## Construction of aggregate consumption based on information from the Brazilian Consumer Expenditure Survey 2008-2009 and its use in the measurement of welfare, poverty, inequality and vulnerability of families

Leonardo S. de Oliveira<sup>1</sup>, Debora F. Souza<sup>1</sup>, Nícia C. H. Brendolin<sup>1</sup>, Viviane C. C. Quintaes<sup>1</sup>

## Abstract

Given the complexity and multidimensionality of poverty phenomenon, a key issue for its study and sizing is to define an appropriate indicator that captures the well-being of individuals and families. In this sense, the objective of this study is to explain in detail the methodology of constructing the aggregate household consumption, based on data from the Brazilian Consumer Expenditure Survey 2008-2009<sup>2</sup> (CES 2008-2009), to enable the measurement and analysis of well-being, poverty, inequality and vulnerability of households to poverty.

Following the literature on the topic, some aspects should be considered: definition of expenditure items that should be included, analysis of extreme values and imputation techniques of food consumption. To ensure comparability between the levels of families well-being, the definition of expenditure items that were excluded in the composition of aggregate consumption obeyed the following assumptions: items with high values, items whose acquisition was sporadic, items purchased to another household and items with low elasticity, according to some references and recommendations of the articles authors Deaton and Zaidi (2002) and Lanjouw (2005).

The propensity score method was tested to deal with the existence of consumption units whose total costs on food comsuption reported in CES 2008-2009 is null. In this exercise, however, imputation showed no significant impact on levels of poverty and inequality.

After the definition of the aggregate consumption per household, some indicators of poverty and inequality were obtained, as well as the vulnerability of households to poverty in Brazil.

The vulnerability of households to poverty was estimated by the methodology described in Chaudhuri et al. (2002). However, the model was modified to incorporate cluster effects. In this way, the probability that households are in poverty is estimated. In this exercise, the poverty line was considered the half of minimum wage in 2008. Following the proposal of the authors, the families with vulnerability index greater than 0.5 were classified as highly vulnerable. Through this methodology it was possible to discern family groups according to their vulnerability and poverty.

This study has the expectation to contribute to the Brazilian literature on indicators of social welfare and methodological improvements on the construction of these indicators, especially regarding the use of aggregate consumption of households.

Keywords: imputation, poverty and inequality indicators, vulnerability, social welfare.

<sup>&</sup>lt;sup>1</sup>Brazilian Institute of Geography and Statistics - IBGE, leonardo.s.oliveira@ibge.gov.br

IBGE has no responsibility by the opinions, information, data and concepts sent in this study, which are the authors' total responsibility.

<sup>&</sup>lt;sup>2</sup>Pesquisa de Orçamentos Familiares - POF 2008-2009 - IBGE

## References

- Chaudhuri, S., Jalan, J., Suryahadi, A., 2002. Assessing household vulnerability to poverty from cross-sectional data: a methodology and estimates from Indonesia. Discussion Paper 102, New York: Economics Department, Columbia University.
- Deaton, A., Zaidi, S., 2002. Guidelines for constructing consumption aggregates for welfare analysis. Tech. rep., The World Bank, Washingotn D.C.
- Lanjouw, P., 2005. Constructing a consumption aggregate for the purpose of welfare analysis: issues and recommendations concerning the POF 2002/3 in Brazil. Tech. rep., The World Bank.