

Assessing the Relative Impacts of Economics Journals

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ACADEMIC JOURNALS have played an increasingly important role in the dissemination of scientific information throughout this century, particularly during the last decade.¹ This fact is no less true in economics than in other disciplines. The number of journals has also increased greatly in recent decades. For these and other reasons, several recent efforts have been made to judge the various qualities and merits of individual journals. Besides being a rather enjoyable form of naval-gazing for those within a given discipline, such activities also provide valuable information. Where articles are published

can affect one's promotion, tenure, and salary at one's present job; it can also affect one's brand name and the ability to change jobs.

The purpose of this study is to provide a ranking of journals based on their relative influences on the writings of academics, either within the economics profession or in the world at large.² The measurement used to create this ranking, described in detail below, is the number of citations that authors make to articles appearing in various journals. After a brief discussion of several previous studies, we proceed to a more complete explanation of our procedures and results.

¹ This can be illustrated by the fact that academic libraries increased their budgets for journals by about 70 percent while their book budgets rose by only 8 percent, approximately, during the early seventies (Bernard M. Fry and Herbert S. White, 1976). This increased use of journals is probably attributable, at least partially, to the advent of the photocopier (S. J. Liebowitz, 1981).

² An earlier, more extended version of this paper also provided a ranking based on evaluations of department chairmen. The results were similar to previous surveys, discussed later in this paper. Readers interested in our survey results should consult our 1983 working paper.

I. Past Studies

Within our discipline³ several studies have attempted to measure journal "quality."⁴ The most recent flurry of activity occurred in the early seventies. In his 1971 article, A. W. Coats created a limited ranking of journals by examining the citations from major AEA survey volumes to articles in 10 different journals in the early fifties and again in the mid-sixties. In a 1972 study by William J. Moore the institutional affiliations of authors were used to measure journal quality. Of course the institutional rank had to be determined and this created possible circularities if institutional rankings were dependent on the publication records of individual faculty members. Two other 1972 studies attempted to rank journals: the first, by Bradley G. Billings and George J. Viksnins, used citations from three top journals to other journals in order to determine the quality of the other journals; the second, by Jack W. Skeels and Ryland A. Taylor, counted articles on graduate reading lists to rank journals. Billings and Viksnins picked their three journals (*American Economic Review*, *Econometrica* and *Economic Journal*) in a somewhat arbitrary manner, and there was no attempt to adjust for journal size or age. Adjustments for age or size might be important because, quite reasonably, older and larger

journals can be expected to receive more citations. Skeels and Taylor, besides using only a small portion of all reading lists, also neglected to control for a journal's size or age, and the rankings were based on only a small percentage of the journals' published output.

In 1973, a paper by Robert G. Hawkins, Lawrence S. Ritter and Ingo Walter provided what was probably the most influential recent ranking of economics journals.⁵ Their methodology consisted of sending out questionnaires to a heterogeneous group of academic economists, asking them to rank economic journals. After the first survey was completed, the respondents were given the results and asked to rank the journals once again, a process known as the Delphi technique.

A ranking performed in 1974 by Winston C. Bush, Paul W. Hamelman and Robert J. Staaf is something of a precursor to parts of this study. They calculated the number of citations that each of 14 journals received from itself and from the other 13 and used those numbers to create a ranking of the 14 journals. Our study differs from theirs in at least three important ways: (1) we standardize journals to compensate for size and age differentials; (2) we include a much larger number of journals; (3) we use an iterative process to "impact adjust" the number of citations received by individual journals.

II. The Journal Rankings

A. Impact Per Journal

The rankings of journals which we present are based on citations to articles in particular journals by articles in others. At least part of the reason that previous studies, using citations, were based on very small samples of journals was the

³ We are aware of several studies rating psychology journals, using citations. Murray J. White and Geoffrey K. White (1977) used a 10 percent sample of the 1974 Citation Index pages to derive a citation-per-article ranking based on 1972 and 1973 articles. J. Phillippe Rushton and Henry L. Roediger (1978) used results calculated by authors of the Citation Index (called the "impact factor," which is defined as the number of citations in a year to articles from the two previous years, divided by the number of articles) to rank psychology journals. For a criticism of these rankings see Henry Voos and Katherine S. Dagaev (1976).

⁴ Since "quality" is somewhat arbitrary and subjective and since it is possible that some of the best quality work exists in a filing cabinet or in a very low-circulation journal, we are reluctant to use this term.

⁵ In 1980, their article received more citations and in journals ranked higher by our study than any other article cited in this section.

high cost involved in looking up and counting citations from a large number of journals. Fortunately, the advent of the Social Science Citation Index (SSCI) eliminates the need for such laborious work.

The SSCI provides information on the total number of citations from approximately 4300 journals, covering all of the social sciences (and some natural sciences as well). These citations can be to books, journals, unpublished materials, etc. The economic journals included in both the SSCI and this study are almost all the journals which might be of use to academic economists. Volume 6 of the 1980 SSCI gathers data for individual journals in a form which allows journals to be ranked in several different ways. For example, the SSCI totals all the citations from the universe of SSCI journals which accrue to any particular journal. This information is further categorized into citations to articles appearing in a particular journal in a given year.

Table 1 provides rankings of journals based on these numbers. Column 1 ranks journals by the total number of citations received from other journals in 1980. The citing articles were published in 1980 although the cited articles may have been published at any time during the life of the journal. The journals chosen to be included in Table 1 come from several recent issues of the *Journal of Economic Literature*. The numbers in Column 1 reflect a journal's accumulated impact on current authors, and the rankings will probably not be very surprising to most readers.⁶ The *American Economic Review* leads the list with a total of 4065 citations garnered

⁶ Readers might be surprised by the standing of some journals such as the *Yale Law Journal*. It is important, however, to remember that the *Yale Law Journal* is influential in a discipline other than economics and its inclusion in the rankings was dictated by its inclusion in the *J. Econ. Lit.* An attempt to adjust the rankings by the influence of the citing journal will be attempted shortly (in column 3) and many seeming anomalies will disappear.

from 1980 articles in the SSCI universe of journals.⁷ Of course, the *American Economic Review* has had changes in its influence over its life, as have many other journals, and the numbers in Column 1 mask such changes.⁸ More importantly, journals of recent birth have a much smaller inventory of articles to be cited and will certainly be at a disadvantage relative to longer-lived journals.

For these reasons journals were standardized to equivalent ages. The citations to articles published only in the 1975-1979 period were used in the rankings of column 2 (1355 for *Amer. Econ. Rev.*), as well as for all other rankings. Column 2, therefore, measures the 1980 influence of articles appearing in journals in the 1975-1979 period.⁹ There are several notable changes in rankings. Most journals which move up significantly in the rankings are relatively new and do not have a large inventory of articles prior to 1975. In other instances when a journal dramatically changes rank, it most likely indicates an alteration in its impact over time or perhaps a change in size or frequency of publication. We suspect, however, that most readers will be less interested in the impact of a journal's old articles than in the impact of a journal's recent articles and therefore expect that Column 2

⁷ The numbers in Table 1 do not represent the total number of cites. Instead they represent the cites as a percentage of the number of cites in the leading journal. This form of measurement will be used in the next table as well.

⁸ For a history of the relative influence of several leading journals see A. W. Coats (1971) and Edward E. Leamer (1981).

⁹ Two journals, *Economic Letters* and *Scandinavian Journal of Economics*, did not have data for the early part of this period. In this case the data were extrapolated back, based on the average pattern of citations to articles written in different years of the existence of other, less new journals. *The Journal of Econometrics* and *The Journal of Mathematical Economics* did not have data explicitly collected for them by the SSCI, but data were available for these journals in the listings of citations from individual journals and they were included in the study although their values are only approximations.

TABLE I
IMPACT OF JOURNALS RANKINGS BASED ON CITATIONS IN 1980

Rankings Based on Citations to All Articles Ever Published by Journals		Rankings Based on Citations to Articles Published 1975-1979		Rankings Based on Impact Adjusted Citations to Articles Published 1975-1979	
1. Amer. Econ. Rev. (4065)	100.00	Amer. Econ. Rev. (1355)	100.00	Amer. Econ. Rev.	100.00
2. J. Amer. Statist. Assoc.	81.57	J. Polit. Econ.	79.56	J. Polit. Econ.	80.88
3. J. Polit. Econ.	78.45	Econometrica	66.13	Econometrica	63.96
4. Econometrica	71.51	J. Amer. Statist. Assoc.	56.24	J. Monet. Econ.	22.96
5. Yale Law J.	55.06	Yale Law J.	55.13	J. Econ. Theory	22.58
6. Rev. Econ. Statist.	39.02	J. Finance	42.80	Rev. Econ. Stud.	22.52
7. J. Finance	31.93	Rev. Econ. Statist.	36.31	Int. Econ. Rev.	19.04
8. Rev. Econ. Stud.	29.50	Amer. J. Agr. Econ.	32.03	Bell J. Econ.	17.43
9. Quart. J. Econ.	29.13	Bell J. Econ.	30.11	J. Finance	17.42
10. J. Roy. Statist. Soci. B	26.67	Rev. Econ. Stud.	26.49	J. Econometrics*	15.99
11. Econ. J.	26.64	J. Econ. Theory	24.58	Scand. J. Econ.	15.13
12. Mich. Law Rev.	21.89	Mich. Law Rev.	23.84	Brookings Pap. Econ. Act.	13.74
13. J. Econ. Theory	19.75	J. Monet. Econ.	21.70	J. Public Econ.	12.12
14. Bell J. Econ.	18.15	Econ. J.	20.66	J. Finan. Econ.	11.57
15. Amer. J. Agr. Econ.	16.78	J. Finan. Econ.	20.44	Rev. Econ. Statist.	11.45
16. Int. Econ. Rev.	16.75	Int. Econ. Rev.	20.37	J. Amer. Statist. Assoc.	10.87
17. Demography	15.79	Brookings Pap. Econ. Act.	19.70	Quart. J. Econ.	10.70
18. J. Law. Econ.	15.25	Demography	19.26	J. Human Res.	9.93
19. Mon. Lab. Rev.	14.86	J. Econ. Lit.	18.38	J. Econ. Lit.	9.69
20. Economica	14.19	Quart. J. Econ.	17.64	Econ. J.	9.59
21. J. Bus.	13.11	J. Cons. Res.	16.53	J. Law Econ.	9.11
22. Population Devel. Rev.	11.59	J. Econometrics*	16.31	Can. J. Econ.	8.80
23. Brookings Pap. Econ. Act.	11.49	J. Roy. Statist. Soc. B	16.31	Econ. Inquiry	8.70
24. Southern Econ. J.	11.05	J. Public Econ.	16.24	J. Math. Econ.*	8.13
25. J. Roy. Statist. Soc. A	10.70	Southern Econ. J.	15.65	J. Int. Econ.	7.96
26. J. Econ. Hist.	10.26	J. Law Econ.	15.65	Southern Econ. J.	7.67
27. J. Econ. Lit.	10.01	Reg. Stud.	14.91	J. Money, Credit, Banking	7.22
28. Econ. Hist. Rev.	9.62	World Devel.	14.61	Economica	5.89
29. J. Financial Quant. Anal.	9.57	Econ. Inquiry	13.87	Nat. Tax J.	5.25
30. J. Money, Credit, Banking	9.32	J. Human Res.	13.87	Amer. J. Agr. Econ.	4.20
31. J. Public Econ.	8.81	J. Money, Credit, Banking	13.14	J. Legal Stud.	3.09
32. Nat. Tax J.	8.73	J. Urban Econ.	12.99	J. Financial Quant. Anal.	2.76
33. Inquiry	8.51	Econ. Letters	12.69	J. Bus.	2.72
34. J. Human Res.	8.44	J. Legal Stud.	12.03	Ind. Lab. Relat. Rev.	2.51
35. J. Reg. Sci.	8.36	Mon. Lab. Rev.	11.88	J. Reg. Sci.	2.27
36. Econ. Develop. Cult Change	8.22	Soc. Sci. Quart.	11.81	J. Urban Econ.	2.26
37. Reg. Stud.	8.22	Nat. Tax J.	11.81	Euro. Econ. Rev.	2.15
38. J. Finan. Econ.	8.02	Scand. J. Econ.	11.70	Kyklos	2.03
39. Soc. Sci. Quart.	7.95	Population Stud.	11.59	J. Devel. Econ.	1.71
40. Ind. Lab. Relat. Rev.	7.92	Inquiry	11.14	Yale Law J.	1.66
41. J. Monet. Econ.	7.43	J. Financial Quant. Anal.	11.14	J. Ind. Econ.	1.61
42. J. Legal Stud.	7.28	J. Econ. Hist.	9.89	Manchester Sch. Econ. Soc. Stud.	1.53
43. Econ. Geogr.	7.06	J. Bus.	9.52	J. Acc. Res.	1.44
44. Land Econ.	6.56	Economica	9.08	Mon. Lab. Rev.	1.43
45. J. Acc. Res.	6.84	J. Acc. Res.	8.86	J. Roy. Statist. Soc.	1.43
46. Oxford Econ. Pap.	6.79	Ind. Lab. Rev.	8.58	Public Choice	1.05
47. J. Cons. Res.	6.57	Can. J. Econ.	8.56	J. Econ. Issues	.99
48. Ind. Relat.	6.35	J. Math. Econ.*	8.52	Public Finance	.93
49. World Devel.	5.88	J. Int. Econ.	8.49	Oxford Econ. Pap.	.82
50. Urban Stud.	5.83	J. Reg. Sci.	8.34	Econ. Letters	.82
51. Can. J. Econ.	5.54	Public Policy	8.34	Weltwirtsch. Arch.	.79
52. J. Urban Econ.	5.51	Urban Stud.	8.27	J. Econ. Hist.	.67
53. Public Choice	5.34	Econ. Develop. Cult. Change	8.19	Reg. Sci. Urban Econ.	.62
54. J. Int. Econ.	4.90	Public Choice	8.12	J. Econ. Educ.	.62
55. Econ. Letters	4.45	Natural Res. J.	7.68	Oxford Bull. Econ. Statist.	.61
56. Natural Res. J.	4.40	Oxford Econ. Pap.	7.60	J. Devel. Areas	.56
57. Kyklos	4.38	Econ. Geogr.	7.53	J. Roy. Statist. Soc. B	.55
58. Soc. Res.	4.33	Land Econ.	7.45	Explorations Econ. Hist.	.46
59. Int. Lab. Rev.	4.26	J. Roy. Statist. Soc. A	7.45	Land Econ.	.38
60. Manchester Sch. Econ. Soc. Stud.	4.11	Ind. Relat.	7.45	Applied Econ.	.38
61. Brit. J. Ind. Relat.	4.03	Policy Anal.	7.08	J. Environ. Econ. Manage.	.29
62. Public Policy	3.99	Econ. Hist. Rev., 2nd Ser.	6.64	Brit. J. Ind. Relat.	.29
63. J. Devel. Stud.	3.47	J. World Trade Law	6.57	Public Finance Quart.	.28

TABLE 1 (Continued)

Rankings Based on Citations to All Articles Ever Published by Journals	Rankings Based on Citations to Articles Published 1975-1979	Rankings Based on Impact Adjusted Citations to Articles Published 1975-1979			
64. <i>Econ. Rec.</i>	3.42	<i>Brit. J. Ind. Relat.</i>	6.42	<i>Inquiry</i>	.23
65. <i>J. World Trade Law</i>	3.42	<i>Weltwirtsch. Arch.</i>	6.27	<i>Urban Stud.</i>	.22
66. <i>Int. Soc. Sci. J.</i>	3.30	<i>J. Environ. Econ Manage.</i>	5.61	<i>Econ. Develop. Cult. Change</i>	.19
67. <i>Weltwirtsch. Arch.</i>	3.30	<i>Europ. Econ. Rev.</i>	5.61	<i>Scott. J. Polit. Econ.</i>	.18
68. <i>J. Risk Ins.</i>	3.20	<i>Kyklos</i>	5.46	<i>J. Econ. Bus.</i>	.17
69. <i>Europ. Econ. Rev.</i>	3.15	<i>J. Econ. Issues.</i>	5.09	<i>Hist. Polit. Econ.</i>	.14
70. <i>J. Ind. Econ.</i>	3.08	<i>Reg. Sci. Urban. Econ.</i>	5.09	<i>Ind. Relat.</i>	.13
71. <i>Scott. J. Polit. Econ.</i>	2.76	<i>Labor Hist.</i>	4.72	<i>Quart. Rev. Econ. Bus.</i>	.12
72. <i>J. Environ. Econ. Manage.</i>	2.68	<i>J. Risk Ins.</i>	4.65	<i>Econ. Rec.</i>	.12
73. <i>Labor Hist.</i>	2.68	<i>Int. Lab. Rev.</i>	4.43	<i>Lloyds Bank Rev.</i>	.11
74. <i>Calif. Manage. Rev.</i>	2.58	<i>J. Devel. Stud.</i>	4.35	<i>Mich. Law Rev.</i>	.11
75. <i>J. Econ. Issues.</i>	2.46	<i>Sloan Manage. Rev.</i>	4.28	<i>Int. Lab. Rev.</i>	.11
76. <i>Policy Anal.</i>	2.41	<i>Soc. Res.</i>	4.28	<i>J. Cons. Res.</i>	.11
77. <i>Appl. Econ.</i>	2.34	<i>Int. Soc. Sci. J.</i>	4.06	<i>J. Devel. Stud.</i>	.10
78. <i>Sloan Manage. Rev.</i>	2.24	<i>Exploration Econ. Hist.</i>	4.06	<i>World Devel.</i>	.09
79. <i>Exploration Econ. Hist.</i>	2.14	<i>Scott. J. Polit. Econ.</i>	4.06	<i>Reg. Stud.</i>	.07
80. <i>Oxford Bull. Econ. Statist.</i>	2.04	<i>J. Devel. Econ.</i>	3.99	<i>J. Risk Ins.</i>	.04
81. <i>Hist. Polit. Econ.</i>	2.02	<i>Calif. Manage. Rev.</i>	3.76	<i>Econ. Geogr.</i>	.04
82. <i>Public Finance</i>	1.99	<i>Manchester Sch. Econ. Soc. Stud.</i>	3.62	<i>Rev. Soc. Econ.</i>	.04
83. <i>Sci. Soc.</i>	1.99	<i>Econ. Record</i>	3.47	<i>Nebr. J. Econ. Bus.</i>	.04
84. <i>Reg. Sci. Urban Econ.</i>	1.97	<i>J. Ind. Econ.</i>	3.47	<i>Sloan Manage. Rev.</i>	.03
85. <i>Quart. Rev. Econ. Bus.</i>	1.89	<i>Applied Econ.</i>	3.32	<i>Public Policy</i>	.03
86. <i>Amer. J. Econ. Soc.</i>	1.85	<i>Hist. Polit. Econ.</i>	3.25	<i>Malayan Econ. Rev.</i>	.03
87. <i>Bus. Hist. Rev.</i>	1.57	<i>Quart. Rev. Econ. Bus.</i>	2.80	<i>Econ. Hist. Rev., 2nd Ser.</i>	.03
88. <i>J. Devel. Econ.</i>	1.55	<i>Amer. J. Econ. Soc.</i>	2.66	<i>J. Transp. Econ. Policy</i>	.02
89. <i>Public Finance Quart.</i>	1.48	<i>Oxford Bull. Econ. Statist.</i>	2.66	<i>J. Int. Econ.</i>	.02
90. <i>J. Transp. Econ. Policy</i>	1.45	<i>Public Finance Quart.</i>	2.66	<i>Int. J. Soc. Econ.</i>	.02
91. <i>Lloyds Bank Rev.</i>	1.33	<i>Public Finance</i>	2.51	<i>Soc. Sci.</i>	.02
92. <i>J. Devel. Areas</i>	1.28	<i>Sci. Soc.</i>	2.36	<i>Australian J. Agr. Econ.</i>	.01
93. <i>J. Common Market Stud.</i>	.91	<i>Lloyds Bank Rev.</i>	2.14	<i>Amer. J. Econ. Soc.</i>	.01
94. <i>J. Econ. Bus.</i>	.91	<i>J. Devel. Areas</i>	2.07	<i>Natural Res. J.</i>	.00
95. <i>Rev. Soc. Econ.</i>	.91	<i>J. Transp. Econ. Policy</i>	1.99	<i>Population Stud.</i>	.00
96. <i>J. Int. Bus. Stud.</i>	.76	<i>J. Econ. Bus.</i>	1.92	<i>Labor Hist.</i>	.00
97. <i>J. Econ. Educ.</i>	.62	<i>J. Int. Bus. Stud.</i>	1.77	<i>J. World Trade Law</i>	.00
98. <i>Int. J. Soc. Econ.</i>	.57	<i>Int. J. Soc. Econ.</i>	1.55	<i>Demography</i>	.00
99. <i>Malayan Econ. Rev.</i>	.44	<i>J. Common Market Stud.</i>	1.40	<i>Policy Anal.</i>	.00
100. <i>Nebr. J. Econ. Bus.</i>	.37	<i>Rev. Soc. Econ.</i>	1.33	<i>Calif. Manage. Rev.</i>	.00
101. <i>Australian J. Agr. Econ.</i>	.32	<i>Bus. Hist. Rev.</i>	1.03	<i>Bus. Hist. Rev.</i>	.00
102. <i>J. Econ. Stud.</i>	.17	<i>J. Econ. Educ.</i>	.89	<i>J. Common Market Stud.</i>	.00
103. <i>Matekon</i>	.07	<i>Nebr. J. Econ. Bus.</i>	.81	<i>Soc. Res.</i>	.00
104. <i>J. Econometrics</i>	N/A	<i>Malayan Econ. Rev.</i>	.44	<i>Sci. Soc.</i>	.00
105. <i>J. Math. Econ.</i>	N/A	<i>Australian J. Agr. Econ.</i>	.15	<i>Int. Soc. Sci. J.</i>	.00
106. <i>Scand. J. Econ.**</i>	N/A	<i>J. Econ. Stud.</i>	.15	<i>Matekon</i>	.00
107. <i>Econ. Inquiry**</i>	N/A	<i>Matekon</i>	.15	<i>J. Econ. Stud.</i>	.00

Source: *Social Science Citation Index*, 1980.

* Approximate value—see S. J. Liebowitz and J. P. Palmer (1983) for details.

** The *SSCI* did not contain information on the *Scandinavian Journal of Economics* prior to 1976 when its name changed. Nor did it combine information for *Economic Inquiry* with the earlier data for the *Western Economic Journal*.

should prove of greater interest than Column 1.

The first two columns of Table 1 provide a measure of a journal's impact on all journals contained in the *SSCI*.¹⁰ Therefore,

¹⁰ Data for the *J. Amer. Statist. Assoc.* and the *J. Roy. Statist. Soc.* (Sections A and B) were collected primarily from the *Science Citation Index* (*SCI*).

the total impact includes a journal's impact on many disciplines other than economics.¹¹ For many purposes this may

Both indexes were cross-researched to make the data base as complete as possible.

¹¹ Unfortunately all data provided by the *SSCI* and the *SCI* are somewhat incomplete in that they don't list citations from one journal to another if there

be an entirely reasonable measure of influence, but economists, being a rather narrow-minded and self-centered group, are probably more concerned with a journal's impact on the economics profession. And even within the discipline, a journal's impact on highly influential journals is probably of greater value than its impact on less influential journals. In Column 3 of Table 1 we create a ranking which addresses these issues.

A ranking which gives less credit for citations from non-economic or less influential economic journals can be created in the following manner. First, we weight each citation according to the total number of citations received by the citing journal if it is on our list; otherwise the citation receives a weight of zero. This has two immediate impacts: (1) citations from journals not on our list get zero weight and therefore the influence of "non-economic" journals disappears; (2) the impact of a citation from an economics journal is determined by its initial ranking in Column 2 of Table 1. The numbers contained in this new ranking are then used as weights in the next iteration of this procedure.

The first iteration can be represented as:

$$Q_{i,1} = \sum_{j=1}^n \left[C_{ij} \sum_{k=1}^m C_{jk} \right]$$

where

- C_{ij} = number of citations to journal i from journal j ,
- m = number of journals in SSCI,
- n = number of "economics" journals,
- $Q_{i,1}$ = Impact Adjusted value for journal i , first iteration,

were relatively few of them over the past five or ten years. To calculate our rankings, we assumed that these citations, listed as "other" in the indexes, were as likely to be from economics journals of similar rankings as those for which data were available. This assumption allowed us to attach pro-rated weights to the citations tabulated in the "other" category, both for the initial rankings and for our iterative process.

and where the Q_i 's are the impact-adjusted values. The logic of the procedure is such that once a set of Q_i 's is calculated, these values can then be used to calculate a new set of Q_i 's. In general, the h^{th} iteration of this procedure can be represented as:

$$Q_{i,h} = \sum_{j=1}^n C_{ij} Q_{j,h-1}.$$

This process could go on ad infinitum but fortunately the results always converged after only a small number of iterations. The results after fifty iterations (well after convergence) are portrayed in Column 3 of Table 1.

There are some fairly general characterizations that can be made about these impact-adjusted results. First, there is a much larger differential between the top and bottom journals than existed in the previous ranking. Second, journals not considered primarily economic (e.g., *Yale Law Journal*, *Journal of the American Statistical Association*) drop significantly, as one would hope for this type of ranking. Third, the value of almost every journal falls in comparison with the *American Economic Review* or *Journal of Political Economy*, indicating that articles in most journals receive not only fewer cites than these two but less influential cites as well.

B. Impact Per Manuscript

While the overall impact of particular journals in the 1975-1979 period is certainly of interest, the average reader is probably much more interested in knowing which journals are likely to provide the greatest impact for any given manuscript. A journal might, after all, attain a rather high degree of total influence through brute force, say, by publishing 12 issues per year and having each issue comprise 500 pages. A measure of influence, holding the size of journals constant, should indicate the relative "bang for the buck" provided by various journals.

We performed two different adjustments to correct for this problem. The first and, we believe, more successful adjustment was to divide citations by the total number of characters published by a journal in the 1975–1979 period. The number of characters was calculated as the number of pages published in this period (excluding book reviews, advertisements, etc.) multiplied by the number of characters contained on a complete page with no mathematical notation. Adjustments were made when the sizes of pages changed over the period. The iterative procedure then used citations per character as the weights in the first iteration and $Q_{j,h-1}/Z_i$ as the weight in the h^{th} iteration (where Z_i = number of characters in journal i). After each iteration the resulting number for each journal was divided by the number of characters published by that journal in order that the results always be consistent. This can be represented as:

$$Q_{i,h} = \left(\sum_{j=1}^n C_{ij} Q_{j,h-1} \right) / Z_i$$

where

Z_i = number of characters
published by journal i

and where

$$Q_{i,0} = \sum_{j=1}^m C_{ij} / Z_i.$$

The rankings based on citations per character are reported in the first two columns of Table 2. Column 1 represents total citations divided by total characters and can be derived from Column 2 of Table 1 by dividing each of the values in Table 1 by the number of characters published by the journal and normalizing the highest value to 100. Controlling for the number of characters causes some fairly notable changes in the rankings. Journals with a small amount of printed matter (such as *Journal of Economic Literature*,

Journal of Financial Economics) move up in the rankings while others with a large amount of printed matter (*American Journal of Agricultural Economics*, *American Economic Review*, *Econometrica*) fall in the rankings.¹²

Column 2, which represents rankings based on impact adjusted citations per character, probably comes closest to an ideal measure of the impact on the economics profession of manuscripts published in various journals. If the number of citations an article receives is not determined only by its own merit, but is affected by the average influence of the journal, authors wishing to have the greatest influence on the profession from their publications should look to this column for guidance in submitting their manuscripts.

Since Column 2 is probably the ranking closest to "journal quality," it might be instructive to compare the ranking with the Hawkins-Ritter-Walter survey of 1973. There are some substantial changes which can be broadly generalized. English journals are less highly ranked in our study: *Review of Economic Studies* drops from 6 to 10; *Economic Journal* drops from 7 to 23; *Economica* drops from 9 to 11 and *Oxford Economic Papers* drops from 12 to 42. Harvard journals have less influence than respondents to the survey thought: *Quarterly Journal of Economics* drops from 4 to 13; *Review of Economics and Statistics* drops from 5 to 16 and their new entry *Economic Letters* comes in at 56. History journals have far less influence in our study. Several new journals, not rated in the 1973 survey, do very well: *Journal of Financial Economics*, *Journal of Monetary Economics*, *Brookings Papers*, *Journal of Mathematical Economics*,

¹² The reader will notice that the *American Economic Review* is now distinct from the Papers and Proceedings Issue. This distinction is made because of our finding that citations per character were much less in the Papers and Proceedings Issue than in the regular *Journal*. Other journals which had special issues (e.g., *Journal of Finance*) were not found to have this dichotomous result.

while other new journals have yet to gain as much influence. The relatively new but previously rated *Bell Journal of Economics* has moved up considerably, from 27 to 8.

The third and fourth columns of Table 2 represent rankings based on citations per article. Using articles to control for journal size might be thought of as good or a better way to control for journal size as using citations per character. Unfortunately the number of articles (taken from the SSCI, which lists them as "source items") does not distinguish between full-size articles and comments, replies and short articles. Therefore journals which do not contain much dialogue or short articles (e.g., *Brookings Papers*) move up relative to those journals which do contain these types of papers (e.g., *American Economic Review*). Nevertheless, these rankings may contain information of value to some and so we present their results as well. The rankings are not too dissimilar from those in Columns 1 and 2 and most of the qualitative generalizations which hold for one also hold for the other.

III. Conclusions

We have endeavored to rank journals in a way which will prove meaningful to members of the profession. We have attempted to control for both journal size and age in constructing a measure of journal impact and consider this procedure

to be a significant improvement over previous methods.

The reader may well wonder if citations are actually a good measure of influence. For example, the practices of scholarship in various fields may differ so that economic historians, say, may give citations more frequently than economic theorists. If so, comparing citations received by authors in these two fields would not be indicative of their actual relative influence. It is also possible that authors submitting manuscripts give gratuitous citations to articles appearing in the journal of submission in the hope that these citations will increase the probability of acceptance. Finally, it can be argued that citations themselves are not indicative of "true" influence. Space limitations precluded a full discussion of these points in this paper but readers who are interested in them are referred to S. J. Liebowitz and J. P. Palmer (1983). In that paper empirical evidence is brought to bear upon the first two hypotheses, with the conclusion being that the rankings in Tables 1 and 2 are *not* significantly influenced by practices of scholarship or gratuitous citations.

One final caution. If these results should ever play an important role in promotions, salary or tenure, we would expect the practices of scholarship to change in a manner which would lead to citation-inflation. Such endogenous behavior could alter the significance and meaning of future studies of this kind.

TABLE 2
IMPACT OF JOURNALS ADJUSTED FOR SIZE
RANKINGS BASED ON 1980 CITATIONS TO ARTICLES PUBLISHED 1975-1979

Rankings Based on Citations Per Character		Rankings Based on Impact Adjusted Citations Per Character		Rankings Based on Citations Per Article		Rankings Based on Impact Adjusted Citations Per Article	
1. J. Polit. Econ.	100.00	J. Polit. Econ.	100.00	J. Econ. Lit.	100.00	J. Econ. Lit.	100.00
2. Amer. Econ. Rev.	93.00	J. Finan. Econ.	99.97	Yale Law J.	76.62	Brookings Pap. Econ. Act.	96.86
3. J. Econ. Lit.	81.61	Amer. Econ. Rev.	76.56	Brookings Pap. Econ. Act.	75.32	J. Finan. Econ.	62.15
4. J. Finan. Econ.	61.64	J. Mon. Econ.	61.07	J. Polit. Econ.	66.35	J. Polit. Econ.	59.12
5. Rev. Econ. Statist.	61.20	J. Finance	60.11	J. Finan. Econ.	61.34	Bell J. Econ.	39.45

TABLE 2 (Continued)

Rankings Based on Citations Per Character	Rankings Based on Impact Adjusted Citations Per Character	Rankings Based on Citations Per Article	Rankings Based on Impact Adjusted Citations Per Article				
6. J. Finance	58.55	J. Econ. Lit.	55.00	Mich. Law Rev.	56.69	Amer. Econ. Rev.	34.48
7. Yale Law J.	58.22	Econometrica	47.59	Amer. Econ. Rev.	48.36	J. Monet. Econ.	33.00
8. Econometrica	57.35	Bell J. Econ.	46.44	J. Legal Stud.	45.98	Economica	31.63
9. J. Monet. Econ.	56.66	Brookings Pap. Econ. Act.	37.04	Bell J. Econ.	45.39	Econometrica	31.60
10. Bell J. Econ.	53.95	Rev. Econ. Stud.	36.45	J. Law Econ.	43.30	Rev. Econ. Stud.	30.36
11. J. Amer. Statist. Assoc.	48.57	Economica	36.20	Inquiry	42.09	J. Math. Econ.	24.73
12. Brookings Pap. Econ. Act.	46.65	J. Math. Econ.	35.60	Econometrica	38.96	J. Law Econ.	22.89
13. Econ. J.	43.74	Quart. J. Econ.	35.17	J. Monet. Econ.	37.66	J. Econ. Theory	22.28
14. J. Cons. Res.	42.05	J. Econ. Theory	32.09	J. Cons. Res.	33.59	J. Public Econ.	19.65
15. J. Roy. Statist. Assoc. B	41.85	Amer. Econ. Rev. P. and P.	31.37	Rev. Econ. Stud.	30.06	Int. Econ. Rev.	19.04
16. J. Urban. Econ.	41.84	Rev. Econ. Statist.	29.98	J. Roy. Statist. Assoc. B	28.93	J. Econometrics*	17.32
17. Quart. J. Econ.	41.59	J. Econometrics*	29.60	Econ. J.	27.99	J. Ind. Econ.	16.55
18. Rev. Econ. Stud.	41.10	J. Int. Econ.	29.55	Rev. Econ. Statist.	27.76	Quart. J. Econ.	16.17
19. J. Law Econ.	40.77	Int. Econ. Rev.	29.33	Demography	27.73	Econ. J.	14.96
20. Demography	39.36	J. Human Res.	28.06	Public Policy	27.60	J. Finance	14.63
21. Amer. Econ. Rev. P. and P.	38.12	J. Money, Credit, Banking	24.15	J. Urban Econ.	26.56	Amer. Econ. Rev. P. and P.	14.613
22. J. Legal Stud.	37.27	J. Public Econ.	23.61	Reg. Stud.	25.46	J. Int. Econ.	14.12
23. Inquiry	37.01	Econ. J.	22.51	J. Finance	24.45	J. Human Res.	13.63
24. J. Human Res.	36.19	Econ. Inquiry	22.44	J. Amer. Statist. Assoc.	24.33	Rev. Econ. Statist.	12.40
25. J. Math. Econ.	35.28	Scand. J. Econ.	22.29	J. Human Res.	23.95	Public Finance	11.92
26. J. Econometrics*	35.90	J. Law Econ.	21.68	Int. Econ. Rev.	23.36	Nat. Tax J.	9.90
27. Int. Econ. Rev.	34.65	J. Bus.	21.13	J. Math. Econ.*	22.51	J. Money, Credit, Banking	9.88
28. J. Econ. Theory	33.85	Ind. Lab. Relat. Rev.	18.52	Quart. J. Econ.	22.36	Can. J. Econ.	9.43
29. Ind. Lab. Relat. Rev.	32.20	Can. J. Econ.	17.99	Population Stud.	22.01	Manchester Sch. Econ. Soc. Stud.	9.38
30. Economica	32.13	J. Financial Quant. Anal.	13.20	J. Econometrics*	21.35	Ind. Lab. Relat. Rev.	8.95
31. Econ. Inquiry	32.08	J. Ind. Econ.	12.60	J. Econ. Theory	21.04	J. Legal Stud.	8.43
32. Scand. J. Econ.	30.74	Southern Econ. J.	12.38	J. Public Econ.	20.77	J. Bus.	8.29
33. J. Public Econ.	30.58	J. Urban Econ.	12.18	J. Roy. Statist. Soc. A.	20.11	J. Urban Econ.	8.07
34. J. Money, Credit, Banking	30.13	Nat. Tax J.	11.76	Amer. Econ. Rev. P. and P.	19.80	Econ. Inquiry	7.88
35. J. Int. Econ.	29.43	J. Acc. Res.	10.63	Economica	18.93	Scand. J. Econ.	7.11
36. Amer. J. Agr. Econ.	29.25	Kyklos	9.95	Ind. Lab. Relat. Rev.	18.83	J. Acc. Res.	6.98
37. Int. Relat.	29.05	Manchester Sch. Econ. Soc. Stud.	9.50	J. Bus.	18.53	Environ. Econ. Rev.	6.88
38. J. Bus.	28.20	J. Amer. Statist. Assoc.	7.45	J. Money, Credit, Banking	18.50	Public Finance Quart.	5.52
39. Mich. Law Rev.	27.85	J. Legal Stud.	7.31	J. Int. Econ.	18.17	Oxford Econ. Pap.	4.86
40. Reg. Stud.	27.00	Public Finance	7.15	J. Econ. Hist.	17.84	Southern Econ. J.	4.83
41. Public Policy	26.83	Europ. Econ. Rev.	6.46	J. Acc. Res.	17.77	Brit. J. Ind. Relat.	4.75
42. Econ. Geogr.	25.88	Oxford Econ. Pap.	6.22	Econ. Inquiry	17.47	Appl. Econ.	4.39
43. Nat. Tax J.	25.47	Public Choice	5.27	Econ. Geogr.	17.39	Kyklos	4.30
44. J. Reg. Sci.	25.41	Public Finance Quart.	4.71	Oxford Econ. Pap.	16.83	J. Environ. Econ. Manage.	4.16
45. Urban Stud.	25.21	J. Reg. Sci.	4.55	J. Ind. Econ.	16.38	J. Roy. Statist. Assoc. A	4.14
46. Kyklos	24.81	Appl. Econ.	4.11	Urban Stud.	16.08	Public Choice	4.09
47. Oxford Econ. Pap.	23.84	J. Devel. Econ.	3.71	Nat. Tax J.	15.73	J. Financial Quant. Anal.	3.44
48. Soc. Sci. Quart.	23.66	Ind. Relat.	3.50	Brit. J. Ind. Relat.	15.62	J. Amer. Statist. Assoc.	3.02
49. Policy Anal.	23.40	J. Roy. Statist. Soc. A	3.47	J. Reg. Sci.	14.88	Inquiry	3.01

TABLE 2 (Continued)

Rankings Based on Citations Per Character		Rankings Based on Impact Adjusted Citations Per Character		Rankings Based on Citations Per Article		Rankings Based on Impact Adjusted Citations Per Article	
50. Public Choice	22.16	J. Econ. Educ.	3.24	Amer. J. Agr. Econ.	14.46	J. Devel. Econ.	2.29
51. Southern Econ. J.	21.97	J. Environ. Econ. Manage.	3.19	Scand. J. Econ.	14.38	Scot. J. Polit. Econ.	1.90
52. Brit. J. Ind. Relat.	21.82	Brit. J. Ind. Relat.	3.10	Policy Anal.	14.22	J. Cons. Res.	1.84
53. Population Stud.	21.65	Weltwirtsch. Arch.	3.02	Reg. Sci. Urban Econ.	13.86	J. Reg. Sci.	1.82
54. Sloan Manage. Rev.	20.85	Amer. J. Agr. Econ.	2.62	Ind. Relat.	13.68	Yale Law J.	1.79
55. Can. J. Econ.	19.99	Lloyds Bank Rev.	2.61	Sloan Manage. Rev.	13.61	Lloyds Bank Rev.	1.73
56. J. Acc. Res.	19.46	Econ. Letters	2.54	Econ. Develop. Cult. Change	13.49	Econ. Letters	1.61
57. Land Econ.	19.25	J. Cons. Res.	2.41	J. Environ. Econ. Manage.	13.34	Weltwirtsch. Arch.	1.60
58. J. Financial Quant. Anal.	19.19	Reg. Sci. Urban Econ.	2.18	Soc. Sci. Q.	13.30	Rev. Soc. Econ.	1.30
59. J. Environ. Econ. Manage.	18.87	Scot. J. Polit. Econ.	2.08	Scot. J. Polit. Econ.	13.30	J. Econ. Issues	1.26
60. J. Econ. Hist.	18.60	Land Econ.	1.95	World Devel.	12.54	Quart. Rev. Econ. Bus.	1.26
61. Labor Hist.	18.38	Urban Stud.	1.86	Econ. Hist. Rev., 2nd Ser.	12.47	Reg. Sci. Urban Econ.	1.24
62. J. Ind. Econ.	18.14	J. Econ. Bus.	1.81	Manchester Sch. Econ. Soc. Stud.	12.35	Ind. Relat.	1.18
63. Econ. Devel. Cult. Change	17.94	Oxford Bull. Econ. Statist.	1.66	Exploration Econ. Hist.	12.29	Nebr. J. Econ. Bus.	1.14
64. Manchester Sch. Econ. Soc. Stud.	17.91	J. Econ. Issues	1.51	Europ. Econ. Rev.	12.17	Urban Stud.	1.02
65. Econ. Letters	17.85	Inquiry	1.46	Can. J. Econ.	11.80	Econ. Rec.	.98
66. Scot. J. Polit. Econ.	17.66	Quart. Rev. Econ. Bus.	1.33	J. Devel. Econ.	11.74	Oxford Bull. Econ. Statist.	.96
67. J. Roy. Statist. Soc. A	17.52	Econ. Rec.	1.30	Public Choice	11.69	Amer. J. Agr. Econ.	.93
68. Lloyds Bank Rev.	17.11	Exploration Econ. Hist.	1.08	Land Econ.	11.18	Land Econ.	.88
69. Reg. Sci. Urban Econ.	16.94	J. Econ. Hist.	1.06	Southern Econ. J.	10.97	J. Econ. Hist.	.75
70. Econ. Hist. Rev., 2nd Ser.	16.52	Econ. Develop. Cult. Change	1.05	J. Financial Quant. Anal.	10.78	Exploration Econ. Hist.	.71
71. Europ. Econ. Rev.	15.88	J. Devel. Areas	1.03	Econ. Letters	10.73	J. Econ. Bus.	.64
72. J. World Trade Law	15.69	Yale Law J.	.99	Labor Hist.	10.60	J. Devel. Areas	.62
73. Weltwirtsch. Arch.	14.93	Nebr. J. Econ. Bus.	.92	Lloyds Bank Rev.	10.26	Econ. Develop. Cult. Change	.59
74. Natural Res. J.	14.40	J. Roy. Statist. Assoc. B.	.91	Natural Res. J.	10.18	Mon. Lab. Rev.	.57
75. J. Devel. Econ.	13.48	Sloan Manage. Rev.	.90	Weltwirtsch. Arch.	9.78	J. Econ. Educ.	.49
76. World Devel.	13.20	Rev. Soc. Econ.	.90	Kyklos	8.55	Hist. Polit. Econ.	.45
77. Exploration Econ. Hist.	13.00	Mon. Lab. Rev.	.75	J. World Trade Law	8.47	J. Transp. Econ.	.44
78. Econ. Rec.	12.76	Hist. Polit. Econ.	.71	J. Devel. Stud.	8.13	J. Roy. Statist. Soc. B	.40
79. J. Devel. Stud.	11.60	J. Risk Ins.	.70	Sci. Soc.	8.07	Public Policy	.37
80. Appl. Econ.	11.38	J. Devel. Stud.	.55	Hist. Polit. Econ.	7.72	J. Devel. Stud.	.36
81. Sci. Soc.	11.20	Int. Lab. Rev.	.48	J. Econ. Issue	7.11	Mich. Law Rev.	.36
82. Public Finance Quart.	11.05	Int. J. Soc. Econ.	.45	Appl. Econ.	6.97	Int. J. Soc. Econ.	.36
83. J. Risk Ins.	10.90	J. Transp. Econ.	.43	Oxford Bull. Econ. Statist.	6.77	Int. Lab. Rev.	.35
84. J. Econ. Issues	10.76	Reg. Stud.	.41	Soc. Res.	6.74	J. Risk. Ins.	.35
85. Calif. Manage. Rev.	10.60	Public Policy	.32	J. Devel. Areas.	6.50	Reg. Stud.	.32

TABLE 2 (Continued)

Rankings Based on Citations Per Character		Rankings Based on Impact Adjusted Citations Per Character		Rankings Based on Citations Per Article		Rankings Based on Impact Adjusted Citations Per Article	
86. Soc. Res.	10.27	Econ. Geogr.	.25	Mon. Lab. Rev.	6.47	Sloan Manage. Rev.	.29
87. Amer. J. Econ. Soc.	10.06	Malayan Econ. Rev.	.25	J. Transp. Econ.	6.40	J. Int. Bus. Stud.	.15
88. Oxford Bull. Econ. Statist.	9.87	J. Int. Bus. Stud.	.23	Public Finance	6.34	Malayan Econ. Rev.	.15
89. J. Econ. Educ.	9.85	Labor Hist.	.17	J. Risk Ins.	6.33	Econ. Geogr.	.12
90. Mon. Lab. Rev.	9.36	World Devel.	.13	Int. Lab. Rev.	6.05	World Devel.	.12
91. J. Econ. Bus.	9.35	Econ. Hist. Rev., 2nd Ser.	.11	Int. J. Soc. Econ.	6.00	Econ. Hist. Rev., 2nd Ser.	.09
92. Quart. Rev. Econ. Bus.	9.29	Amer. J. Econ. Soc.	.07	Calif. Manage. Rev.	5.87	Labor Hist.	.05
93. Int. J. Soc. Econ.	9.11	Mich. Law Rev.	.05	Public Finance Quart.	5.84	Amer. J. Econ. Soc.	.03
94. Public Finance	8.73	Soc. Sci. Quart.	.04	Econ. Rec.	5.74	Soc. Sci. Quart.	.03
95. J. Transp. Econ. Policy	8.53	Natural Res. J.	.03	Int. Soc. Sci. J.	5.50	Population Stud.	.03
96. Hist. Polit. Econ.	8.49	Calif. Manage. Rev.	.03	J. Int. Bus. Stud.	5.47	Policy Anal.	.02
97. Int. Lab. Rev.	7.75	Population Stud.	.03	Quart. Rev. Econ. Bus.	4.81	Nat. Res. J.	.01
98. J. Devel. Areas	7.47	Australian J. Agr. Econ.	.02	Amer. J. Econ. Soc.	4.66	Australian J. Agr. Econ.	.01
99. Rev. Soc. Econ.	7.20	Policy Anal.	.02	Rev. Soc. Econ.	4.40	Calif. Manage. Rev.	.01
100. J. Common Market Stud.	6.96	Bus. Hist. Rev.	.01	Bus. Hist. Rev.	3.86	Demography	.00
101. J. Int. Bus. Stud.	5.95	Demography	.00	J. Common Market Stud.	3.85	Bus. Hist. Rev.	.00
102. Bus. Hist. Rev.	5.40	J. World Trade Law	.00	J. Econ. Bus.	3.60	J. World Trade Law	.00
103. Nebr. J. Econ. Bus.	5.05	J. Common Market Stud.	.00	Nebr. J. Econ. Bus.	2.61	J. Common Market Stud.	.00
104. Int. Soc. Sci. J.	4.99	Sci. Soc.	.00	J. Econ. Educ.	2.35	Sci. Soc.	.00
105. Malayan Econ. Rev.	2.73	Soc. Res.	.00	Malayan Econ. Rev.	2.15	Soc. Res.	.00
106. J. Econ. Stud.	1.18	Matekon	.00	J. Econ. Stud.	.72	Int. Soc. Sci. J.	.00
107. Matekon	.76	Int. Soc. Sci. J.	.00	Australian J. Agr. Econ.	.66	Matekon	.00
108. Australian J. Agr. Econ.	.47	J. Econ. Stud.	.00	Matekon	.43	Econ. Soc. Rev.	.00

Source: Social Science Citation Index, 1980.

* Approximate value—see S. J. Liebowitz and J. P. Palmer (1983) for details.

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