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SOME THOUGHTS ON REGIONAL ECONOMICS AS A SOURCE OF SCHOLARLY CONTRIBUTIONS*

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ABSTRACT. The present study seeks to extend the depth and scope of an earlier study by Isserman (2004). In particular, using Isserman (2004) as a starting point and using more recent data [for the years 2005 through 2009], this study seeks to provide a broader and more in-depth perspective on the role and relative contribution of Regional Economics research to pertinent related scholarly literature as a whole. Interestingly, by taking into consideration the size of a subfield or field in terms of the number of its SSCI-journals, Regional Science journals may well manifest a higher impact than the journals of Economics and Geography. Hence, RSAI journals appear to be contributing quite productively, given the relative size of their field.

Keywords: Regional Economics; Scholarly contribution; Productivity; Impact factor; Citations

JEL Classification Codes: B2, B4, C4, R1

1. INTRODUCTION

Regional Economics, broadly defined to include Regional Development and Urban Economics, had become established with a clear identity as a major subfield of Economics by the 1950s. This observation is confirmed by the establishment of scholarly journals specializing in Regional Economics during the 1950s time frame (e.g., *Papers in Regional Science* and the *Journal of Regional Science*). This observation is further supported by the rapid growth in the number of such field journals (Kau and Johnson, 1983; Durden and Knox, 2000; Haynes and Xie, 2002; Capello, 2008) during the 1960s and 1970s, including the *Annals of Regional Science, Growth and Change, International Regional Science Review, The Review of Regional Studies, Regional Science Perspectives/Journal of Regional Analysis and Policy, Regional Science and Urban Economics, Regional Studies,* and *Urban Studies*.

Interestingly, on the 50th anniversary of the RSAI (Regional Science Association International), Isserman (2004) provided panegyric statistics for a grouping of five Regional Science Journals (the *Journal of Regional Science, Papers in Regional Science, Regional Science and Urban Economics, International Regional Science Review,* and the *Annals of Regional Science*). His study involved an assessment of the impact of RSAI research as reflected in citations data involving these six scholarly outlets. The present study seeks to extend the depth and scope of this very useful initial study by Isserman (2004) so as to provide a broader, more robust perspective on the role and relative contribution of Regional Economics in the pertinent scholarly literature as a whole.

Accompanying the publication of the Isserman (2004) study, a paper by Batey (2004) observes that the "self-congratulatory" orientation of the celebration of the 50th anniversary of the RSAI should be accompanied by at least some degree of humility. This is clear from the words by Batey (2004, p. 4) that "A major element of the anniversary celebrations will ensure that there is a self-critical assessment of our research…" While the latter

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Table 1: **The Major RSAI Journals [Initial List]**

Journal	Acronym	Since	Citations
Journal of Regional Science	*JRS*	1958	11,589
Papers in Regional Science	*PiRS*	1955	6,937
Regional Science and Urban Economics	*RSUE*	1971	6,066
International Regional Science Review	*IRSR*	1975	2,668
Annals of Regional Science	*ARS*	1967	1,837

Source: Isserman (2004, p. 95)

consideration is effectively missing from Isserman (2004), it must be acknowledged and can certainly be argued that the latter study was essentially intended to demonstrate the undeniable highly respected stature that Regional Economics had achieved. Moreover, on the one hand, the Isserman (2004) study is very useful in accomplishing this goal; on the other hand, as it turns out, it is also very useful in serving as a point of departure for a broader and more in-depth (and more current) analysis of the Regional Economics discipline and its contributions. As suggested above, this is indeed the goal of the present study.

2. A BROADER PERSPECTIVE

To begin the discussion, consider the Isserman (2004) assessment of the impact of RSAI research as reflected in citations data for the five journals upon which he focuses, as summarized in Table 1. As a first assessment, this information could lead to potentially misleading inferences or undermine any effort to make strong inferences. Indeed, if one focuses, e.g., on the first line of Table 1, a summary of *Journal of Regional Science* citations data reveals that over the 1982-2002 period, *Journal of Regional Science* articles have been cited 11,589 times. The problem with trying to interpret this figure is that there is no perspective provided, i.e., nothing against which to compare/contrast it.

But just how should such a number be interpreted? Is it a reflection of great success? Unfortunately, the raw numbers in Table 1 do not speak for themselves. Arguably, in order to provide a genuinely useful interpretation for such statistics, these citation statistics data must, at a minimum, be compared with other pertinent and similar data. For Regional Science, this alternative could reasonably be drawn from the two generally related, traditional disciplinary fields that most closely parallel it, namely, Economics and Geography. In other words, in order to provide an appropriate assessment of RSAI journals, these journals arguably should be compared to journals in these sister fields. Furthermore, at least two major Regional Economics [broadly defined] journals are omitted from the Isserman (2004) list and clearly should be added to it, namely, *Regional Studies* and *Urban Studies*.

In order to begin to help provide a more useful interpretation and evaluation, some basic bibliometrics for journals of the RSAI and those of the Regional subfield are considered. Table 2 presents the total citations (TC) per year during the 1997-2009 period for these journals. In accordance with the suggestion above, it is observed that two journals have been added to the database for the present analysis: *Regional Studies* (*REG ST*) and *Urban Studies* (*UR ST*). All seven of the journals shown in Table 2 are Social Science Citation Index (SSCI) registered journals. The addition of *Regional Studies* and *Urban Studies* to this list of Regional Economics journals helps to "complete" (or better define) the SSCI subfield "Regional-Urban Research"; although a strong argument for adding *The Review of Regional Studies* (and perhaps even the *Journal of Regional Analysis and Policy*) to the list could be made; this study will simply adopt the two additional journals indicated in Table 2. The *five* major journals identified by Isserman (2004) have total citations of between 82 and

TABLE 2. Total Annual Citations for Regional-Urban Journals, 1997-2009

Year/Journal	*ARS*	*IRSR*	*JRS*	*PiRS*	*RSUE*	*REG ST*	*UR ST*
1997	82	128	449	176	382	595	694
1998	124	146	397	197	370	703	836
1999	102	150	422	227	387	706	939
2000	141	151	446	232	462	798	1,013
2001	111	120	399	196	450	882	1,212
2002	135	182	409	254	468	923	1,358
2003	191	244	524	266	556	1,000	1,574
2004	246	268	511	315	601	1,154	1,681
2005	234	240	538	304	652	1,311	1,719
2006	240	272	565	302	647	1,227	2,079
2007	326	348	704	407	796	1,620	2,724
2008	429	358	742	572	962	1,769	2,826
2009	648	523	1,136	904	1,252	2,840	4,137

Source: *Journal Citation Reports*

1,252 *per year* if the study is extended through 2009. Interestingly, the two additional journals (*Regional Studies* and *Urban Studies*) actually have much higher average *annual* rates of total citations than the initial set of five RSAI journals listed in Isserman (2004). Also notably, the total annual citations among these RSAI journals increased more than 100 percent (i.e., more than doubled) between 2004 and 2009.

As with nearly any index, other measures of whatever is of pertinence and interest can also be constructed. For instance, in lieu of citations, an alternative bibliometric indicator that would seem reasonable in order to assess the contribution of a field of study (in this case Regional Economics) is the "Impact Factor," or *IF*. The *IF* for any given journal in year *t* is the total number of citations received in year *t* divided by the total number of articles published in that journal over a specific time period, usually the previous two years. The classic two-year *IF* for a journal is given by:

$$IF_t^i = \frac{c_t^i}{P_{t-1}^i + P_{t-2}^i}$$

where *c* denotes the citation count and *P* denotes the number of articles published, the superscript identifies a particular journal *i*, and subscript *t* identifies a particular year . By considering the *IF* for the Regional Economics subfield, which incorporates all seven of the RSAI-journals identified in Table 2, Table 3 is constructed.

The first five journals, which are those journals included in Isserman (2004), have an IF in the range of 0.23 to 1.39, depending upon the year considered and the journal upon which one is focused. Interestingly, but in view of the information provided in Table 2 above, not surprisingly, the two additional journals [*Regional Studies* and *Urban Studies*] have IF levels between 0.77 and 1.65. This information, in conjunction with that in the last two columns of Table 2, could be interpreted as the foundation for an argument that it is appropriate—if not critical—to include these two journals when assessing the significance/scholarly contribution of the Regional Economics subfield. In any case, on the average, an increase in the values of the IFs between 2004 and 2009 can be observed. Table 4 is generated by depicting the number of articles per year in all journals of our sampling concerning the journals of Regional/Urban subfield.

TABLE 3. The Impact Factor of the Regional/Urban Subfield by the SSCI, 1997-2009

Year/Journal	*ARS*	*IRSR*	*JRS*	*PiRS*	*RSUE*	*REG ST*	*UR STUD*
1997	0.23	0.48	0.31	0.31	0.42	0.83	0.77
1998	0.46	0.54	0.43	0.42	0.71	1.07	1.05
1999	0.27	0.45	0.67	0.16	0.34	0.86	0.92
2000	0.76	0.90	0.65	0.18	0.46	1.02	0.81
2001	0.32	0.74	0.45	0.45	0.72	1.43	0.88
2002	0.37	0.46	0.56	0.45	0.63	0.97	0.98
2003	0.38	0.59	0.68	0.50	0.69	0.92	1.19
2004	0.29	1.46	0.63	0.48	0.69	1.65	1.12
2005	0.38	1.05	0.74	0.47	0.74	1.52	0.98
2006	0.25	1.10	1.10	0.52	0.62	1.16	0.99
2007	0.50	1.72	0.78	0.57	0.88	1.79	1.27
2008	0.53	0.93	0.95	1.25	1.21	0.98	1.38
2009	0.82	0.93	1.13	1.39	0.91	1.46	1.30

TABLE 4: The Number of Articles per Year for the Regional/Urban Subfield, 2004-2009

	Number of Articles					
Journal	2004	2005	2006	2007	2008	2009
ARS	30	43	49	49	52	52
IRSR	14	14	15	17	16	23
JRS	27	28	37	35	33	36
PiRS	33	30	29	29	29	43
RSUE	35	42	36	38	40	71
REG ST	60	70	68	92	78	85
UR ST	123	118	116	123	116	110

Most of the journals identified by Isserman (2004) published fewer than 35 articles in 2004, but *Regional Studies* and *Urban Studies* published 60 and 123 articles, respectively, in 2004. This difference in the *number* of published articles among our sample of journals might well be expected to generate better or at least alternative bibliometric indicators, e.g., Impact Factors. Observe in particular the substantial increase in the number of published articles in almost all of the journals shown in Table 4 in the year 2009 as compared to the year 2004. An interesting question potentially relevant to this study is: "Can the observed increase in the number of published articles per year be considered as a *de facto* systematic effort of the editors of Regional Economics subfield journals to produce higher Impact Factors and higher Total Citations?" It is observed that editors of Economics and Geography journals appear to have not increased the number of published articles per year.

There are other bibliometric metrics for journal impact evaluation such as the H-index for journals, the PageRank (which is a weighted Impact Factor), Eigenfactor (which indicates position in the journal network), SCImago Journal Rank, Immediacy Index, the Cited Half-life (CHL); these metrics will be considered in a forthcoming study. For instance, the Immediacy Index is the number of citations the articles in a journal receive in a given year divided by the number of articles published. The Cited Half-life (CHL) is the median age of the articles that were cited in Journal Citation Reports each year. This is the long-term value of source items in a single journal publication according to ISI. A primary research journal should have a longer CHL than a communication journal. The comparison of CHL of the

journals can reveal the differences in format and publication history, but not differences in journal quality.

Every scientific field or subfield has its own publication and citation pattern (reference list length, inter-field citation traffic, growth of fields, short articles, and so forth). There are, therefore, variations in the robustness of bibliometrics between different fields and subfields. Citations statistics are more robust in fields that publish and cite more frequently. Moreover, if we change our commercial database Web of Science and we use other databases like Scopus and Google Scholar, we may very well generate a new publication and citation pattern for the same field or subfield. A generally accepted normalization process for the impact of journals for a field, e.g., the Regional-Urban subfield, would seem desirable [albeit perhaps challenging].

Naturally, comparing the above group of seven RSAI journals with equivalent major Economics and Geography journals may give a much more useful perspective of how well the RSAI-journals have been doing in terms of recognized contributions. Accordingly, Tables 5 and 6 are constructed using the same indicators, TC and IF, for the years 2004 through 2009 for a number of the top ranked (in terms of *both* TC *and* IF) Economics and Geography journals. It is noteworthy that the *American Economic Review* (*AER*) is omitted from the uppermost part of Tables 5 and 6. This reflects the fact that although it receives numerous citations, it also has a lesser record in terms of impact; this is because the *AER* publishes so many articles annually, a condition that reduces its Impact Factor (IF) substantially.

TABLE 5. Ranking Top-Rated Journals in Terms of Total Citations (TC) in Economics and Geography Journals, 2004- 2009

	Total Citations					
	2004	2005	2006	2007	2008	2009
Field-Economics						
Quarterly J of Economics	6,617	6,947	7,962	8,713	11,723	13,985
J of Economic Literature	2,422	2,649	2,845	3,201	4,069	5,018
J of Economic Perspectives	2,531	2,713	3,068	3,319	4,261	5,649
J of Political Economy	8,546	9,206	10,150	10,878	13,671	16,350
J of Financial Economics	4,529	5,404	6,615	6,980	10,013	12,058
Field-Geography						
J of Economic Geography *	207	270	403	571	763	1,146
Progress in Human Geography	1,010	1,069	1,410	1,638	1,889	2,402
Trans of the Inst of British Geog	897	986	1,154	1,402	1,581	1,876
Economic Geography *	625	61	734	768	1,048	1,311
Annals of the Assoc of Am Geog	476	1,545	1,872	2,008	2,317	2,747

*Listed as both top-rated economics and geography journal. The Economics field had 172 SSCI journals in 2004 and 247 in 2009. The Geography field had 38 SSCI journals in 2004 and 62 in 2009. The Regional/Urban subfield had 13 SSCI journals in 2004 and 16 in 2009 (our computations).

Table 6: **Ranking Top-Rated Journals in Terms of Impact Factor (IF) in Economics and Geography Journals, 2004-2009**

	Impact Factors					
	2004	2005	2006	2007	2008	2009
Field-Economics						
Quarterly J of Economics	4.41	4.77	3.93	3.68	5.04	5.64
J of Economic Literature	4.40	4.05	4.66	3.97	4.82	6.91
J of Economic Perspectives	2.95	2.63	2.83	2.83	3.94	3.55
J of Political Economy	2.62	2.24	3.19	4.19	3.72	3.84
J of Financial Economics	2.55	2.38	2.49	2.98	3.54	4.02
Field-Geography						
J of Economic Geography *	3.13	3.22	2.51	2.67	2.93	3.93
Progress in Human Geography	2.14	2.61	3.44	3.72	3.48	3.59
Trans of the Inst of British Geog	2.38	2.21	3.50	4.06	3.96	3.41
Economic Geography *	2.32	1.75	1.81	2.06	2.96	3.45
Annals of the Assoc of Am Geog	2.11	1.75	2.14	2.96	2.67	2.56

*Listed as both an economics and geography journal.

By comparing the bibliometric indicators in Tables 2, 3, 4, 5, and 6, one might well conclude that the bibliometric indicators for the highest ranked Economics and Geography journals are, overall, higher than the counterpart indicators for the seven major identified RSAI journals for the years 2004 and 2009. But is this really a valid assessment concerning the scholarly contributions of Regional Science journals?

At first glance, it would appear that the visibility and usefulness of the major RSAI-journals are lower than the major Economics and Geography journals. However we might be prompted to ask: "What are the determinants of journal visibility?" There are some critical questions in the history of bibliometrics that are pertinent to this issue. For instance, what is the relationship between the *size of a field, subfield, or forum* and the *magnitude* of its *corresponding* journal bibliometric *indicators*?

Not surprisingly, a positive scale relationship has been observed between the *size of a field* and its *bibliometric indicators* (Moed, 2005; Althouse et al., 2009). Thus, major Economics journals should be expected to have much higher values on the TC and IF indicators than major Geography journals—simply due to the factor of *size*: the field of Economics has a much larger membership than that of Geography. Moreover, for the same reason (*size of field*) the same could be expected when comparing Economics to the Regional/Urban (henceforth RSAI) subfield. Ideally, perhaps obviously, this field size/membership factor should be adjusted for in the assessment of the scholarly contribution process. Specifically, bibliometric indicators should be normalized with respect to size of the field or subfield. However, there is no generally accepted procedure for doing this.

Should the size of a field be measured by the number of its members (professionals) or by the number of its journals? In principle, the number of RSAI members could be compared to the numbers of members of economics associations or geography associations. This is potentially a misleading endeavour, however, because the professionals in such associations and disciplines have highly varying degrees of research participation levels, including that of "retirement" status. Furthermore, since many persons belong to several economics and/or non-economics associations, and since this pattern differs from person to person and from discipline to discipline, there could be a "double counting" problem. Using membership numbers could easily lead to spurious conclusions. A viable (yet still imperfect)

TABLE 7. Normalized Impact Factors of Economics, Geography, and Regional/Urban Journals, 2004-2009.

	Impact Factors					
	2004	2005	2006	2007	2008	2009
Field-Economics						
Quarterly J of Economics	0.025	0.027	0.022	0.018	0.023	0.022
J of Economic Literature	0.025	0.023	0.026	0.020	0.022	0.027
J of Economic Perspectives	0.017	0.015	0.016	0.014	0.018	0.014
J of Political Economy	0.015	0.012	0.018	0.021	0.017	0.015
J of Financial Economics	0.010	0.013	0.014	0.015	0.016	0.016
Field-Geography						
J of Economic Geography *	0.080	0.084	0.064	0.059	0.056	0.062
Progress in Human Geography	0.061	0.068	0.088	0.084	0.066	0.057
Trans of the Inst of British Geog	0.068	0.058	0.089	0.090	0.076	0.055
Economic Geography *	0.062	0.045	0.046	0.045	0.056	0.054
Annals of the Assoc of Am Geog	0.060	0.046	0.054	0.065	0.050	0.040
Subfield-Regional/Urban						
ARS	0.022	0.023	0.015	0.031	0.031	0.050
IRSR	0.112	0.065	0.068	0.107	0.106	0.058
JRS	0.048	0.046	0.068	0.048	0.059	0.068
PiRS	0.036	0.029	0.032	0.031	0.078	0.086
RSUE	0.053	0.046	0.038	0.055	0.075	0.056
REG ST	0.126	0.095	0.072	0.106	0.061	0.091
UR STUD	0.086	0.061	0.062	0.079	0.081	0.081

alternative, but one that nonetheless integrates across countries and at the same time reflects variations in active research participation, is the number of journals in a given field as a proxy for the scale/size of a discipline. This is the option adopted here, although there is no reason to believe that this approach will necessarily yield markedly different outcomes than use of the membership figures.

In Table 7 of the present study, scale effect has been normalized (RSAI-subfield, Economics-field, and Geography-field) for each of the listed Journals by dividing the respective journal impact factor (IF) by the number of journals listed in the field *according to SSCI indexed journals*. Interestingly, by taking into consideration the *size* of a subfield or field in terms of the number of SSCI-journals, Regional Science journals actually manifest/reflect a higher *average adjusted* impact than the journals of the broader fields of Economics and Geography. Hence, RSAI journals appear to be contributing quite productively, given the relative size of their field. This conclusion is, in spirit, compatible with the more preliminary findings in Isserman (2004).

3. OVERVIEW

The British Library includes more than 40,000 scientific journals, but the Web of Science includes only 10,000 journals. On the average, bibliometric analysis is based on a 25 percent sampling of all JCR-listed journals in the world, with the remaining 75 percent of all non- JCR-listed journals excluded! Moreover, journal quality and status, as well as the quality and status of a discipline or subfield, may be far more complex concepts than is usually appreciated since the quality/status issue can be addressed only partially by these bibliometric indicators (Sarafoglou and Haynes, 1990; Sarafoglou and Haynes, 1996;

Forsund and Sarafoglou, 2005; Maier, 2006; Sarafoglou, 2006; Sarafoglou and Paelinck, 2008).

With respect to the dynamics of the Total Citations and the two-year Impact Factors in the fields of Economics and Geography, and the Regional/Urban subfield during recent years, closing observations are now offered. One general finding is that the number of citations rose quite quickly between 2004 and 2009. That is, the journals considered for the Economics and Geography fields did not overall markedly change the number of papers per issue published, yet the TC and the IF levels rose in both fields. One general rationale for this is that Internet and electronic access of bibliographic databases yielded a higher efficiency in information retrieval. Another possible explanation of this phenomenon might be the increase of JCR-listed journals and the increased cross-citations among journals. In other words, the increase of bibliometric journals during this period (2004-2009) in combination with the increase of the citations in reference lists might have been a major force for the positive growth of TC and IF levels in these two fields.

The Regional/Urban subfield increased in the number of papers per issue published over the 2004-2009 study period. Its TC and IF levels also increased. It is reasonable to conclude that the combined effect of the increase in number of papers per publication and the observed increase of the JCR-listed journals in the Social Science might well be the major forces for the positive growth of TC and IF of the subfield.

It might also be beneficial to admit that normalizing regional science journals only by those in regional science might not be totally fair since they are something of a subfield, yet to not control for the size of the field remains problematic. Moreover, since many journals in Economics publish studies that belong in the Regional/Urban subfield, any measure comparing Economics journals and Regional/Urban subfield journals is by nature imperfect.

Future assessments for journal evaluation (or subfield evaluation) arguably should use other bibliographic databases (Google, Elsevier, and so forth) in combination with the ISI database. Furthermore, to the extent possible, all journals, not just SSCI indexed ones, as well as databases for books and working papers, could be included in the evaluations of publications in any particular field.

In conclusion, we should appreciate that journal ranking [or subfield ranking] is a rather complicated task that can be pursued only with expressed qualifications that acknowledge the limitations of any methodology. Thus, it is important to utilize bibliometric tools with an eye toward rational, albeit imperfect, assessment. The apparent "father" of bibliometric analysis, Eugene Garfield (1963, p.101), years ago pointed out that a bibliometric indicator "is a very useful tool for evaluation of journals, but it must be used discretely."

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