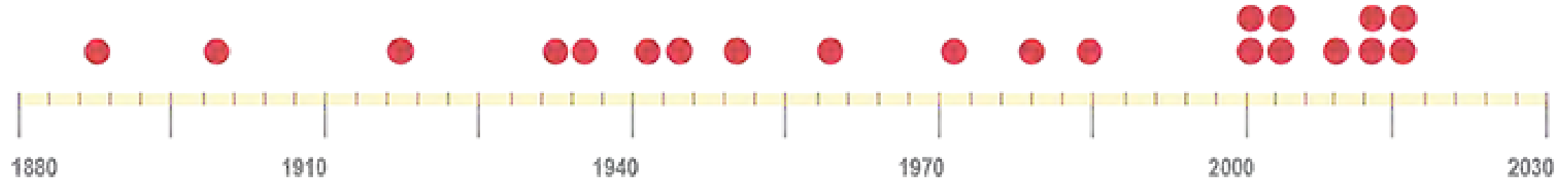


130 Years of the Consumer Expenditure Surveys (CE) 1888 - 2018



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CE History



- BLS established in Department of Interior in 1884
- First expenditure survey at BLS initiated in 1888 ($n=3,000$)
- Family living condition studies rank among the oldest data-collecting functions of BLS
- To date, there have been 10 “iterations” of the CE

The Evolution of the CE, 1888 through 1936

1. **1888–1891** – First nationwide expenditure survey. The purpose was to study workers' spending patterns as elements of production costs.
2. **1901** – Provided weights for an index of food prices by workers through WWI.
3. **1917-1919** – Provided weights for computing a cost-of-living index, now known as the Consumer Price Index (CPI).
4. **1934-1936** – Urban wage earners and clerical workers, primary purpose to revise CPI weights, but also extended analysis of socioeconomic conditions during Depression.



The Evolution of the CE, some details from the first 30 years: CE 1, the Beginning

- Income: \$586.43.
- Food per family: \$238.66, including \$3.00 for vinegar, pickles, and condiments. (45% of total spending)
- Total expenditures per family: \$527.94
- Spending on food or fuel lower than consumption for farms and mining areas
- Spending on intoxicating liquors in the U.S: “the lowest is for the Scotch families, being \$8 per annum.”



The Evolution of the CE 1: 1888

- Going back in time, everybody who works on the CE is new, as even the most senior staff at the Bureau only started in 1884.
- Grover Cleveland is president.
- The Civil War had been over less than 25 years.
- There was no spending reported at restaurants, or even for cakes. Cupcake tins were a recent invention.
- There seems to be a small sample size problem, with published conclusions being drawn from just a few households.



The Evolution of the CE 2: 1901

- The CE turned 13 years old.
- Teddy Roosevelt is president.
- The CE is surveying hard working families, and is still based on annual recall. Family members are earning wages, including their children.
- The report notes some families kept “correct book accounts.”



The Evolution of the CE 2: 1901

- “The *data* here presented *were* gathered by experienced *special agents...*” (Date are plural even then. And instead of ‘data collectors’ we had ‘special agents.’ That’s a great job title.)
- Average expenditures per family: \$699.24, including \$312.92 on food, which is still 45% of the total.
- Income of \$749.50.
- Income contributed by wives:
8.54%, by children 22.19%,
(In the US: Income from children 35.29% in the Welsh nativity.)



The Evolution of the CE 2: 1901

- Concerns about recall, sample bias, and variance. If the sample was small, the averages “should of course be accepted with due caution...”
- The value of producing public use microdata was dismissed: “It is believed that all the more important features are brought out in the tables presented in this report.”
- There was also a special detailed table for families who “were reported as being generally somewhat more intelligent and better educated than the average family.”



The Evolution of the CE 3: 1917 – 1919

- The CE was turning 30 years old. Woodrow Wilson is president, and WW I is ending.
- Income now includes earnings plus income from lodgers, from garden, poultry, gifts, rents, and investments.
- There are separate tables for “All Family” averages, plus averages for only those who’d made a purchase for that item that year.
For example, the national all family average on shoe shines was 9 cents, but was \$3.61 for those who’d bought shoe shines.



The Evolution of the CE 3: 1917 – 1919

- Average yearly expenses per family: \$1,434.37, including \$548.51 for food (now 38% of total spending.) Income was \$1,513.29.
- Expenditures were published for talking machines; excursions and vacations; street car fares; umbrellas and parasols; hats: felt, straw, and caps; spats and leggings; collars; arctics; and belts (3 cents) and suspenders (8 cents).
- Included \$15 on cakes and cookies!



The Evolution of the CE, 1935 through 1961

5. **1935-1936** – Urban and rural sample used for the “Study of Consumer Purchases.”
6. **1941-1944** – Urban, farm, and non-farm sample provided estimates of expenditures and savings by income for the nation. Covered all of 1941 and the first 3 months of 1942, highlighting differences before and after the Pearl Harbor attack. Repeated in 1944 for urban households to see how spending changed.
7. **1950** – Urban sample only, an abbreviated version of the 1935–1936 study.
8. **1960-1961** – Urban and rural sample, provided the basis for revising the CPI weights, while supplying material for broader economic, social, and market analyses.



The Evolution of the CE, 1941 through 1961

9. **1972-1973** – Data used to revise CPI weights, but major changes in collection:
 - Unlike earlier surveys, the **U.S. Census Bureau**, under contract to BLS, conducted all sample selection and field work.
 - Another change was the introduction of a **Diary Survey** in addition to the existing **Interview Survey** to collect the survey information.
 - A third major change was the switch from an **annual recall to a quarterly recall** (in the Interview Survey) and **daily recordkeeping** of expenditures (in the new Diary Survey).
10. **1980-present** – Initiation of the current continuing survey in 1980. Since then, the data have been available annually.



Selected CE Highlights, 1984-2003

- 1984, The first year of **integrated data** from the Diary Survey and Interview Survey.
- 1993, CE **microdata** are made available on CD-ROM for sale to the public.
- 1995, CE **data tables** are made available to the public on the BLS website.
- 1996, The **Initial Edit Subsystem** (IES) added to production processing.
- 1999, CE **sample increased** by 50 percent, allowing more frequent CPI weight updates.
- 1999, The CE Division receives funding to establish a separate **research branch**.
- 2000, The first year for which **standard error tables** are made available.
- 2001, Improvements to the survey income estimates by introducing **income brackets**.
- 2002, Downsized from **mainframe to Unix** and the client server environment.
- 2003, Data collection in the Interview Survey shifts from PAPI to **CAPI**.



Selected CE Highlights, 2004-today

- 2004, Income estimates improved by implementing model-based **income imputation**.
- 2005, A more user-friendly **redesigned diary** collection instrument is introduced.
- 2006, The first of the annual CE **public-use microdata workshops** is held at BLS.
- 2007, Migrated from **Sybase to Oracle**.
- 2009, **Gemini Project** to redesign the CE surveys initiated.
- 2012, The first of the annual CE **survey methods symposiums** is held at BLS.
- 2013, CE introduces new estimates of **tax liabilities** using the TAXSIM calculator.
- 2013, CE **midyear data tables** are made available to the public on the BLS website.
- 2015, Initial **bounding interview** dropped from the Interview Survey.
- 2017, First release of experimental **state-level weights** for use with CE data (NJ).



Want to learn more about the history of the CE?

- See [historical summaries and articles](#) about the CE
- The historic timeline is from the [CE chapter](#) from the BLS Handbook of Methods
- Original source documents referenced are:
 - ▶ 1888, the 6th Annual Report of the Commissioner of Labor, 1890.
 - ▶ 1901, the 18th Annual Report of the Commissioner of Labor, 1903.
 - ▶ 1918-1919, Cost of Living in the United States, Bulletin of the US Bureau of Labor Statistics, #357, May 1924.
- Or write to us at CEXInfo@BLS.gov

