

Allocation of Research Resources and Publication Productivity in Japan: A Growth Accounting Approach*

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Abstract

In Japan, as in many developed countries, the government's agencies for science have implemented several reforms to the scientific research system, which has concentrated research resources in the top research universities. However, the growth of research papers has stagnated in Japan during the 2000s. To analyze the reason for this, this paper develops a framework that decomposes the changes in research output. The framework is based on a model of universities and is an application of growth accounting that is widely used in economics. Using the framework, we find that the change in the allocation of research funds between universities had only a small effect on research output. The stagnation in research output during the 2000s was mainly accounted for by the decrease in research time. We also conduct a counterfactual experiment to examine how the research output would increase if the misallocation of research resources were completely removed.

JEL Codes: C43, D24, D61

Keywords: growth accounting; publication productivity; research time; allocation of research funds

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