

Text Table 9. Comparison of aggregate expenditures for food, Consumer Expenditure Diary Survey, Personal Consumption Expenditures (PCE), *Supermarket Business*, and *Progressive Grocer*, 1991

Food categories	Diary survey aggregate expenditures (in billions)	Ratio of Diary to PCE	Ratio of Diary to <i>Supermarket Business</i>	Ratio of Diary to <i>Progressive Grocer</i>
Food at home, total	\$255	0.74	1.10	1.22
Cereals and cereal products	14	.69	1.09	1.43
Bakery products	25	.66	1.06	1.12
Meat including poultry	58	.83	1.07	1.07
Fish and seafood	8	1.20	1.19	2.68
Eggs	3	1.17	2.04	1.44
Fresh milk and cream	13	1.01	1.74	1.86
Other dairy products	16	.76	1.38	1.32
Fresh fruits and vegetables	25	.92	.73	.92
Processed fruits and vegetables	16	.59	1.06	1.37
Sugar and other sweets	10	.37	1.32	2.48
Fats and oils	7	.76	1.09	1.74
Nonalcoholic beverages	22	.53	1.02	1.20
Miscellaneous prepared foods	37	.85	1.28	1.16

Source: BLS Consumer Expenditure Survey, *Supermarket Business*, Consumer Expenditure Study (September 1991); and *Progressive Grocer* (July 1991).

Detailed food comparisons. *Supermarket Business* conducts a comprehensive annual survey of food manufacturers, packers, wholesalers, and retailers to construct a detailed picture of grocery store sales by product line. Total grocery store sales for the study are based on U.S. Bureau of the Census estimates, and include sales by specialty food stores. Estimates are also available annually from a similar study by *Progressive Grocer*. The *Progressive Grocer* data are limited to stores with annual food sales of \$2 million or more, accounting for only 75 to 80 percent of grocery store food sales.

Text table 9 compares the industry data, as well as PCE data, with detailed CE Diary survey estimates of food expenditures. These comparisons show that the estimates for 1991 CE food at home expenditures are generally lower than PCE but that the CE estimates are almost always higher than those of *Supermarket Business* and *Progressive Grocer*. In the case of the *Progressive Grocer* estimates, this is due in part to the truncated store sample, as noted above. The results shown in text table 9 for 1991 are, in general, similar to those from previous years.

Residential Energy Consumption Survey. The Energy Information Administration of the U.S. Department of Energy (DOE) publishes data collected in the Residential Energy Consumption Survey (RECS) on expenditures for electricity, natural gas, fuel oil and kerosene, and liquified petroleum gas. The data are published triennially. The RECS focuses on obtaining detailed data from energy suppliers on residential energy use. To make the comparison, time periods and fuel types were matched to the extent possible. Fuel oil and kerosene are not compared because of differences in how the items are categorized and the inclusion of expenditures for wood fuel in RECS.

The data in text table 10 show aggregate expenditures and ratios from the two surveys for periods back to 1984. Some difference between the CE survey and RECS is to be

expected because imputations are made in the DOE surveys for money value of utilities included in residential rents. In addition, the RECS covers military households who live on base, but the CE survey does not include such households. The 1990 data show that consumer expenditure estimates for natural gas and electricity combined are very close to those from the Energy Department survey. The consumer expenditure estimate for electricity expenditures, which is 3 percent higher than the RECS estimate, more than offset the lower expenditure amount for natural gas.

National Health Accounts. The Health Care Financing Administration (HCFA) of the U.S. Department of Health and Human Services publishes total aggregate health costs of the United States in the National Health Accounts (NHA). Total health care costs include payments from all sources, public and private. The CE survey data are compared with the out-of-pocket expenditures in the NHA. Out-of-pocket expenditures for health care include copayment and deductible amounts required by third party payers (governments, commercial insurance companies, and other nonhousehold sources) and medical care services and products not covered by third parties. To derive the out-of-pocket estimates, HCFA uses CE data along with data from administrative and industry sources. For the comparisons, estimates of insurance premiums are based on detailed data in NHA on the financing of health care.

Text table 11 shows a comparison of aggregate out-of-pocket health care expenditures from the CE survey and NHA. Expenditures by patients in nursing homes, which are not covered in the CE survey, are excluded from the comparison. Because of methodological changes in NHA, ratios in the comparison below should not be compared with those published in earlier bulletins.

As reported in the CE survey, aggregate health care expenditures were \$150 billion in 1991, or about 73 percent

Text table 10. Comparison of aggregate expenditures for household fuels, Consumer Expenditure Interview Survey and Residential Energy Consumption Survey, April 1984-March 1985, 1987, and 1990

Item	Interview survey (In billions)			Ratio of CE to RECS		
	Apr. 84- Mar. 85	1987	1990	Apr. 84- Mar. 85	1987	1990
Natural gas and electricity, total	\$85.0	\$87.1	\$97.4	1.01	.99	.99
Natural gas	26.6	21.9	23.9	.89	.84	.88
Electricity	58.4	65.2	73.5	1.07	1.06	1.03

Note: The Residential Energy Consumption Survey was conducted annually from 1978 to 1982, and triennially since then. Estimates through March 1985 are for 12-month periods from April to March. Beginning in 1987, estimates are on a calendar year basis. No RECS data are available for April 1983 to March 1984.

Source: The Residential Energy Consumption Survey data for 1984-85 and 1987 are from *Consumption and Expenditures, Part 1: National Data*, DOE/EIA-0321 and for 1990 are from *Household Energy Consumption and Expenditures 1990*, DOE/EIA-0321.

Text table 11. Comparison of estimated aggregate expenditures for health care, Consumer Expenditure Survey and National Health Accounts, 1988-91

Expenditure categories	Consumer Expenditure Survey (in billions)				Ratio of CE to NHA			
	1988	1989	1990	1991	1988	1989	1990	1991
Health care, total	\$119	\$132	\$141	\$150	0.74	0.75	0.76	0.73
Health insurance premiums ¹	45	51	56	64	.71	.72	.71	.74
Medical care, total ²	74	81	85	86	.76	.76	.79	.72
Medical commodities, total	28	31	33	34	.66	.69	.66	.65
Drugs and sundries ³	22	25	26	27	.64	.64	.63	.60
Medical equipment and supplies ³	5	7	6	7	.80	1.03	.83	.90
Medical services, total	46	50	52	52	.83	.83	.82	.79
Professional services	36	40	45	43	.80	.81	.85	.76
Hospital care	10	10	8	10	.99	.89	.73	.96

¹ NHA data used to obtain the ratios are derived from NHA out-of-pocket estimates of health insurance data from Levit, Katherine R. and Cathy A. Cowan, "The Burden of Health Care Costs: Business, Households, and Governments," *Health Care Financing Review*, Winter 1990, table 1.

² Excludes nursing home care and medical equipment repairs.

³ CE categories have been rearranged to match NHA.

Note: Sums may not equal totals due to rounding.

Source: NHA data are from the U.S. Department of Health and Human Services, Health Care Financing Administration, "National Health Expenditures, 1991," *Health Care Financing Review*, Spring 1993. Estimates have been revised using a rebenchmarking procedure which adjusts the category estimates to proportions from the CE survey.

Text table 12. Comparison of money income before taxes, Consumer Expenditure Interview Survey and Current Population Survey (CPS), total United States, 1988-91

Income category	CE aggregate money income before taxes ¹ (in billions)				Ratio of CE to CPS			
	1988	1989	1990	1991	1988	1989	1990	1991
Money income before taxes ²	\$2,694	\$2,987	\$3,077	\$3,300	0.85	0.87	0.87	0.90
Wage and salary income	2,066	2,228	2,344	2,502	.87	.87	.90	.93
Self-employment income	170	243	225	250	.84	1.08	.98	1.11
Social Security and retirement income	291	325	332	351	.98	1.02	.97	.97
Property income	96	120	103	114	.43	.48	.39	.46
Unemployment, workers' compensation, and veterans' benefits	23	20	21	24	.80	.66	.59	.52
Public assistance and supplemental security income	21	20	23	26	.86	.77	.79	.80
Regular contributions and other income	28	33	30	33	.75	.80	.63	.68

¹ CE data are for complete reporters of income; see glossary.

² Money income before taxes excludes the value of food stamps, meals as pay, and rent as pay.

Note: Ratios are based on unrounded data.

Source: CPS data are from U.S. Department of Commerce, Bureau of the Census, *Money Income of Households, Families, and Persons in the United States*, annual, Series P-60, No. 172, tables 33 and 63, and Series P-60, Nos. 174 and 180, table 34.

of the \$205 billion estimated from the NHA. Of the CE survey total, \$64 billion was spent on health insurance, \$34 billion was spent on medical commodities, and \$52 billion was spent on medical services. The medical commodities total was 65 percent of the NHA estimate, and the medical services total was 79 percent of the NHA estimate. The ratios for the health insurance estimates are relatively stable from 1988 through 1991. Moderate variations in the ratios for the medical commodities total and the medical services total have occurred over the period.

Current Population Survey. The Bureau of the Census collects income data in the March supplement to the Current Population Survey (CPS). Using data collected for 1988 through 1990, comparisons are made with CE Interview survey estimates of total consumer unit income before taxes and by income component. The CPS aggregate income estimates derive from the mean income of persons and the number of persons with the specified income.

There are several differences between the CE survey and the CPS. The CPS collects data in March for the previous calendar year, while the CE survey collects income data for the prior 12 months in the second and fifth interviews of the consumer unit. These interviews may occur any time during the year. CPS income data which are missing (because of nonresponse to income questions) are imputed based on demographic characteristics. By contrast, CE income estimates are for complete income reporters only; income is not imputed in the CE survey. Neither procedure accounts for underreporting, which is especially prevalent for property income.

As text table 12 shows, the CE survey total income data compare well with the CPS for the most part. Total income for the CE survey averages about 85 to 90 percent of the CPS. Some difference is expected because the CPS population is about 3 percent larger than the CE population. The low ratios for property income reflect imputations for missing data in the CPS and underreporting.

Interpreting the data

Several factors should be considered when interpreting the expenditure data, especially when relating averages to individual circumstances. The data are averages for the total population—urban and rural. Because not all consumer units purchased each item during the survey period, the average expenditure for an item is generally considerably lower than the expenditure by those consumer units that purchased it. The less frequently an item is purchased, the greater the difference between the average for all consum-

er units and the average of those purchasing the item. For instance, reference table 1 shows average expenditures for new cars and trucks of only \$1,078, because relatively few consumer units actually bought a new vehicle. Of course, the average cost for those who did make the purchase would be substantially higher than this. For instance, if about 8 percent of the households reported purchasing a new car or truck in 1991, the average expenditure on new cars and trucks for those households would be \$13,475. Even if all consumer units purchased a particular item, an individual consumer unit may have spent more or less than the average for that item. Even within a group with similar characteristics, there may be significant variation. Income, family size, age of family members, geographic location, and individual tastes and preferences all influence expenditures.

Due to the small sample sizes, take special caution when using data from the Metropolitan Statistical Area (MSA) tables (reference tables 19-22). Even though 2 years of data are used to increase the sample sizes, the average expenditures of the most detailed items may not be reliable because there may be few reports of expenditures for those items. A small number of unusually large purchases, or increases or decreases in the number of expenditures for infrequently reported items, can cause a large change in the mean from one year to the next.

Expenditures reported here are the direct out-of-pocket expenditures. Indirect expenditures, which may be significant, may be reflected elsewhere. For example, rental contracts often include utilities. Renters with such contracts would record no direct expense for utilities and, therefore, appear to have lower utility expenses. Employers or insurance companies frequently pay other costs. Consumer units with members whose employers pay for all or part of their health insurance or life insurance would have lower direct expenses for these items than those who pay the entire amount themselves.

In addition, use caution in interpreting changes in expenditures over a short time span. Average amounts spent on different expenditure components may fluctuate from year to year due to changes in economic conditions. For example, a decrease in the supply of food products as a result of poor weather conditions, or a decrease in the oil supply arising from political events such as an oil embargo might result in sharp price increases and short-term changes in expenditure levels. A less volatile measure of expenditure patterns is the share of total expenditures spent on major categories of consumption over a period of several years.