

BIBLIOMETRIC RESEARCHERS – NEW SERVICE AT VILNIUS UNIVERSITY LIBRARY

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Bibliometrics is the application of mathematical and statistical methods to study and analyse the flow of documents and their bibliographic characteristics. A statistical analysis (citation) method for bibliographic references is used to evaluate the efficiency of scientific and scholarly publications, researchers and research group performance; to certificate researchers according to their citations and impact to scientific progress; to identify scientific schools and major branches of scientific and scholarly publications; to optimize the supply of information to the scientists; to improve the organisation and management of science, etc.

The idea of using the *Impact Factor* (IF) to evaluate scientific journals was first suggested by Eugene Garfield as far back as 1955¹. The journal *Impact Factor* is the average number of times articles from the journal published in the past two years have been cited in the JCR² year.

The IF shows journal articles citation frequency, the popularity, value and use of the journal. It has a huge impact on the evaluation of scientific output, although scientists and specialists make contradictory assessments of this impact. The reason is, that the usage of IF for other purposes (i.e., for journal subscription selection processes in the libraries, for estimation of individual scientist's or research group's productivity in science management) faces a dilemma if scientific assessment on a macro level (science, country, world) applies the same criteria on the micro (individual) level. Citation is the indicator of the influence of an article, author or journal, but is not necessarily a *quality indicator* of the individual publication or the researcher's activity. The language issue is a relevant problem. For example, scientists who publish their articles in Lithuanian risk being cited or referred to only by those who know of this language,

which means that the visibility of such article worldwide will be poor or equal to zero. To minimize this problem, abstracts in major world languages are provided. In addition, different areas of science (such as humanities – history, philosophy, philology), especially if the research is conducted over a long period, do not publish their results in journals. In this case, books and monographs are one of the main forms for dissemination of research results.

Results of the survey on the *Need for bibliometric research*

The idea of providing bibliometric research services at the Vilnius University Library came up a few years ago, but it was important to know how it would be regarded by people at the University: would they see it as necessary, useful, timely.

For these reasons, the Vilnius University Library (in January 2010) conducted a survey on the *Need for bibliometric research*.

The aim of the survey: to find out if researchers think that bibliometric research is useful and necessary and, if the answer is yes, what kind of research should be performed.

Main goals:

- To question VU scientists;
- To analyze the results of the questionnaire;
- To provide findings concerning the research priorities.

Organization of the survey and a sample: A questionnaire was prepared and placed online. A letter inviting participation in the survey was disseminated via the VU email list to University lecturers, researchers and doctoral students. 141 answer was received.

Key indicators of research results

In total 141 respondents replied to the questionnaire: 80 lecturers, 34 doctoral students, 19 researchers, and

¹ Garfield E. The History and the Meaning of the Journal Impact Factor. JAMA. 2006, No 295 (1), p. 90 – 93. Available at: <http://jama.ama-assn.org/content/295/1/90.full.pdf.html>.

Accessed February 22, 2012.

² JCR – Journal Citation Report

8 other respondents (see Figure 1).

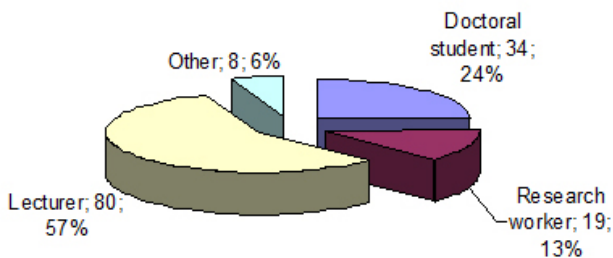


Figure 1: Respondents by occupation.

The first question of the survey *Bibliometric research is necessary* was aimed to clarify whether the scientists think that such research should be carried out. 80% of the respondents agreed that such analyses are needed., 16% said they had no opinion, 3% did not know what it meant, and only 1% (1 respondent) said that such research is unnecessary (see Figure 2).

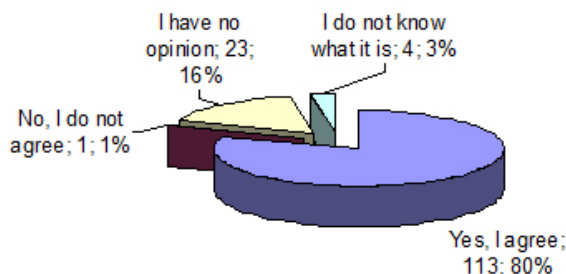


Figure 2: Answers to the proposition: "Bibliometric research is necessary".

Considering the scientists' opinion and proposed bibliometric research topics, the Scientific Information Data Center at Vilnius University library accomplished and presented the following analysis to the VU Senate:

- The Impact Factor and other parameters of those journals in which VU scientists published their articles in 2009.
- Comparative analysis of Vilnius University, Vilnius Gediminas Technical University and Kaunas

Technological University publications registered in Web of Science (WOS) in 2009.

- Analysis of VU publications registered in WoS in 2010.
- Analysis of VU publications in the humanities and social science registered in WoS .
- Analysis of VU publications in humanities registered in SCOPUS.
- Comparative analysis of publications in the humanities from Lithuania, Estonia, Finland, and Germany.

Representation of humanities publications in the Web Of Science database

At the end of 2011, the research project *Reflection of humanities in the database Web Of Science* was accomplished. The aim of the research was to determine how the humanities are represented in the database *Web of Science*, and whether this source is advantageous and appropriate for the registration and evaluation of articles in the humanities..

Chronological range: 1990–2011.

Source: Web of Science (WOS) database.

Subject: articles in humanities from Lithuania, Estonia, Finland, Germany in WoS.

The results show, that there are 1,395 humanities journals registered in WoS, whereas the number of social science journals is 4,500 and of science journals is 8m500 (see Figure 3).

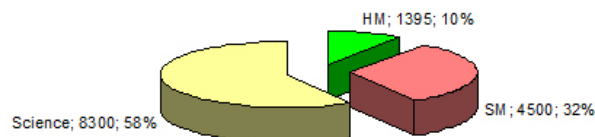


Figure 3: Journals' distribution in DB WoS according to the branches of knowledge.

Although the number of journals in humanities in the WoS database presents a fair amount, it is only 10% of all journals registered in this database.

The study shows, that the amount of humanities publications in WoS from the surveyed countries is slightly increasing (see Figure 4, 5, 6, 7).

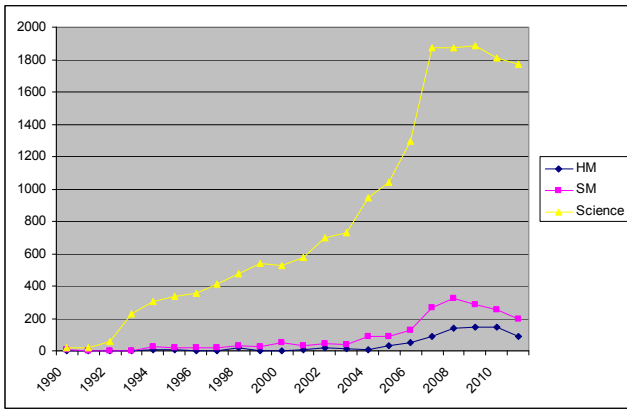


Figure 4: Dynamic of scientific publications, Lithuania, WoS, 1990 – 2011.

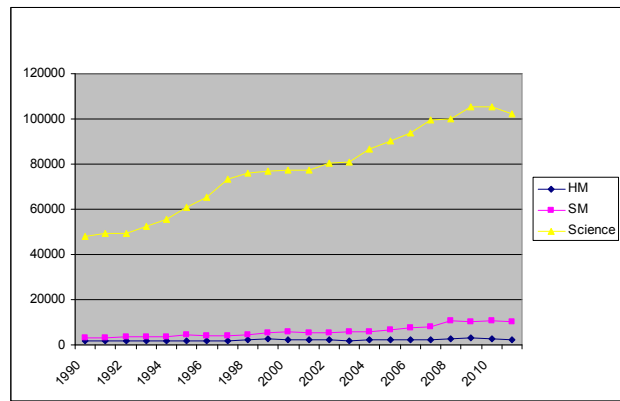


Figure 7: Dynamic of scientific publications, Germany, WoS, 1990 – 2011..

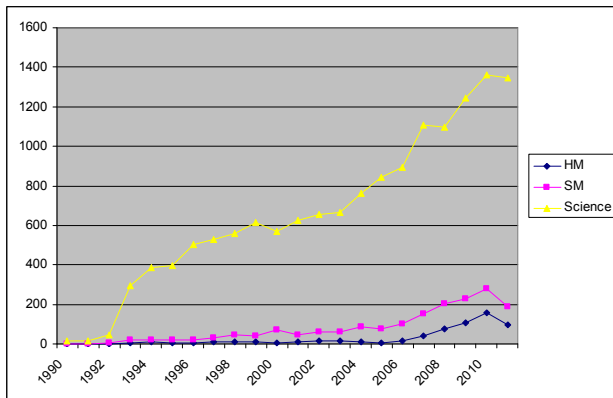


Figure 5: Dynamic of scientific publications, Estonia, WoS, 1990 – 2011.

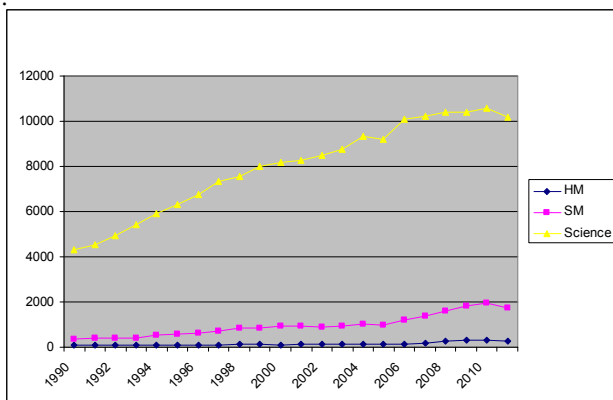


Figure 6: Dynamic of scientific publications, Finland, WoS, 1990 – 2011.

However, it must be acknowledged that in comparison with publications in other subject areas humanities cover a very small part of the database (see Figure 8).

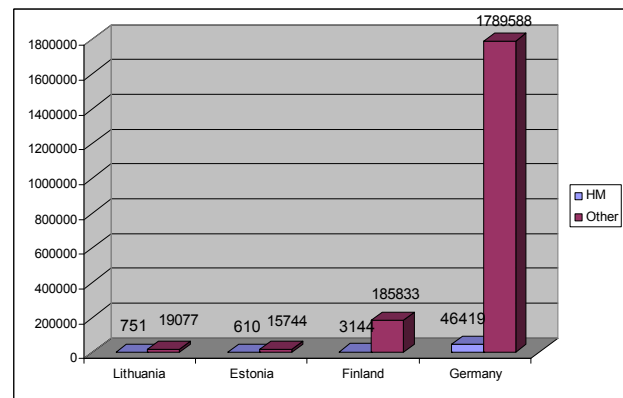


Figure 8: Comparison of humanities and other publications, WoS, 1990 – 2011.

Summary:

A general trend can be observed: humanities publications in WoS registered journals represent a very small proportion compared to other sciences: from Lithuania and Estonia – less than 0,04%, from Finland – less than 0,02%, from Germany – less than 0,03%. In addition, journals in the humanities consist only 10% of the total amount of journals registered in the WoS database. Therefore, it can be concluded, that the Web of Science database offers an insufficient representation of research in the humanities.



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