Is There an Insider Advantage in Getting Tenure?

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At most universities there are two types of tenured economists – those that came to the school shortly after leaving graduate school (and were later promoted) and experienced economists that were hired with tenure. Conventional wisdom in academic circles suggests that it is easier to get tenure as an insider than it is to attract an offer as an outsider. That is, schools hold potential external senior hires to tougher standards than the requirements for promotion of the school's junior professors.

In this paper, I take a first step towards showing that, at least for academic economists, there is an insider advantage. I analyze the research records of economists with ten years of experience and compare the productivity of those who recently changed employers (suggesting they were hired with tenure) to those that did not (suggesting internal promotion.) I show that the productivity of "outsiders" is higher than the productivity of "insiders" at all but the top 10 economics institutions in the world. The economic significance of the estimates is substantial, but the statistical precision suggests that more work is required to draw strong conclusions. Also, I focus on average productivity of all available insiders and outsiders whereas an ideal dataset would allow a direct comparison of marginal insiders and outsiders (that is, those that barely met the standard.)

I. Conceptual Background

William Chan (1995) directly addresses the issue of insider advantages in picking people for senior positions by extending the tournament model of Edward P. Lazear and Sherwin Rosen (1981). He shows that firms can manage the trade-off between the incentive effects of internal

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promotions and the option value of hiring externally by giving insiders an advantage. This model will not apply, however, in economics departments that do not have an explicit limit on the number of people they can promote. That is, Chan's (1995) model only applies to organizations that use a relative, rather than an absolute, standard in making promotion decisions.

Several other economic models would predict that an employer would apply lower standards in promoting an insider than the employer would use in hiring an outsider, if the additional assumption of an "up-or-out" system is made. For example, Bruce Greenwald's (1986) application of George A. Akerlof (1970) to the employment context warns of a lemons problem when hiring externally. When this information structure is combined with an up-or-out system, employers would only make an external hire if the candidate's expected ability were above some threshold higher than was required of internal candidates for promotion. While much of economist ability is easily observed (through reading CVs and papers), it is harder to infer other forms of productivity such as teaching skill and "citizenship."

Alternatively, if insiders can influence those making promotion decisions (as in Paul R. Milgrom and D. John Roberts, 1988), then they will have an advantage relative to outsiders. A similar, but more socially efficient, possibility is that economists develop relationships with colleagues that would be costly to replicate so that, at least up to a point, it is better to continue current co-worker relationships than to change to new (but higher ability) colleagues.

II. Data Summary

The data include 1,263 people from seven economics PhD programs that went on the job market (that is, were included in the books of CVs sent out by their departments) between the Fall of 1979 and the Fall of 1994. For each of these people, I compiled as complete a year-by-year career profile as I could using AEA directories, EconLit, and Google searches. I then

classified the types of jobs into six categories: tenure track jobs at Top 10 universities (using econphd.net rankings), tenure track Top 25 jobs, tenure track Top 50 jobs, tenure track jobs at other research institutions, other known position, and missing.[1]

Figure 1 shows the year-to-year transition of the 144 economists who move from graduate school to a tenure track position at a university ranked in the Top 25, but not the Top 10. People start exiting this group (and academia altogether) almost immediately. A small sample moves up to Top 10 schools, all within the first five years.[2] Panel A of Table 1 shows the transitions for all six job categories, though only at two points in time. As the table shows, economists move "down" to a broad set of other job categories, but movements "up" are rare. Very few economists work at Top 50 schools ten years after leaving school that did not work at one initially. Note that the table only includes transitions between categories. There are also within-category job changes.[3]

Panel B of Table 1 provides a hint of the relative research productivity of insiders and outsiders. It shows the average number of papers published in the Top 50 journals as ranked by Pantelis Kalaitzidakis, Theofanis P. Mamuneas, and Thanasis Stengos (2003).[4] Not surprisingly, those who work at Top 10 schools ten years after graduation are relatively productive. The

[1] See Oyer (2006a) for details on the dataset and Oyer (2006b) for more detail on "job rank" distinctions. The sample used here is smaller because I use those for whom I can gather research productivity measures for the first ten years after they leave graduate school. Note that I assume the person went straight from graduate school to the first job I observe the person holding. As a result, it is not possible to move from initially "missing" to another category, though a few people do move in and out of missing as their career develops.

[2] The group that moves from Top 11-25 schools to Top 10 schools shows some of the noise introduced by using a categorical measure of job rank, using econphd.net rankings, and using ten years after leaving school as the focal point of the analysis. Several of the thirteen people that moved from Top 11-25 schools to Top 10 schools started at Columbia, which some might rank in the Top 10. The group also includes an economist that moved relatively late, got a new tenure clock, and subsequently moved to the "other" category.

[3] For the record, I made one (though I am not in the dataset because the Princeton economics department did not keep copies of its job market CV books.)

[4] Unfortunately for me and the others in this volume, I dropped May *AER* papers. The top journals on this list should be obvious. Those that are ranked 46-50 include *Journal of Urban Economics, International Journal of Industrial Organization, Journal of Law, Economics, and Organizations, Journal of Law and Economics, and National Tax Journal.*

second line of the table provides evidence consistent with an insider advantage. Those who work at a Top 11-25 school ten years after graduation but started elsewhere publish more, on average, than those who were in that category both initially and after ten years. The group that started at schools below the Top 50 and moved to Top 11-25 schools is particularly productive (five of the six are above the mean productivity for those who start and stay in Top 11-25 positions.)

The patterns are not consistent throughout the whole table, however. The top row shows no evidence of an insider advantage, as the most productive group is the one that starts and stays at Top 10 schools. This may be highlighting the "average" versus "marginal" issue mentioned earlier as this group includes a set of superstars whose research talent was unmistakable as they left school (including two Clark Medal winners, several others that were recognized as Clark Medal candidates in press coverage, and several editors of Top 5 journals.)

III. Insider Advantage

I now analyze the insider advantage by running regressions of measures of research productivity over the first ten years of careers on an indicator for switching jobs and control variables. I use two measures of research productivity. First, I use the same count of Top 50 journal papers used in Panel B of Table 1. Second, I constructed an impact measure by adding together the *Journal Citation Reports* impact factors of each journal where the person published a paper (adding the impact factor for the journal as many times as the person published in that particular journal.) See Oyer (2006b) for details on this measure. The results below are generally similar when using the publication category and Top 5 journal indicator measures of productivity in Oyer (2006a).

In these regressions, an observation is an economist holding a tenure track job at a university ten years after she left graduate school. The sample is limited to the sixty-five schools

with both an insider and an outsider in the sample. The regressions control for dummies for each of the sixty-five schools and a linear trend for the year the person left graduate school (which is always small and insignificant suggesting cross-year comparisons are reasonable.) The variable of interest is an indicator ("outsider") that takes the value one if the person works at a different institution ten years after leaving school than she worked at five years earlier.[5]

Columns 1 and 4 show that there is no evidence of an insider advantage when looking at this whole sample. Both coefficients are positive, but they are small and insignificant. As noted above, one problem with using the entire sample is that in includes superstar economists that always have and always will work at a top department. Given that many of these people never change jobs, they inflate the average productivity of insiders though they provide no information at all about what the minimum standard is for tenure.

To try to reduce the impact of these individuals, I reduce the sample to the 233 people at fifty-five schools ranked outside the Top 10. Columns 2 and 5 indicate that this sample is consistent with an insider advantage. Those who changed jobs recently are more productive than their colleagues who worked at the same institution for more than five years. The point estimate in column 2, which is marginally significant, suggests that the typical outsider is 5.5 percentage points higher in the impact distribution than her insider colleague. For example, the average UCLA economist with ten years of experience is at the 84th percentile of the impact measure and the standard deviation is 10.6 percentage points. If a typical UCLA insider were at the 82nd percentile, the typical outsider would be at the 87th percentile of the economist impact distribution. While the standard errors on this estimate are fairly large, this suggests a large insider advantage.

[5] Results are similar when defining outsider as someone who switches jobs at any point in the ten years. They are also similar when looking at people fifteen years after leaving school.

Column 5 shows that the average outsider publishes more than one extra Top 50 journal paper in her first ten years than an insider colleague at the same school. The average number of Top 50 journal papers for this sample is five with a standard deviation of 4.5. So the estimated insider advantage, which differs statistically from zero at the 95 percent confidence level, is more than a quarter of the sample standard deviation.

Columns 3 and 6 attempt to address the problem that the previous analysis makes no distinction among economists in economics departments, public policy schools, medical schools, etc. To do this, I drop everyone who, to the best of my knowledge, does not work in a department of economics or a business school ten years after leaving school. I include a department or a business school if it has at least one insider and one outsider and now include fixed effects for each department or business school. This reduces the sample to 155 economists at forty-four universities.[6]

In both cases, this leads to larger estimated insider effects. Though the extra outsider impact in column 3 is still quite noisy, it suggests outsiders are about seven percentage points higher in the impact distribution than their insider colleagues. The estimate in column 6, which is significant at the one percent level, suggests outsiders average two more papers in Top 50 journals than their insider colleagues. Given the mean and variance mentioned above, this suggests the insider advantage may be quite substantial.

IV. Conclusion

As I warned at the outset, there are some important limitations to this analysis. Most importantly, the entire analysis has been about average productivity rather than the productivity

[6] I leave a detailed analysis of differences in productivity between economics departments and business schools to a future AEA session. But it appears that there are not substantial differences in the impact measure or in the number of papers published. However, because the Top 50 journals I use do not include most top finance journals, business school economists are behind by that measure.

of the marginal economist that barely gets tenure or an outside offer. Also, the data are noisy due to variation in the length of tenure clocks, publication lags, and perceived quality of schools and journals. However, the evidence is at least suggestive that outsiders are more productive than insiders and are held to a higher standard than those used for internal promotion. As data from more years or more schools becomes available, I hope to be able to refine the estimate of the insider advantage. In the meanwhile, the evidence here is suggestive that some of the permanent benefits of getting a "good" first job that I identified in Oyer (2006a) are due to being on the inside track for tenure.

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Table 1
Economist Productivity and Transitions by Institution Rank

Panel A: Transition Matrix

	Initial Placement					
Year 10 Job	Top 10	Top 11-25	Top 26-50	Other Ranked	Other	Missing
Top 10	85	13	6	5	1	0
Top 11-25	20	49	8	6	2	0
Top 26-50	10	10	33	14	6	0
Other Ranked	28	38	25	252	65	0
Other	18	28	20	103	246	0
Missing	2	6	2	30	32	100

Panel B: Average Number of Papers

	Initial Placement					
Year 10 Job	Top 10	Top 11-25	Top 26-50	Other Ranked	Other	Missing
Top 10	8.5	7.2	2.5	7.4	1.0	n/a
Top 11-25	6.2	5.6	6.1	9.3	3.0	n/a
Top 26-50	4.4	8.5	5.2	4.3	1.8	n/a
Other Ranked	4.5	4.4	4.2	2.8	1.2	n/a
Other	2.4	1.9	0.7	1.3	0.5	n/a
Missing	2.5	0.0	0.0	0.7	0.2	0.8

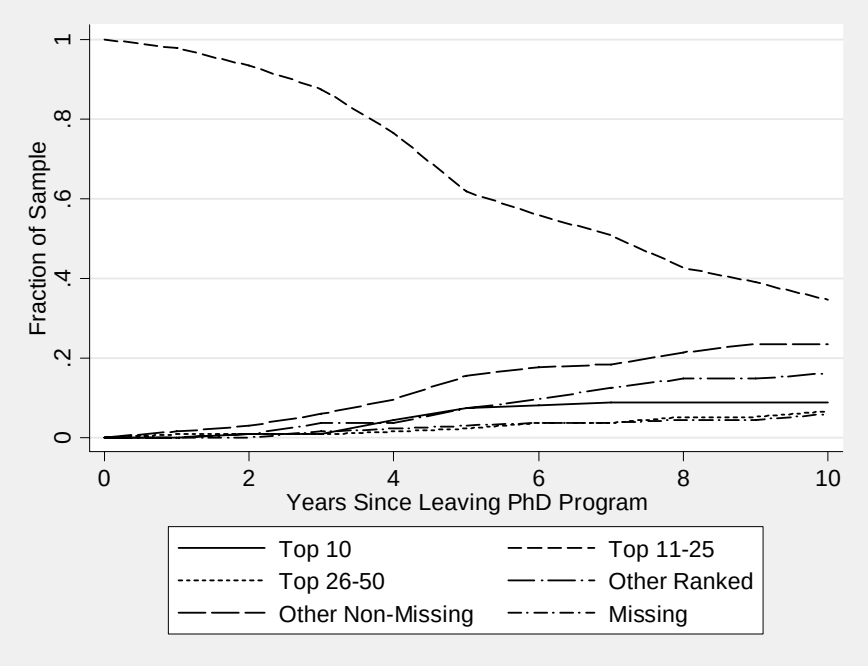
Notes: Sample consists of 1,263 economists from seven graduate schools that left school in the Summers of 1980-1995. Rankings are based on econphd.net. Panel A shows the number of economists in each group. Panel B shows the average number of journal articles published in Top 50 journals (as measured by Kalaitzidakis, Mamuneas, and Stengos, 2003) within ten years of leaving school.

Table 2
Productivity Regressions of Insiders and Outsiders

	Dependent Variable: Impact measure 10 years after leaving school			*Dependent Variable:* Number of papers in "Top 50" journals		
	(1)	(2)	(3)	(4)	(5)	(6)
=1 if change job between 6 and 10 years after leaving school	0.023	0.055*	0.069*	0.412	1.24**	1.84***
	(0.027)	(0.033)	(0.040)	(0.634)	(0.626)	(0.689)
Business School Dummies	No	No	Yes	No	No	Yes
Sample	All	Top 10 dropped	Top 10 dropped	All	Top 10 dropped	Top 10 dropped
Sample Size	343	233	155	343	233	155
R-square	0.315	0.360	0.4391	0.239	0.279	0.439

Notes: Sample limited to academic institutions with at least one insider (a person that held a tenure-track post at the institution in years 0 and 10 after graduation) and one outsider (a person that held a tenure-track job there at year 10 and not year 5.) Columns 2, 3, 5, and 6 drop Top 10 universities (according to econphd.net.) Columns 3 and 6 limit the sample to economics departments and business schools.

Figure 1
Sector Mobility Conditional on Initial Placement at Top 11-25 School



Notes: Sample limited to economists whose first placement is a tenure-track job at a school that ranks between 11 and 25, according to econphd.net.