RAND Research Brief

Recruiter Incentives and Enlistment Supply

To ensure that recruiting resources are expended in the most productive manner and that manpower projections are accurate, a number of studies have been made of factors influencing the supply of enlistments. Models have been devised that quantitatively relate the number of enlistments to prevailing economic factors such as civilian wages and employment opportunities and to the amount of money spent on recruiters and advertising.

However, previous studies have not considered the effects of demand factors such as rewards given to recruiters for achieving quotas and for securing "high-quality" recruits. (Here "high-quality" refers to high school graduates scoring in the top half of the Armed Forces Qualification Test; "low-quality" refers to high school graduates scoring in the bottom half.) These demand factors can be important, according to an analysis of Army enlistment data conducted with a recently developed econometric model. In current research the model is being extended to other services.

RECRUITER BEHAVIOR

The analysis uses a model of recruiter choices, illustrated in simplified form below, in which **enlistment outcomes—the number and quality composition of enlistments—depend not only on supply factors but also on the demand factors which influence recruiter behavior.** The points along the solid curve represent all possible combinations of high- and low-quality enlistments. The location of the curve depends on the level of economic variables and recruiting resources. The dashed curve represents all possible combinations after supply factors have changed so as to increase supply. Along such curves, the specific combination of high- and low-quality enlistments which a recruiter decides upon depends on demand factors such as recruiter incentive programs. Points A and A′, for example, represent decisions to recruit relatively more high-quality enlistments; points B and B′, decisions to recruit relatively more low-quality enlistments. Such curves show that a recruiter must give up some low-quality recruits to secure more high-quality recruits.

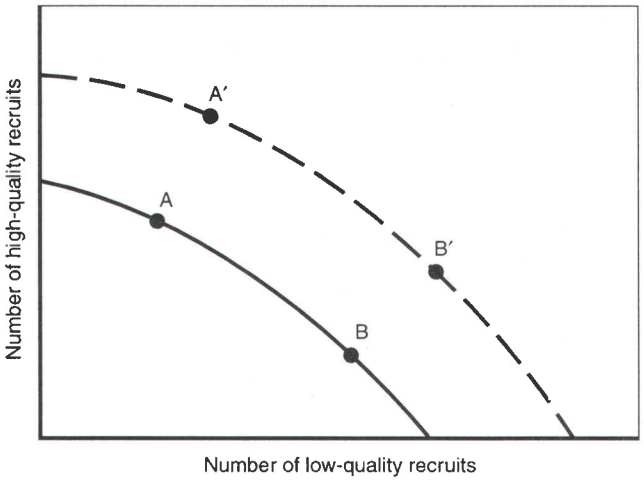


Figure 1—A simplified model of recruiter choices

The analysis yielded two basic findings about recruiter behavior. First, **recruiters can substitute low- for high-quality enlistments at the rate of about four to one.** Ignoring this tradeoff and the quotas affecting recruiting behavior can yield incorrect estimates of the effects of economic factors and resource expenditures.

Second, **recruiters who achieve high-quality quotas are less likely to be induced by existing incentives to increase their productivity (in terms of quality and quantity) than are those who do not achieve high-quality quotas.** One factor contributing to this disparity could be the tendency of the Army to increase quotas for recruiters who have met them in preceding years.

IMPLICATIONS FOR RECRUITING EFFECTIVENESS

These findings imply that **the cost of obtaining an additional high-quality recruit depends on the system of incentives in place.** Cost estimates derived from the analysis are displayed in Table 1.

The costs in column A are those incurred under the incentives in place at the time the data were collected (1980 and 1981). The marginal cost in 1981 exceeds that of 1980 because although high-quality quotas were higher,

Table 1
Marginal Recruiting Costs for High-Quality Enlistments

	A	B	C	D
1980	$6,800	$4,800	$3,600	$2,900
1981	$10,300	$4,400	$3,000	$2,300

NOTE: A = present incentives; B = incentive change to induce only high-quality recruiting at the margin; C = incentive change as in B, plus further change to induce more effective recruiters to increase their productivity; D = incentive changes as in C, plus further change to induce substitution of high-quality recruits for low ones.

more recruiters were making those quotas. Incentives could be altered so that recruiters' additional efforts would be expended only on high-quality recruits. If that were done, the costs of obtaining an additional high-quality recruit (keeping the number of low-quality recruits the same) would drop to those given in column B. The costs in column C are based on the same assumptions as those for column B but additionally assume that quotas for high-quality enlistments are set high enough that even recruiters who achieve the present quotas would be induced to increase their productivity further. If incentives are additionally altered so that recruiters drop a low-quality enlistment for every additional high-quality one they obtain, the costs of obtaining a high-quality recruit decrease to those in column D.

The relationship between the marginal cost of high-quality enlistments and recruiter incentives is also demonstrated by a reanalysis of the effects of the 1981 test of the Veteran's Educational Assistance Program (VEAP). Previous analysis had shown that the enhanced benefit of that program increased Army high-quality enlistments by about 9 percent. The present reanalysis was consistent with that estimate. However, **it also indicated a VEAP could potentially increase the number of high-quality enlistments by about 16 percent if incentives were altered to also reward recruiters who achieve their quotas.** This estimate represents the increase in output of high-quality recruits by recruiters in the 1981 test who did not achieve their quotas and who thus continued to face incentives which more productive recruiters had surpassed.

One way to induce recruiter effort might be to increase quotas for high-quality enlistments, since a large point bonus is awarded when that quota is achieved. However, **the effect of quota changes on the number of high-quality enlistments can vary dramatically, depending on the ability of recruiters to achieve the quotas.** For example, increasing the quota would induce recruiters who are presently somewhat above quota to increase high-quality enlistments. On the other hand, increasing the quota would have no effect on recruiters unable to meet current quotas or able to exceed them by a great deal. For recruiters who are just able to meet the old quota, increasing the quota, perhaps just a little, could result in a dramatic decline in the number of high-quality enlistments. Such recruiters would have no incentive to work as hard as before, simply because the new quota level is unattainable.

IMPLICATIONS FOR ENLISTMENT PROJECTIONS

This analysis also implies that **enlistment projections could be more accurate if they took demand factors into account.** These projections play a pivotal role in the allocation of resources to recruiting. When used to assess the sources of growth in Army high-quality enlistments from 1981 to 1982, the model indicates that changes in supply factors account for less than two-thirds of the increase. The remainder was due to the relative increase in high-quality quotas, which induced recruiters to reallocate their efforts from low-quality to high-quality recruits.

CONCLUSION

This analysis suggests and applies a modeling approach that explicitly considers the role of recruiters in the determination of enlistments. The research demonstrates that the traditional focus solely on the supply of single categories of enlistments can be significantly improved. This is because recruiters acting as agents on behalf of the military can alter both the quantity and quality of enlistments. Ignoring recruiter responses to goals and incentives can yield incorrect estimates of the effects of economic changes and resource expenditures.

This research brief describes work done within the Forces and Resources Policy Center of RAND's National Defense Research Institute for the office that preceded the Under Secretary of Defense (Personnel and Readiness). It is more fully documented in Recruiter Incentives and Enlistment Supply, *by James N. Dertouzos, R-3065-MIL, May 1985, 44 pp., $4.00, available from RAND Distribution Services (Telephone: 310-451-7002; FAX: 310-451-6915; or Internet: order@rand.org). Abstracts of all RAND documents may be viewed on the World Wide Web (http://www.rand.org). Publications are distributed to the trade by National Book Network. RAND is a nonprofit institution that helps improve public policy through research and analysis; its publications do not necessarily reflect the opinions or policies of its research sponsors.*

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