

Rankings of Canadian Universities with Regard to Research in Economics at the Turn of the Twenty-First Century

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This study attempts to rank Canadian universities with regard to the productivity of their research capacity in economics, around the turn of the twenty-first century. (The hard data refer principally to the years 1984 through 1996, so that this is principally an historical study.) Appearance in Mark Blaug's Who's Who in Economics (1999) is used as the principal method of ranking universities' teams of researchers. One important subsidiary conclusion that results from this study is that there appears to be a regional clustering of research capacity in economics, at least for the time of this study. A second supplementary conclusion is that it appears that movement in the research ranking over time of a university is indeed possible. Some comparisons with previous studies are also attempted.

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JEL Classification: A11, A14

I. Introduction: Past Studies

Perhaps human nature is to compare oneself with one's fellows to see how well in a comparative sense one is performing. In any case over the final quarter of the twentieth century, a number of studies ranked economics faculties in North America. Most of these studies focussed on the United States, although several have been concerned with Canada (the point of interest of this paper). For the USA, surveys of knowledgeable (and presumably unbiased) observers have been employed to rank economics faculties; a recent contribution in this regard is Goldberger *et al.* (1995). Some new ground was broken by Graves, Marchand, and Thompson (1982), who ranked universities by faculty publications during the period 1974-78 (standardized page counts) in 24 top journals, giving the reader a choice of total pages of publication and pages per faculty member. Davis and Papanek (1984), on the other hand, preferred to use citations (from the then new Social Science Citation Index [SSCI]) of faculty members listed in current catalogs

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over the period 1978-81.¹ Recently, Thursby (2000) has shown that reputation, as measured by survey results, is indeed closely linked to output produced in the form of publications, citations, and Ph.D. graduates.

The paper by Hirsch *et al.* (1984) forms a natural link with the Canadian studies, because the authors extended their method to 40 foreign "leading departments of economics," 10 of which were in Canada. Moreover, Canadians were not slow to join in the ratings game. Frankena and Bhatia (1973) produced a ranking of top Canadian departments of economics by counting articles (not pages) in 35 "relatively high quality" journals over the period 1968-1972. Laband (1985) had the relatively novel idea of ranking economics faculties by the productivity of their graduates using (1) pages published (size-adjusted) during 1975-84 in 100 top journals; or (2) articles published in the same sources; or (3) citations to work of these graduates over the same period in the SSCI, deleting self-citations. Lucas (1995) used his study of the research productivity of the Canadian profession to produce rankings of university departments of economics based on the number of pages published (adjusted for co-authorship and journal quality, but not for page size). The results from these Canadian studies will be briefly compared to the results of this paper in Section 4.

Before leaving this introduction, it is noted that (at least) two contentious issues must be faced by each study of this sort. First, one must decide if the "economics faculty" includes economists in related disciplines, such as a business school; or if it only includes the department of economics as narrowly defined.² Second, one must decide whether the absolute size of a department is a factor to take into account, so that one desires a per capita measure or whether economies of scale are so important that no scaling should be attempted. Of course, if one wishes to scale, a measure for the scaling must be found. Most studies do not choose between these two approaches, presenting rankings with both an absolute and a per capita measure, although Dusansky and Vernon (1998) aggregate these two measures (by averaging rank order in the two rankings) to provide a final ranking.

II. The Approach of This Study

The approach to be followed here is simply to count the number of scholars cited in Mark Blaug's *Who's Who in Economics* (1999). Thus the number of scholars referenced in this publication becomes the absolute index of departmental quality.

This is not as easy as it sounds, and four issues have to be faced. First, not every scholar invited to submit a biography to this publication will respond; but fortunately there is an appendix listing those invited to respond who did not. With the use of directories and other outside information, the author was able to identify an institutional affiliation for many of these

¹ Other U.S. studies worthy of mention include Hirsch *et al.* (1984), Hogan (1984), Tschirhart (1989), who allowed for rankings in economics specialties, and Dusansky and Vernon (1998). The latter measured journal pages published, adjusted for co-authorships, size of the journal's pages, and the quality of the journal (according to the work of Liebowitz and Palmer [1984]).

² For the record, we note that this is not a trivial issue. Thus Dusansky and Vernon (1998) find a relatively low ranking for the University of Chicago (as compared to other studies), which they trace to their including only the faculty from the strictly defined Department of Economics (and not the Business School, which includes a number of economists) of this august institution. In addition, Griliches and Einev (1998) find fault with Dusansky and Vernon's study's comparatively low ranking for Chicago, on the grounds that the externalities of a star, such as James Heckman, are not properly taken into account.

recalcitrant scholars and to include them in the faculty listings. Second, the author thought that business faculty and other affiliated departments, assuming that they publish in publications considered to be within the economics discipline, were worthy of inclusion; thus individuals listed in Table 1 are not just those in a narrowly defined department of economics.

Third, retired faculty (generally emeriti) are included, on the grounds that they are often still active in research; indeed, some, relieved of teaching duties, may be more active than mid-career faculty.³ Fourth, a definitive date for this exercise must be established as (active) faculty move around. I have chosen (in principle) the pre-millennial period 1996-1999. The first date is the end of the evaluation period for citations that put individual scholars in the directory under study. The second is the date of publication of this Third Edition and which has the institutional affiliation correct for this particular year as far as the author was able to verify.

Of course, the first question that one can ask is, "How did Blaug select his list of leading scholars?" In the preface to the Third Edition (1999), he indicates us that this is done on the basis of citation counts in 200 economics journals indexed in the Social Sciences Citation Index (ISI, 1982 *et seq.*) over the period 1984-1996. Thus the method of this paper has all the weaknesses of standard citation counts, and some would criticize it for weighting equally (at least implicitly) a citation in the most prestigious journal with one in a publication little better than a house organ.⁴ Blaug justifies using citations as his key indicator by the assertion (in a footnote), "...[C]itations are the coinage of reward in academia." (1999, p. viii.) It is noted that individual scholars as a method of aggregating citations is a crude approach; thus a world beater and a marginal scholar who just makes the cut-off line receive the same weight in ranking a university's research contribution in economics. Still, an individual scholar is a natural unit; and the number of scholars of distinction might be considered a good indication of a university's research capabilities in a particular field under examination (here economics).

A fifth issue remains, that of an appropriate measure of scale. Since retired department members and members of related disciplines are included, a count of department size, narrowly defined, will not do. At an earlier stage, the author proposed to scale by the number of economists listed in the 1996 membership directory of the Canadian Economics Association (CEA), where institutional affiliation is clearly indicated. However, the incomplete coverage of this indicator (in the author's own department, only 9 of 17 regular department members were also members of the CEA) made it an imperfect measure of scale. In consequence this approach was dropped, and the rankings are based only on the absolute measure.

III. Results

The results of this tabulation are presented in Table I. (A listing of these individual scholars and their university affiliations appears in the Appendix.) Ten Canadian universities have two or

³ However, I drew the line at deceased faculty members, even those as eminent as the late Harold Innis, on the grounds that, while a research aura never fades completely (at least to an historian of thought), clearly they are not producing current research output.

⁴ The issues are well joined by Boris P. Pesek in his entry in Blaug (1999); Pesek writes, "... In this volume, I appear only as a result of computer blindness. The citations that put me here usually explain how wrong I am. But it has been said that the next best thing to being loved is being hated; the worst thing is to be ignored. Besides, I know that Emperors [sic] hate to be informed about the lack of substance to their clothing." (Blaug, 1999, p. 888.) As far as I can tell, citations are not adjusted for whether the reference is to a single- or a multiple- authored paper, nor for self-citations. In addition, the controls for the clerical accuracy of such counts have been left unspecified.

more scholars listed in *Who's Who in Economics*, and this forms the basis of the ranking.⁵ Thus, according to this criterion, the University of British Columbia is the leading research university in Canada; but the University of Toronto and the University of Western Ontario are not far behind. Considerable bunching appears at the bottom of the list; Queen's University and McMaster University are tied for the fifth position, while four universities vie for ranks seven through ten. Perhaps the greatest surprise (at least to the author) was the relatively strong showing of Simon Fraser University.

Table 1: Research Rankings of Canadian Universities in Economics, 1996-1999

University and Rank	Number of Scholars Profiled
University of British Columbia (I)	13
University of Toronto (II)	10
University of Western Ontario (III)	9
Simon Fraser University (IV)	8
McMaster University (V - tie)	3
Queen's University (V - tie)	3
Carleton University (VII - tie)	2
University of Ottawa (VII - tie)	2
University of Victoria (VII - tie)	2
York University (VII - tie)	2

Source: Author's calculations. (See the text.)

Another feature of this data that leaps to mind upon a slight reflection, is the regional concentration of research strength in economics, for this period. Thus the greater Vancouver region (UBC, the University of Victoria, and Simon Fraser University) boasts 23 profiled scholars in economics; whereas, the greater Toronto area (the University of Toronto, York, McMaster, and Western) has 24 cited economists.⁶ And the remaining three research universities (Carleton, Queen's and Ottawa), with seven named scholars, could be considered a regional grouping.

IV. Some Comparisons with Other Studies

It might be of some interest to compare these results with some previous studies of research rankings in economics of Canadian universities. To begin with the oldest study, that of Frankena and Bhatia (1973), it is noted that their method was simply to count articles in 35 "relatively high quality" journals from mid-1968 through mid-1972. They found that the top departments (according to this criterion) were (in order) the University of British Columbia, the University of Western Ontario, the University of Toronto, and Queen's University. Thus, at the top, the rankings appear to be relatively unchanged over a span of more than a quarter of a century,

⁵ We note that the University of Alberta, the University of Guelph, the Université de Montréal, and the University of Saskatchewan each have one scholar listed in this volume.

⁶ It may be doubtful whether residents of Hamilton or London would be happy with being classified as citizens of greater Toronto. Nevertheless, in terms of easy physical access, I should argue that such a grouping can be justified.

although these results suggest that Queen's has declined slightly and Simon Fraser University has risen. Less agreement exists among the "second tier" Canadian universities; the rankings of Frankena and Bhatia for the next ten Canadian universities are (in order) Waterloo, McMaster, York, Carleton, Alberta, Calgary, McGill, SFU, Montréal, and Ottawa. It is noted that, out of these trailing ten universities, five (Waterloo, Alberta, Calgary, McGill, and Montréal) do not appear in the top ten list of this paper.

Next, the study of Hirsch *et al.* (1984) is examined. Although this study is principally concerned with American universities, Hirsch and his co-authors added an international dimension to their study. Their method was to count the number of standardized pages in 24 "high-quality" journals, with an adjustment by the rule of $1/n$ for co-authored articles, where n is the number of co-authors of a research contribution, and the period of study was 1978-1983. Hirsch *et al.* found ten Canadian universities that made their list; in order these were UBC, Western, Toronto, Queen's, Carleton, McMaster, Alberta, SFU, McGill, and Montréal. For the top four universities, one may note a perfect correlation with the Frankena and Bhatia study, as well as a close correlation with the first four or five ranked universities of the present study. For the remaining six universities, three universities (Alberta, McGill, and Montréal) don't make the top ten list of the present study, although two out of these three (Alberta and Montréal) merit an "honorable mention," as indicated in foot-note 5.

Next, is David Laband's somewhat unique study (1985). As the title of his article indicates, Laband had the interesting idea to rank seven major producers of economics Ph.D.s by the output of their graduates, rather than the output of their faculties. While the period of study was 1975-84, Laband also gives one the choice of several criteria. Thus one can choose the number of size-adjusted pages published in 100 top journals during this period,⁷ the number of articles published in the same journals during the same period, or the number of citations during this period to the work of these graduates in the *Social Sciences Citation Index*, excluding self-citations. One will not be surprised to learn that the results depend upon the criterion adopted. Thus, if the criterion is that of citations received, the rankings are (in order): Western, Queen's, Toronto, UBC, McMaster, McGill, and SFU. However, if the criterion is number of publications, the rankings switch to the following: UBC, Queen's, Toronto or Western (tie), McMaster or SFU (tie), McGill. One may note that, although some volatility exists in these rankings, the top four research universities in economics remain as in Table I of this paper, except for Queen's University, which has been replaced in the top four in this study by SFU. Laband's method would appear not to be particularly suitable for ranking the "second tier" of Canadian universities since some of them do (did) not have established doctoral programs in economics.

Finally, comparison was made to Robert F. Lucas' study of the research productivity in economics journals of the Canadian economics profession, which, as noted above, has as a by-product an implicit ranking of the economics faculties at Canadian universities. Also as noted above, Lucas used total and per capita pages published, adjusted for co-authorship and for journal quality but not for page size. His full period of study was 1981-1990, which overlaps the study period of the present study (1984-1996), but which is certainly not identical to it. On the basis of the total adjusted pages published during period, Lucas' top three schools are Western, Toronto, and UBC (in that order). Hence the same three universities appear in the first three positions as in the present study, even if the order within this first tier is not the same. The next

⁷Laband excluded the *Canadian Journal of Economics* from this list of 100 top journals, a nice touch to eliminate possible bias from the location of this journal at one or more of these schools, as the editor might conceivably encourage with understandable enthusiasm the output of one of his/her own students.

seven schools in order are Queen's (tie for fifth, in this study), McMaster (tie for fifth), Alberta (not in top ten), Montréal (also not in top ten), Carleton (tie for seventh), York (also tie for seventh), and SFU (ranked fourth here). The two schools appearing in the top ten rankings of this study that do not make it into the second tier (ranks 4 through 10 of the Lucas study) are University of Ottawa and University of Victoria, ranked 20th and 22nd respectively in Lucas' study.⁸ Thus one can assert that the correlation of Lucas' rankings with those of the present and previous studies is tight although not perfect.

V. Qualifications and Conclusions

This is ultimately a citation-based study, so it shares the weaknesses of all citation-based studies. Although the author won't repeat the arguments pro and con outlined above, it can be admitted that it certainly is arbitrary to give all citations in recognized journals equal weight, regardless of the importance of the original study, the source study in which the citation appears, the quality of the author cited, the quality of the citing journal itself, or indeed whether the citation is a self-citation. In addition, some might regard the method of aggregating citations, namely the individual scholar whose abbreviated biography appears in *Who's Who in Economics*, as somewhat arbitrary. Thus all citations associated with a named scholar receive a unitary weight; whereas, all others receive a zero weight. This might well be an additional point of dispute. A related issue is the possible underweighting of junior faculty, who may be an important part of a department's research activity; but who will not have had time to build up a portfolio of citations. This qualification might apply especially to an emerging department, which hired a crop of excellent junior researchers.

Indeed, in this regard it may be noted that the fortunes of several departments of economics in the 1990's appear to have been quite sensitive to the movement of several senior scholars. Thus the departure of Richard G. Lipsey from Queen's University for SFU in the mid-1980s is a large part of the lower standing of Queen's in this study as compared to previous studies. Obviously, the appearance of Lipsey and Curtis Eaton (who arrived at Simon Fraser University from Toronto about the same time) helped to boost this school in the standings. Nor is this an isolated example. The departure of Pierre Perron from the Université de Montréal in 1997 (for a destination outside of Canada, namely Boston University) deprived this well-established department of a position in the top ten rankings of this study. By contrast, Montréal finished in the top ten in two of the previous four Canadian studies that have been reviewed.⁹ Whether this sensitivity to the movement of senior scholars is a weakness of this study or an identification of shifting relative capacities is something on which opinions may well differ.

This leads to three tentative conclusions of this study. First, this would appear to be something out there; it seems fair to say that Canadian universities do differ in their capacity for basic research in economics. The rankings of this study do appear to be one method of attacking this question; these rankings are moderately correlated with the rankings of other studies that have addressed this issue. (That the correlations of the rankings are less than perfect is to be expected: time periods, the ranking methodologies, and even the universes studied have not

⁸ For the record, we note that Lucas ranked 33 universities.

⁹ In addition, in Canada our linguistic duality must always be taken into account. The displacement of a French-speaking university, like the Université de Montréal, may simply reflect a lower visibility, as many of the publications of their research faculty will be in the French language and hence be cited less often in the predominantly English-language network of scholarly journals.

always been the same.) Second, a clustering of economic scholarship within regions of Canada has been identified; research capacity does not appear to be evenly spread across the geographical area of Canada as noted above. Finally, shifts in relative research capacity and position in the hierarchy do appear to occur over time.¹⁰ Thus it is possible for an ambitious university/department to improve its standing and also possible for a complacent unit to slip in its reputation and capacity.

This essay may be closed by citing a letter by Robert M. Feinberg (1998) on the study by Dusansky and Vernon (1998). Feinberg argued (and backed his argument with a regression equation) that studies of departmental or university rankings tend to have a bias in favor of the institutions of the authors; a conclusion that seems reasonable to the author. The author of this study was a Professor of Economics for 26 years at the University of Ottawa (1975-2001) and before that was affiliated for a decade (eight years as Full Professor and two years as Associate Professor) at the University of Western Ontario. The author's biases are hereby declared explicitly. Nevertheless, it is hoped that the reader will agree with the author that something of value survives both the qualifications and the possible biases.

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¹⁰ We note that, even within two halves of the 1981-1990 decade, Lucas (1995) noted some small shifts in the relative rankings of journal productivity of Canadian university departments of economics.

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Appendix

Listing of Individual Scholars Associated with the Top Ten Research Universities in Economics

University of British Columbia

Blackorby
 Brander
 Cragg
 Diewert
 Levi
 Rosenbluth
 Scott
 Spencer
 White

 Eswaran
 Evans
 Slade
 Wales

University of Toronto

Berry
 Bird
 Breton
 Carr
 Gordon, M. J.
 Helleiner
 Hollander
 Moggridge
 Pesando
 Poirier

University of Western Ontario

Boyer
 Burgess
 Harley
 Laidler
 Lim
 Parkin
 Segal
 Whalley
 Wonnacott

Simon Fraser University

Boland
 Cheng
 Eaton
 Grubel
 Knetsch
 Lipsey

 Globerman
 Gross

**Listing of Individual Scholars Associated with the Top Ten
Research Universities in Economics: Continues**

McMaster University

Ahmad
Burbridge
Denton

Queen's University

Boadway
Mackinnon
Usher

Carleton University

Brecher
West

University of Ottawa

Bodkin
Perrakis

University of Victoria

Bish
Rutherford

York University

Appelbaum
Plourde

Note: With one exception, scholars indicated below the dotted line did not submit their biographies, but their satisfaction of the criteria for inclusion in the compendium was based on the material of Appendix 4 of Blaug, ed. (1999), along with other supplementary materials, such as annuaries of the American and Canadian economics associations. The one exception is Globerman of Simon Fraser University; in Blaug (1999), his affiliation was listed as a visiting professor at Western Washington University, while the Canadian Economics Association Directory of 1996 lists him as a member of the Simon Fraser faculty. As Appendix 2 of Blaug (1999) also lists him as resident in Canada, I thought that SFU should be credited for his presence at the point of reference of the study.