

The Role of National Citation Index in the Evaluation of National Science

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Summary

This paper presents the national citation index as a relevant source for development and evaluation of national science, whose use and impact mark constant increase. Serbian citation index (SCIIndeks), open access service for Serbian scientific journals, established in 2005, started in cooperation of the Centre for evaluation in Education and Science (CEON) and National Library of Serbia, and financed by Ministry of Education and Science. It contains more than 1.4 million of references from more than 120.000 articles (more than 40.000 in full text). Journals from natural, biomedical and technical sciences are referred from 2000, social sciences and humanities from 1991. From 2008, by law regulations, citations from Serbian citation index are taken as valid for evaluation of scientific work, beside Web of Science.

Since the social sciences and humanities from Serbia are rarely cited in Web of Science (much less than natural, biomedical and technical sciences), Serbian citation index is covering that part of scientific work. It contains also the bibliometric reports for referred journals with detail and valuable data about characteristics of journals (type of articles, age of references etc). Serbian citation index surely contributed to the general visibility of Serbian science as a part of process in which the authors evaluate journals publish in them and raise again their quality.

Serbian citation index has 7000-9000 visits per day and more than 13.000 registered users. Monthly, it is access app. 200.000 times (comparing with Web of Science - 22.000 accesses per month).

University Library in Belgrade takes a significant role in dissemination of information about Serbian citation index by organizing workshops and courses for academic environment.

Key words: citation index, open access, scientific evaluation, Serbia

Introduction

Small scientific communities, such as Serbian, give additional effort to make results of its scientific work visible to the world science. Some scientific areas (like biomedical) are more perceptible outside the country, but some other disciplines, directed to the local subject areas (history, geology, etc), are rarely presented in the world. The question that can be posed is: how these scientific areas can be evaluated properly? Are they going to be deprived for the possibility of citation analysis which enables the more precise results and which can be easily checked by the rest of the scientific environment? How they can measure and see the actual *impact* of their work to other scientists?

Serbian scientists are present in the citation index – Web of Science, not only through the papers published in the foreign scientific journals. In this moment, 20 journals from Serbia are referred in Web of Science, and 18 among them have Impact Factor. Most of them are from biomedical and technical sciences, and only two from social sciences (psychology and economy). It leaves the great number of national scientific journal not visible in this database. How this gap can be over passed?

The role of Serbian citation index

Serbian citation index is an open access service established in 2005. It is a national service whose goal is to index Serbian scientific journals – journals categorized as periodical scientific publications.

It is developed in cooperation of Centre for Evaluation in Education and Science and National Library of Serbia, and it is financed by Ministry of Education and Science of the Republic of Serbia (Centre for Evaluation in Education and Science, access 2011).

It covers 357 journal titles including cited references. From that number 131 are indexed in full text. Serbian scientists and others have access to more than 120.000 articles, from which more than one third are available in full text. Finally, more than 1.4 million of cited references in these articles are searchable for the citation analysis of Serbian scientists.

Journals from natural, biomedical and technical sciences are referred from year 2000, and social sciences and humanities from 1991 (Serbian citation index, access 2011).

From 2008, bylaw regulation, Serbian citation index is taken as relevant source for evaluation of scientific work, beside Web of Science. In official Regulation of the Ministry of Education and Science (March 2008) is quoted: "The citation

is shown by the total number of citations, hetero citation and fractional, considering the contribution of each author in cited work. Citation from Web of Science and national citation index should be presented separately (Rules of Procedure and quantitative way..., access 2011).”

From the point of view of users, Serbian citation index can fulfill several needs:

- new and accurate information of trends in particular science (subject search)
- receiving the full text for one third of the references (open access)
- information about citations in national journals (citation search)

The open access policy is particularly significant, not only for the subject search (making scientific results easy to get), but also for evaluation of particular journal. From 20 journal referred in Web of Science, 18 are indexed in Serbian citation index and available in full text (KoBSON, access 2011). That offers the possibility for the rest of scientific community to has quick access to the results and trends that are visible in the world science, to use them and cited them properly, and finally to publish in those journals, raising their quality again.

Serbian scientists in Web of Science and Serbian citation index

Comparing the results in both indexes for the particular authors (social sciences and humanities), it can be noticed the significant difference between the number of citations in Web of Science and Serbian citation index (Elleby Anita, 2010).

Vladeta Jerotic is psychiatrist and writer, Ranko Bugarski is linguist and Dusan Ivanic is philologist.

Table 1: Citation in Web of Science and Serbian citation index

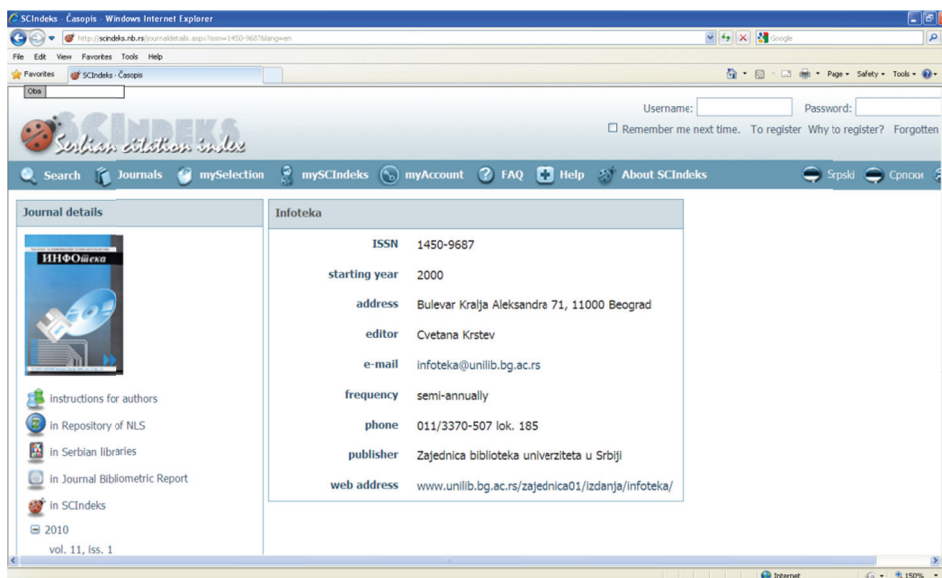
Author	Citations in Web of Science (from 1996)	Citations in Serbian citation index (from 1991)
Jerotic, Vladeta	3	143
Bugarski, Ranko	36	252
Ivanic Dusan	2	56

This unbalance between the results from two citation indexes shows that very productive and important authors, especially from social sciences and humanities, can have small number of citations in Web of Science, but much more in national citation index. That takes us to the observation that lack of citations in Web of Science doesn't mean that the work of specific author is without impact, but that it should be observed within the different context.

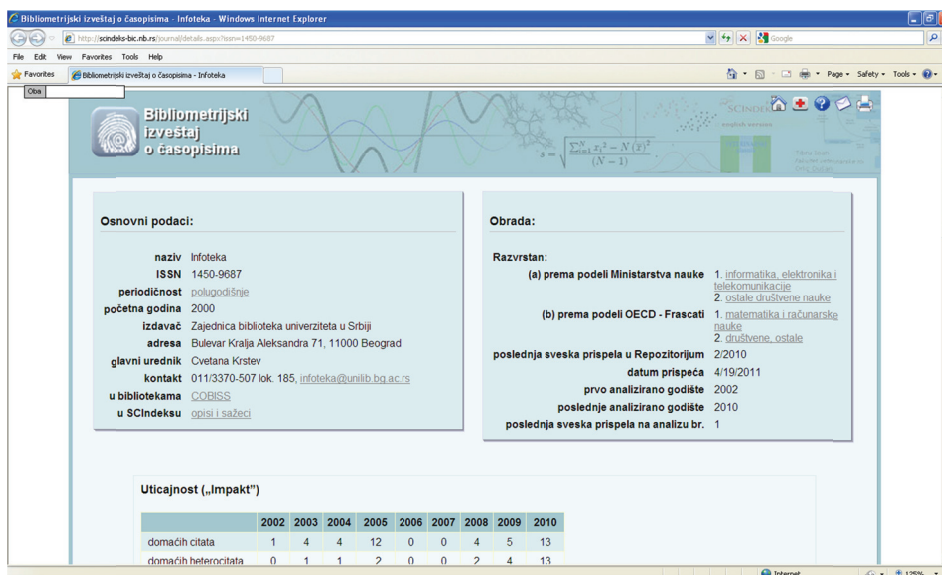
Information about journals

Serbian citation index offers the important bibliometric information about the particular journal which is indexed, beside detailed bibliographic data (with classification). Serbian citation index has a Journal Bibliometric Report which

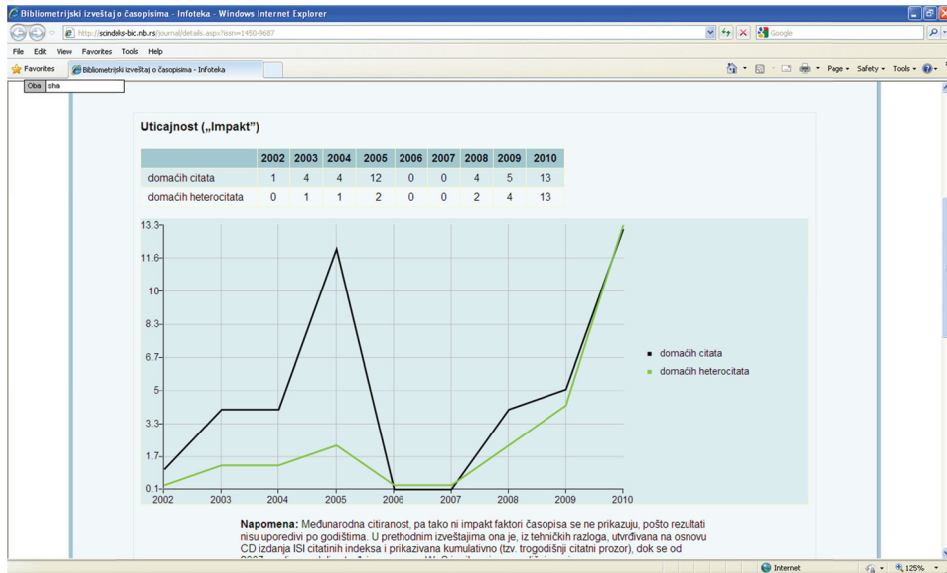
contains information like: number of citations, number of hetero citations, share of foreign authors, number of references, age of references, etc.



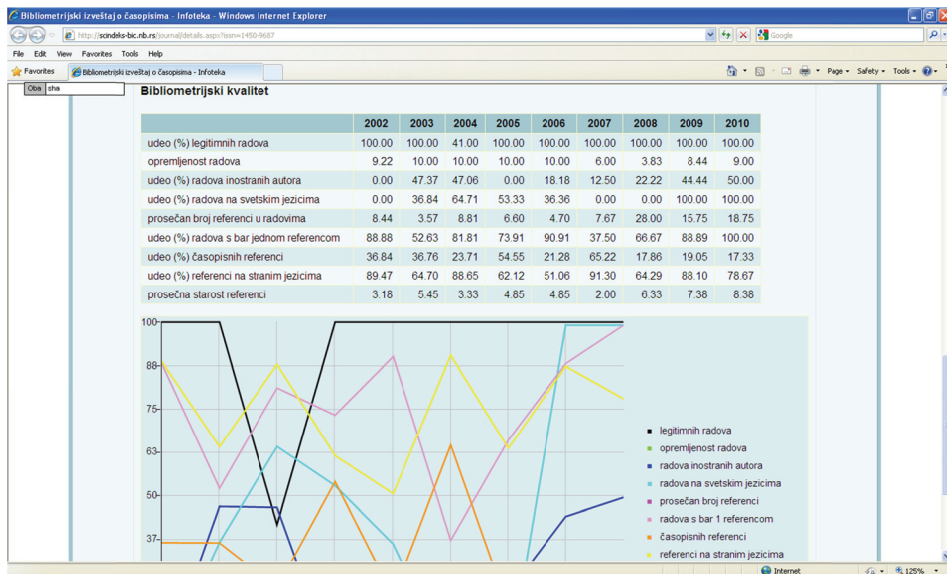
Picture 1: Web page of Serbian citation index - Information about journal and links to other resources: shared catalogue, repository and Journal Bibliometric Report (<http://scindeks.nb.rs/journaldetails.aspx?issn=1450-9687>)



Picture 2: Part of Infotheca Bibliometric Report: bibliographic data and classification, (<http://scindeks-bic.nb.rs/journal/details.aspx?issn=1450-9687>)



Picture 3: Impact of Infotheca (domestic citation and domestic hetero citation)



Picture 4: Table and graph about Infotheca bibliometric quality

Information about journals can be very valuable to the authors who can see the impact and scientific features of the journal, can evaluate it and finally decide if they should publish in it. This is the process that brings to the new raise of journal quality (Li Jiang, 2010).

Use of Serbian citation index and education

The use of Serbian citation index marks constant increase. It has 7000-9000 visits per day, and 200.000 access per month (2 million per year). Registered users (more than 13.000) have possibility to use service "My account" for additional preferences.

Still, for the much of academic population Serbian citation index is unknown. That is why the University librarians include Serbian citation index in its educational program for each group that participate the organized courses. The Department for scientific information and education, as its regular activity, has dissemination of information about all electronic resources available to members of University of Belgrade, and others. Some of those activities are: practical courses for the students of library and information sciences, courses for PhD students about electronic resources acquired through KoBSON (Serbian Library Consortium for Coordinated Acquisition), presentation on searching electronic resources for professors and students at different faculties (Filipi Matutinovic Stela, 2011), once a week user education about library skills and information skills. The presentation of Serbian citation index is obligatory part of all these educational programs (University Library, access 2011).

Conclusion

Web of Science covers 10-12% of scientific world journals. The great part of world science stays outside of it. It should not be expected that the rest of journals (especially national journals oriented toward specific characteristics of particular country) will be visible to the world science through this citation index.

The solution for the problem (how to cover by citation analysis all scientific areas, with international and national orientation, in natural, biomedical and technical sciences as well as social sciences or humanities), can lie in the development of national citation indexes. The role of those indexes is not competitive, but rather additional. The example of Serbian citation index shows that the way is not to subordinate national science to international, but to analyze its particular qualities and to measure it within its proper environment.

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