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METHODOLOGICAL NOTE ON NEW ESTIMATES OF THE PREVALENCE OF UNDERNOURISHMENT IN CHINA

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Abstract

This paper presents new estimates of the extent of food consumption inequality in mainland China and discusses their implications for the estimated prevalence of undernourishment (PoU). The new food consumption inequality estimates are based on the joint analysis of food consumption and food expenditure data obtained from two separate household surveys, covering the period from 2011 to 2017. The results reveal much less inequality in dietary energy consumption than previously assumed and imply a substantial downward revision of the estimated series of the PoU for China, which becomes more in line with other assessments of food insecurity and with other development indicators.

Keywords

Prevalence of undernourishment; food security indicators; China; food consumption inequality.

1. Overview

The Food and Agriculture Organization of the United Nations (FAO) estimates the prevalence of undernourishment (PoU) in all countries and regions of the world by assuming a probabilistic model for the distribution of the per capita levels of habitual dietary energy consumption in the population. The distribution is characterized in terms of the average (the mean dietary energy consumption in the population) and the coefficient of variation (CV, which is a measure of inequality in food consumption level within the population) . As differences in observed food consumption of different people may also reflect differences in dietary energy requirement due to sex, age, body mass and physical activity levels, the key parameter to determine the extent of undernourishment is the coefficient of variation (CV|y) that can be traced back to differences in the households' socio-economic characteristics that are independent of sex, age, body mass and physical activity of their members.

For mainland China, the last time the CV|y was estimated directly from official survey data was in 1999, in preparation for the first edition of *The State of Food Insecurity in the World* (SOFI) report. Later, lack of access to the needed data prevented updates and the parameter has been kept constant since then. As a result, FAO's current assessments of the PoU for China do not reflect possible changes in food consumption inequality within its population since 1999, and therefore may be inaccurate. Such changes may have occurred as a consequence of the likely increases in the levels of dietary energy intake for the poorer strata of the Chinese population due to the rapid, intense economic growth in the country over the last two and a half decades. If food consumption of the poor has increased more than that of the rich, overall inequality, and therefore the PoU, should be lower.

Granular data on food consumption that allow a direct assessment of the inequality in the levels of habitual dietary energy consumption across different population groups are rare. For China, such data are currently publicly available only from the nutrition module of the China Health and Nutrition Survey (CHNS – see further for a description of the survey). As the CHNS also provides information on the income decile group to which the surveyed individuals belong, its data can be used to directly estimate CV|y. Unfortunately, CHNS data only cover 12 provinces and municipalities and are publicly available only up to 2011.