relation to the youth population and because participants would not need to delay entry into college. This is also the only option considered here that would not reward service with an education voucher.

Option B: Medium-Scale, Compensated

The principal effect of this option would be a temporary decrease--beginning the first year after implementation--in the number of youth enrolled in colleges and other postsecondary educational institutions. If youth who chose full-time service did so immediately after high school, and if no other changes occurred in enrollment rates, postsecondary enrollment would decrease by the number of full-time participants who would have entered school.

If college-bound and other-enrolled youth participated in full-time service in proportion to their share of the youth population (about 65 percent), this decrease would be about 130,000 students, or about 1 percent of total enrollment. As a fraction of first-year students, the decrease would be about 6 percent. By way of comparison, the number of youth 18-19 enrolled in colleges and universities declined about 10 percent between 1980 and 1985.

Unless national service changed youths' minds about attending school, the number of first-year students would return to its pre-service level in the second year following implementation. Total enrollment would be lower, however, by the number of first-year participants who otherwise would have been enrolled during that year.^{8/} Ignoring the small number of youth who go on to graduate school, postsecondary enrollment would return to pre-service levels in about four years.

The long-term impact of Option B on postsecondary enrollment would be likely to be small and of uncertain direction. Vouchers might enable youth to begin or continue postsecondary schooling who could not have afforded to do so

8. For example, if 80 percent of college freshmen go on to become sophomores, the decline in enrollment in the second year attributable to national service would be only 80 percent as large as the first-year decline. The remaining 20 percent of participants would not have been enrolled in any case.

otherwise, and youth who gained greater maturity during their year of service might be more likely to obtain a degree or certificate. However, enrollment would only increase by about 5 percent even if all national service participants were youth who would not otherwise have gone on to college, and all of them later enrolled for an average of two years.^{9/} Moreover, youth who delayed postsecondary schooling to participate in full-time service might end up not enrolling at all, meaning that long-run enrollment rates would be lower.

Option C: Large-Scale, Compensated, Linked to Student Aid

The factors that would determine the short- and long-run impacts of Option B are also relevant for this option. Applying the analysis used for Option B, postsecondary enrollment would fall by about 3 percent in the short run, reflecting college-bound and other-enrolled youth in full-time service. Again, the decline as a percentage of first-year enrollments would be much larger: on the order of 15 percent. As an entitlement, however, Option C would potentially have much greater short-run effects because it might attract many more participants than intended. Enrollment would return to its preservice levels in the long run, again assuming no major behavioral changes.

In requiring service to obtain federal subsidies for postsecondary education, Option C would also permanently raise the price of attending school--in relation to current prices--for students who now receive financial aid. This increase would tend to reduce enrollment, although the magnitude of the decline cannot be predicted with any degree of confidence. Whereas some youth (and their families) might react by choosing to forgo additional schooling, others might simply choose lower-cost institutions.

IMPLICATIONS FOR FEDERAL COSTS

Corresponding to the range of options called "national service" is a range of potential budgetary costs for each participant. In addition to any "fixed" costs associated with establishing and administering a national service program, "variable" costs--which would include stipends and benefits, housing or education vouchers, and expenditures for outreach, supervision and training, materials, and room and board--could range from negligible to almost \$40,000 per participant per year.

Federal costs would be lower than total costs to the extent that costs were shared with state or local government agencies, that there were offsetting receipts from private nonprofit agencies that utilized participants, or that payment of vouchers for educational expenses reduced federal expenditures for current student financial aid. Under Option C, there would also be (gross) savings associated with the abolition of Pell grants; restrictions on student loan eligibility might result in additional savings.

9. If enrollment was for two years, on average, then 300,000 youth leaving national service each year could increase enrollment by 600,000 annually, compared with projected college enrollment of about 12.2 million during the mid-1990s.

This section outlines the factors that would determine costs per participant and how federal costs would differ among the options examined in this study. The estimates of total federal costs presented here pertain only to the target participation levels assumed for each option; actual federal costs could be significantly different. The number of participants would depend on the financial rewards given for service, and estimating the response of youth to a given level of rewards is beyond the scope of this study.

Estimated Costs per Participant

The cost estimates described in this section pertain to a "steady-state" national service program in which the number of participants would be constant from year to year so that budget authority and outlays would be the same in real (that is, inflation-adjusted) terms in each year. In the absence of a steady state, authorization levels and outlays could differ over time.^{10/} All estimates are in fiscal year 1991 dollars, and are presented on a full-time equivalent (FTE) basis (2,000 hours per year).

Stipends and Benefits. The average annual cost of stipends per FTE service year would depend on the amount specified by legislation and the relative numbers of full- and part-time participants. Thus, the cost of stipends for Option A would be zero, since participants would not receive them. Under Option B, part-time participants would not receive stipends, but full-time participants would receive \$7,500 per year. If, as assumed here, 50 percent of the 400,000 participants were full time, the cost of stipends would be \$1.5 billion annually. For Option C, under which all participants would be full time, the cost of stipends would be \$3.75 billion for 500,000 participants.

The costs of health insurance or other nonwage benefits, to the extent provided for by legislation, would depend on both the type and level of benefits provided. Based on the experience of the Volunteers in Service to America (VISTA) and California Conservation Corps (CCC) programs, CBO estimates that the annual cost of health insurance for each insured participant would be \$1,100. The cost per FTE service year would depend on the level of coverage provided to part-time participants.

This estimate assumes that coverage would be provided only for individuals. Higher costs could be expected if coverage included participants' dependents, or if benefits were more extensive than those provided by the VISTA and CCC plans. Costs could be lower if some participants obtained coverage through parents or other sources.

Vouchers. In a steady state, the annual costs of vouchers per FTE service year would depend on the relative number of full- and part-time participants, the sizes of the vouchers issued to each, and whether vouchers would be denied, issued on a pro rata basis, or issued on some other basis to participants who did not complete their service obligation.

10. Moreover, budget authority and outlays would differ if federal liability for vouchers was incurred upon completion of participants' service, but outlays made much later.

For Option A, no vouchers would be paid, so that annual costs per participant would be zero. Under Option B, full-time participants would receive a \$10,000 voucher after one year, and part-time participants would receive a \$4,000 voucher after two years of service. Assuming equal numbers of full- and part-time participants, the total cost of vouchers would be \$2.4 billion at the target level of participation. For Option C, the cost of vouchers would be \$5.0 billion at the target level of participation.

These estimates assume that all participants would complete their terms of service, but it is reasonable to expect that some attrition would occur. If attrition occurred, and vouchers were less than fully prorated, the costs per FTE service year would be somewhat lower than the estimates above.

Operating Costs. For Option A, in which the federal government would encourage service, but would not administer national service programs directly, an important component of operating costs would support outreach and public service announcements. Costs would generally not depend on participants' activities.

For Options B and C, operating costs would depend on the number of participants, their educational and employment backgrounds and, perhaps most importantly, the activities of the program in which they participated. CBO's estimates of operating costs are based on experience with four representative types of programs operated by state and local governments. The estimates that follow are based on the average amounts of training and supervision provided under each program and are net of costs for stipends and benefits. Operating costs could be higher or lower depending upon the amount of training and supervision required by the national service program.

In sponsorship programs, participants would be sponsored by private and public nonprofit agencies, and would provide assistance to sponsors' regular staff. Based on the costs--net of stipends and benefits--of the VISTA and Washington Service Corps programs, CBO estimates that operating costs per FTE service year in sponsorship programs would be \$1,700.

Although the activities undertaken in urban service corps would be similar to those in sponsorship programs, the costs of training and supervision would be borne by the federal government, not a sponsoring agency. Based on the costs of the New York City Volunteer Corps, CBO estimates that 1991 costs per FTE service year would be \$8,700.

CBO estimates that annual costs per FTE service year in nonresidential conservation corps would be \$12,800. This estimate includes the cost of training, supervision, and materials. The higher cost (in relation to the urban service corps) reflects the extra training and materials need to perform heavier physical labor.

Residential conservation corps would be similar to nonresidential programs, but participants would be provided with room and board. CBO estimates that costs for such programs would be \$19,000 per participant--all of whom would be full time--again inclusive of training, supervision, and materials.

With such a range of costs--\$1,700 to \$19,000--average operating costs per FTE service year for each national service option would depend crucially on the distribution of youth among programs. A distribution similar to that proposed by Charles Moskos would yield average operating costs per FTE service year of about \$6,700 in 1991 (see the column labeled Variant II in Table 10).^{11/} Other combinations would yield different costs, both per service year and in total. For example, the variants shown here would increase costs by about 40 percent (Variant I) or lower them by about 40 percent (Variant III) in relation to the Moskos plan.

These cost estimates assume zero attrition. Significant attrition would almost certainly increase administrative costs but, depending on the treatment of deferred compensation for youth who did not complete their service terms, could decrease costs for vouchers.

Factors That Would Lower Federal Costs

A number of offsetting actions could reduce the federal costs of national service. The magnitudes of such offsets are not estimated here, however, because they would depend on possible interaction effects among different offsets, the responses of state and local governments to a given national service option, and the characteristics of national service participants.

Federal/State Cost Sharing. The federal costs of national service would depend on the federal and state shares of each of the three cost categories. Under some proposals, for example, the federal government would pay all of the costs of vouchers, and share the costs of stipends, benefits, and operating expenses equally with participating states.

Collections From Nonprofit Agencies. Private nonprofit agencies could be required to reimburse the federal government for each participant placed, with the amount of reimbursement depending on whether participants were full time or part time. The extent to which this would reduce federal costs per FTE participant would depend on the size of the reimbursement charge and its effect on the numbers of youth who could be placed in full- and part-time sponsorship programs.

Federal Student Aid. National service options that would provide vouchers for education expenses--such as B and C--could reduce federal financial aid outlays if the vouchers reduced student need. The effect on costs per participant would depend on a number of issues: the mix between participants using vouchers for education or for other purposes; whether vouchers would be treated as assets or scholarships under federal rules for student financial aid; the mix between aided and nonaided students in the national service program; and the amount of "unmet" need under current aid rules.

11. See Charles C. Moskos, A Call to Civic Service (New York: The Free Press, 1988), p. 157.

TABLE 10. FEDERAL COSTS OF TWO ILLUSTRATIVE NATIONAL SERVICE OPTIONS BY MIX OF PARTICIPANTS AMONG ACTIVITIES (1991)

	Variant I	Variant II	Variant III
Distribution of Participants (In percent)			
Sponsorship Programs	40	60	80
Urban Service Corps	5	5	5
Conservation Corps, Nonresidential	37	23	10
Conservation Corps, Residential	18	12	5
Costs per FTE Service Year (In dollars)			
Operating and Administrative Expenses	9,300	6,700	4,000
Stipends			
Option B	6,000	6,000	6,000
Option C	7,500	7,500	7,500
Vouchers			
Option B	9,600	9,600	9,600
Option C	10,000	10,000	10,000
Total Costs			
Option B	24,900	22,300	19,600
Option C ^{a/}	26,800	24,200	21,500
Total Costs (In billions of dollars)			
Total Costs			
Option B (250,000 FTE)	6.2	5.6	4.9
Option C (500,000 FTE) ^{a/}	13.4	12.1	10.8

SOURCE: Congressional Budget Office.

NOTE: FTE (full-time equivalent) is 2,000 hours per year.

a. The costs shown do not reflect savings associated with abolishing the Pell grant and Supplemental Educational Opportunity Grant programs. Outlays for these programs were \$5.0 billion in 1989.

If federal student financial aid programs were changed, as in Option C, which would eliminate Pell grants and restrict eligibility for other types of federal student aid to youth who participated in national service, offsets to federal outlays could be large. In addition to the factors outlined above, the magnitude of the offsets would also depend on the number and financial circumstances of youth exempted from service.

Even if there were no changes in federal student financial aid programs, outlays for aid during the phase-in period could fall to the extent that declines in postsecondary enrollment included youth who would have received aid. If youth who would have received financial aid were more likely to participate (say because they came from families with lower incomes) than youth who would not have been aided, the percentage reduction in aid outlays would be larger than the percentage reduction in enrollment. There would be no offsets from this source during the steady state, however.