



17th International Input-Output Conference

TITLE: ECONOMETRIC ESTIMATES OF THE DANISH CO2 EMISSION MULTIPLIERS ON THE BASIS OF SUPPLY-USE TABLES: PERFORMANCE OF EMISSION REDUCTIONS VIA EXTERNAL TRADE

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KEYWORDS: CARBON DIOXIDE EMISSIONS ; AIR EMISSIONS ; CLIMATE CHANGE ; SUPPLY AND USE TABLES ; INPUT-OUTPUT ANALYSIS

PAPER CONFERENCE CODE: 49

FULL PAPER IN CD?: YES

ABSTRACT:

Climate Change is currently on the mainstream of the economic science and particularly, environmental input-output analysis is increasingly playing a relevant role in measuring economic and environmental effects of sustainable development policies in Europe. Nevertheless, other approaches co-exist, such as the econometric modelling, where impacts are quantified on statistical grounds and with certain desirable properties (efficient estimates, confidence intervals, hypothesis testing, etc) that are not found in the input-output approach. Therefore, this paper merges both approaches to address the calculation of unbiased and consistent carbon dioxide emission multipliers for Denmark and their respective confidence intervals. The use of the supply and use system instead of the symmetric input-output table also brings in the chance to avoid usual problems in the construction of technical coefficients (technology assumptions, negatives, etc). Moreover, a new application of these multipliers with policy relevance is introduced to quantify the performance of the carbon dioxide emission reductions carried out by industries via external trade.