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Understanding the Federal Statistical System: Why are Economic Indicators Revised?

Federal statistical agencies provide a wide array of data that can add heft and backbone to your reporting. To use the data properly, it is essential to understand how data are produced, disseminated and revised.

Provisional Data

Many federal statistical agencies release "provisional data" from their studies to ensure a timely flow of information. Provisional data are preliminary statistics that may not yet be fully analyzed and may change as new information is collected and reviewed.

Here are some of the most frequent reasons that statistical agencies revise data:

- **Receipt of additional data.** To make economic indicators available in a timely manner, statistical agencies have strict deadlines for data collection. For some indicators, additional data that are received after the deadline are included in subsequent revisions.
- **Benchmark to comprehensive counts.** Where a population count is available, some economic indicators "anchor" survey-based estimates to the population periodically.
- **Updated seasonal adjustment.** To account for normal seasonal patterns, many economic indicators are seasonally adjusted. This process removes normal seasonal patterns, allowing a clearer view of the cyclical and non-seasonal movements. Statistical agencies typically review and adjust seasonal patterns on a periodic basic.

Data Revisions

When activities such as these are completed, agencies issue data revisions. These revisions may be dramatic or subtle, but they are simply a change or set of changes that reflect corrected or improved statistical information within published reports. Each agency approaches these revisions differently, depending on the nature of the data sets, but the processes meet rigorous and widely accepted statistical standards.

Revisions Process for Agencies Issuing Economic Indicators

Bureau of Labor Statistics (BLS)

Data from the BLS address essential economic indicators including employment and unemployment, price change such as the Consumer and Producer Price Indexes, productivity, and wage data.

Among the most commonly covered indicators is the monthly jobs report, which includes a count of payroll jobs from the Current Employment Statistics (CES). CES represent the first preliminary estimates of employment, hours and earnings, and is published each month about three weeks after the reference period. These estimates are then revised twice – one month and two months after the initial release, to account for receipt of additional data and updated seasonal patterns.

Once a year, in March, the data are subject to the "annual benchmarking process" that may then result in additional revisions.

The benchmark adjustment is an annual re-anchoring of the sample-based employment estimates to full population counts available primarily through Unemployment Insurance tax records filed by employers to the state. The difference between the March population counts and the March sample-based employment estimate is called the benchmark revision. A preliminary estimate of the benchmark revision is published in late summer, and the final benchmark revision is published in early February.

Other data sets produced by the BLS will also go through similar revisions and adjustments.

Explanations for the processes can be found in the technical notes that accompany the data sets. You can also find more information on Current Employment Statistics vintage data information and revisions, as well as other frequently asked questions on BLS.gov.

Census Bureau

Data from the Census Bureau address thirteen principal economic indicators which include data on sales, shipments, investments, orders, residential and nonresidential construction, inventory, revenue, rental vacancy rates, homeownership rates, profits, and international trade goods and services.

One of the most covered indicators is the Monthly Retail Trade Report. The advance monthly retail sales represent the first estimates of retail sales and is published each month about nine days after the reference period. These estimates are then revised twice – one month and two months after the initial release, to account for receipt of additional data, larger sample, and updated seasonal patterns.

Once a year, in April, the data are benchmarked to the Annual Retail Trade Survey and may result in additional revisions. The Census Bureau benchmarks to the Annual Retail Trade Survey for the following reasons:

- **Timing** - The respondents have more time to prepare their annual reports than they do for their monthly reports. The annual and census responses are requested at a time when many firms have already compiled audited book figures for their own use. On the other hand, respondents to the monthly survey have just a few weeks.
- **Sampling** – The estimates derived from the annual survey are based on a sample that is much larger than the samples used to produce the monthly sales and inventory estimates.
- **Response** - The annual estimates are based on more reported data than are the monthly estimates.

Other indicators produced by the Census Bureau go through similar revisions and adjustments and the processes are documented on their websites under the methodology sections.

You can find more information on the Monthly Retail Trade Survey methodology and revisions at www.census.gov.

Bureau of Economic Analysis (BEA)

Data from the BEA address critical economic measures, including consumer spending, people's income and savings, business investment, international trade and investment, and prices and inflation.

Among the most covered economic indicators is the Gross Domestic Product (GDP). GDP is a comprehensive measure of U.S. economic activity that incorporates the value of the final goods and services produced in the United States. GDP is often used as an indicator of the nation's economic health.

The BEA estimates GDP for each year and each quarter. Each quarterly estimate is comprised of three preliminary estimates. The BEA releases the advance estimate near the end of the month after the quarter ends based on the best information available at the time. Second and third estimates incorporate additional data as they become available and are released near the end of the second and third months. Latest quarterly estimates reflect the results of both annual and comprehensive updates, which used to be released in late July but starting in 2022 will be released in late September.

GDP data are adjusted to account for recurring seasonal patterns, such as winter weather and holidays.

The BEA tracks the average revisions to the various estimates. The current quarterly estimates correct the indicate the direct of change in real GDP 95% of the time and correctly indicate whether real GDP growth is above, near, or below trend growth about 78% of the time.

For more information on how our society and government count on the federal statistical system, visit www.countonstats.org and follow @CountonStats on Twitter.