

University of Milan
Department of Economics, Management and Quantitative Methods
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The economics of large-scale R&D projects: cost-benefit analysis

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Motivation and approach

There is an increasing policy support for research, development, innovation (RDI) spending, particularly in the EU. While there is a wide literature on the macroeconomic returns of RDI, relatively less is known on the social returns at the project level. How to measure the welfare effects of large-scale research projects? How to contribute to project decision making in science policy in the perspective of economics? This turns out in designing an empirical analysis and valuation of effects of RDI on firms, consumers, employees, taxpayers, e.g in the form of technological spillovers, human capital effects, cultural effects, scientific output, and the pure value of discovery as a public good, in the framework of applied welfare economics.

Structure of the lectures

The course in two parts: three lectures of two hours each December 1-2-3, 14.30-16.30 (DEMM seminar room, via Conservatorio 7, second floor). Additional two units of discussion with students about possible research projects will be added if required, dates to be agreed.

The first lecture will briefly review the theory of cost-benefit analysis and its potential application to RDI evaluation, a new research topic.

In the second lecture a case study will be examined in depth: the Large Hadron Collider (LHC) at CERN, where the Higgs boson has been recently discovered.

In the third lecture, further ideas for research in this area will be discussed, drawing from theory and the case study.

Reading list

Lecture 1: Florio M, Applied Welfare Economics, Routledge 2014

Lecture 2: Florio M, Forte S, Sirtori E., Cost-Benefit Analysis of the Large Hadron Collider to 2025 and beyond, <http://arxiv.org/abs/1507.05638>

Lecture 3: Florio M & Sirtori M, 2014. "The Evaluation of Research Infrastructures: a Cost-Benefit Analysis Framework," Departmental Working Papers 2014-10, Department of Economics, Management and Quantitative Methods at Università degli Studi di Milano. REPEC

Extended and revised versions of the materials for Lecture 2 and 3 will be available in due course at www.eiburs.unimi.it