

# WORLDWIDE INSTITUTIONAL AND INDIVIDUAL RANKINGS IN STATISTICAL THEORY BY JOURNAL PUBLICATIONS OVER THE PERIOD 1980–1986

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Nine leading journals that publish statistical theory are used to provide a data base of institutional and individual research activity in statistics over the period 1980–1986. From this data base, we construct both institutional and individual research rankings according to standardized page counts of articles published in these journals over the stated period. The study is worldwide and we provide breakdowns of publication by country and by journal. Separate rankings are also provided for both institutions and individuals according to publication track records in the *Annals of Statistics* alone.

## 1. INTRODUCTION

Evaluations of academic research play an important role in every field of scholarship. In leading scientific journals, for instance, the review process of anonymous refereeing provides an example of peer evaluation that underpins academic standards and influences publication decisions. Likewise, in research funding through agencies such as the National Science Foundation in the USA and the Research Councils in Canada and the U.K., *ad hoc* and panel reviews of proposed research play a vital role in supporting some research ventures and rejecting others. At the institutional level, individual reviews for reappointment and tenure are a regular cycle of activity that involve research evaluations, often with both internal and external assessments. Department reviews are also periodically commissioned either from within institutions by academic deans or from outside by external funding agencies. All of these instances of evaluation involve judgmental elements concerning the significance and the quality of academic research. Such judgments are not only necessary but also desirable, since one of the objectives of research is successful communication and the merit of new scientific work

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is ultimately tested by its capacity to survive in competition with other ideas and results.

In addition to judgmental elements, scientific evaluations typically involve more objective analyses that are based on historical publication performance. In both individual and departmental reviews, for instance, the hard evidence of publication track records is taken very seriously. If combined with what are generally agreed ratings of journal quality, such evidence is a useful and low cost proxy measure for research quality and productivity. Graduate students, faculty and academic administrators already use such measures in a very informal way, typically by eyeballing academic journals and lists of publications to make inferences about where much of the recent research activity in a field is concentrated and which individuals and institutions appear to lead the rest of the pack.

In the subject of economics, objective rankings of institutions by the publication record of their faculty have been available for some years and there is now a large literature. Various methodologies can and have been employed in studies of this kind, ranging from publication page counts to citation enumerations and opinion surveys. Recent contributions which have attracted substantial attention among economists are by Graves, Marchand, and Thompson [1] and by Hirsch, Austen, Brooks, and Moore [3]. These studies provide rankings that are based on standardized page counts of articles published by faculty members in twenty-four leading economics journals. Using the same methodology, Hall [2] recently provided worldwide institutional rankings for the specialization of econometrics. Area studies of this type are useful because they clarify quality and productivity differentials that exist between fields within the same department and they pinpoint institutions with superior track records in particular fields.

The purpose of the present paper is to provide objective rankings of research activity in the subject area of statistics. Our focus is statistical theory rather than applications and we do not include probability theory. Our rankings are based on standardized page counts of research articles published in nine leading international journals that publish statistical theory. The study is worldwide and we report both individual and institutional rankings over the period 1980–1986. In addition, we provide breakdowns of research activity by country and by journal. Also, for those who perceive the *Annals of Statistics* as the pinnacle of achievement in publication, we report both institutional and individual rankings for this journal alone.

## 2. DATA BASE

Our sample data consist of research articles on statistical theory published in the *Annals of Statistics*, *Biometrika*, *Econometric Theory*, *International Statistical Review*, *Journal of the American Statistical Association (JASA)*,

*Journal of Multivariate Analysis*, *Journal of the Royal Statistical Society (JRSS) Series B*, *Journal of Time Series Analysis*, and *Sankhya (Series A)* during the period 1980–1986. Our selection of journals is, of course, subjective. In making the choice our intent was to include the main international journals that publish statistical theory. The data in Table 1 below and Table A5 in the Appendix make it plain that a very high percentage (in fact, 71%) of the published research that we have considered appears in three of the nine journals selected: the *Annals of Statistics* (with 34.4%), *Biometrika* (14.1%), and *JASA* (22.5%); and it seems likely that the output of these journals would dominate the rankings for any selection of international journals. However, there are several important journals that could have been included. Prominent among these are: regional journals like the *Annals of the Institute of Statistical Mathematics* (Tokyo), the *Australian Journal of Statistics*, and the *Scandinavian Journal of Statistics*; more applied journals like *Technometrics* and *Biometrics*; and more probabilistic journals like *Probability Theory and Related Fields* and *Stochastic Processes and its*

TABLE 1. Citation data

Journals	CF	Average length of article in standardized pages	Number of citations	Number of authors	Number of articles
<i>Annals of Statistics</i> 1984–1986	1.00	10.0	984	1163	796
1981–1983	1.29				
1980	1.08				
<i>Biometrika</i>	1.16	5.5	745	929	611
<i>Econometric Theory</i>	0.88	11.0	46	54	34
<i>International Statistical Review</i>	1.04	9.6	103	139	80
<i>Journal of the American Statistical Association</i>	1.96	8.4	813	981	610
<i>Journal of Multivariate Analysis</i>	0.84	7.9	177	223	146
<i>Journal of Time Series Analysis</i>	1.06	8.7	152	198	129
<i>Journal of the Royal Statistical Society (Series B)</i>	1.24	8.6	342	414	286
<i>Sankhya (Series A)</i>	0.75	6.2	165	201	135
		Total	3,527	4,302	2,827

Total number of pages = 28,079

Total number of standardized pages = 34,247.5

Total number of distinct authors = 1,971

Average article length in standardized pages = 8.3

*Applications.* In a study that expanded on what we have done here, it would be useful to include research in statistical theory from these outlets as well. This would give more weight to regional research and to research in twilight zones between statistical theory and probability.

Almost all of the articles published in the *Annals of Statistics*, *Biometrika*, *Econometric Theory*, and *JRSS* were included in our data base; but we did exclude historical remarks, interviews, and problem sets. Applied papers and historical accounts in the *International Statistical Review*, *JASA*, and *Journal of Time Series Analysis* were not included. Probabilistic papers in the *International Statistical Review*, *Journal of Multivariate Analysis*, and *Sankhya* were excluded from the sample, based on the AMS subject classification codes given with each paper. When these codes were not provided, only papers that were obviously probabilistic were excluded. In general, efforts were made to include as many papers as possible.

Institutional affiliations of authors were recorded for the institutional rankings as they were given in the published articles. For individual rankings our latest information concerning affiliations was taken from the 1987 Institute of Mathematical Statistics (IMS) Directory. In the case of multiple authorship one- $n$ th of the publication credit was assigned to each author for an article with  $n$  joint authors. When more than one affiliation was listed, each institution received credit in the institutional rankings for papers with multiple authors. The nominal page counts for each article were standardized according to the average number of characters published on one page of the respective journals. The numeraire was set as  $1.00 = \textit{Annals of Statistics}$  (1984–1986) and we refer to this in the following as an *Annals*-standardized page.

Table 1 lists the journals included in our study, the conversion factors (CF) used to standardize the page counts, the total number of institutional citations and articles included for each journal, and the number of authors included in our sample for each journal over the period 1980–1986. For example, in the case of *Biometrika*, the conversion factor is 1.16, the average length of a *Biometrika* article is 5.5 *Annals*-standardized pages, and there are 611 *Biometrika* articles in our data base with 929 listed authors and 745 institutional citations. In the complete data base, there are 3,527 citations in total, giving a raw page count of 28,079 pages which converted to 34,247.5 *Annals*-standardized pages. Our data base includes 1,971 distinct authors from 518 separate institutions.

As is evident from the table, the *Annals of Statistics*, *JASA*, and *Biometrika* numerically dominate the other journals as outlets of statistical theory. Each of these journals published more than twice the number of articles of any of the other journals in our data base; and they attracted more than twice as many authors as the other journals over the period 1980–1986. Note that *Econometric Theory* commenced publication in 1985 and our data base only includes two years of articles for this journal. Assuming a similar

average output for the earlier years 1980–1984 would lead to an output of around 120 articles in statistical theory, a figure that is broadly in line with the *Journal of Time Series Analysis* and *Sankhya (Series A)*. Note finally that the average length of all articles in our data base is 8.3 *Annals*-standardized pages, with a minimum average of 5.5 pages for *Biometrika* and a maximum average of 11.0 pages for *Econometric Theory*.

### 3. INSTITUTIONAL RANKINGS

Table 2 ranks the top twenty institutions in terms of pages published by their faculty in the journals named in Table 1. Column 3 of Table 2 gives the stan-

**TABLE 2.** Top twenty institutions by publications in statistical theory

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for <i>Annals</i>
1	Stanford U.	1048.0	39	94	36	2
2	U. of Wisconsin, Madison	1038.0	41	107	44	3
3	U. of California, Berkeley	990.0	32	88	22	1
4	Australian National U. (ANU)	827.3	30	95	33	10
5	U. of Chicago	685.0	17	59	8	7
6	Imperial College (U.K.)	684.9	21	60	17	26
7	Purdue U.	651.2	22	63	26	5
8	U. of North Carolina, Chapel Hill	627.1	29	79	66	8
9	Cornell U.	608.4	25	64	50	4
10	Rutgers U.	484.8	22	62	62	6
11	Harvard U.	476.5	32	58	150	22
12	Iowa State U.	464.4	25	72	83	16
13	CSIRO (Australia)	433.3	31	60	163	28
14	U. of Illinois, Urbana	429.3	18	41	53	9
15	U. of Minnesota	388.8	20	47	75	13
16	Carnegie-Mellon U.	349.7	14	33	46	11
17	U. of Texas, Austin	339.2	16	28	68	12
18	U. of Pittsburgh	338.3	24	51	159	34
19	U. of California, Los Angeles	323.7	20	35	121	24
20	Hebrew U. (Israel)	322.6	15	31	67	18

Note: N is the number of contributors from each institution.

**TABLE 3.** Top twenty institutions by publications in the *Annals of Statistics*

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for all journals
1	U. of California Berkeley	731.6	17	54	4	3
2	Stanford U.	566.9	21	43	20	1
3	U. of Wisconsin, Madison	416.9	21	34	50	2
4	Cornell U.	380.4	15	33	29	9
5	Purdue U.	372.1	14	33	21	9
6	Rutgers U.	352.0	18	41	51	10
7	U. of Chicago	309.8	13	17	33	5
8	U. of North Carolina, Chapel Hill	247.9	11	24	40	8
9	U. of Illinois, Urbana	243.6	7	18	7	14
10	Australian National U. (ANU)	239.4	7	20	8	4
11	Carnegie-Mellon U.	183.6	10	16	59	16
12	U. of Texas, Austin	172.0	8	13	43	17
13	U. of Minnesota	161.1	10	17	79	15
14	Florida State U.	154.1	15	25	143	35
15	AT&T Bell Laboratories	153.6	8	10	55	22
16	Iowa State U.	143.8	8	20	63	12
17	U. of Michigan, Ann Arbor	139.3	3	8	3	27
18	Hebrew U. (Israel)	131.8	9	11	92	20
19	Johns Hopkins U.	131.1	5	10	22	25
20	Pennsylvania State U.	130.6	4	9	11	23

Note: N is the number of contributors from each institution.

Standardized page counts, column 4 gives the number (N) of authors at each institution that have contributed to the page count, and column 5 gives the number of articles (institutional citations) upon which the page count is based. Column 6 gives institutional rankings according to faculty productivity, which is measured by dividing column 3 by N. Column 7 gives the corresponding institutional rankings for publication in the *Annals of Statistics*. Table A1 in the Appendix lists the leading 300 institutions by the same criteria.

Clearly, there is a huge disparity in publication activity across institutions.

Even in the top twenty institutions the range of activity is remarkable. Using the top 300 institutions listed in Table A1 as the population, the mean (median) page count is 109.1 (55.7) with a standard deviation of 153.2. In this population, the Hebrew University (ranked 20) is 1.39 standard deviations out from the mean; and the leading institution (Stanford) is 6.13 standard deviations out from the mean. The top U.S. schools that are known to be strong in statistics dominate the rankings: Stanford University (1), University of Wisconsin (2), and University of California, Berkeley (3). However, non-U.S. schools also figure prominently: two in the top six (ANU and Imperial College); and four in the top twenty. Also notable is the fact that some distinguished U.S. schools do not make it to the top twenty: Massachusetts Institute of Technology (M.I.T.) (ranked 40), Columbia University (50), Princeton University (64), University of Pennsylvania (66), Yale University (75), Northwestern University (98). The London School of Economics (LSE), which dominated the rankings in econometric theory [2], here ranks 36 in statistical theory.

There is also a wide disparity in the number of researchers ( $N$ ) publishing in statistics across institutions and this should be borne in mind when examining the tables. Note that the top three institutions (at Stanford, Wisconsin, and Berkeley) also have the largest number of researchers. A simple productivity measure can be obtained by dividing the standardized page count by  $N$  and we report productivity rankings for institutions in column 6 of Table 2 and Table A1. These rankings show that, of the top twenty institutions listed in Table 2, only University of Chicago (with productivity rank = 8) and Imperial College (17) have productivity ranks which keep them in the top twenty schools. However,  $N$  is random for each institution and depends on many factors, involving researchers across several departments in the same institution. We therefore believe that a more direct and comprehensible measure of productivity is given by the individual rankings that we report in Section 4. In the individual rankings, one simply needs to check the institutional affiliations of the most productive researchers and it is easy to determine which institutions dominate. This will be considered later.

Table 3 ranks the top twenty institutions according to publication in the *Annals of Statistics* and Table A2 in the Appendix provides the same information for the top 200 institutions. Again, University of California, Berkeley (1), Stanford University (2), and University of Wisconsin (3) top the rankings but in a different order. Some institutions show substantial changes in this category over their general rankings. The main improvers in the top twenty are: Cornell University (up from 9 to 4), Purdue University (7 to 5), Rutgers University (10 to 6), University of Illinois, Urbana (14 to 9), Carnegie-Mellon University (16 to 11), Florida State University (35 to 14), AT&T Bell Laboratories (22 to 15), University of Michigan (27 to 17), and Johns Hopkins University (25 to 19). The main losers in moving from the

general to the *Annals* rankings are: ANU (down from 4 to 10), Imperial College (6 to 26), Harvard University (11 to 22), CSIRO (13 to 28), University of Pittsburgh (18 to 34), and the Indian Statistical Institute (21 to 70). Note that the ANU is the only non-U.S. institution in the top 10; and there are only two non-U.S. institutions placed among the top twenty. Clearly, U.S. institutions dominate the *Annals of Statistics* and among these institutions, the University of California, Berkeley and Stanford University are pre-eminent. In spite of their preeminence at the institutional level, neither the University of California, Berkeley nor Stanford University has the most productive researcher, as we shall see in the individual rankings.

As with the rankings based on all nine journals, there is substantial disparity in publication activity across institutions. Using the top 200 institutions in the *Annals* rankings listed in Table A2 as the population, the mean (median) page count is 56.1 (28.2) with a standard deviation of 88.9. The University of California, Berkeley and Stanford University are therefore more than 1.6 standard deviations ahead of their nearest rival (University of Wisconsin at 3) and the University of California, Berkeley is itself more than 1.8 standard deviations ahead of Stanford University. These figures demonstrate the magnitude of Berkeley's world renowned strength in high-brow statistical theory.

Several distinguished U.S. schools do not make it into the top twenty in the *Annals* rankings. Their ranks can be found in Table A2. Most notable are: Harvard University (ranked 22), Columbia University (25), University of Pennsylvania (53), Princeton University (59), M.I.T. (60), Yale University (67), and Northwestern University (73). The London School of Economics (ranked 1 in econometric theory and 36 in statistics) does not make it into the top 200 in the rankings for the *Annals of Statistics*.

Of the top twenty institutions listed in Table 3, only the University of Michigan (with productivity rank = 3), University of California, Berkeley (4), University of Illinois (7), ANU (8), and Pennsylvania State University (11) remain in the top twenty when the institutions are ranked by productivity (column 6 of Table 3 and Table A2) for the *Annals of Statistics*.

#### 4. INDIVIDUAL RANKINGS

Table 4 ranks the top ten individual researchers who published the most pages in the nine named journals of Table 1. Table A3 in the Appendix provides the same information for the top 50 individuals. Here and elsewhere in the paper we use the square parentheses "[...]" to signify the latest affiliation of an author (from the 1987 Institute of Mathematical Statistics Directory) when this is different from the affiliation(s) given in the published articles.



TABLE 4. Top ten authors by publication in statistical theory

Rank	Author	Affiliation	Standardized page count	Number of articles	Rank for <i>Annals</i>
1	Hall, P.	Australian National U.	340.3	33	1
2	Efron, B.	Stanford U.	216.9	11	17
3	Wu, C.F.J.	U. of Wisconsin, Madison	184.7	17	8
4	Bickel, P.J.	U. of California, Berkeley	155.3	12	5
5	Goodman, L.A.	U. of Chicago [U.C. Berkeley]	146.3	4	15
6	Li, K.C.	Purdue U./ U.C.L.A.	142.0	10	2
7	Barndorff-Nielsen, O.E.	Aarhus U. (Denmark)	139.3	11	54
8	Bhansali, R.J.	U. of Liverpool (U.K.)	136.7	7	114
9	Kallenberg, W.C.M.	Twente U./Vrije U. (Holland)	134.9	8	7
10	Freedman, D.A.	U. of California, Berkeley	134.0	12	3

/ indicates multiple affiliations.

[ ] signifies current affiliation (to which citations do not refer).

The results in Tables 4 and A3 are striking. They bring sharp new evidence to bear on the institutional rankings, showing that there are some prolific authors whose contributions are often obscured at the aggregate institutional level. P. Hall (ANU) leads the rankings by a huge margin, with half as many pages again as that of his nearest rival, B. Efron (Stanford University). P. Hall also leads the field in terms of an article count, publishing 15 more articles than that of L.J. Wei [U. Michigan] who ranks second by this classification. The University of California, Berkeley has four individuals in the top twenty, while the University of Wisconsin, Stanford University, University of Chicago, and Imperial College each have two. The U.S. institutions account for thirteen of the top twenty places and are therefore less dominant than at the institutional level; U.K. institutions account for four places; and Australia, Denmark, and Holland account for one place each.

Using the top 200 individuals in this category as the population, the mean

(median) page count is 69.9 (57.8) with a standard deviation of 35.6. In this population, the individual ranked 20 (A.C. Atkinson) is 1.1 standard deviations ahead of the mean. P. Hall, the most prolific author, is 7.6 standard deviations out from the mean and is 3.5 standard deviations ahead of B. Efron, his nearest rival. If he were to be compared with complete institutions, he would rank 17 in the world in the rankings of Table 2.

Table 5 ranks the top ten individuals according to publication in the *Annals of Statistics* and Table A4 in the Appendix shows the same information for the top fifty individuals. Again, P. Hall (ANU) leads the rankings by an appreciable margin. The University of California, Berkeley has four individuals (D.A. Freedman, R. Beran, P.J. Bickel, and C.J. Stone) in the top ten and thereby convincingly displays its strength in high-brow statistical theory at the individual level. Using the top 200 individuals in this category as the population, the mean (median) page count is 39.0 (31.0) with a standard deviation of 24.0. In this population, the individual ranked 10 (P. Diaconis) is 2.5 standard deviations ahead of the mean. P. Hall, the most prolific author in the *Annals of Statistics*, is 4.7 standard deviations out from the mean and is 0.54 standard deviations ahead of K.C. Li, his nearest rival.

TABLE 5. Top ten authors by publication in the *Annals of Statistics*

Rank	Author	Affiliation	Standardized page count	Number of articles	Rank for all journals
1	Hall, P.	Australian National U.	151.6	11	1
2	Li, K. C.	Purdue U./U.C.L.A.	138.7	9	6
3	Freedman, D.A.	U. of California, Berkeley	128.2	11	10
4	Beran, R.	U. of California, Berkeley	125.0	7	14
5	Bickel, P.J.	U. of California, Berkeley	124.9	8	4
6	Stone, C.J.	U. of California, Berkeley/U.C.L.A.	106.9	6	24
7	Kallenberg, W.C.M.	Twente U./Vrije U. (Holland)	106.4	6	9
8	Wu, C.F.J.	U. of Wisconsin, Madison	103.5	8	3
9	Marden, J.I.	U. of Illinois, Urbana	102.3	6	22
10	Diaconis, P.	Stanford U.	99.3	8	23

Again, if he were to be compared with complete institutions in the rankings of Table 3, he would rank 16 in the world, ahead of many prestigious institutions.

Column 6 of Table 5 records individual rankings based on publications in all journals for cross referencing with the individual *Annals* rankings. Many individuals have substantial improvements over their generalist rankings. The most notable improvers are: Li (up from 6 to 2), Freedman (10 to 3), Beran (14 to 4), Stone (24 to 6), Marden (22 to 9), Diaconis (23 to 10), Brown (25 to 12), and Mason (42 to 16). Similarly, column 6 of Table 4 gives the *Annals* ranking for the top ten authors across all journals. Eight of the top ten generalist authors are ranked within the top 20 in the *Annals* rankings (only Barndorff-Nielsen (54) and Bhansali (114) do not make it into the top 20 for the *Annals*). On the other hand, all of the top ten authors in the *Annals* rankings make it into the top 25 in the generalist rankings.

## 5. INSTITUTIONAL RESEARCH CONCENTRATION

Upon examination of Tables 2 and 3, one is inclined to infer from the thick upper tail of the distributions that much of the publication in statistical theory is concentrated in the leading institutions. Table 6 reports concentration ratios in terms of standardized page counts for the top 1, 5, 10, 20, 25, 50, and 100 ranked institutions using the formula

$$CR(n) = \sum_{i=1}^n PG_i / \sum_{i=1}^I PG_i, \quad I = 300 \text{ (all journals)}, \quad I = 200 \text{ (Annals)},$$

where  $PG_i$  denotes total *Annals*-standardized pages published by the  $i$ th ranked institution and  $n$  represents the number of leading institutions. The

TABLE 6. Concentration ratios

CR( $n$ )	All journals	<i>Annals</i>
1	0.03	0.06
5	0.13	0.21
10	0.22	0.33
20	0.34	0.45
25	0.38	0.50
50	0.54	0.67
100	0.72	0.83

measure was used in earlier studies [2,3] of research activity in economics and econometrics to quantify concentration. Note that  $CR(n)$  is biased upwards because the denominator does not include all publications, only those of the top 300 schools. However, the effect of this bias seems small enough to be neglected for our purposes here.

Table 6 shows that publication in statistical theory is highly concentrated in the recognized top institutions. Thus, for all journals, the top 10 institutions produced 22% of the published research over the period 1980–1986. The concentrations are even greater for the *Annals of Statistics* where the top five schools produced more than 20% of the publications, the top ten schools more than 32%, and the top twenty-five schools more than 50%.

## 6. INDIVIDUAL CONTRIBUTIONS TO INSTITUTIONAL RANKINGS

Institutional rankings are the end result of individual not institutional research activity. However, some institutions certainly provide more hospitable environments for research in statistics than others; and some institutions have longer traditions of excellence than others in statistical theory. These factors often tend to make such institutions more attractive to graduate students looking for Ph.D. instruction and supervision in the field and to young faculty in the early phase of their careers. To help quantify such latent variables, we report in Table 7 rankings of the top twenty-one institutions according to the number of authors ( $\geq 3$ ) each institution has in the top 200. We emphasize that these rankings are based on faculty affiliations as they were recorded in the published articles, not current affiliations. Of course, faculty migrations inevitably affect these rankings, as they do also for Tables 2 and 3. Again, rankings are given for all journals and for the *Annals of Statistics* separately. In case of ties where more than one institution has the same number of researchers, total page counts are used as the tie-breaking rule.

The table can be interpreted in conjunction with the figures given earlier in Tables 2 and 3. For instance, the University of Wisconsin is ranked 3 in Table 7 with 7 researchers in the top 200. Recall that the University of Wisconsin ranks 2 from Table 2 in the overall rankings with 41 researchers contributing to the total page count. We deduce that it supports a large group of researchers in statistical theory with 7 out of 41 making it into the top 200 authors worldwide. The University of Chicago ranks 5 in Table 2 with 17 researchers overall but ranks 1 in Table 7 with 9 of its researchers among the top 200. Note that six non-U.S. institutions are ranked in the top twenty and three of these are from the U.K.

Table 8 provides more explicit information about the leading three authors in each of the top five institutions.

**TABLE 7.** Institutional rankings by the number of faculty in the top 200 authors

All journals			<i>Annals</i>	
Rank	Institution	Number of reseachers	Rank	Number of reseachers
1	U. of Chicago	9	6	7
2	U. of California, Berkeley	8	1	10
3	U. of Wisconsin, Madison	7	4	7
4	Imperial College (U.K.)	7	28	2
5	Stanford U.	6	2	9
6	Purdue U.	5	7	6
7	Cornell U.	5	5	7
8	U. of Illinois, Urbana	5	12	3
9	Australian National U.	4	13	3
10	U. of North Carolina, Chapel Hill	4	8	5
11	Rutgers U.	4	3	9
12	Iowa State U.	4	16	3
13	Hebrew U. (Israel)	4	23	2
14	Harvard U.	3	25	2
15	Carnegie Mellon U.	3	10	4
16	U. of Pittsburgh	3	46	1
17	Aarhus U. (Denmark)	3	36	2
18	Ohio State U.	3	30	2
19	London School of Economics (U.K.)	3	—	0
20	U. of Surrey (U.K.)	3	33	2
21	U. of Maryland, College Park	3	20	3

## 7. GEOGRAPHIC FACTORS

Countries may be ranked according to the number of institutions and the number of authors in the top 200. Table 9 records this information for seven countries (Australia, Canada, India, Japan, West Germany, U.K., and U.S.A.) and an "Other Nation" category. In absolute figures, the U.S.A. dominates these rankings, having 56.5% of the top 200 authors in the generalist rankings and 69.5% of the top 200 in the *Annals* rankings. On a per capita basis, the U.S.A. leads the rankings for the *Annals*, having  $M^* = 0.57$  authors in the top 200 worldwide for every million of its population. However, in the all journals category, Australia leads the rankings with  $M^* = 0.69$  authors in the top 200 for every million of its population. The U.K. is second in this category with  $M^* = 0.64$  and the U.S.A. is third with  $M^* = 0.46$ .

TABLE 8. Leading authors of the top five institutions

	Rank	Institution	Author	Pages
All journals	1	Stanford U.	Efron, B.	216.9
			Anderson, T.W.	112.0
			Diaconis, P.	108.2
	2	U. of Wisconsin	Wu, C.F.J.	184.7
			Reinsel, G.C.	114.7
			Wahba, G.	101.5
	3	U. of California, Berkeley	Bickel, P.J.	155.3
			Freedman, D.A.	134.0
			Beran, R.	125.0
	4	Australian National U.	Hall, P.	340.3
			Hannan, E.J.	96.4
			Dunsmuir, W.	44.5
	5	U. Chicago	Goodman, L.A.	146.3
			[U.C. Berkeley]	
			Ansley, C.F.	76.5
			Wong, W.H.	72.1
<i>Annals of Statistics</i>	1	U. of California, Berkeley	Freedman, D.A.	128.2
			Beran, R.	125.0
			Bickel, P.J.	124.9
	2	Stanford U.	Diaconis, P.	99.3
			Efron, B.	70.3
			Siegmund, D.	67.3
	3	U. of Wisconsin	Wu, C.F.J.	103.5
			Leurgans, S. [Ohio State]	47.7
			Wahba, G.	46.4
	4	Cornell U.	Hwang, J.T.	97.6
			Brown, L.D.	97.6
			Casella, G.	46.5
	5	Purdue U.	Li, K.C. [U.C.L.A.]	138.7
			Berger, J.O.	69.6
			Gleser, L.J.	44.5

[ ] signifies current affiliation.

The U.S.A. dominates both the *Annals* and the generalist rankings according to the number of institutions in the top 200. Interestingly, West Germany ranks third in the *Annals* ranking by this criterion, having 20 institutions in the top 200.

Table 10 shows a breakdown of total standardized page publications in percentage terms for each country according to journal of publication. Thus, in the case of Australia, 23.8% of this country's standardized research publications appeared in the *Annals of Statistics*, 21.5% in *JRSS (Series B)*,

**TABLE 9.** Country rankings according to number of authors and institutions in top 200

			Authors			Institutions	
	Rank	Country	$M$	$M^*$	%	$N$	%
All journals	1	U.S.A.	113	0.46	56.5	88	44.0
	2	U.K.	36	0.64	18.0	30	15.0
	3	Other	18	—	9.0	37	18.5
	4	Australia	11	0.69	5.5	9	4.5
	5	Canada	8	0.31	4.0	15	7.5
	6	W. Germany	7	0.11	3.5	12	6.0
	7	Japan	5	0.04	2.5	8	4.0
	8	India	2	0.00	1.0	1	0.5
<i>Annals of Statistics</i>	1	U.S.A.	139	0.57	69.5	97	46.9
	2	Other	18	—	9.0	37	17.9
	3	U.K.	12	0.54	6.0	17	8.2
	4	W. Germany	11	0.18	5.5	20	9.7
	5	Canada	8	0.31	4.0	15	7.3
	6	Australia	6	0.38	3.0	9	4.4
	7	Japan	6	0.05	3.0	9	4.4
	8	India	0	0.00	0.0	3	1.5

 $M$  = Number of authors in top 200. $M^*$  =  $(M/\text{Population}) \times 10^6$ . $N$  = Number of institutions in top 200.

21.0% in *Biometrika*, and so on. The final two rows in this table record inequality indices for the distribution of shares across journals. Apparently, Australia and the "Other Nation" category have the most evenly distributed publication records. The most unevenly distributed records are held by India, where 49% of the published research is in *Sankhya*; the U.S.A., where 73% of the published research appears in two journals, the *Annals of Statistics* (with 41.7%) and *JASA* (with 31.5%); and West Germany where 54% of the published research appears in the *Annals of Statistics*.

Table 11 gives a breakdown according to geographic origin of the research published in each of the listed journals. Thus, taking the *Biometrika* row of this table, we see that 39% of the contents of this journal are published by U.S. authors, 22% by U.K. authors, and so on. The final two columns of the table provide inequality indices for the distribution of journal contents according to geographic origin. We observe that *Journal of Time Series* is the most evenly distributed by this criterion (with a Gini coefficient of 0.44) and *JASA* the most unevenly distributed (with a Gini coefficient of 0.74).

TABLE 10. Percentage breakdown of total publications of each country by journal

Journal	Country							
	Australia	Canada	West Germany	India	Japan	Other	U.K.	U.S.A.
<i>Annals of Statistics</i>	23.8	33.2	54.2	13.1	29.9	27.9	14.1	41.7
<i>Biometrika</i>	21.0	17.7	6.9	13.2	21.2	18.6	23.4	10.0
<i>Econometric Theory</i>	6.2	1.1	0.0	0.0	8.7	1.1	3.1	0.7
<i>International Statistical Review</i>	4.2	4.6	1.8	0.9	0.0	10.5	5.7	1.6
<i>JASA</i>	6.6	23.2	5.1	11.2	12.6	14.3	7.1	31.5
<i>Journal of Multivariate Analysis</i>	6.8	3.8	16.8	7.1	6.2	6.9	1.0	4.7
<i>Journal of Time Series Analysis</i>	9.1	3.0	9.0	1.0	12.2	11.2	9.2	2.2
<i>JRSS (Series B)</i>	21.5	8.2	2.2	4.5	7.9	7.2	35.9	4.7
<i>Sankhya (Series A)</i>	1.3	5.2	5.1	49.0	1.9	3.0	0.8	3.2
Total	100	100	100	100	100	100	100	100
Gini coefficient	0.39	0.49	0.61	0.59	0.43	0.38	0.52	0.60
Coefficient of variation	0.74	1.00	1.52	1.36	0.85	0.74	1.05	1.34



TABLE 11. Percentage breakdown of total publications in each journal by country of author

Journal	Country										Gini coeff.	Coeff. of variation
	Australia	Canada	West Germany	India	Japan	Other	U.K.	U.S.A.	Total			
<i>Annals of Statistics</i>	4.1	4.8	5.1	0.5	2.7	10.2	5.4	67.3	100	0.64	1.79	
<i>Biometrika</i>	8.8	6.2	1.6	1.3	4.6	16.6	21.7	39.2	100	0.51	1.04	
<i>Econometric Theory</i>	22.7	3.5	0.0	0.0	16.5	8.7	25.0	23.7	100	0.45	0.86	
<i>International Statistical Review</i>	7.1	6.5	1.6	0.3	0.0	37.6	21.2	25.6	100	0.56	1.12	
<i>JASA</i>	1.7	5.1	0.7	0.7	1.7	8.0	4.1	77.8	100	0.74	2.13	
<i>Journal of Multivariate Analysis</i>	8.0	3.8	10.8	1.9	3.8	17.5	2.6	51.6	100	0.56	1.33	
<i>Journal of Time Series Analysis</i>	10.4	2.8	5.2	0.3	7.2	27.1	23.9	23.0	100	0.44	0.85	
<i>JRSS (Series B)</i>	12.4	4.0	0.7	0.6	2.4	8.9	45.9	25.2	100	0.59	1.26	
<i>Sankhya (Series A)</i>	2.2	7.4	0.7	19.3	1.7	10.7	3.2	50.8	100	0.57	1.32	

Table A5 in the Appendix provides a complete percentage breakdown of the entire data base of standardized pages into journal and country of origin. This table shows the overall dominance of U.S. authors in the data base, providing 55% of the standardized pages, and the large market share taken by the *Annals of Statistics* (34.4% of the standardized pages) and *JASA* (22.5%).

## 8. CONCLUSION

The rankings given in this paper provide some objective evidence of research performance in statistical theory over the period 1980–1986 by publication track records for institutions and individuals throughout the world. All studies of this type involve subjective elements through the selection of journals, the classification of articles, and the criteria employed in forming the rankings. The rankings are limited by the exclusion of other forms of publication such as research monographs. There are inevitable quality differentials between articles whether they are published in the same journal or not. There is bias in the individual rankings against scholars who write few papers but have a profound influence through their work. The aggregate institutional rankings are biased in favor of those centers with big collections of statisticians. The period 1980–1986 covers only a recent vintage of research.

Notwithstanding these limitations, rankings and analyses of research performance of the type conducted here do seem to be worthwhile. As argued in the Introduction, less formal analyses of the research productivity of individuals and of departments are routinely made by faculty, students, and administrators. The reason for even a casual perusal of research records is clear. People need such information to assist in ongoing decisions about where to do graduate study, where to find employment, and to see how well certain individuals stack up against others in the promotion stakes. Hopefully, the present study will help to furnish some factual evidence for the statistical community to assist in such decisions.

Studies of this type are never finished. Institutional rankings change over time as faculty migrate and retire, as new faculty are recruited, and as research interests evolve. Individual rankings also change as new generations of statisticians emerge and as earlier generations accept administrative responsibilities which give less time for research. To monitor these changes in research activity it would be desirable for the present rankings to be updated regularly in the future. It would also be useful to study earlier vintages of research by the same methods. Retrospective data would give prominence to earlier generations of statisticians and, in conjunction with the present study, help to highlight some of the changes that have taken place in the major research centers over time.

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2. Hall, A.D. Worldwide rankings of research activity in econometrics 1980-1985. *Econometric Theory* 3 (1987): 171-194.
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## APPENDIX

TABLE A1. Ranking of institutions by publications in statistical theory

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for <i>Annals</i>
1	Stanford U.	1047.8	39	94	36	2
2	U. of Wisconsin, Madison	1038.2	41	107	44	3
3	U. of California, Berkeley	990.0	32	88	22	1
4	Australian National U.	827.3	30	95	33	10
5	U. of Chicago	685.0	17	59	8	7
6	Imperial College (U.K.)	684.9	21	60	17	26
7	Purdue U.	651.2	22	63	26	5
8	U. of North Carolina, Chapel Hill	627.1	29	79	66	8
9	Cornell U.	608.4	25	64	50	4
10	Rutgers U.	484.8	22	62	62	6
11	Harvard U.	476.5	32	58	150	22
12	Iowa State U.	464.4	25	72	83	16
13	CSIRO (Australia)	433.3	31	60	163	28
14	U. of Illinois, Urbana	429.3	18	41	53	9
15	U. of Minnesota	388.8	20	47	75	13
16	Carnegie-Mellon U.	349.7	14	33	46	11
17	U. of Texas, Austin	339.2	16	28	68	12
18	U. of Pittsburgh	338.3	24	51	159	34
19	U. of California, Los Angeles	323.7	20	35	121	24
20	Hebrew U. (Israel)	322.6	15	31	67	18
21	Indian Statistical Institute	306.4	27	55	230	78
22	AT&T Bell Laboratories	303.5	23	30	183	15
23	Pennsylvania State U.	297.1	12	27	47	20
24	U. of Waterloo (Canada)	285.6	18	44	129	54
25	Johns Hopkins U.	283.2	12	30	55	19
26	Aarhus U. (Denmark)	278.8	10	27	32	44
27	U. of Michigan, Ann Arbor	271.9	16	25	111	17
28	U. of Copenhagen (Denmark)	270.5	14	24	76	38

continued

TABLE A1 continued

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for <i>Annals</i>
29	U. of Washington	265.0	19	32	164	21
30	Ohio State U.	261.3	15	39	104	32
31	U. of Florida	247.0	15	30	116	69
32	U. of Hong Kong	229.3	13	33	97	—
33	U. of California, San Diego	228.2	13	21	100	29
34	National Institute of Health	225.9	24	39	277	76
35	Florida State U.	223.8	19	39	210	14
36	London School of Economics (U.K.)	220.6	10	19	61	—
37	U. of Manchester (U.K.)	214.4	19	30	232	—
38	U. of Iowa	202.6	17	34	206	57
39	North Carolina State U.	196.9	12	25	117	87
40	M.I.T.	196.3	15	19	186	60
41	U. of California, Davis	193.9	15	26	189	39
42	U. of Missouri, Rolla	193.0	11	30	101	30
43	U. of Surrey (U.K.)	187.3	4	16	5	43
44	U. of Tokyo (Japan)	179.3	7	13	39	42
45	U. of Maryland, College Park	178.8	7	22	40	35
46	Michigan State U.	176.1	13	24	176	37
47	George Washington U.	175.9	10	29	98	166
48	U. Heidelberg (West Germany)	175.1	12	18	154	23
49	Hiroshima U. (Japan)	172.7	7	17	48	75
50	Columbia U.	171.9	11	26	133	25
51	U. of Birmingham (U.K.)	171.2	5	11	14	176
52	U. of Newcastle Upon Tyne (U.K.)	166.6	10	16	114	—
53	U. of Durham (U.K.)	161.6	4	9	7	—
54	U. College, London (U.K.)	157.9	7	15	56	36
55	U. of Bath (U.K.)	157.3	5	11	20	56
56	McGill U. (Canada)	157.2	9	22	102	46
57	U. of Toronto (Canada)	155.6	10	19	135	40
58	Indiana U.	153.5	10	19	139	82
59	Colorado State U.	152.1	12	22	194	33
60	Southern Methodist U.	151.4	10	25	146	148
61	Vrije U. (Holland)	150.0	3	10	4	27
62	U.S. Bureau of the Census	149.9	11	15	171	95
63	U. of Liverpool (U.K.)	148.0	4	10	12	100
64	Princeton U.	145.7	13	19	233	59
65	U. of Southampton (U.K.)	138.6	10	28	166	—
66	U. of Pennsylvania	137.3	15	17	287	53
67	Bowling Green State U.	136.1	5	13	34	50
68	U. of Rochester	134.8	8	19	112	102
69	U. of Glasgow (Scotland)	133.7	6	20	58	219
70	U. of British Columbia (Canada)	132.4	14	27	276	128
71	Texas A&M U.	128.4	10	19	193	—
72	U. of Western Ontario (Canada)	127.4	12	22	249	—
73	U. of Southern California, Los Angeles	125.0	8	12	134	49
74	U. of Cambridge (U.K.)	120.9	13	18	280	101

TABLE A1 continued

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for <i>Annals</i>
75	Yale U.	119.9	9	14	181	67
76	U. of Hull (U.K.)	115.6	2	11	2	110
77	U. of South Carolina	115.0	8	17	155	199
78	U. of York (U.K.)	115.0	4	16	28	72
79	Monash U. (Australia)	114.2	8	15	158	208
80	U. of Oxford (U.K.)	113.6	10	11	229	199
81	Institute of Statistical Mathematics (Japan)	112.6	9	13	197	—
82	Rice U.	112.5	6	9	79	31
83	Hitotsubashi U. (Japan)	112.4	4	14	31	62
84	U. of Kentucky	111.6	8	11	165	45
85	Simon Fraser U. (Canada)	111.4	9	19	198	51
86	Mathematical Centre, Amsterdam (Holland)	111.1	6	10	84	58
87	Oregon State U.	109.2	9	19	201	86
88	U. of Leeds (U.K.)	108.7	6	17	87	188
89	U. of Kansas	108.4	5	8	64	132
90	Kansas State U.	107.6	6	15	92	126
91	U. de Montreal (Canada)	106.3	9	14	209	102
92	Osaka U. (Japan)	106.3	7	14	144	66
93	Old Dominion U.	105.5	7	14	147	55
94	New York U.	104.3	9	13	226	102
95	U. of Bergen (Norway)	104.0	3	11	13	—
96	U. of Amsterdam (Holland)	103.1	10	12	257	176
97	La Trobe U. (Australia)	102.6	6	17	109	152
98	Northwestern U.	102.2	5	13	71	73
99	U. of Delaware	101.7	3	11	15	63
100	Virginia Polytechnic Inst.	100.3	10	15	262	114
101	Montana State U.	97.2	6	10	119	47
102	Loughborough U. (U.K.)	97.1	1	9	1	—
103	Tokyo Institute of Technology (Japan)	95.8	6	9	126	99
104	U. of Sydney (Australia)	94.5	7	13	177	68
105	Temple U.	93.6	12	20	323	172
106	U. of Adelaide (Australia)	91.8	7	7	185	—
107	Szeged U. (Hungary)	90.0	3	10	24	88
108	U. Siegen (W. Germany)	88.8	5	8	93	41
109	U. of Warwick (U.K.)	88.5	6	12	152	233
110	U. of Essex (U.K.)	85.7	5	8	108	—
111	U. Osnabruck (West Germany)	84.4	2	5	6	94
112	U. of Arizona	82.2	6	8	170	134
113	U. of Auckland (New Zealand)	81.8	5	14	118	161
114	Queens U. (Canada)	81.4	6	8	174	125
115	Educational Testing Service	80.4	6	8	179	108
116	Royal Holloway College (U.K.)	80.1	6	13	180	156

continued

TABLE A1 continued

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for <i>Annals</i>
117	Fred Hutchinson Cancer Research Center	77.8	6	14	187	—
118	U. of Sheffield (U.K.)	77.4	6	8	192	149
119	Dalhousie U. (Canada)	77.1	5	7	137	61
120	Flinders U. of South Australia	76.2	4	9	77	143
121	State U. of New York, Albany	76.2	5	10	143	235
122	U. of Calgary (Canada)	75.8	3	8	45	63
123	Washington State U.	75.6	4	10	78	185
124	Trinity College (Ireland)	75.0	5	11	148	130
125	Tel-Aviv U. (Israel)	73.9	8	10	283	117
126	U. of Houston	73.6	8	8	286	119
127	Institute of Hydrology (U.K.)	73.4	3	7	49	—
128	U. of Alberta (Canada)	72.3	3	7	52	71
129	U. of California, Riverside	71.6	5	10	156	151
130	Carleton U. (Canada)	71.3	3	9	54	95
131	U. Paul-Sabatier (France)	70.2	6	8	220	156
132	Katholieke U. Leuven (Belgium)	67.8	6	7	231	188
133	Texas Tech U.	67.1	5	9	178	127
134	U. of California, Santa Barbara	66.5	5	11	182	105
135	U. of New South Wales (Australia)	66.4	3	8	60	—
136	U. of London (U.K.)	65.8	6	6	241	165
137	U. of Georgia	65.4	11	14	375	221
138	U. of Sussex (U.K.)	65.1	3	5	63	—
139	U. Libre de Bruxelles (Belgium)	65.0	3	6	65	65
140	State U. of New York, Buffalo	64.8	6	8	246	79
141	U. of Edinburgh (Scotland)	64.7	6	9	247	—
142	Dortmund U. (West Germany)	63.9	4	6	125	52
143	U. of Illinois, Chicago	62.9	5	10	196	89
144	U. of Freiburg (West Germany)	61.3	2	5	23	48
145	U. of Western Australia	61.2	7	8	300	129
146	U. of Wisconsin, Milwaukee	61.2	4	10	141	198
147	U. Essen (West Germany)	59.4	2	4	25	—
148	Duke U.	58.7	5	6	219	197
149	U. of Bayreuth (West Germany)	56.8	2	4	29	135
150	U. of Koln (West Germany)	56.5	2	3	30	—
151	U. of Oslo (Norway)	54.9	5	6	240	85
152	The U. (U.K.)	54.8	6	7	288	—
153	U. of Hamburg (West Germany)	54.7	3	7	85	79
154	Naval Postgraduate School	54.4	3	4	86	—
155	Technion-Israel Inst. of Technology	53.8	3	6	91	118
156	U. of Helsinki (Finland)	52.7	3	5	99	233
157	U. of Stockholm (Sweden)	52.0	5	6	254	176
158	State U. of New York, Stony Brook	51.9	3	6	106	91
159	Leiden U. (Holland)	51.3	5	6	258	69
160	Agricultural U., Copenhagen (Denmark)	50.7	1	4	3	119
161	Polish Academy of Sciences (Poland)	49.9	6	6	307	124

TABLE A1 continued

Rank	Affiliation	Standardized page count	Number of N citations		Productivity rank	Rank for <i>Annals</i>
162	Academia Sinica (China)	48.6	8	8	372	171
163	Brown U.	48.4	3	5	122	74
164	U. de Sao Paulo (Brazil)	48.4	7	9	340	—
165	U. of Strathclyde (Scotland)	48.4	2	5	51	—
166	U. of Guelph (Canada)	48.2	4	6	203	123
167	Kyoto U. (Japan)	48.2	4	7	204	221
168	U. of St. Andrews	48.1	5	9	272	91
169	U. of Lancaster (U.K.)	47.0	4	6	217	—
170	U. of Nottingham (U.K.)	47.0	4	8	218	—
171	Limburgs U. Centrum (Belgium)	46.1	3	11	138	77
172	Keio U. (Japan)	45.8	3	4	142	93
173	U. of Kent at Canterbury (U.K.)	45.0	5	8	296	—
174	Virginia Commonwealth U.	44.8	2	5	57	—
175	U. di Padova (Italy)	44.5	2	5	59	—
176	U. Regensburg (West Germany)	42.9	3	3	157	83
177	State U. of New York, Binghamton	42.7	5	6	303	109
178	U. of Cincinnati	41.4	5	5	308	174
179	U. of Manitoba (Canada)	40.7	6	6	345	145
180	U. of Wroclaw (Poland)	40.3	6	8	347	116
181	U. Laval (Canada)	39.5	1	3	9	98
182	U. of Reading (U.K.)	39.4	3	5	184	—
183	Brookhaven National Laboratories	38.2	1	5	10	81
184	U. de Grenoble (France)	38.1	1	4	11	—
185	U. of Frankfurt (West Germany)	37.2	2	3	82	199
186	U. of Lund (Sweden)	36.8	4	5	285	—
187	Haifa U. (Israel)	36.7	3	6	200	107
188	U. of Queensland (Australia)	36.4	4	4	289	119
189	Memphis State U.	36.2	5	5	336	231
190	U. of Windsor (Canada)	36.1	7	8	405	—
191	City U. of New York	35.0	3	4	221	186
192	U. of Paris (France)	34.9	2	3	103	162
193	U.S. Department of Energy	34.5	3	4	227	212
194	U. of Limburg, Maastricht (Holland)	34.2	2	2	110	84
195	Open U. (U.K.)	33.5	3	5	234	212
196	U. of South Africa	33.5	2	3	113	—
197	Worcester Polytechnic Inst.	33.1	1	5	16	231
198	U. of Berne (Switzerland)	32.5	1	2	18	139
199	California State U.	32.3	4	4	313	212
200	Humboldt U., Berlin (West Germany)	32.2	2	2	123	89
201	Uppsala U. (Sweden)	32.0	1	1	19	—
202	Birkbeck College (U.K.)	31.9	3	3	248	—
203	Georgia Inst. of Technology	31.8	2	4	127	154
204	U. of Melbourne (Australia)	31.8	4	5	315	176
205	Macquarie U.	31.7	2	3	130	110
206	U. di Roma (Italy)	31.5	4	5	317	—

*continued*

TABLE A1 continued

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for <i>Annals</i>
207	Concordia U. (Canada)	31.5	3	5	251	249
208	Charles U., Prague (Czechoslovakia)	31.4	4	6	318	138
209	U. of Colorado	31.4	4	4	319	—
210	U. of Poona (India)	31.1	6	7	404	239
211	Kanazawa U. (Japan)	31.0	1	3	21	—
212	Kyushu U. (Japan)	30.9	5	7	363	—
213	U. Simon Bolivae (Venezuela)	30.7	2	3	140	—
214	U. of Buenos Aires (Argentina)	29.9	2	3	149	97
215	Syracuse U.	29.4	2	6	153	240
216	Johannes Gutenberg U. (West Germany)	28.9	1	2	27	—
217	National Tsing Hua U. (Taiwan)	28.8	3	4	271	221
218	U. of Central Florida	28.6	3	4	273	229
219	U. of Massachusetts, Amherst	28.4	3	4	274	115
220	U.S. Bureau of Labor Statistics	28.0	2	2	161	212
221	U. of Virginia	27.4	4	6	342	—
222	U. of Quebec (Canada)	27.3	3	3	290	—
223	U. of Umea (Sweden)	27.2	3	4	292	—
224	U. of Ottawa (Canada)	27.1	2	3	173	150
225	U. Nacional de Tucuman (Argentina)	27.0	1	1	35	106
226	U. of Tsukuba (Japan)	26.8	4	5	348	212
227	U. College, Cork (U.K.)	25.8	1	1	37	110
227	U. of Giessen (West Germany)	25.8	1	2	37	110
229	U. of Turku (Finland)	25.5	1	2	41	—
230	U. of Tasmania (Australia)	25.5	1	3	42	—
231	Portsmouth Polytechnic	25.4	1	1	43	—
232	U. of Salford (U.K.)	24.4	3	4	309	—
233	J.W. Goethe U. (West Germany)	24.3	3	3	310	139
234	Lucknow U. (India)	24.2	6	6	442	199
235	Katholieke U. (Holland)	24.1	2	3	202	—
236	Technical U. Aachen (West Germany)	24.0	3	4	314	176
237	U. of Gotenborg (Sweden)	23.8	2	2	207	—
238	St. Judes Childrens Research Hospital	23.6	3	3	316	—
239	Ben Gurion U. of the Negev (Israel)	23.5	2	3	216	—
240	Memorial U. of Newfoundland (Canada)	23.2	2	3	225	119
241	U. of Munich (West Germany)	22.7	3	3	328	132
242	Western Michigan U.	22.3	2	3	235	—
243	McMaster U. (Canada)	22.2	2	2	238	—
244	Tufts U.	22.1	2	2	239	—
245	Heriot-Watt U. (Scotland)	21.8	2	2	244	145
246	Winthrop College	21.1	1	2	69	170
247	U. of Nebraska	21.1	5	5	435	144
248	Claremont McKenna College	20.9	2	3	253	243
249	U. of Kaiserslautern (West Germany)	20.6	1	1	70	130



TABLE A1 continued

Rank	Affiliation	Standardized page count	Number of N citations		Productivity rank	Rank for <i>Annals</i>
250	U. of Athens (Greece)	20.6	3	4	343	—
251	Liverpool Polytechnic (U.K.)	20.2	1	4	72	—
252	Tilburg U. (Holland)	20.2	2	2	260	—
253	U. of Oulu (Finland)	20.1	2	4	261	—
254	Odense U. (Denmark)	19.9	1	2	73	—
255	Delft U. of Technology	19.6	1	1	74	—
256	U. Federal do Rio de Janeiro (Brazil)	19.5	2	2	268	—
257	Cleveland State U.	19.4	2	4	269	—
258	Gujarat U. (India)	19.3	2	4	270	—
259	Miami U.	19.2	4	5	416	—
260	National U. of Singapore	19.1	3	4	354	—
261	U. of East Carolina	18.9	2	3	275	—
262	U. of Leicester (U.K.)	18.7	1	1	80	—
263	AFRC Unit of Statistics (U.K.)	18.7	3	3	362	156
264	U. of Joensuu (Finland)	18.6	1	2	81	—
265	Victoria U. of Wellington (New Zealand)	18.5	2	2	284	—
266	U. of Bielefeld (West Germany)	18.3	3	3	369	187
267	Shiraz U. (Iran)	18.2	2	2	291	176
268	Technische U. Wien (Austria)	18.1	1	1	88	135
268	U. of Montana	18.1	1	1	88	135
270	U. of Technology (Austria)	18.0	1	3	90	—
271	Drexel U.	17.6	1	1	94	—
271	Los Alamos National Scientific Labs	17.6	3	4	383	—
271	National Bureau of Standards	17.6	1	1	94	—
271	Wilfred Laurier U. (Canada)	17.6	1	1	94	—
275	U. Trier (West Germany)	17.4	1	1	105	—
276	U. of New England (Australia)	17.2	1	2	107	—
277	Clemson U.	17.0	2	4	304	246
278	Louisiana State U.	16.6	4	4	437	—
279	Kagawa U. (Japan)	16.5	1	2	115	188
280	Lehigh U.	16.5	3	3	395	141
281	U. of Texas, El Paso	16.2	1	1	120	142
282	Illinois Inst. of Technology	16.0	1	2	124	—
283	U. of Mannheim (West Germany)	15.9	3	5	398	221
284	U. de Lille (France)	15.9	1	2	128	—
285	U. di Bologna (Italy)	15.9	3	3	399	—
286	Northeastern U.	15.8	1	3	131	221
287	Mount Lawley College (Australia)	15.7	1	1	132	—
288	U. of Connecticut	15.7	3	3	400	—
289	California Inst. of Tech.	15.5	1	1	136	145
290	Oklahoma State U.	15.2	2	3	326	—
291	U. of Utrecht (Holland)	15.2	1	2	145	—
292	U. of Groningen (Holland)	15.0	2	2	329	167
293	U. de Chile	14.8	1	1	151	—
294	U. of Texas, Arlington	14.7	2	2	332	—

continued

TABLE A1 continued

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for <i>Annals</i>
295	Yokohama National U. (Japan)	14.7	2	2	332	—
296	U. of New Mexico, Albuquerque	14.7	2	3	334	—
297	Dana Farber Cancer Institute	14.7	2	2	335	199
298	U. of Padua (Italy)	14.0	1	2	160	—
299	U. of Canterbury (New Zealand)	14.0	1	2	162	221
300	Indian Institute of Technology	13.9	3	3	417	—

TABLE A2. Ranking of institutions by publications in the *Annals of Statistics*

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for all
1	U. of California, Berkeley	731.6	17	54	4	3
2	Stanford U.	566.9	21	43	20	1
3	U. of Wisconsin, Madison	416.9	21	34	50	2
4	Cornell U.	380.4	15	33	29	9
5	Purdue U.	372.1	14	33	21	7
6	Rutgers U.	352.0	18	41	51	10
7	U. of Chicago	309.8	13	17	33	5
8	U. of North Carolina, Chapel Hill	247.9	11	24	40	8
9	U. of Illinois, Urbana	243.6	7	18	7	14
10	Australian National U.	239.4	7	20	8	4
11	Carnegie-Mellon U.	183.6	10	16	59	16
12	U. of Texas, Austin	172.0	8	13	43	17
13	U. of Minnesota	161.1	10	17	79	15
14	Florida State U.	154.1	15	25	143	35
15	AT&T Bell Laboratories	153.6	8	10	55	22
16	Iowa State U.	143.8	8	20	63	12
17	U. of Michigan, Ann Arbor	139.3	3	8	3	27
18	Hebrew U. (Israel)	131.8	9	11	92	20
19	Johns Hopkins U.	131.1	5	10	22	25
20	Pennsylvania State U.	130.6	4	9	11	23
21	U. of Washington	128.3	10	13	113	29
22	Harvard U.	113.4	6	7	56	11
23	U. Heidelberg (West Germany)	110.3	7	10	81	48
24	U. of California, Los Angeles	108.9	4	8	18	19
25	Columbia U.	101.6	6	13	69	50
26	Imperial College (U.K.)	100.5	5	8	48	6
27	Vrije U. (Holland)	95.5	1	5	1	61
28	CSIRO (Australia)	94.1	7	10	102	13
29	U. of California, San Diego	92.1	5	8	58	33
30	U. of Missouri, Rolla	89.9	4	13	41	42
31	Rice U.	87.0	5	6	67	82

TABLE A2 continued  
the *Annals of Statistics*

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for all
32	Ohio State U.	86.4	6	9	93	30
33	Colorado State U.	85.8	4	6	44	59
34	U. of Pittsburgh	84.6	6	11	95	18
35	U. of Maryland, College Park	78.7	3	7	23	45
36	U. College, London (U.K.)	78.4	3	5	24	54
37	Michigan State U.	78.3	8	11	145	46
38	U. of Copenhagen (Denmark)	76.8	5	7	87	28
39	U. of California, Davis	74.6	6	8	116	41
40	U. of Toronto (Canada)	74.6	5	6	91	57
41	U. Siegen (West Germany)	72.1	4	6	62	108
42	U. of Tokyo (Japan)	71.8	3	3	32	44
43	U. of Surrey (U.K.)	71.5	3	6	34	43
44	Aarhus U. (Denmark)	69.7	3	6	38	26
45	U. of Kentucky	69.0	3	5	39	84
46	McGill U. (Canada)	65.9	2	7	9	56
47	Montana State U.	61.9	4	6	85	101
48	U. of Freiburg (West Germany)	61.3	2	5	13	144
49	U. of Southern California, Los Angeles	60.6	4	5	88	73
50	Bowling Green State U.	60.0	3	3	49	67
51	Simon Fraser U. (Canada)	59.9	5	6	119	85
52	Dortmund U. (West Germany)	58.0	3	4	52	142
53	U. of Pennsylvania	58.0	7	7	166	66
54	U. of Waterloo (Canada)	57.9	8	9	184	24
55	Old Dominion U.	56.1	5	8	128	93
56	U. of Bath (U.K.)	56.1	2	3	17	55
57	U. of Iowa	53.7	3	9	64	38
58	Mathematical Centre, Amsterdam (Holland)	51.9	2	4	25	86
59	Princeton U.	51.8	4	5	106	64
60	M.I.T.	50.6	4	5	115	40
61	Dalhousie U.	50.5	3	4	70	119
62	Hitotsubashi U. (Japan)	50.3	1	6	2	83
63	U. of Calgary (Canada)	50.3	2	5	30	122
63	U. of Delaware	50.3	3	5	71	99
65	U. Libre de Bruxelles (Belgium)	49.4	2	3	31	139
66	Osaka U. (Japan)	48.6	4	5	117	92
67	Yale U.	45.8	4	5	125	75
68	U. of Sydney (Australia)	44.8	2	4	42	104
69	Leiden U. (Holland)	43.0	4	4	132	159
69	U. of Florida	43.0	4	5	132	31
71	U. of Alberta (Canada)	42.6	1	4	5	128
72	U. of York (U.K.)	42.6	2	4	45	78
73	Northwestern U.	41.8	2	5	46	98
74	Brown U.	41.5	3	4	96	163

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**TABLE A2** continued  
the *Annals of Statistics*

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for all
75	Hiroshima U. (Japan)	41.3	3	4	97	49
76	National Institute of Health	39.9	4	4	144	34
77	Limburgs U. Centrum (Belgium)	39.4	3	9	103	171
78	Indian Statistical Institute	38.9	6	7	191	21
79	State U. of New York, Buffalo	38.7	4	4	146	140
79	U. of Hamburg (West Germany)	38.7	2	5	52	153
81	Brookhaven National Laboratories	37.4	1	4	6	183
82	Indiana U.	35.7	4	5	159	58
83	U. Regensburg (West Germany)	34.8	2	2	66	176
84	U. of Limburg, Maastricht (Holland)	34.2	2	2	68	194
85	U. of Oslo (Norway)	33.8	3	3	127	151
86	Oregon State U.	33.8	5	7	190	87
87	North Carolina State U.	33.5	4	5	165	39
88	Szeged U. (Hungary)	32.7	1	2	10	107
89	Humboldt U., Berlin (West Germany)	32.2	2	2	76	200
89	U. of Illinois, Chicago	32.2	4	5	168	143
91	State U. of New York, Stony Brook	32.2	2	4	77	158
91	U. of St. Andrews	32.2	2	5	77	168
93	Keio U. (Japan)	32.1	2	2	80	172
94	U. Osnabruck (West Germany)	31.0	1	1	12	111
95	Carleton U. (Canada)	31.0	3	4	142	130
95	U.S. Bureau of the Census	31.0	2	2	86	62
97	U. of Buenos Aires (Argentina)	29.9	2	3	90	214
98	U. Laval (Canada)	29.7	1	2	14	181
99	Tokyo Inst. of Technology (Japan)	28.5	1	2	15	103
100	U. of Liverpool (U.K.)	28.4	1	2	16	63
101	U. of Cambridge (U.K.)	28.0	4	4	187	74
102	New York U.	27.1	3	3	156	94
102	U. de Montreal (Canada)	27.1	2	2	100	91
102	U. of Rochester	27.1	2	3	100	68
105	U. of California, Santa Barbara	27.1	3	3	158	134
106	U. Nacional de Tucuman (Argentina)	27.0	1	1	19	225
107	Haifa U. (Israel)	26.7	3	4	160	187
108	Educational Testing Service	26.4	3	3	161	115
109	State U. of New York, Binghamton	26.2	3	3	162	177
110	Macquarie U.	25.8	2	2	112	205
110	U. College, Cork (U.K.)	25.8	1	1	26	227
110	U. of Giessen (West Germany)	25.8	1	2	26	227
110	U. of Hull (U.K.)	25.8	1	3	26	76
114	Virginia Polytechnic Inst.	25.4	2	2	114	100
115	U. of Massachusetts, Amherst	24.5	3	3	167	219
116	U. of Wroclaw (Poland)	24.5	4	4	200	180
117	Tel-Aviv U. (Israel)	23.7	4	5	204	125

**TABLE A2** continued  
the *Annals of Statistics*

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for all
118	Technion-Israel Inst. of Technology	23.4	1	3	35	155
119	Agricultural U., Copenhagen (Denmark)	23.2	1	1	36	160
119	Memorial U. of Newfoundland (Canada)	23.2	2	3	123	240
119	U. of Houston	23.2	2	2	123	126
119	U. of Queensland (Australia)	23.2	1	1	36	188
123	U. of Guelph (Canada)	23.2	3	3	180	166
124	Polish Academy of Sciences (Poland)	22.9	3	3	181	161
125	Queens U. (Canada)	22.8	4	4	206	114
126	Kansas State U.	22.8	4	5	207	90
127	Texas Tech U.	21.3	2	2	134	133
128	U. of British Columbia (Canada)	21.1	4	5	213	70
129	U. of Western Australia	20.7	3	3	188	145
130	Trinity College (Ireland)	20.6	3	3	189	124
130	U. of Kaiserslautern (West Germany)	20.6	1	1	47	249
132	U. of Kansas	19.3	1	1	52	89
132	U. of Munich (West Germany)	19.3	2	2	146	241
134	U. of Arizona	18.7	1	2	57	112
135	Technische U. Wien (Austria)	18.1	1	1	60	268
135	U. of Bayreuth (West Germany)	18.1	2	2	156	149
135	U. of Montana	18.1	1	1	60	268
138	Charles U., Prague (Czechoslovakia)	17.6	1	2	65	208
139	J.W. Goethe U. (West Germany)	16.8	1	1	71	233
139	U. of Berne (Switzerland)	16.8	1	1	71	198
141	Lehigh U.	16.5	3	3	210	280
142	U. of Texas, El Paso	16.2	1	1	74	281
143	Flinders U. of South Australia	16.2	1	2	75	120
144	U. of Nebraska	16.1	3	3	212	247
145	California Inst. of Tech.	15.5	1	1	82	289
145	Heriot-Watt U. (Scotland)	15.5	1	1	82	245
145	U. of Manitoba (Canada)	15.5	2	2	170	179
148	Southern Methodist U.	15.5	1	3	84	60
149	U. of Sheffield (U.K.)	15.1	1	1	89	118
150	U. of Ottawa (Canada)	14.4	1	2	94	224
151	U. of California, Riverside	14.2	2	2	185	129
152	La Trobe U. (Australia)	13.6	1	2	98	97
153	U.S. Environmental Protection Agency	13.5	1	1	99	310
154	Eindhoven U. of Technology (Holland)	13.0	1	1	104	313
154	Georgia Inst. of Technology	13.0	1	1	104	203
156	AFRC Unit of Statistics (U.K.)	12.9	1	1	107	263
156	Royal Holloway College (U.K.)	12.9	1	1	107	116

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**TABLE A2** continued  
the *Annals of Statistics*

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for all
156	Technical U., Munich (West Germany)	12.9	1	1	107	314
156	U. of Texas, Dallas	12.9	1	1	107	314
156	U. Paul-Sabatier (France)	12.9	1	1	107	131
161	U. of Auckland (New Zealand)	12.9	2	2	199	113
162	U. of Paris (France)	12.0	1	1	118	192
163	U. of Newcastle (Australia)	11.9	1	1	120	331
164	U. of Bonn (West (Germany)	11.9	2	2	202	308
165	U. of London (U.K.)	11.9	2	2	203	136
166	George Washington U.	11.8	3	3	232	47
167	Imperial Cancer Research Center (U.K.)	11.6	1	1	121	339
167	U. of Groningen (Holland)	11.6	1	1	121	292
169	Baylor U.	11.5	3	3	237	342
170	Winthrop College	11.3	1	1	126	246
171	Academia Sinica (China)	11.2	2	2	208	162
172	Temple U.	11.2	2	2	209	105
173	U. of Sri Jayawardanepura (India)	11.1	1	2	129	350
174	Twente U. of Technology (Holland)	11.0	1	1	130	352
174	U. of Cincinnati	11.0	1	1	130	178
176	Kumamoto U. (Japan)	10.3	1	1	135	358
176	Malaspina College	10.3	1	1	135	358
176	Shiraz U. (Iran)	10.3	1	1	135	267
176	Technical U. Aachen (West Germany)	10.3	2	2	214	236
176	U. of Amsterdam (Holland)	10.3	1	1	135	96
176	U. of Birmingham (U.K.)	10.3	1	1	135	51
176	U. of Melbourne (Australia)	10.3	1	1	135	204
176	U. of Stockholm (Sweden)	10.3	1	1	135	157
176	U. Zurich (Switzerland)	10.3	2	2	214	358
185	Washington State U.	10.1	2	2	223	123
186	City U. of New York	9.7	2	2	224	191
187	U. of Bielefeld (West Germany)	9.5	1	1	148	266
188	Boston U.	9.0	1	1	149	307
188	Fairleigh Dickinson U.	9.0	1	1	149	372
188	Kagawa U. (Japan)	9.0	1	1	149	279
188	Katholieke U. Leuven (Belgium)	9.0	1	1	149	132
188	Technical U. of Lodz (Poland)	9.0	1	1	149	372
188	U. of Hagen (West Germany)	9.0	1	1	149	372
188	U. of Leeds (U.K.)	9.0	2	2	225	88
188	Westfälische Wilhelms U. (West Germany)	9.0	1	1	149	361
196	Bucknell U.	8.6	1	1	163	379
197	Duke U.	8.4	1	1	164	148
198	U. of Wisconsin, Milwaukee	8.0	1	2	169	146
199	Dana Farber Cancer Institute	7.7	1	1	170	297
199	Lucknow U. (India)	7.7	1	1	170	234

**TABLE A2** continued  
the *Annals of Statistics*

Rank	Affiliation	Standardized page count	N	Number of citations	Productivity rank	Rank for all
199	Mainz U.	7.7	1	1	170	390
199	Rhodes U.	7.7	1	1	170	349
199	Tohoku U. (Japan)	7.7	1	1	170	390
199	U. of Frankfurt (West Germany)	7.7	1	1	170	185
199	U. of Northern Illinois	7.7	1	1	170	346
199	U. of Oxford (U.K.)	7.7	1	1	170	80
199	U. of South Carolina	7.7	1	1	170	77

**TABLE A3.** The 50 most prolific authors and their institution(s)

Rank	Author	Institution(s)	Pages	Number of citations	Rank for <i>Annals</i>
1	Hall, P.	Australian National U.	340.3	33	1
2	Efron, B.	Stanford U.	216.9	11	17
3	Wu, C.F.J.	U. of Wisconsin, Madison	184.7	17	8
4	Bickel, P.J.	U. of California, Berkeley	155.3	12	5
5	Goodman, L.A.	U. of Chicago/[Berkeley]	146.3	4	15
6	Li, K.C.	Purdue U./U.C.L.A.	142.0	10	2
7	Barndorff-Nielsen	Aarhus U. (Denmark)	139.3	11	54
8	Bhansali, R.J.	U. of Liverpool (U.K.)	136.7	7	114
9	Kallenberg, W.C.M.	Twente U./Vrije U. (Holland)	134.9	8	7
10	Freedman, D.A.	U. of California, Berkeley	134.0	12	3
11	Silverman, B.W.	U. of Bath/U. of Cambridge (U.K.)	132.0	7	43
12	Sen, P.K.	U. of North Carolina, Chapel Hill	129.9	16	63
13	Hwang, J.T.	Cornell U.	128.6	10	11
14	Beran, R.	U. of California, Berkeley	125.0	7	4
15	McCullagh, P.	Imperial College (U.K.)/U. of Chicago	122.7	9	186
16	Wei, L.J.	George Washington U./Harvard U./ N.I.H./U. of South Carolina [U. of Michigan]	122.4	18	
17	Butler, R.W.	U. of Texas, Austin/ [U. of Michigan]	114.8	6	75
18	Reinsel, G.C.	U. of Wisconsin, Madison	114.7	9	
19	Anderson, T.W.	Stanford U.	112.0	9	20
20	Atkinson, A.C.	Imperial College (U.K.)	110.5	8	
21	Woodroffe, M.	U. of Michigan, Ann Arbor	110.3	7	13
22	Marden, J.I.	U. of Illinois, Urbana	108.9	7	9
23	Diaconis, P.	Stanford U.	108.2	9	10
24	Stone, C.J.	U. of California, Berkeley/U.C.L.A.	106.9	6	6

continued

TABLE A3 continued

Rank	Author	Institution(s)	Pages	Number of citations	Rank for <i>Annals</i>
25	Brown, L.D.	Cornell U./Rutgers U.	106.6	13	12
26	Lindsay, B.G.	Pennsylvania State U.	106.6	7	14
27	Berger, J.O.	Purdue U.	106.2	7	18
28	Rukhin, A.L.	Purdue U./Rutgers U.	105.3	8	25
29	Titterington, D.M.	U. of Glasgow (Scotland)	104.6	12	
30	Taniguchi, M.	Hiroshima U. (Japan)	104.4	8	138
31	Goldstein, M.	U. of Hull (U.K.)	103.2	10	129
32	Cox, D.R.	Imperial College (U.K.)	102.8	13	
33	Cook, R.D.	U. of Minnesota	102.6	10	
34	Carroll, R.J.	U. of North Carolina, Chapel Hill	102.5	14	79
35	Wahba, G.	U. of Wisconsin, Madison	101.5	5	45
36	Pettitt, A.N.	Loughborough U. (U.K.)/ U. of Queensland (Australia)	100.0	10	
37	Ghosh, M.	Indian Statistical Institute/Iowa State U./U. of Florida	99.3	18	93
38	Siegmund, D.	Stanford U.	98.6	6	19
39	Smith, R.L.	Imperial College (U.K.)/ [U. of Surrey] (U.K.)	96.8	7	128
40	Hannan, E.J.	Australian National U.	96.4	12	85
41	Kariya, T.	Hitotsubashi U. (Japan)/ U. of Pittsburgh	96.2	13	24
42	Mason, D.M.	U. of Delaware/U. of Kentucky/ U. of Wisconsin, Madison	95.4	8	16
43	Ruppert, D.	U. of North Carolina, Chapel Hill	88.4	11	40
44	Fisher, N.I.	CSIRO (Australia)	85.9	9	
45	Tsay, R.S.	Carnegie-Mellon U.	84.8	7	167
46	Fuller, W.A.	Iowa State U.	84.1	12	49
47	Casella, G.	Cornell U./Rutgers U.	83.8	7	44
48	Aitchison, J.	U. of Hong Kong	83.7	5	
49	Shafer, G.	U. of Kansas	82.2	4	186
50	Dawid, A.P.	U. College, London (U.K.)	82.0	5	27

TABLE A4. The 50 most prolific authors and their institutions for the *Annals of Statistics*

Rank	Author	Institution(s)	Pages	Number of citations	Rank for all
1	Hall, P.	Australian National U.	151.6	11	1
2	Li, K.C.	Purdue U./U.C.L.A.	138.7	9	6
3	Freedman, D.A.	U. of California, Berkeley	128.2	11	10
4	Beran, R.	U. of California, Berkeley	125.0	7	14
5	Bickel, P.J.	U. of California, Berkeley	124.9	8	4
6	Stone, C.J.	U. of California, Berkeley/U.C.L.A.	106.9	6	24
7	Kallenberg, W.C.M.	Twente U./Vrije U. (Holland)	106.4	6	9



TABLE A4 continued

Rank	Author	Institution(s)	Pages	Number of citations	Rank for all
8	Wu, C.F.J.	U. of Wisconsin, Madison	103.5	8	3
9	Marden, J.I.	U. of Illinois, Urbana	102.3	6	22
10	Diaconis, P.	Stanford U.	99.3	8	23
11	Hwang, J.T.	Cornell U.	97.6	7	13
12	Brown, L.D.	Cornell U./Rutgers U.	97.6	11	25
13	Woodrooffe, M.	U. of Michigan, Ann Arbor	86.4	5	21
14	Lindsay, B.G.	Pennsylvania State U.	81.3	5	26
15	Goodman, L.A.	U. of Chicago/[Berkeley]	77.4	1	5
16	Mason, D.M.	U. of Delaware/Kentucky/Madison	72.7	6	42
17	Efron, B.	Stanford U.	70.3	4	2
18	Berger, J.O.	Purdue U.	69.6	4	27
19	Siegmund, D.	Stanford U.	67.3	3	38
20	Anderson, T.W.	Stanford U.	67.1	3	19
21	Portnoy, S.	U. of Illinois, Urbana	66.4	4	54
22	Huber, P.J.	Harvard U.	63.2	2	56
23	Rieder, H.	U. of Bayreuth/Freiburg U. (West Germany)/U. of California, Berkeley	62.4	4	82
24	Kariya, T.	Hitotsubashi U. (Japan)/ U. of Pittsburgh	61.9	7	41
25	Rukhin, A.L.	Purdue U./Rutgers U.	61.9	4	28
26	Devroye, L.P.	McGill U. (Canada)	61.6	6	63
27	Dawid, A.P.	U. College, London (U.K.)	60.3	3	50
28	Vardi, Y.	AT&T Bell Laboratories	58.0	3	95
29	Wong, W.H.	U. of Chicago	57.4	3	65
30	Kiefer, J.	U. of California, Berkeley	57.2	4	104
31	Pollak, M.	Hebrew U. (Israel)	56.5	3	67
32	Cohen, A.	Rutgers U.	55.1	8	55
33	Naiman, D.Q.	Johns Hopkins U.	52.9	3	119
34	Lambert, D.	Carnegie-Mellon U.	52.2	4	51
35	Wright, F.T.	U. of Missouri, Rolla	51.1	8	69
36	Cheng, C.S.	U. of California, Berkeley	50.4	6	58
37	Speed, T.P.	CSIRO (Australia)/U. of Western Australia	49.7	5	126
38	Berger, J.	Bowling Green State U.	49.7	1	138
39	Wynn, H.P.	Imperial College (U.K.)	49.0	3	84
40	Ruppert, D.	U. of North Carolina, Chapel Hill	48.4	5	43
41	Perlman, M.D.	U. of Chicago/U. of Washington	48.1	3	86
42	Leurgans, S.	Ohio State U./U. of Wisconsin, Madison	47.7	4	93
43	Silverman, B.W.	U. of Bath/U. of Cambridge (U.K.)	47.3	3	11
44	Casella, G.	Cornell U./Rutgers U.	46.5	3	47
45	Klonias, V.K.	Johns Hopkins U.	46.4	2	151
46	Wahba, G.	U. of Wisconsin, Madison	46.4	2	35
47	Martinsek, A.T.	U. of Illinois, Urbana	46.4	3	121
48	Marron, J.S.	U. of North Carolina, Chapel Hill	45.8	3	145
49	Fuller, W.A.	Iowa State U.	45.5	6	46
50	Gleser, L.J.	Purdue U.	44.5	3	68

TABLE A5. Percentage breakdown of total publications by journal and by country

Journal	Country								Journal total
	Australia	Canada	Germany	India	Japan	Other	U.K.	U.S.A.	
<i>Annals of Statistics</i>	1.4	1.6	1.8	0.2	0.9	3.5	1.8	23.2	34.4
<i>Biometrika</i>	1.2	0.9	0.2	0.2	0.7	2.3	3.1	5.6	14.1
<i>Econometric Theory</i>	0.4	0.1	0.0	0.0	0.3	0.1	0.4	0.4	1.7
<i>International Statistical Review</i>	0.3	0.2	0.1	0.0	0.0	1.3	0.7	0.9	3.5
<i>Journal of the American Statistical Association</i>	0.4	1.2	0.2	0.2	0.4	1.8	0.9	17.6	22.5
<i>Journal of Multivariate Analysis</i>	0.4	0.2	0.5	0.1	0.2	0.9	0.1	2.6	5.0
<i>Journal of Time Series Analysis</i>	0.5	0.1	0.3	0.0	0.4	1.3	1.2	1.1	4.9
<i>Journal of the Royal Statistical Society (Series B)</i>	1.3	0.4	0.1	0.1	0.2	0.9	4.7	2.6	10.3
<i>Sankhya (Series A)</i>	0.1	0.3	0.2	0.7	0.1	0.4	0.1	1.8	3.7
Country total	6.0	5.0	3.2	1.4	3.1	12.6	13.0	55.7	100.0