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Pedigree or Placement? An Analysis of Research Productivity in Finance

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Abstract

We examine pedigree and placement effects of research productivity in finance and find a notable placement effect: authors who are currently affiliated with "elite" institutions tend to be more productive, especially among the top three finance journals. The placement effect, however, weakens in more recent years. We also observe a pedigree effect in the top three journals, where there is a higher concentration of publications by authors with degrees from "elite" institutions. We provide rankings of the institutions that are best at developing and training scholars.

Keywords: research productivity, ranking, pedigree, placement, financial economists

JEL Classifications: G10, G19

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1. Introduction

Reputations matter in life. Where someone goes to college is thought to matter a great deal. The reputation of a university is important because people assume a well-known name implies quality. The literature suggests that graduates of "top" research institutions are more research productive than graduates from other institutions; pedigree seems to matter. Prior research also shows that faculty who are affiliated with elite research institutions are more research productive than other scholars; placement also seems to matter. The link between pedigree and placement effects, however, remains unexamined. Which of the two exerts more influence on an individual's research productivity in finance? We investigate pedigree and placement effects, focusing on the link between the two and their relative importance in explaining an individual's research productivity.

We use a comprehensive publication database with 21 core finance journals published from 1990 to 2004 to examine the pedigree and placement effects. The data cover a large number of authors and their affiliations. Based on the articles in the 21 journals, we construct a familiarity-rank position index (FARPI) weighted number of articles as our institutional ranking metric. We use individual authors' total number of appearances in these journals as our research productivity measure. To mitigate the quality difference among the journals and the challenge of publishing in top journals, we analyze the top three journals (*Journal of Finance, Journal of Financial Economics* and *Review of Financial Studies*) and 18 other journals.

Our results for the top three finance journals indicate a significant pedigree effect in finance publishing, implying that graduates from top doctoral programs on average publish more than others in the top three finance journals, a result that supports the saying, "Success breeds more success." The pedigree effect, however, is lacking in the other 18 journals. In fact, graduates of elite programs seem to publish less in these 18 journals than graduates of nonelite programs. We also find a significant placement effect, implying that authors affiliated with elite institutions tend to be more productive in research. In comparison, the placement effect has a larger impact on individual research productivity than the pedigree effect on the top three finance journals. Authors affiliated with elite institutions, on average, also show fewer tendencies to publish their research in the other 18 journals. We provide rankings of an institution's ability to develop scholars after controlling for where authors receive their degrees and the institution's success at training scholars after controlling for where authors are placed. The rankings are useful for job applicants and graduate students.

2. Literature review

Several accounting studies examine the pedigree effect, the tendency for graduates of a small number of elite schools to dominate in a field of research. Williams and Rodgers (1995) and Lee (1995, 1997) discuss the pedigree effect in accounting from

a historical perspective. Lee and Williams (1999) and Reiter and Williams (2002) provide small sample evidence to show a pedigree effect in accounting research. Williams, Jenkins and Ingraham (2006) offer additional evidence of a pedigree effect in behavioral accounting research.

Chan, Chen and Cheng (2007) study a sample of accounting scholars who publish in a broad set of accounting journals. Chan, Chen and Cheng's (2007) findings of a pedigree effect are consistent with earlier studies in accounting. In addition, they find a placement effect in which scholars' placement also affects their research productivity. With the exception of Chan, Chen and Cheng (2007), accounting studies primarily examine articles in a small number of leading accounting journals and involve only a small number of scholars.

A few studies in finance indirectly suggest the existence of a pedigree effect. Borokhovich and Chung (2000) rank finance departments on the basis of the research productivity of their graduates. They show that the majority of productive authors are graduates from a small number of institutions. Chan, Chen and Steiner (2002) show the probability that a finance professor will move to a higher-ranked academic institution to be positively correlated with the ranking of an individual's degree-granting institution.[1] The results of Borokhovich and Chung (2000), and those of Chan, Chen and Steiner (2002), suggest a pedigree effect, but the authors provide no in-depth examination of the pedigree effect, the possible placement effect or the interaction between the two.

3. Data and research productivity score construction

We examine 21 major finance research journals that are considered influential in the field of finance (see Oltheten, Theoharakis and Travlos, 2005) from 1990 to 2004. Table 1 lists the journals. With the exception of *Review of Quantitative Finance and Accounting*, all journals appear in Table 5 of Oltheten, Theoharakis and Travlos (2005, p. 230). Many of these journals are cited for ranking finance programs and measuring financial research productivity (see Chan, Chen and Steiner, 2002; Heck and Cooley, 2005; Chan, Chen and Lung, 2007). From 1990 to 2004, these 21 journals published 11,501 articles written by 8,554 authors from 1,126 academic and 1,035 nonacademic institutions.[2] We calculate the weighted number of articles (weighted by coauthors and institutions) and the total number of appearances in publication for each institution and author. It is well recognized that there are quality differences among journals. The commonly used quality measure, journal impact factors from *Social Science Citation Index*, is not available for a number of finance journals in

[1] Chan, Chen and Steiner (2002) classify academic institutions into five levels based on cumulative research productivity with the *Journal of Finance*-equivalent page as a metric. Level 5 institutions (highest level) publish 20% of total JF-equivalent pages. Level 4 institutions (second-highest level) publish the next 20% of total JF-equivalent pages, and so on.

[2] We do not include "discussions," "comments," and "replies."

Table 1

Familiarity-Rank Position Index (FARPI) of 21 finance journals

FARPI is from Table 5 Column (3) of Oltheten, Theoharakis and Travlos (2005). *Review of Quantitative Finance and Accounting* does not have a FARPI value; hence, we assign a value of 4.4 (the lowest score) to it.

Journal names	Abbreviated names	FARPI
Journal of Finance	JF	95.0
Journal of Financial Economics	JFE	81.3
Review of Financial Studies	RFS	75.3
Journal of Financial and Quantitative Analysis	JFQA	61.3
Journal of Business	JB	53.6
Journal of Banking and Finance	JBF	33.9
Financial Management	FM	29.5
Financial Analysts Journal	FAJ	21.4
Journal of Corporate Finance	JCF	15.8
Journal of Financial Intermediation	JFI	15.7
Journal of Empirical Finance	JEmF	14.9
Journal of Financial Research	JFR	12.5
Journal of Portfolio Management	JPM	12.2
The Financial Review	FR	8.5
Journal of Futures Markets	JFM	8.2
Journal of Financial Markets	JFMkt	7.9
Journal of International Money and Finance	JIMF	7.7
Journal of Business Finance and Accounting	JBFA	5.5
Journal of Financial Services Research	JFSR	4.5
Pacific-Basin Finance Journal	PBFJ	4.4
Review of Quantitative Finance and Accounting	RQFA	4.4

our sample.[3] Hence, we use the FARPI in Oltheten, Theoharakis and Travlos (2005, p. 230) to measure the quality of each journal. The FARPI for the 21 journals is presented in Table 1. Since *Review of Quantitative Finance and Accounting* is not ranked in Oltheten, Theoharakis and Travlos, we assume that it has a FARPI score of 4.4, which is the lowest score among all journals.

We multiply the FARPI score for each journal by the weighted number of articles for authors and institutions to form the FARPI-weighted number of articles (FARPI-articles hereafter). The FARPI-articles measure provides a quality-weighted research performance metric for ranking institutions. The top 50 ranked institutions based on FARPI-articles are in Table 2, which also shows the weighted number of articles and total number of appearances for each institution. When we analyze the pedigree effect, we define "elite" as the top 25 institutions shown in Table 2.

[3] Impact factors are unavailable for *The Financial Review, Journal of Financial Research, Review of Quantitative Finance and Accounting, Journal of Empirical Finance, Journal of Business Finance and Accounting* and *Pacific-Basin Finance Journal*.

Table 2

Ranking of top 50 institutions based on FARPI-weighted number of articles (FARPI-articles) in 21 finance journals, 1990–2004

FARPI-articles = (FARPI) × (weighted number of articles) in each journal.

Rank	Institution	FARPI-articles	Weighted number of articles	Total number of appearances
1	New York U	12,717.0	246.0	527
2	U Pennsylvania	10,371.0	174.9	356
3	U Chicago	9,228.5	136.8	244
4	Harvard U	8,820.6	131.9	242
5	UCLA	7,837.6	133.6	252
6	U Michigan	7,435.5	115.8	218
7	Columbia U	6,069.8	114.3	202
8	Duke U	5,455.6	96.7	190
9	Northwestern U	5,140.8	80.3	157
10	MIT	5,008.8	76.5	135
11	Ohio State U	5,008.0	90.7	178
12	Cornell U	4,897.8	101.3	205
13	Stanford U	4,838.4	78.5	145
14	Federal Reserve System	4,722.1	127.6	222
15	U Illinois	4,309.3	96.4	213
16	U Rochester	4,298.6	64.5	122
17	U Southern California	3,916.2	61.6	123
18	London Business School	3,457.3	64.6	134
19	U Texas-Austin	3,433.1	69.4	148
20	U British Columbia	3,427.4	53.7	104
21	U California-Berkeley	3,318.9	68.5	116
22	U Florida	3,301.9	66.8	137
23	Indiana U	3,227.7	78.3	152
24	U North Carolina-Chapel Hill	3,190.4	55.6	118
25	Arizona State U	3,138.9	54.7	112
26	Purdue U	3,114.2	61.5	126
27	Boston College	3,057.4	68.6	131
28	Yale U	3,035.0	57.7	115
29	U Washington	2,961.3	58.1	112
30	U Maryland	2,831.7	50.2	109
31	Virginia Tech	2,804.5	70.5	144
32	Carnegie Mellon U	2,773.0	37.9	74
33	U Notre Dame	2,437.2	53.0	111
34	Pennsylvania State U	2,371.2	52.2	110
35	U Wisconsin-Madison	2,354.4	50.7	95
36	U Georgia	2,347.7	55.6	120
37	Rutgers U	2,315.9	94.7	186
38	Washington U	2,307.0	47.8	84
39	Vanderbilt U	2,298.0	51.9	102
40	Southern Methodist U	2,243.3	52.2	104

(*continued*)

Table 2 (*continued*)

Ranking of top 50 institutions based on FARPI-weighted number of articles (FARPI-articles) in 21 finance journals, 1990–2004

Rank	Institution	FARPI-articles	Weighted number of articles	Total number of appearances
41	Hong Kong U Science and Technology	2,104.6	61.0	137
42	Georgetown U	2,093.7	47.8	90
43	Emory U	2,053.6	42.8	80
44	U Minnesota	2,043.2	40.9	80
45	U Iowa	1,934.6	38.8	74
46	Michigan State U	1,911.0	48.5	97
47	Baruch College	1,910.1	61.1	121
48	U Utah	1,901.6	36.3	78
49	Dartmouth College	1,789.8	33.7	65
50	Princeton U	1,761.5	30.0	50

For the placement effect analysis, we use all 8,554 authors. We are able to identify these authors' current affiliations and hence classify all of them into "placement authors." For the pedigree effect analysis, we need to identify the degree-granting institutions for the authors, the specific area of the degree and the degree-conferring year. We use an ABI/INFORM dissertation search, various issues of the *Hasselback Finance Directories* and current faculty webpages to find this information. The sample for the pedigree analysis contains 5,757 authors out of 8,554 total authors. We match the 5,757 authors' doctoral degree-granting institutions with our ranking of institutions in Table 2 to identify those with degrees from the top 25 institutions.[4] Because some degree-conferring years are missing, we have only 5,549 authors for some of our analysis. For an individual author's research productivity, we use the total number of appearances in the top three and other 18 journals as the research productivity metric instead of FARPI-articles. Because we use the FARPI-articles to produce the "elite" institutions, using total number of appearances to measure individual author's research productivity mitigates the endogeneity issue in examining the placement effect.[5]

We examine these two samples for pedigree and placement effects and how the two relate to the research productivity of each author.

[4] To be consistent with the placement analysis, we use the same top 25 institutions in the pedigree analysis. There is one institution that does not confer doctoral degrees so the number used in the pedigree analysis is actually 24.

[5] We thank the reviewer for this suggestion. In addition, using total appearances also makes the interpretation of the results clearer.

4. Research methods, results and discussions

4.1. Placement effect

Table 3 reports placement effects for the top three journals (*Journal of Finance*, *Journal of Financial Economics* and *Review of Financial Studies*) and for the other 18 finance journals. Three subgroups of author affiliations are studied: all authors of an article are affiliated with elite institutions; no author is affiliated with an elite institution; and at least one (but not every) author is affiliated with an elite institution.

Among the 11,501 articles, 2,447 (21.3% of all articles) appear in the top three finance journals and 9,054 in the remaining 18 journals. Panel A of Table 3 shows that 924 of the 2,447 (37.8%) articles in the top three journals are written by authors solely affiliated with the top 25 elite institutions; 944 (38.6%) are written by authors outside of the elite institutions; and 579 (23.7%) are coauthored articles with at least one (but not every) author affiliated with an elite institution. Therefore, 61.5% (37.8% + 23.7%) of the top three journal articles have at least one author affiliated with elite institutions.

The 15-year study period allows us to examine trends. Figure 1 shows the publication patterns in the top three finance journals. Authorship patterns change over the years but some patterns emerge. There is a clear downward trend for authors affiliated with the top 25 institutions publishing in the top three finance journals. Authors affiliated with top 25 institutions write approximately 44% of the articles in the top three journals in 1990 and around 28% in 2004. The share of publications by nontop 25 affiliated authors rises from 36% in 1990 to 47% in 2004. The "mixed" authorship also increases from 20% of the top three journal publications in 1990 to almost 25% in 2004.

Our result is similar to a conclusion by Kim, Morse and Zingales (2006) that shows collaboration between researchers in elite and nonelite programs is common in top-ranked economics and finance journals. Kim, Morse and Zingales (2006) conclude that the externality of affiliation with elite colleges has diminished. They attribute the declining utility of physically residing in an elite institution to technology improvements.

The results for the 18 journals are shown in Panel B of Table 3. On average, only about 18.6% (8.9% + 9.7%) of the articles are written by at least one top 25 institution affiliated author. Hence, the placement effect in the 18 quality journals appears to be weaker relative to the top three journals. We need to be cautious in the interpretation of the results in Panel B, however. Some authors chose not to publish outside the top three journals. Therefore, the small placement effect in the 18 journals may be a result of self-selection from elite institution authors who are less likely to submit manuscripts to the 18 journals.

Figure 2 shows the trend for the 18 quality finance journals. The pattern is quite different from Figure 1. Authors not affiliated with a top 25 institution publish approximately 77% of all articles in the 18 journals in 1990; the percentage increases

Table 3

Placement effect on research productivity in finance

Panel A reports top three finance journal placement effect when elite institutions are defined as the top 25 ranked institutions from Table 2. Panel B reports the other 18 finance journal placement effect.

Panel A: Top-three finance journal articles by authors from top 25 and nontop 25 institutions

	All authors are affiliated with top 25 programs (single or multi-authored articles)		At least one (but not every) author in multi-authored articles is from a top 25 program		All authors are affiliated with programs outside top 25 (single or multi-authored articles)		
Year	*N*	Percentage of articles	*N*	Percentage of articles	*N*	Percentage of articles	Total number of articles
1990	72	43.6%	33	20.0%	60	36.4%	165
1991	72	52.6%	22	16.1%	43	31.4%	137
1992	68	51.1%	17	12.8%	48	36.1%	133
1993	67	45.0%	28	18.8%	54	36.2%	149
1994	50	40.0%	32	25.6%	43	34.4%	125
1995	70	48.6%	29	20.1%	45	31.3%	144
1996	57	36.8%	43	27.7%	55	35.5%	155
1997	66	37.9%	43	24.7%	65	37.4%	174
1998	44	28.2%	40	25.6%	72	46.2%	156
1999	54	30.9%	45	25.7%	76	43.4%	175
2000	66	36.9%	45	25.1%	68	38.0%	179
2001	67	37.6%	47	26.4%	64	36.0%	178
2002	67	36.2%	52	28.1%	66	35.7%	185
2003	48	25.3%	52	27.4%	90	47.4%	190
2004	56	27.7%	51	25.2%	95	47.0%	202
All years	924	37.8%	579	23.7%	944	38.6%	2,447

(*continued*)

Table 3 (*continued*)

Placement effect on research productivity in finance

Panel B: Articles from 18 nontop three finance journals by authors from top 25 and nontop 25 institutions

	All authors are affiliated with top 25 programs (single or multi-authored articles)		At least one (but not every) author from top 25 programs (multi-authored articles)		All authors are affiliated with programs outside top 25 (single or multi-authored articles)		
Year	*N*	Percentage of articles	*N*	Percentage of articles	*N*	Percentage of articles	Total number of articles
1990	72	13.9%	48	9.2%	399	76.9%	519
1991	76	14.0%	55	10.2%	410	75.8%	541
1992	58	10.7%	44	8.1%	440	81.2%	542
1993	71	12.3%	68	11.8%	437	75.9%	576
1994	52	9.2%	50	8.8%	464	82.0%	566
1995	61	10.2%	62	10.3%	477	79.5%	600
1996	56	8.5%	64	9.8%	536	81.7%	656
1997	50	8.1%	55	8.9%	511	83.0%	616
1998	59	9.6%	60	9.7%	497	80.7%	616
1999	57	9.5%	53	8.8%	489	81.6%	599
2000	40	6.8%	64	10.9%	481	82.2%	585
2001	38	6.2%	51	8.3%	524	85.5%	613
2002	39	6.1%	64	10.0%	536	83.9%	639
2003	40	6.0%	67	10.0%	565	84.1%	672
2004	40	5.6%	73	10.2%	601	84.2%	714
All years	809	8.9%	878	9.7%	7,367	81.4%	9,054

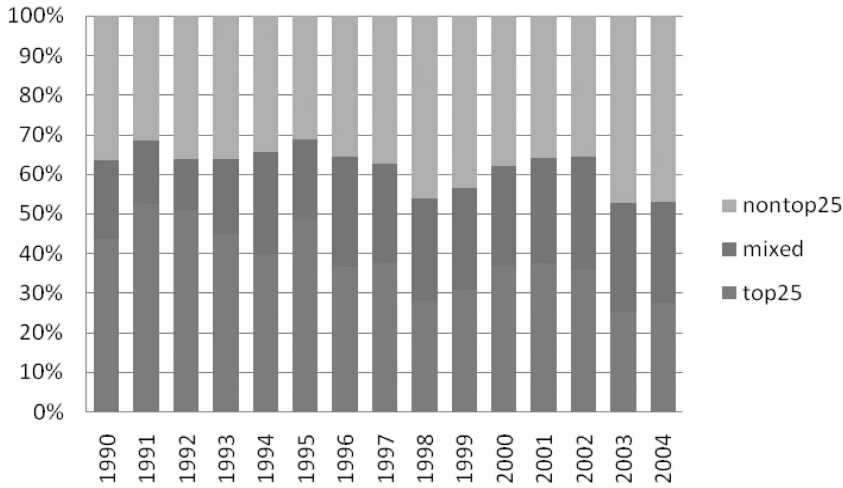

Figure 1

Publication patterns in the top three finance journals by authors from top 25 and nontop 25 institutions

Percentage of FARPI-articles by authors from top 25 institutions, nontop 25 institutions and "mixed" institutional affiliation. "Mixed" means that at least one (but not every) author of an article is from a top 25 institution.

to about 84% in 2004. The increase largely comes from the top 25 affiliated authors publishing less in these 18 journals.

4.2. Pedigree effect

Table 4 presents summary statistics of the pedigree effect. Institutions are ranked from 1 to 2,161 based on research output. Table 4, Panel A shows a mean rank of 80.2 for all 5,757 authors' Ph.D. granting institutions. The mean rank generally decreases (i.e., institutions are more highly ranked) as the authors publish more articles. For authors who have never published in the top three journals but have published in the other 18 journals, the mean rank, as expected, is the weakest at 94.0. The proportion of authors with elite degrees generally increases as the authors' publishing records improve. Around 63% of the authors with at least one article in the top three journals hold degrees from top 25 institutions; this percentage increases to about 81% for those with more than ten articles in the top three journals. However, the increasing rate seems to approach a plateau beyond four or more articles. That is, the proportion of authors publishing in the top three journals remains about same once the threshold of four articles is reached. For all authors who do not publish in the top three journals, only 37.3% graduate from top 25 institutions.

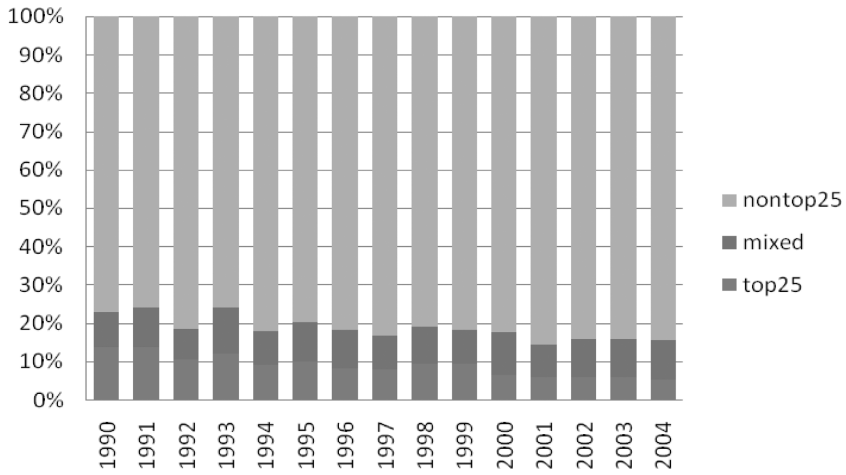

Figure 2

Publication patterns in 18 finance journals by authors from top 25 and nontop 25 institutions

Percentage of FARPI-articles by authors from top 25 institutions, nontop 25 institutions and "mixed" institutional affiliation. "Mixed" means that at least one (but not every) author of an article is from a top 25 institution.

Table 4, Panel B presents the same statistics for the other 18 quality journals. The results offer three findings different from Panel A. First, the mean ranks fluctuate along with the total number of articles published, suggesting that the pedigree effect is weak for the 18 journals. Only authors who publish ten or more articles exhibit a substantially lower mean rank (62.2) in their degree-granting institutions. Second, the proportion of authors with elite degrees does not vary much across research productivity levels. This result suggests that authors with elite degrees do not necessary publish more articles in these 18 journals. Third, there are 590 authors who do not publish in the 18 journals: they publish only in the top three journals and 69.7% of these authors are graduates of top 25 programs. This is likely the outcome of self-selection.

4.3. Placement effect, pedigree effect and coauthorship patterns

In this section, we examine the coauthorship patterns that contribute to the placement and pedigree effects.[6] We examine the following three possible coauthorship patterns:

1. Coauthorship between doctoral degree recipients and faculty at the student's degree-granting institution (mentor-coauthorship);

[6] We thank an anonymous referee for providing guidance on the coauthorship patterns.

Table 4

Pedigree effect on research productivity in finance

The statistics are based on the ranks of the authors' doctoral degree-granting institutions. The top institution has a rank of "1" and the last institution has a rank of "2,161."

Panel A: Authors that appear in top three finance journals, 1990–2004

Authors' publishing records (in number of total number of appearances)	*N*	Mean rank of degree-granting institution (1 to 2,161 with 1 being the highest rank)	Standard deviation of ranks	Proportion of authors with degree from a top 25 institution
0 article	3,978	94.0	218.3	37.3%
1 or more article(s)	1,779	49.2	172.3	62.5%
2 or more articles	855	36.7	138.1	69.2%
3 or more articles	549	39.0	166.9	71.2%
4 or more articles	356	32.6	146.7	75.0%
5 or more articles	237	28.6	142.5	77.3%
6 or more articles	171	18.7	29.6	77.8%
7 or more articles	122	18.2	25.7	76.2%
8 or more articles	90	17.4	24.7	77.8%
9 or more articles	73	15.5	23.5	79.5%
10 or more articles	59	16.0	25.7	81.4%
All authors	5,757	80.2	206.4	45.1%

(*continued*)

Table 4 (*continued*)

Pedigree effect on research productivity in finance

Panel B: Authors that appear in the other 18 quality finance journals, 1990–2004

Authors' publishing records (in number of total number of appearances)	*N*	Mean rank of degree-granting institution (1 to 2,161 with 1 being the highest rank)	Standard deviation of ranks	Proportion of authors with degree from a top 25 institution
0 article	590	49.3	212.2	69.7%
1 or more article(s)	5,167	83.7	205.4	42.3%
2 or more articles	2,518	76.8	180.2	43.1%
3 or more articles	1,590	69.9	142.6	43.6%
4 or more articles	1,079	75.0	166.8	44.9%
5 or more articles	803	77.7	179.0	44.7%
6 or more articles	589	82.1	187.5	44.0%
7 or more articles	433	84.5	191.5	43.6%
8 or more articles	328	80.5	167.2	42.1%
9 or more articles	258	73.0	143.1	41.1%
10 or more articles	195	62.2	84.2	39.5%
All authors	5,757	80.2	206.4	45.1%

2. Coauthorship among doctoral degree recipients from the same institution (alumni-coauthorship); and
3. Coauthorship among current colleagues (peer-coauthorship).

The mentor- and alumni-coauthorships are related to where authors receive their degree, that is, the coauthorships are derived from the pedigree effect. On the other hand, the peer-coauthorship is derived from the placement of the authors.

Out of the total 11,501 articles, 7,944 are coauthored. Among the 7,944 coauthored articles, 5,388 have all coauthors' degree information available. Thus, our analysis of coauthorship patterns is confined to these 5,388 articles. To compare across three coauthorship patterns, we calculate the percentage of coauthor relationship among all available articles on a yearly basis. For instance, suppose a paper has four authors, A, B, C and D, where A and B were students of C and A is a peer of D. Then AC and BC would be a mentor-coauthorship. AB would be an alumni-coauthorship, and AD would be a peer-coauthorship. For a four-authored article, there are a total of six possible coauthor relationships. Hence, 33% of the coauthorship in this example is the mentor-coauthorship, 16.7% is the alumni-coauthorship, and the peer-coauthorship is 16.7%. The remaining pairs, BD and CD, have no relationship. For two-, three- and five-authored articles, we calculate the coauthorship in a similar fashion.[7] We examine each article and calculate the mean percentage of all three coauthorship patterns for all articles across different years.

Table 5 presents the results. Averaging across all years, the peer-coauthored, alumni-coauthored and mentor-coauthored articles make up 29.9%, 18.0% and 15.9%, respectively, of the top three journal articles. Hence, on average, the placement effect (related to the peer-coauthored articles) is stronger than the pedigree effect for the top three journals. However, examining the patterns across time, we find that peer-coauthored articles decline in importance, while mentor-coauthored and alumni-coauthored articles increase in importance. In 1990, about 35% of the top three journal articles are peer-coauthored and in 2004 this number decreases to about 24%. On the other hand, mentor-coauthored (alumni-coauthored) articles increase from 8.2% (16.5%) to 19.4% (23.6%). The increase in mentor- and alumni-coauthored papers, therefore, outweighs the decrease in peer-coauthored articles.

Results for the 18 journals suggest some similarities to, as well as differences from, the patterns in the top three journals. Similar to the results based on the top three journals, on average, peer-coauthored is more prevalent than alumni- or mentor-coauthored articles. Across all years, about 30% of all articles in the 18 journals are peer-coauthored, while alumni- and mentor-coauthored represent approximately 13–15%. Peer-coauthored papers among the 18 journals also decline over time, similar to the top three journals. Alumni-coauthored and mentor-coauthored papers remain stable at around 14% and 12%, respectively. Overall, in contrast to the top three

[7] There are ten, three, and one possible relationships in five-authored, three-authored, and two-authored articles, respectively.

Table 5

Coauthorship patterns and elite affiliation effect

Peer-coauthorship is among current colleagues; alumni-coauthorship is among doctoral degree recipients from the same institution; mentor-coauthorship is between doctoral degree recipients and faculty at the degree-granting institution.

	Top three journals				18 quality journals			
Year	Number of articles	Mean % of peer-coauthorship per article	Mean % of alumni-coauthorship per article	Mean % of mentor-coauthorship per article	Number of articles	Mean % of peer-coauthorship per article	Mean % of alumni-coauthorship per article	Mean % of mentor-coauthorship per article
1990	96	35.4%	16.5%	8.2%	216	37.5%	14.7%	12.2%
1991	77	28.1%	22.1%	11.3%	234	35.9%	11.5%	12.4%
1992	71	36.2%	17.4%	14.3%	248	36.8%	12.8%	13.3%
1993	87	39.5%	17.6%	18.0%	270	33.6%	13.3%	14.9%
1994	79	30.0%	22.8%	13.1%	275	35.9%	13.7%	13.5%
1995	81	44.7%	16.0%	14.6%	273	30.5%	12.1%	16.7%
1996	95	25.4%	14.6%	9.8%	296	36.5%	12.0%	14.4%
1997	109	32.1%	15.6%	12.1%	280	25.2%	14.0%	13.7%
1998	89	29.4%	15.5%	19.5%	260	22.7%	13.7%	15.5%
1999	112	25.7%	16.5%	21.1%	245	23.9%	12.7%	15.8%
2000	103	32.4%	14.6%	23.6%	266	23.9%	11.9%	17.4%
2001	111	27.6%	13.1%	15.0%	266	26.8%	14.6%	13.7%
2002	113	22.7%	22.0%	18.7%	246	24.8%	15.2%	14.3%
2003	108	23.0%	22.4%	16.2%	276	25.4%	12.9%	17.7%
2004	116	24.3%	23.6%	19.4%	290	25.7%	14.3%	12.1%
All years	1,447	29.9%	18.0%	15.9%	3,941	29.6%	13.3%	14.5%

journals, the decrease in peer-coauthored papers in the 18 journals seems to be replaced by coauthors with no placement or pedigree relationship.

4.4. The relative importance of placement and pedigree effects

While the results in Tables 3 and 4 suggest that productive authors are more likely to be the graduates of or affiliated with elite institutions, the analysis is based on univariate methods and not corrected for possible selectivity bias. In this section, we use a more detailed multivariate analysis to reexamine the two effects. In addition, we use a tobit regression to mitigate the potential selectivity bias due to some authors' lack of appearances in either the top three or the 18 journals. Tobit regression analysis is conducted on 5,549 authors to analyze the placement and pedigree effects more explicitly. Two variations of the tobit model are

$$\begin{aligned}\text{Pub}_i &= \beta_0 + \beta_1\,(\text{Rankpedigree})_i + \beta_2\,(\text{Rankplacement})_i + \beta_3\,(\text{Year})_i + \beta_4\,(\text{Year}^2)_i \\ &\quad + \beta_5\,(\text{Finance})_i + \beta_6\,(\text{Econ})_i + \beta_7\,(\text{Academic})_i + \varepsilon_i, \qquad (1)\end{aligned}$$

$$\begin{aligned}\text{Pub}_i &= \alpha_0 + \alpha_1\,(\text{Dumpedigree})_i + \alpha_2\,(\text{Dumplacement})_i + \alpha_3\,(\text{Year})_i + \alpha_4\,(\text{Year}^2)_i \\ &\quad + \alpha_5\ (\text{Finance})_i + \alpha_6\,(\text{Econ})_i + \alpha_7\,(\text{Academic})_i + u_i, \qquad (2)\end{aligned}$$

where Pub_i is the publication records of the ith author measured by total number of appearances in top three or other 18 journals; Rankpedigree_i the logarithm of the rank of ith author's degree-granting institution (from 1 to 2,161) where 1 is the highest rank;[8] Rankplacement_i is the logarithm of the rank of the ith author's affiliated institution (from 1 to 2,161) where 1 is the highest; Dumpedigree_i is the elite degree institution binary variable (1 if the author is the graduate of a top 25 institution); Dumplacement_i the elite institution affiliation binary variable (1 if the author is affiliated with a top 25 institution);[9] Year_i the 2004 minus year doctoral degree was conferred for the ith author; Year_i^2 the square of Year_i; Finance_i is a binary variable equal to 1 if the ith author has a degree in finance; Econ_i the binary variable equal to 1 if the ith author has a degree in economics; Academic_i is the Academic affiliation binary variable (1 if the author is affiliated with an academic institution); u_i and ε_i are the random error terms.

In Equation (1), if there are pedigree and placement effects in the top three journals, we would expect negative and statistically significant β_1 and β_2, indicating that a top-ranked program (smaller $\text{Rankpedigree}_\text{i}$ and $\text{Rankplacement}_\text{i}$ numbers) is associated with higher research productivity. Similarly, in Equation (2), α_1 is expected to be positive and significant if there is a pedigree effect, and a positive and significant

[8] The number of doctoral-granting institutions is substantially smaller than 2,161. However, there are a few foreign doctoral-granting institutions that do not have faculty published in these 21 journals. We assign them the lowest rank of 2,161.

[9] For an author with multiple affiliations, we use the highest-ranked institution as the author's affiliation.

α_2 shows a placement effect in the top three journals. For the 18 journals, however, β_1, β_2, α_1 and α_2 could be negative because some elite programs discourage their faculty from publishing in the nontop three journals.

Among the control variables, Year captures the length of time an author has engaged in financial research, suggesting a positive sign. The square of Year is to control the possible depreciation of human capital after an author receives his or her degree and we expected the sign to be negative. Econ and Finance are binary variables for degree specializations. Academic is a binary variable capturing the possibility that academic and nonacademic institutions have different incentive structures in research.

On average, each author has more than 16 years of post-doctoral experience. Among the 5,549 authors in the sample, finance, economics and other degree areas make up approximately 51%, 31% and 18%, respectively. Overall, about 89% of the authors are affiliated with academic institutions and 18% of all authors are currently affiliated with top 25 institutions. For degree-granting institutions, 43% of the 5,549 authors receive their degrees from top 25 institutions. The average rank of Ph.D.-granting institutions for all authors is about 78, and the mean rank for (most recent) affiliation is about 322.

Table 6 reports the tobit results for publications in the top three journals. The variables for both Ph.D.-granting institution rank and affiliated institution rank are negative and significant at the 1% level in Model 1, indicating that there are pedigree and placement effects. In Model 2, all elite degree and elite affiliation binary variables carry positive signs and are statistically significant at the 1% level, supporting both the pedigree and placement effects. Comparing the magnitudes of the coefficients, the economic significance of the placement effect exceeds that of the pedigree effect. For instance, the binary variables in Model 2 suggest that an author affiliated with a top 25 affiliation (the placement effect) produces 3.22 more articles (appearances) than nontop 25 affiliated authors, which is greater than 1.89 articles generated by the pedigree effect (top 25 degree-granting institution dummy variable). T-tests with alternative hypotheses $(|\beta_2| - |\beta_1|) > 0$ and $(|\alpha_2| - |\alpha_1|) > 0$ are both significant at the 1% level.

The Year variable is positive and significant at the 1% level in both models, indicating that the post-degree experience helps an author publish more in the top three journals. The Year^2 variable is negative and significant in both models, suggesting the rate of publishing in the top three journals decreases over time. The binary variable Finance is positive and significant at the 1% level in all models, suggesting that authors with a finance doctoral degree, on average, produce more publications in the top three journals. The magnitude of the Finance coefficient in Table 6 (Models 1 and 2) suggests that authors with a finance degree publish, on average, about 2.6 more articles than other degree recipients.

The binary variable Econ also has a positive sign and is statistically significant at the 1% level in both models, but the magnitude suggests that those with an economics degree (less than half of finance degree holders) produce about 1.1 more articles than other degree recipients. The Academic binary variable is positive and significant in

Table 6

Tobit regressions for pedigree and placement effects of finance research in the top three finance journals, 1990–2004

The observations represent individual authors of articles in the top three finance journals. The models are

$$\text{Pub}_i = \beta_0 + \beta_1\,(\text{Rankpedigree})_i + \beta_2\,(\text{Rankplacement})_i + \beta_3\,(\text{Year})_i + \beta_4\,(\text{Year}^2)_i + \beta_5\,(\text{Finance})_i + \beta_6\,(\text{Econ})_i + \beta_7\,(\text{Academic})_i + \varepsilon_i \quad (1)$$

$$\text{Pub}_i = \alpha_0 + \alpha_1\,(\text{Dumpedigree})_i + \alpha_2\,(\text{Dumplacement})_i + \alpha_3\,(\text{Year})_i + \alpha_4\,(\text{Year}^2)_i + \alpha_5\,(\text{Finance})_i + \alpha_6\,(\text{Econ})_i + \alpha_7\,(\text{Academic})_i + u_i, \quad (2)$$

where Pub_i is the publication records of the ith author measured by total number of appearances in the top three journals; Rankpedigree_i the logarithm of the rank of ith author's degree-granting institution (from 1 to 2,161) where 1 is the highest; Rankplacement_i the logarithm of the rank of the ith author's affiliated institution (from 1 to 2,161) where 1 is the highest; Dumpedigree_i the elite degree institution binary variable, 1 if the author is the graduate of a top 25 institution; $\text{Dumplacement}_\text{i}$ the elite institution affiliation binary variable, 1 if the author is affiliated with a top 25 institution; Year_i the 2004 minus year doctoral degree was conferred for the ith author; Year_i^2 the square of Year_i Finance_i the binary variable equal to 1 if the ith author has a degree in finance; Econ_i the binary variable takes a value of 1 if the ith author has a degree in economics; Academic_i the Academic affiliation binary variable, 1 if the author is affiliated with an academic institution.

Variables	Expected sign	Model 1		Model 2	
		Coefficient	χ^2	Coefficient	χ^2
Intercept		2.0444	29.50***	−7.0215	380.72***
Rankpedigree	−	−0.4670	95.72***		
Rankplacement	−	−1.1824	701.18***		
Dumpedigree	+			1.8866	188.74***
Dumplacement	+			3.2234	385.51***
Year	+	0.2014	56.13***	0.1588	33.56***
Year^2	−	−0.0065	83.14***	−0.0053	52.85***
Finance	+	2.6157	179.64***	2.6084	170.80***
Econ	?	1.0267	23.62***	1.0583	23.85***
Academic	+	0.1321	0.47	1.1443	35.18***
Log likelihood value		−6,170.35		−6,381.69	
N		5,549		5,549	
Observations with censored dependent		3,810		3,810	

*** indicates statistical significance at the 0.01 level.

Model 2 only, suggesting that academic authors have higher incentives to publish in the top three journals.

Table 7 reports the tobit results for publications in the 18 quality journals. The results in Table 7 differ from that of Table 6. In Model 3, the coefficient associated with the Rankpedigree (pedigree effect) is positive and significant, indicating an opposite relation between the rank of the degree institution and publication in the 18 journals compared to the top three journals. The inverse relation is consistent with the descriptive statistics in Panel B of Table 4, which do not show a clear negative relation between the mean rank of authors' degree-granting institution and

Table 7

Tobit regressions for pedigree and placement effects of finance research in 18 finance journals, 1990–2004

The observations represent individual authors of articles in the other 18 finance journals. We use the same variables and models as in Table 6.

Variables	Expected sign	Model 3		Model 4	
		Coefficient	χ^2	Coefficient	χ^2
Intercept		−1.9208	58.21***	−0.7732	14.93***
Rankpedigree	?	0.1715	30.81***		
Rankplacement	?	0.0533	3.66		
Dumpedigree	?			−0.3382	15.12***
Dumplacement	?			−0.9608	67.22***
Year	+	0.2290	181.22***	0.2235	173.78***
Year^2	−	−0.0038	79.71***	−0.0037	74.38***
Finance	+	1.2282	115.34***	1.1684	105.42***
Econ	?	0.0925	0.55	0.0989	0.63
Academic	+	0.2450	4.29**	0.3155	7.71***
Log likelihood value		−13,124.54		−13,095.40	
N		5,549		5,549	
Observations with censored dependent		570		570	

*** and ** indicate significance at the 0.01 and 0.05 level, respectively.

publication record. The significant relation observed in the tobit analysis probably comes from the fact that 590 of the authors (as shown in Table 4, Panel B) with a higher mean rank of degree-granting institution publish in the top three journals but not in the other 18 journals.[10] Rankplacement, the placement effect, however, is not statistically significant, suggesting the absence of a placement effect in the 18 journals. When we limit pedigree and placement effects to the top 25 institutions in Model 4, the results are also different. In Model 4, both the coefficients of Dumpedigree and Dumplacement are negative and statistically significant, indicating that scholars related to the top 25 institutions (degree-granted or affiliated with), on average, publish less in the 18 finance journals relative to nontop 25 institution researchers. These results are consistent with those in Tables 3 and 4, which show some researchers who receive their degree from or are affiliated with elite programs do not dominate the publications in these 18 journals. Alternatively, it is quite possible that some authors who graduate from or are affiliated with the top 25 institutions choose not to submit to the 18 journals. The general findings in Table 7 differ from Table 6.

Year carries a positive sign and is significant at the 1% level, meaning research experience, on average, helps publish in these 18 journals. Year^2, similar to Table 6, carries a negative sign and is significant at the 1% level, suggesting a

[10] We have information on explanatory variables for 570 of these 590 authors only. Thus, Table 7 has 570 authors that do not publish in the 18 journals.

decreasing publication rate in the 18 journals. The Finance variable is positive and significant at the 1% level in both Models (3) and (4), suggesting that scholars with a finance degree do produce more articles in these 18 journals than other degree holders. The Econ variable is not significant in either model. The Academic variable continues to be positive and significant in both Models 3 and 4.

4.5. Research productivity value-added and institutional rank

In this section we examine individual institutions' ability to develop and train future scholars. We use a tobit model with fixed effects to identify the research productivity value-added of each institution.[11] The fixed effect model for an institution's ability to train future scholars (i.e., pedigree effect) is

$$\begin{aligned} \text{Pub}_i = {} & \gamma_0 + \Sigma\gamma_i \chi_i + \delta_1 (\text{Year})_i + \delta_2 (\text{Year}^2)_i \\ & + \delta_3 (\text{Finance})_i + \delta_4 (\text{Econ})_i + \delta_5 (\text{Academic})_i + \theta_i, \end{aligned} \tag{3}$$

where χ_i is a set of dummy variables measuring institutional placement fixed effects for 2,161 institutions. All other variables are defined as in Equations (1) and (2). Tobit again is used to mitigate the selectivity bias because there are authors who publish no articles in top three or 18 finance journals. The residuals, θ_i, for each author from Equation (3) are summed across each author's degree-conferring institution. The residuals are the value-added (impact) of degree-conferring institutions because the impact of institutional affiliation (the placement effect) is purged from the fixed effect model. In essence, institutions with the highest residuals are the "best" institutions at training scholars. Given the fact that the number of graduates varies by school, we provide the best school ranking on a per capita basis, subject to a minimum of 20 graduates per school.

We model and repeat the process to identify the best schools at developing scholars after controlling for where scholars receive their degrees. That is, χ_i in Equation (3) is now a set of dummy variables measuring institutional pedigree fixed effects. The results for individual fixed effects are available from the authors.

In Table 8, Panel A, the schools that contribute the most value-added research to the top three finance journals after controlling for the pedigree effects are Carnegie Mellon University, the University of Chicago, Northwestern University and Cornell University, with UCLA and the University of Rochester tied for fifth place. These are the top schools in developing scholars controlling for the pedigree effect. Panel B of Table 8 presents a list of schools contributing to the most value-added research in the other 18 quality finance journals. The top five schools are the University of Cincinnati, the University of Houston, the University of Pittsburgh, the University of Arizona and the University of Memphis.

[11] We acknowledge an anonymous referee for suggestions in this section.

Table 8

Research productivity value-added by institutions after controlling for where authors received their degrees

The table lists schools that contribute the most value-added research after controlling for the pedigree effects. In essence, these are the best institutions in developing scholars they hire. We estimate a tobit model with fixed effects using dummy variables for all degree-conferring institutions and several explanatory variables (academic dummy, years after graduation, the square of years after graduation, finance dummy and economics dummy). The dependent variable is an author's total number of appearances in either top three or 18 quality journals. We recover the residuals from the tobit equation and sum over all authors according to their current affiliations. The ranking is based on the per capita mean residual based on current affiliations (at publication). To mitigate the bias resulting from an extremely small faculty size, we rank only institutions with at least 20 authors.

Panel A: Research productivity value-added by institutions to the top three finance journals after controlling for where authors receive their degrees

Rank	Institutions	Number of authors	Total value-added score based on tobit residual	Per capita value-added score
1	Carnegie Mellon U	45	46.76	1.04
2	U Chicago	287	264.43	0.92
3	Northwestern U	101	90.25	0.89
4	Cornell U	85	74.73	0.88
5 (tied)	U Rochester	88	75.36	0.86
5 (tied)	UCLA	109	93.26	0.86
7	MIT	197	164.53	0.84
8 (tied)	Indiana U	82	65.85	0.80
8 (tied)	Stanford U	143	114.76	0.80
10 (tied)	Harvard U	187	146.52	0.78
10 (tied)	Ohio State U	107	83.63	0.78
12	Yale U	81	62.57	0.77
13 (tied)	U Michigan	95	72.60	0.76
13 (tied)	U Washington	72	54.67	0.76
15	U Pennsylvania	144	107.63	0.75
16	U British Columbia	37	27.20	0.74
17 (tied)	U Texas–Austin	89	65.34	0.73
17 (tied)	U Utah	33	24.04	0.73
19	Duke U	32	23.18	0.72
20	Princeton U	90	63.81	0.71
21 (tied)	U Florida	63	44.36	0.70
21 (tied)	NYU	141	98.60	0.70
23 (tied)	UC-San Diego	39	26.41	0.68
23 (tied)	Purdue U	108	73.04	0.68
25	U Iowa	50	33.64	0.67

(*continued*)

Table 9 presents the list of schools showing value-added research contributed by degree-conferring institutions after controlling for the placement effect. With respect to publishing in the top three finance journals, UCLA, the University of Rochester, Carnegie Mellon University, the University of Chicago and Cornell

Table 8 (*continued*)

Research productivity value-added by institutions after controlling for where authors received their degrees

Panel B: Research productivity value-added by institutions to the 18 journals after controlling where the authors receive their degrees

Rank	Institutions	Number of authors	Total value-added score based on tobit residual	Per capita value-added score
1	U Cincinnati	20	55.71	2.79
2	U Houston	32	63.66	1.99
3	U Pittsburgh	36	65.03	1.81
4	U Arizona	31	47.81	1.54
5	U Memphis	21	30.68	1.46
6	LSU	40	57.89	1.45
7	Texas Tech U	30	40.16	1.34
8	U British Columbia	37	45.52	1.23
9	U Nebraska	31	37.86	1.22
10 (tied)	Purdue U	108	129.79	1.20
10 (tied)	U Alabama	46	55.19	1.20
12	NYU	141	166.26	1.18
13	Iowa State U	31	35.37	1.14
14 (tied)	U Illinois	123	138.93	1.13
14 (tied)	U Toronto	45	50.71	1.13
16	U North Carolina-Chapel Hill	87	97.04	1.12
17 (tied)	Ohio State U	107	115.61	1.08
17 (tied)	UC-Berkeley	130	140.32	1.08
17 (tied)	Arizona State U	47	50.53	1.08
20	Indiana U	82	87.42	1.07
21	U Georgia	65	69.04	1.06
22 (tied)	Georgia State U	40	42.12	1.05
22 (tied)	U Chicago	287	300.49	1.05
22 (tied)	Kent State U	20	20.92	1.05
25 (tied)	U Tennessee	29	29.88	1.03
25 (tied)	Carnegie Mellon U	45	46.32	1.03
25 (tied)	UCLA	109	112.06	1.03

University are in the top five. That is, these five institutions are the best at training Ph.D. students to publish in the top three finance journals, controlling for the placement effect. Among these five top schools, four are also in the best placement list.

Panel B of Table 9 provides a school list with respect to the other 18 quality finance journals. The institutions on the top five list are the University of Houston, the University of Pittsburgh, the University of Memphis, the University of Arizona, and Louisiana State University. Similar to the top three journal results, four of the top five institutions are also present in the best placement list.

Table 9

Value-added research productivity by degree-conferring institutions after controlling for where authors were placed

The table lists schools that contribute the most value-added research after controlling for where the graduates are placed. In essence, these institutions are best at training scholars. We estimate a tobit model with fixed effects using dummy variables for authors' current affiliated institutions and several explanatory variables (academic dummy, years after graduation, the square of years after graduation, finance dummy and economics dummy). The dependent variable is an author's total number of appearances in either top three or 18 quality journals. We recover the residuals from the tobit equation and sum over all authors according to their degree-conferring institutions. The ranking is based on the per capita mean residual across degree-conferring institutions. To mitigate the bias resulting from extremely small doctoral programs, we limit the ranking to institutions with at least 20 graduates.

Panel A: Research productivity value-added by institutions to the top three finance journals after controlling for where authors are placed

Rank	Institutions	Number of graduates	Total value-added score based on tobit residual	Per capita value-added score
1	UCLA	109	133.36	1.22
2	U Rochester	88	104.68	1.19
3	Carnegie Mellon U	45	53.19	1.18
4	U Chicago	287	310.81	1.08
5	Cornell U	85	92.00	1.08
6	MIT	197	192.87	0.98
7	Northwestern U	101	95.50	0.95
8	Ohio State U	107	100.01	0.93
9	U Utah	33	29.55	0.90
10	Harvard U	187	166.13	0.89
11	Princeton U	90	76.52	0.85
12 (tied)	Stanford U	143	120.74	0.84
12 (tied)	U British Columbia	37	31.17	0.84
14	U Pennsylvania	144	119.46	0.83
15	U Washington	72	57.06	0.79
16 (tied)	Duke U	32	25.01	0.78
16 (tied)	U Texas–Austin	89	69.24	0.78
18	Yale U	81	62.28	0.77
19	U Michigan	95	71.48	0.75
20	Indiana U	82	60.76	0.74
21 (tied)	U North Carolina–Chapel Hill	87	63.11	0.73
21 (tied)	Purdue U	108	78.30	0.73
23	UC-San Diego	39	27.18	0.70
24	Columbia U	111	73.32	0.66
25	U Pittsburgh	36	22.72	0.63

(*continued*)

5. Summary

We use a comprehensive publishing database of articles in 21 leading finance journals from 1990 to 2004 to examine pedigree and placement effects in financial

Table 9 (*continued*)

Value-added research productivity by degree-conferring institutions after controlling for where authors were placed

Panel B: Research productivity value-added by institutions to the 18 journals after controlling for where authors are placed

Rank	Institutions	Number of authors	Total value-added score based on tobit residual	Per capita value-added score
1	U Houston	32	76.26	2.38
2	U Pittsburgh	36	74.36	2.07
3	U Memphis	21	40.40	1.92
4	U Arizona	31	58.67	1.89
5	LSU	40	61.73	1.54
6	Texas Tech U	30	42.28	1.41
7	U Nebraska	31	42.89	1.38
8	Purdue U	108	147.22	1.36
9 (tied)	U Cincinnati	20	26.76	1.34
9 (tied)	U Toronto	45	60.08	1.34
11	Indiana U	82	103.11	1.26
12	U Illinois	123	149.74	1.22
13	NYU	141	168.72	1.20
14	U Iowa	50	58.94	1.18
15 (tied)	U British Columbia	37	43.47	1.17
15 (tied)	Ohio State U	107	124.93	1.17
17	U Tennessee	29	33.61	1.16
18 (tied)	U Alabama	46	52.66	1.14
18 (tied)	U Georgia	65	74.04	1.14
18 (tied)	Iowa State U	31	35.21	1.14
21 (tied)	Columbia U	111	125.91	1.13
21 (tied)	U Florida	63	71.27	1.13
23	U North Carolina–Chapel Hill	87	96.88	1.11
24	Texas A&M U	57	62.96	1.10
25	U Western Ontario	20	21.52	1.08

research. Both placement and pedigree effects in the top three and the remaining 18 quality finance journals are separately examined.

We find a placement effect: authors who are currently affiliated with an elite institution tend to be more research productive. The placement effect is particularly strong among the top three finance journals. Almost 62% of all articles in the top three journals are written by at least one author affiliated with one of the top 25 institutions. This dominance, however, weakens over the sample period. The lost share of publications appears to be gained by authors not affiliated with the top 25 programs but coauthoring articles with a colleague from one of the top 25. The placement effect, however, does not exist in the other 18 quality finance journals. In fact, authors affiliated with top 25 programs tend to publish less in these 18 journals than nontop 25 program authors.

Second, we find a pedigree effect: publication is concentrated among authors who receive degrees from elite institutions. For example, on average 62.5% of the authors who publish one or more articles in the top three journals hold degrees from one of the top 25 programs. This statistic increases to more than 77% when we consider authors publishing five or more articles in the top three journals. However, we find a reverse pedigree effect in the 18 journals as compared to the top three journals, suggesting that authors with elite degrees publish less in the 18 journals. There is evidence suggesting that some authors with elite degree choose not to submit papers to the 18 journals.

Third, when we compare the relative effects of pedigree and placement on research productivity using tobit regression, we confirm that placement exhibits a stronger influence than pedigree in the top three journals. Scholars from the top 25 institutions tend to focus their publication energy in the top three finance journals and hence they publish less in the other 18 journals than the nontop 25 affiliated researchers. Finally, we separate the placement and pedigree effects using a tobit model with fixed effects and provide lists of leading finance programs in terms of training versus developing future scholars in financial research.

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