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Finance Research Productivity and Influence

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ABSTRACT

This study examines differences in finance research productivity and influence across 661 academic institutions over the five-year period from 1989 through 1993. We find that 40 institutions account for over 50 percent of all articles published by 16 leading journals over the five-year period; 66 institutions account for two-thirds of the articles. Influence is more skewed, with as few as 20 institutions accounting for 50 percent of all citations to articles in these journals. The number of publications and publication influence increase with faculty size and academic accreditation. Prestigious business schools are associated with high publication productivity and influence.

LITTLE IS KNOWN ABOUT the distribution of research among institutions and the contributions of research to the prestige of an institution.¹ This article addresses these topics in the following manner. First, expanding on the identification of leading institutional contributors to finance journals (Niemi (1987), Heck, Cooley, and Hubbard (1987) and Heck and Cooley (1988)), the distribution of research across institutions and the influence of that research are described. Next, factors related to research productivity and influence are identified. Finally, following Armstrong and Sperry's (1994) findings suggesting a link between the rankings of prestigious business schools and their article publication frequencies, the relation between an institution's prestige and its level and quality of finance research is examined in detail.

The distribution of research across institutions is examined by identifying the affiliation of the authors publishing original research in a set of 16 finance journals from 1989 through 1993. A total of 330 academic institutions published in these journals over the five-year period studied. The distribution of publications among these institutions is highly skewed, with 20 percent of the institutions publishing over 66 percent of the articles. The influence of these articles on the field of finance is then estimated by weighting each article by its impact, using citation frequency as a journal quality measure. The distribution

* Borokhovich is from Lehigh University. Bricker and Simkins are from Case Western Reserve University. Brunarski is from the University of Cincinnati. We thank Sam Thomas, Terry Zivney, G. William Schwert, the referee, and René Stulz, the editor, for their comments. All errors are those of the authors.

¹ Schwert (1993) addresses this issue, but only for institutions credited with articles published in the *Journal of Financial Economics*. However, the distribution of research by author has been extensively examined. For example, see Chung and Cox (1990) and Zivney and Bertin (1992).

of influential research is at least as skewed as total publications, with 20 percent of the institutions accounting for over 76 percent of total influence.

Next, the factors proposed as being related to research productivity and influence (finance faculty size, accreditation status, and public or private) are examined. Faculty size is intuitively appealing as a factor. Greater numbers of members imply greater research productivity. Accreditation status is salient because a minimum level of research is required for institutions to maintain accreditation, an incentive nonaccredited institutions lack. Finally, private/public institution differences may occur if there are systematic differences in resource allocation flexibility or procedures, or in assigned teaching loads and research functions.

The results show that faculty size and accreditation status are highly significant in explaining research productivity and influence among academic institutions. Not surprisingly, total publications and influence increase with faculty size. However, there is evidence of a possible synergistic effect in faculty size. Publications and influence, both in total and on a per-faculty-member basis, increase in faculty size. Additionally, publications and influence tend to be greater at accredited institutions in total and on a per-faculty-member basis. There is no strong evidence of a significant difference in publication frequency or influence between public and private institutions.

Finally, the association between an institution's prestige and its research productivity and influence is addressed. Two lists of prestigious institutions are identified; those included in *US News & World Report's* 1994 rankings of the 50 leading business schools and those included in Tracey and Waldfogel's (1994) value-added rankings of business schools. The relationship between both these rankings and the institutions' research productivity and research influence are found to be positive and very highly significant. Prestigious business schools tend to have high research productivity and influence.

The remainder of this article is organized as follows. Section I describes data sources. Empirical findings are presented in Section II. Section III contains concluding remarks.

I. Data

A. Articles and Institutional Affiliations

The data for this study are the affiliation of authors at the time of publication and the number of articles published from 1989 through 1993 in a set of 16 finance journals. The journals are selected from those listed in Heck's *Finance Literature Index* for 1993 according to the following criteria. First, a journal had to publish original research in finance (excluding real estate and insurance). Also, the journal had to publish regularly between 1988 and 1993 to establish a citation pattern sufficient to allow analysis of the journal's influence on finance research. The journal set includes all journals identified as the core of finance research by Borokhovich, Bricker, and Simkins (1994a) and Zivney and Reichenstein (1994) with the exception of the *Review of Futures*

Markets, which is excluded because of extensive delays in its publication in the latter years of the study.

B. Article Influence

This study uses journal impact factors as a proxy for journal influence. Counting journal article citations to provide evidence of journal influence is common in the social sciences. For example, in an examination of the *Journal of Financial Economics*, Schwert (1993) uses the *Social Science Citation Index* (SSCI) impact factor² to measure journal influence. Schwert (1993) also points out that these factors change over time.

This study obtains all impact factors reported by the SSCI for 13 of the 16 journals from 1989 through 1993. The use of impact factors as a measure of an article's influence is noisy. An impact factor is clearly a better estimate of journal influence than article influence, since articles vary individually in quality and influence. Not all articles appearing in the same journal, even in the same issue, are likely to be equally influential. Schwert (1993), Alexander and Mabry (1994) and Borokhovich, Bricker, and Simkins (1994a) clearly demonstrate these differences in influence among articles as measured by citations. If, however, this effect is randomly distributed, the effect of this imprecision is not expected to introduce a systematic bias into the results of this study.

Since this study covers more than one year, selection of an appropriate impact factor to apply to each article is required. Each individual impact factor measures the influence of articles published during the prior two years; 1993's impact factor, the most recent available, assesses the influence of articles published in 1991 and 1992. Since impact factors vary across individual years, any measure used here is inherently imperfect because it does not include the impact of articles published in 1992 and 1993.

As shown in Table I, the SSCI reports impact factors for all five years for 11 of the journals, but for only two years for the *Journal of Financial Services Research* and the *Review of Financial Studies*. The SSCI does not report impact factors for the *Financial Analysts Journal*, *Financial Review*, and *Journal of Business Finance and Accounting*. The impact factors reported in Table I for these journals are estimated from citational data used in Borokhovich, Bricker, and Simkins (1994b). To estimate these journals' impact factors, this study regressed SSCI impact factors against citations for five journals included in Borokhovich, Bricker, and Simkins (1994b). The results are used as parameters for a least-squares model relating citations to impact factors. The impact factors listed in Table I for the three journals not covered by the SSCI are then estimated using this model. The resulting estimates, when compared to the impact factors for the other journals listed in Table I, are consistent with the relative influence of these journals reported in previous studies. For

² The impact factor for year (t) is calculated as the number of citations in year (t) to papers published in a journal in years ($t-1$) and ($t-2$), divided by the number of articles published in the journal in years ($t-1$) and ($t-2$).

Table I
Journal Titles and Impact Factors

These 16 journals publish articles containing original research in finance from 1989 through 1993. A *Social Sciences Citation Index* (SSCI) impact factor is calculated for year (t) as the number of citations in year (t) to a journal's articles published in years ($t-1$) and ($t-2$) divided by the number of articles published in the journal in years ($t-1$) and ($t-2$). A regression model supplies estimates when the SSCI does not.

Journal	1989	1990	1991	1992	1993	Average	Estimated
<i>Financial Analysts Journal</i>							0.547
<i>Financial Management</i>	0.667	0.852	0.552	0.550	0.641	0.652	
<i>Financial Review</i>							0.328
<i>Journal of Banking and Finance</i>	0.136	0.270	0.288	0.426	0.236	0.271	
<i>Journal of Business</i>	1.489	1.289	1.500	1.304	0.720	1.260	
<i>Journal of Business Finance and Accounting</i>							0.080
<i>Journal of Finance</i>	1.402	1.918	1.994	2.174	2.241	1.946	
<i>Journal of Financial Economics</i>	3.557	3.533	1.783	2.597	2.000	2.694	
<i>Journal of Financial and Quantitative Analysis</i>	0.726	0.843	0.750	0.722	0.579	0.724	
<i>Journal of Financial Research</i>	0.344	0.441	0.230	0.177	0.049	0.248	
<i>Journal of Financial Services Research</i>	0.000	0.217				0.109	
<i>Journal of Futures Markets</i>	0.323	0.423	0.505	0.279	0.709	0.448	
<i>Journal of International Money and Finance</i>	0.646	0.451	0.746	0.795	0.671	0.662	
<i>Journal of Money, Credit and Banking</i>	0.884	0.904	1.195	0.688	0.714	0.877	
<i>Journal of Portfolio Management</i>	0.422	0.510	0.427	0.324	0.200	0.377	
<i>Review of Financial Studies</i>				2.236	2.218	2.227	

example, compared to the impact factors reported for 1990, the relative rankings of the three journals in this study differ by no more than one position from those reported in Zivney and Reichenstein (1994).

C. Allocation of Articles

Only articles and notes are included in this study. Other publications, such as comments and book reviews, are excluded. The number of publications attributed to each academic institution³ is adjusted for the number of authors. For example, for two-authored publications, each institution with which an author is affiliated receives credit for 0.5 article. Any proportion of an article that is not attributable to an author affiliated with an academic institution located in the United States or Canada is deleted from the study. Limiting authors to US and Canadian institutions controls for differences in language,

³ For state institutions with multiple campuses, any article not specifically attributable to a branch campus is attributed to the main campus.

the likelihood of the 16 journals being the primary outlets for an institution's research, and tenure processes.

D. Nonpublishing Institutions and Accreditation

The American Assembly of Collegiate Schools of Business (AACSB) *Membership Directory 1993–94* is used to identify academic institutions not credited with articles in the 16 journal set from 1989 through 1993. Additionally, the accreditation status of institutions is obtained from the AACSB *Members of the Accreditation Council 1993–94*. Accreditation by the AACSB requires institutions to maintain minimum standards of research. Any institutions accredited by the AACSB by 1993–94 must have been at least working toward accreditation through most of the 1989–1993 period, so all are assumed to be maintaining the standards during that period. The status of each institution as public or private is obtained from *Lovejoy's College Guide 1993* (Straugh and Straugh (1993)).

E. Faculty Size

Hasselback's 1993–1994 *Wiley Guide to Finance Faculty* is the primary source for determining the number of finance faculty in each institution. Only faculty members bearing the title of Professor, Associate Professor, or Assistant Professor are counted in the total. Visiting faculty and those in primarily administrative positions such as Dean or Associate Dean are not counted. Further, faculty identified as being primarily in Business Law, Real Estate, or Insurance are not counted. The resulting totals are verified against those found Hasselback's 1995 *Wiley Guide to Finance Faculty*. If the number of faculty members in the two Guides differ by more than one, the institution is contacted directly for verification. The institution is also contacted directly to identify the number of finance faculty if the department is jointly designated as Finance and some other discipline, such as Economics or Accounting. Finally, any institution not listed in the Guide is contacted directly. Any institution that is both not in the Guide and not willing to supply information on the number of finance faculty is deleted. The resulting number of faculty members is used as an estimate of the average faculty size in each institution from 1989 through 1993.

This procedure results in a final sample of 661 academic institutions. Of these, 330 institutions have a total of 2504.46 articles⁴ attributed to their finance faculty members in a 16 journal set from 1989 through 1993. A complete listing of these institutions and the publications data associated with each appears in descending order of total publications in the appendix. The remaining 331 academic institutions are credited with no articles in the 16 journals during this period.

⁴ For simplicity, all articles and notes are generically referred to as articles throughout the remainder of this paper.

F. Institutional Prestige

Finally, the prestige of an academic institution is first proxied using the *US News & World Report* rankings of the 50 leading Business Schools for 1994. This year is chosen because it immediately follows the five-year period for which this study has research data. The rankings are a weighted average of rankings by Deans of Business Schools and CEOs of large US corporations, and rankings of the quality of incoming students. Other rankings, such as those provided by *BusinessWeek*, use somewhat different ranking procedures, but the business schools included in the lists are substantially the same. For example, the 20 institutions included in *BusinessWeek*'s 1994 rankings are all included in the rankings of *US News*. In 1992, *BusinessWeek* ranked 40 institutions. All but two appeared in the *US News* rankings. Since individual rankings within the list are not used in this study, only the *US News* list is employed here as a measure of the prestige of the institutions. A list of these institutions is contained in Table II. It is interesting to note that 33 of these 50 schools are ranked among the leading 50 schools in this study by total articles published, while 43 are in the top 100. Only one school is not among the leading 200 of the 661 academic institutions included here.

Tracey and Waldfogel (1994) provide an alternative measure of prestige by ranking business schools using a market-based approach. The ranks are determined by adjusting starting salaries for a school's graduates by the quality of its entering students to determine the value-added by the program. A list of the 20 leading business schools by this value-added criterion appears in Table III. Only four of the schools do not appear on the *US News & World Report* list. All 20 business schools are among the leading 200 schools ranked in this study by total articles published, 17 are in the top 100, and 14 are in the top 50.

II. Empirical Findings

This section presents empirical evidence on the three aspects of finance research studied. First, the distribution of publications and the impact of those publications across academic institutions is examined. Next, the relations between the levels and impact of research and the number of finance faculty members in the institution, the institution's accreditation status, and whether the institution is public or private is examined. Finally, evidence is presented on the relation between the prestige of an academic institution and the level and impact of its finance research.

A. Distribution of Research

The data in the appendix readily identify the finance research productivity of specific academic institutions on several measures. A significant contribution of this article is its identification of the institutions in which research is being conducted. However, in a study such as this, it is important to acknowledge the limitations of the analysis. Rankings of academic institutions extracted from the data in the appendix are, with the exception of those based on

Table II
A List of 50 Leading Business Schools

Listed below are the names, in ranked order, of 50 academic institutions chosen by *US News & World Report* as the 50 leading business schools in 1994, and the ranks of the schools by total finance publications in 16 journals from 1989 through 1993. The selection criteria for inclusion in the list include rankings by Deans of Business Schools and Chief Executive Officers, and evaluations of student candidates.

Institution	<i>US News</i> Rank	Rank by Total Articles
Stanford University	1	15
Massachusetts Institute of Technology	2	16
Harvard University	3	8
University of Pennsylvania	4	2
Northwestern University	5	7
University of Chicago	6	3
Dartmouth College	7	40
University of Michigan at Ann Arbor	8	4
Duke University	9	10
University of California at Los Angeles	10	5
Columbia University	11	9
University of California at Berkeley	12	50
University of Virginia	13	57
Carnegie Mellon University	14	47
Cornell University	15	11
University of North Carolina at Chapel Hill	16	63
New York University	17	1
University of Texas at Austin	18	26
Yale University	19	73
University of Southern California	20	21
Indiana University	21	12
Emory University	22	88
University of Rochester	23	13
Purdue University	24	41
Georgetown University	25	74
Georgia Institute of Technology	26	216
Washington University	27	66
Vanderbilt University	28	35
University of Maryland at College Park	29	49
University of Pittsburgh	30	105
Arizona State University	31	30
Brigham Young University	32	102
University of Wisconsin at Madison	33	38
Ohio State University	34	6
University of Illinois at Urbana-Champaign	35	19
University of Tennessee at Knoxville	36	33
University of Washington	37	29
University of Georgia	38	22
University of Florida	39	23
University of Minnesota at Twin Cities	40	70
Claremont Graduate School	41	180
Michigan State University	42	60
Case Western Reserve University	43	140

Table II—*continued*

Institution	<i>US News</i> Rank	Rank by Total Articles
Texas A&M University at College Station	44	25
Pennsylvania State University at University Park	45	67
University of Arizona	46	87
Boston University	47	27
University of Iowa	48	106
Tulane University	49	108
Southern Methodist University	50	31

Table III**A List of 20 Leading Business Schools**

Listed below are the names, in ranked order, of 20 academic institutions chosen by Tracey and Waldfogel (1994) for the value added by their business programs, and the ranks of the schools by total finance publications in 16 journals from 1989 through 1993. The selection criteria for inclusion in the list is based on starting salaries for graduates adjusted for the quality of entering students.

Institution	Value-Added Rank	Rank by Total Articles
Stanford University	1	15
Harvard University	2	8
University of Chicago	3	3
University of Virginia	4	57
University of Pennsylvania	5	2
Northwestern University	6	7
University of Michigan at Ann Arbor	7	4
Oklahoma State University	8	95
University of New Mexico	9	123
Wake Forest University	10	189
Brigham Young University	11	102
Vanderbilt University	12	35
Duke University	13	10
University of Tennessee at Knoxville	14	33
Southern Methodist University	15	31
Purdue University	16	41
University of Texas at Austin	17	26
University of Oklahoma	18	79
Carnegie Mellon University	19	47
University of Maryland at College Park	20	49

total publications attributed to an institution, only approximate. The rankings in Table IV illustrate this point. The institutions included in the rankings are the 30 most productive as ranked by total articles published. These initial rankings are accurate in that the authors of the articles are affiliated with those specific institutions. However, each of the other rankings requires some transformation of the total articles by estimated values for either the number of finance faculty at the institution, the influence of the articles, or both.

Table IV
Rankings of Academic Institutions

Rankings are based on articles published in a set of 16 finance journals from 1989 through 1993. Total impact is the sum of the total articles weighted by the impact factors of the journals in which they appear. Impact factors are taken from the *Social Sciences Citation Index (SSCI)* when available and calculated by a regression model when not available. Average impact factors are the mean of all available impact factors published by the *SSCI* for 1989 through 1993. Articles (Impact)/Faculty is total articles (impact) adjusted for co-authorship, divided by the number of faculty. Impact/Article is the total impact divided by total articles.

Institution	Total Articles/ Articles Faculty		Average Impact Factors			1993 Impact Factors		
			Total Impact	Impact/ Faculty	Impact/ Article	Total Impact	Impact/ Faculty	Impact/ Article
New York University	1	15	1	17	49	1	17	48
University of Pennsylvania	2	31	3	20	38	3	21	36
University of Chicago	3	7	2	1	7	2	1	8
University of Michigan	4	14	4	8	15	4	7	12
University of California-Los Angeles	5	6	6	4	22	5	5	21
Ohio State University	6	8	7	6	27	8	6	31
Northwestern University	7	33	8	14	21	6	13	19
Harvard University	8	17	5	7	9	7	9	11
Columbia University	9	27	11	18	39	11	20	38
Duke University	10	10	10	9	25	9	8	22
Cornell University	11	1	16	11	62	16	10	55
Indiana University	12	35	18	32	70	18	32	69
University of Rochester	13	3	9	2	10	10	2	15
Rutgers University	14	26	30	49	149	30	47	151
Stanford University	15	12	14	13	33	15	12	32
Massachusetts Institute of Technology	16	4	12	3	17	13	3	23
University of British Columbia	17	18	13	12	19	12	11	14
Louisiana State University	18	19	26	31	88	25	29	84
University of Illinois	19	58	22	41	58	19	39	51
Virginia Polytechnic Institute	20	51	28	52	101	28	50	95
University of Southern California	21	45	15	21	16	14	18	9
University of Georgia	22	29	23	26	53	23	26	56
University of Florida	23	49	27	38	63	27	41	71
University of Miami	24	30	55	73	210	51	69	211

Table IV—continued

Institution	Total Articles/ Articles Faculty	Articles/ Faculty	Average Impact Factors			1993 Impact Factors		
			Total Impact	Impact/ Faculty	Impact/ Article	Total Impact	Impact/ Faculty	Impact/ Article
Texas A&M University	25	53	41	67	143	40	61	138
University of Texas- Austin	26	69	24	46	47	26	55	59
Boston University	27	67	44	89	153	48	91	167
Texas Tech University	28	25	50	57	179	45	51	149
University of Washington	29	54	19	25	28	22	31	34
Arizona State University	30	55	21	28	29	20	27	25

Undoubtedly, the authors affiliated with the institutions are not in all cases members of the finance faculty. Some are likely to be economists, accountants, or students, among others. These authors are not identified separately in the data. Therefore, any measure of an institution's average productivity per finance faculty member is potentially biased upward, distorting the rankings. Also, the number of finance faculty attributed to each institution is itself an approximation.

Table IV presents rankings for total articles and total impact of the articles attributed to an institution, the average articles (impact) per finance faculty member, and the average impact per article. Total impact is calculated by multiplying each proportion of an article attributed to an institution by the impact factor of the journal in which it appears, then summing the weighted articles. The impact factors are calculated two ways. The first method uses the average of all available impact factors for each journal reported by the SSCI for 1989 through 1993. This method assumes that each journal has some mean influence around which the impact factors vary. The second method assumes the most recent impact factor is the best estimate of influence and uses the 1993 factors for the 12 journals reported. For the *Financial Analysts Journal*, *Financial Review*, and *Journal of Business Finance and Accounting*, the estimated impact factors are used in both methods. No 1993 impact factor is reported for the *Journal of Financial Services Research*, so the average impact factor is applied to both methods.

A comparison of the rankings in Table IV shows that the mean (median) absolute difference in the rankings supplied by the two methods for total impact, impact per faculty member, and impact per article are 1.2 (1.0), 2.0 (1.0), and 5.1 (4.0), respectively.⁵ These changes are small within the context

⁵ These relatively small changes occur even though some differences in individual impact factors between the two methods are quite large. The difference in impact factors between the two methods for the *Journal of Financial Economics* is 0.694, larger than the estimated impact factors

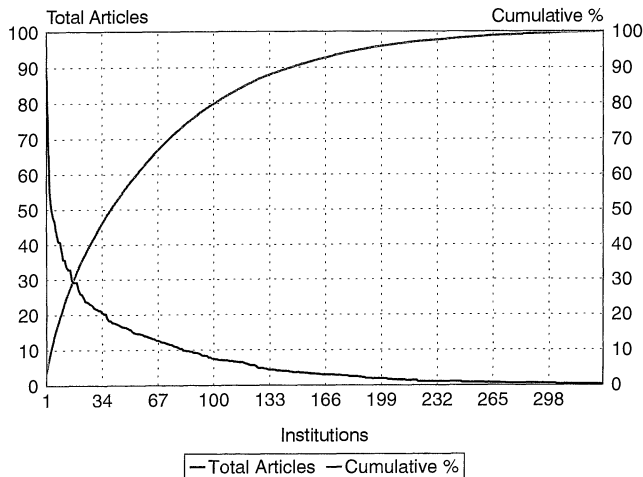


Figure 1. Total Publications. The figure represents the distribution of publications in a set of 16 finance journals for 330 academic institutions from 1989 through 1993. The institutions are in descending order of total publications.

of the 330 institutions that published articles included in this study. In fact, the method of measuring the impact of articles does not significantly affect any of the results presented here. The differences in measurement would only be of concern if precise rankings were required rather than the approximate rankings necessary for this analysis. For the remainder of the analysis and in the data presented in the appendix, impact is measured as the average of the available impact factors from 1989 through 1993.

The preceding analysis of the limitations of the other measures used in this study is not meant to imply that total articles is the most significant metric for measuring research productivity and influence. Obviously, size can have a great effect on this measure. Each of the measures used here has application depending on the viewpoint of the analysis.

With the 330 research institutions (defined as those publishing articles contained in this study) sorted in descending order of total publications, Figure 1 shows that research activity is highly skewed toward the most productive institutions. The 10 most published institutions contribute almost 21 percent of the total articles published in the 16 journals over the five-year period. Just over 50 percent of the articles are contributed by the 40 leading institutions. The first quintile (66 institutions) accounts for 66.3 percent of the publications. In contrast, the second through fourth quintiles contribute 21.4 percent, 8.1 percent, and 3.0 percent, respectively, while the fifth quintile accounts for only 1.2 percent. Interestingly, the drop-off in research production is steepest among the leading institutions. For example, the number of articles published

for the *Financial Analysts Journal*, *Financial Review*, and *Journal of Business Finance and Accounting*. If a difference of this magnitude in the *JFE*'s impact factors has such a minor effect, errors in the estimated impact factors should not be problematic.

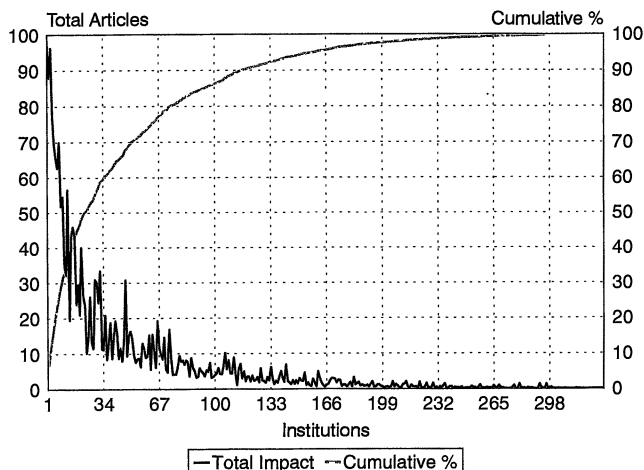


Figure 2. Total Influence. The figure represents the distribution of total impact in a set of 16 finance journals for 330 academic institutions from 1989 through 1993. The institutions are in descending order of total publications. Impact is obtained by weighting each article by the impact factor of the journal in which it is published. An impact factor is calculated for year (t) as the number of citations in year (t) to a journal's articles published in years ($t-1$) and ($t-2$) divided by the number of articles published in the journal in years ($t-1$) and ($t-2$).

by the seventh leading institution is less than half of the total published by the leading institution, and the thirty-second institution has less than half again of that total.

Figure 2 shows that the distribution of total impact is also highly skewed across institutions. Again sorted in descending order of total publications, the leading 10, leading 23, and leading 66 (first quintile) institutions account for 31.3 percent, 50 percent, and 76.7 percent of the total impact, respectively. The percentage of total impact accounted for by the second through fifth quintiles (15.4 percent, 5.6 percent, 1.7 percent, and 0.6 percent, respectively) are lower than the corresponding percentage of total articles for each quintile. This greater concentration of total impact relative to total articles suggests that the leading institutions publish not just more articles, but more influential articles than less productive institutions.

B. Characteristics of Research Institutions

The relation between research productivity and impact, and the institutional factors of accreditation, public or private charter, and number of finance faculty are examined next. Summary data are presented in Table V. The quintiles rank institutions in descending order of total publications. Measures of research productivity are average articles per institution and average articles per faculty member within the institution, adjusted for co-authorship. The influence of published articles in the field of finance is measured by the average impact per institution, per faculty member within the institution, and

Table V
Summary Data

Summary data is provided for a sample of 661 academic institutions. The 330 research institutions are those that are credited with publications in a set of 16 finance journals from 1989 through 1993. The research institutions are sorted in descending order of total publications, then assigned to quintiles containing 66 institutions based on this ordering. Impact is obtained by weighting each article by the impact factor of the journal in which it is published. An impact factor is calculated for year (t) as the number of citations in year (t) to a journal's articles published in years ($t-1$) and ($t-2$) divided by the number of articles published in the journal in years ($t-1$) and ($t-2$). Articles (Impact)/Faculty is total articles (impact) adjusted for co-authorship, divided by the number of faculty in the institution. Impact/Article is total impact divided by total articles. Accredited institutions are those accredited by the American Assembly of Collegiate Business Schools.

	Average Articles/ Institution	Average Impact/ Institution	Average Articles/ Faculty	Average Impact/ Faculty	Average Impact/ Article	Average Number of Faculty	Number of Public Institutions	Number of Accredited Institutions
Quintile 1	25.17	27.17	1.78	1.92	1.08	14.14	40	63
Quintile 2	8.13	5.46	0.82	0.55	0.68	9.86	48	58
Quintile 3	3.07	1.99	0.39	0.25	0.64	7.85	49	55
Quintile 4	1.12	0.61	0.19	0.10	0.54	5.86	45	41
Quintile 5	0.45	0.23	0.08	0.04	0.51	5.62	47	32
330 research institutions	7.59	7.09	0.87	0.82	0.93	8.69	229	249
Total sample	3.79	3.54	0.61	0.57	0.93	6.26	392	291

per published article. As shown in Table V, each of these measures decreases monotonically with total publications, as do the average number of faculty members per institution and the number of accredited institutions. No difference in total publications is found between public and private institutions. This evidence is consistent with research increasing with faculty size, and with accredited institutions conducting more (influential) research than non-accredited institutions. For faculty size, this evidence is not surprising in the cases of average articles and average impact per institution. However, the evidence also shows that research and impact per faculty member increase with faculty size, as does the average influence of the articles published. This evidence suggests a possible synergistic effect in larger faculties. Alternatively, the results may reflect a preference in larger institutions for general, low cost methods of measuring research productivity when a high frequency of faculty evaluations and promotion/tenure decisions place heavy demands on a department's resources. Counting articles, in particular, obviously creates more quantity-based research incentives than more specific and content-oriented measures of productivity and influence where article quality is paramount.⁶

Next, multivariate tests are conducted for the research productivity and influence associations implied in Table V. Research productivity variables

⁶ We thank G. William Schwert for this explanation.

Table VI
Characteristics of Research Institutions

Ordinary least squares regressions are used to test the relation between measures of research productivity and influence for a sample of 661 academic institutions from 1989 through 1993, and the number of finance faculty members in the institution (faculty size), whether the institution is public or private, and whether the institution is accredited by the American Assembly of Collegiate Business Schools. Impact is obtained by weighting each article by the impact factor of the journal in which it is published. An impact factor is calculated for year (t) as the number of citations in year (t) to a journal's articles published in years ($t-1$) and ($t-2$) divided by the number of articles published in the journal in years ($t-1$) and ($t-2$). Articles/Faculty (Impact/Faculty) is total articles (impact) adjusted for co-authorship, divided by the number of finance faculty in the institution. (p -values of two-tailed t -tests in parentheses.)

Dependent Variable	(Articles/ Institution) ⁻⁵	(Articles/ Faculty) ⁻⁵	(Impact/ Institution) ⁻⁵	(Impact/ Faculty) ⁻⁵	(Impact/ Article) ⁻⁵	(Impact/ Article) ⁻⁵
Constant	-1.869 (0.000)	-0.300 (0.000)	-1.852 (0.000)	-0.320 (0.000)	-0.234 (0.000)	-0.088 (0.038)
Dummy: 1 if institution is accredited	0.935 (0.000)	0.385 (0.000)	0.758 (0.000)	0.313 (0.000)	0.354 (0.000)	0.325 (0.000)
Dummy: 1 if institution is public	-0.091 (0.269)	0.008 (0.763)	-0.217 (0.019)	-0.037 (0.202)	0.029 (0.244)	0.049 (0.040)
(Faculty size) ⁻⁵	1.113 (0.000)	0.212 (0.000)	1.104 (0.000)	0.219 (0.000)	0.188 (0.000)	0.105 (0.000)
Total articles						0.013 (0.000)
Adjusted R ²	0.592	0.462	0.503	0.400	0.473	0.515

(total articles, average articles per faculty member) and influence variables (total impact, impact per faculty member, impact per article) are regressed against the square root of faculty size,⁷ a dummy variable that is 1 if the institution is accredited and 0 otherwise, and a dummy variable that is 1 if the institution is public and 0 if it is private. The results of the tests are presented in Table VI. In each case, the coefficient for faculty size is positive and highly significant. Each additional faculty member adds the equivalent of approxi-

⁷ This square root transformation for the dependent variables and faculty size is necessitated by heteroscedasticity in the error terms when the raw data are used. However, analysis of the error terms for tests using both the raw and transformed data (including n -scores) provided no evidence of nonlinearity.

mately 1.2⁸ single-authored articles to the institution's output, and also increases the total impact by about 1.2. This level of impact is higher than the mean impact factors for all but four of the journals listed in Table I. These results show that research productivity generally increases as additional faculty members are added, but do not necessarily suggest any research synergies. However, articles per faculty member and impact per faculty member also increase as the number of faculty members increases. These results are consistent with the synergies suggested by the evidence in Table V, as well as with the argument that research incentives change with faculty size. There are a number of possible explanations for this implied synergy. One explanation is that the close proximity of more colleagues either increases the quantity or quality of exchanged information concerning research in progress, or both. Alternatively, there may be economies of scale that allow more data bases to be acquired or more resources to be allocated to research.

There is strong evidence that accredited institutions publish more total articles and more influential articles than nonaccredited institutions. The coefficients for the accreditation dummy variables are positive and highly significant in all regressions. Faculty at accredited institutions tend to publish about 0.9 more articles over the five-year period with an increase of about 0.6 in total impact. The influence of the average article also tends to be greater by about 0.1, or approximately the impact of a single article in the *Journal of Financial Services Research*.

Two of the regressions in Table VI suggest that private institutions publish higher quality research than public institutions. This evidence must be interpreted with caution, however. Regressions not reported here show that the public/private dummy is only significant if both faculty size and the accreditation dummy are included.

The final regression (for impact per article) in Table VI adds total articles attributed to an institution to the explanatory variables. The coefficient for total articles is positive and highly significant. This result is inconsistent with a trade-off between the quantity of research produced and the influence or quality of that research. Quality and quantity instead appear to be complements.

C. Institutional Prestige and Research

The relation between institutional prestige and the finance research produced is examined using logit regressions. A dependent variable for prestige is 1 if the institution is listed as one of the 50 leading business schools by *US News & World Report* for 1994, and 0 otherwise. Table VII presents the results.

The most significant result of these tests, consistent across all five regressions, is the strong positive relation between institutional prestige and research productivity and influence overall and per-faculty-member. These find-

⁸ This and subsequent estimates derived from these regressions are obtained by squaring the coefficient to adjust for the square root transformation of the dependent variables.

Table VII
Multivariate Tests of Prestige and Research of 50 Leading Business Schools

Logit regressions are used to test the relation for a sample of 661 academic institutions from 1989 through 1993 between the institution's prestige, and measures of research productivity and influence, the number of finance faculty members in the institution (faculty size), whether the institution is public or private, and whether the institution is accredited by the American Assembly of Collegiate Business Schools. The dependent variable is 1 if the institution is included in *US News & World Report's* 1994 listing of 50 leading business schools, and 0 otherwise. Impact is obtained by weighting each article by the impact factor of the journal in which it is published. An impact factor is calculated for year (t) as the number of citations in year (t) to a journal's articles published in years ($t-1$) and ($t-2$) divided by the number of articles published in the journal in years ($t-1$) and ($t-2$). Articles (Impact) per Faculty is total articles (impact) adjusted for co-authorship, divided by the number of finance faculty members in the institution. (p -values of two-tailed chi-square tests in parentheses.)

Regression	(1)	(2)	(3)	(4)	(5)
Constant	-4.489 (0.000)	-4.539 (0.000)	-6.055 (0.000)	-5.865 (0.000)	-6.247 (0.000)
Dummy: 1 if institution is public	-0.356 (0.110)	-0.279 (0.250)	-0.331 (0.112)	-0.164 (0.498)	-0.444 (0.026)
Faculty size	0.015 (0.792)	0.039 (0.472)	0.204 (0.000)	0.193 (0.000)	0.219 (0.000)
Total articles	0.222 (0.000)				
Total impact		0.251 (0.000)			
Articles per faculty			2.018 (0.000)		
Impact per faculty				2.308 (0.000)	
Impact per article					2.717 (0.000)
Likelihood ratio	165.78	151.50	166.28	148.20	188.69

ings suggest that time spent on research does not come at the expense of other activities that are of more value to the reputation of the institution. In fact, they suggest the opposite.

Although the signs of the coefficients in each regression suggest that private institutions are more prestigious, only one is significant. As is the case with the

other results in this study, evidence of differences between public and private institutions is, at best, weak.

Finally, there is some evidence that larger institutions are perceived as more prestigious. Faculty size is not significant when total publications or impact are included in the regression. However, faculty size is significant when publications and impact are adjusted by faculty size. This result is not surprising. A business school must be recognized to appear in the survey sections of the *US News & World Report* rankings, and larger schools are likely to have greater name recognition. Also, larger programs are more likely to offer more program options and graduates, thus drawing more attention from potential students and employers.⁹

Table VIII presents the results of similar logit regressions with the dependent variable that is 1 if the business school is ranked as one of the 20 leading value-added programs by Tracey and Waldfogel (1994), and 0 otherwise. The results presented in Table VIII are qualitatively similar to those in Table VII. Research productivity and influence, and faculty size are positively and significantly related to recognition as a leading business school.

The positive relation between the prestige of a business school and its research productivity and influence extends to differences within the ranked institutions. The 50 leading business schools as ranked by *US News & World Report* are segmented by rank with schools ranked 1 through 17 in the first, 18 through 34 in the second, and 35 through 50 in the third group. Wilcoxon rank sum tests are then used to test for differences in research productivity and influence across the groups. The evidence in Table IX shows that the first group generally produces significantly more articles and more influential articles than either of the other two groups overall and on a per-faculty-member basis, even after controlling for size. On a per-faculty-member basis, the second group publishes more articles and more influential articles than the third group.

III. Concluding Remarks

The motivation for this article is to provide information on finance research. Research in finance is not homogeneous across academic institutions. A majority of the total articles published in a set of 16 finance journals over a five-year period, and an even higher proportion of the influential articles, are attributable to a relatively small number of institutions. Faculty size is found to play an important role in research. Not only does total production of articles increase with the number of faculty members, the output of individual faculty members and the general quality of the articles also increases. Additionally, accredited institutions, possibly because of the research requirements of accreditation, tend to produce more total articles, and articles with more influence than nonaccredited institutions. Also, there is no strong evidence of any difference in publication patterns for public and private institutions. Finally, the leading business schools tend to have a strong research orientation.

⁹ Again, we thank G. William Schwert for this explanation.

Table VIII
**Multivariate Tests of Prestige and Research of 20 Leading
 Business Schools**

Logit regressions are used to test the relation for a sample of 661 academic institutions from 1989 through 1993 between the institution's prestige, and measures of research productivity and influence, the number of finance faculty members in the institution (faculty size), whether the institution is public or private, and whether the institution is accredited by the American Assembly of Collegiate Business Schools. The dependent variable is 1 if the institution is included in Tracey and Waldfogel's (1994) listing of 20 leading business schools, and 0 otherwise. Impact is obtained by weighting each article by the impact factor of the journal in which it is published. An impact factor is calculated for year (t) as the number of citations in year (t) to a journal's articles published in years ($t-1$) and ($t-2$) divided by the number of articles published in the journal in years ($t-1$) and ($t-2$). Articles (Impact) per Faculty is total articles (impact) adjusted for co-authorship, divided by the number of finance faculty members in the institution. (p -values of two-tailed chi-square tests in parentheses.)

Regression	(1)	(2)	(3)	(4)	(5)
Constant	-4.350 (0.000)	-4.412 (0.000)	-5.688 (0.000)	-5.240 (0.000)	-5.860 (0.000)
Dummy: 1 if institution is public	-0.175 (0.508)	-0.091 (0.739)	-0.207 (0.434)	-0.038 (0.893)	-0.351 (0.170)
Faculty size	-0.018 (0.800)	0.028 (0.649)	0.101 (0.013)	0.098 (0.015)	0.123 (0.001)
Total articles	0.108 (0.000)				
Total impact		0.066 (0.000)			
Articles per faculty			1.440 (0.000)		
Impact per faculty				1.001 (0.000)	
Impact per article					1.975 (0.000)
Likelihood ratio	129.18	125.74	117.25	155.85	126.56

The evidence presented here must be interpreted carefully. Teaching loads, academic programs, incentives created by salary structures, and promotion and tenure requirements vary across academic institutions. The results of this study must be interpreted in light of the factors existing at each individual institution.

Table IX
Univariate Tests of Prestige and Research

Wilcoxon rank sum tests are used to test the relation for a sample of 50 academic institutions from 1989 through 1993 between the institution's prestige, as measured by *US News & World Report's* 1994 rankings, and measures of research productivity and influence, and the number of finance faculty members in the institution (faculty size). The 50 institutions are grouped approximately into thirds by rank. Schools ranked 1–17 are in the first group, 18–34 in the second, and 35–50 in the third. Impact is obtained by weighting each article by the impact factor of the journal in which it is published. An impact factor is calculated for year (t) as the number of citations in year (t) to a journal's articles published in years ($t-1$) and ($t-2$) divided by the number of articles published in the journal in years ($t-1$) and ($t-2$). Articles (Impact) per Faculty is total articles (impact) adjusted for co-authorship, divided by the number of finance faculty members in the institution.

Panel A: Median Values						
Group	Articles/ Institution	Impact/ Institution	Articles/ Faculty	Impact/ Faculty	Impact/ Article	Number of Faculty
1 (Ranks 1–17)	38.17	51.86	2.35	3.30	1.31	15
2 (Ranks 18–34)	17.67	19.15	1.62	1.87	1.02	10
3 (Ranks 35–50)	17.20	12.52	1.21	0.98	0.94	13

Panel B: z-Scores (p -Values) of Differences Between Groups						
Tests of Groups	Articles/ Institution	Impact/ Institution	Articles/ Faculty	Impact/ Faculty	Impact/ Article	Number of Faculty
1 & 2	2.962 (0.003)	2.824 (0.005)	2.153 (0.031)	2.395 (0.017)	1.894 (0.058)	2.318 (0.020)
1 & 3	3.404 (0.001)	4.016 (0.000)	3.909 (0.000)	4.198 (0.000)	3.189 (0.001)	1.066 (0.286)
2 & 3	0.342 (0.732)	1.171 (0.242)	1.747 (0.081)	2.000 (0.046)	1.495 (0.135)	–1.521 (0.128)

Appendix

Ranking Based on Total Articles

Rank	Institution	Total Articles	Articles per Faculty	Total Impact	Impact per Faculty	Impact per Article
1	New York U.	89.17	2.35	98.25	2.59	1.10
2	U. of Pennsylvania	68.92	1.97	88.01	2.51	1.28
3	U. of Chicago	53.58	3.15	96.23	5.66	1.80
4	U. of Michigan	50.00	2.38	77.03	2.67	1.54
5	U. of Cal.-Los Angeles	47.83	3.19	69.78	4.65	1.46
6	Ohio State U.	46.42	3.09	65.70	4.38	1.42
7	Northwestern U.	42.92	1.95	62.70	2.85	1.46
8	Harvard U.	40.92	2.27	69.83	3.88	1.71
9	Columbia U.	40.75	2.04	51.86	2.59	1.27
10	Duke U.	38.17	2.54	54.58	3.64	1.43

Appendix—Continued

Rank	Institution	Total Articles	Articles per Faculty	Total Impact	Impact per Faculty	Impact per Article
11	Cornell U.	35.75	3.57	34.63	3.46	0.97
12	Indiana U.	35.67	1.88	32.24	1.70	0.90
13	U. of Rochester	33.50	3.35	56.52	5.65	1.69
14	Rutgers U.	32.83	2.05	19.43	1.21	0.59
15	Stanford U.	32.83	2.53	42.89	3.30	1.31
16	Massachusetts Inst. of Tech.	29.83	3.31	45.91	5.10	1.54
17	U. of Brit. Col.	29.17	2.24	43.22	3.32	1.48
18	Louisiana State U.	29.17	2.24	23.96	1.84	0.82
19	U. of Illinois	29.17	1.39	29.59	1.41	1.01
20	Virginia Poly. Inst.	27.17	1.51	20.97	1.17	0.77
21	U. of Southern Cal.	26.00	1.62	40.04	2.50	1.54
22	U. of Georgia	25.75	1.98	26.49	2.04	1.03
23	U. of Florida	24.83	1.55	23.77	1.49	0.96
24	U. of Miami	23.75	1.98	10.23	0.85	0.43
25	Texas A&M U.	23.67	1.48	14.70	0.92	0.62
26	U. of Texas-Austin	23.42	1.12	26.07	1.24	1.11
27	Boston U.	23.00	1.15	13.45	0.67	0.58
28	Texas Tech U.	22.67	2.06	11.52	1.05	0.51
29	U. of Washington	22.00	1.47	30.89	2.06	1.40
30	Arizona St. U.	21.67	1.44	30.32	2.02	1.40
31	Southern Methodist U.	21.50	1.79	24.47	2.04	1.14
32	Boston College	21.17	1.32	33.44	2.09	1.58
33	U. of Tennessee	21.17	1.63	11.39	0.88	0.54
34	U. of Kansas	20.50	3.42	11.18	1.86	0.55
35	Vanderbilt U.	20.33	2.54	20.74	2.59	1.02
36	U. of Alabama	20.25	1.84	8.37	0.76	0.41
37	Iowa St. U.	18.83	2.09	13.01	1.45	0.69
38	U. of Wisc-Madison	18.25	1.82	18.69	1.87	1.02
39	U. of Delaware	18.25	2.03	8.66	0.96	0.47
40	Dartmouth College	17.67	1.61	15.11	1.37	0.86
41	Purdue U.	17.67	2.52	19.15	2.74	1.08
42	Baruch College	17.50	0.92	15.40	0.81	0.88
43	Loyola U.-Chicago	17.25	2.16	8.66	1.08	0.50
44	Southern Ill. U.	17.08	1.55	11.53	1.05	0.67
45	Fordham U.	16.67	0.88	7.92	0.42	0.48
46	Clemson U.	16.50	1.27	13.35	1.03	0.81
47	Carnegie Mellon U.	16.42	2.35	30.77	4.40	1.87
48	Wilfred Laurier U.	16.33	2.72	9.39	1.57	0.57
49	U. of Maryland	16.17	1.62	15.23	1.52	0.94
50	U. of Cal.-Berkeley	15.83	1.22	16.17	1.24	1.02
51	Notre Dame U.	15.67	0.92	14.02	0.82	0.89
52	U. of Mo.-Columbia	15.08	1.51	9.65	0.97	0.64
53	Auburn U.	14.83	1.35	7.55	0.69	0.51
54	N.C. State U.	14.67	2.10	8.45	1.21	0.58
55	U. of Connecticut	14.58	0.77	8.66	0.46	0.59
56	Temple U.	14.58	0.97	6.31	0.42	0.43
57	U. of Virginia	14.50	1.61	12.82	1.42	0.88

Appendix—Continued

Rank	Institution	Total Articles	Articles per Faculty	Total Impact	Impact per Faculty	Impact per Article
58	U. of S. Carolina	14.33	0.84	11.39	0.67	0.79
59	U. of Massachusetts	14.00	1.40	8.97	0.90	0.64
60	Michigan St. U.	13.83	1.26	9.28	0.84	0.67
61	U. of Cal.-Irvine	13.67	1.95	15.19	2.17	1.11
62	Florida St. U.	13.50	0.71	5.60	0.29	0.41
63	U. of N. Carolina	13.33	1.03	15.37	1.18	1.15
64	Georgia St. U.	13.17	0.69	10.91	0.57	0.83
65	Syracuse U.	13.08	1.19	6.11	0.56	0.47
66	Washington U.	12.67	1.81	19.18	2.74	1.51
67	Penn. St. U.	12.67	1.15	11.59	1.05	0.92
68	U. of Colorado	12.50	1.04	9.84	0.82	0.79
69	U. of Houston	12.17	0.76	8.43	0.53	0.69
70	U. of Minnesota	12.17	0.87	14.54	1.04	1.20
71	Memphis St. U.	12.00	0.67	5.65	0.31	0.47
72	Northeastern U.	11.83	0.66	4.77	0.27	0.40
73	Yale U.	11.67	1.67	16.73	2.39	1.43
74	Georgetown U.	11.50	1.28	8.94	0.99	0.78
75	U. of Mo.-St. Louis	11.50	1.64	4.06	0.58	0.35
76	McMaster U.	11.17	1.40	4.13	0.52	0.37
77	U. of New Orleans	11.00	1.00	4.18	0.38	0.38
78	American U.	10.92	0.99	6.14	0.56	0.56
79	U. of Oklahoma	10.67	1.78	9.37	1.56	0.88
80	Santa Clara U.	10.33	2.07	7.83	1.57	0.76
81	U. of Toronto	10.33	0.86	8.11	0.68	0.78
82	U. of Cal.-Davis	9.83	1.97	6.93	1.39	0.70
83	U. of Alberta	9.83	1.09	8.01	0.89	0.81
84	U. of Ill.-Chicago	9.67	0.97	7.55	0.76	0.78
85	U. of N. Texas	9.67	0.81	3.62	0.30	0.37
86	Bentley College	9.50	0.56	8.77	0.52	0.92
87	U. of Arizona	9.50	1.06	6.04	0.67	0.64
88	Emory U.	9.17	0.92	5.03	0.50	0.55
89	Florida Atlantic U.	9.17	0.71	3.22	0.25	0.35
90	Old Dominion U.	9.08	0.76	3.53	0.29	0.39
91	Drexel U.	9.00	1.12	5.92	0.74	0.66
92	U. of Baltimore	8.75	0.87	4.96	0.50	0.57
93	DePaul U.	8.42	0.42	4.56	0.23	0.54
94	SUNY-Binghamton	8.33	2.08	3.59	0.90	0.43
95	Oklahoma St. U.	8.33	0.93	5.28	0.59	0.63
96	N. Illinois U.	8.25	0.75	4.91	0.45	0.60
97	Queen's U.	7.83	1.12	7.34	1.05	0.94
98	Wayne St. U.	7.83	0.87	3.17	0.35	0.40
99	George Mason U.	7.58	0.84	3.48	0.39	0.46
100	U. Laval, Quebec	7.50	0.83	4.03	0.45	0.54
101	Simon Fraser U.	7.33	1.05	4.50	0.64	0.61
102	Brigham Young U.	7.33	0.67	5.89	0.54	0.80
103	SUNY-Albany	7.17	0.90	4.21	0.53	0.59
104	N. Arizona U.	7.17	1.79	4.24	1.06	0.59
105	U. of Pittsburgh	7.08	1.01	6.27	0.90	0.89

Appendix—Continued

Rank	Institution	Total Articles	Articles per Faculty	Total Impact	Impact per Faculty	Impact per Article
106	U. of Iowa	7.00	0.44	10.16	0.64	1.45
107	SUNY-Buffalo	7.00	0.87	5.62	0.70	0.80
108	Tulane U.	7.00	1.00	8.11	1.16	1.16
109	San Diego St.	6.83	0.30	4.40	0.19	0.64
110	U. of Texas-Arlington	6.83	0.98	4.41	0.63	0.65
111	U. of Utah	6.83	0.43	8.91	0.56	1.30
112	U. of Kentucky	6.67	0.83	4.33	0.54	0.65
113	Florida Int. U.	6.67	0.44	1.18	0.08	0.18
114	Texas Christian U.	6.58	0.94	5.56	0.79	0.84
115	Clark U.	6.50	3.25	7.04	3.52	1.08
116	U. of Cincinnati	6.50	0.41	3.06	0.19	0.47
117	McGill U.	6.50	0.93	4.94	0.71	0.76
118	Suffolk U.	6.33	0.90	2.21	0.32	0.35
119	U. of Nebraska	6.17	0.88	3.47	0.50	0.56
120	Oakland U.	6.00	1.00	3.52	0.59	0.59
121	Rider College	5.83	0.65	2.15	0.24	0.37
122	U. of Tenn.- Chattanooga	5.83	1.16	3.89	0.78	0.67
123	Baylor U.	5.67	0.47	3.72	0.31	0.66
124	U. of N. Mexico	5.67	0.81	2.34	0.33	0.41
125	West Virginia U.	5.67	0.71	2.52	0.32	0.44
126	U. of Arkansas	5.50	0.55	3.35	0.34	0.61
127	John Carroll U.	5.00	1.00	1.88	0.38	0.38
128	U. of Rhode Island	4.83	0.48	5.83	0.58	1.21
129	York U.	4.83	0.54	2.43	0.27	0.50
130	Louisiana Tech U.	4.83	0.81	2.18	0.36	0.45
131	Concordia U.	4.67	0.78	1.81	0.30	0.39
132	U. of Nevada-Las Vegas	4.67	0.47	3.35	0.34	0.72
133	U. of Mississippi	4.42	0.37	2.38	0.20	0.54
134	U. of Cal.-San Diego	4.33	0.87	6.19	1.24	1.43
135	U. of W. Ontario	4.33	0.43	3.10	0.31	0.72
136	Cleveland St. U.	4.33	0.39	1.38	0.13	0.32
137	Kansas St. U.	4.33	0.72	2.28	0.38	0.53
138	Cal. St. U.-L.A.	4.17	0.60	1.81	0.26	0.43
139	Rice U.	4.17	0.83	3.44	0.69	0.83
140	U. of Waterloo	4.17	1.04	5.02	1.26	1.20
141	Case Western Reserve U.	4.08	0.41	3.07	0.31	0.75
142	U. of Alaska-Fairbanks	4.00	1.00	2.01	0.50	0.50
143	U. of Oregon	4.00	0.44	6.86	0.76	1.72
144	San Jose St. U.	4.00	0.40	2.20	0.22	0.55
145	Western Mich. U.	4.00	0.31	1.88	0.14	0.47
146	East Carolina U.	3.83	0.48	1.34	0.17	0.35
147	U. of Calgary	3.83	0.43	2.40	0.27	0.63
148	Bowling Green U.	3.67	0.46	1.45	0.18	0.40
149	U. of New Brunswick	3.67	0.92	2.40	0.60	0.65
150	U. of Vermont	3.67	1.22	1.60	0.53	0.44
151	Washington St. U.	3.67	0.33	3.01	0.27	0.82

Appendix—Continued

Rank	Institution	Total Articles	Articles per Faculty	Total Impact	Impact per Faculty	Impact per Article
152	Marquette U.	3.50	0.50	2.34	0.33	0.67
153	Miami U.	3.50	0.29	2.19	0.18	0.63
154	Cal. St. U.-Fullerton	3.50	0.21	4.59	0.27	1.31
155	Hofstra U.	3.42	0.23	1.11	0.07	0.32
156	Portland St. U.	3.42	0.57	1.76	0.29	0.52
157	Ball St. U.	3.33	0.28	1.04	0.09	0.31
158	San Francisco St. U.	3.33	0.30	0.75	0.07	0.23
159	U. of Wisc.-Milwaukee	3.33	0.30	1.78	0.16	0.53
160	U. of Dayton	3.25	0.46	0.65	0.09	0.20
161	U. of Cal.-Riverside	3.17	1.06	4.99	1.66	1.58
162	Wichita St. U.	3.17	0.63	3.28	0.66	1.04
163	Clarkson U.	3.08	0.77	1.89	0.47	0.61
164	Loyola College, Md.	3.00	0.30	1.06	0.11	0.35
165	Middle Tenn. St. U.	3.00	0.38	0.53	0.07	0.18
166	Rochester Inst. of Tech.	3.00	0.50	1.14	0.19	0.38
167	U. of Hartford	3.00	0.38	1.39	0.17	0.46
168	U. of S. Florida	3.00	0.18	2.34	0.14	0.78
169	U. of Texas-Dallas	3.00	0.50	3.01	0.50	1.00
170	U. of Wyoming	3.00	0.38	3.00	0.38	1.00
171	William & Mary	3.00	0.43	2.80	0.40	0.93
172	George Washington U.	2.83	0.31	1.82	0.21	0.64
173	U. of S. Alabama	2.83	0.40	2.56	0.37	0.90
174	U. of Saskatchewan	2.83	0.57	2.39	0.48	0.84
175	U. of Central Fla.	2.83	0.26	0.72	0.07	0.25
176	New Mexico St. U.	2.67	0.44	1.16	0.19	0.44
177	U. of Texas-El Paso	2.67	0.44	1.18	0.20	0.44
178	Carleton U.	2.67	0.67	0.65	0.16	0.24
179	St. John's U.	2.67	0.16	1.13	0.07	0.42
180	Claremont McKenna	2.50	0.83	1.87	0.62	0.75
181	Illinois St. U.	2.50	0.28	0.67	0.07	0.27
182	Rensselaer Tech.	2.50	0.83	3.26	1.09	1.30
183	U. of Wisc.-La Crosse	2.50	0.50	1.21	0.24	0.48
184	Western Ky. U.	2.50	0.36	1.58	0.23	0.63
185	Villanova U.	2.50	0.28	1.84	0.20	0.74
186	U. of Akron	2.33	0.17	0.88	0.06	0.38
187	U. of Toledo	2.33	0.19	1.14	0.10	0.49
188	Kent St. U.	2.17	0.27	0.82	0.10	0.38
189	Wake Forest U.	2.17	0.31	0.87	0.12	0.40
190	Arkansas St. U.	2.00	0.33	1.10	0.18	0.55
191	Eastern Mich. U.	2.00	0.29	0.60	0.09	0.30
192	Oregon St. U.	2.00	0.67	1.38	0.46	0.69
193	U. of Windsor	2.00	0.29	2.04	0.29	1.02
194	Bryant College	1.83	0.23	0.56	0.07	0.31
195	Colorado St. U.	1.83	0.20	0.66	0.07	0.36
196	Lehigh U.	1.83	0.23	1.26	0.16	0.69
197	Murray St. U.	1.83	0.37	1.14	0.23	0.62
198	N. Dakota St. U.	1.83	0.92	0.82	0.41	0.45
199	U. of Louisville	1.83	0.26	0.64	0.09	0.35

Appendix—Continued

Rank	Institution	Total Articles	Articles per Faculty	Total Impact	Impact per Faculty	Impact per Article
200	U. of Richmond	1.83	0.37	0.31	0.06	0.17
201	U. of N. Florida	1.83	0.37	0.63	0.13	0.34
202	U. of Wisc.-Eau Claire	1.83	0.61	0.62	0.21	0.34
203	Appalachian St.	1.67	0.19	0.48	0.05	0.29
204	Drake U.	1.67	0.42	0.70	0.18	0.42
205	U. of N. Carolina- Greensbor	1.67	0.24	2.04	0.29	1.22
206	Norfolk St. U.	1.50	0.38	0.60	0.15	0.40
207	SUNY-Brockport	1.50	0.75	1.28	0.64	0.85
208	U. of Ala.-Huntsville	1.50	0.38	0.81	0.20	0.54
209	Utah St. U.	1.50	0.30	0.33	0.07	0.22
210	Western Ill. U.	1.50	0.19	0.31	0.04	0.21
211	Winthrop U.	1.50	0.30	1.21	0.24	0.81
212	Boise St. U.	1.50	0.21	1.50	0.21	1.00
213	U. of Hawaii	1.50	0.21	2.06	0.29	1.37
214	Cal. St. U.-Chico	1.33	0.17	0.62	0.08	0.47
215	Fairfield U.	1.33	0.22	0.36	0.06	0.27
216	Georgia Tech.	1.33	0.33	1.10	0.28	0.83
217	Indiana St. U.	1.33	0.19	0.69	0.10	0.52
218	Radford U.	1.33	0.22	0.55	0.09	0.41
219	U. of Wisc.-Oshkosh	1.33	0.19	0.65	0.09	0.49
220	Virg. Commonwealth	1.33	0.17	0.13	0.02	0.10
221	Arizona St. U.-West	1.00	0.50	1.95	0.98	1.95
222	Ashland U.	1.00	0.33	0.25	0.08	0.25
223	Bradley U.	1.00	0.17	0.33	0.06	0.33
224	Bucknell U.	1.00	0.33	0.55	0.18	0.55
225	Chapman U.	1.00	0.50	1.60	0.80	1.60
226	Duquesne U.	1.00	0.17	0.33	0.06	0.33
227	E. Tenn. St. U.	1.00	0.20	0.49	0.10	0.49
228	Fairleigh Dickinson U.	1.00	0.08	0.33	0.03	0.33
229	Gonzaga U.	1.00	0.33	1.68	0.56	1.68
230	Lakehead U.	1.00	0.50	0.27	0.14	0.27
231	Manhattan College	1.00	0.50	0.54	0.27	0.54
232	N. Michigan U.	1.00	0.25	0.08	0.02	0.08
233	N.C. Central U.	1.00	0.50	0.66	0.33	0.66
234	Northern St. U.	1.00	0.50	0.38	0.19	0.38
235	Pomona College	1.00	0.11	0.88	0.10	0.88
236	Seattle U.	1.00	0.13	1.47	0.18	1.47
237	Southeastern La. U.	1.00	0.33	0.08	0.03	0.08
238	U. of Alabama- Birmingham	1.00	0.25	0.38	0.10	0.38
239	U. of Bridgeport	1.00	0.20	0.66	0.13	0.66
240	U. of Cal.-Santa Barbara	1.00	0.14	0.66	0.09	0.66
241	U. of Colorado-Denver	1.00	0.13	0.11	0.01	0.11
242	U. of Denver	1.00	0.10	0.44	0.04	0.44
243	U. of Scranton	1.00	0.09	0.33	0.03	0.33
244	U. of Tulsa	1.00	0.17	0.32	0.05	0.32

Appendix—Continued

Rank	Institution	Total Articles	Articles per Faculty	Total Impact	Impact per Faculty	Impact per Article
245	U. of Wisc.-Whitewater	1.00	0.14	0.24	0.03	0.24
246	W. Washington U.	1.00	0.25	0.54	0.14	0.54
247	Cal. Polytechnic	0.83	0.12	0.15	0.02	0.18
248	Cal. St. U.-Long Beach	0.83	0.08	0.22	0.02	0.26
249	Clark Atlanta U.	0.83	0.14	0.23	0.04	0.28
250	Emporia St. U.	0.83	0.17	0.28	0.06	0.34
251	Glasboro St. U.	0.83	0.28	0.25	0.08	0.30
252	Morgan St. U.	0.83	0.14	0.77	0.13	0.92
253	N. E. Illinois U.	0.83	0.21	0.31	0.08	0.37
254	N. E. Louisiana U.	0.83	0.14	0.38	0.06	0.46
255	Nicholls St. U.	0.83	0.17	0.08	0.02	0.10
256	U. of Montana	0.83	0.21	0.54	0.14	0.65
257	U. of N. Carolina- Charlotte	0.83	0.12	1.08	0.15	1.30
258	U. of N. Colorado	0.83	0.17	0.22	0.04	0.26
259	Xavier U.	0.83	0.14	0.27	0.05	0.32
260	Youngstown St. U.	0.83	0.05	0.26	0.02	0.31
261	Georgia Southern U.	0.75	0.09	0.41	0.05	0.55
262	U. of Evansville	0.75	0.38	0.20	0.10	0.27
263	U. of Southern Miss.	0.75	0.11	0.34	0.05	0.45
264	Cal. St. U.-Fresno	0.67	0.07	0.16	0.02	0.24
265	Creighton U.	0.67	0.10	0.87	0.12	1.31
266	McNeese St. U.	0.67	0.22	0.30	0.10	0.45
267	Millersville U.	0.67	0.22	0.25	0.08	0.38
268	S. W. Missouri St. U.	0.67	0.07	0.93	0.07	1.40
269	Wm. Paterson College	0.67	0.07	0.26	0.03	0.39
270	James Madison U.	0.58	0.06	0.33	0.03	0.57
271	Rollins College	0.58	0.15	0.14	0.04	0.24
272	Shippensburg U.	0.58	0.12	0.13	0.03	0.22
273	American Grad. Sch.	0.50	0.07	0.04	0.01	0.08
274	Austin Peay St. U.	0.50	0.17	0.04	0.01	0.08
275	Cal. St. U.-Hayward	0.50	0.06	0.14	0.02	0.28
276	Canisius College	0.50	0.06	0.44	0.05	0.88
277	Central Mich. U.	0.50	0.06	0.97	0.11	1.94
278	Central Missouri St. U.	0.50	0.06	0.14	0.02	0.28
279	E. Washington U.	0.50	0.17	0.04	0.01	0.08
280	Fort Lewis College	0.50	0.13	1.35	0.34	2.70
281	Grand Valley St.	0.50	0.10	0.36	0.08	0.72
282	Howard U.	0.50	0.05	0.16	0.02	0.32
283	Jacksonville St. U.	0.50	0.08	0.19	0.04	0.38
284	Kennesaw St. College	0.50	0.06	0.12	0.02	0.24
285	Laurentian U.	0.50	0.13	0.36	0.09	0.72
286	Mississippi St. U.	0.50	0.07	0.27	0.04	0.54
287	Pacific Lutheran U.	0.50	0.25	0.19	0.10	0.38
288	Saginaw Valley St.	0.50	0.17	0.16	0.05	0.32
289	Sam Houston St. U.	0.50	0.07	0.05	0.01	0.10
290	Southeastern U.	0.50	0.06	0.05	0.01	0.10
291	Stetson U.	0.50	0.08	0.04	0.01	0.08

Appendix—Continued

Rank	Institution	Total Articles	Articles per Faculty	Total Impact	Impact per Faculty	Impact per Article
292	SUNY-Stony Brook	0.50	0.50	1.35	1.35	2.70
293	U. of Detroit Mercy	0.50	0.08	0.33	0.06	0.66
294	U. of Maine	0.50	0.17	0.19	0.06	0.38
295	U. of Neb.-Omaha	0.50	0.10	0.12	0.02	0.24
296	U. of New Hampshire	0.50	0.10	1.35	0.27	2.70
297	U. of Northern Iowa	0.50	0.06	0.04	0.01	0.08
298	U. of San Francisco	0.50	0.13	0.33	0.08	0.66
299	U. of St. Thomas	0.50	0.17	0.44	0.15	0.88
300	U. of the Pacific	0.50	0.17	0.12	0.04	0.24
301	Westfield College	0.50	0.13	0.14	0.04	0.28
302	Wright St. U.	0.50	0.06	0.04	0.01	0.08
303	Babson College	0.33	0.04	0.22	0.02	0.66
304	Cal. St. U.-Northridge	0.33	0.02	0.15	0.01	0.45
305	Catholic U. of America	0.33	0.07	0.11	0.02	0.33
306	College of Charleston	0.33	0.17	0.03	0.02	0.09
307	E. Illinois U.	0.33	0.04	0.22	0.03	0.66
308	E. Kentucky U.	0.33	0.08	0.03	0.01	0.09
309	Ferris St. College	0.33	0.06	0.04	0.01	0.12
310	Grambling St. U.	0.33	0.17	0.03	0.02	0.09
311	Indiana U.-South Bend	0.33	0.07	0.08	0.02	0.24
312	La Salle U.	0.33	0.05	0.08	0.01	0.24
313	Louisiana St. U.- Shreveport	0.33	0.11	0.11	0.04	0.33
314	Meredith College	0.33	0.08	0.22	0.06	0.66
315	Montclair St. College	0.33	0.08	0.11	0.03	0.33
316	Moorehead St. U.	0.33	0.07	0.11	0.02	0.33
317	Ohio U.	0.33	0.07	0.03	0.01	0.09
318	Pittsburgh St. U.	0.33	0.07	0.09	0.02	0.27
319	Penn St. U.-Erie	0.33	0.17	0.08	0.04	0.24
320	S. E. Missouri St. U.	0.33	0.07	0.04	0.01	0.12
321	Salisbury St. U.	0.33	0.11	0.04	0.01	0.12
322	Seton Hall U.	0.33	0.04	0.04	0.00	0.12
323	Southern U.	0.33	0.33	0.03	0.03	0.09
324	St. Cloud St. U.	0.33	0.04	0.03	0.00	0.09
325	U. of Manitoba	0.33	0.04	0.13	0.01	0.39
326	U. of Ottawa	0.33	0.03	0.11	0.01	0.33
327	U. of Portland	0.33	0.17	0.09	0.05	0.27
328	U. of S. W. Louisiana	0.33	0.05	0.09	0.01	0.27
329	U. of Texas-Pan American	0.33	0.17	0.04	0.02	0.12
330	Widener U.	0.33	0.08	0.11	0.03	0.33

REFERENCES

- Alexander, John C., Jr., and Rodney H. Mabry, 1994, Relative significance of journals, authors, and articles cited in financial research, *Journal of Finance* 49, 679–712.
- Armstrong, J. Scott, and Tad Sperry, 1994, The ombudsman: Business school prestige—research versus teaching, *Interfaces* 24, 13–43.

- Borokhovich, Kenneth A., Robert J. Bricker, and Betty J. Simkins, 1994a, Journal communication and influence in financial research, *Journal of Finance* 49, 713–725.
- Borokhovich, Kenneth A., Robert J. Bricker, and Betty J. Simkins, 1994b, The streams of financial research and their interrelationships: Evidence from the social sciences citation index, *Financial Practice and Education* 4, 110–123.
- Chung, Kee. H., and Raymond A. K. Cox, 1990, Patterns of productivity in the finance literature: A study of bibliometric distributions, *Journal of Finance* 45, 301–309.
- Hasselback, James R., 1994, *The 1993–1994 Wiley Guide to Finance Faculty* (Wiley & Sons, New York).
- Hasselback, James R., 1995, *Wiley Guide to Finance Faculty 1995* (Wiley & Sons, New York).
- Heck, Jean Louis, 1994, *Finance Literature Index* (McGraw-Hill, New York).
- Heck, Jean Louis, and Philip L. Cooley, 1988, Most frequent contributors to the finance literature, *Financial Management* 17, 100–108.
- Heck, Jean Louis, Philip L. Cooley, and Carl M. Hubbard, 1986, Contributing authors and institutions to the *Journal of Finance*: 1946–1985, *Journal of Finance* 41, 1129–1140.
- Niemi, Albert W., Jr., 1987, Institutional contributors to the leading finance journals, 1975 through 1986: A note, *Journal of Finance* 42, 1389–1397.
- Schwert, G. William, 1993, The *Journal of Financial Economics*: A retrospective evaluation (1974–91), *Journal of Financial Economics* 33, 369–424.
- Straugh, Charles T. and Barbarasue L. Straugh, 1993, *Lovejoy's College Guide 1993* (Prentice Hall, New York).
- Tracey, Joseph, and Joel Waldfogel, 1994, The best business schools: A market based approach, Working paper #4609, National Bureau of Economic Research.
- Zivney, Terry L., and William J. Bertin, 1992, Publish or perish: What the competition is really doing, *Journal of Finance* 47, 295–329.
- Zivney, Terry L., and William Reichenstein, 1994, The pecking order of finance journals, *Financial Practice and Education* 4, 77–87.