African American or Hispanic.

WHAT DID WE LEARN?

The publication landscape is dominated by the English-speaking world, as evidenced by the languages and the countries of publication. This is worrying, as most of the research therefore follows the orientations of a small subset of the global population, emphasizing characteristics of a higher education system that might not be valid for all. More importantly, this domination prevents knowledge from spreading in remote places where English language is seldom used or where publications are not available. Efforts have to be made to disseminate research in higher education more widely, by encouraging open source publications as well as appropriate translations.

It includes a list of 280 journals and publications, primarily concerning higher education.

The number of publications also show that a few countries are clearly leading the higher education research land-scape—the United States, the United Kingdom, China, and Japan. In many countries around the world, higher education has not emerged as an important area for academic inquiry, and many countries are lacking the appropriate and reliable knowledge that can inform policymaking. Regionally, Latin America, Africa, Middle East and North Africa are highly underrepresented, as well as Asia, except for China and Japan. Efforts should be made to help researchers in these regions and enhance regional collaboration to strengthen the knowledge base in higher education.

The regional distribution of publications in the field of higher education also parallels the National Science Foundation's 2009 estimate of global research and development expenditures. North America and Asia are the leading research and development investors, the latter being heavily driven by China and Japan, while regions like Africa and the Middle East lag behind. Unsurprisingly, this suggests that the availability of funds is correlated with the output of research in higher education, as in other fields.

Finally, the range of publication focus areas reflects well the diversity of higher education stakeholders around the world. It is encouraging to see that so many issues are rising to the attention of researchers and the public, showing the complexity of the higher education field. This emphasizes the need to prioritize issues at the policy level.

The absence of any publication emphasizing the funding of higher education as a main focus struck us as unique, especially when considering the importance of the issue today for students, parents, institutions, and policymakers. However, there is no lack of research on this subject, and we can only assume that publications with a broader focus publish extensively on the subject of funding and finance. Overall, the aim of publications with specific focus areas might be to drive interest on an underresearched topic, thus leaving prominent issues to the broadly focused publications.

CONCLUSION

The higher education publication sector is quite uneven worldwide, as some countries can count on numerous publications with diverse focuses, while others do not even enjoy a single publication focused solely on higher education. The need to make sure that knowledge is shared more equally around the world is pressing, an effort that should be undertaken by researchers, publishers, and policymakers

Note: Higher Education: A Worldwide Inventory of Research Centers, Academic Programs, and Journals and Publications is published by Lemmens Media. It is available under three formats: an e-book, a downloadable PDF, or a printed book.

International Higher Education Research and Comparative Analysis

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International comparative higher education research has been a popular and valuable field of research. International and global trends and developments in higher education have stimulated higher education research on a worldwide scale in recent years. Simultaneously, international higher education research has increased in volume and even more in popularity. Furthermore, international collaboration in research in general has intensified and proliferated rapidly in the last two decades. This trend has also been en-

couraged by political institutions, particularly in Europe, through specific research funding. The European Union's Seventh Framework Program, for instance, requires at least three different EU member states for transnational partnerships; and national funding agencies all across Europe have opened their national funding programs and offer crossborder funding to facilitate researcher mobility and crossborder research projects.

In light of these developments, one would also expect a growing amount of international comparative higher education research, partially due to an intersection of both international collaborative and international higher education research.

International and global trends and developments in higher education have stimulated higher education research on a worldwide scale in recent years.

WHAT BIBLIOMETRIC DATA SHOW

In a recent study we explored the patterns of international comparative higher education research presented in articles in eight leading international higher education journals, both from Europe and the United States. Among other questions, we asked: What share does international comparative research have in higher education research in general, and how does it develop quantitatively over the years? Where do the authors come from? And how many countries are compared? To answer these questions, a specific definition was adopted of international comparative research in higher education: the comparison of issues and developments of higher education within different national higher education systems. Hence, journal articles were defined as internationally comparative, if they refer to research that compares mainly at two countries. This criterion served to distinguish international comparative research from higher education research that focuses on international or global topics, without being genuinely internationally comparative. Methodologically, a bibliometric approach was analyzing international journal data with a quantitative content analysis of abstracts of articles on the basis of a coding of countries. The overall data set covers 4,095 publications from the Web of Science for the period 1992–2012.

A SMALL, BUT STEADY FIELD

Surprisingly, the patterns we found do not reflect the general trend of a growing internationality in higher education

research. In contrast, the results of our publication analysis of international journal data reveal a relatively steady state of international comparative higher education research over the past 20 years (1992–2012): over the years, a share of 11 percent of articles present results from international comparative research—with a slight increase in recent years: From 2009 onwards, the mean percentage is 15 percent. It remains an open question whether this indicates a stable trend of growth, stabilization on a higher level or a short-term increase, which might be reversed. Nevertheless, in general our analysis indicates that international comparative research can be described as a small but steady branch of international higher education research.

INTERNATIONAL COLLABORATION AND SMALL COMPARATIVE CLUSTERS

We found twice as much international collaborative publications (measured as coauthorships) in international comparative research compared to noncomparative research. Our results show 46 percent international coauthored publications (coauthors from at least two different countries) for our data set on international comparative journal articles, compared to 24 percent in noncomparative journal articles. Furthermore, our analysis shows that small-size comparisons are most popular in international comparative higher education research; they have by far the greatest share among all articles compared: 85 percent of the articles compare two countries or three countries. Articles comparing four, five, or even six and more countries exist but are quite rare. Nevertheless, from 2009 onwards, there is also a tendency to include more than three countries.

RESULTS

Results from bibliometric analysis always have to be interpreted with caution, and they definitely do not tell the whole story about international comparative research in higher education but provide interesting initial insights. The insights gained from our study indicate specific characteristics of international comparative higher education research. Although higher education research focusing on international or global topics might increase in international journals in the field, genuine international comparative higher education research only has a small share in the international journal literature. Hence, it can be described as a small but steady branch of international higher education research, which is basically engaged with small cluster comparisons of countries and is to a large extent internationally collaborative. How can these characteristics be explained? We basically see two rationales:

Higher education research is to a large extent nationally and locally based. Due to its interdisciplinary and applied character it often contributes knowledge at the intersection

of national higher education politics, institutional governance, and practitioners. Building on this characteristic, considerations on locals (individuals with deep experience in their own country) and cosmopolitans (individuals with a broad experience in and a focus on different countries), as introduced by Alvin W. Gouldner in the late 1950s, are revealing. Applying his considerations to higher education research illuminates two latent types of research orientations of academics and institutes, within national research environments. Whereas the cosmopolitans immediately pick up and implement international trends in higher education into their research agenda and initiate international comparative research, the locals usually devote their research to the national context. They also pick up international trends in higher education but are more likely to translate them into national research designs and projects.

The overall data set covers 4,095 publications from the Web of Science for the period 1992–2012.

International comparative research is genuinely more complex in its nature than nationally based research—it has multifaceted national angles, which constitute specifically complex research objects. Furthermore, as we have shown, international comparative articles are often outcomes of international collaborative research teams. Due to the more complex research team dynamics within teams located in different countries, international comparative research often implicates a more time-consuming coordination and costly communication. Hence, it might be difficult for international research teams to publish journal articles within the usual three-year time span of research projects. It might be even more difficult to maintain a research network beyond the project duration and to continue the joint international work. Thus, it seems likely that international research teams may favor anthologies, conference proceedings, and monographs as publication formats.

Although these two rationales point to inherent characteristics of international comparative higher education research, which seem to limit its growth, we also found both a recent increase in international comparisons and a tendency toward the comparison of larger country clusters since 2009. Further research is necessary, which explores whether this growth and the tendency toward larger comparative clusters are affected by political institutions through specific research funding schemes. Furthermore, studies on the communication and publication practices and research

team dynamics of international research teams in interdisciplinary research settings would be desirable.

POLICY IMPLICATIONS

Both rationales refer to institutional and funding structures of higher education research. Thus, we draw the following policy relevant implications from our analysis: in order to strengthen and promote—and eventually increase—international comparative research projects, longer project periods, or projects with flexible modular options for extensions appear as first-choice means. Beyond that, it is worth considering establishing more systematic capacity building, regarding research designs and steering of international collaborative research projects—e.g., through the exchange with other interdisciplinary and disciplinary research fields, as well as through specific training for early career researchers in higher education research. Moreover, international exchange of higher education researchers should be stimulated (and promoted) from the very beginning of research careers. This-reciprocally-would facilitate the internationalization of higher education research and eventually might facilitate international comparative projects.

Academic Ranking of World Universities: Changes in World Higher Education?

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In order to find out the gap between top Chinese universities and World-Class Universities, a team led by Professor Nian Cai Liu at the Center for World-Class Universities (CWCU) of Shanghai Jiao Tong University started a project on the benchmarking of top Chinese universities with US research universities, which eventually evolved into the Academic Ranking of World Universities (ARWU)—first published in June 2003 and then updated on an annual basis. ARWU is distinguished from other global rankings, for it only uses objective indicators. Its methodology has been kept unchanged since 2004, therefore only substantial progress in academic excellence can help universities