ARTIGO
RBEE Revista Brasileira de Economia de Empresas
Brazilian Journal of Business Economics
Vol. 2 - nº 3 Setembro - Dezembro 2002 95-117

AN ANALYSIS OF RANKINGS OF ECONOMIC JOURNALS

João Ricardo Faria[1]

Abstract: *This paper presents rankings of economic journals covering the period 1970-1995. The analysis of these rankings gives a number of results: The journals that appear consistently among the top 10 are: American Economic Review, Journal of Political Economy and Econometrica. There is a tendency towards specialization in economics. Specialized journals are becoming more important in comparison with general journals. The relative importance of particular areas has changed from less to more technical fields. Journals published in the U.S. have gained market share from journals published elsewhere. The performance of journals shows that the influence of prestigious departments is decreasing, while the role of individual editors is increasing. Finally, there is growing participation of commercial publishers in the market of academic journals.*

Keywords: *Role of economics and economists; Economics rankings.*

JEL Classification Numbers: *A11; A19; B15.*

Acknowledgements: *I would like to thank, without implicating, Joaquim P. Andrade and Miguel Leon-Ledesma for useful comments.*

[1] School of Social Sciences, University of Texas at Dallas, USA.

Introduction

In Economics, and other sciences in general, rankings provide valuable information. They have been used to measure, evaluate, compare, classify and reward departments and scholars. They are one of the key instruments to assess the quantity and quality of academic output of scholars and departments through objective criteria. This is consistent with the idea that people and departments in academia should be evaluated on a merit basis.

Departmental rankings have an important role in attracting grants, future students and faculty job searchers. They provide evidence of departmental productivity, which is one of the main criteria to allocate public grants [Fox and Milbourne, 1999]. They are perceived as a low-information-cost proxy for the quality of the research environment and faculty skills to prospective students and faculty job searchers [Graves et. al, 1982]. Productivity rankings of academic economists help evaluate an individual's productivity to allocate salary increases, promotions and tenure decisions [Hammermesh et. al., 1982]. They also affect the academic's reputation and his job mobility inside and outside academia[2].

Most of the departmental and scholar rankings are based in publications in peer-review academic journals. Therefore, a requisite to construct departmental and scholars' rankings is a list of academic journals. Academic journals have played an increasingly important role in the dissemination of scientific information in many disciplines. In Economics their importance have increased steadily over the past decades and they are now the main mean of communication among academic economists.

Rankings of economic journals are based on the relative impact of the papers published. The often used measure to assess the impact of academic journals in economics is the number of citations each journal is credited in a specific year for material published in previous years. Despite its limitations[3], citations data provide one of the few quantifiable aspects of a journal's performance. An alternative approach to analyze the relative impact of journals is to survey members of the profession.

Citations, according to Laband and Sophocleus (1985), are the scientific community's version of dollar voting by consumers for consumption goods. Holding prices constants, consumers decide to buy goods from certain producers because of their merchandise's quality. Whether the purchase decision is influenced by the buyer's friendship or family relationship with the seller, it does not matter. The relevant point is the volume of sales in which market shares are based. The same holds true for the consumption of scientific literature. What matters is the volume of citations and not the motivation behind each specific citation.

There are general rankings of journals in economics, and rankings for more specialized fields of economics[4]. The focus here is on general rankings. As shown below, even when one is dealing with a quantifiable measure such as citations, rankings may differ, and actually differ, due to the way citations are taken into account. It is important to stress that journal's citations have several dimensions. Among them, the sample of journals, the time period in consideration, and self

[2] For worldwide rakings of economists and economics departments see Coupé (2000) and García-Castrillo et al. (2002); for Brazil see Faria, 2000; Azzoni 2000; Issler and Pillar, 2002.

[3] Beed and Beed (1996) contest that citation rankings reassure journal quality.

[4] See, for example, the ranking of real estate journals in Redman *et al.* (1998), and agricultural economics journals in Burton and Phimister (1996).

citations play an important role in defining the relative importance of the journal. The rankings can display remarkable differences depending on the methodology implemented to assess citations.

In the first part of this paper, a sample of economics journals rankings is reported. One of the prominent features of these rankings is the variation in the position of journals. Journals change their relative position frequently. In the second part, the paper focuses on the forces that shape the rankings of academic journals in economics. By studying the dynamics of journals' hierarchy it identifies a pattern, or patterns, of change in the rankings. The pattern is characterized by the increasing specialization inside economics, the geographical concentration of economic research, the decreasing importance of institutions, and the active and growing influence of editors and publishers. In addition, some hypothesis are advanced and contrasted with the available empirical evidence to explain the dynamics of journals' rankings.

The remainder of the article is organized as follows. The next section presents the rankings of academic journals in economics from 1970 to 1995. Section three analyses the specialization trends in journals and in economics. Section four presents evidence of geographical changes in the profession. Section five brings forward the increasing importance of individuals vis-à-vis economics departments and the role of commercial publishers in the profession. Finally, the concluding remarks appear in section six.

Rankings of Economics Journals: 1970-1995

Among earlier efforts to build journal rakings, two are worth noticing. Coats (1971) ranking was based on the citations from major AEA survey volumes to articles in 10 different journals in the early fifties and mid-sixties. Bush et al. (1974) calculated the number of citations that each of 14 journals received from itself and from a control group of other 13 journals. They used those numbers to create a ranking of 14 journals.

Liebowitz and Palmer (1984) [L-P, henceforth] refined the technique used by Bush et al. (1974). L-P standardized journals to compensate for size and age differentials. They also included a much larger number of journals and used an iterative process to calculate the impact-adjusted citations per article.

The ranking based on impact-adjusted citations was created to address two issues. The first is to emphasize the journal's impact on the economics profession, by decreasing the weight of non-economic journals in the ranking. Actually, L-P gave zero weight to non-economic journals. The second issue is to focus on the influence of a journal within economics. The journal's citations received by influential journals has greater weight than citations in less influential journals. Therefore, the L-P technique is sensible to the choice of the initial ranking, and tends to bias the results towards the journals that appear in the top of the initial ranking.

The computation of the impact-adjusted citations per article is an iterative procedure. The first interaction is the following:

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

where, C_{ij} is the number of citations to journal *i* from journal *j*; *m* is the number of journals in the Social Science Citation Index (SSCI); *n* is the number of economics journals, and $Q_{i,1}$ is the impact adjusted value for journal *i*, first iteration. The h-th iteration is:

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

After a number of iterations the results are expected to converge.

However, journals can have a greater impact depending on its age and its size. The older is the journal, other things being constant, the greater the number of articles published by the journal that can be cited. The selection of a specific time interval is a way to control for the age of the journal. In the same vein, the size of the journal matters, since the number of articles and pages published increase with the size of the journal, which makes it more likely to be quoted than others.

In order to control for the size of the Journal, L-P divided citations by the total number of characters published by a journal in the period studied. The number of characters was calculated as the number of pages published multiplied by the number of characters contained on a complete page with no mathematical notation. The iterative procedure is:

$$Q_{i,h} = \sum_{j=1}^{n} [C_{ij}\, Q_{j,h-1}] / Z_i$$

where Z_i is the number of characters published by journal *i*, and where $Q_{i,0} = \sum_{j=1}^{n} [C_{ij}] / Z_i$.

Laband and Piete (1994) update and backdate the rankings of Liebowitz and Palmer (1984) using the same methodology. In the rankings for 1970, they collected information on citations in 1970 for 50 selected economics journals indexed by the Index of Economics Articles for articles published from 1965 to 1969. In the 1990 rankings they used the SSCI, and collected citation information of 130 journals. The rankings of 1980 are the same as in Liebowitz and Palmer (1984).

The top 50 journals of Table A2 of Laband and Piete (1994) is reproduced here [Table 1]. They are the rankings based on impact adjusted citations per character. As Liebowitz and Palmer (1984) argue, these rankings probably come closest to an ideal measure of the impact on the economics profession of papers published in various journals.

LABAND AND PIETE (1994) - Table A2 **TOP 50 JOURNALS: 1970-1980-1990**						
Rankings Based on Impact Adjusted Citations Per Character						
	1970		**1980**		**1990**	
1	JPE	*100*	JPE	*100*	AER	*100*
2	Rev. Econ.Stud.	*43.2*	J.Financ. Econ.	*99*	J. Financ. Econ.	*90.7*
3	AER	*41.4*	AER	*76.6*	Econometrica	*89*
4	QJE	*34.4*	J. Monet. Econ.	*61.1*	JPE	*79.1*
5	Rev. Econ. Stat.	*30.2*	J. Finance	*60.1*	QJE	*64.5*
6	J. Finance	*22.6*	JEL	*55*	J. Monet. Econ.	*59.3*
7	Econ. J.	*20.9*	Econometrica	*47.6*	JET	*51.1*
8	Economica	*20.7*	Rand J. Econ. (Bell)	*46.4*	J. Finance	*51*
9	Econometrica	*20*	Brookings Pap. Ec. Ac.	*37*	Rev. Econ. Stud.	*47.6*
10	J. Bus	*17*	Rev. Econ. Stud.	*36.5*	Rand J. Econ	*46.5*
11	AER Papers & Proc.	*16.3*	Economica	*36.2*	J. Econ. Persp.	*37*
12	Int. Econ. Rev.	*15*	J. Math. Econ.	*35.6*	J. Math. Econ.	*32.4*
13	Econ. Planning	*10.7*	QJE	*35.2*	J. Acc.Econ.	*28.7*
14	Oxford Econ. Papers	*8.06*	JET	*32.1*	J. Bus.	*27.1*
15	Econ. Rec.	*6.06*	AER P &P.	*31.4*	J. Econometrics	*26.8*
16	JASA	*6*	Rev.Econ. Stat.	*30*	AER P & P.	*26.7*
17	Southern Econ. J.	*5.1*	J. Econometrics	*29.6*	J.Financ. Quant. An.	*21.3*
18	J. Law Econ.	*4.1*	J. Inter. Econ.	*29.6*	JEL	*18.6*
19	J.Roy.Stat. A	*4*	Int. Econ. Rev.	*29.3*	J. Mon.Credit Bank.	*17.9*
20	J. Econ. Hist.	*3.7*	J. Human Res.	*28.1*	J. Lab.Econ.	*17.1*
21	Yale Essays Econ.	*3.4*	J. Mon. Credit Bank.	*24.2*	Int. Econ. Rev.	*16.7*
22	Econ. Inquiry	*3.2*	J. Public Econ.	*23.6*	Brookings	*14.7*
23	J. Devel. Stud.	*2.7*	Econ. J.	*22.5*	Rev. Econ. Stat.	*14*
24	Kyklos	*2.7*	Econ. Inquiry	*22.4*	J. Law Econ.	*12.8*
25	Econ. Dev.Cult. Change	*2.5*	Scand. J. Econ.	*22.3*	Econ.J.	*12.8*
26	Lloyd' Bank Rev.	*2.4*	J. Law Econ.	*21.7*	J.Bus.Econ. Stat.	*12.4*
27	Nat. Tax J.	*2.3*	J. Bus.	*21.1*	J.Econ. Educ.	*12.2*
28	Public Finance	*2.2*	Ind. Lab. Relat. Rev.	*18.5*	Ind.Lab.Relat.Rev.	*11.7*
29	Rev. Soc. Econ.	*2.1*	Canadian J. Econ.	*18*	J. Public Econ.	*10.8*
30	Quart. Rev.Econ. Bus	*2*	J. Finan. Quant. Anal.	*13.2*	J. Int. Econ.	*10.8*
31	J. Reg. Sci.	*1.7*	J. Ind. Econ.	*12.6*	Econ. Letters	*9.6*
32	Weltwirt. Archiv	*1.6*	Southern Econ. J.	*12.4*	J. Ind. Econ.	*9.5*
33	Amer. J.Agri. Econ.	*1.5*	J. Urban Econ.	*12.2*	Int. J. Ind.Org.	*8.5*
34	J. Ind. Econ.	*1.4*	Nat. Tax J.	*11.8*	J.Econ. Dyn.Control	*8.1*
35	Manch.School	*1.4*	J. Acc. Res.	*10.6*	Soc.Choice Welfare	*7.3*
36	Land Econ.	*1.3*	Kyklos	*10*	J. Human Res.	*7.3*
37	Econ. Internazionale	*1.2*	Manch. School	*9.5*	J.Bank. Finance	*6.7*
38	Explorations Econ. Hist.	*1*	JASA	*7.5*	Econ. Inquiry	*5.9*
39	Scand. J. Econ.	*0.8*	J. Legal Stud.	*7.3*	JASA	*5.5*
40	IMF Staff Papers	*0.8*	Public Fiance	*7.2*	J.Urban Econ.	*5.3*
41	Ind. Relat.	*0.6*	Europ. Econ. Rev.	*6.5*	Demography	*5.1*
42	Prob. Econ.	*0.5*	OEP	*6.2*	J.Roy.Stat. B	*4.8*
43	Econ.Hist. Rev.	*0.2*	Public Choice	*5.3*	J.Econ. Hist.	*4.4*
44	Bus. Hist. Rev.	*0.1*	Publ.Finan. Quart.	*4.7*	Oxford Bull.Ec. Stat.	*4.2*
45	Ind. Lab. Relat. Rev.	*0.1*	J. Reg. Sci.	*4.6*	J. Finance Res.	*4.1*
46	Indian Econ. J.	*0*	Applied Economics	*4.1*	Economica	*3.9*
47	Scot. J. Pol. Econ.	*0*	J.Devel. Econ.	*3.7*	Public Choice	*3.8*
48	S. African J.Econ.	*0*	Ind.Rel.	*3.5*	J. Risk Ins.	*3.7*
49	Soc. Econ. Stud.	*0*	J. Roy. Stat. A	*3.5*	Eur.Econ. Rev.	*3.6*
50	German Econ. Rev.	*0*	J. Econ. Education	*3.2*	Scand. J.Econ.	*3.6*

A more recent ranking of journals for 1995 appears in Hodgson and Rothman (1999). They calculate the "impact factor" of citations differently from the L-P methodology. Thus it is not surprising that their list of top journals is quite distinct from the one in Table 1. They calculate the citation impact factor as a ratio between citations and citable items published. For example, the 1995 impact factor of Journal *A* is calculated by dividing the number of all SSCI source journals' 1995 citations of articles the Journal *A* published in 1993 and 1994 by the total number of source items published by the Journal *A* in 1993 and 1994. Therefore they attributed the same weight to economic and non-economic journals. Their list is reproduced in Table 2.

HODGSON AND ROTHMAN (1999) -Table 1 TOP 30 JOURNALS: 1995		
		Impact Factor
1	JEL	*4.7*
2	Econometrica	*3.2*
3	J. Econ. Perspectives	*2.9*
4	J. Account. Econ.	*2.3*
5	J. Financ. Econ.	*2.1*
6	QJE	*2.1*
7	Brookings Papers	*1.9*
8	JPE	*1.9*
9	Econ. Geogr.	*1.7*
10	AER	*1.7*
11	Rev. Econ. Stud.	*1.5*
12	J.Env. Econ. Manag.	*1.5*
13	J. Monet. Econ.	*1.5*
14	Post-Soviet Affairs	*1.4*
15	J. Law Econ.	*1.3*
16	J. Labor Econ.	*1.3*
17	J. Econometrics	*1.1*
18	J. Law Econ. Organ.	*1.1*
19	Ecol. Econ.	*1*
20	J. Risk Uncertainty	*1*
21	J. Health Econ.	*1*
22	J. Hum. Res.	*1*
23	Econ. Hist. Rev.	*1*
24	Work Employ Soc.	*1*
25	Rand J.Econ.	*0.9*
26	Econ J.	*0.9*
27	Land Econ.	*0.9*
28	J. Comp. Econ.	*0.9*
29	Game Econ. Behav.	*0.8*
30	B. Indon. Econ. Stud.	*0.8*

One influential ranking of journals was published by Diamond (1989). Diamond (1989) attempted to determine a set of core economic journals. The list of core journals was built by using the citations from the SSCI for 1986 employing three criteria: 1) total number of citations; 2) the percentage of self-citations; 3) the impact of a journal. The impact factor was defined as the number of citations made to articles published in 1984 and 1985 in a journal divided by the total number of articles published by that journal in those years.

The Diamond list of core journals provoked much controversy. Hodgson (1993) has argued that the lack of recognition of heterodox journals in Diamond's core has led to a downgrading in the status of these journals. This has important implications for research funding for individuals and departments. Burton and Phimister (1995) argue that the way in which the citations data was combined to form the Diamond list was arbitrary. They find more appropriate to investigate ways in which the "value of judgements" implicit in the choice of weights can be reduced. To address this issue they applied ranking techniques such as Data Envelopment Analysis (DEA) and Integer Programming (IP).

DIAMOND (1986)	**BURTON AND PHIMISTER (1995) - Tables 3, 5 AND 6**		
	DEA	*Integer Programming*	*DEA*
Alphabetical Order	*Ranking 1986*	*Ranking 1986*	*Ranking 1991*
AER	JEL	JEL	JEL
Brookings	J.Financ. Econ.	J. Financ. Econ.	Econometrica
Canadian J. Econ	Brookings	Brookings	JPE
Econometrica	J.Law Econ.	JPE	Brookings
Econ. Inquiry	JPE	J.Law Econ.	J.Econ. Persp.
E. Journal	Econometrica	Econometrica	J. Financ. Econ.
Economica	AER	AER	QJE
Econ. Letters	J. Monet. Econ.	Rev. Econ. Stud.	AER
Eur. Econ. Rev.	Rev. Econ. Stud.	J. Monet. Econ.	Rev. Econ. Stud.
Int. Econ. Rev.	J. Account. Econ.	J. Account. Econ.	J. Law Econ.
J. Devel. Econ.	Rand J. Econ	Econ. J.	J. Monetary Econ.
J. Econometrics	Explor.Econ. Hist	Expl. Econ. Hist.	Rand. J. Econ.
JEL	J. Labor Econ.	Rand J. Econ.	OEP
JET	Econ. J.	QJE	Econ. J.
J. Financ. Econ.	Econ. Hist. Rev.	J. Hum. Res.	J. Labor Econ.
J.Int. Econ.	QJE	J. Labor Econ.	JET
J. Labor Econ.	J. Econ. Hist.	Econ. Geogr.	Sov. Econ.
J. Law Econ.	Econ. Geogr.	Econ. Hist. Rev.	J.Hum. Res.
J. Math. Econ.	J. Hum. Resour.	Cambridge J. Econ.	J. Account. Econ.
J. Monet. Econ.	Int. Econ. Rev.	Int. Econ. Rev.	Econ. Geogr.
JPE	Cambridge J. Econ.	J. Econometrics	J. Int. Econ.
J. Publ. Econ.	Rev. Econ. Stat.	Rev. Econ. Stat.	J. Health Econ.
OEP	Econ. Dev.Cult. Change	J. Econ. Hist.	Probl. Communism
QJE	J. Int. Econ.	J. Int. Econ.	J. Econometrics
Rand J.Econ.	J. Econometrics	IMF Staff Papers	NBER Macro. Ann.
Rev. Econ. Stud.	IMF Staff Papers	JET	J. Econ. Hist.
Rev. Econ. Stat.	JET	Econ. Dev. Cult. Change	J. Appl. Econometr.

In Table 3 the Diamond's core list of journals is reproduced together with three rankings drawn from Burton and Phimister (1995). The first two rankings are based in data from SSCI for 1986, and are constructed with DEA and IP. The third list with data for 1991 was constructed with DEA.

Stigler et al. (1995) explored another way to rank the journals. They assess the ratio of the number of times journal *A* is cited by journal *B* relative to the citations of journal *B* by journal *A*. They selected the cross-citations of nine earlier economics journals for the period of 1987-1990. Table 4 presents the figures for citing journal and cited journal.

STIGLER ET AL (1995) - Table 2									
Citing Journal	Cited Journal								
	AER	E.J.	Econ.	JET	JME	JPE	QJE	REStat	REStud
AER	1,090	108	423	136	185	652	275	120	209
Econ. J.	440	369	458	103	101	375	160	55	208
Econometrica	157	44	894	269	43	170	92	35	229
JET	123	22	669	754	7	126	100	5	252
J. Monet. Econ.	276	17	272	107	455	362	87	27	65
JPE	373	61	321	108	113	646	155	75	155
QJE	301	43	204	98	57	230	220	32	114
Rev. Econ. Stat.	416	66	416	25	95	310	98	574	97
Rev. Econ. Stud.	140	40	379	189	26	166	94	12	291
Total	3,316	770	4,036	1,789	1,082	3,037	1,281	935	1,620

STIGLER ET AL (1995) - Table 3									
Ratios of Citations sent to Journal A by Journal B to Citations Received by B from A									
Journal A	*Journal B*								
	AER	E.J.	Econ.	JET	JME	JPE	QJE	REStat	REStud
AER	1	4.07	0.37	0.9	1.49	0.57	1.09	3.47	0.67
Econ. J.	0.25	1	0.1	0.21	0.17	0.16	0.27	1.2	0.19
Econometrica	2.69	10.41	1	2.49	6.33	1.89	2.22	11.89	1.66
JET	1.11	4.68	0.4	1	15.29	0.86	0.98	5	0.75
J. Monet. Econ.	0.67	5.94	0.16	0.07	1	0.31	0.66	3.52	0.4
JPE	1.75	6.15	0.53	1.17	3.2	1	1.48	4.13	1.07
QJE	0.91	3.72	0.45	1.02	1.53	0.67	1	3.06	0.82
Rev. Econ. Stat.	0.29	0.83	0.08	0.2	0.28	0.24	0.33	1	0.12
Rev. Econ. Stud.	1.49	5.2	0.6	1.33	2.5	0.93	1.21	8.08	1
Weighted Average	0.96	2.95	0.48	1.15	1.54	0.66	1.01	2.24	0.83

The hierarchy of journals is calculated using the data from Table 4. One can see that *AER* was cited by the *Econometrica* 157 times and in turn cited the *Econometrica* 423 times. So 157/423 = 0.37 is the ratio, for this pair of journals, of citations sent to the *AER* to those sent to the *Econometrica*. High ratios indicate that the journal in the column head of table 5 is more an importer than an exporter of citations. From table 3 one can infer that *Econometrica* and *JPE* are the leading exporters, therefore they are on the top of the hierarchy of this list of journals for the period in consideration.

Up to this point we have showed journal rankings based on citations. However, as said earlier, journals rankings can be built through surveys of members of the profession. In a pioneer work, Hawkins et al. (1973) asked a heterogeneous group of academic economists, through questionnaires, to rank economic journals. After the first survey was finished, they sent the results to the respondents, asking them to rank the journals once again. Malouin and Outreville (1987) conducted a survey of 1,045 economists in the United States, Great Britain, France and Quebec and ranked economics journals on the basis of their response. Table 6 presents their ranking for the top 10 journals.

MALOUIN AND OUTREVILLE (1987) - Table 1	
1	AER
2	JPE
3	Econometrica
4	JASA
5	J. Finance
6	JET
7	QJE
8	Rev. Econ. Stat.
9	Rev. Econ. Stud.
10	JEL

It is worth comparing the perception of the economists within academia concerning journals with the rankings based on citations. Ellis and Durden (1991) related the ranking in Malouin and Outreville (M-O) (1987) with L-P ranking. The idea was to test if the economists' perceptions ranking as in M-O is affected by the scientific impact of the journal as measured by citation frequency, given by L-P ranking. In addition they tested the hypothesis that the past reputation of the journal, as reflected in the earlier ranking of Hawkins et al. (1973), also matters for the actual reputation. The estimate OLS regression was:

Actual Reputation = 5.6 + 0.032 Scientific Impact + 0.622 Past Reputation
(7.180) (3.472) (8.472)

Adjusted R^2 = 0.855; D-W statistic = 1.491

The result in Ellis and Durden (1991) sugggests a bias in the rankings toward the older, more established journals. They also show a bias towards more theoretical and general journals.

Taking into account in Table 1 the rankings for 1980 and 1990, and Tables 2, 3 and 4, including all columns, and contrasting them with Table 6, one can see that just 3 journals – the "holy trinity" to quote Barret et al. (2000) - appear consistently among the top 10 in all lists: *American Economic Review*, *Journal of Political Economy* and *Econometrica*. While *Review of Economic*

Studies and the *Quarterly Journal of Economics* fail to appear in at least one of these rankings.

The rankings of journals exposed above have interesting features, the most prominent is that the relative importance of journals is always changing. This paper is concerned with the identification of patterns that shape these changes. As we will see below, they are characterized by the increasing specialization inside economics, the geographical concentration of economic research, the decreasing importance of institutions, and the active and growing influence of editors and publishers. Additionally, some ideas are used to explain these characteristics. Whenever it is possible, the hypotheses advanced here are contrasted with the available empirical evidence.

What Do Journals' Rankings Tell Us?

This question involve a huge number of issues -just to number a few - such as the institutional nature of journals, their market niche, their public, and economists that publish in them.

Specialization

Relevant information that can be draw from journals' rankings is that they reflect the status of several specific fields inside economics. This issue is better analyzed through Table 1, since it depicts rankings that emphasise journals citations. By looking at Table 1, one can wonder how and why specific areas gather the attention of the academic community in economics, while others lost it. Table 7 depicts the numbers of journals from Table 1 by areas. General journals are journals that publish any sort of material in Economics: theoretical and applied work. Field journals correspond to specific disciplines within economics, such as mathematical economics, public economics or health economics. Table 7 indicates the change in the relative importance of specialized journals in relation to general journals and in relation to other field journals.

NUMBER OF JOURNALS PER AREA BASED ON TABLE 1			
	1970	1980	1990
GENERAL	25	23	18
FINANCE	3	5	9
MATH-ECONOMETRICS	2	4	6
LABOR	2	3	3
MONET.	2	2	2
INDUSTRIAL	1	1	2
EDUCATION	0	1	1
INTERNATIONAL	2	1	1
REGIONAL-URBAN	1	2	1
POLITICS	0	1	1
RISK	0	0	1
DEMOGRAPHY	0	0	1
SOCIAL CHOICE	0	0	1
PUBLIC	2	4	1
LAW	1	2	1
HISTORY	4	0	1
PLANNING	1	0	0
AGRICULTURAL	2	0	0
DEVELOPMENT	2	1	0

Basically one can identify two trends in economics by considering Table 7. The first trend is the relative increase in the number of specialized journals vis-à-vis general journals, which suggests that specialization is increasing inside economics. Economics has become more fragmented and the market share of general journals has decreased as a consequence [see Eagly, 1975, and Siegfried, 1994].

The second trend reflects that specialization has changed its own pattern. Some areas expanded their relative importance at the cost of others. That is, there is competition between areas to attract the attention of the profession. Areas such as finance, mathematics and econometrics, and labor economics have their journals growing in influence from the 1970 to 1990 rankings. Among the fields that have lost market share are economic history, agricultural economics, and development economics.

An obvious explanation for both trends is the rate of growth of economists. Stigler et al (1995) estimate that the population of academic economists in English-speaking nations has increased over 75-fold in the last 100 years. Of course one should expect increasing specialization in the field, since some areas become congested. The specialization pattern, however, follows the differential in the research return between different areas. That is, economists tend to concentrate in areas in which the return of their research is higher. The return of the research can be measured in terms of number of papers published, reputation, income, etc[5].

Table 8 presents the matrix of correlation for field journals that appear in Table 7. The reduction in the correlation coefficients suggests that has been a major change within specific fields in economics. One can see that the biggest change in the relative importance of the field journals happened during the seventies. There are several causes for this change, two of them are analyzed here: technological shocks and the rise of brand new journals.

CORRELATION FIELD JOURNALS			
	1970	*1980*	*1990*
1970	1		
1980	0.406237	1	
1990	0.375812	0.772443	1

Technological Shocks

It is noticeable from Table 7 that while journals in mathematics and econometrics increased their relative importance by threefold; journals dealing with economic history almost disappeared from the top 50. This may suggest that during this period there was remarkable changes in the way economists communicate their findings, with an expansion in the use of mathematics and econometric techniques, which explains the replacement of verbal by analytical journals[6] in the journals hierarchy. These changes reflect a major technological shock with permanent effects, translated in the substitution in research tools by economists.

[5] For instance, Sauer (1988) considered the value of a published paper to an academic economist, and found that a publication in a top journal is worth an increase in salary of $1602.

[6] Incidentally, McCloskey (1991) argues that despite the language of economics has become more codelike and their procedures more mechanized, economists are not more scientific than they were in the past, just more scientistic, concluding that: "The results are bad for economic science, because they conceal the arguments beneath the rhetorical conventions, in the choice of words".

The technological improvement inside the profession was driven by two forces: on the one hand, the spread of mathematical, statistical and econometric techniques, and, on the other hand, the introduction of personal computers which made it easy to write and edit papers, and to apply econometric and mathematical tools. These technological shocks reduced the production costs of academic research[7]. An increase in technical skills by academic economists, ceteris paribus, implies that they consume more technical papers as inputs for their work, which consequently becomes more technical. Therefore, technological shocks, by affecting production costs and economists' preferences help to explain the observed trend towards the increase in the relative importance of more technical journals[8].

What do General Journals Publish ? Are They Really General ?

The loss of relative importance of general journals as showed in Table 7, has to be seem with caution. According to Stigler et al. (1995) general journals' importance is manifest in the citation patterns of journals with a strong empirical orientation. They present evidence that leading journals in agricultural economics, labor and finance cite heavily general journals while the inverse is not true. However, their evidence is confined to the three top journals: *AER, JPE* and *Econometrica*. As seen before, these are the only journals that appear in the top 10 journals in all rankings presented.

One wonders if the observed decrease in the market share of general journals is due to the type of articles they publish. The increasing specialization in economics leads to the formulation of the hypothesis that general journals are not general enough to publish important papers of particular fields in economics. The idea is that if general journals refrain from publishing papers of particular areas in economics, the authors in these fields have incentives to submit their papers to journals specialized in their fields.

One possible corollary of this proposition is that the degree of openness of general journals to specific areas is due to editorial preference of specific fields of research. Or in other terms, it reflects discrimination against specific areas resulted from the loss of prestige of particular fields of research among economists.

The areas in economics are classified according to the JEL system in 18 categories: from *A* to *Z*. If one assumes that all areas have the same importance in economics, and general journals represent these areas fairly, so one should expect to find around 5.5% of the articles published by these journals corresponding to each specific field.

Table 9 presents the percentage of articles published by some of the main general journals of the profession [Krueger, 1999] : *AER, AER Papers and Proceedings, JPE, Journal of Economic Perspectives* (*JEP*), *QJE and JEL* [all of them figuring among the top 20 journals in the 1990 ranking, see Table 1].

---

[7] Nowadays, the internet has pushed down the production costs of academic output by facilitating the communication with other researchers.

[8] Technical knowledge increases the chances of journal's publication. First, it decreases the evaluation costs of papers (Garner, 1979) and second, it decreases the opportunity cost of a contributor who has acquired the minimal technical expertise demanded by the journal (Wallis and Dollery, 1993), as Colander (1991) stressed: "knowing a technique that can be applied to various areas can lead to five or ten articles, knowing a specific area may lead to one or two articles" (p.59).

Krueger (1999) - Table 1							
Percentage of Articles Published by Field in Selected Journals, 1994-1998							
JEL Code	*JEP*	*AER*	*JPE*	*QJE*	*JEL*	*AER P&P*	***MEAN***
A. General economics and teaching	17	0.3	0.9	1.1	16.7	7.7	7.3
B. Methodology and history of economic thought	5.8	0.9	0.9	0	14.6	4.5	4.45
C.Mathematical and quantitative methods	4.5	3.8	0.5	2.2	1	0.9	2.15
D.Microeconomics	9	21.3	26.9	14.4	12.5	10.8	15.81
E. Macroeconomics and monetary economics	13	13.1	10.4	8.7	13.5	6.8	10.9
F. International economics	1.8	11.1	4.7	4.3	7.3	12.5	6.9
G. Financial economics	2.2	7.3	9.9	30	3.1	1.7	9
H. Public economics	8.1	5	4.7	2.2	2.1	7.1	4.8
I. Health, education, and welfare	9.4	2.9	4.2	3.2	7.3	10.5	6.2
J. Labor and demographic economics	8.5	11.4	9.4	13.4	11.5	18.5	12.1
K. Law and economics	1.8	0.6	1.9	1.4	1	0.9	1.26
L. Industrial organization	6.3	7.3	8	5.4	0	1.7	4.8
M. Business administration and business economics; marketing; accounting	0.4	0.3	1.9	1.4	0	1.1	0.85
N. Economic history	0.4	1.5	2.8	0.7	1	2	1.4
O. Economic development, technological change, and growth	4.9	7.3	4.2	8.3	4.2	8	6.1
P. Economic systems	4	0.3	1.4	0.7	1	4	1.9
Q. Agricultural and natural resource economics	2.2	4.4	5.2	0.7	1	0.6	2.35
R. Urban, rural, and regional economics	0.4	1.5	1.4	1.8	1	0.9	1.16
z. Other special topics	0	0	0.5	0	1	0	0.25
Number of articles	223	343	212	277	96	352	

The last column in Table 9 depicts the average number of articles published in the journals per area. It is clear that areas C, K, M, N, P, Q, R and Z are under-represented in the articles published by these general journals. This evidence is reinforced by the findings of Barrett et al. (2000), which show that most of the fields within economics are implicitly fully marginalized by traditional ranking methods. That is, the journals' that make the top in the rankings are confined to the subdisciplines from which basic theory and methods originate.

In line with the hypothesis outlined above, authors in the marginalized fields prefer to migrate to specialized journals to publish their work. Hence one must expect the development of a market for specialized journals in these areas.

However, the evidence presented in Table 9, is not suffice to support the idea that general journals are discriminating against particular areas due to the loss of importance or prestige of specific fields of research. While areas that have been loosing prestige among economists, such as economic history (N) and agricultural and natural resource economics (Q) are indeed under-represented in the general journals. One can notice that areas with increasingly relative importance in economics such as Mathematical and quantitative methods (C) and Business (M), are also under-represented in these general journals[9].

[9] Notice that this pattern is kept in the journals which publish invited articles as JEP and AER Papers and Proceedings.

The Raise of Brand New Journals: Interest Gap and Congestion in General Journals

According to Laband and Piete (1994), at least 55 new economics journals commenced publication between 1976 and 1985. There are no figures available from 1985 onwards, however one can notice that the number of journals catalogued in the Journal of Economic Literature has increased over the last few years and now it is over 300 journals.

The rise of new journals appear to be associated with the effort in filling the existing gap between general public interest and academic output. In specific niches of the profession these gaps were not fully explored by the dominating journals. The gaps become wider when problems and issues related to specific fields become more important for the general public[10] . This holds true particularly for finance and labor economics.

The massive increase of the financial sector in the past decades expanded the research in finance with the consequent multiplication in the number of academic journals and scholars dedicated to it. A similar movement occurred in labor economics. Problems related to permanent high unemployment rates and their macroeconomic impacts drove the attention of economists to this field of research. However, the general importance of these fields is not immediately translated into academic output. There is an essential role played by new journals in capturing, channelling and promoting these issues among academic economists[11] .

An additional hypothesis to explain the raise of brand new journals in the profession is that prestigious general journals have limited space to publish material from many different areas. Due to their reputation, these journals attract a huge number of submissions, making the competition for space tougher, leading to congestion.

The congestion in general journals has two important consequences. First, it implies, other things the same, that it has becoming increasingly more difficult to publish in prestigious general journals, that is, the rejection rate tends to increase along time. Secondly, holding the rejection rate constant, congestion leads to an increase in the time delay between submission, acceptance and final publication of papers. This represents a considerable cost for academics since they are pushed in the beginning of their careers to build up their CVs. Therefore, authors, in order to maximize the chances of publication of their articles, must move elsewhere creating room for the appearance of brand new journals.

The data available for the number of manuscripts submitted and published in the American Economic Review [AER], Table 10 [Borts, 1979; Ashenfelter, 1999] illustrate this hypothesis. As shown in Figure 1, there is a clear structural break in the AER acceptance rate series. The acceptance rate is constant around 15% till approximately 1980, when there is a structural break[12] . This is followed by a negative time trend, which shows that it is becoming increasingly difficult to publish in the AER.

---

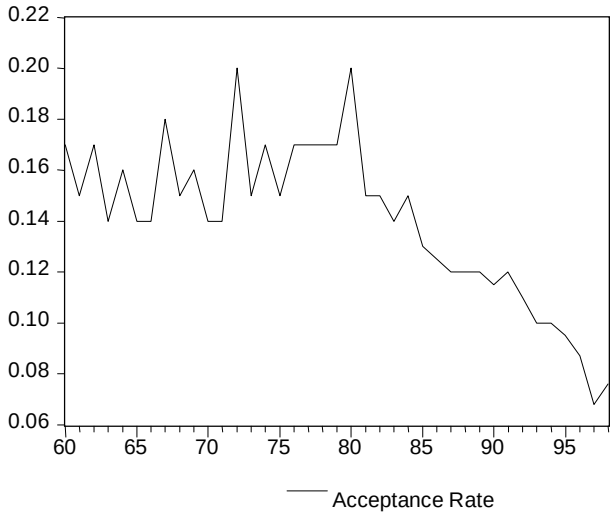
[10] Walstad (1997) studies the impact of economic knowledge on public opinion. Our point is to stress the other way round, how public opinion affects the economic knowledge.

[11] Perlman (1991) has analyzed the success of earlier journals in economics. He found that the success of a journal lies in the provision of a few provocative articles and ensuring discussions. Provocative articles are outstanding original papers, phrased in an appropriate rhetoric. The appropriate rhetoric is a controversial (but partly acceptable) ideology (e.g. limited state intervention vs. the free market; sound money vs. inflationary redistribution) and a comprehensible linguistic vehicle (e.g. relevant and illuminating analogies vs. formalized, specified statements). Quick turn-around time and overwhelming relevance, too has been another factor.

[12] The structural break was verified through the Chow Breakpoint Test: F-Statistic = 14.31[0.000031].

Manuscripts Submitted and Published in AER 1960-1998			
Year	*Submitted*	*Published*	*Ratio of Published to Submitted*
1960	276	46	0.17
1961	305	47	0.15
1962	273	46	0.17
1963	329	46	0.14
1964	431	67	0.46
1965	420	59	0.14
1966	451	62	0.14
1967	534	94	0.18
1968	637	93	0.15
1969	758	121	0.16
1970	879	120	0.14
1971	813	115	0.14
1972	714	143	0.2
1973	758	111	0.15
1974	723	125	0.17
1975	742	112	0.15
1976	695	117	0.17
1977	690	114	0.17
1978	649	108	0.17
1979	719	119	0.17
1980	641	127	0.2
1981	784	115	0.15
1982	820	120	0.15
1983	932	129	0.14
1984	921	138	0.15
1985	952	128	0.13
1986	987	123	0.125
1987	843	99	0.12
1988	844	100	0.12
1989	946	116	0.12
1990	911	100	0.115
1991	884	110	0.12
1992	950	108	0.11
1993	900	94	0.1
1994	953	91	0.1
1995	929	88	0.095
1996	976	85	0.087
1997	976	66	0.068
1998	900	71	0.076

FIGURE 1: The AER Acceptance Rate, 1960-1998



	Coefficients	*Standard Error*	*T Stat*
Intercept	5.933817	1.424776	4.164736
X Variable 1	-0.00292	0.00072	-4.06103

Another consequence of general journals' congestion is the increase in time delay between submission, acceptance and publication of articles. In a survey led by the American Economic Association reported in Mason et al. (1992)[13], over 71% of the respondents felt that general-interest journals have longer delays. Moreover, the respondents definitely believed that established journals took longer to process papers than newer journals.

These results suggest that general journals' congestion, reflected by increasing time delay and rejection rates, is an important factor for the appearance of brand new journals in the profession.

Geographical Change

Another important trend behind the lists of journals presented in Table 1 is the geographical shift of the main journals. Over the past decades British Journals have lost ground while American journals have advanced in importance. In 1970, the main British journals, the *Economic Journal* [published by the Royal Economic Association] and *Economica* [associated with the London School of Economics] were in the top 10 journals of the profession. The *Oxford Economic Papers* (*OEP*) [associated with the University of Oxford] was among the top 20, while the *Manchester School* [associated with the University of Manchester] was in the top 40[14] and the

[13] From a sample of 304 useable questionnaires that were returned from members of the AEA in April 1990.

[14] The Review of Economic Studies is taken here as an International journal, in the same condition as Econometrica, for example.

Scottish Journal of Political Economy (SJPE) [associated with the Scottish Economic Association] was in the top 50. In the 1980 rankings, there are no British general journals in the top 10. The *Economic Journal* dropped 16 positions to the 23rd place. The *OEP* fell even more, it dropped 28 positions in the rankings. *Economica* and *Manchester School* dropped 1 and 2 positions respectively, and the *SJPE* no longer appear in the top 50. In the 1990 rankings *OEP* and *Manchester School* do not figure among the top 50 journals, while the Economic Journal appears in the 25th position and *Economica* dropped 30 positions to occupy the 46th place.

It is clear that the relative importance of the British general journals has decreased steadily during the past decades. In the 1970 ranking, British general journals corresponded to 20% of top 10 journals and 10% of top 50 journals. In the 1980 rankings, there were no general British journals in the top 10 and they accounted for 8% of the top 50. Finally, in the 1990 rankings, they accounted for just 4% of the top 50 journals.

From Table 1 one can see that general journals of other countries also decreased in importance. *Kyklos* (Switzerland), *Economic Record* (Australia), *German Economic Review* (Germany), *Scandinavian Journal of Economics* (Sweden) are among the journals that made the top 50 in 1970 list and by the 1990 ranking their names have disappeared from the top 50.

The movement described by the general journals published outside the United States in the rankings are indicative of a major geographical change in our profession. The geographical change corresponds to a shift towards the growing influence of journals published in the United States. It suggests that the U.S. has won the race against Europe, and in particular, against the U.K., in concentrating the research in economics.

Hodgson and Rothman (1999) provide figures that illustrate this point. By assessing the location of the editors of the leading journals of their list [Table 2], they revealed that 70.8% of them are located in the United States. Moreover, twelve universities in the U.S. accounted for the location of more than 38.9% of the journal editors. In fact, it appears that there is a concentration of journals and editors in the U.S. This, however, does not provide enough evidence that the U.S. is monopolizing the academic output in economics. In order to draw such a conclusion one has to investigate the location of article authors. Hodgson and Rothman (1999) show that 65.7% of all article authors are located in U.S. institutions, and twelve U.S. universities accounted for 21.8%.

The figures in Hodgson and Rothman (1999) provide strong evidence that the U.S. has indeed pushed European, in particular British, journals and economists from the leading position in our profession[15] . The consequences of this geographical change are huge for economics as a science, since the research agenda, methods, and policy implications will follow the American leadership and shift towards the American view.

Notwithstanding the increasing influence of American journals, the U.S. general journals present an interesting dynamics. One can notice that general journals of regional economic associations in the U.S. have lost importance as well. The *Economic Inquiry* [Western Economic Association] and the *Southern Economic Journal* [Southern Economic Association] have lost influence during the period of time covered by the rankings in Table 1. At the same time, the American Economic Association's journals have increased their influence. This is particularly well illustrated by the performance of the *Journal of Economic Perspectives*, first published in 1987, that appears in the 11th position in the 1990 ranking.

[15] However, Kocher and Sutter (2001) provide evidence that suggests that the position of the US has been weakening in recent years.

Great Schools or Great Economists ?

Another issue of importance concerning journals is the role and influence of the major departments in our profession. Most of the earlier influential journals of our profession are related to economics departments, such as *QJE* to Harvard, *JPE* to Chicago, *Economica* to LSE and *Oxford Economic Papers* to Oxford. Even the journals of economics associations were under the departmental influence, which is exemplified by the case of Cambridge and the *Economic Journal*.

For almost half a century Cambridge through the *Economic Journal* influenced economics under the leadership of Keynes. His role as the Editor of the Economic Journal is well known for his incredible degree of discretion [see Moogridge, 1992]. After Keynes the Economic Journal continued under the influence of Cambridge with the editorship of Austin Robinson. Cambridge also was influential in the *Review of Economics Studies*, especially during the sixties, due to the editorship of Nicholas Kaldor.

As noted before, the General British journals lost their market share in the profession, which point out to the loss of influence of the British economists and economics departments. In the same fashion, the general journals associated with American departments have suffered the impact of the increasing competition among journals as well. However, some of the leading departments in the U.S. seem to have benefited from this.

For example, the former prestigious Harvard's journal, *Review of Economics and Statistics* has showed a clear reduction in its influence inside the profession. It was the 5th journal in the 1970 ranking, then dropped to the 16th position and finally to the 23rd position in 1990 [Table 1], and does not figure among the top 30 of the 1995 list [Table 2]. The *International Economic Review* associated with the University of Pennsylvania, had a similar performance, departing from the 12th place in the 1970 ranking and declining smoothly towards the 21st position in the 1990 ranking. Another Harvard journal, *QJE*, has assured itself in the top 10 without showing the same stable performance of Chicago's *JPE*[16]. Despite the performance of their home journals, there is evidence that Harvard and Pennsylvania are in the elite of the leading departments of economics in the world. As stressed by Hodgson and Rothman (1999), most of their influence is due to the role of their members, particularly as members of editorial boards of academic journals.

In light of these observations one can infer that departmental influence has lost power as an expression of leadership. The growing relative importance of field journals, driven by the performance of a few leading economists, indicates that the role of individuals is more important than the role of departments and their respective journals. It implies that mobility of researchers among departments can have a significant impact in the status and influence of a particular department in profession [see Colander, 1989]

The key point here is that editors play an essential role in the performance of journals in economics. Their behavior as leaders, path finders, and explorers of the market opportunities who set the standards, problems, methods of the research in economics, is one of the fundamental determinants of the journals' performances in the rankings showed above.

[16] Actually, JPE is the only journal associated to an influential department that has kept its place and performance along the years, which reflects the enduring influence of Chicago economics within the profession.

Publishers

So far it has been stressed the role of the editors to explain the performance of academic journals. However, it remains to be analyzed the role of publishing market in academic journals. Few people have paid attention to the fact that academic journals are part of the publishing business and thus are subjected to the market forces. This lack of attention can be attributed to the fact that earlier journals were associated with universities and/or professional associations. Ceteris paribus, universities are interested in the dissemination of knowledge and fostering their reputations through the publication of prestigious journals. Thus one expect that a university press responsible for the publication of an academic journal is more likely to pursue these objectives rather than profit maximization. In the same vein, a professional association may choose to benefit its members by setting their journals' prices that just cover costs rather than maximize profits.

The main agent behind the market performance of academic journals is the publisher. Other things constant, a publisher with reputation, experience and penetration in the academic market can make a difference in the performance of academic journals. There are four types of publishers in this market: 1) professional associations; 2) universities; 3) commercial publishers, and 4) others. An alternative classification is by dividing the publishers into non-profit and for-profit. Of course, commercial publishers fall into the last and the remaining into the first category[17] .

There are international, national and regional associations. Examples of national associations are American Economic Association, American Statistical Association, American Finance Association, Canadian Economics Association, Royal Economic Society. The American Economic Association is responsible for four publications: *AER, AER Papers and Proceedings, JEL, Journal of Economic Perspectives* and *Journal of Economic Education* [co-publisher]. The American Statistical Association publishes the *Journal of the American Statistical Association* (*JASA*) and the *Journal of Business Economics and Statistics*. The Econometric Society is an example of international association, and is responsible for the *Econometrica*. Among the Regional associations are the Western Economic Association, which publishes the *Economic Inquiry* and the Southern Economic Association, responsible for the *Southern Economic Journal*.

Among the Universities presses that publish academic journals in economics are: MIT [*QJE* and *Review of Economics and Statistics*], Chicago [*JPE, Journal of Business, Journal of Labor Economics, Journal of Law and Economics*], Oxford [*Oxford Economic Papers, Journal of Law, Economics and Organization*] and Wisconsin [*Journal of Human Resources, Land Economics*].

The commercial publishers with great penetration in academic journals in economics are: Elsevier, Blackwell, Academic Press and Kluwer. They are responsible for the major innovations in the market. Blackwell, for example, has taken care of traditional journals, journals that have been published by associations such as Econometrica, Review of Economic Studies and the Economic Journal. Elsevier and Academic Press have been successful in the creation of brand new journals that turn out to be quite influential in the profession such as the *Journal of Financial Economics* [Elsevier], and *Journal of Economic Theory* [Academic Press].

[17] Rosenbaum and Ye (1997) produce evidence that publishers engage in price discrimination. Publishers have market power over each of its journals and discriminate between distinct consumer groups: individual and library subscribers. Furthermore, Rosenbaum and Ye (1997) show that library prices rise faster than individual subscribers' prices.

Table11 depicts the publishers of the top 30 journals in Table 1 for 1980 and 1990, and Table 2, for 1995[18]. One can see that commercial publishers have gained substantial market share over the past few years. Their performance reflects the creation of successful brand new journals and the take over of traditional top journals formerly published by professional associations.

Concluding Remarks

Journals' rankings in economics are useful tools to assess the academic productivity of departments and scholars. It is well known that journal rankings based on citations vary according to the methodology employed. This paper presents influential rankings of journals in economics covering the period 1970-1995. The analysis of these rankings gives a number of results.

1) Among the journals that appear consistently among the top 10 journals of the profession for the whole period are: *American Economic Review, Journal of Political Economy* and *Econometrica*.
2) There is a tendency towards increasing specialization in economics. The specialization is expressed in two trends. The first is the increase in the relative importance of specialized journals vis-à-vis general journals. This can be seen by the fall in the number of general journals in the top slots of the rankings. The second trend is that specific fields compete among each other, and while some areas increase their relative influence in the profession, others loose it. Among the areas that have had their influence expanded are finance and labor economics. The areas that lost market share are economic history and agricultural and natural resource economics.
3) The specialization in economics results from a combination of forces. On the one hand, the population of academic economists is growing fast, and economics has been subjected to technological shocks. On the other hand, the importance of general journals has decreased creating room for the rise of brand new journals.
4) There is geographical concentration economics research. Journals published in the U.S. become relatively more influential than journals published elsewhere. In particular, British journals are the ones that have their market share reduced.
5) The rankings reflect that the influence of prestigious departments is decreasing, while the role of individual editors is becoming more important for the performance of journals.
6) There is growing participation of commercial publishers in the market of academic journals. The market share of journals published by commercial publishers has expanded at the expense of journals published by professional associations and universities during the period of analysis.

[18] Two journals: Economic Geography and Work Employ Soc. Were not classified.

REFERENCES

Ashenfelter, O. (1999) Report of the editor American Economic Review, *American Economic Review Papers and Proceedings* 89, 467-477.

Azzoni, C.R. (2000) Desempenho das revistas e dos departamentos de economia Brasileiros segundo publicações e citações recebidas no Brasil, *Economia Aplicada* 4, 787-822.

Barrett, C.B; A. Olia and D.V. Bailey (2000) Subdiscipline-specific journal rankings: Whither applied economics ?, *Applied Economics* 32, 239-252.

Borts, G.H. (1980) Report of the managing editor American Economic Review, *American Economic Review Papers and Proceedings* 70, 455-460.

Beed, C. and C. Beed (1996) Measuring the quality of academic journals: The case of economics, *Journal of Post Keynesian Economics* 18, 369-396.

Burton, M.P. and E. Phimister (1995) Core journals: A reappraisal of the Diamond list, *Economic Journal* 105, 361-373.

Burton, M.P. and E. Phimister (1996) The ranking of agricultural economics journals, *Journal of Agricultural Economics* 47, 109-114.

Bush, W.C.; P.W. Hamelman and R.J. Staaf (1974) A quality index for economic journals, *Review of Economics and Statistics* 56, 123-125.

Coats, A.W. (1971) The role of scholarly journals in the history of economics: An essay, *Journal of Economic Literature* 9, 29-44.

Colander, D.C. (1989) Research on the economics profession, *Journal of Economic Perspectives* 3 (4), 137-148.

Colander, D.C. (1991) *Why Aren't Economists as Important as Garbagemen ?And Other Essays on the State of Economics*, Sharpe, New York.

Coupé, T. (2000) Revelead performances – Worldwide rankings of economists and economics departments, *Unpublished Manuscript*, ULB.

Diamond, A.M., Jr. (1989) The core journals in economics, *Current Contents* 21, 4-11.

Eagly, R.V. (1975) Economics journals as a communication network, *Journal of Economic Literature* 13, 878-888.

Ellis, L.V. and G.C. Durden (1991) Why economists rank their journals the way they do, *Journal of Economics and Business* 43, 265-270.

Faria, J.R. (2000) The research output of academic economists in Brazil, *Economia Aplicada* 4, 95-113.

Fox, K.J. and R. Milbourne (1999) What determines research output of academic economists ?, *Economic Record* 75, 256-267.

García-Castrillo, P.; A. Montañés and F. Sanz-Garcia (2002) A worldwide assessment of scientific production in economics (1992-1997), *Applied Economics* 34, 1453-1475.

Garner, C.A. (1979) Academic publication, market signalling and scientific research decisions, *Economic Inquiry* 17, 575-584.

Graves, P.E.; J.R. Marchand, and R. Thompson (1982) Economics departmental rankings: Research incentives, constraints, and efficiency, *American Economic Review* 72, 1131-1141.

Hamermesh, D.S.; Johnson, G.E. and Weisbrod, B.A. (1982) Scholarship, citations and salaries: economic rewards in economics, *Southern Economic Journal* 49, 472-481.

Hawkins, R.G.; L.S. Ritter and I. Walter (1973) What economists think of their journals, *Journal of Political Economy* 81, 1017-1032.

Hodgson, G. (1993) The ranking of heterodox economics journals in the UK research funding exercise, European Association for Evolutionary Political Economy, mimeo.

Hodgson, G.M. and H. Rothman (1999) The editors and authors of economics journals: A case of institutional oligopoly ?, *Economic Journal* 109, F165-F186.

Issler, J.V. and T. Pillar (2002) Mensurando a produção científica internacional em economia de pesquisadores e departamentos Brasileiros, *Pesquisa e Planejamento Economico*, forthcoming.

Kocher, M.G. and M. Sutter (2001) The institutional concentration of authors in top journals of economics during the last two decades, *Economic Journal* 111, 405-421.

Koshal, R.K.; M. Koshal and A.K. Gupta (1996) Research grants and school ranking of Ph.D. granting institutions: A simultaneous equations model, *Education Economics* 4, 3-9.

Krueger, A.B. (1999) Report of the editor Journal of Economic Perspectives, *American Economic Review Papers and Proceedings* 89, 479-483.

Laband, D.N. and M.J. Piette (1994) The relative impacts of economics journals: 1970-1990, *Journal of Economic Literature* 32, 640-666.

Laband, D.N. and J.P. Sophocleus (1985) Revealed preference for economics journals: Citations as dollar votes, *Public Choice* 46, 317-324.

Liebowitz, S.J. and J.P. Palmer (1984) Assessing the relative impacts of economics journals, *Journal of Economic Literature* 22, 77-88.

Lucas, R.F. (1995) Contributions to economics journals by the Canadian economics profession, 1981-1990, *Canadian Journal of Economics* 28, 945-960.

Malouin, J.L. and J.F. Outreville (1987) The relative impact of economics journals: A cross-country survey and comparison, *Journal of Economics and Business* 39, 267-277.

Mason, P.M.; J.W. Steagall and M.M. Fabritius (1992) Publication delays in articles in economics: What to do about them, *Applied Economics* 34, 859-874.

McCloskey,D. N. (1991) Mere style in economics journals, 1920 to the present, *Economic Notes* 20, 135-158.

Moogridge, D.E. (1992) *Maynard Keynes*, Routledge, London.

Perlman, M. (1991) On the editing of American economics journals: Some comments on the earliest journals and the lessons suggested, *Economic Notes* 20, 159-172.

Redman, A.L; H. Manakyan and J.R. Tanner (1998) The ranking of real estate journals: A citation analysis approach, *Financial Practice and Education* 8, 56-69.

Rosenbaum, D.I. and M.H. Ye (1997) Price discrimination and economics journals, *Applied Economics* 29, 1611-1618.

Sauer, R.D. (1988) Estimates of the returns to quality and coauthorship in economic academia, *Journal of Political Economy* 96, 855-866.

Siegfried, J.J. (1994) Trends in institutional affiliation of authors who publish in the three leading general interest economics journals, *Quarterly Review of Economics and Finance* 34, 375-386.

Stigler, G.J.; S.M. Stigler and C. Friedland (1995) The journals of economics, *Journal of Political Economy* 103, 331-359.

Wallis, J.L. and B.E. Dollery (1993) The economics of economics: A model of research discourse, *Australian Economic Papers*, 175-183.

Walstad, W.B. (1997) The effect of economic knowledge on public opinion of economic issues, *Journal of Economic Education* 28, 195-205.