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Velká obhajoba disertační práce
Dissertation Defense

Vít Macháček
Chapters in cross-country analysis of science

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Opponent's Report on Dissertation Thesis

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This report provides a final assessment of the doctoral thesis of Vít Macháček. I had already reviewed the submitted version, for which I had very few requested edits. This revised version contains marginal improvements, which is coherent with my original comments. In its revised version, the thesis represents a legitimate contribution to the advancement of our knowledge on the various incentives that shape current research activity.

As I mentioned, in my original report, starting in the late 1990s, several nations across the world have made scientific publishing the core mechanism through which researchers are being evaluated, both explicitly—through cash per publication policies or evaluations that exclusively rely on bibliometrics—and implicitly, through bibliometric-informed peer review. Adverse effects of those practices are well documented—scientific fraud, predatory publishing, etc. The doctoral thesis from Vít Macháček tackles this issue with three essays on three aspects of contemporary academe which are associated with incentives: predatory publishing, institutional mobility, and internationalization of scientific publications. After revisions, I am even more so convinced that those represent important contributions to our understanding the contemporary research system.

The **first paper** of the thesis targets the presence of predatory journals—as per Beall's list—in a selective bibliographic database (Scopus), and assesses the country-level variables associated with publishing in such journals. Predatory journals are a modern concept, and definitions are still in flux. The candidate does a good job at defining, and distinguishing them from legitimate open access journals. The most controversial aspect of the paper is the use of Beall's list, which has many flaws, but which represents a useful source when used in a critical manner (i.e. not blindly). Therefore, I found the use of Beall's list was appropriately argued for. The analysis was performed in an appropriate manner; however, it was limited by the fact that the candidate does not have access to a bibliometric version of Scopus. Moreover, the lack of access to an individual-level data—through disambiguation algorithms—did not allow the candidate to look at individual-level factors that can affect publication in those journals. Are authors who publish in those journals well-established or young? Author disambiguation would have allowed to add to the regression and go beyond country-level data. I also believe it would have been interesting to have a variable related to the research evaluation culture. Does the country have a national research evaluation system? What are its characteristics? Why is Norway—which has a natural resource rent—does not have a predatory publishing problem, contrary to Saudi Arabia? Despite those limitations, the paper

represents a useful contribution to the understanding of the structural factors—at the country-level—that affect publication in predatory journals. Despite those limitations, this paper represents an important contribution. The comments I had in my original evaluation related to databases and naming of publishers were properly addressed.

The **second paper** looks at institutional mobility, using a set of researchers disambiguated in the Dimensions database. Mobility indicators are relatively new in the bibliometric toolbox; those studies rely on algorithms to distinguish researchers who have the same name. In this analysis, the candidate has used the state of the art algorithms as well as much more inclusive database—Dimensions—to tackle mobility at the institutional level. I found this analysis particularly interesting, as it goes beyond country-level mobility, and assesses mobility at the institutional level. This allows to address an important policy question for universities: is in-breeding something that is a problem for research institutions? How frequent is it? How does it vary according to countries? The results are interesting, and show important differences across countries and nations. The comments I had in my original evaluation related to languages and geographic factors were properly addressed.

The **third paper** assesses how researchers from different countries publish in international journals. Defining what an international journal is not straightforward: journal such as Nature or Science are considered as international, despite the fact that most of their authors are affiliated with US or UK institutions. Therefore, coming up with an objective and empirically informed indicator is a challenge. The candidate does a thorough assessment of indicators of internationalization at the level of journals, and then chooses six of them to assess journals' and authors' publications. Results shows strong national differences, with most European and North American countries having the highest internationalization rates, and lower rates for Eastern European and Asian countries. The comments I had in my original evaluation related to interpretation related to internationalization were also properly addressed.

In sum, the three essays contained in this thesis are original, and constitute relevant contributions to the research literature. Despite the fact that they are related to three different topics—predatory publishing, mobility and internationalization—there is a clear thread across them, which is how modern academe reacts to incentives. I must also note that the three papers have already been published, which shows that the results could be published in reputable journals. This thesis would also be accepted in my home institution, as well as institutions at which I have given lectures. On the whole, I believe the thesis can be accepted as such and be defended

Date:	11 September 2023
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