

## **An Input-Output Model with an Expanded Composition of Endogenous Parameters: Synthesis of the Keynesian Income Multiplier and the Leontief Model**

Topic: Methodological aspects of input-output analysis I

Author: Zorikto Bato-Dugarovich Dondokov

The author develops a «household income input-output model» (HIOM), in which household consumption is included into the category of endogenous parameters. This model is based on a hypothesis of homogeneity of intermediate consumption and consumer expenditures, which determines the possibility of their summation for modeling.

According to the proposed approach, income and expenditures of households are considered across sectors. Each household is considered as a separate economic unit receiving income in certain sectors and using it for the purchase of products of various sectors.

The households are grouped into sectors according to the sources of their income. The column-vector of household consumption is substituted with a «household income input-output matrix», the structure of which is analogous to the 1st quadrant of input-output table.

The author conducted a comparative analysis of this model against other input-output models that include household consumption into the composition of endogenous parameters – Social Accounting Matrices, the Miyazawa model.

The method of forming «household income-expenditures matrix» is explained stage by stage. The author describes basic statements in the questionnaire on household income and expenditures. Distinctive features of this questionnaire are that the distribution of income and expenditures is conducted in accordance with the All-Russian National Classification of Economic Activities. The author also describes the process of developing a matrix of household expenditures based on the results of population survey, as well as the algorithm of creating the matrix of household income and calculating relevant coefficients.

Finally, the paper presents the results of experimental calculations of the matrix based on the study conducted in the Republic of Buryatia, one of Siberian regions of Russia.