

Poverty and Food Security Mapping at Country-level: Lessons Learned from Seven Case Studies

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Key words: poverty mapping, maps, geography, food security, small area estimation

Abstract

The increased importance of poverty reduction to the global development agenda has motivated greater interest in poverty mapping. However, many obstacles create poor conditions for developing national-level poverty assessments and maps. This paper reviews the experience of seven national-level assessments of poverty and food security in three continents.

Digital maps of administrative boundaries and transportation infrastructure are two important framework data sets needed for poverty mapping. For our case studies, government agencies often lacked well-developed programs to provide these data sets in up-to-date and well-documented formats, hindering the construction of accessibility models and thematic maps from census data.

Our experience showed that data from censuses and household surveys needed for poverty estimation and mapping using small area estimation (SAE) methods can generally be acquired. However the difficulties in finding compatible time frames for censuses and surveys, and the lack of compatibility between household surveys and censuses with respect to the types of variables that are measured, compromised some key assumptions of the SAE approach. These two data sources should be made compatible to

facilitate the SAE method. Our case studies and other evidence demonstrated the need for household level data from the census (microdata) and that census agencies could release microdata to the benefit of poverty assessments, without compromising the privacy of citizens. We found that a great deal of social data is not in the public domain.

The geographic resolution of social and infrastructure data sets is also usually coarse, limiting comparability with biophysical data sets, which are often available at detailed scales. This puts a premium on the development of reliable methods that reconcile data at different scales and spatial resolutions. Analytical capacity also declines at higher levels of aggregation. Countries should assess the possibilities for improving access to these data sets and make greater efforts to release social data at the finest geographic resolution possible. Trends in adoption of information technology and geographic information systems are likely to resolve some of the difficulties in developing poverty maps. However future assessments will depend heavily on more government commitments to carrying out regular and frequent censuses and household surveys. Our experience also suggested the importance of engaging policy makers in poverty assessments. They should know about the data requirements and processes involved in developing poverty maps. More importantly, they should be engaged in discussions on the implications of the spatial patterns and their determinants.