
Women and men in Czech R & D: Publication performance, productivity and co-authorship¹

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Summary

- This study offers the first systematic comparison of scientific publication performance of men and women in the Czech Republic. We analyze the period 2009 – 2013 and focus on publication output of Czech scientists in journals indexed in the Web of Science database in 11 broad field groups. In addition to the quantity of publications, we assess the quality of published articles using journal bibliometric indicators as a proxy for article quality.
- The recent gender shares among tertiary graduates in the Czech Republic are balanced, but the share of women among Czech scientists is still considerably smaller (at 38 %) and it differs dramatically across broad field-of-science groups (mathematical sciences 20 %; agricultural sciences 48 %).
- The share of women on publication counts is even lower (at 25 %), again with relatively large differences across field groups (engineering and information sciences 14 %; agricultural sciences 39 %). Women are also less likely to publish in the academically most influential journals.
- Publication productivity, i.e., the number of publications per researcher, is on average higher for men than for women (in humanities by 23 %; in biological sciences by 94 %). These differences become larger when based on the upper half of journal quality as proxied by bibliometric indicators (47 % in engineering and information science; 112 % in chemical sciences).
- Co-authorship exhibits gender polarization in all field groups. The shares of all-male or all-female author teams is significantly higher than in the hypothetical benchmark case in which co-authorships structure is assigned randomly based on the gender structure of a field of science.
- All-male author teams exhibit a higher share of publications in the top decile of journal quality than mixed-gender co-author teams in all broad fields of science we study. All-female teams also outperform mixed-gender teams on this metric in some fields; they do equally well as all-male teams in this regard in medical sciences.

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