



International Input-Output Association

Working Papers in Input-Output Economics

WPIOX 09-007

Frederik Neuwahl, Andreas Uihlein and Aurelien Genty

**An Econometric Input-Output Model for EU Countries
Based on Supply and use Tables: The Production Side**

Working Papers in Input-Output Economics

The Working Papers in Input-Output Economics (WPIOX) archive has been set up under the auspices of the International Input-Output Association. The series aims at disseminating research output amongst those interested in input-output, both academicians and practitioners. The archive contains working papers in input-output economics as defined in its broadest sense. That is, studies that use data collections that are in the format of (or are somehow related to) input-output tables and/or employ input-output type of techniques as tools of analysis.

Editors

Erik Dietzenbacher

Faculty of Economics and Business
University of Groningen
PO Box 800
9700 AV Groningen
The Netherlands

h.w.a.dietzenbacher@rug.nl

Bent Thage

Statistics Denmark
Sejrøgade 11
2100 Copenhagen Ø
Denmark

bth@dst.dk

Code: WPIOX 09-007

Authors: Frederik Neuwahl, Andreas Uihlein and Aurelien Genty

**Title: An Econometric Input-Output Model for EU Countries
Based on Supply and use Tables: The Production Side**

Abstract:

This paper discusses the specification of the production structure in a model, recently introduced by Kratena and Streicher, which integrates econometric and input-output models in order to supersede the linear production technology assumption with more flexible production functions estimated from time series of National Accounts and other data. The model is proposed as a general applicable model for EU countries as it makes use of the full range of information available in the Eurostat database of national accounts, as well as of additional information originating from major research projects sponsored by the EC such as EU KLEMS and EXIOPOL. The model is implemented in GAMS and is simultaneously solved for prices and quantities as a constrained non-linear system such as to be able to integrate flexible production functions. We discuss the results of an operational model prototype with translog formulation of the production block, applied in a demonstrative simulation of energy price shocks impacts in energy intensive and non energy intensive sectors including aspects of technical change embodied in the capital stock.

Keywords: Supply and use tables, Econometric input-output, Production

Archives: CGE models and econometrics

Correspondence address:

Frederik Neuwahl
European Commission - Joint Research Centre
Institute for Prospective Technological Studies (IPTS)
Edificio Expo
c/Inca Garcilaso 3
41092 Seville
Spain

E-mail: Frederik.Neuwahl@ec.europa.eu

Date of submission: September 3, 2009