Review of the Book *Prospects for Faculty in the Arts and Sciences*

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**Abstract**
[Excerpt] 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.

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**Comments**

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future as it is whether we choose to deal responsibly with the future.

Individuals can advance fund their personal retirement costs by accumulating assets during their working years and selling these assets during their retirement years. Nations cannot advance fund a generation’s retirement costs as easily. Assets can be accumulated during the generation’s working years, but the only way to liquidate them during the generation’s retirement years is through sales to foreigners. Nations can affect future tax burdens, however, if they can adopt policies that offset projected increases in taxes with equal or larger increases in before tax income.

That brings us to the point of departure for these authors: the relationship between the federal budget deficit and the current Social Security financing plan. Historically, America’s Social Security program has been financed essentially on a current cost basis, meaning that the tax revenues collected in any one year are used primarily to cover that year’s benefit payments. But, the Social Security tax rates now in effect produce far greater revenues than needed to cover current benefit payments. Under the current Social Security financing plan, this excess continues into the first two decades of the twenty-first century, and the balance in the Social Security funds eventually peaks at something more than one-quarter of the GNP. After that, the costs of the baby boom generation’s retirement benefits outstrip revenues, and the fund balance declines rapidly.

Aaron, Bosworth, and Burtless analyze the effect of a fiscal policy that converts current and projected future Social Security surpluses into additional national savings (and that alters the Social Security financing plan so that the balance in the fund does not drop when the baby boom retires). Not surprisingly, assuming short run stabilization objectives can be met through other policy tools, a higher savings rate today leads to higher future incomes. The interesting outcome of this analysis, however, is not the direction of change but the magnitude. The authors conclude that translating the currently scheduled Social Security surplus into additional national savings can increase future incomes by more than enough to offset the additional burden of pensions for the aged, and by almost enough to offset the additional hospital insurance costs as well. America can afford to grow old. It needs only to summon the will to deal responsibly with its budget deficit.

This volume continues the Brookings tradition of insightful and easily understandable analyses of major current public policy issues. The current Social Security financing plan provides a potential mechanism for dealing with future retirement burdens. That promise is not being realized. Presently, the rising balance in the Social Security fund has essentially no economic meaning because it is not being translated into higher national savings. It is being used instead for financing the deficit in the federal general fund. Indeed, the reduction in the federal deficit over the past five years is more the result of an ever increasing Social Security surplus than of a closing of the gap between receipts and expenditures of the general fund.

The current federal budget accounting procedures conceal as much as they reveal. Many Americans do not realize that we are, in effect, financing part of our defense spending with payroll tax receipts. Nor do they realize that to continue to use the Social Security surpluses in this way is to forgo an opportunity to deal responsibly with future retirement burdens. Aaron, Bosworth, and Burtless have performed a valuable service by explaining our choices and the implications of each.

Lawrence H. Thompson
U.S. General Accounting Office

Prospects for faculty in the arts and sciences.

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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Easily the most dramatic development in law and economics and in the products environment more generally has been the emergence of product liability as a major force in the U.S. economy. Insurance premiums mushroomed in the mid-1980s. In some cases, liability insurance was denied. The net effect has been a major change in the cost of goods and the character of products being developed and sold. Visitors to motels noticed that the diving boards had been removed. Pharmaceutical companies withdrew vaccines and, more typically, reduced vaccine research. The cost of purchasing a private plane also escalated, and some models were discontinued. In all of these cases, the shifts can be attributed to the rising role of product liability in the U.S. economy.

This escalation in the product liability burden has brought about many calls for reform. In his book, Liability: The Legal Revolution and Its Consequences, Peter Huber presents what might best be termed the corporate brief for product liability reform. Huber provides a detailed, and highly critical review of the history of the development of product liability law, including an almost exhaustive collection of product liability anecdotes and selected case material. In addition, he summarizes and presents a variety of reform proposals intended to decrease the emerging liability burdens.

Huber begins by documenting the increasing scope of product liability law. The emergence of the strict liability doctrine greatly shifted the responsibility of companies for accidents arising out of products, replacing the earlier and much less stringent negligence criteria. Similarly, the introduction of the design defect doctrine enabled juries to function in effect as regulatory agencies. Even though there was no manufacturing defect, juries could decide that the product design was not sufficiently safe, thus imposing liability across an entire product line. Recent developments, such as the emergence of toxic torts in which there may be thousands of claimants filing lawsuits for product-related diseases, highlight the limits of product liability law. Because of the difficulty in proving causality in these instances, many of these actions simply become the search for the "deep pocket." In particular, is there an identifiable party who can be linked to the accident who has sufficient funds to reimburse the disease victims?

The difficulty with this escalation in product liability costs is not simply that products have become more expensive, and victims now receive more compensation. Rather, there are more fundamental economic effects as well. In Huber's view, the chief adverse impact is the chilling effect that these awards have had on the introduction of new products with potentially large liability exposures. In this regard, Huber leaves little doubt as to where his sympathies lie: "Who fled most quickly for shelter from the baying new tort pack? Those quickest on their feet, of course—the person of action, the company of initiative, the mover, the shaker, and the doer. When it comes to liability problems, the bold innovators are the most