

Factors influencing the scientific productivity of university departments and research institutes

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This study investigates how the scientific publication productivity varies at Norwegian university departments and research institutes. The purpose is to analyze factors that may explain some of this variation. The study also examines whether there are differences in the productivity between small, medium and large departments and if evidence of a so-called “critical mass” effect can be identified. By combining two databases, one with R&D statistical data and one with publication data, we are able to analyze factors influencing scientific productivity. On the input side, we are using data such as R&D work years, external funding and composition of the scientific personnel as variables. The output indicators are based on the bibliographic database called CRISTin, which is a common documentation system for all institutions in the higher education and institute sector in Norway. Publication numbers are measured as article equivalents where the numbers are adjusted for co-authorship and publication types. The analysis covers the period 2009-2013.

The figure below presents some overall results of the study. This figure shows the relationship between the size of 263 departments/institutes in terms of R&D work-years and their publication output (preliminary data based on one year only). As there are differences across sectors/types of institutions in the terms and conditions for carrying out research, each group will be analyzed separately.

