

Global ranking of accounting programmes and the elite effect in accounting research

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Abstract

We provide a global ranking of accounting research and examine the elite degree and elite affiliation effect. Based on 24 accounting journals during the period 1991–2005, the top 5 most productive countries in accounting research are in the following order: the USA, the UK, Australia, Canada and Hong Kong. We find a significant elite degree effect, indicating that authors who graduated from elite accounting programmes have a disproportionate share of publications in top-notch journals. The same conclusion is also supported by the elite affiliation effect in which leading accounting journals have higher concentration of authors who are affiliated with elite institutions.

Key words: Accounting research; Institutional ranking; Elite effect

JEL classification: G00, J40, J62

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1. Introduction

Love them or hate them, college rankings appeal to a culture that worships consumer choice and is seduced by prestige value. (*Duke Magazine*, September–October 2001, p. 3)

Each year popular publications, such as the *U.S. News & World Report*, *Business Week*, *Forbes*, the *Financial Times*, *Money* and *Fiske Guide to Colleges*, rank colleges and programmes. Academic institutions do not hesitate to use the ranking to signal their quality if they are ranked high. For example, in its website, the University of Texas at Austin claims that its PhD Program in Accounting was ranked first in the nation according to the November 2003 issue of the *Public Accounting Report*. It continues, ‘We believe this ranking reflects the Program’s

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diversity and excellence across all areas of accounting education and scholarship'.¹ The ranking competition actually goes beyond the USA, and has attracted international attention. Recently, Shanghai Jiao Tong University of China has provided academic ranking of the top 500 academic institutions in the world.² In the UK, the Manchester School of Accounting and Finance at the University of Manchester states in its website that 'The School is one of only two accounting and finance schools in the UK rated as 6* by the RAE (i.e. with RAE 5* rating for two consecutive periods)'.³ Besides signalling programme quality, institutional ranking also serves several other purposes, such as attracting research funding, donations and recruitment of faculty and students.

Although different ranking agencies use different instruments to derive the ranking, faculty research productivity always plays a significant role in the determination of overall academic reputation. There are ample studies in research productivity in many business disciplines. For example, Hasselback and Reinstein (1995), Brown (1996) and Stammerjohan and Hall (2002) examine rankings in accounting; Niemi (1987), Alexander and Mabry (1994) and Borokhovich *et al.* (1995) in finance; and Conboy *et al.* (1995), Scott and Mitias (1996) and Collins *et al.* (2000) in economics. However, all of these studies focus their rankings on North American institutions. In contrast, there are a few studies confined to the European and Asian regions. Some of these examples are Chan *et al.* (2005) in Asian accounting and Chan *et al.* (2006) in European accounting. However, studies in a global context are rather limited. Chan *et al.* (2002, 2007), who study the global ranking of finance programmes are the exceptions. The interest in global ranking is not without precedence (e.g. the *Financial Times* publishes its world rankings of the top 100 MBA programmes annually) and the globalization of the world's economies stimulates a stronger interest in a worldwide ranking for academic institutions.

The present study has three objectives. First, we rank the production of accounting literature by countries. Second, we rank the production of accounting literature by academic institutions, which allows an institution to determine its academic rank in the world during the study period. Unlike previous studies in the literature, our sample extends to a larger number of accounting journals and a considerably longer period. The longer sampling period of 15 years also offers an opportunity to examine an institution's improvement in research productivity over time. Third, we examine authorship concentration by analysing the elite degree and elite affiliation effect of accounting research.

¹ See <http://www.mcombs.utexas.edu/Department/accounting/phd/context.asp>.

² See <http://ed.sjtu.edu.cn/ranking/htm>.

³ See <http://www.mbs.ac.uk/aboutus/ranking.aspx>. The British rating system consists of 1, 2, 3, 4, 5 and 5*, with 5* being the highest rating.

The results of our research offer the following conclusions. First, based on 24 accounting journals, the top 5 most productive countries are in the following order: the USA, the UK, Australia, Canada and Hong Kong.⁴ Second, the University of Manchester, the University of New South Wales, the University of Pennsylvania, the University of Michigan and the University of Texas at Austin take the top 5 spots among a total of 1087 ranked academic institutions. The share of the US institutions among the top 100 ranks is overwhelming: 60 out of the top 100 institutions are US institutions. By comparing the research performance of the 1991–1997 and 1998–2005 subperiods, we find an impressive improvement in many Asia–Pacific academic institutions. For example, the Hong Kong University of Science and Technology improved its rank from 93rd during the 1991–1997 subperiod to 20th during the 1998–2005 subperiod. However, when only the top 5 journals are used in the ranking, both the University of Manchester and the University of New South Wales drop out of the top 5; replaced by the University of Chicago and Stanford University. Third, we find a significant elite degree effect. Accounting authors who graduate from elite accounting programmes tend to produce disproportionately more accounting research in top-ranked journals than authors who graduate from non-elite programmes. Fourth, there exists an extreme elite affiliation effect such that publications in top-ranked journals are dominated by authors affiliated with elite accounting programmes.

The remainder of the paper is organized as follows. Section 2 describes our database and methodology. Section 3 presents our findings of ranking by country and global rankings of institutions, as well as the changes in research productivity over time. Section 4 reports elite degree and elite affiliation effect of accounting research. Finally, Section 5 contains the conclusion.

2. Data and methodology

We manually collected all data from hard or electronic copies from a set of 24 leading accounting journals for a period of 15 years from 1991 to 2005. The data include authors' names, their affiliations, and the country of origin of the institutions. The set of 24 accounting journals are *Abacus*; *Accounting, Auditing and Accountability Journal*; *Accounting and Business Research*; *Accounting and Finance*; *Accounting Review*; *Accounting, Organizations and Society*; *Auditing: A Journal of Practice and Theory*; *Behavioral Research in Accounting*; *British Accounting Review*; *Contemporary Accounting Research*; *European Accounting Review*; *Issues in Accounting Education*; *Journal of Accounting and Economics*; *Journal of Accounting and Public Policy*; *Journal of Accounting Literature*; *Journal of Accounting Research*; *Journal of Accounting, Auditing and Finance*;

⁴ Hong Kong is a special administrative region of China. Because its political system, accounting standard and rule of law are significantly different from China, we treat it as a de facto country for the purpose of the present study.

Journal of Management Accounting Research; Journal of the American Taxation Association; Journal of Business Finance and Accounting; Management Accounting Research; National Tax Journal; Review of Accounting Studies; and Review of Quantitative Finance and Accounting.

Several criteria are used for the journal selection. First, the majority of these 24 journals have received a quality rating of at least 1.00 according to Hasselback and Reinstein (1995) and Hasselback *et al.* (2003).⁵ Second, all journals included in the present study have existed for at least 15 years except for the *Review of Accounting Studies*, which had its inauguration issue in 1996. This criterion is imposed to measure an institution's progress over time. Despite the fact that the *Review of Accounting Studies* does not have as long a publishing history, it is still included in our dataset because it is generally regarded as one of the top accounting journals. Third, these 24 journals include journals with a general scope (e.g. *Accounting Review*) as well as specialized journals, such as the *National Tax Journal*, *Auditing: A Journal of Practice and Theory* and *Behavioral Research in Accounting*. The inclusion of journals with general scope and journals with specialty takes into account the research productivity of faculty with respect to their different research interests and expertise. Finally, although we have 13 US-edited journals, we also include 11 journals that are edited outside the USA to reduce any perceived US bias. However, undeniably, the US-edited journals still constitute the most influential (elite) accounting journals by European and Asian authors.⁶

Three potential caveats exist for this database. First, not all authors belong to accounting faculty. Although accounting faculty members write a vast majority of the articles published in these journals, authors from other disciplines, such as finance, economics and statistics, also contribute to the accounting literature. However, because often authors' departmental affiliations are not specified in these journal articles, it is impractical to classify authors based on their disciplines. Most importantly, there is no reliable source to identify the departmental affiliations of all authors during the entire 15 year period. Therefore, we may overstate the ranks of certain accounting departments. Nevertheless, we believe that the impact of this bias, if any, is negligible because publications of accounting articles by authors in other disciplines within the same institution also enhance the reputation of the accounting programme in that same institution. Second, some journals, such as the *Journal of Accounting, Auditing and Finance*,

⁵ We do not include the *Journal of Taxation* despite that it has a quality rating of 1.15 in Hasselback *et al.* (2003) because there are many articles with missing authors. We also do not include journals that primarily publish articles other than accounting articles although they are ranked high in Hasselback *et al.* (2003). Examples of these journals include the *Journal of Finance and Management Science*. We include the *Review of Quantitative Finance and Accounting* because it has been ranked in the top 10 in Brown (2003).

⁶ For example, see Brinn *et al.* (1996).

Review of Quantitative Finance and Accounting, *Accounting and Finance* and the *Journal of Business Finance and Accounting*, publish related but non-accounting papers (e.g. finance in these cases) as well. However, many of these papers can be related to accounting research and there is no objective way to clearly define the field of many of these papers. Third, although all 24 journals are considered major accounting journals, their quality is by no means identical. Hence, aggregating all journals equally results in bias against elite journals. However, because a commonly used benchmark to account for journal quality, the Social Science Citation Index, is not available for many of our accounting journals, adjusting journal quality becomes a difficult task. To mitigate this issue, we also rank institutions based on the top 5 accounting journals only (i.e. *Accounting, Organizations and Society*, *Accounting Review*, *Journal of Accounting Research*, *Journal of Accounting and Economics* and *Contemporary Accounting Research*). However, the use of this limited dataset creates a different kind of bias; that is, assigning zero weight to all other journals. Nonetheless, the rank correlation between the 24 journal dataset and the top 5 journal dataset for institutional ranking is very high, suggesting a similarity of rankings based on these 2 datasets.⁷

To measure research productivity, we made some adjustments to the raw data. First, we calculate the weighted number of articles published per author by dividing the article with the number of authors for multi-authored papers. Second, when an author has more than one affiliation, his or her contribution is divided equally among the stated institutions. For example, if an article has 3 co-authors (Professors A, B and C) with the first author having 2 affiliations (X and Y) and the second and the third author each has one affiliation (W and Z), then institutions X and Y each receives 1/6 credit for the article and institutions W and Z each receives 1/3 credit for the article. Third, we proofread the manually collected data for possible errors. Additional verifications by studying university catalogues and websites are also conducted in case of doubt. We find that some authors or institutions use slightly different names over the 15 year sample period. For instance, we find that several academic institutions have changed their names and we convert all the old names to the new names in such cases. An example is replacing Memphis State University with the University of Memphis. They represent the same institution with a name change occurring in the mid-1990s.

For the period 1991–2005, all 24 journals contain 8327 articles written by 6791 authors from 1087 academic institutions and 376 non-academic institutions.⁸ In the present study, we include articles published by academic institutions and authors only. Accordingly, the academic authors publish a total of 7869.45 articles (or 94.5 per cent of total articles).

⁷ There are 432 academic institutions with authors that published in top 5 accounting journals. Among these 432 institutions, the correlation coefficient between weighted number of articles in 24 journals and top 5 journals is 0.8061.

⁸ We do not include ‘Discussions’, ‘Comments’ and ‘Replies’.

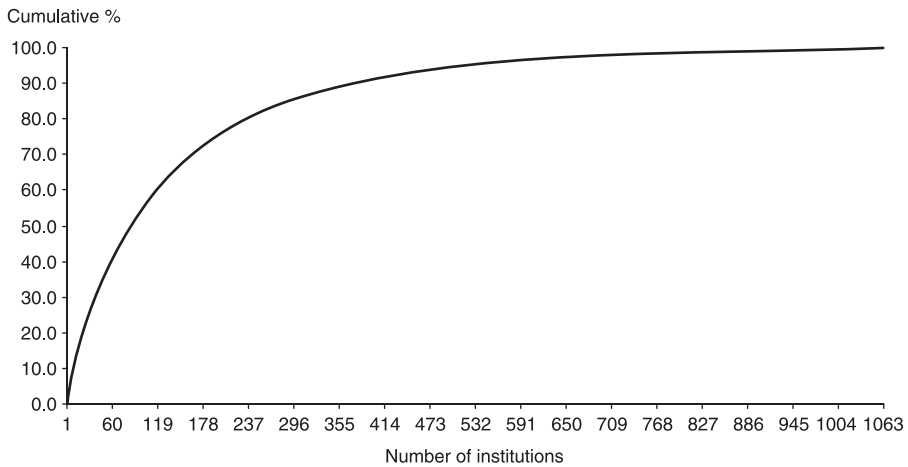


Figure 1 Cumulative percentage of weighted number of articles appeared in 24 leading accounting journals for 1087 academic institutions (1991–2005).

We plot a cumulative percentage of weighted articles written by academic authors against the total number of academic institutions in Figure 1. The distribution is highly skewed. The top 5, top 10, top 25 and top 50 academic institutions account for 5.9, 10.7, 22.0 and 36.4 per cent of the total number of weighted articles, respectively. Therefore, less than 5 per cent (50/1087 or 4.6 per cent) of the academic institutions account for more than 36 per cent of the total production in accounting literature. We also compute the Gini coefficient of accounting publishing; the equation and results are reported in Appendix I. The Gini coefficient measures the degree of concentration (inequality) in a distribution, with 0 being no concentration (perfect equality) and 1 being total concentration (perfect inequality). For all 1087 institutions in 24 accounting journals, the Gini coefficient is 0.7240, which indicates a high degree of concentration in accounting research (i.e. a steeper Lorenz curve). If we limit the analysis to top 5 journals only, the Gini coefficient is 0.7099 for 432 academic institutions, which is slightly smaller than the Gini coefficient with 24 accounting journals. In short, the degree of concentration in accounting research is very high no matter what journal list we use.

Table 1 reports the summary statistics of research productivity by academic institutions and by academic authors. We report both the weighted number and the unweighted number of articles published (each institution and author receive one credit for co-authored articles). In Panel A, the mean values of the weighted number and the unweighted number of articles per academic institution are 7.24 and 14.42, respectively. Because the median values are 1.50 weighted articles and 3 unweighted articles, the distribution is highly skewed. The skewness and kurtosis statistics are all positive and large for both research productivity measures.

Panel B of Table 1 summarizes research productivity by authors affiliated with academic institutions. If an author has both academic and non-academic affiliations, we treat the author as an academic author. From Panel B, a total of 6218 academic authors contribute to articles in these 24 journals. An average author produced 1.27 weighted articles, or 2.48 unweighted articles during the period 1991–2005. The median value of weighted articles is 0.67, and the same statistic for the unweighted articles is 1.0. As both median values are smaller than the means, distribution is again skewed, although the skewness is smaller than that is reported in Panel A based on institutions. Similar to Panel A, both research productivity measures also show serious skewness and kurtosis.

Table 1
Summary statistics of the research productivity in a set of 24 leading accounting journals from 1991 to 2005

Panel A: By academic institutions

	Weighted number of articles	Unweighted number of articles
Mean	7.24	14.42
Median	1.5	3
Mode	0.5	1
Standard deviation	13.58	27.21
Coefficient of variation (%)	187.57	188.77
Kurtosis	13.40	13.89
Skewness	3.34	3.39
Range	113.34	228
Minimum	0.13	1
Maximum	113.47	229
Sum	7869.45	15 670
Number of institutions	1087	1087

Panel B: By academic authors

	Weighted number of articles	Unweighted number of articles
Mean	1.27	2.48
Median	0.67	1
Mode	0.5	1
Standard deviation	1.52	2.85
Coefficient of variation (%)	119.69	114.92
Kurtosis	13.11	13.52
Skewness	3.14	3.24
Range	15.63	26
Minimum	0.2	1
Maximum	15.83	27
Sum	7880.83	15 411
Number of authors	6218	6218

Table 1 (continued)

Panel C: Number of unweighted publications for all authors in academic institutions

Number of unweighted publications (1991–2005)	Number of authors	Percentage of total	Cumulative percentage
1 publication	3532	56.80	56.80
2 publications	1032	16.60	73.40
3 publications	483	7.77	81.17
4 publications	320	5.15	86.31
5 publications	211	3.39	89.71
6 publications	150	2.41	92.12
7 publications	114	1.83	93.95
8 publications	82	1.32	95.27
9 publications	68	1.09	96.37
10 publications	53	0.85	97.22
11 publications	34	0.55	97.76
12 publications	29	0.47	98.23
13 publications	20	0.32	98.55
14 publications	21	0.34	98.89
15 publications	13	0.21	99.10
16 or more publications	56	0.90	100
Total	6218	100.00	

This table contains some preliminary summary statistics of the research productivity based on a set of 24 accounting journals. They are: *Abacus*; *Accounting, Auditing and Accountability Journal*; *Accounting and Business Research*; *Accounting and Finance*; *Accounting Review*; *Accounting, Organizations and Society*; *Auditing: A Journal of Practice and Theory*; *Behavioral Research in Accounting*; *British Accounting Review*; *Contemporary Accounting Research*; *European Accounting Review*; *Issues in Accounting Education*; *Journal of Accounting and Economics*; *Journal of Accounting and Public Policy*; *Journal of Accounting Literature*; *Journal of Accounting Research*; *Journal of Accounting, Auditing and Finance*; *Journal of Management Accounting Research*; *Journal of the American Taxation Association*; *Journal of Business Finance and Accounting*; *Management Accounting Research*; *National Tax Journal*; *Review of Accounting Studies*; and *Review of Quantitative Finance and Accounting*. The ‘sum’ statistics in Panel A and Panel B have small differences because: (i) some articles have missing authors or institutional information; and (ii) some authors might have more than one affiliation. Panel C suggests that there are only approximately 10 per cent of the academic authors who have published at least 5 articles (unweighted) or more.

In Panel C we report the frequency of publications for individual authors. Among the 6218 academic authors, 3532 (56.8 per cent of total) have published only 1 unweighted article in the 24 accounting journals during the 15 year period. When we add to that percentage those who have published only 2 unweighted articles (16.6 per cent), we find that almost three-quarters (73.4 per cent) of all authors have published 2 articles or fewer during the 15 year period. Therefore, publishing 5 or more articles in 15 years places a researcher close to the top 10 percentile of the productivity distribution. Finally, less than 1 per cent of authors publish more than 15 unweighted articles (i.e. 1 per year).

3. Ranking by countries and institutions

In Table 2, we report the ranking in aggregate accounting literature productivity by countries. Also reported are the number of institutions in each country that contributed to the literature, the mean productivity of each institution, the standard deviation, and the coefficient of variation. We do not rank countries by their respective mean productivity per institution because such a measure could be misleading. Consider a hypothetical country that has 20 academic institutions. Among these 20 academic institutions, only 1 contributes 5 weighted articles to the accounting literature, whereas the other 19 contribute nothing; therefore, they are not ranked at all. If we use the mean productivity to rank countries, this hypothetical country could have been ranked high. However, this is misleading because the 5 weighted articles is the mean productivity of a single institution, not the average of all 20 institutions. The USA dominates accounting literature production, with a share of 58 per cent (4567.5 out of 7869.45 weighted articles) of the total accounting research published by academic institutions in these 24 journals. The USA is followed by the UK (1208.2 weighted articles, or 15.4 per cent of the total articles), Australia (633.2 weighted articles, or 8.1 per cent of the total), Canada (316.7 weighted articles, or 4.0 per cent of the total) and Hong Kong (167.4 weighted articles, or 2.1 per cent of the total). Hence, the top 5 countries account for almost 85.5 per cent of the total publications.

Table 2

Summary statistics of weighted number of articles appearing in 24 leading accounting journals by country

Rank	Country	Number of schools	Mean	SD	Coefficient of variations	Total articles
1	USA	495	9.23	15.49	167.77	4567.54
2	UK	105	11.51	18.35	159.49	1208.20
3	Australia	44	14.39	18.81	130.71	633.16
4	Canada	28	11.31	11.67	103.20	316.70
5	Hong Kong	7	23.92	15.57	65.11	167.44
6	New Zealand	12	8.65	9.57	110.56	103.83
7	The Netherlands	13	5.46	6.35	116.36	70.99
8	Finland	13	5.27	7.10	134.83	68.50
9	Spain	37	1.84	2.73	148.52	68.00
10	Singapore	4	16.51	21.39	129.57	66.04
11	Germany	40	1.58	2.30	146.24	63.00
12	Taiwan	29	1.98	2.74	138.85	57.29
13	Sweden	17	3.08	3.60	116.91	52.33
14	France	29	1.60	2.25	140.37	46.44
15	Ireland	7	6.54	4.52	69.17	45.75
16	Denmark	5	8.93	11.05	123.68	44.67
17	Belgium	11	3.52	5.26	149.71	38.67
18	Korea	29	1.15	1.28	111.67	33.25
19	Israel	7	4.56	4.19	91.93	31.92
20	Japan	21	0.97	1.24	128.24	20.33

Table 2 (continued)

Rank	Country	Number of schools	Mean	SD	Coefficient of variations	Total articles
21	Norway	4	5.01	6.04	120.52	20.04
22	Italy	16	1.25	1.06	85.03	20.00
23	Cyprus	1	18.50	NA	NA	18.50
24	Austria	9	1.49	1.96	131.53	13.42
25	Greece	8	1.65	2.01	121.93	13.17
26	Switzerland	8	1.56	1.49	95.05	12.50
27	China	10	0.85	0.69	81.48	8.50
28	Malaysia	9	0.78	0.55	70.26	7.00
29	Poland	3	1.83	1.44	78.73	5.50
30	Portugal	5	0.87	0.68	78.59	4.33
31	United Arab Emirates	5	0.72	0.39	54.29	3.58
32	Russia	4	0.83	0.53	63.25	3.33
33	South Africa	4	0.67	0.45	67.70	2.67
34	Saudi Arabia	1	2.66	NA	NA	2.66
35	Indonesia	4	0.63	0.25	40.00	2.50
36	Jordan	4	0.63	0.34	54.97	2.50
37	Thailand	2	1.17	0.94	80.81	2.33
38	Czech Republic	2	1.13	0.18	15.71	2.25
39	Turkey	5	0.43	0.17	39.46	2.13
40	India	4	0.52	0.34	64.50	2.08
41	Slovenia	1	1.50	NA	NA	1.50
42	Estonia	2	0.63	0.53	84.85	1.25
43	Hungary	2	0.63	0.53	84.85	1.25
44	Lithuania	1	1.25	NA	NA	1.25
45	Chile	1	1.00	NA	NA	1.00
46	Egypt	1	1.00	NA	NA	1.00
47	Jamaica	1	1.00	NA	NA	1.00
48	Macedonia	1	1.00	NA	NA	1.00
49	Nigeria	1	1.00	NA	NA	1.00
50	Oman	1	0.87	NA	NA	0.87
51	Kenya	2	0.42	0.12	28.28	0.83
52	Bangladesh	2	0.38	0.18	47.14	0.75
53	Slovakia	1	0.67	NA	NA	0.67
54	Sri Lanka	1	0.58	NA	NA	0.58
55	Fiji	2	0.27	0.09	35.36	0.53
56	Kuwait	1	0.50	NA	NA	0.50
57	Macau	1	0.50	NA	NA	0.50
58	Philippines	1	0.50	NA	NA	0.50
59	Serbia	1	0.50	NA	NA	0.50
60	Bahrain	1	0.33	NA	NA	0.33
61	Mexico	1	0.33	NA	NA	0.33
62	Latvia	1	0.25	NA	NA	0.25

This table provides the ranking in aggregate accounting literature productivity by country. Also reported are the number of institutions in each country that contributed to the published literature, the mean productivity of each institution, the standard deviations (SD), and the coefficient of variation. NA, not applicable.

Table 3 presents the 100 institutions with the highest weighted number of articles appearing in the 24 accounting journals. If 2 institutions have the same weighted number of articles, we use the unweighted number of articles as a tie-breaker. The University of Manchester, the University of New South Wales, the University of Pennsylvania, the University of Michigan and the University of Texas at Austin take the top 5 spots. Although US institutions account for 60 places in the top 100 academic institutions, foreign institutions have considerable presence. Specifically, 3 UK institutions and 1 Australian institution are in the top 10. Out of these 100 institutions, the UK, Australia, Canada, Hong Kong, New Zealand, Denmark and Singapore have 19, 9, 4, 4, 2, 1 and 1 institutions, respectively.⁹

In Table 4, we report the research productivity progress from the subperiod 1991–1997 to the subperiod 1998–2005 for the top 100 academic institutions. Relative ranking during the subperiod 1991–1997 is reported in column 4, and the ranking during the subperiod 1998–2005 is reported in column 6. Column 7 shows the changes in rank: a positive number n indicates an improvement in ranking by n places, whereas a negative number m indicates a decrease in ranking by m places. The percentage changes in ranking are shown in Column 8. There are dramatic improvements as well as significant regressions in performance. Most notably, the Massachusetts Institute of Technology (MIT) has a significant increase (233 per cent) in weighted number of articles, followed by the Hong Kong University of Science and Technology (184.3 per cent), Georgia State

Table 3

The 100 academic institutions with most weighted number of articles appearing in 24 accounting journals

Rank	Colleges	Country	Weighted number of articles	Unweighted number of articles
1	University of Manchester	UK	113.47	229
2	University of New South Wales	Australia	92.00	195
3	University of Pennsylvania	USA	90.88	187
4	University of Michigan	USA	90.13	161
5	University of Texas at Austin	USA	81.08	175
6	New York University	USA	77.67	160
7	University of Chicago	USA	77.46	154
8	Stanford University	USA	76.33	156
9	Cardiff University	UK	75.42	154
10	London School Economics	UK	70.92	102
11	University of Southern California	USA	69.29	142
12	University of Edinburgh	UK	65.92	100
13	University of California, Berkeley	USA	64.00	111
14	Columbia University	USA	63.92	122
15	Rutgers University	USA	62.54	128

⁹ The remaining academic institutions (101–1087) are presented in the authors' website (<http://www.wku.edu/~johnny.chan/full-ranking.html>).

Table 3 (continued)

Rank	Colleges	Country	Weighted number of articles	Unweighted number of articles
16	Indiana University	USA	62.17	130
17	Arizona State University	USA	58.17	136
18	Georgia State University	USA	57.60	121
19	University of Wisconsin–Madison	USA	56.92	114
20	Harvard University	USA	56.25	97
21	University of Illinois at Urbana Champagne	USA	55.92	118
22	Northwestern University	USA	55.25	107
23	Michigan State University	USA	53.67	111
24	Lancaster University	UK	53.50	98
25	University of Sydney	Australia	53.50	97
26	University of Washington	USA	51.95	116
27	University of Melbourne	Australia	51.68	108
28	Monash University	Australia	51.60	101
29	University of North Carolina	USA	49.75	111
30	University of Arizona	USA	49.58	114
31	Ohio State University	USA	48.73	110
32	Cornell University	USA	48.33	101
33	University of Alberta	Canada	47.37	101
34	Nanyang Technological University	Singapore	46.88	98
35	University of Iowa	USA	46.87	90
36	Duke University	USA	46.70	90
37	University of Oklahoma	USA	45.75	82
38	University of Alabama	USA	45.33	86
39	Hong Kong University of Science Technology	Hong Kong	44.40	89
40	Texas A&M University	USA	43.85	100
41	Washington University	USA	43.83	84
42	Boston College	USA	43.75	90
43	University of Glasgow	UK	43.12	75
44	University of Exeter	UK	42.42	83
45	Syracuse University	USA	41.00	80
46	University of Dundee	UK	40.97	97
47	University of Florida	USA	40.33	75
48	University Georgia	USA	38.75	83
49	Pennsylvania State University	USA	38.67	77
50	Baruch College	USA	38.25	79
51	University of Connecticut	USA	37.38	72
52	City University of Hong Kong	Hong Kong	37.33	79
53	University of Queensland	Australia	36.83	74
54	University of Essex	UK	36.73	64
55	University of Notre Dame	USA	35.92	72
56	University of Strathclyde	UK	35.28	73
57	University of South Carolina	USA	34.75	76
58	University of California, Los Angeles	USA	33.83	64
59	Emory University	USA	33.67	67
60	Temple University	USA	33.17	68

Table 3 (continued)

Rank	Colleges	Country	Weighted number of articles	Unweighted number of articles
61	Macquarie University	Australia	33.00	63
62	Florida State University	USA	32.75	72
63	University of Warwick	UK	32.67	53
64	University of Missouri	USA	32.25	69
65	Chinese University of Hong Kong	Hong Kong	31.71	66
66	University of Colorado	USA	30.78	67
67	Carnegie Mellon University	USA	30.45	64
68	University of Maryland	USA	30.33	63
69	Brigham Young University	USA	30.20	71
70	Hong Kong Polytechnic University	Hong Kong	29.50	71
71	University of Minnesota	USA	29.48	69
72	Griffith University	Australia	29.00	48
73	University of Stirling	UK	28.87	65
74	University at Buffalo–State University of New York	USA	28.58	61
75	University of Tennessee	USA	28.58	58
76	Massachusetts Institute of Technology	USA	28.53	54
77	University of Toronto	Canada	28.33	53
78	Cambridge University	UK	28.33	47
79	Copenhagen Business School	Denmark	28.25	49
80	University of Waterloo	Canada	28.17	55
81	University of Illinois at Chicago	USA	28.00	55
82	Northeastern University	USA	27.83	57
83	Australian National University	Australia	27.50	51
84	University of Houston	USA	27.00	59
85	University of British Columbia	Canada	27.00	49
86	University of Rochester	USA	26.92	52
87	University of Bristol	UK	26.42	47
88	Virginia Polytechnic Institute and State University	USA	26.33	58
89	University of Sheffield	UK	26.32	54
90	Louisiana State University	USA	25.83	59
91	University of Reading	UK	25.33	38
92	Dartmouth College	USA	25.00	38
93	University of Waikato	New Zealand	24.67	47
94	University of Western Australia	Australia	24.53	54
95	Case Western Reserve University	USA	24.33	48
96	University of Wales, Aberystwyth	UK	24.25	45
97	University of Auckland	New Zealand	23.83	44
98	University of Kentucky	USA	23.75	52
99	University of Nottingham	UK	23.58	41
100	University of Leeds	UK	23.33	46

This table presents the 100 institutions with most weighted number of articles appearing in 24 accounting journals. If the weighted numbers of articles are the same, we use the number of unweighted articles as a tie-breaker.

Table 4
 Research productivity progress of the 100 colleges with most weighted number of articles appearing in 24 accounting journals from 1991–1997 to 1998–2005

Rank (1991–2005)	Colleges	Weighted number of articles (1991–1997)	Rank (1991–1997)	Weighted number of articles (1998–2005)	Rank (1998–2005)	Change in rank	Percentage change in weighted number of articles
1	University of Manchester	67.70	1	45.77	5	–4	–32
2	University of New South Wales	39.08	7	52.92	1	6	35
3	University of Pennsylvania	39.38	4	51.50	2	2	31
4	University of Michigan	39.50	3	50.63	3	0	28
5	University of Texas at Austin	39.33	5	41.75	8	–3	6
6	New York University	40.08	2	37.58	11	–9	–6
7	University of Chicago	37.00	9	40.46	10	–1	9
8	Stanford University	33.58	11	42.75	6	5	27
9	Cardiff University	27.67	17	47.75	4	13	73
10	London School Economics	39.17	6	31.75	22	–16	–19
11	University of Southern California	34.54	10	34.75	15	–5	1
12	University of Edinburgh	24.83	23	41.08	9	14	65
13	University of California, Berkeley	30.83	13	33.17	18	–5	8
14	Columbia University	28.42	15	35.50	14	1	25
15	Rutgers University	38.08	8	24.46	38	–30	–36
16	Indiana University	32.33	12	29.83	27	–15	–8
17	Arizona State University	30.67	14	27.50	32	–18	–10
18	Georgia State University	15.42	61	42.18	7	54	174
19	University of Wisconsin–Madison	24.17	26	32.75	21	5	36
20	Harvard University	21.75	34	34.50	16	18	59
21	University of Illinois at Urbana Champagne	25.58	20	30.33	24.5	–5	19
22	Northwestern University	24.92	22	30.33	24.5	–3	22
23	Michigan State University	17.75	48	35.92	13	35	102

24	Lancaster University	19.67	41	33.83	17	24	72
25	University of Sydney	16.75	53	36.75	12	41	119
26	University of Washington	25.86	19	26.09	35	-16	1
27	University of Melbourne	20.83	37	30.84	23	14	48
28	Monash University	21.83	33	29.77	28	5	36
29	University of North Carolina	24.67	25	25.08	36	-11	2
30	University of Arizona	21.08	36	28.49	30	6	35
31	Ohio State University	25.33	21	23.39	41	-20	-8
32	Cornell University	20.75	38	27.58	31	7	33
33	University of Alberta	24.12	27	23.25	42	-15	-4
34	Nanyang Technological University	13.88	76	33.00	19	57	138
35	University of Iowa	27.87	16	19.00	58	-42	-32
36	Duke University	17.37	50	29.33	29	21	69
37	University of Oklahoma	15.67	60	30.08	26	34	92
38	University of Alabama	22.92	30	22.42	45	-15	-2
39	Hong Kong University Science Technology	11.57	93	32.83	20	73	184
40	Texas A&M University	21.42	35	22.43	44	-9	5
41	Washington University	26.67	18	17.16	65	-47	-36
42	Boston College	23.75	28	20.00	50	-22	-16
43	University of Glasgow	16.37	54	26.75	34	20	63
44	University of Exeter	14.92	65	27.50	33	32	84
45	Syracuse University	16.17	55	24.83	37	18	54
46	University of Dundee	24.72	24	16.25	72	-48	-34
47	University of Florida	23.75	29	16.58	70	-41	-30
48	University of Georgia	19.25	43	19.50	55	-12	1
49	Pennsylvania State University	20.00	39	18.67	59	-20	-7
50	Baruch College	22.33	32	15.92	75	-43	-29
51	University of Connecticut	19.67	40	17.71	60	-20	-10
52	City University of Hong Kong	17.50	49	19.83	53	-4	13
53	University of Queensland	15.33	62	21.50	47	15	40
54	University of Essex	19.03	44	17.70	61	-17	-7
55	University of Notre Dame	11.75	91	24.17	40	51	106
56	University of Strathclyde	22.62	31	12.67	100	-69	-44

Table 4 (continued)

Rank (1991–2005)	Colleges	Weighted number of articles (1991–1997)	Rank (1991–1997)	Weighted number of articles (1998–2005)	Rank (1998–2005)	Change in rank	Percentage change in weighted number of articles
57	University of South Carolina	14.08	71	20.67	49	22	47
58	University of California, Los Angeles	14.50	68	19.33	56	12	33
59	Emory University	9.33	117	24.33	39	78	161
60	Temple University	17.00	51.5	16.17	73	–22	–5
61	Macquarie University	13.42	79	19.58	54	25	46
62	Florida State University	15.67	59	17.08	66	–7	9
63	University of Warwick	18.17	46	14.50	84	–38	–20
64	University of Missouri	9.58	114	22.67	43	71	137
65	Chinese University of Hong Kong	16.08	56	15.63	78	–22	–3
66	University of Colorado	18.83	45	11.95	107	–62	–37
67	Carnegie Mellon University	17.00	51.5	13.45	92	–41	–21
68	University of Maryland	15.92	58	14.42	85	–27	–9
69	Brigham Young University	10.33	105	19.87	52	53	92
70	Hong Kong Polytechnic University	8.33	129	21.17	48	81	154
71	University of Minnesota	19.43	42	10.04	127	–85	–48
72	Griffith University	9.00	125	20.00	51	74	122
73	University of Stirling	12.12	87	16.75	69	18	38
74	University at Buffalo–State University of New York	12.92	80	15.67	77	3	21
75	University of Tennessee	12.83	82	15.75	76	6	23
76	Massachusetts Institute of Technology	6.58	160	21.95	46	114	233

77	University of Toronto	10.83	101	17.50	63	38	62
78	Cambridge University	11.50	94	16.83	68	26	46
79	Copenhagen Business School	9.17	121	19.08	57	64	108
80	University of Waterloo	12.92	81	15.25	79	2	18
81	University of Illinois at Chicago	10.67	102	17.33	64	38	63
82	Northeastern University	12.67	85	15.17	81	4	20
83	Australian National University	14.25	70	13.25	95	-25	-7
84	University of Houston	13.92	75	13.08	97	-22	-6
85	University of British Columbia	9.33	116	17.67	62	54	89
86	University of Rochester	17.92	47	9.00	141	-94	-50
87	University of Bristol	10.00	109	16.42	71	38	64
88	Virginia Polytechnic Institute and State University	14.58	67	11.75	110	-43	-19
89	University of Sheffield	14.82	66	11.50	113	-47	-22
90	Louisiana State University	14.00	72	11.83	108	-36	-15
91	University of Reading	14.00	74	11.33	118	-44	-19
92	Dartmouth College	9.75	110	15.25	80	30	56
93	University of Waikato	11.33	95	13.33	94	1	18
94	University of Western Australia	10.87	100	13.67	89	11	26
95	Case Western Reserve University	15.17	63	9.17	139	-76	-40
96	University of Wales, Aberystwyth	13.83	77	10.42	122	-45	-25
97	University of Auckland	9.25	119	14.58	83	36	58
98	University of Kentucky	9.00	123	14.75	82	41	64
99	University of Nottingham	7.42	145	16.17	74	71	118
100	University of Leeds	16.08	57	7.25	170	-113	-55

We report the research productivity progress from the subperiod 1991–1997 to the subperiod 1998–2005 for the top 100 academic institutions. Relative ranking during the subperiod 1991–1997 is reported in column 4, and the ranking during the subperiod 1998–2005 is reported in column 6. Column 7 shows the changes in rank: a positive number n indicates improvement in ranking by n places, whereas a negative number m indicates regression in ranking by m places. The percentage changes in ranking are shown in column 8.

University (174 per cent), Emory University (161 per cent), and Hong Kong Polytechnic University (154 per cent). In contrast, the University of Leeds and the University of Rochester lead the regression of productivity with a percentage decline (in weighted number of articles) of –55 and –50 per cent, respectively, followed by the University of Minnesota (–48 per cent), University of Strathclyde (–44 per cent) and Case Western Reserve University (–40 per cent).

To further examine these most improved (regressed) institutions, we present a more detail decomposition of the publication records for the institutions with drastic changes in Appendix II. The top 10 per cent of decliners consist of only US and UK schools, whereas the top 10 per cent of improvers contain 5 Asia–Pacific institutions. For the decliners, shown in Panel A of Appendix II, there exist many well-known research-orientated universities. One might suspect that the decline might be the result of shifting research focus to top journals only among these regressed institutions. However, the data show that these institutions' publications decline in both the top 5 and the remaining 19 accounting journals during the subperiods 1991–1997 and 1998–2005. Therefore, the decrease in research is not a result of the change of the declining institutions' publishing strategy of publishing at top 5 journals.

We postulate that the slowdown of faculty research could be due to several reasons, such as the exhaustion of faculty human capital and institutions' failure to add new blood to research groups. We report the 'number of unique authors' statistics during each subperiod to gauge this possibility. The 'number of unique authors' is calculated as the number of different (distinct) publishing authors from the same institution in each subperiod. For example, during the period from 1991 to 1997, the University of Rochester has 17 different faculties publishing in 24 accounting journals, but the same number dwindles to only 9 during 1998–2005. In Panel A, it is clear that all top decliners, with the exception of Washington University and the University of Dundee, experienced decline or no change in the 'number of unique authors'; that is, the number of active researchers in these declining institutions is constant.

In Panel B of Appendix II, we show the data for the top 10 improving institutions. Clearly, the top improvers gain their research output through not only publications in 19 high-quality journals, but also in top 5 journals. For example, MIT publishes only 2.59 weighted articles in the top 5 journals during the first subperiod, but this figure increases to 12.53 during the second subperiod. The Hong Kong University of Science and Technology is equally impressive, with 3.95 weighted articles in the first subperiod and 20.83 articles in the second subperiod. Because half of the top improvers are Asia–Pacific institutions, this result is consistent with the observation that Asia–Pacific institutions have received more government funding and emphasized faculty research in recent years. We find that the 'number of unique authors' statistics is in sharp contrast to the top decliners. The 'number of unique authors' for the top improvers increases dramatically for all institutions. For example, MIT had 9 different faculties publishing in 24 journals in 1991–1997, but the number increased to 20 in

1998–2005. The same statistics for the University of Sydney is even more extreme, with 1 faculty in 1991–1997 increasing to 35 faculties participating in publication in 1998–2005. Therefore, these top improving institutions have significantly increased their faculty size and/or replaced non-research-active faculties with more research-active faculties.

Although we include 24 journals that have been ranked high in the accounting literature, variations in journal quality still exist and this journal quality bias might penalize certain institutions that stress higher quality but favour others that take a broader view of journal quality. Ideally, one would make explicit adjustment in journal quality to minimize this bias. However, a common acceptable measurement of journal quality, the Social Science Citation Index, is not available for most of the accounting journals. To provide a different perspective on institutional ranking, we follow Chan *et al.* (2005) by using only the top 5 accounting journals to provide an alternative ranking in Table 5.

Using only the top 5 accounting journals, the top 5 institutions are the University of Pennsylvania, the University of Chicago, the University of Michigan, Stanford University and the University of Texas at Austin. Comparing with results reported in Table 3 where all 24 journals are used: the University of Pennsylvania jumps to the top from third, the University of Chicago moved to second from seventh, whereas both the University of Manchester and the University of New South Wales drop out of the top 30 list. There are only 27 foreign academic institutions in Table 5, which is considerably fewer when compared to Table 3. Among the top 100 institutions, 73 of them are US institutions. The presentation of UK universities on this list declines drastically from 19 in Table 3 to 6 in Table 5. However, Canadian universities gain 7 seats: from 4 in Table 3 to 11 in Table 5. The USA and Canada account for 84 per cent of the top 100 list of institutions. Note that using only the top 5 journals creates a different type of bias; that is, all other journals are assigned a zero weight.¹⁰

Finally, the *Public Accounting Report* surveys professors in accounting and reports top 5 PhD programmes in accounting in the USA. In their November 2003 survey, the University of Texas at Austin, the University of Michigan, the University of Pennsylvania, the University of Chicago, and the University of Illinois at Urbana Champagne are the top 5 programmes. Comparing with our ranking using the full sample of 24 journals, 4 academic institutions in the survey ranking are also in our top 10 rank, with the exception of the University of Illinois at Urbana Champagne, which is ranked 21st when all 24 journals are used to form the ranking. When we use only top 5 journals as the ranking criterion, the University of Illinois at Urbana Champagne is ranked 22nd.

¹⁰ In addition to institutional ranking, we also present the top 50 authors in 24 journals and top 5 journals in the authors' website (<http://www.wku.edu/~johnny.chan/top-50.html>).

Table 5
The 100 institutions with most weighted number of articles appeared in top 5 accounting journals

Rank	Colleges	Country	Weighted number of articles	Unweighted number of articles
1	University of Pennsylvania	USA	70.08	141
2	University of Chicago	USA	63.88	126
3	University of Michigan	USA	49.54	93
4	Stanford University	USA	43.58	97
5	University of Texas at Austin	USA	40.42	89
6	Northwestern University	USA	39.92	75
7	University of Southern California	USA	38.42	82
8	Columbia University	USA	38.00	72
9	University of Washington	USA	37.61	81
10	University of North Carolina	USA	35.17	76
11	Cornell University	USA	35.08	78
12	University of Alberta	Canada	31.67	70
13	New York University	USA	31.00	60
14	University of Arizona	USA	29.16	64
15	Washington University	USA	29.08	57
16	Harvard University	USA	28.25	55
17	University of California, Berkeley	USA	26.42	48
18	University of Iowa	USA	26.28	49
19	Indiana University	USA	26.17	58
20	Pennsylvania State University	USA	26.17	53
21	Emory University	USA	25.67	51
22	University of Illinois at Urbana Champagne	USA	25.42	54
23	Duke University	USA	24.95	55

24	Hong Kong University of Science Technology	Hong Kong	24.78	52
25	Michigan State University	USA	24.33	52
26	London School Economics	UK	22.92	30
27	University of Rochester	USA	22.50	44
28	Ohio State University	USA	21.35	49
29	University of California, Los Angeles	USA	21.08	41
30	University of Notre Dame	USA	20.75	41
31	University of Wisconsin–Madison	USA	20.00	45
32	University of Minnesota	USA	19.98	48
33	University of Waterloo	Canada	19.83	38
34	University of New South Wales	Australia	19.33	39
35	University of Georgia	USA	16.92	39
36	University of British Columbia	Canada	16.92	33
37	University of Florida	USA	16.83	32
38	University of Manchester	UK	16.67	32
39	University of Colorado	USA	16.17	33
40	Carnegie Mellon University	USA	15.62	33
41	Massachusetts Institute of Technology	USA	15.12	35
42	University of Connecticut	USA	14.67	25
43	University of New Mexico	USA	14.25	20
44	Arizona State University	USA	13.83	32
45	Purdue University	USA	13.58	32
46	Boston College	USA	13.17	28
47	University of Calgary	Canada	13.00	21
48	University of Melbourne	Australia	12.92	26
49	University of Oklahoma	USA	12.92	25
50	University of Missouri	USA	12.67	27

Table 5 (continued)

Rank	Colleges	Country	Weighted number of articles	Unweighted number of articles
51	University at Buffalo–State University of New York	USA	12.50	27
52	Georgia State University	USA	12.28	25
53	Texas A&M University	USA	11.83	28
54	Brigham Young University	USA	10.75	20
55	Nanyang Technological University	Singapore	10.67	19
56	Yale University	USA	10.58	22
57	Rutgers University	USA	10.50	20
58	University of Edinburgh	UK	10.50	12
59	Temple University	USA	10.42	19
60	Case Western Reserve University	USA	10.25	15
61	Florida State University	USA	10.17	21
62	Baruch College	USA	9.92	21
63	University of Toronto	Canada	9.83	19
64	Oxford University	UK	9.58	12
65	Simon Fraser University	Canada	8.83	18
66	University of South Carolina	USA	8.75	18
67	University of Utah	USA	8.58	16
68	Louisiana State University	USA	8.50	18
69	University of Pittsburgh	USA	8.42	23
70	Macquarie University	Australia	8.25	17
71	University of Massachusetts	USA	7.50	21
72	Queen's University	Canada	7.50	19
73	University of Warwick	UK	7.33	8
74	Monash University	Australia	7.00	12
75	University of Saskatchewan	Canada	6.83	10

76	University of Maryland	USA	6.67	18
77	Boston University	USA	6.67	12
78	University of California, Irvine	USA	6.42	10
79	Southern Methodist College	USA	6.33	14
80	McMaster University	Canada	6.25	13
81	University of Texas at Dallas	USA	6.08	18
82	Dartmouth College	USA	6.08	10
82	Syracuse University	USA	5.83	15
83	Virginia Polytechnic Institute and State University	USA	5.83	14
85	Georgetown University	USA	5.67	13
86	University of Wisconsin–Milwaukee	USA	5.67	9
87 (tied)	Chinese University of Hong Kong	Hong Kong	5.42	14
87 (tied)	Texas Christian University	USA	5.42	14
89	City University of Hong Kong	Hong Kong	5.33	14
90	University of Kentucky	USA	5.25	14
91	Vanderbilt University	USA	5.17	12
92	Cambridge University	UK	5.17	10
93	North Carolina State University	USA	5.08	11
94	Wilfrid Laurier University	Canada	5.00	9
95	York University	USA	4.87	8
96	University of Illinois at Chicago	USA	4.83	12
97	Maastricht University	The Netherlands	4.83	10
98	Laval University	Canada	4.83	8
99	University of Queensland	Australia	4.75	11
100	University of Oregon	USA	4.67	12

We report rankings based on the top 5 accounting journals. The top 5 accounting journals are: *Accounting, Organizations and Society*, *Accounting Review*, *Journal of Accounting Research*, *Journal of Accounting and Economics* and *Contemporary Accounting Research*.

4. Who contributed to accounting research?

It has been argued that graduates of a small set of elite US schools dominate the accounting research, and a scholar's likelihood of success at publishing is conditioned by where the person received his or her doctoral degree. Several studies have addressed the elite degree effect. Some examples are Williams and Rodgers (1995), Lee (1995, 1997), Lee and Williams (1999) and Williams *et al.* (2006) in accounting, and Cox and Chung (1991) in economics. However, many of these studies examine the published articles in a few top accounting journals and confine their analysis to a small number of scholars. Given a comprehensive database, we are able to re-examine the elite effect with respect to 24 accounting journals. In addition, the literature provides interesting results on the elite degree effect (the impact of authors' doctoral-degree-granting institutions) but not the elite affiliation effect (the impact of authors' current affiliations). We intend to study both aspects of the elite effect by using our extended dataset.

4.1. Elite degree effect

Ideally, we would examine the doctoral-degree-granting institutions of all 6218 authors identified in the present study. However, it is time and cost prohibitive to obtain such information for all authors and, in addition, such information is not available for all authors. Therefore, we obtain data regarding their doctoral-degree-granting institution for the top 100 and bottom 100 accounting authors and examine their respective weighted number of accounting articles published. We use the University of Michigan doctoral theses website supplemented by the ABI/INFORM database to identify the top 100/bottom 100 authors' doctoral-degree-granting institutions, the year degree conferred, and geographical affiliations of the accounting authors. If the accounting authors' information is not available in the University of Michigan website, we move the list down (up) further for top 100 (bottom 100) authors until 100 authors in each category are met.¹¹

In Panel A of Table 6 we present the average ranks of doctoral-degree-granting institutions from these top/bottom authors without distinguishing their nationalities. The mean ranks of doctoral-degree-granting institutions for the top 100 authors and bottom 100 authors are 53.05 and 107.61, respectively. The difference is statistically significant at the 1 per cent level. As expected, the alma maters of the top authors are much better ranked than those of the bottom authors. The standard deviations of the ranks of authors' doctoral-degree-granting institutions are 78.09 and 158.94 for top and bottom authors, respectively. The *F*-statistic is statistically significant at the 1 per cent level, suggesting that top authors have considerable less variability in the ranks of their degree granting institutions

¹¹ We do not use authors who are not affiliated with academic institutions, who do not currently teach in accounting programmes, or who do not have doctoral degrees.

Table 6
Elite degree effect for all authors (top 100 versus bottom 100 authors)

Panel A: Descriptive statistics

		Top 100 authors	Bottom 100 authors	<i>t</i> -test for equal means; <i>F</i> -test for equal variance; and <i>Z</i> -test for equal proportions
Author's degree-granting institution rank (1, 2, . . . ; 1 is the highest)	Mean rank	53.05	107.61	$t = 3.08^{***}$
	Standard deviation of ranks	78.09	158.94	$F = 4.14^{***}$
Proportion of 100 authors who graduated from the top 20 accounting programmes as in Table 3		39%	25%	$Z = 2.15^{**}$

Panel B: Regression model

Variables	Expected sign	Dependent variable = author's accounting publication record in terms of weighted number of articles		Dependent variable = author's accounting publication record in terms of unweighted number of articles	
		Coefficient	<i>t</i> -statistics	Coefficient	<i>t</i> -statistics
Intercept		5.6790	4.27***	10.2336	3.99***
The rank of an author's degree- granting institution (1, 2, . . . ; 1 is the highest)	–	–0.0071	–3.04***	–0.0127	–2.80***
Year of graduation	+	0.0151	0.52	0.0246	0.43
Country (non-US institutions = 1; US = 0)	?	–1.6253	–1.42	–1.9951	–0.90
Adjusted R^2		0.0318		0.0252	
<i>F</i> -statistics		3.18**		2.72**	
<i>N</i>		200		200	

Table 6 presents the results of the elite degree effect. We examine the top 100 and bottom 100 accounting authors in our database in terms of their respective weighted number of accounting articles published. We use the University of Michigan doctoral theses website and ABI/INFORM to identify the top 100/bottom 100 authors' doctoral-degree-granting institutions, the year degree conferred, and geographical affiliations of the accounting authors. The results suggest that there is indeed an elite degree effect. ** and *** denote significance at the 5 and 1 per cent levels, respectively.

relative to bottom authors. The third row of Panel A reports the proportion of these authors having a degree from elite programmes. Elite programmes are defined here as the top 20 accounting programmes in Table 3. Thirty-nine per cent of the top 100 authors received their degree from elite schools, whereas only 25 per cent of the bottom 100 authors received their degree from elite accounting programmes. The difference in these 2 proportions is statistically significant at the 5 per cent level. Therefore, the elite degree effect suggested by the literature is also valid in our sample. That is, graduates of elite programmes are better published in these 24 leading accounting journals. Nevertheless, slightly more than 60 per cent of the top authors did not obtain their degrees from elite schools.

The univariate results in Panel A suggest an elite degree effect in which top authors, on average, are graduates of higher ranked accounting programmes. To further analyse the elite degree effect, we conduct a multivariate analysis based on the following regression model with a sample size of 200 (top 100 and bottom 100) authors:

$$PUB_i = \alpha + \beta_1(RANK)_i + \beta_2(YEAR)_i + \beta_3(COUNTRY)_i + \epsilon_i, \quad (1)$$

where PUB_i is accounting publication records of author i ; $RANK_i$ is the rank of degree granting institution (from 1 to 1087; with 1 being the highest) for author i ; $YEAR_i$ is 2005 minus doctoral degree confer year for author i ; $COUNTRY_i$ is a binary variable that takes a value of 1 if the doctoral-degree-granting institution is a US school, and 0 otherwise; ϵ_i is a random error term.

We use equation (1) to examine if an author's publications can be explained by the rank of their doctoral-degree-granting institutions, controlling for the year of graduation (length of time to publish) and whether the degree is a US or non-US degree, which controls for a possible US school effect. Dependent variables are measured by both weighted articles and unweighted articles for each author. If there is an elite degree effect, we would have a negative and statistically significant β_1 , which indicates that a top-ranked programme (smaller $RANK_i$) is associated with higher research productivity. In addition, we also expect β_2 to be positive because, other things being equal, an author can publish more when given more time to do so.

The results are reported in Panel B of Table 6. The results suggest the existence of an elite degree effect as evidenced by the negative signs and significant coefficients in the doctoral-degree-granting institution rank variable in both productivity measures. However, year of graduation and country effect are not statistically significant. The adjusted R^2 value, nevertheless, is less than 5 per cent in both models, suggesting that bulk of the variations in publications is not accounted for by the elite degree effect.

In Table 7, elite degree effect for international authors is also examined. All top 100 and bottom 100 authors are non-US authors. Panel A shows that the mean rank for the top 100 authors' degree granting institution is 100.08, compared with 182.10 for the bottom 100 authors. Again, the differences in mean

Table 7

Elite degree effect for international authors only (top 100 versus bottom 100 authors)

Panel A: Descriptive statistics

		Top 100 authors	Bottom 100 authors	<i>t</i> -test for equal means; <i>F</i> -test for equal variance; and <i>Z</i> -test for equal proportions
Author's degree-granting institution rank (1, 2, . . . ; 1 is the highest)	Mean rank	100.08	182.10	2.87***
	Standard deviation of ranks	134.61	252.19	<i>F</i> = 3.51***
Proportion of 100 authors who graduated from the top 20 accounting programmes as in Table 3		23%	13%	<i>Z</i> = 1.86*

Panel B: Regression model

Variables	Expected sign	Dependent variable = author's accounting publication record in terms of weighted number of articles		Dependent variable = author's accounting publication record in terms of unweighted number of articles	
		Coefficient	<i>t</i> -statistics	Coefficient	<i>t</i> -statistics
Intercept		2.3551	4.70***	4.0226	4.77***
The rank of an author's degree-granting institution (1, 2, . . . ; 1 is the highest)	–	–0.0021	–1.91*	–0.0030	–1.64
Year of graduation	+	0.0565	2.45**	0.1066	2.74***
Adjusted <i>R</i> ²		0.0453		0.0476	
<i>F</i> -statistics		5.72***		5.97**	
<i>N</i>		200		200	

Table 7 presents the results of the elite degree effect in the sample of international authors. We examine the top 100 and bottom 100 international accounting authors in our database in terms of their respective weighted number of accounting articles published. We use the University of Michigan doctoral theses website and ABI/INFORM to identify the top 100/bottom 100 authors' doctoral-degree-granting institutions, the year degree conferred, and geographical affiliations of the accounting authors. The results suggest that there is indeed an elite degree effect. *, ** and *** denote significance at the 10, 5 and 1 per cent levels, respectively.

and variance of ranks are statistically significant, further supporting the elite degree effect for a sample of international scholars. Compared with the results in Table 6 where all authors are reported, an average international author is a graduate of less prestigious PhD programmes with the mean ranks for the top

100 and bottom 100 authors in Table 7 being larger (lower ranked) than the corresponding mean ranks shown in Table 6. Furthermore, only 23 per cent of the top 100 international authors obtain their degrees from the top 20 elite programmes. Publishing in leading accounting journals is, therefore, dominated by US authors, consistent with the findings initially reported in Tables 2 and 3.

Panel B of Table 7 reports regression results, which differ slightly from those reported in Table 6 for all authors. Although the rank of an author's degree-granting institution still significantly impacts the author's publication record in the 24 leading accounting journals, the variable is only marginally significant at the 10 per cent level in the weighted number of articles equation. Moreover, the year-of-graduation effect is positive and statistically significant at the 1 per cent level for international authors. Again, the model explains less than 5 per cent of the variation in publications, leaving room for other explanations. Therefore, the elite degree effect is weaker among international authors.

4.2. *Elite affiliation effect*

In Section 4.1, we showed the existence of an elite degree effect of accounting publications. In this section, we present statistics of another type of elite school effect; namely, the elite affiliation effect. Authorship concentration has been found in various disciplines; for example, Cox and Chung (1991) find that the top 3 employers account for 30 of the top 100 economics scholars and Niemi (1987) reports that 28 leading programmes published 50 per cent of the total pages of the top 3 finance journals during the period from 1975 to 1986. As Figure 1 and Appendix I already highlight the institutional concentration in accounting research, we report additional statistics demonstrating the elite affiliation effect.

Table 8 reports elite affiliation effect when 'elite school' is defined as the top 20 accounting programmes according to results reported in Table 3. Statistics for the entire 15 years (1991–2005) are shown in the bottom 3 rows of the Table. During the 15 year period, a total of 8327 articles were published in 24 leading journals, among which 2105 (25.3 per cent of all articles) are in the top 5 accounting journals, and 6222 are in the remaining 19 journals. Among the 2105 articles in the top 5 journals, 350 (16.6 per cent) are written by authors affiliated with an elite schools; 1274 (60.5 per cent) by authors outside of elite schools; 481 (22.9 per cent) are co-authored papers with at least 1 author affiliated with an elite school. Hence, almost 40 per cent of the top 5 journal articles have at least 1 author affiliated with an elite (top 20) school. That is, less than 2 per cent (20 out of 1087 academic institutions or 1.8 per cent) of the institutions accounted for approximately 40 per cent of the top 5 accounting journal articles.

For the remaining 19 leading accounting journals, the elite affiliation effect is significantly lessened. Among 6222 articles, 513 (8.2 per cent) come from authors affiliated with top 20 programmes, 4916 (79.0 per cent) from authors outside of the top 20, and 793 (12.8 per cent) are co-authored papers with at least 1 author affiliated

Table 8
Elite affiliations effect

Period	Journals	Number of articles published in accounting journals			Total number of articles
		All authors are affiliated with top 20 programmes (single or multi-authored articles)	All authors are affiliated with programmes outside top 20 (single or multi-authored articles)	At least 1 author from top 20 programmes in multi-authored articles	
1991–1997	Top 5 accounting journals only	186 (19.0)	607 (62.1)	184 (18.9)	977
	Other 19 quality journals	271 (9.6)	2261 (79.8)	303 (10.6)	2835
1998–2005	Top 5 accounting journals only	164 (14.5)	667 (59.1)	297 (26.4)	1128
	Other 19 quality journals	242 (7.1)	2655 (78.4)	490 (14.5)	3387
1991–2005	Top 5 accounting journals only	350 (16.6)	1274 (60.5)	481 (22.9)	2105
	Other 19 quality journals	513 (8.2)	4916 (79.0)	793 (12.8)	6222
	Total	863 (10.4)	6190 (74.3)	1274 (15.6)	8327

Table 8 presents the results of the elite affiliation effect. Elite schools are defined as the top 20 ranked academic institutions shown in Table 3. The top 5 accounting journals are *Accounting, Organizations and Society*, *Accounting Review*, *Contemporary Accounting Research*, *Journal of Accounting and Economics* and *Journal of Accounting Research*. The values inside parentheses are the percentage share of each cell across rows. The results suggest that top 20 programmes place more emphasis on top 5 accounting journal articles. The relative percentage share of articles by collaboration between authors in top 20 and non-top 20 programmes has increased in recent years.

with top 20 programmes. Therefore, a vast majority of the authors (79 per cent) for the 19 accounting journals are not affiliated with top 20 elite programmes.

The top four rows of Table 8 decompose the sample into two subperiods to examine the changes, if any, in the elite affiliation effect in recent years. Several points are worth mentioning. It has become progressively more difficult for non-elite-school-affiliated researchers to publish in the top 5 journals. The percentage of top 5 journal articles published by all non-elite-school-affiliated researchers decreased from 62.1 per cent during 1991–1997 to 59.1 per cent during 1998–2005. Similarly, the proportion of articles in the top 5 journals written by all elite school researchers also dropped from 19.0 per cent in 1991–1997 to 14.5 per cent in 1998–2005. For the 2 subperiods, there is a 7.5 per cent increase in articles written by researchers co-authored with faculties affiliated with elite programmes (from 18.9 to 26.4 per cent). For the remaining 19 journals, we also find an increase in co-authored research among researchers in elite and non-elite programmes (from 10.6 to 14.5 per cent). In essence, although there is an elite affiliation effect, the extent of the effect has weakened in recent years. Furthermore, collaboration between authors in elite and non-elite institutions has increased over time.

5. Conclusions

We study the ranking of accounting programmes globally using a set of top 24 accounting journals from 1991 to 2005. A total of 6218 authors from 1087 academic institutions published at least 1 unweighted article in this set of journals. An average institution published only 7.24 weighted and 14.42 unweighted articles, respectively, during the 15 year period. As the distribution is highly skewed, the median numbers of publications per institution are 1.50 for the weighted measure and 3 for the unweighted measure, respectively. Similar skewed distributions can be found for the number of publications by author. Approximately 73 per cent of the 6218 academic authors published 2 or fewer articles during the entire 15 year period. Therefore, publishing 5 or more unweighted articles would place an individual in the top 10 percentile. Publishing 15 articles, or 1 per year, would rank this individual in the top 1 percentile.

When ranked by countries, the USA dominates the accounting research arena, with a share of almost 58 per cent, followed by the UK, Australia, Canada and Hong Kong. We also rank accounting programmes based on a full sample of 24 journals and a subset of top 5 journals. In both cases, US institutions have a large share in the top 100 list. When all 24 journals are used, 60 US academic institutions are ranked in the top 100, followed by the UK, Canada, Australia, Hong Kong and Singapore. When only the top 5 journals are used as the base of ranking, 73 US academic institutions are ranked in the top 100, followed by Canada, Australia, Hong Kong and Singapore. We also partition the whole sample into two subperiods and study the improvement/regression of research productivity. Academic institutions that show the most improvement are MIT, the Hong Kong University of Science and Technology, Georgia State University, Emory University

and Hong Kong Polytechnic University. In contrast, academic institutions that show the highest regression in research productivity are the University of Leeds, the University of Rochester, the University of Minnesota, the University of Strathclyde and Case Western Reserve University. The changes in institutional research productivity can be found in a variety of journals. We suggest that regional location and the number of active researchers are possible explanations for the drastic changes among the top improving and declining institutions.

We further analyse the ‘elite degree’ and ‘elite affiliation’ effect and find that top-ranked authors generally graduated from higher-ranked schools. For example, 39 per cent of the top 100 authors received their degrees from top 20 accounting programmes, whereas only 25 per cent of the bottom 100 authors obtained their degrees from the same group of degree-conferring institutions. With respect to the ‘elite affiliation’ effect, we find that the top 5 accounting journals have high concentrations of authors affiliated with top academic institutions. During the entire 15 year sampling period, approximately 40 per cent of the articles in the top 5 journals are written by authors in the top 20 institutions (either as sole authors or co-authored with non-elite institution authors). Finally, the difficulty of getting published in the top 5 journals by non-elite-affiliated authors has increased in recent years. However, such authors appear to have responded by increasing the co-authored research among researchers in elite and non-elite programmes.

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Appendix I

Gini coefficients of accounting publishing (1991–2005)

	N	Gini coefficient
All institutions in 24 journals	1087	0.7240
All institutions in top 5 journals	432	0.7099

We compute the Gini coefficient according to Damgaard (2003). Gini coefficient measures the inequality in a distribution. We calculate the coefficient, G , as:

$$G = \frac{\sum_{i=1}^n \sum_{j=1}^n x_i x_j}{2n^2 \mu}$$

where μ is the arithmetic mean; n is the size of population; x_i is the weighted number of articles of i th institution.

Appendix II

Top 10 per cent changes (as in Table 5) in weighted number of articles in 24 accounting journals

Panel A: Top 10 per cent drop in weighted number of articles

Rank in Table 3	Institutions	Weighted in 24 journals (1991–1997)	Weighted in 24 journals (1998–2005)	Percentage change in weight	Country	1991–1997			1998–2005		
						Weighted in top 5 journals	Weighted in other 19 journals	Number of unique authors	Weighted in top 5 journals	Weighted in other 19 journals	Number of unique authors
100	University of Leeds	16.08	7.25	–55	UK	2.00	14.08	11	1.00	6.25	11
86	University of Rochester	17.92	9.00	–50	USA	15.83	2.09	17	6.67	2.33	9
71	University of Minnesota	19.43	10.04	–48	USA	13.77	5.66	19	6.21	3.83	13
56	University of Strathclyde	22.62	12.67	–44	UK	2.25	20.37	19	0.50	12.17	14
95	Case Western Reserve University	15.17	9.17	–40	USA	5.92	9.25	13	4.33	4.84	8
66	University of Colorado	18.83	11.95	–37	USA	9.84	8.99	17	6.33	5.62	15
15	Rutgers University	38.08	24.46	–36	USA	6.67	31.41	29	3.83	20.63	30
41	Washington University	26.67	17.16	–36	USA	17.83	8.84	14	11.25	5.91	17
46	University of Dundee	24.72	16.25	–34	UK	1.00	23.72	20	0.00	16.25	22
1	University of Manchester	67.70	45.77	–32	UK	11.84	55.86	52	4.83	40.94	47
35	University of Iowa	27.87	19.00	–32	USA	16.45	11.42	23	9.83	9.17	22

Panel B: Top 10 per cent increase in weighted number of articles

Rank in Table 3	Institutions	Weighted in 24 journals (1991–1997)	Weighted in 24 journals (1998–2005)	Percentage change in weight	Country	1991–1997			1998–2005		
						Weighted in top 5 journals	Weighted in other 19 journals	Number of unique authors	Weighted in top 5 journals	Weighted in other 19 journals	Number of unique authors
76	Massachusetts Institute of Technology	6.58	21.95	233	USA	2.59	3.99	9	12.53	9.42	20
39	Hong Kong University of Science Technology	11.57	32.83	184	Hong Kong	3.95	7.62	21	20.83	12.00	29
18	Georgia State University	15.42	42.18	174	USA	1.33	14.09	25	10.95	31.23	40
59	Emory University	9.33	24.33	161	USA	6.67	2.66	10	19.00	5.33	22
70	Hong Kong Polytechnic University	8.33	21.17	154	Hong Kong	0.50	7.83	15	2.75	18.42	26
34	Nanyang Technological University	13.88	33.00	138	Singapore	2.34	11.54	16	8.33	24.67	37
64	University of Missouri	9.58	22.67	137	USA	4.67	4.91	10	8.00	14.67	22
72	Griffith University	9.00	20.00	122	Australia	1.00	8.00	10	2.00	18.00	19
26	University of Sydney	16.75	36.75	119	Australia	0.67	16.08	1	1.50	35.25	35
99	University of Nottingham	7.42	16.17	118	UK	0.00	7.42	10	2.00	14.17	15

Appendix II shows the details of publication records of the institutions that are within the top 10 per cent changes in weighted number of articles during the subperiods 1991–1997 and 1998–2005. Panel A has 11 institutions because of a tie.