Obtaining spatially disaggregated estimates of poverty in low resource settings: asset indices versus imputed welfare: a case study of Azerbaijan

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Abstract

'Poverty maps', that is graphic representations of spatially disaggregated estimates of welfare, are being increasingly used to geographically target scare resources. The development of detailed poverty maps in many low resource settings is, however, hampered due to data constraints. Data on income or consumption are often unavailable and, where they are, direct survey estimates for small areas are likely to yield unacceptably large standard errors due to limited sample sizes. Census data offer the required level of coverage but do not generally contain the appropriate information. This has led to the development of a range of alternative methods aimed either at combining survey data with unit record data from the Census to produce estimates of income or expenditure for small areas or at developing alternative welfare rankings, such as asset indices, using existing Census data.

This paper outlines the development of a set of poverty maps for Azerbaijan which can be used by different users. The paper contrasts two alternative approaches to the measurement and mapping of welfare. First a map is derived using imputed household consumption. This involves combining information from the 2002 Household Budget Survey (HBS) with 1999 Census data using techniques developed by a team within the World Bank that are now becoming standard practice (see Elbers et al, 2002). Secondly an alternative map is constructed using an asset index based on data from the 1999 Census to produce estimates of welfare at the district level. This provides a unique opportunity to compare the welfare rankings obtained at the regional level under the two alternative approaches and to assess the different results that the two techniques provide.