Journal of Economic Perspectives—Volume 13, Number 3—Summer 1999—Pages 153–156

Implications of the Labor Market for Graduate Education in Economics

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The demand for the services of new Ph.D.'s in economics is obviously a function of the graduate education and abilities of those Ph.D.'s, and the value of economists to their employers. The more productive economists are, and the more useful they are to potential academic and nonacademic employers, the greater will be the number of jobs available to new Ph.D.'s. In this comment, I will consider the implications of the Siegfried-Stock findings for graduate education in economics, in light of the findings of the Commission on Graduate Education in Economics (COGEE) whose data ended in the late 1980s (Krueger, 1991).

COGEE's assignment on behalf of the American Economic Association was to assess graduate education in economics. Focus on the labor market was one important aspect of our charge. As we began our work, simple fact-finding was the primary task. There was little data, and what there was was generally piecemeal. We felt ourselves to be on reasonably solid ground when commenting on the existing situation, but much less so when we began considering whether there were meaningful trends, whether positive or worrisome. Thus, findings and conclusions that were based on a cross-section could be drawn with considerable confidence. Trend data, however, were not more than suggestive, and many commission members, including myself, hoped that later data would confirm or reject our tentative conclusions. The Siegfried and Stock data are therefore to be doubly welcomed: not only do they provide valuable information on the current status of the job market and issues related to graduate education, but they also provide the first

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systematic evidence that permits a reexamination of some of the trends that COGEE wondered about.

Overall, the Siegfried and Stock findings represent good news, and allay some of the concerns that were raised among members of COGEE. In particular, the number of new Ph.D.'s in economics is up, their average starting earnings have increased, and unemployment is very low. We economists continue to rank, along with engineering, at the top of the academic heap in terms of compensation, both at starting levels and most likely at more senior levels as well. It is probably no coincidence that engineering, like economics, is a discipline which has maintained enrollments in its graduate programs without significant increases in waiting time for jobs. Interestingly, engineering and economics are also the two disciplines which seem to have attracted the greatest proportion of foreign graduate students. The fact that education in economics and in engineering are export industries certainly explains the ability of graduate schools to maintain enrollments without apparent reduction in entry standards.

While the various members of COGEE each had their own views, I think it is fair to say that there was a consensus that our major concern with graduate education was the "disconnect" between the training in the tools of economics taught in the first year, like theory and the econometrics, and the ways in which graduate students learned—or more accurately, did not learn—how to apply those tools to the economic problems they confronted. This showed up both in students' perception of a lack of connection between core first-year courses and applied courses, and also in the difficulty many students experience in choosing a dissertation topic and making progress on it after coursework is completed.

The failure of the profession to teach the linkages between tools and applications more satisfactorily was seen to affect all new Ph.D.'s, but showed up in sharpest relief in connection with the response of nonacademic employers to questions regarding their view of new Ph.D.'s in economics. Complaints were voiced by nonacademic employers that COGEE interviewed that new hires did not know how to find even the simplest of statistical series, could not do simple computations, and generally were unfamiliar with the real world economy.

This claim would have seemed less worrying had all, or almost all, new Ph.D.'s in economics been destined for academic research positions. But the facts emerging from COGEE data seemed to be that about half of all new Ph.D.'s began their careers in non-research institutions—like government and business—and even of those who began in academia, a significant portion began in liberal arts colleges where teaching undergraduates was emphasized relative to research.

These bits and pieces of evidence suggested that the economics profession should have cause for concern. There was considerable evidence that the growth segment of the market for economists and new Ph.D.'s was not research institutions. Even within research institutions, there was some evidence that much of the increased demand for new Ph.D.'s that had taken place had been in schools of business and public policy, rather than in traditional economics departments. But questions arose over how the demand for Ph.D. economists from these sources would change in the future. Would business and government continue to demand more Ph.D. economists? Moreover, it appeared that there was at least some tendency for business and public policy schools to begin training their own Ph.D.'s, rather than drawing so heavily on the output of economics departments.

Among the reassuring aspects of the Siegfried and Stock findings is the report that the number of new Ph.D.'s has indeed increased since the time of the COGEE report. The percentage of foreign students, to be sure, has increased, while the number of U.S. citizens receiving Ph.D.'s has continued to fall. While a 17 percent increase in new Ph.D.'s does not make us a growth industry, it points (along with evidence on starting salaries contained in the Siegfried and Stock findings) yet again to the fact that even if economics Ph.D.'s may not be entirely happy with their lot, they are much better off than their counterparts in other fields.[1]

It would appear from the Siegfried and Stock projections, however, that the increase in the output of economists has been temporary. Moreover, from data supplied by the authors, the number of new jobs in liberal arts colleges and in nonacademic institutions is down relatively, if not absolutely, since the data coming from the COGEE survey. If public policy and business schools are producing their own Ph.D.'s while jobs are down in liberal arts colleges and nonacademic institutions, it would appear that continued growth in the total number of Ph.D. students will depend in large part on increased enrollments of foreign students, many of whom will then return to jobs in other countries. The growth of foreign graduate students in economics is a trend which has continued since COGEE, according to Siegfried and Stock. However, if some of the foreign universities stocked with foreign-trained Ph.D.'s start producing their own Ph.D.'s, as seems likely, one must ask how the market for graduate education in economics in the United States will hold up: if the only part of the market that fails to shrink is jobs in research universities, the outlook for new Ph.D.'s might become bleak indeed.

In a sense, the question for graduate education in economics is what the relevant market should be. Siegfried and Stock seem to accept that the Ph.D. in economics is a program training students for research. Accepting that premise implies that the training of non-research professional economists is better done either at the undergraduate level or in public policy or business schools. If, as I believe, a strong grounding in theory and econometrics produces better applied economists for work in business and government, then one can legitimately ask whether leaving that training to public policy and to business schools will provide the best professional economists in those particular markets.

[1] I am not persuaded that a survey undertaken in October of the first year of a new job is a time at which indications of satisfaction with the job are to be taken too seriously. For most new Ph.D.'s undertaking academic jobs, the date at which the survey was taken would correspond to their first month of employment. I likewise see some ambiguity in the question asking whether their work experience was what they expected when they entered graduate school: many graduate students have interests that evolve during their first two years, and it is not clear that a question asking whether the job is what you expected when you entered graduate school provides an indicator of satisfaction, or simply an indicator that the respondent changed interests in the course of graduate study.

For those aspiring to work as applied economists in government and business, the degree of success we have with teaching linkages between theory, econometrics, and applications is vital. Yet there is little evidence that the profession has addressed these issues of linkages any more successfully in the 1990s than it did in the period covered by COGEE.

Raising the question of what programs are appropriate for those seeking careers as government and business economists, rather than academic researchers, immediately points to another question that surfaced in the COGEE report, that still puzzles me, and now puzzles Siegfried and Stock as well. Why is there not more product differentiation among economics departments? One possible answer, of course, is that product differentiation comes about in offerings in public policy, business schools, and other parts of universities, such as schools of public health, agricultural economics, and environmental studies, rather than in economics departments themselves. If that is the case, it must be asked whether economists, and especially those teaching in the economics Ph.D. programs, are content to see product differentiation taking place outside traditional departments. Another possible explanation is the Hotelling paradox, cited by Siegfried and Stock, in which competitive pressures drive producers to cluster together. A third explanation is that there is indeed product differentiation. But although one can find a few specialized graduate programs that emphasize such areas as public choice, minerals economics, and a few other subfields, the overriding impression to me remains one of great similarity across programs. Yet a fourth hypothesis is that deans and provosts evaluate departments based on their overall rankings, and since graduate students are acculturated in economics departments, they evaluate all departments by criteria that force conformity on the part of those seeking the approval of deans and provosts.

None of these explanations seems fully satisfactory, although each undoubtedly has a kernel of truth. Understanding the incentive structure within universities that leads to such conformity and to the apparent narrowing of economics toward the core, with applications moving to other schools and disciplines is, it seems to me, a central issue for further analysis of the future prospects for new Ph.D.'s in economics.

References

Krueger, Anne O., et al. 1991. "Report of the Commission on Graduate Education in Economics." *Journal of Economic Literature.* XXIX:3, September. pp. 1035–1053.