

## COMPARISON OF BLS PRICE AND SPENDING MEASURES

	<b>Consumer Price Index (CPI)</b>	<b>Producer Price Index (PPI)</b>	<b>Import and Export Price Indexes (MXP)</b>	<b>Consumer Expenditure Surveys (CE)</b>
<b>Concept / Objective</b>	Measures the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services. Underlying concept is a cost-of-living framework. Index series are published for the CPI-U (All urban consumers), CPI-W (Urban wage earners and clerical workers), and the chained CPI-U.	Measures the average change in selling prices producers and service providers receive for their output.	Export price indexes measure the average change over time of transaction prices paid by non-U.S. residents for goods and services provided by U.S. residents. Import price indexes measure the average change over time of transaction prices paid by U.S. residents for goods and services provided by non-U.S. residents.	Measures the average expenditures by the total US civilian non-institutionalized population, along with income and other related demographic details.
<b>Product Coverage / Scope</b>	Any item purchased for consumption by consumers.	Domestic producers from the mining, manufacturing, agriculture, forestry, services, and construction sectors of the U.S. economy.	Most merchandise goods exported from or imported into the U.S. as well as selected services items. Military goods, works of art, used items, charity donations, railroad equipment, rebuilt and repaired items, items leased for less than a year, and custom-made capital equipment are excluded.	Every item or service purchased by consumers, plus some related consumption information. Investments and business expenses are excluded, auto purchase is net after trade-in allowance, health costs and car repairs are net after insurance reimbursements.

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<b>Headline measure (focus of news release)</b>	CPI-U, All items	PPI for Final Demand	U.S. All imports; U.S. All Exports	Average 12-month expenditures and income per consumer unit
<b>Primary Uses</b>	Used to compute cost-of-living adjustments for Social Security and other government payments. Used to adjust tax brackets and other tax parameters, and as a deflator of other economic time series. Used privately, either in contracts or informally, to adjust rents, wages, and other payments for changes in the cost-of-living.	PPI data for capital equipment are used by the U.S. Department of Commerce to calculate the gross domestic product (GDP) deflator and many of its components. Private firms use PPI data to assist their operations in a variety of ways, in addition to using the data for general economic analysis or as a deflator of some other quantity. PPIs frequently are cited for price escalation purposes in long-term sales or purchase contracts as a means of protecting both the buyer and the seller from unanticipated surges or drops in prices.	Conversion of U.S. trade figures from current dollars to constant dollars in U.S. trade statistics including the Bureau of Economic Analysis' Quarterly Gross Domestic Product and the Census Bureau's monthly U.S. trade statistics; Assessing the impact of international trade on domestic inflation and the competitive position of the U.S.	Regularly revise the Consumer Price Index market basket of goods and services and their relative importance. Also used by economic policymakers examining the impact of policy changes on economic groups, by the Census Bureau as the source of thresholds for the Supplemental Poverty Measure, by businesses and academic researchers studying consumers' spending habits and trends, by the Defense Department for living adjustments, the Commerce Department on the cost of raising children, by other Federal agencies to track spending by demographics.
<b>Revision Policy</b>	CPI-U and CPI-W indexes are not revised; Chained CPI-U indexes are revised when updated	Producer Price Indexes are revised up to 4 months after they are initially published, as	Import and export price indexes are revised up to 3 months after they are initially published, as more	Estimates are not revised.

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	expenditure data is available.	more information becomes available.	information becomes available.	
<b>Production Classification System(s)</b>	The consumer market basket is divided into 8 major groups and 243 item categories.	The PPI family of indexes is divided into several major classification systems, each with its own structure, history, and uses. The four most important classification structures are (1) industry (NAICS based), (2) commodity (unique to PPI), (3) FD-ID (Final Demand - Intermediate Demand.), and (4) Inputs to Industry.	Three classification systems are used for aggregating merchandise goods. The Bureau of Economic Analysis (BEA) Classification System which classifies items by end use, the Harmonized System which classifies items by product type, and NAICS which classifies items by industry. Services indexes adhere to the BEA balance of payments definition.	Universal Classification Code (UCC)
<b>Source of Weighting</b>	Item weights: calculated from the CE interview and diary surveys.  Aggregation weights: Consumer Expenditure Survey (CE)	Item weights: weights at the item level are calculated based on a sample unit's value of shipments.  Aggregation weights: Census Bureau economic census data and BEA input/output tables.	Item weights: weights are based on the company's probability weight from sampling.  Aggregation weights: U.S. Census Bureau figures for exports and imports.	US Census Bureau population figures from the Current Population Survey (CPS.) The basic unit is the Consumer Unit, any single or multiple person household who are related by blood, marriage, adoption, or other legal arrangements; or share living expenses.

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<b>Current aggregation weighting base</b>	2021	2017	2021 trade weights	Concurrent monthly CPS population counts are aggregated per collection quarter.
<b>Frequency of Weight Updates</b>	Every year with a 2 year lag in weights.	Census weights, every 5 years; BEA weights, less frequently.	Every year with a 2 year lag in weights.	Monthly population figures are updated quarterly to current US population
<b>Sample Sizes/month</b>	BLS collects about 103,500 consumer prices from about 23,000 places of business each month, as well as approximately 8,400 rents.	BLS collects about 60,000 prices from about 11,000 producers.	BLS collects about 17,000 prices from a sample of about 2,250 importers and exporters each month.	There are two surveys with two samples, the Quarterly Interview Survey and the Diary Survey. The U.S. Census Bureau collects about 5,000 household Interviews each quarter, and another 12,500 weekly Diaries per year (two sets of 1-week diaries from 6,250 households.)
<b>Mode of Data Collection</b>	Initiation and Repricing: Personal visit, phone and internet.	Initiation: Personal visit, Phone and Video  Repricing: Virtually all prices are collected through web-repricing.	Initiation: Personal visit, Phone and Video  Repricing: Virtually all prices are collected through web-repricing.	First Contact: Primary mode for the Interview Survey is by phone using a Computer Assisted Personal Interview (CAPI) instrument. Diary Survey is primarily collected using a paper diary. One-third is collected using a new online diary instrument.  Follow-up: Primarily by phone for the Interview Survey. Paper diary and/or receipts must be picked up by the

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				Census Bureau field representative or diary entries are submitted online.
<b>Resampling Strategy</b>	Roughly 25% of outlet and item samples rotated each year	The PPI samples three times per year; sampling approximately 30-40 industries per sample.	The MXP samples all industries within the import and export universe once per year (alternating).	A household can be in the Interview survey for up to four interviews each three months apart; a Diary household is only in for 2 weeks. New households are rotated in monthly.
<b>Reference Period</b>	Monthly	Monthly	Monthly	12 months of data
<b>Price Collection Time Frame</b>	Prices are collected throughout the month.	PPI requests prices for the Tuesday of the week of the month that includes the 13 <sup>th</sup> .	Prices are collected as close as possible to the first day of the month. The exception is petroleum import prices which are collected throughout the month.	Expenditures are collected throughout the month.
<b>Price definition</b>	Retail/transaction price, including sales and excise taxes.	Net selling prices, including discounts and surcharges, excluding taxes and delivery charges.  PPI uses margin prices for establishments engaged in wholesale and retail trade; these establishments purchase	Transaction prices that exclude any duty or other taxes.	Retail/transaction price at time of purchase or obligation, including sales and excise taxes

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		goods primarily for direct resale to other businesses and consumers.		
<b>Index Calculation</b>	Two-stage calculation process. First, price changes are averaged using geometric or arithmetic means. At 2 <sup>nd</sup> stage, for the CPI-U and CPI-W, indexes are aggregated using a modified Laspeyres. For the C-CPI-U, indexes are aggregated using a Tornqvist superlative formula.	Modified Laspeyres at all levels of aggregation.	Modified Laspeyres at all levels of aggregation.	Dollar amounts are averaged using weighted means.
<b>Timing and frequency of publication</b>	Monthly; 10-14 days after the reference month.	Monthly; about two weeks after the reference month.	Monthly; about two weeks after the reference month.	Publication Tables: Once a year about 9 months after the end of the reference period in September. Public use microdata: Twice a year with two quarters released in April-May and remaining quarters released in September.
<b>Standard reference base</b>	Varies; for many items, 1982-84=100	Varies: Many commodity-oriented PPI series have an index base of 1982 = 100, but many other indexes, including most FD-ID indexes, began after 1982 and have a	Varies; for many items, 2000=100. The exceptions are indexes that began publication after 2000 which are based to the first month of publication.	Nominal dollars for the reference year

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		base date indicating the month and year of their introduction.		
<b>Web site</b>	<a href="http://www.bls.gov/cpi/">http://www.bls.gov/cpi/</a>	<a href="http://www.bls.gov/ppi/">http://www.bls.gov/ppi/</a>	<a href="http://www.bls.gov/mxp/">http://www.bls.gov/mxp/</a>	<a href="http://www.bls.gov/cex">http://www.bls.gov/cex</a>

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