



Improving of the Reliability of Ukrainian Poverty Indicators Estimation Using Auxiliary Information

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The reliability of the poverty indicators direct estimation on base of the state Household Living Conditions Survey (HLCS) data at the regional level is, in general, insufficiently. One of main factors of this is the high nonresponse rate, especially among the well-to-do population strata. This affects the income and consumption profiles which are determined from the HLCS, and may leads to biased estimates of poverty indicators. Other significant factor is the rather small effective sample size in some regions which can make less than 250 households. In the paper an efficient approach to enhancing statistical reliability of the poverty indicators estimation at the regional level based on using of auxiliary information is submitted. The approach provides calibration of HLCS statistical weights using National Accounting System (NAS) adjusted data on structure of the final consumption expenditures of Ukrainian households and multivariate composite estimation of poverty indicators. It is shown that estimation on base of the approach can significantly improve the reliability of the poverty indicators estimates. Moreover, it is established that on base of calibrated HLCS data the potential bias of the Gini coefficient estimate can be reduced.

Keywords: sample survey, bias, calibration, composite estimation.