

A question of quality

Fábio de CASTRO

Brazilian scientific journals conquer space in one of the main databases in the world. Experts explained to FAPESP Agency that the increase is due to the quality of the national research, but it can not be confused with increase in production

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The Brazilian science has gained more visibility overall, the number of national scientific journals indexed in the international database Web of Science-ISI (WoS) increased 205% between 2002 and 2008.

The reason for the increase, according to experts in scientometrics and the company Thomson Reuters - responsible for WoS - is the increased interest worldwide in the Brazilian scientific research that is considered of high quality.

This increased Brazilian presence in the WoS base does not mean that the national scientific production has grown in the same percentage. According information from researchers in the field of scientometrics to the FAPESP Agency, the statement of the Minister of Education Fernando Haddad that would have occurred in Brazil increased by over 50% in the number of articles published in just one year (from 2007 to 2008, what would be unprecedented in the country and the world) is not justified.

According to José Claudio Santos, regional manager of Thomson Scientific to South America, since 2006 the company has sought to add to the database greater amount of content in the region. With the inclusion of new journals, the Brazilian presence at the base increased 56% from 2007 to 2008.

“The international community was demanding this because news about the excellent quality of the Brazilian scientific production, especially in the areas of alternative energy, agriculture and social sciences have been continuously released. There was demand for a data set that we did not have at the database; then we started to index information” said Santos to the FAPESP Agency.

“What increased was the Latin American presence in the database and Brazil led this process of growth, which is excellent. But it did not happen due to government investment in science, as was said. The investments remain

low. The greatest reason was that in the last two years new journals have been indexed”, said Rogerio Meneghini, scientific coordinator of the Scientific Electronic Library Online (SciELO), created in 1997 through a partnership between FAPESP and the Latin-American and Caribbean Center on Health Sciences Information (BIREME).

According to Meneghini, in addition to the new direction of Thomson to include developing countries, the company has concentrated its focus on areas such as climate change, biodiversity, public health and some social science disciplines. “Brazil was well in all these areas and, because of that, became the spotlight among the other countries of the continent that gained more space in WoS”, he explained.

In an article published in the *Folha de S. Paulo* newspaper on May 12, Meneghini denied the version that attributed to the federal investments a supposed increase in scientific production. For him, it is possible that the government may be mistaken when checking the data from the WoS.

“The data on the increase in indexing of Brazilian journals in WoS are not available on the Internet. I got them apart. When the government celebrated the numbers as if they were result from its investments, I quickly realized the mistake. I believe, assuming good faith, that they are excited about the great numbers, thus reaching wrong conclusions”, said a leading Brazilian specialist in scientometrics.

Meneghini highlights that more public investment in Brazilian scientific journals could further increase the visibility of national science.

“It would be necessary to create some policies. Annual investments of tens of millions of dollars to maintain a portal that provides to the postgraduate courses access to national journals are not enough - although this is an

important product. We must also invest in national journals, what does not happen” he said.

According to Santos, the criteria of Thomson for indexing of printed and electronic journals will remain the same. “Only journals that meet five basic criteria are indexed: ability to publish and distribute in reasonable time; use of international conventions for the editorial; publication preferably in English; editorial content - as abstracts and keywords - also in English and international diversity”, explained the responsible for the commercial area, editorial and bibliometric studies of Thomson in the continent.

According to Santos, increased participation of Latin American in the base WoS was 154% between 2002 and 2008. “In 2002, we had 63 journals of the continent indexed. In the end of 2008 we had 160, and 64 of them were Brazilian journals. Of all countries - Brazil, Mexico, Chile, Argentina and Colombia - Brazil was the country with the highest number of indexations: 205%”.

Distorted conclusions

For Leandro Innocentini Lopes de Faria, a professor of the Department of Information Science of the Center of Education and Human Sciences, Federal University of São Carlos (UFSCar), regardless of how it was released, increasing Brazilian presence in WoS is encouraging – with the new situation, the country moved from the 15th to the 13th position among countries with more articles published in the database.

“The way of disclosure was a little strange, since the supposed growth of scientific production was artificial, caused by the increasing number of journals. But the good news is that the Brazilian science has gained more space”, said the professor.

Lopes de Faria is the author of the study based on WoS and Portal Periódicos of the Coordination for the Improvement of Higher Education Personnel (CAPES), to be published in the next edition of the FAPESP’s *Indicators of Science, Technology and Innovation in São Paulo*.

“In the indicators we created, we analyzed the scientific production considering that the database used has a continuous collection. If the universe of journals is the same, we can calculate the growth of scientific production from there. However, from the moment the WoS increases the number of indexed journals, it is not possible to compare with the previous year, or the conclusions would be obviously distorted”, he said.

According to Lopes de Faria, the WoS database has been often used for the production of indicators exactly because it maintains a continuous journals collection. In contrast, the negative point of the base was the fact that this group, although stable, had little representation of Brazilian journals.

“The lack of Brazilian journals was much criticized and

currently there is an adjustment, providing to the group more representativeness. But this is a time of change, which brings analysis inconclusive at this time. The base only could be used now to assess the growth of scientific production in a few years, unless the WoS makes a retroactive inclusion of issues of new indexed journals published in recent years”, he explained.

Importance of SciELO

According to Abel Packer, director of BIREME and one of the creators of SciELO – together with Meneghini - the improvement in quality of national journals was decisive for the increase of its presence in WoS.

“While the criteria have been expanded, they were not relaxed. The fact is there is a great improvement in journals, which has been showed by SciELO. Therefore, it was impossible for international organisms to ignore the science that have been done in Brazil”, he said.

For Packer, the program supported by FAPESP has been proactive in increasing of Latin American scientific publications. “SciELO showed we have a significant number of quality journals which deserves international indexation. We have contributed to provide to Brazilian journals greater visibility nationally and internationally, which is reflected in a large and growing number of downloads of articles in the SciELO database, in addition to the increase number of citations, reflecting the impact of this scientific production”, he said.

Throughout the development of the SciELO’s database, a series of journals reached a number of impact factor greater than 1, something unprecedented in the country until now. According to Packer, it was a result of the constant critical evaluation by the program in its selection of articles, whose consequence is a gradual improvement in quality of journals.

“I would like to criticize the international indexes, such as WoS, which always see our journals as products of the second category. Since long ago, we called attention that our journals deserved a wider coverage due to their quality. Finally, we achieved success, but this change came well late”, he emphasized.

More quality

For the scientometrics Jacqueline Leta, professor of the Institute of Biomedical Sciences, Federal University of Rio de Janeiro (UFRJ), the news that Brazil now becomes the 13th country in the world with more articles published in WoS should be celebrated.

“It is an excellent news. What is bad is how the reasons of this growth were disclosed - it was caused more due to the inclusion of more journals in the WoS database than by an increase in publications. Capes has great merits, but it did nothing alone”, she said.

This indexing of new Brazilian journals, according to her, was the result of great negotiation and many articulations between Thomson and the Brazilian scientific community.

“There was an entire editorial process that led to improvement in all journals’s subjects, from submission to publication. All this ensured to these journals a better evaluation. If they did not have quality, they could not be accepted to the base”, she pointed.

According to Jacqueline, one must emphasize that the bases such WoS have limits in cataloging of journals. So, the organizers reserve the indexing to journals with more worldwide recognition. “The bases make a cut in world scientific literature. There would be no economic or technical

capacity to include all journals in the world”, she explained.

Journals of the United States, according to Jacqueline, traditionally lead the WoS databases. “If we think in terms of demography, perhaps China has the largest number of journals in the world, but it is not represented so concentrated as other countries with great scientific tradition. Therefore, the scientific production of a country is not necessarily proportional to the number of articles published in the database. The numbers must always be understood taking into account the size of the database”, she said.

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