Consumer Data: What's Available and Where

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Information is critical in today's fast moving food industry. Several sources offer information on consumption, prices, and expenditures, with similar data but with differences in how the data are presented. Analysts need to know where the data are available, which topics are represented, how the series are constructed, and how the information can be adapted to their particular needs. Analysts seeking data on food expenditures, for example, can find the information from USDA, personal consumption expenditures from the U.S. Department of Commerce, and the continuing consumer expenditures survey from the U.S. Department of Labor. These three sources publish similar data but there are substantial differences in methods, concepts, and results.

Three Series on Food Expenditures

The USDA series on total food expenditures provide the broadest and longest coverage. These data, from the Economic Research Service (ERS), include all expenditures for food in the United States since 1889. The data are for food purchased (including food stamps) and in-kind (donated, home-produced, and sport fish and game).

Purchases include food paid for by families and individuals, food in travel and entertainment paid for by businesses, and food furnished to employees, prisoners, and hospital patients. The series is available in two ERS publications—annually in *Food Consumption, Prices, and Expenditures*, and monthly in *Agricultural Outlook (see box)*.

Two ERS series measure food expenditures from personal income and personal money income. Personal income includes items which are not paid directly to workers, including fringe benefits such as employer contributions for health insurance. Personal income also includes transfer payments, such as food stamps. These items are excluded in personal money income.

The expenditures from personal income and personal money income series may be appropriate when less comprehensive information is needed. The "Expenditures Paid Out of Personal Income" series, for instance, excludes the value of donated foods, nonfarm and home-produced foods, sport fish and game, expense account meals, and meals for patients and inmates. Also excluded are food and cash donated to schools and institutions.

The U.S. Department of Commerce series on personal consumption expenditures (PCE) for food provide data from 1929 to the present. The series include expenditures from personal income for human food, pet food, animal feed (mostly for personally owned horses), and ice. Food bought with food stamps, and food produced and consumed on the same farm are included. Data on consumer expenditures for all other goods and services, income, and savings are also included.

The PCE series from Commerce and the total expenditures series from ERS differ significantly in methods, concept, and results *(table 1)*. Total expenditures include expenditures for businesses and for food served in hospitals and institutions. PCE excludes these items. However, food purchased for at-home use is essentially the same concept in both

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Up-to-Date Information Is Just a Phone Call Away...

For further discussion of the data available, see *Data for Food Demand Analysis: Availability, Characteristics, and Options* by Alden C. Manchester. USDA, ERS. AER-613, April 1990. To order a copy of this report, call toll free 1-800-999-6779 (8:30-5:00 ET).

Current figures on ERS' total food expenditures series are available monthly in *Agricultural Outlook* and annually in *Food Consumption, Prices, and Expenditures*. To order these publications, call toll free 1-800-999-6779 (8:30-5:00 ET).

ERS' consumption data are also available in *Food Consumption, Prices, and Expenditures*.

Personal consumption expenditures are published monthly in the *Survey of Current Business*, U.S. Department of Commerce, Bureau of Economic Analysis. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 or call (202) 783-3238.

The results of the *Continuing Consumer Expenditure Survey* are available from the U.S. Department of Labor, Bureau of Labor Statistics in press releases and bulletins. To order, call (202) 523-1913.

Food price indexes are published monthly by the Bureau of Labor Statistics in the *CPI Detailed Report*. Order from Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402 or call (202) 783-3238.

Table 1. How the Expenditures Series Compare

	1977	1980	1984	1988	1989
			Million dollars		
Total expenditures for food	221.5	306.2	391.5	485.8	515.6
Off-premise (at home)	136.6	185.6	228.4	266.2	284.8
Meals and snacks	84.9	120.5	163.1	219.6	230.8
Expenditures paid out of personal income[1]	190.2	263.8	342.3	414.9	443.3
Off-premise	131.6	178.4	219.3	255.9	274.7
Meals and snacks	58.6	85.4	123.0	159.0	168.6
Expenditures paid out of personal money income[2]	182.2	250.2	324.9	395.1	422.5
Off-premise	126.1	169.1	207.6	243.8	262.1
Meals and snacks	56.0	81.1	117.3	151.3	160.3
Personal consumption expenditures for food	216.7	297.5	387.9	490.9	520.9
Off-premise	156.8	208.3	266.2	326.3	347.5
Meals and snacks	59.9	89.2	121.7	164.6	173.4
Aggregate expenditures from Continuing Consumer Expenditure Survey	NA	222.8	296.8	355.5	NA
Off-premise	NA	146.1	177.7	202.6	NA
Meals and snacks	NA	76.7	119.1	152.9	NA

NA = Not Available.
[1]Personal income includes items which are not paid to workers in money form, including fringe benefits, such as employer contributions for health insurance; and transfer payments, such as food stamps. [2]Personal money income includes only income in money form, excluding fringe benefits and transfer payments.

Source: Manchester, Alden C. *Data for Food Demand Analysis: Availability, Characteristics, and Options.* ERS, USDA. AER-613, April 1990, and updates.

series after (1) home food production and donations are excluded from total expenditures and (2) estimated expenditures for pet food are taken out of personal consumption expenditures. After those adjustments, the estimate from PCE exceeded total expenditures by 8 percent in 1954, 19 percent in 1977, and 22 percent in 1982.

Two consumer surveys, USDA's *Nationwide Food Consumption Survey* (NFCS) and the Bureau of Labor Statistics' *Continuing Consumer Expenditure Survey* (CCES), also provide measures of household food expenditures. Formerly, the surveys were conducted about once a decade. The CCES became a continuing survey in 1980 but it covered only urban areas in 1981-83. The NFCS may become a continuing survey, but until recently its coverage has been limited by budget problems and its emphasis has been on individual food intake rather than on household consumption and expenditures. In 1987-88, a household survey was conducted, but with limited sample size.

Survey methods differ between the NFCS and CCES. The CCES, for example, relies on two weekly diaries each quarter for frequently purchased items and quarterly interviews for "global" items, such as the number of trips to the grocery store and average expenditures per trip. The NFCS, in contrast, uses an aided-recall interview where information on food used in surveyed households is collected.

The NFCS and CCES also differ in the categories of food spending that are included. The CCES, for instance, provides no figures for the value of donated or home-produced food. Carryout foods are also treated differently in the two surveys.

The CCES is the only source that breaks down food spending for at-home use by product groups—the same products that appear in the Consumer Price Index. There is considerable year-to-year variation in the data for individual products. The level of aggregate spending for food at home is much lower than in the other series.

What Do We Eat? Looking at the Data

In addition to information on how much is spent for food, analysts often want to know what is consumed. The main sources of data on quantities are ERS per capita consumption figures and commercial data which are based on information from retail food store sales or consumer panels. Consumer panel data indicate quantities of food purchased for use at home and the number of away-from-home occasions when the specified food was purchased.

ERS publishes per capita consumption data for over 200 foods, mostly defined at the manufacturing level. All uses of flour, for example, are included. Food donated by the Federal Government through food programs is also included. The data cover food for at-home and

away-from-home use, and as ingredients in other products. Estimates of the total available U.S. food supply are based on the sum of production, beginning inventories, and imports. These three components are either directly measurable or estimated by Government agencies using sampling and statistical methods.

The ERS data do not directly measure or statistically estimate actual human food use. Instead, they indicate the food available for human use after deducting exports, industrial uses, farm seed and feed, and end-of-year inventories. The ERS data are often referred to as "food disappearance."

In general, food disappearance data indicate trends in consumption over a period of time rather than absolute measures of food eaten. Food disappearance estimates are greater than the amounts actually eaten because they measure the quantities purchased by the consumer and do not allow for some spoilage and waste in the marketing system and in the home.

Food Prices: The CPI and More

The Bureau of Labor Statistics (BLS) is the principal source of data on retail price movements. BLS has compiled retail price indexes and some retail prices since 1890. Until 1978, only prices paid by clerical and manual workers in cities were represented. BLS collected prices for samples of individual food products that were fairly narrowly defined using detailed specifications for each product through 1977.

Coverage was expanded to the entire urban portion of the country in 1978. The post-1978 indexes reflect a broader coverage of food products, but the component price in each store is still for a narrowly specified product. Price collection was extended to three pricing periods, each including 6 business days. This procedure includes most of the month and ensures that a higher proportion of the prices collected will reflect specials. Prior to 1978, BLS collected prices on Tuesday, Wednesday, and Thursday of the first week of each month that included a Tuesday. This practice minimized the effects of weekend specials designed to lure shoppers into the store for the major weekly shopping trips.

Analysts need to know where data on food demand are available and how the information can be adapted to their particular needs.

Good information on price movements is available from BLS in the form of indexes. Data on actual price levels that are available are much less satisfactory because they are not designed to provide such information. Analysts must turn to other sources to determine the average level of prices for all purchases. USDA's periodic food consumption surveys (now called the *Nationwide Food Consumption Survey*), conducted since the mid-1930's, are the primary sources of such data. Average prices can be imputed from the quantity and value data for individual products. Because of shifts among products within a group, average prices often do not rise as rapidly as the index which is designed to measure only pure price changes.

Using the Data

Data on food expenditures, prices, and quantities are used in many ways. One common type of analysis uses per capita consumption data from ERS and retail store price indexes from BLS to determine the effect of price changes on our diets. Relying on these two data sources, however, can cause problems. The per capita consumption data, for instance, include quantities used by foodservice and as ingredients, as well as those sold to consumers at the prices recorded by BLS. One way to deal with this problem is to use wholesale prices, which cover a broad range of uses.

Other problems arise if the study period is lengthy because some products change over time. Milk, for example, used to be sold in quarts and most was delivered to homes at higher prices than in retail stores. Today, milk sells mostly in gallons and very little is delivered. In addition, lowfat and skim milk now account for about half of all milk, up drastically from 20 years ago.

An average price series can be constructed for a product, for example milk, using other data such as milk sales by container size from Federal milk marketing orders. ■