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Review of the Book *In Pursuit of the Ph.D.*

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Abstract

[Excerpt] When William Bowen, the President of the Andrew W. Mellon Foundation (formerly the President of Princeton University), and Neil Rudenstine, the President of Harvard University (formerly Executive Vice President of Mellon), combine to write a book on doctoral study in the arts and sciences, the academic profession must take notice. And well it should. Building on Bowen and Julie Ann Sosa's (1989) predictions of forthcoming shortages of Ph.D.'s in the arts and sciences, *In Pursuit of the Ph.D.* provides a detailed analysis of the propensity of American college graduates to enter doctoral programs in the arts and sciences and of doctoral students' completion rates and times-to-degree. Bowen and Rudenstine also carefully analyze the role that labor market characteristics, financial support patterns, institutional characteristics, and graduate program policies play in influencing these outcomes. Finally, they both implicitly and explicitly lay out an agenda for future research. *In Pursuit* is thus a "must read" for faculty and administrators involved in graduate education and for economists interested in higher education and academic labor supply issues.

Keywords

higher education, doctoral study, completion rates, graduate programs, academic labor supply

Disciplines

Higher Education | Labor Economics | Labor Relations

Comments

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In pursuit of the Ph.D. By WILLIAM G. BOWEN AND NEIL L. RUDENSTINE in collaboration with JULIE ANN SOSA ET AL. Princeton: Princeton University Press, 1992. Pp. xx, 442. $35.00. ISBN 0–691–04294–2.

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When William Bowen, the President of the Andrew W. Mellon Foundation (formerly the President of Princeton University), and Neil Rudenstine, the President of Harvard University (formerly Executive Vice President of Mellon), combine to write a book on doctoral study in the arts and sciences, the academic profession must take notice. And well it should. Building on Bowen and Julie Ann Sosa's (1989) predictions of forthcoming shortages of Ph.D.'s in the arts and sciences, *In Pursuit of the Ph.D.* provides a detailed analysis of the propensity of American college graduates to enter doctoral programs in the arts and sciences and of doctoral students' completion rates and times-to-degree. Bowen and Rudenstine also carefully analyze the role that labor market characteristics, financial support patterns, institutional characteristics, and graduate program policies play in influencing these outcomes. Finally, they both implicitly and explicitly lay out an agenda for future research. *In Pursuit* is thus a "must read" for faculty and administrators involved in graduate education and for economists interested in higher education and academic labor supply issues.

Economists of my vintage and younger, who were taught that empirical research is best when it is based upon rigorous underlying maximization models and contains careful estimation of multivariate structural econometric models, may not initially appreciate how important a book *In Pursuit* is because they will not find such a research strategy employed here. If they read the book carefully, however, they will quickly learn that major contributions to knowledge can come from simple tabulations of relatively underutilized data sets and, more importantly, from careful collection of comparable data from a set of institutions (in this case graduate schools). The latter is, of course, often expensive to do, and the authors' ability to obtain the data they needed was facilitated by the resources they had at their disposal at the Mellon

Foundation and by the fact that the graduate schools were themselves often recipients of support from the Mellon Foundation and thus had obvious incentives to cooperate.

Bowen and Rudenstine amassed data from a wide variety of sources. They obtained information on times-to-degree or drop-out and financial support patterns for all entrants into Ph.D. programs in six arts and sciences fields over a 25-year period from the graduate deans at ten major research institutions. The National Research Council's *Doctorate Records File* provided data on times-to-degree. Knowledge of the names of winners of prestigious public and private national fellowship programs (e.g., National Science Foundation, Woodrow Wilson Foundation) when matched with the *Doctorate Records File* data permitted estimates of the effectiveness of these programs. Surveys that they conducted of recipients of fellowships from some of these national programs, along with prior evaluations of the programs, also aided their analyses. Finally, studying the content of graduate catalogs at different points in time for several humanities graduate fields provided evidence on how the content of humanities Ph.D. programs has changed over time.

Bowen and Rudenstein's findings are numerous and provocative and space constraints, unfortunately, permit me to touch on only a few. First, the growth of both Ph.D. production and the propensity of undergraduates to pursue doctoral study that took place during the mid 1960s to early 1970s period appears to have been more related to "draft related" decisions induced by the Vietnam War than to changing academic labor market conditions. The supply of new doctoral students appears to respond only gradually to the latter. Hence, to avert projected shortages, policies to improve completion rates and reduce times-to-degree should be considered.

Second, the share of new doctorates awarded by the most highly rated long-established graduate programs has declined substantially over time. Many of the "newer" programs are not large enough to be efficient producers (many produce less than three doctorates a year) and, on average, times-to-degree are longer and completion rates lower at the less highly rated programs. Although Bowen and Rudenstine are too polite to explicitly say it, the implication is that resources for Ph.D. education should be more heavily concentrated in the elite research institutions.

Third, although times-to-degree have not actually increased by as much as published data grouped by year of receipt of degree suggest (see Bowen, Graham Lord, and Sosa 1991, for reasons why), times-to-degree have increased over the last 25 years. Moreover, patterns of doctoral student financial support, which have also changed over time, do seem to matter. Fellowships at appropriate points in students' training appear to speed up degree time and increase completion probabilities. However, national fellowship programs, with their promise of multiyear fellowship support, have not been overwhelmingly successful in increasing completion rates or reducing times-to-degree.

Finally, comparisons of the contents of graduate catalogs (in the humanities) suggest that the number of courses has increased, formally stated expectations about degree progress have declined, and, more generally, the structure of graduate education has become more loosely defined. All of these factors tend to slow down degree progress and lead Bowen and Rudenstine to suggest that policies to improve the flow of doctorates must also be institutionally (and, more specifically, departmentally) based.

Bowen and Rudenstine conclude *In Pursuit of the Ph.D.* with a provocative set of policy recommendations directed at government, foundations, and doctoral institutions themselves. Implicit, and sometimes explicit, in the book is an equally provocative set of unanswered research questions. For example, will their findings, which often are based on simple comparisons of means, continued to hold in the context of more structured multivariate statistical models? Indeed, their findings on the importance of financial support patterns has already stimulated my own work which estimated "competing risk" models of doctoral students' times-to-degree and drop-out (Ehrenberg and Mavros 1992).

I am compelled to conclude my review by informing the reader that I am not a totally disinterested party. I previously reviewed Bowen and Sosa's book for this journal (Ehrenberg 1990), the Mellon Foundation partially funded the research that led to Ehrenberg (1992), and it is now partially funding a study

of historical black colleges that I am conducting (the latter was motivated by a reference in the preface to *In Pursuit* about topics that the book was *not* addressing). All these relationships grew out of the interest in doing research in the area that first Bowen and Sosa's book and now *In Pursuit* have generated. I believe my own growing involvement and that of others in research on graduate education is evidence of one of the major impacts these two books already have had.

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