



17th International Input-Output Conference

TITLE: ESTIMATING REGIONAL AND MULTIREGIONAL I-O TABLES, THROUGH THE STONE-CHAMPERNOWNE-MEADE ESTIMATOR

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COUNTRY: ITALY

KEYWORDS: BALANCING ; MULTIREGIONAL I-O TABLES ;

PAPER CONFERENCE CODE: 132

FULL PAPER IN CD?: NO

ABSTRACT:

The estimator proposed by Stone et al. (1942), later developed by Byron (1978), has been utilized in this paper to estimating a series of multiregional I-O tables for Italy. Unlike other methodologies reviewed in the paper (rAs and cross entropy) the Stone estimator is very sensitive to initial data inserted in the balancing accounting system: biased initial estimates could lead to either non convergence of the iterative solution procedure (either conjugate gradient or Newton-Raphson) or final values with unexpected negative/positive sign. Far from being a weakness of the methodology we think this is an important and distinguishing feature of the estimator because can be interpreted as an important warning of inconsistencies in the var-cov matrix, in the constraints and/or in the initial estimates, this can therefore be a spur to check more carefully the components of the solution to the algorithm. The paper is divided in four parts. After a review of the most utilized balancing methodologies, the second part will be focused on the Stone estimator and its usage in estimating the italian multiregional I-O tables. The third part of the paper will analyse the estimator performance through a sensitivity analysis of the most relevant I-O structural indicators. The last part will show the main structural features of the estimated multiregional I-O table.