

Interactive comment on “International collaboration, mobility and team diversity in the life sciences: impact on research performance” by F. Barjak and S. Robinson

Anonymous Referee #1

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International collaboration, mobility and team diversity in the life sciences

This paper seeks to add to debates focusing upon international collaboration and team diversity, and their impact on research performance. Empirical evidence which relates to the topic is presented at the beginning, followed by a discussion of the survey design and modelling issues. The core of the paper presents descriptive and multivariate findings based on new survey data. Output volume, team productivity and output quality of research teams are used as dependent variables. The paper presents interesting insights into international knowledge transfers and the mobility of academics at the empirical level. However, there are some issues that need to be carefully considered.

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What theoretical debates does the study relate to? A theoretical/conceptual framework would assist the reader because the empirical evidence has produced contradictory results in the past (pp. 124-127). Please present research questions and then theoretically derived hypotheses. The paper does not theoretically explore why diversity of geographic origin is central. Which theoretical discussions support the authors' hypothesis that diversity of geographic origin has a significant impact on research performance? Why limit the diversity analysis to young researchers? Why is it important to differentiate between PhD candidates and Post Doctoral Fellows with respect to diversity of geographic origin? Why it is important to differentiate between EU and US collaborations? The article seems to be very empirically driven. I think by including a theoretical/conceptual section, the results presented in this article can be related to existing work more meaningfully. By doing so, the choice for the dependent and independent variables can be related more easily to this theoretical/conceptual framework.

With respect to the empirical analyses the authors should present the correlations between the variables, since it could be expected that at least some of the variables are highly correlated and possibly cause multicollinearity problems. The means, standard deviations, tolerance and VIF scores could be reported for all variables. The authors would help the reader by discussing in more detail the limitations of their statistical approach, e.g. many insignificant variables (table 6 in particular) and the low explanatory power of the models (R square). What points in real time do all dependent and independent variables relate to? Please show results for all variables in both tables (if possible). Please precisely state all variables and exact definitions in an Appendix to avoid confusion when interpreting the data. Finally, a more lengthy discussion of population and sampling issues would be helpful because data quality is as important as data quantity.

I think table 2 could be excluded. Most figures could be eliminated as well as they show insignificant differences between groups (ANOVA).

The novel theoretical/methodological contribution of the study needs to be stated in

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the abstract. The introduction and subsequent sections should state more precisely the current knowledge base and the gaps in the knowledge base. The results on international collaboration mainly confirm previous studies: Any surprises based on the new survey data? The empirical part of the paper should relate the findings to the theoretical discussion. The final section should draw the attention of the reader to the novel contribution(s) of the study.

Please check variable names in tables (spelling mistakes).

Aside from the above mentioned points, I feel this is an interesting and useful paper, which will advance debates on international knowledge transfers and the mobility of academics.

I am looking forward to the discussions - and the outcomes.

Interactive comment on Soc. Geogr. Discuss., 3, 121, 2007.