

**Innovation of Pharmaceuticals:
Does Public Research Bridge the Gap Between Private Supply and Public Demand?**
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!!Work In Progress!!

Abstract

Market failure is characterized by an inefficient allocation of resources. In the case of pharmaceuticals, the market may provide an insufficient level of research and an abundance of development. Often times, the government will play an active role in the pharmaceuticals market. The purpose of this research is to measure and describe the (in)effectiveness of government funded research in its attempt to reduce market failure. To those means, we randomly select 1,800 United States patents awarded to drugs and medical chemicals between 1981 and 1999. The data differentiates between patents owned by non-for-profit and for-profit organizations. The numbers of forward citations, along with the amount of original and specific claims made by each patent, are some of the metrics used to characterize the effectiveness of government research in erasing the divide between the private market solution to development and the social benefits from research in pharmaceuticals. We find that in 1990, patents that are built upon previous patents from non-profit institutions lead to 13 more patents than those solely built upon previous patents from for-profit institutions.