Input-Output Analysis: An Impact Study

Bart Los

University of Groningen
Faculty of Economics and Business
P.O. Box 800, NL-9700 AV Groningen, The Netherlands
b.los@rug.nl, phone:+31 50 363 7317

Abstract prepared for the International IO Meeting on Managing the Environment,
July 2008, Sevilla, Spain

The objective of this paper is to provide quantitative evidence of the impacts of input-output analysis. Bibliometric methods are used to identify which scientific disciplines have been impacted by input-output analysis most intensively, and to identify shifts in this pattern over time.

Input-output economics has virtually disappeared from the pages of leading mainstream economic journals since the late 1980s. Understandably, this has led to a rather unfavorable position of input-output analysis regarding its ability to remain well-represented in economics departments and its chances of obtaining funds from research councils. Simultaneously, however, other disciplines (such as industrial ecology and operations management) seem to have embraced input-output analysis as a useful toolbox. Consequently, debates emerged concerning the future of input-output within the community of input-output scholars. Many of these mainly addressed the question which types of questions could and should be answered by input-output analysis. Therefore, it might be interesting to construct statistics based on bibliographic information to find out what kind of studies the input-output community contributed and in what fields it had its strongest impacts.

The citations data required for this study are taken from a recently published, continuously updated, and wide-ranging bibliographic database, Scopus. The data allow for an analysis of the period 1996-2005. In the first step, the “body of input-output literature” (IO-LIT) will be identified. To this end, we first find the authors of articles (ESR-LIT) that appeared in the input-output journal Economic Systems Research, 1996-2005. Besides these articles, IO-LIT consists of those articles that appeared in other journals (in the same period) and (i) cited at least one of the authors of articles in ESR-LIT, and (ii) the titles or abstracts of which contain the terms “input-output”, “interindustry” or “intersectoral”. IO-LIT allows us to quantify the direct influence of input-output analysis on various scientific fields and academic journals. Next, we construct a set of articles that do not belong to IO-LIT, but cite one or more articles in IO-LIT. We assume that the articles in this set (IO-CIT) benefited from the body of input-output literature. Hence, the fields to which these articles correspond and the journals in which these appeared enjoyed an indirect influence of input-output analysis.

We compare the extents to which ESR-LIT, IO-LIT and IO-CIT contributed to several fields of study, by using keyword analysis and the opinions of experts. We also consider the impact of IO-LIT and IO-CIT on academic journals. Finally, we investigate whether these impacts have shifted over time, as far as the short span of time covered by our data allows us.