

Advanced Management Program

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COMPARATIVE ANALYSIS OF ROTC, OCS AND SERVICE ACADEMIES AS COMMISSIONING SOURCES

Team: 2

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Executive Summary

Continued resource constraints and well-diversified officer commissioning sources for U.S. Military Officers may necessitate a redistribution to meet officer corps requirements, considering the best value to the government and the taxpayer. This analysis, based on a Return on Investment (ROI) concept, compares the tangible benefits and investments, or costs, of each of the three main commissioning sources enabling a qualitative comparison. From a complete analysis a redistribution of program loading would reduce commissioning source expenditures from the Service Academies, Reserve Officer Training Corps (ROTC) and Officer Candidate School (OCS) graduates for the Department of Defense.

The returns, or benefits, of commissioning sources can only be compared through evaluating career success indicators to determine quality of officer produced. The indicators include retention, career progression and attainment of flag/general officer rank. From a 1992 Government Accounting Office (GAO) Report, only about a 6% higher retention rate has been measured for service academy graduates after 15 years of active duty, when compared to ROTC and OCS Graduates. Although service academy graduates have historically attained flag rank at a much higher percentage rate than ROTC and OCS graduates, the significant shift occurred between 1972 and 1990. In 1972, only about 20% of flag officers were from ROTC and OCS combined, whereas in 1990 over 50% of general/flag officers were from ROTC and OCS commissioning sources. Differences in career progression between the three main commissioning sources were indistinguishable in the GAO Report. Ultimately, the quality indicators do not reveal any significant difference between commissioning sources. Thus, the tangible benefits from each program are exceptionally similar.

Each of the three main commissioning sources have some unique benefits and varied costs per graduate. Service academies cost on average eight times as much as OCS graduates and about four times as much as an ROTC graduate. Comparison of commissioning source costs proves difficult since complete and uniform cost reporting from each source does not exist.

Several alternatives were developed based on the ROI concept looking qualitatively at the returns and investments of each commissioning source. By right-sizing the service academies, ROTC and/or OCS cadet loading, while maintaining the desired balance of tangible and intangible benefits, would provide the best value to the government for U.S. Military Officers.

An accurate and complete comparison of program costs can only be made after quantifying all tangible and intangible costs and benefits. As a result of this qualitative comparison, recommend a detailed quantitative analysis of commissioning sources be performed to capture complete costs and benefits. Ultimately, a thorough cost benefit analysis could be performed which would result in best value recommendations to provide the most effective combination of commissioning programs to deliver the required quantity and quality of military officers for the future.



INTRODUCTION

Resource constraints dictate that the Department of Defense maximizes utility from its Officer Commissioning Sources. Service academies, Reserve Officer Training Corps (ROTC), and Officer Candidate School (OCS) all represent different costs to graduate each officer, and presumably, each source produces a similar, yet varied product. The intent of the analysis is to provide the framework for a comparative of the service three main commissioning sources.

The framework presented facilitates a Return On Investment (ROI) concept to be used for the comparative analysis. Any ROI analysis requires that every cost as well as all potential and proven returns for each of commissioning source be considered. Developing and applying appropriate methods to account for the total investment made and returns realized is particularly challenging.

Calculating investments or costs is challenging because there are implicit costs peculiar to each commissioning source that are difficult to identify and, once identified, difficult to quantify. Calculating returns is also challenging since several of the benefits associated with each source is subjective. Furthermore, the returns that are realized are not all denominated in monetary terms.

The framework presented is limited to providing suggestions for a method by which a comprehensive ROI can be conducted. The framework also attempts to identify categories or elements of investment costs and returns that are typically absent from analyses that have been conducted in the past.



ENVIRONMENT

Both Congress and the General Accounting Office (GAO) scrutinize the Service Academies because of the perceived high cost associated with a service academy graduate relative to other officer commissioning sources. DoD invests approximately four times as much to produce a single academy graduate as it invests to produce a single ROTC graduate. Academy graduates cost approximately eight times as much as Officer Candidate School (OCS) graduates.¹

Precisely how much greater the investment made for a service academy graduate compared to an alternate commissioning source, however, is not well known since there exists a lack of guidance with regard to cost reporting that has resulted in inconsistencies among the academies and makes comparisons problematic. Furthermore, DoD financial systems do not capture the cost accounting information necessary to measure the cost of an academy education. Complicating the ability to conduct a meaningful comparative analysis is the fact that there is no universally accepted method by which the return or benefits of each commissioning source is articulated and calculated.

The degree of difficulty in calculating the investments made for each commissioning source and the benefits derived from each source does not excuse the requirement to build a method to perform an ROI analysis for each commissioning source as an aide to determine the most appropriate allocation of scarce resources at a time when fiscal constraints will likely become more severe. The imperative to construct an accurate and transparent, and

¹ These figures are derived from a GAO report using 1997 dollars.



therefore defensible, method by which financial comparisons can be made among the three commissioning sources is also necessary to conform to statutory requirements.²

ANALYSES – RETURNS

Officer commissioning sources have some common advantages and benefits to the government, as well as some unique ones, listed below:

Service Academies

- Long term, intensive military training
- Emphasis on military history and traditions
- Historically highest retention rates
- Historically higher success in achieving general/flag officer ranks

ROTC

- Interaction between military instructors at civilian institutions
- Programs available nationwide
- Variety of institutions enables officer corps diversity
- Guarantees Citizen-Soldier Concept

OCS

- No cost to the government for college education (most programs)
- Relatively short duration commissioning program (typically 90 days)
- Surge capability for commissioning officers
- Focused military training and better retention at commissioning

Although each service has developed a core curriculum to ensure all commissioning sources provide the military knowledge and skills an officer needs, no systematic assessment of officer effectiveness is directly measured. To compare returns derived from commissioning sources, indicators of success (retention, career progression and attainment of flag rank) are compared.

² E.g. The Government Performance and Results Act of 1993 (GPRA), P.L. 103-62, which amends the Budget Act of 1921 and is intended to increase the public's confidence in fiscal management within the federal government.



Retention of service academy graduates (at 15 years) is on average about 6% higher than officers commissioned through ROTC or OCS/OTS, as illustrated in Figures 1 and 2.

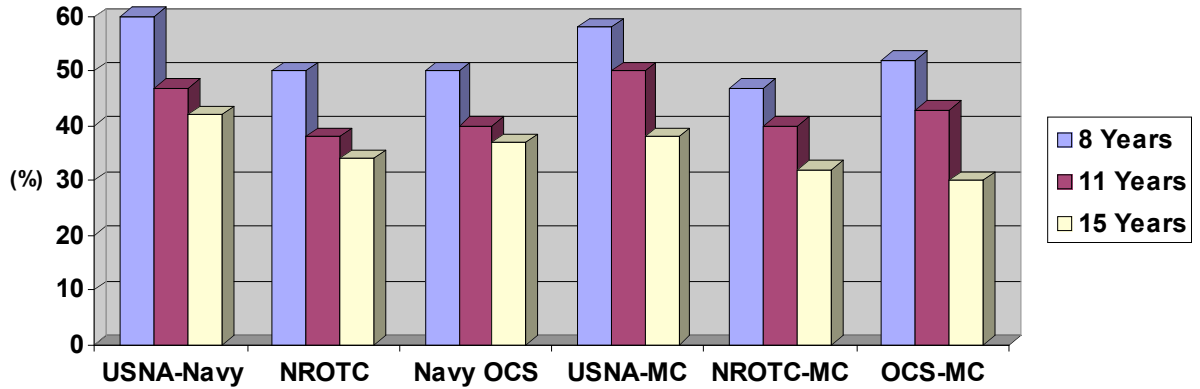


Figure 1. Navy/USMC Officer Retention Rates

No significant difference in officers' progression through the lower ranks, based on commissioning source, has been observed. According to a 1992 Government Accounting

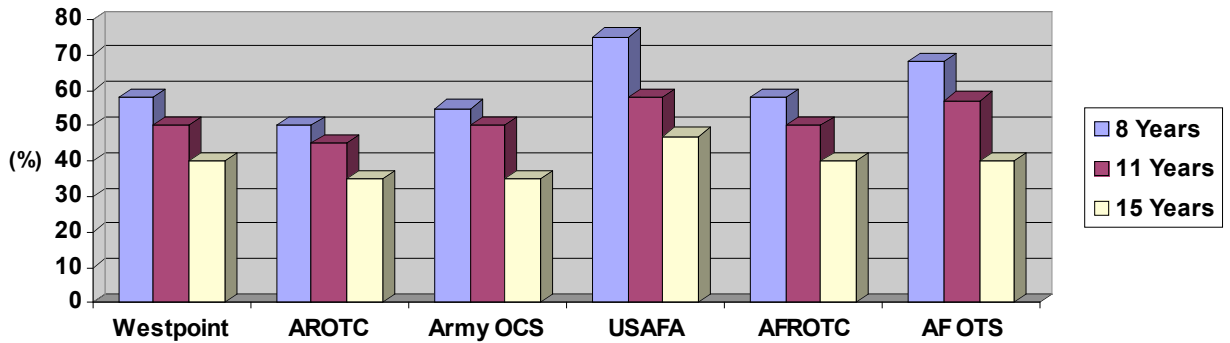


Figure 2. Army/Air Force Officer Retention Rates

Office (GAO) Report, the number of days officers spend as an O-2, typically a 750-day duration only differs by several days, with the exception of the Air Force whose academy and

ROTC officers differ by about 40 days. The number of days officers spend as an O-3, typically a 2,500-day duration, differs only up to about 3% between commissioning sources.

Service academy graduates have historically experienced the greatest success in attaining senior officer ranks. However, the advantage in achieving the general/flag officer ranks has diminished over the last two decades, as illustrated in Figure 3.

Source/Year	1972	1975	1978	1981	1984	1987	1990
Academy	43 %	43 %	42 %	39 %	34 %	32 %	33 %
ROTC	5 %	7 %	14 %	19 %	26 %	40 %	41 %
OCS	5 %	4 %	5 %	7 %	7 %	13 %	15 %

Figure 3. Percentage of General/Flag Officers by Commissioning Source (1972-1990)
(Other commissioning sources not included)

In the late 1960's and early 1970's similar numbers of Naval Officers were commissioned through the Naval Academy, ROTC and OCS. Currently, Naval Academy graduates (those commissioned in the late 1960's and early 1970's) make up a significantly higher percentage of Vice Admirals and Admirals (Figure 4). Across services, it is not clear whether this tendency is due to the quality of service academy programs or other factors that have tended to favor academy graduates.

	Naval Academy	OCS	NROTC
ADM/VADM's	28	7	8
Relative Contribution	65%	16%	19%

Figure 4. Current Navy Flag Officers (O-9/O-10) by Commissioning Source

Thus, except for the predominance of academy graduates achieving the highest general/flag officer ranks, commissioning source quality indicators of success (retention, career progression and attainment of flag rank) reveal commissioning sources are essentially indistinguishable during officer's careers.



ANALYSES - INVESTMENTS

Neither the DoD nor the services have established guidance to ensure commissioning source cost reporting is uniform. As a result of the inconsistency, comparing costs per graduate can only be approximated. Figure 5 illustrates the average cost to the federal government to graduate/commission an officer from a service academy, ROTC and OCS/OTS. Costs for non-scholarship ROTC Midshipmen are about one-half that of midshipmen on scholarship.

Service Academy	Naval Academy	ROTC (Scholarship)	OCS/OTS
Federal Government cost per graduate (FY97 dollars)	\$340,000	\$86,000	\$32,000

Figure 5. Commissioning Source Costs

At the service academies, DoD pays the full cost of a 4-year college education, military and physical training, and full-time pay for the cadets and midshipmen. For ROTC Midshipmen, DoD may pay all or part of a 4-year college costs, military training, a monthly stipend for scholarship students and active duty pay during summer training. For the OCS/OTS Programs, DoD pays for the candidates' military training and active duty pay while in the program.

As stated earlier, not all costs or adjustments have likely been taken into account in the cost per graduate estimations. Difficult to quantify to level the cost basis are any tax advantages, federal research and development funding or subsidies realized as a result of hosting commissioning programs. Even more difficult benefits to quantify are intangibles that add value to the community and institution, as well as promoting national pride, as a result of interaction with civilian counterparts and community members.



ALTERNATIVES

Given an environment of cost-wise readiness, it is imperative that DoD take a look at various options to develop the necessary numbers of qualified officers in the most cost efficient manner. Some options include:

- 1) Right-sizing the Academy
- 2) Right-sizing the ROTC/OCS programs
- 3) Right-sizing both Academy and ROTC/OCS using standard methodology to formulate the right mix of both
- 4) Maintain the status quo

Looking at each one of these options individually there are issues that must be addressed to adequately evaluate them in a consistent manner.

1) Right-sizing the Academy – While the Academies are the most expensive form of officer production, cost is not the only factor that we can look at compared to other officer commissioning programs. The academies provide various intangible benefits that provide utility to each service that need to be quantified so that they can be objectively compared to other monetary benefits. To determine if we need to raise or lower the number of officers produced at academies we first need to determine what is the priority of qualitative and quantitative benefits provided by the academies and conduct analysis to determine what the ‘right’ number of personnel to produce at these historic institutions.

2) Right-sizing ROTC/OCS programs – OCS is used as a filler program to balance requirements between the academies and OCS and is dependent on the analysis between the two major programs. Therefore independent analysis of OCS will be considered as a subset



of the analysis of academies versus ROTC. Given that ROTC programs are offered at a variety of universities and colleges with varying levels of education quality and costs, it is very difficult to compare one program to another equitably. Again, non-cost factors come into play such as relative prestige and education qualities amongst institutions and the benefit of the positive interaction of military and civilian organization in a collaborative environment. Again to determine the ‘right size’ of ROTC personnel you also have to look at the priority of qualitative and quantitative benefits not only provided by the ROTC program itself but also the quality/effectiveness of the various universities that provide ROTC programs.

3) Right-sizing both Academy and ROTC using standard methodology to formulate the right mix of both – GAO studies have found that reporting criteria for officer production programs lacked uniformity among and within the commissioning programs; consequently, costs are incompletely reported and difficult to compare. Given these factors, to determine the ‘right’ size of academies and ROTC programs in relation to one another it is imperative that procedures be put in place to collect equivalent data that can be used to conduct a proper comparison of benefits and negatives of each program using a common methodology. Again, intangible benefits of each program need to be quantified to conduct an equitable analysis that is useful to decision makers.

4) Maintain the status quo – Currently the status quo is mainly based on DoD’s involvement in the officer production system primarily focused on defending commissioning program budgets, and has not extended to determining the number of new officers to be produced, either by the entire system or by its individual programs. As currently constructed,



in the absence of a coordinated, unified planning and oversight the current system does not provide a production of officers based on detailed qualitative and quantitative analysis.



RECOMMENDATIONS

Given the limited amount of time of this program a detailed cost benefit analysis of the benefits of one commissioning program over another is not possible, but this group has the following recommendations:

- 1) Quantify the intangibles of each commissioning program – Previous analysis of cost benefits of the various commissioning programs have all been done on explicit costs of the various programs. But the intangible benefits of the various commissioning sources are factors that cannot be ignored just because they are not readily quantifiable. This group recommends that in order to conduct a detailed cost benefit analysis to determine a return on investment of the various commissioning programs the first step must be to quantify the intangible benefits of each commissioning source to enable the ability to conduct analysis of all relevant factors of each commissioning program.
- 2) Once a method has been determined on how to quantify the intangibles of each commissioning program this group recommends that further study be conducted on the true cost of each commissioning program and their benefit to meeting the requirement of officer production for each service in terms of quality and quantity of officers required. This information then can be used to conduct a true cost benefit analysis and determine the return on investment of each commissioning source.

As discussed at the beginning of this paper, the costs constraints of the current military environment dictate that the true costs and benefits of our officer commissioning programs be analyzed in detail. Once the return on investment analysis is completed, this information needs to be given to the DoD leaders and decision makers to determine what is



the right mix and cost of commissioning programs that will deliver the needed quantity and quality of officer needed to lead our military in the 21st century.



REFERENCES

1. Educational Benefits and Officer Commissioning Opportunities Available to U.S. Military Service members. Michael Thirtle, Rand Documents 2001.
2. Report to the Chairman, Subcommittee on Manpower and Personnel, Committee on Armed Services, U.S. Senate: Officer Commissioning Programs – More Oversight and Coordination Needed. Government Accounting Office Report GAO/NSIAD-93-97, November 1992.

