Household food expenditure share (% of total spending)

Overview

The share of total household expenditure 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 has consistently shown that as incomes rise, both within a country and across countries, expenditure on food increases, but expenditure on other things increases even more, so that the share of total income spent on food declines. Given this consistent observation, this 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 food share of total expenditure, this means the household is more resource constrained as a result of the change. 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 (Lele et al. 2016 [1]).

Method of Construction

This indicator is calculated with data from Household Consumption and Expenditure Surveys [2] (HCES) that include the value of household consumption disaggregated into food and non-food. The share of household expenditure on food is equal to: (expenditure on food / total expenditure) X 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.

Generally, 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 (Smith et al., 2007 [3]).

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 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, here [4]. Please also see the Molledo et al. 2014 [5] book published by the World Bank, which
provides detailed instructions for analyzing food security using household survey data.

**Uses**

Household food expenditure can be used to assess the prevalence of food insecurity and to identify populations that may be vulnerable to shocks that could affect food prices (Lele et al. 2016 [1]). This indicator can also be used for advocacy and national monitoring. It is a particularly important indicator when monitoring food prices, for the reasons related to Engel's Law discussed in the overview. This indicator is included in the FAO suite of food security indicators (FAO 2016 [6]) and is used in the FAO annual State of Food Insecurity in the World (SOFI) report. The World Food Programme (WFP) frequently uses this indicator, often in combination with other indicators (e.g. Food Consumption Score [7]), to assess food security and vulnerability to future shocks (Rose 2012 [8]). This indicator used by country governments and NGOs to assess trends in food security and a similar indicator ("share of food expenditure of the poor") is part of the FAOSTAT Suite of Food Security Indicators [9] and is published annually by FAO in the State of Food Insecurity (SOFI).

**Strengths and Weaknesses**

Household food share of total expenditure is 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 data and is easier to measure accurately than other indicators (Lele et al. 2016 [1]). One weakness of this indicator, however, is that if it is based on survey data that does not capture the value of home production, it may underestimate the food expenditure share (Rose 2012 [8]). Because HCES 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 (Lele et al 2016 [1]).

**Data Source**

HCES data can be used to calculate this indicator and are (generally) publicaly available. The International Household Survey Network (IHSN) is an online repository for household surveys (IHSN [10]). For details on the consumption module in HCES see Smith et al. (2014) [11].

**Links to guidelines**


**Links to validation studies**

There are no links to validation studies to show for this indicator.
Links to illustrative analyses


PDF [15]

Data Sources

- Household Consumption and Expenditure Surveys (HCES)

Unit of Observation

- Household

Food Security Components

- Quantity
- Quality

Food Composition Database Required?

- No

Household Consumption and Expenditure Surveys (HCES)

Open this information in a new window [16]

Summary

Household Consumption and Expenditure Surveys (HCES), also referred to by a variety of other names including Household Income and Expenditure Surveys (HIES), Household Budget Surveys (HBS), or Living Standards Measurement Surveys (LSMS), are complex surveys conducted on a nationally representative sample to characterize important aspects of household socio-economic conditions (Coates et al., 2012). The results of such surveys have wide-ranging utility, however, their primary purpose is to provide information for poverty monitoring, the calculation of national accounts, and as an input for consumer price indices (Smith et al., 2014). The food data collected in HCES can be analyzed to produce a variety of food security and nutrition indicators but the data are collected at the household, not the individual, level. The Adult Male Equivalent (AME) was created as a standard of measurement for the food intake of an adult male. A multiple of the AME is used to account for the varying energy needs of household members based on their age and sex. This allows for a more accurate direct comparison of household of different sizes and compositions than per capita accounts. (Weisell & Dop, 2012).
HCES are heterogeneous across countries, thus it is important to understand some of the key differences before leveraging HCES for food security and nutrition purposes. Some sources of variability that affect the food consumption data include recall period, the number of food items, and level of disaggregation of the food list. Another additional important source of variability is whether the specific survey includes acquisition data, consumption data, or a combination of both. Surveys that collect data on acquisition are a proxy for food consumption, as households may build food stocks or consume food stocks during the reference period, as compared to consumption based surveys which collect data on food consumed in a specified recall period (Fiedler, et al., 2016). Both of these types (acquisition and consumption) collect information on food that is purchased, own-produced, or received as a transfer. A third type of HCES collects a combination of acquisition and consumption data wherein households report what they acquired through purchases and what they consumed from own-production and transfers (Smith, 2003). Food consumption estimates generated from acquisition data or a combination of both acquisition and consumption data are typically referred to as “apparent consumption” (Fiedler & Mwangi, 2016).

HCES are conducted every 3-5 years in most industrialized countries. Typically, they cover between 7,000 to 20,000 households to provide a statistically representative measure (Fiedler et al., 2012). Most HCES are implemented by national statistical agencies, often with technical assistance from the World Bank’s Living Standard Measurement Study (LSMS) group. The World Bank maintains the Microdata Library to facilitate access to HCES and LSMS survey data sets [17]. Guidelines and tools for HCES analysis can be found on the International Household Survey Network [18] (IHSN).

Strengths:

- Longer recall period makes it more suitable for assessing “usual intake”
- HCES are nationally representative and sometimes representative at provincial and district levels
- Depending on the country, HCES provide information on trends due to routine collection of data (~5 years)
- Potentially include a variety of nutritional and economic measurements for the assessment of nutritional status, poverty and food security

Weaknesses:

- To capture seasonal variation, the survey must be repeated in multiple seasons
- Primary purpose is to inform poverty indices, national accounts, and consumer prices indices, not to measure food consumption
- HCES frequently only measures “apparent consumption” not actual consumption
- Only provides a household level measure, not individual level consumption

Indicators that can be derived from this data include:

- Household Food Expenditure Share (% of total spending) [19]
- Household Share of Food from Various Sources (% kcals) [20]

Sources:


3) Fiedler, J. and Mwangi, D., (2016). “Using household consumption and expenditure surveys to make inferences about food consumption, nutrient intakes and nutrition status [23]”


