IMPROVING SUCCESS PROBABILITIES OF FACULTY REQUESTS FOR EXTRAMURAL RESEARCH SUPPORT

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The study focuses on a predetermined selection of variables which are amenable to administrative control and which are frequently cited in the literature as having an impact on success probabilities, and it offers estimates of the magnitude and direction of the effect of these on the chance of obtaining an award from either of two leading sponsors of research at universities and colleges. It finds that as much as 50 percent of the variability in the probability of success is attributable to the selected variables and that individual measures of impact vary both within and between sponsoring agencies. This outcome is evidence that action taken by university administrators could improve the competitiveness of faculty in the sponsored funds market.

Key words: faculty; success; proposals; administrative action; extramural support

The set of variables defining the possibilities for action in the art of grant-getting defines at least two levels of competition in the academic market for extramural research support: competition at the proposal level, among individual requests for project support (micro-level), and competition at the institutional level, among colleges and universities, for increasing shares of the nation’s resources for research (macro-level). Generally, and at both levels, the reason for success is quality.

Quality in research, however, is normally taken as given by the typical grantsman, with writers in the area of grant-getting commonly restricting their attention to the more identifiable characteristics affecting success probabilities. Notwithstanding, treatment of these more objective factors is generally selective, rarely rigorous, and in many instances substantially specialized, as evidenced by the burgeoning literature on how to write a proposal.

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There have been virtually no studies on the precise effects of the micro-variables that have impact on the funding process. This set of variables includes considerations such as amount requested, the duration of the proposed research, and the academic rank and publications record of the applicant. The literature also lacks articles on the specific impact of the macro-variables—for example, the size of the applying department, its Ph.D. output, and the magnitude of the university’s research facilities on the institution’s ability to obtain project support.

This lack of studies about specific attributes affecting success probabilities may be blamed in part for the lack of a cohesive organizational theory for those who request grants. There are virtually no analytic models to guide cooperative efforts among university staff, and there are virtually no studies which would quantitatively justify roles for different academic/administrative types in the quest for extramural project support.

The present paper, therefore, presents the results of a statistical analysis that combines various micro and macro considerations having impact on the funding process, and it attempts to estimate their separate and combined effect on the probability of success of an application for extramural research project support.

There are three equations treating those variables cited most frequently in the literature as relevant to the funding decision. Two describe the impact of the micro-level variables; the third describes the influence of the macro-variables. This latter effect is captured initially at the micro-level by dummy variables, which form the connecting link between the micro and macro equations.

The equations and their variables are described in greater detail below. To preserve homogeneity in the data, and in recognition of the fact that different award criteria apply to subjects within and among sponsoring organizations, the first two equations treat chemistry applications to the National Science Foundation and to the United States Public Health Service only. The macro equation, being more general and also lacking adequate data, treats federal volumes. Empirical findings are followed by a summary of the findings. For reasons noted above, the model avoids incorporating quality aspects of the proposed research and estimates instead the impact and significance of those variables most amenable to administrative action.

So although the results might not suggest ways of improving project merit, they could be used by chemistry faculty as an aid in selecting sympathetic sponsors. The study offers research officers a guide in methodology for estimating success probabilities and for forecasting probable levels of extramural support for research, given university-wide levels of proposal output. An application by research offices ex-