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A Bibliometric Note on Isserman's Panegyric Statistics

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Abstract:

As a rule, in anniversary celebrations, papers and the related statistics are presented in a positive perspective and even mild self-critical assessment is usually minimized. The 50th anniversary of Regional Science Association International (RSAI) was not an exception to this the rule. Andy Isserman in his Paper in Regional Science (PiRS) article (2004) for the anniversary of RSAI presented panegyric statistics for the history of RSAI related publications.

In this context I have reviewed the presentation of Isserman's assessment of the impact of RSAI research as reflected in the citation data. As a first assessment this which could lead one to draw misleading conclusions about the current state and the history of RSAI publications and their impact.

JEL classifications: B2, B4, C4, R1.

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As a rule, in anniversary celebrations, papers and the related statistics are presented in a positive perspective and even mild self-critical assessment is usually minimized. The 50th anniversary of Regional Science Association International (RSAI) was not an exception to this the rule. Andy Isserman in his Paper in Regional Science (PiRS) article (2004) for the anniversary of RSAI presented panegyric statistics for the history of RSAI related publications.

But Peter Batey's scepticism in the PiRS-preface (2004) notes the self congratulatory orientation of the work suggests that the celebration should demonstrate at least some humility. As he indicated: "A major element of the anniversary celebrations will ensure that there is a self-critical assessment of our research...."

In this context I have reviewed the presentation of Isserman's assessment of the impact of RSAI research as reflected in the citation data. As a first assessment this which could lead one to draw misleading conclusions about the current state and the history of RSAI publications and their impact.

Table 1: The Major RSAI Journals

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, page 95)

Considering the first row of the citation data for the Journal of Regional Science (JRS). The JRS-articles have been cited 11,589 times during the

period 1982-2002.

How should this number be interpreted? Is it a great success or a miserable failure? The numbers do not speak for themselves in all cases and particularly in this case! These citation statistics data should be compared with similar data. For Regional Science this could probably be from the two traditional disciplinary fields primarily economics and geography. In order to provide an appropriate assessment RSAI journals should be compared to journals in those fields. A modicum of Batey's "self-critical" criterion needs to be set forth even in an anniversary celebration.

In order to provide a more balanced 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 period 1997-2004 for these journals.

Table 2: Total and Average Citations for Regional-Urban Journals (1997-2004)

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	1013
2001	111	120	399	196	450	882	1212
2002	135	182	409	254	468	923	1358
2003	191	244	524	266	556	1000	1574
2004	246	268	511	315	601	1154	1681
Average	141.5	173.6	355.7	232.9	367.6	845.1	1163.4

Source: Journal Citation Reports

Two new journals of RSAI have been added for this analysis: Regional Studies (REG ST) and Urban Studies (UR ST). These seven journals are Social Science Citation Index (SSCI) registered journals and define the index´s subfield Regional-Urban research. The five major journals used by Isserman have total citations that average from 140 to 400 citations per year. The other two additional journals have a much higher rate of total citations per year, but when added to the others, constitute the full set in the SSCI relevant indexed subfield.

As with any index other measures can also be offered. For example, besides citations, another bibliometric indicator is the “Impact Factor” (IF). The IF for a journal is the number of citations received in year t by all articles published in that journal over a specific time period – usually the previous two years. By considering the IF for this subfield which incorporates all the RSAI-journals, Table 3 is constructed.

Table 3: The Impact Factor of the Regional-Urban Subfield (1997-2004) according to SSCI

Journal Year	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
Average	0.39	0.67	0.55	0.37	0.58	1.09	0.97

The first five journals used by Isserman have an IF between 0.27 to 1.46. The two additional journals have an IF between 0.77 to 1.65.

Comparing this group of RSAI journals with other major Economics-journals and Geography-journals may give a better picture of how well the RSAI-journals are doing.

Table 4 is constructed using the same indicators TC and IF for the year 2004.

Table 4: Total Citations and Impact Factors of major Economics and Geography journals (2004)

Field-Econ (172 journals)	Total Citations (TC)	Impact Factors (IF)
Quarterly Journal of Economics	6617	4.41
Journal of Economic Literature	2422	4.40
Journal of Economic Perspectives	2531	2.95
Journal of Political Economy	8546	2.62
Journal of Financial Economics	4529	2.55
Field-Geography (35 journals)		
Journal of Economic Geography *	207	3.13
Progress in Human Geography	1010	2.14
Transactions of the Institute of British Geographers	897	2.38
Economic Geography *	625	2.32
Annals of the Association of American Geographers	1476	2.11

*Is listed as both an Economics journal and a Geography journal.

By comparing the bibliometric indicators of Table 2, Table 3 and Table 4, one may conclude that the bibliometric indicators for Economics and Geography journals are higher than the indicators of these RSAI-journals. Given this should we accept Isserman's euphoria or Batey's scepticism concerning the status of RSAI-journals?

At first it would appear that the visibility and usefulness of RSAI-journals is lower than Economics and Geography journals. However we might ask what are the determinants of journal visibility?

There are some critical questions in the history of bibliometrics that relate to this issue. For example, what is the relationship between the size

of a field, subfield, forum etc. and their journal bibliometric indicators?

A positive scale relationship has been observed between the size of a field and its bibliometric indicators (Moed, 2005). Given this the major economics journals should be expected to have better indicators than the major geography journals simply due to the size of the field as economics has a larger membership than geography.
This should probably be adjusted for. Specifically, these bibliometric indicators should be normalized with respect to size of the field, subfield or forum. However, there is no well accepted procedure for doing this.

Should the size of a field be measured by the number of members (professionals) or by the number of journals? The number of RSAI-members could be compared to equivalent numbers of member of economics associations or geographic associations or even planning associations. This is very difficult because there is also a need to integrate the data and analysis across countries because RSAI is a global organization. Further these disciplines and professionals may have and indeed do have highly variable participation levels. A viable alternative that integrates across countries and at the same time reflects active research participation that is partially reflected in the market is the use the number of journals in a given field as a proxy for scale. This is the option used here.

In this paper, scale effect has been normalized(RSAI-subfield, Economics-field and Geography-field) by dividing the journal impact factor (IF) by the number of journals in the field according to SSCI indexed journals (Table 5).

By taking into consideration the size of a subfield or field in terms of number of SSCI-journals, the Regional Science journals depict a higher impact relative to the journals of Economics and Geography.

Isserman´s statistics for RSAI-journal citations and our normalized Impact Factor analysis would seem not be panegyric when adjusted for scale. Hence even with Batey's "self-critical" assessment adjusted for, RSAI journals appear to be doing quite well given the size of their field even in comparison to their closest disciplinary rivals.

Table 5: The Normalized Impact Factors of Economics-, Geography- and Regional-Urban-journals for the year 2004.

Field- Econ (172 journals)	Normalized Impact Factor (NIF)
Quarterly Journal of Economics	0.025
Journal of Economic Literature	0.025
Journal of Economic Perspectives	0.017
Journal of Political Economy	0.015
Journal of Financial Economics	0.01
Average	0.018
Field-Geography (35 journals)	
Journal of Economic Geography	0.08
Progress in Human Geography	0.061
Transactions of the Institute of British Geographers	0.068
Economic Geography	0.062
Annals of the Association of American Geographers	0.06
Average	0.066
Field-Regional Science (13 journals)	
ARS	0.022
IRSR	0.112
JRS	0.048
PiRS	0.036
RSUE	0.053
REG ST	0.126
UR STUD	0.086
Average	0.069

Journal quality and status are more complex concepts than is usually appreciated and can be addressed only partially by these bibliometric indicators (Forsund and Sarafoglou 2005, Sarafoglou and Haynes 1990, and Maier 2006).

Future assessments for journal-evaluation should utilize other bibliographic databases (Google, Elsevier etc) in combination with ISI´s databases. Further, to the extend possible, all journals, not just SSCI indexed ones, as well as databases for books and working papers should be included in the evaluations of publications in any particular field.

In conclusion, we should no forget that ranking is a tricky and complicated task. Thus, it is important to utilize bibliometric tools with an eye toward rational assessment. The father of bibliometric analysis Eugene Garfield has pointed out that a bibliometric indicator "is a very useful tool for evaluation of journals, but it must be used discretely".

We hope that Isserman and other anniversary cheerleaders will accept our supporting but cautionary note and apply Garfield's message in other academic research celebrations.

Notes:

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