

Publication Activity Assessment of Slovak Higher Education (Central Europe Region)

Peter Kruzlik – Eugen Trajtel

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Abstract

This report evaluates the endowment distribution policy at Slovak state universities. Publication activity is divided into particular groups and categories. Among them, monographs and papers indexed in Current Contents Connect database reach the highest-ranking score. There are distinct bibliometrical indicators used for the evaluation: Impact Factor, 5-Year Impact Factor and Immediacy Index. Publication activity in Slovakia uses its own internet portal and has been recorded in the Central Register of Publication Activity since 2007.

Key words

publication activity, universities, ranking indicators, quantitative analysis, bibliometrics analysis, Central Europe, Slovakia

Introduction

The official ranking of publication activities began in the midst of 1990. The association and the project "ProSciencia" was established for dealing with problems of categorization of publication activity. It were precisely universities which came up with the exigency of recording all the academic publication activity in their own university libraries in order to have this agenda compiled in the sense of the accepted norms. In 2000 such a commitment was officially imposed on academy libraries according to the Law on Libraries n. 183 from 2000. The whole agenda is handled by the Directive of Ministry of Education n. 13 / 2008 on Bibliographical Registration and Categorization of Publication Activity. The first Slovak categories of publication activity were created by prof. Štefan Kimlička from the Faculty of Philosophy, Department of Library and Information Science, Comenius University in Bratislava.

Publication activity is an important and pursued parameter of the activities and effectiveness of higher education institutions. The idea of realization of the Central Register emerged from a need of the effective automatization of the data delivering directly to the responsible institution of higher education ranking, which executes its subsequent evaluation and control. Thus the project of the Central Register of Academic Publication Activities was established in 2007 under the direction of Ministry of Education of the Slovak Republic and was implemented by The Solutionist Group at University of Constantinus the Philosopher in Nitra, University of Zilina in Zilina and SVOP Company in Bratislava. The important output of the project is the internet portal of "Central Register of Academic Publication Activities" under internet adress www.crep.sk. Higher categories of publication activity are executing the strict requirements of indexed periodical of ISI Web of Knowledge database. These publication activity categories serves like the one of the methodological devices for obtaining the state financial support that is distributed to particular universities (15 % of university budget). Certain bibliometrical indicators peculiar to ISI Web of Knowledge are used for accreditation and evaluation ranking of faculties of natural science (Impact Factors, 5-Year Impact Factor, Immediacy Index).

Knowledge is considered to be the fundamental source of national prosperity. Economies of countries which are growing in strength on global market today are

based on so-called knowledge economics (Forey and Lundvall, 1996). To reach the level of the strong economies requires enforcing of science and research areas funding. That is the case of south-east Asian countries. First profits of the applied research in these countries can be found along with publishing in the widely-respected periodicals which belong into database ISI Web of Knowledge. Indexing of the scientific outcomes in such reputable periodicals become an indicator of the ignition or renewal of the scientific research. There are the applied internet devices enabling to browse the net structure in the quantitative mode through on-line web tools, to connect with the national web-sides and portals, social nets and to provide the quantitative indicators for the further analysis (Khan and Park, 2001). Rankings utilizes all the available webmetrical, scientometrical and infometrical methods of analysis. Bibliometrical impact indicators represent proxy value of the measuring of the work quality (Oppenheim, 1997; Oppenheim and Norris, 2003; Rinia, van Leeuwen, van Vuren and van Raan, 1998) and support the proces of determining of the best products, which are in the scientific portfolio of institutions. There is, for example, the methodology of the Italian national system of university evaluation (for 2004-2006) based on bibliomerical values cited in Web of Science by Thomson Reuters. Eighty-two universities were evaluated here. Ranking was set and qualified by the impact factor of a periodical.

Carmen López-Illescas, Félix Moya-Anegón and Henk F. Moed have analyzed the question of evaluation of the quality level of universities using the comparison of publication activity results from 1500 universities from 40 countries of the world (López-Illescas, C., de Moya-Anegón, F., & Moed, H.F, 2011). As a result, there was no proof - from the statistics standpoint of view- that the higher concentration of publication outcomes and citations leads to a higher quality of the research. It simultaneously revealed that the higher indexation of the national oriented periodical of the developing countries in SCOPUS and Web od Science databases do not increases its citation response. Contrariwise, its effects are disserviceable and just increases the citation of the western authors. It was ascertained as well, that the higher publication activity and a larger citation number do not automatically increase the quality of the scientific research - as mentioned above. There are fields with rather low publication activity which reaches the high citation rate level (biomedicine, nonotechnologies, genetic engineering).

We still do not have a sufficient research done and literature available for the really satisfying evaluation handling. Even the method of peer-reviewing has its own defects due to necessary subjective view of the peer-reviewers (Moxham and Anderson, 1992). Recent surveys realized by Italian universities indicate that the selective proceeding and university evaluation in Italy based on such a subjective ranking methodology are far less exact than the analysis of biblometrical criterion (Abrama, D'Angelo and Caprasecca, 2008).

Universities plays important and irrevocable role in acquiring and spreading of knowledge and intellectual level of nation's population. There are twenty public institutions of higher education in Slovakia, moreover, the three institutions are officially regarded as state universities. There are also twelve private institutions of higher education. Slovaka is a country of 5,4 millions of inhabitants. These institutions provide 347 accredited study fields. Those are responsible for forming of cognizant society concordantly with higher education criterion of European Union countries. The average annual endowment for the higher educational institutions in the Slovak Republic is 0,75 % of GNP, that means 0,411 mld. €. Comparing with the average annual endowment of the countries of European Union (1,1 %) we evidently

deal here with a low number. That's why the goal of the government is to increase the degree of financing of universities up to 1,2 % of GNP, and that is, however, a very difficult task in times of worldwide recession.

Methodology of publication activity ranking

Today, the methodology of endowment distribution policy considers four main appertained areas:

1. accredited study programs (number of students, number of graduates, financial requirements of particular study field, job market demands), wages, scholarships, products and services
2. research, developmental and artistic activities (projects, grants, infra-structure, publication activity)
3. subsidizing of high school institutions development (financing of common developing projects)
4. endowment appointed to support students (scholarships)

Under the rubric of the research, developmental and artistic activities (2.) can be subsumed publication activity of university professors, scholarly and scientific researchers, doctoral students. These counts the most significant criterion for evaluation of institutions of higher education. Ranking of the publication activity is used for accreditation processes, for project and grant proposals and individual qualification promotions. 15 % of the endowment from the budget belongs to publication activity of the institution. The first systematical attempts to carry out the electronic register of publication activity in Slovakia are from the midst of 1990. Since the publication activity have been recorded by academic university libraries in its internal information systems. It was the initiative of the high school institutions themselves, because they wanted to have professionally managed publication registration.

The scientometrical indicators of international database Journal Citation Report are used for accreditation ranking of Slovak universities, namely, value numbers of Impact Factor, 5-Year Impact Factor and Immediacy Index.

First officially set categories of publication activity and citations in Slovakia was created by prof. Štefan Kimlicka from the Department of Library and Information Science, Comenius University in Bratislava under the heading of ProSciencia project in his book "Pro Scientia - registration and presentation of publication activity, citation responses and scientific activities" (Kimlicka, 1999, 2002). But Slovak academic libraries started to use the categorization actively precisely after the recommendation of Accreditation committee in 1998. In 2005 the categorization was adopted by the Ministry of Education of the Slovak Republic and became a part of the Directive on Bibliographical Registration and Categorization of Publication Activity, Artistic Activity and Citations. Libraries are not allowed to change or modify the categories arbitrarily. In 2008 the Directive was extended by adding the new categories of artistic activity.

Since universities are subsidized for the publication activity from the Ministry of Education, there was a need to create the way for the central registration of publication activity and control as operative in nationwide level. In 2007 the electronic Central Register of Publication Activity was established. All the universities are obliged to record the proper bibliographical data. The main goal of this national project was to automatize the process of acquiring and evaluating data concerning the publication activities at Slovak universities. The other aim of the

project was the establishment of the central information source found on www.creps.sk. Not all the bibliographical records here are financially supported.

Publication activity of Slovak Republic is divided into 6 main groups:

Group A1 – Scientific monographs (subsidized)

Group A2 – Professional monographs (subsidized)

Group B – Articles indexed in the database Current Contents Connect (subsidized)

Group C – Articles indexed in databases Web of Science or Scopus (subsidized)

Group D – Other publications (subsidized)

Group O – Non-subsidized

Categories subsidized groups:

Group A1 – Scientific monographs

1. Scientific monographs published in abroad
2. Scientific monographs published in Slovakia
3. Scientific studies published in abroad
4. Scientific studies published in Slovakia
5. Chapters published in scientific monographs in abroad
6. Chapters published in scientific monographs in Slovakia

Group A2 - Professional monographs

1. Undergraduate textbooks published by the foreign publishers
2. Undergraduate textbooks published by the Slovak publishers
3. Specialized monographs published in abroad
4. Specialized monographs published in Slovakia
5. Textbooks for the basic and the secondary schools
6. Lecture notes and textbooks
7. Monographs of art/translations and the origin catalogues published in abroad
8. Monographs of art/translations and the origin catalogues published in Slovakia
9. Survey works
10. Specialized translations of monographs
11. Editorial and the compiling works
[bibliographies/periodicals/encyclopaedias/dictionaries/miscellaneous]

Group B – Articles indexed in database Current Contents Connect

1. Scientific articles in the foreign journals indexed in Current Contents Connect
2. Scientific articles in the Slovak journals indexed in Current Contents Connect
3. Professional articles in the foreign journals indexed in Current Contents Connect
4. Professional articles in the Slovak journals indexed in Current Contents Connect
5. Artistic works in the foreign journals indexed in Current Contents Connect
6. Artistic works in the Slovak journals indexed in Current Contents Connect
7. Abstracts in the scientific articles in the foreign journals indexed in Current Contents Connect
8. Abstracts in the scientific articles in the Slovak journals indexed in Current Contents Connect
9. Patents

Group C - Articles indexed in databases Web of Science or Scopus

1. Scientific articles in the foreign journals indexed in Web of Science or Scopus
2. Scientific articles in the Slovak journals indexed in Web of Science or Scopus
3. Professional articles in the foreign journals indexed in Web of Science or Scopus
4. Professional articles in the Slovak journals indexed in Web of Science or Scopus

Group D – Other publications

1. Chapters in academic foreign textbooks
2. Chapters in academic Slovak textbooks
3. Scientific works in non-indexed foreign journals
4. Scientific works in non-indexed Slovak journals
5. Scientific reviewed works in foreign proceedings and monographs
6. Scientific reviewed works in Slovak proceedings and monographs
7. Published invited contributions on foreign scientific conferences
8. Published invited contributions on Slovak scientific conferences
9. Published contributions on foreign scientific conferences
10. Published contributions on Slovak scientific conferences
11. Abstracts of contributions from foreign scientific conferences
12. Abstracts of contributions from Slovak scientific conferences
13. Scientific abstracts in the foreign journals indexed in Web of Science or Scopus
14. Scientific abstracts in the Slovak journals indexed in Web of Science or Scopus
15. Chapters in Professional books published in abroad
16. Chapters in Professional books published in Slovakia
17. Chapters in textbooks
18. Encyclopedia's and dictionary's foreign headings
19. Encyclopedia's and dictionary's Slovak headings
20. Professional Works in foreign journals
21. Professional Works in Slovak journals
22. Abstract of professional foreign works
23. Abstract of professional Slovak Works
24. Standards (ISO)
25. Chapters in artistic foreign works
26. Chapters in artistic Slovak Works
27. Artistic works and translations in foreign journals
28. Artistic works and translations in Slovak journals

Group O – Non-subsidized

1. Posters in the proceedings from the conferences held in abroad
2. Posters in the proceedings from the conferences held in Slovakia
3. Reports about scientific tasks
4. Specialized papers in the foreign non/reviewed miscellaneous
5. Specialized papers in the Slovak non/reviewed miscellaneous
6. Compositions [musical scores/CD/cartridges/records] published in abroad
7. Compositions [musical scores/CD/cartridges/records] published in Slovakia
8. Artistic Works and translations in published in abroad
9. Artistic Works and translations in published in Slovakia
10. Thesis [all qualifying works]
11. Reviews in the periodicals and proceedings
12. Surveys/ specialized translations in the periodicals and proceedings
13. Research reports and studies
14. Works published in Internet
15. Others publications and documents not included to the previous categories

Conclusion

Identification and controlling of the proper classification of records registred in Central Register with the database Current Contents Connect is being made automatically through inbuilt database's tools by comparing the name of the author,

the title of the contribution, the source document and international numbers ISSN and ISBN. If the record has two or more authors from the various institutions, the authorship percentage is shared according to each authors' contribution due to his or her membership in the particular workplace. In 2011 there were 1712 indexed records of Slovak universities in the database CCC, that means, 65,9 % from the whole amount of indexed slovak records in this database. One can notice serious contemporaneous considerations about the novelization of the current methodology of evaluation of publication activity, which is said to be not only evaluative of Current Content Connect contributions, but also of the articles indexed in databases WOS and SCOPUS. Today, this bibliographical database has approximately 250 thousand records.

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Ing. Peter Kružlík

Mgr. Eugen Trajtel

University of Constantine the Philosopher in Nitra

University Library

Dražovská 2, 94901 Nitra

Slovakia

pkruzlik@ukf.sk

etrajtel@ukf.sk