

Prospects for faculty in the arts and sciences.

By WILLIAM G. BOWEN AND JULIE ANN SOSA.
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Very few books by economists are announced to the world in a front page story in the *New York Times*. However, *Prospects for Faculty in the Arts and Sciences* by William G. Bowen and Julie Ann Sosa was (see Fiske) and this honor is well deserved. *Prospects* may well be the most important analysis of the academic labor market to appear since Alan Cartter's pioneering work in the mid-1970s.

Bowen and Sosa present a detailed projection model of the demand and supply for faculty in the arts and sciences by field and type (e.g.,

major research, liberal arts) of institution over the 1987–2012 period. They are careful to stress at each stage of their analysis the specific assumptions that they are making and to illustrate the sensitivity of their findings to variations in the assumptions. Ultimately they conclude that starting in the late 1990s there will be large shortages of faculty in the arts and sciences, that these shortages will be caused primarily by growing student enrollments, not by the need to replace retiring faculty, that these shortages will be larger in the humanities and the social sciences than in the sciences, and that the appropriate response is for government and universities to take steps together to increase the flow of college graduates into doctorate study. Among the policies they advocate are increasing financial support for graduate students and shortening the length of time needed to complete doctoral programs (which has been lengthening over the last two decades).

Their analysis proceeds systematically. Chapter 2 uses data on the current age distribution of faculty and estimates of departure rates (to nonacademia, retirement, and death) by age to project the replacement demand for faculty each year. Quite strikingly, they show that plausible changes in retirement behavior that might be induced by the abolition of mandatory retirement for faculty only have small effects on replacement demand. In Chapters 3 and 4, they use data on population trends and age-specific college enrollment rates to project college enrollments and then data on trends in enrollments by major to project enrollments in the arts and sciences. An important finding presented here is the decline that has occurred in the fraction of college degrees conferred in the arts and sciences, from 40 percent in 1971 to 25 percent in 1985. Chapter 5 then uses data on trends in student/faculty ratios (which have been decreasing) and assumptions about what is likely to occur to these ratios in the future to project how changes in enrollment will translate into changes in the demand for new faculty.

In Chapter 6, the authors shift to the supply side of the academic labor market. While the number of Ph.D.s granted by U.S. universities has been roughly constant in recent years, nonacademic job opportunities are increasingly

available to Ph.D.s. There also has been an increase in Ph.D. recipients who are non-American citizens, whose probability of desiring and obtaining academic appointments in the United States is low. Projections of future academic labor supply are made based upon these trends and projections of the number of college graduates. Supply and demand forces are then integrated in Chapter 7 where the actual projections of forthcoming shortages are presented.

Bowen and Sosa emphasize that projections are not predictions and in Chapter 8 discuss a variety of adjustment mechanisms that might reduce or eliminate the shortages they project. These include adjustments in academic salaries, increased reliance on non-Ph.D.s for teaching needs, and reductions in retirements and in departures of professors to the nonacademic sector. Ultimately, they conclude that policies to increase the attractiveness of doctoral study such as increasing financial aid and reducing the length of doctoral programs, are necessary.

To say that the authors have produced an extraordinarily important book does not imply that one must agree with all their conclusions and critics can find many places to disagree with the assumptions that underly these conclusions. For example, an op-ed piece in the *New York Times* criticized the authors for ignoring the possibilities that as academic positions become more plentiful, a greater share of new doctorates may choose academic appointments and existing doctorates employed outside academia may also return to the academic market (Cheney 1989). Similarly, it argued that while student/faculty ratios dropped substantially from 1977 to 1987 as many colleges and universities attempted to “upgrade” their programs when the academic market had a surplus of Ph.D.s, the authors’ projections do not allow for any significant rebound in student/faculty ratios during a period of projected shortages.

I could, of course, add my own set of concerns. For example, Bowen and Sosa assume that shortening the length of doctoral programs and increasing financial aid will increase the flow of people into doctoral study. The existing literature provides no firm guidance, however, on what the magnitude of these responses might be. Also, the authors, have treated nonacademic demands for doctorates somewhat passively; one longs for a formal treatment of the

determinants of corporate and governmental demand including the role of relative wages in allocating new doctorates to the academic sector. And, they treat only cursorily the possibility of substituting part-time for full-time faculty and reducing reliance on Ph.D.s for teaching in colleges and universities that are not heavily research oriented.

However, in my view the importance of their book does *not* depend upon the accuracy of their projections. Rather, by providing an explicit model and set of assumptions for their critics to challenge, the authors have implicitly laid out a research agenda for researchers concerned with academic labor markets and college and university behavior. Anyone who knows Bowen will suspect that a major purpose of the book was to stimulate further research on these topics and I am certain that *Prospects for Faculty in the Arts and Sciences* has already succeeded in that objective.

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