TITLE: CELL-CORRECTED RAS METHOD (CRAS) AS A REGIONAL INPUT-OUTPUT TABLE CONSTRUCTION TECHNIQUE

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ABSTRACT:

The RAS method is used to update or regionalize a single matrix such that it conforms to new row and column totals. This paper presents a correction of the RAS method (CRAS) that uses cell variation distributions calculated from various matrices of different regions as a non-survey estimation technique for single region input-output tables. After the solution of the regular RAS method is obtained, an additional optimization problem based on first order reliability methods (FORM) is solved, producing the most likely cell-corrections to the regular RAS solution. The advantage of the proposed formulation is its simplicity, which allows solving the optimization problem by means of an efficient iterative scheme. To test the behaviour of the cell-corrected RAS method (CRAS) several simulations are made with a series of twelve input-output tables from the respective Spanish regions for the period 1998-2005, harmonized to fifty economic sectors.