Household food expenditure share

Overview

The share of total household expenditure (as a proxy of income) spent on food is an indicator of household food security because it is widely documented that the poorer and more vulnerable a household, the larger the share of household income spent on food. This observation is known as Engel's law, which demonstrates that as incomes rise, both within a country and across countries, expenditure on food increases while expenditure on other things increases even more, so that the share of total income spent on food declines. Given this observation, the indicator is especially helpful to understand the impact of food price fluctuations on both the quality and quantity of household food consumption.

If a change in food prices results in a higher share of total household expenditure being spent on food, then this can result in the household being more resource constrained (i.e. poorer) as a result of the increase in food prices. Consequently, depending on the specific foods, households that are very poor and already consuming the lowest-cost foods will be unable to substitute cheaper foods and will be forced to spend more on basic staples, reduce the quality of their diets, or even reduce the quantity consumed of the least expensive foods, while also reducing non-food expenditures that may be equally needed (e.g. on health and education) (Lele et al., 2016).

Method of Construction

This indicator is commonly calculated with data from Household Consumption and Expenditure Surveys (HCES) that include the monetary value of household consumption disaggregated into food and non-food items. The share of household expenditure on food is equal to:

\[
\frac{\text{Expenditure on food}}{\text{Total expenditure}} \times 100
\]

The monetary value of non-purchased items, including consumption from own production and in-kind payments and transfers, must be imputed from available price information.

While no internationally agreed thresholds exist, Smith and Subandoro (2007) have proposed that households spending over 75% of their income on food are considered very vulnerable and consequently food insecure, whereas people spending 65-75% are considered to have high food insecurity; those spending 50-65% have medium food insecurity; and those that spend less than 50% of their income on food are considered to have lower levels of food insecurity.

This indicator is one of several indicators included in the ADePT-FSM (Food Security Module) software package, which is a free standalone software developed by the Food and Agriculture Organization (FAO) and the World Bank that allows users to easily derive food security indicators from household survey data. The software download and corresponding documentation can be found on the FAO website.

Please also see the Molendo et al., 2014 book published by the World Bank, which provides detailed instructions for analyzing food security using household survey data. This indicator is also included in the FAO suite of food security
indicators (FAO, 2016 [7]) as the share of food expenditures of the poor (population belonging to the first income quintile).

**Uses**

Share of food expenditure in total expenditures can be used to identify populations that may be vulnerable to shocks that could affect food prices (Lele et al., 2016 [2]). This indicator can also be used for advocacy and national monitoring. The World Food Programme (WFP) frequently uses this indicator, often in combination with other indicators (e.g. Food Consumption Score [8]), to assess food insecurity and vulnerability to future shocks (Rose, 2012 [9]). This indicator is used by country governments and nongovernmental organizations to assess trends in food security.

**Strengths and Weaknesses**

Household food share of total expenditure is generally useful due to its sensitivity to food price fluctuations, especially for staple foods. Another strength of this indicator is that it can be derived from HCES [3] data, which are typically nationally representative. One weakness of this indicator is that if using survey data that do not adequately capture the value of home production, it may underestimate the food expenditure share (Rose, 2012 [10]). Because HCES [3] data collection is not uniform across countries, differing definitions of food and non-food expenditures, as well as the inclusion (or exclusion) of consumption from own production and consumption away from home, can potentially limit comparability of the indicator across countries (Schmidhuber, 2003 [11]).

**Data Source**

HCES [3] data can be used to calculate this indicator. The World Bank Microdata Library [12] has the most comprehensive and publicly accessible repository of data. Otherwise, data can be accessed—often for a fee—from the National Statistics Office, though each country has its own policies and procedures. The International Household Survey Network (IHSN) [13] is an informal network to promote data standards and dissemination.

**Links to guidelines**

- Smith et al., (2014). "Assessment of the reliability and relevance of the food data collected in national household consumption and expenditure surveys" [14]

**Links to illustrative analyses**

- Adams et al., (2010). "Remittances, household expenditure and investment in Guatemala" [16]

**Expert review conducted by:**

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Food Security Dimensions

- Quantity [18]
- Quality [19]

Data Collection Levels

- Household [20]

Data Sources and Methods

- Household Consumption and Expenditure Surveys (HCES)

Requires Food Composition Database

- No [21]