

National impact

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Compared to all the countries of Latin America and the BRIC (Brazil, Russia, India and China), Brazilian scientists are those who can impact rates higher with publications in national journals.

The analysis was performed by Felix Moya, a researcher at the Department of Dynamics of Science and Innovation at Policy Institute and Public Goods in Granada (Spain) during the 2nd Seminar on Performance Evaluation of Brazilian journals on JCR, held last Friday Monday (16/9) at the headquarters of FAPESP, São Paulo.

The event was supported by the Scientific Electronic Library Online (SciELO), created in 1997 through a partnership between FAPESP and the Latin American and Caribbean Information Center in Health Sciences (Bireme).

The aim of the seminar was to discuss the growing visibility achieved by Brazilian science in Journal Citation Reports (JCR), the most important international index of citations. The quantity of national periodicals indexed in JCR grew by 43% from 2009 to 2010.

According to Moya, besides the increased presence of Brazilian scientific publications in the international scenario, these publications clearly improved their impact abroad as well. Proof of this is that when compared to other Latin American countries or BRIC countries, Brazil has managed to attain the highest impact rates by publishing in national journals.

“SciELO has a lot to do with this, undoubtedly. No other country in the world has a national project providing open access to publications like this one. It’s not everything that is needed in the area for disclosure of Brazilian science, but it is a very important step forward and has not been done in other countries,” he told **FAPESP Agency**.

Impact in itself is not an end, however, according to Moya. “The pursuit of greater impact is a measure that can be considered a symptom of the improved quality of research. There is a clear co-relation between impact and research excellence. The importance of this, however, is not limited to the scientific field: the high impact of research has major social relevance,” he says.

The analysis, however, should be performed carefully, according to Moya. In his opinion, what is not true for a researcher could be true for the country.

“If someone says that every study published in a high impact journal will be a work of excellence it is a lie. But if someone says that the Brazilian researchers who tend to publish in higher impact journals will have a greater quantity of works of excellence, this is true,” he affirms.

According to him, it is preferable that researchers submit to more rigorous and competitive processes for publication of their study because this guarantees the overall quality of these studies in the scientific community. But even if they are not the favorites, low impact journals serve a purpose.

“Lower impact magazines will only allow authors to be published if they can publish in high impact publications. For others, one should have other journals. The works published in lower impact magazines are not necessarily of worse quality. The same researcher may publish alternatively in both types of magazines. This subject is very poorly analyzed and the conclusions are weak when looking at individual cases. It is a subject that should be analyzed as a system,” affirms.

According to the Spanish researcher, the complex system of communication in science manages to disseminate knowledge in distinct levels of journals. “Neither the researchers, nor the journals are stagnant. What is lacking is greater observance of the trends that both journals and researchers should follow,” he says.

If for the researchers it is recommendable to pursue publication in high impact journals, for journals developing an editorial policy that increases international collaboration is fundamental. For Moya, the editors should develop scientific marketing activities.

“It would be interesting, for example, if the editors of Brazilian journals sent each one of scientists cited in its journals a communiqué about their citation. This would generate a process of dialogue, prompting the authors of the works to become familiar with journal, since they are potential collaborators. This type of scientific marketing practice improves the international visibility of works,” he notes.

According to Moya, when the journal has more international collaborations, the authors increase the spectrum of the origins of their citations. “I believe that

this is why there is a difference between the activities of an editor, who is focused on the journal's scientific level, and the publisher, who is the professional editor focused on obtaining the highest possible visibility for the journal in the communication arena. Not all journals have publishers, but it is a central role in the process," he says.

Internationalization of science

During the event, Carlos Henrique de Brito Cruz, scientific director at FAPESP, highlighted the Foundation's interest in accompanying the performance of Brazilian journals that would garner more international interest and increase visibility.

"We are interested in accompanying the performance and development of these journal collections to know which actions we can take to step up our progress in this area. On the other hand, we hope that the debate helps to diagnose the bottlenecks and problems so that we can seek solutions to them," he noted.

Brito Cruz also highlights the importance that internationalization of Brazilian science affords for consolidation of scientific publications. According to him, the progress of science occurs more intensely when there is dialogue between scientists from several parts of the world.

"When we measure the impact of publications, we want to evaluate communication. Publishing a scientific article is an act of communication. It is a means of communicating discoveries to others and submitting them to criticism. I would like for science conducted in Brazil to converse more with the world. The more intelligent people from here dialogue with intelligent people from around the world, the more Brazilian science will progress," he sums up.

According to Abel Packer, operational coordinator of SciELO, there was a 17% increase in the periodicals published under the program from 2007-2010. The mean growth rate in this period was 5% per annum. On the other hand, from 2007 to 2008 the Brazilian presence has increased

fourfold in one of the main the international databases - a Web of Science-ISI (WoS), where JCR is based.

"The insertion of more Brazilian periodicals on WoS and other major databases has contributed to Brazil's rise to 13th place in the global ranking for scientific production. In this production, counting articles and revisions, the weight of Brazilian periodicals is 33% of the total," says Packer.

With 33%, Brazil has a large percentage of articles with an impact factor published in domestic periodicals in relation to other countries like South Africa (21%), India (17%), China (16%), Mexico (10%) and Spain (10%).

"Brazil is not bad in terms of impact factor among domestic periodicals. Roughly 10% of the periodicals have an above average impact factor in their respective areas. Our challenge is to rise to 15% to 20% of the periodicals with an above average impact factor," affirms Packer.

Rogério Meneghini, coordinator of SciELO's scientific program, highlighted that science is a cyclical process. According to him, scientific production in itself is not the last step in the process, which is also part of the scientific communication and informal discussion with partners. "Publishing is a complex task that is a very important part of the process of performing science," he affirms.

According to Meneghini, contrary to developed countries where the number the periodicals is directly related to commercial interests, in developing countries the number of publications is connected to the need to disseminate scientific production.

"At the moment of publication, there are two possible routes, domestic or international. What we have been discussing in the last few years - and which will continue to be discussed - is how much Brazilian publication begins to overlap with international production. Or rather, to what extent what we publish here is part of the international context of scientific publications," he said.

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