

Do collaborations enhance the high quality output of scientific institutions? Evidence from the Italian Research Assessment (2001-2003)

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Extended abstract

This paper deals with the effects of research collaborations on the quality of the scientific output of academic institutions. Quality is a key characteristic of scientific production, as the ultimate impact of research on the progress of scientific knowledge is not fully captured by a quantitative measure.

In order to measure high quality research, we use data from the Italian Research Assessment in the period 2001-2003. Panels of experts classified all scientific outputs presented by Italian universities according to grades from "excellent" to "limited". We estimate a Poisson model for count data, whose dependent variable is the number of scientific outputs of "excellent" and "good" quality. The unit of observation is the pool of researchers affiliated to the same academic organization and to the same research field. As indicators of intellectual collaboration, we consider: the number of co-authors per researcher; the share of co-authors affiliated to other academic institutions; and the number of researchers in international mobility.

Our results show that the positive effects of external collaborations are significant, and stronger for "excellent" publications. We also find a strong positive association between international mobility and the number of excellent publications. These results support the view that, in order to improve the quality of its publications, a scientific organization has to encourage interactions with scientists from other institutions.