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PANELIST ABSTRACTS

Measuring food insecurity in times of crisis

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1. Food insecurity is a very broad concept. For measurement and operation purposes it needs substantial unbundling. It formally covers a continuum of problems ranging from anxiety over food access, to issues of dietary quality, to outright hunger. Food security also has an uncomfortable overlap with nutrition, but nutrition outcomes are individual level outcomes influenced by both food intake and other factors. And food security has both chronic dimensions associated with persistent poverty, and acute dimensions associated with irregular shocks. So we need to systematically unbundle this concept before we operationalize measurement.

2. In the last symposium there was some agreement to focus on a suite of indicators. This stemmed from criticism of the FAO hunger measure, but most of the criticism was about cross-country comparisons. That criticism has magnified since 2002 because the FAO could not gauge the impact of the 2008 food crisis. Even with technical improvements, I believe the FAO hunger indicator would still suffer from some inherent flaws. For example, in the Indonesian financial crisis rice prices tripled, but people consumed roughly the same amount of rice because it was still the cheapest source of calories. What they did do was cut back on micronutrient rich foods, so anemia prevalence in Java went from 52% to 68% in the space of a few months. The World Bank poverty simulations performed better, but ultimately poverty is not necessarily tightly linked with food security, though it matters in its own right. So we have a problem gauging food insecurity across countries, but we are also bad at gauging the impact of shocks. These shocks may be more prevalent in the future, not less.

3. I therefore want to propose two principles for food security measurement. First, attempt to measure both inputs and outcomes. From a welfare perspective it is really nutrition outcomes that matter: stunting, wasting, anemia, etc. The objection that these are caused partly by health factors is in some sense not a very defensible one. Health and food intake factors interact so intimately that solely focusing on food insecurity can actually be disadvantageous. On the other hand, measuring inputs into nutrition outcomes – including food security - is useful for diagnostic purposes. A second principle is to try to get cross-country comparisons right, but also to have a better platform for gauging the impact of shocks.

4. How do we do this? For cross-country purposes there are proposals to scale up LSMS-type surveys. Such a plan has total benefits that are well in excess of just measuring food security. But the frequency of health and nutrition surveys has also improved tremendously. Moreover, measuring nutrition outcomes is important because early childhood and maternal nutrition have lifelong welfare effects. Better coordination between UN, DHS, and greater advocacy on the part of donors would make regular nutrition surveys a reality. Moreover, these surveys could include dietary diversity or food consumption scores, as they already do to a large extent. Ultimately, developing countries themselves should be promoting nutrition monitoring at the community level, and in principle this could community monitoring could be aggregate to national level indicators.

5. What about gauging the impact of shocks? This is the greater challenge. For extreme shocks, the WFP and others already have approaches. They typically focus on wasting as their key indicator of the depth of a food/nutrition crisis, but they have food consumption scores and other indicators. WFP could improve their dissemination of this data, perhaps in collaboration with specialized research institutes. For "milder" shocks, like food price shocks, we may need another platform. If we had tri-annual nutrition surveys that included food consumption scores, for example, then ad hoc surveys in intermediate years could be used to gauge the impact of shocks where warranted. These food consumption scores are relatively cheap to measure, and are less likely to be biased by the kind of problems that permeate more direct self-reporting of hunger and food insecurity. One could also add equivalent questions on health. Of course, institutional responsibility for conducting ad hoc surveys is still an open question.

Measuring Food and Nutrition Security in Multi-purpose Household Surveys: Experience to Date and Mapping a Way Forward

Calogero Carletto, The World Bank

At the International Scientific Symposium on Measurement and Assessment of Food Deprivation and Undernutrition held at FAO in 2002, the main consensus emerging was that a suite of indicators should be used to measure food and nutrition security in its multidimensionality and that different data sources will have to be tapped and improved in order to better measure and monitor global food insecurity. In this respect, the Symposium highlighted a number of shortcomings of current data sources and indicators which would need to be addressed in the years ahead for the global community to successfully monitor achievements towards the World Food Summit goal of halving the number of hungry people by 2015.

Household surveys like the Living Standards Measurement Study and other Integrated Household Surveys as well as more specialized surveys like Household Budget Surveys, Demographic and Health

Surveys and Multiple Indicator Cluster Surveys are routinely collected in most countries and provide an indispensable source of information on food and nutrition security. Each survey has different but often overlapping objectives partly reflecting the agenda and mandate of the sponsoring institution. Despite great strides in improving the availability of data on food and nutrition security, large gaps remain in terms of quality, consistency and periodicity of the information being collected. Also, few sources are still able to adequately capture seasonality and other forms of intra- and inter-annual variability of food security as well as the geographic level of disaggregation needed to inform proper targeting.

The presentation will review current global household survey data collection efforts and highlight the main strength and weaknesses of different instruments in measuring and monitor food and nutrition security and propose ways in which better synergies could be created as we move forward. Emphasis will be placed on the institutional framework, in an attempt to provide practical recommendations on ways in which the current data collection apparatus supported by individual countries and donors can be tuned to provide better quality, more timely and more relevant data to measure and monitor global food insecurity.

Advances in hunger measurement

Carlo Cafiero, FAO Statistics Division

The question of how to properly capture and monitor the “food problem” has preceded and then accompanied the whole history of FAO. In this presentation I shall begin by offering my view on the essential elements of the debate and try to link them to the methodological problems that are raised by adherence to any of the various views that, from time to time, have become prevalent. This background will give me the opportunity to highlight the fundamental conceptual issues that need to be considered when monitoring hunger at the global, national and local level, and that condition the choice of the best possible methodological approach.

We shall see how, as the emphasis in the development literature shifted from looking at the food problem as one of global scarcity towards emphasizing the limitations to individual households’ ability to access food, the debate on hunger assessment has tended to play down the relevance of food supply assessment while emphasizing the need for collection and analysis of household level food consumption data. The process has conceivably been affected by the parallel evolution and advances in the practice of income poverty assessments, where reference to households’ total expenditure as the best indicator of real income, and therefore of standard of living has become the karma, at least within the economic development profession. Recognizing that food expenditure constitute one of the indispensable components of households’ budgets, high expectations have been put into the analysis of household budget surveys as a way to assess food security at the household level.

Over time, however, perhaps as quantitative measures of households economic access to food seemed to be at odds with perceptions of the extent and world distribution of the food problem, emphasis in the debate has shifted to the proper definition of food insecurity, recognizing that – perhaps – supply of and access to food are not sufficient to capture the various dimensions of the “hunger” problem, seen now as one of “food and nutrition”. When nutritionists have had their voice more and more heard in the debate, concerns on qualitative aspects of the diet as well as the implications that health and sanitation conditions have on the ability of humans to benefit from food consumption have become central. A

Generating evidence on individuals' experience of food insecurity and vulnerability

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Although hunger and deprivation are intrinsically experienced by persons, many indicators of food security and vulnerability are reported at the household level. This prevents policymakers and development practitioners from identifying how differences among individuals within the household—whether due to gender, age, or status within the household—affect individual food security and vulnerability. The lack of attention to individual-level indicators and the use of proxies such as sex of the household head could lead to unintended consequences. This is illustrated using examples from recent work in Uganda, Bangladesh, and Ethiopia that capture different dimensions of food security and vulnerability such as agricultural productivity, nutritional status, and coping mechanisms in response to shocks. In Uganda, we show how using only a household-level indicator of gender differences (the sex of the household head) tends to underestimate differences in agricultural productivity between men and women, which are more starkly revealed when the sex of the plot manager is used as an indicator of gender differences. In Bangladesh, evidence from an evaluation of the long-term impact of agricultural technologies suggests that lack of attention to individual health and nutrition outcomes could lead to misleading evaluations of anti-poverty interventions. In Ethiopia, we show how focusing only on household-level coping mechanisms in response to crises may obscure differential impacts on household members by gender. Finally, this presentation will discuss a variety of methods to elicit information on individual experiences of food security and vulnerability, ranging from the use of finer levels of gender disaggregation that go beyond headship, the standard use of individual measures of well-being (such as nutritional status), and modifications of household level questions on coping mechanisms to take into account differences that arise owing to age and sex within the household.

From Complexity to Food Security Decision-Support: Novel methods of assessment and their role in food security information systems

Nancy Mock, Tulane University

This presentation explores the relationship between the theory and practice of food security information in light of recent technological advances. The presentation will provide a framework for incorporating new and traditional methodologies for gathering and analyzing data relevant to food security. The theoretical foundation of understanding food security is anchored in complex adaptive systems thinking. A framework for incorporating methods and information utility will speak to the following elements: predictive versus damage assessment, hazards versus solutions, and scale. Different techniques for gathering and analyzing food security will be assessed, especially emphasizing and defining the role of newer methods such as event monitoring, crowd sourcing, global polling, social media, mobile computing technologies and visualization analytics. The presentation will examine empirical findings from these more recent applications and discuss the implications for food security decision support systems.

Empirical Associations of the Adequacies of Food, Health and Care with Nutritional Outcomes

John L. Newman, The World Bank

This research analyzes the empirical associations between measures of adequacy of food, health and care and nutritional outcomes using household survey data from Bangladesh and India. While there is widespread knowledge and acceptance of the UNICEF framework that focuses attention on food, health and care, there is not yet a consensus around what constitutes adequate food, health and care. And there is not yet a clear body of empirical evidence that relates these adequacies to nutritional outcomes in different settings. When children receive adequate food, health and care at the same time, is this sufficient to ensure that they do not suffer from stunting or being underweight? How does this vary if they are inadequate in one or another of the dimensions of food, health and care?

This research builds on some ongoing efforts to develop criteria for what constitutes adequacy and presents some visual data analysis which illuminates these relationships. Some of the areas where there is already consensus on adequacy are with respect to improved sanitation and improved water (with the efforts of WHO's and UNICEF's Joint Monitoring Program), infant and child feeding practices, adequacy of antenatal care and adequacy of immunization. There are several measures of food security, but no single dominant measure. One of the goals of the research is to test how the results vary as one modifies the definition of what constitutes adequacy and to develop tools to make it easier for these comparisons to be carried out.

A key part of the work is to make the work accessible to policy makers, not just researchers, so that those advocating for improved attention to nutrition can make their case that multisectoral interventions are needed. To this end, we have adapted tools of data visualization to allow one to quickly see how the nutritional outcomes vary with measures of adequacy. We do this with both with and without controlling for background variables. Our approach to controlling for background variables such as wealth and education uses unconditional quantile regressions (Firpo, Fortin and Lemieux, 2009), which allows the coefficients to vary at different points of the unconditional distribution of Height for Age (and Weight for age) z-scores. This builds in considerable flexibility in the estimation. However, we then create microsimulations based on the estimations that allow the results to be presented in interactive dashboards that allow for visual analysis of the relations between adequacy of food, health and care and nutritional outcomes, both with and without controlling for background variables. The econometrics is fairly sophisticated, but it is hidden to the policy maker, who need only focus on pictures and how the pictures change as one varies different characteristics.

Firpo, S., N. Fortin and T. Lemieux, "Unconditional Quantile Regressions, *Econometrica*, Vol. 77, No. 3, May 2009, pp: 953-973.

Steps from research to policy: ensuring and measuring policy influence

Howard White, 3ie

There has been a large growth in the production of rigorous impact evaluations in the last five years. This growth has been driven by a desire to know what works. But will learning what works actually influence policy? Simply producing good studies is rarely sufficient to achieve policy influence from those studies. So what else need be done? This presentation will discuss how both the study design and

the process of implementing the study matter for policy influence. How and when do we involve policy makers, how do we present studies with negative findings, what are the best channels for influence? It is argued that an explicit influence strategy is needed, but that the specifics of such a strategy vary on a case by case basis. Having achieved influence, how do we measure it? Is it possible to demonstrate the impact of a specific study on policy change?

Institutionalized evidence-based approaches to policy making: the case of Mexico's food security index

Ricardo César Aparicio Jiménez, CONEVAL México

In the first section, a brief introduction of what Coneval is and how food insecurity is incorporated into multidimensional poverty measurement in Mexico is presented. Then, results from the 2008 and 2010 surveys at the national and state level are discussed. The main findings show that although there have been reductions in education, health, social security and dwelling deprivations, an increase in monetary poverty and food deprivation took place. We will also present recently released data on food deprivation at the municipality level for 2010. Finally, we conclude with a discussion about the ways in which these results have led to public policy by the Mexican Government, aimed to reduce food insecurity and with also discuss some our main future research and policy agenda.

Use of systematic reviews to understand the impact of programmes and policies on food and nutrition security

Edoardo Masset, Institute of Development Studies

The presentation will briefly describe the results of a systematic review of agricultural interventions that aim to improve nutritional status of children, carried out by IDS. It will discuss the lessons learned for policy makers, as well as for researchers conducting primary studies. It will also explore what the capacity and the institutional set up needed is in order to promote impact evaluations in the area of nutrition and agriculture. Finally, the presentation will include the results of a communication study experimental study that is being carried out using policy briefs based on the same systematic review.