



Food Insecurity in Sub-Saharan Africa

New Estimates from Household Expenditure Surveys

Lisa C. Smith, Harold Alderman, and Dede Aduayom

Hunger is a pervasive problem in developing countries, undermining people's health, productivity, and often their very survival. Therefore, much of the development agenda focuses on directing scarce resources to providing food to people in need or enabling them to acquire it themselves. The foundation for doing so is a reliable information base on food insecurity—that is, inadequate access by people to food—which is the most immediate cause of hunger. Such information is fundamental to effectively targeting assistance, evaluating progress, and developing interventions. Its need is now more urgent than ever as efforts are stepped up to meet the Millennium Development Goal (MDG) of halving the proportion of people who suffer from hunger by 2015. Yet arriving at an accurate measure of food insecurity that is comparable both within and across countries remains a challenge. The indicator most widely employed by policymakers is “undernourishment,” or the percentage of a country's population that does not consume sufficient dietary energy, as reported by the Food and Agriculture Organization of the United Nations (FAO). This method is based on a country's food supplies rather than directly on data representing peoples' access to food. Given a lack of data collected at the household or individual level in national surveys, this is the only feasible method at present, though its reliability for policymaking and program planning has been the subject of considerable debate.

This report introduces new estimates of food insecurity based on food acquisition data collected directly from households as part of national household expenditure surveys (HESs) conducted in 12 Sub-Saharan African countries. The report has three objectives: (1) to explore the extent and location of food insecurity across and within the countries; (2) to investigate the scientific merit of using the food data collected in HESs to measure food insecurity; and (3) to compare food insecurity estimates generated using HES data with those reported by FAO and explore the reasons for differences between the two. The overall purpose is to investigate how the data collected in HESs can be used to improve the accu-

racy of FAO's estimates, which are being used to monitor the MDG hunger goal. The study is based on both diet quantity and diet quality indicators of food insecurity. The two main indicators of focus are the share of people consuming insufficient dietary energy, or the prevalence of “food energy deficiency,” and the share of households with low diet diversity. The study finds these to be valid indicators of food insecurity and to be reasonably reliably measured. They are also comparable across the study countries despite differing methods of data collection.

THE EXTENT AND LOCATION OF FOOD INSECURITY IN SUB-SAHARAN AFRICA

This report confirms that food insecurity is a major problem in Sub-Saharan Africa. The prevalences of food energy deficiency among the study countries range from 37 percent (Uganda) to 76 percent (Ethiopia). Problems of diet quality associated with the region's high rates of micronutrient deficiencies are found to be widespread. Notably, there is no strong association between the diet quantity and diet quality measures. If both of these aspects of food insecurity are taken into account, country rankings differ substantially from results considering diet quantity alone, which is the convention.

HESs offer a rich lens through which to examine food insecurity within countries as well. The socio-economic characteristics examined here—region of residence, urban or rural residence, economic status, and female- or male-headed household—are only a few of those that would interest the policy community. The study countries show wide variation on the characteristics, with the only consistent patterns being that male-headed households in eastern and southern Africa and urbanites have a clear advantage when it comes to diet quality. As expected, income has a potent bearing on food insecurity.

DIFFERENCES BETWEEN HES AND FAO ESTIMATES OF FOOD INSECURITY

The study identified strong differences between HES and FAO estimates of food energy deficiency for the 12 study countries, resulting in significantly different pictures of the magnitude of food insecurity in the countries and country rankings. The main source of the divergences lies in differences in the national-level parameters used to generate the FAO estimates (mean energy availability, energy requirement, and distribution across households) rather than in the method employed itself. The lower requirement used explains why FAO estimates are almost uniformly lower than those reported here. Nevertheless, the most important factor behind the divergence between the FAO and HES estimates is not found there but in the differences in the underlying estimates of national energy availability.

HES estimates of food energy deficiency are found to be more strongly associated with other MDG indicators of poverty and hunger than are the FAO estimates. The correlation between HES country rankings and poverty is 3.6 times higher than that for the FAO estimates. The same correlation for estimates of child malnutrition is 1.7 times higher. The HES estimates are also more consistent with country rankings based on a survey of expert opinion. These findings provide empirical support that HES data are a useful source of information for improving the accuracy of FAO estimates of food insecurity.

CONTRIBUTING TO A MORE RELIABLE GLOBAL FOOD SECURITY DATABASE

The main advantage of using HES data for measuring food insecurity is that they are a source of multiple, policy-relevant,

and reasonably reliable measures. They allow multi-level monitoring and evaluation including that of within-country and national-level food insecurity and, given data from a sufficient number of countries, of regional and developing-world food insecurity as well. Their main disadvantage is that data are not collected for all countries regularly, partly because of the financial resources and skill levels required for data collection, processing, and analysis. Creating a database of cross-country comparable estimates of food insecurity based soundly on household-level data, while currently not feasible, is fast becoming a reality as the surge in the collection of HESs that began in the 1990s continues.

Meanwhile, HES data can be used to improve the accuracy of the FAO's estimates in a number of ways: first, they can improve estimates of national food supplies; second, they can improve the accuracy of estimates of the distribution of dietary energy across countries' populations and increase the number of countries for which they are available; and, finally, HES-derived estimates of food energy deficiency can continue to serve as a reference for comparison and validation. The above endeavors require that this report's analysis be extended to the other developing regions, providing the essential data for (a) improving estimates of energy availabilities and their distribution; and (b) generating regional and developing-world estimates of food insecurity using FAO or alternative methods. Additionally, basic research is needed to resolve outstanding reliability issues in the estimation of food energy deficiency and poor diet quality from HESs. Finally, because many HESs are not undertaken with the intention of calculating measures of food insecurity, they often do not contain the appropriate data for doing so. To remedy this problem, guidelines containing best practices for collecting and processing HES food data are needed.

Copyright © 2006 International Food Policy Research Institute. All rights reserved.

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE • 2033 K STREET, NW • WASHINGTON, DC 20006-1002 USA

T: +1-202-862-5600 • F: +1-202-467-4439 • ifpri@cgiar.org • www.ifpri.org

IFPRI is supported by the Consultative Group on International Agricultural Research (CGIAR).

Download or order online: <http://www.ifpri.org/pubs/pubs.htm#rreport>

To order by post, please fill out and send this coupon to Publication Services at IFPRI.

Please send me a copy of Research Report 146:

Food Insecurity in Sub-Saharan Africa: New Estimates from Household Expenditure Surveys, by Lisa C. Smith, Harold Alderman, and Dede Aduayom.

Name/Title _____

Organization _____

Address _____

If your order is not received within 2 weeks (USA) or 6 weeks (outside USA) please let us know.