



OpenBrand Consumer Price Index:

Durable and Personal Goods

Methodological Notes

The **OpenBrand CPI of Durable and Personal Goods** is constructed using a data-driven methodology that ensures accuracy, timeliness, and transparency in measuring price trends for both short and long-lasting consumer products. The methodology consists of the following key components:

1. Data Collection

- **Real-Time Price Tracking:** Prices are sourced daily from online marketplaces, retail websites, and brick-and-mortar store listings.
- **Retailer & Manufacturer Data:** Aggregates pricing information from major retailers, direct-to-consumer brands, and wholesale suppliers into broader consumer categories.
- **Temporal Coverage:** Captures price variations over time, including daily discounts and price promotions

2. Product Selection & Tracking

- **Durable and Personal Goods Focus:** The index includes products with an expected lifespan of three years or more, such as home appliances, consumer electronics, and tools, as well as personal

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care products with a shorter lifespan, such as hair and skin care products, vitamins, over-the-counter medications, and oral care products.

- **Brand & Model Tracking:** Individual brands and models are monitored to reflect pricing shifts within competitive product segments, including both permanent changes in listing price as well as temporary promotional pricing.

3. Price Calculation, Adjustments, and Weighting

- **Price Calculation:** Tracks month-over-month and year-over-year price movements to measure price stability in the marketplace and take into account both longer-term changes in pricing (such as changes in manufacturer's suggested retail price) as well as more short-term changes in pricing, such as promotional discounts and sales prices.
- **SKU-Removal Instead of Hedonic Adjustments:** When a product (or SKU) becomes unavailable in the BLS goods basket, the BLS implements a SKU-replacement procedure whereby the next most similar product is used in its place, and a quality (hedonic) adjustment procedure is performed to get closer to an apples-to-apples price comparison. Since OpenBrand has data on nearly 100% of the SKUs pricing history in a given product category, we can simply remove that SKU from the basket and rely on price changes of the remaining SKUs in that basket. This eliminates the need for hedonic adjustment in the OpenBrand CPI basket.
- **Weighting and Aggregation Method:** A weighted geometric mean formula is used to minimize volatility and improve stability in price

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trend analysis at both the product grouping and category level. Instead of using sales-volume weights when aggregating the index, we take an alternative approach by using persistence-based weights for aggregation. Instead of more frequently purchased items getting more weight in the BLS' CPI calculation, OpenBrand takes a more novel approach by weighting items with a more established price history in the market more heavily in our CPI calculation than items with a less established history.

4. Reporting & Updates

- **High-Frequency Updates:** Published freely on a monthly basis, with a subscription option for daily summaries across categories, sub-categories, and individual products.
- **Comparative Benchmarks:** We aggregate pricing as analogously as possible to traditional BLS CPI measures for benchmarking purposes.
- **Transparency & Accessibility:** Provides both open and paid data access for journalists, researchers, businesses, and policymakers.

By leveraging real-time data and advanced statistical techniques, the OpenBrand CPI offers an accurate and dynamic measure of pricing trends, helping businesses and consumers make informed decisions in an evolving economic landscape.

OpenBrand Consumer Price Index: Durable and Personal Goods

Product Groups

Appliance Group

Air Conditioners

Air Purifiers

Beverage Coolers

Blenders

Coffee Makers

Cooktops & Wall Ovens

Countertop Cooking

Countertop Microwaves

Dehumidifiers

Dishwashers

Dryers

Freezers

Icemakers

Laundry

Ranges

Refrigerators

Vacuums

Washers

OTR (Over-the Range Microwaves)

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Communications Group

Business Printers

Desktops

Printers

Headsets

HED

Ink

Large Printers

MFP Copiers

Monitors

Notebooks

Personal & SOHO Printers

Projectors

Smartphones

Tablets & Detachables

Toner

Wearables

Wireless Routers

Home Improvement Group

Bathroom Faucets

Cutting Machines

Door Locks

Generators

Grass Seed

Handhelds

Hand Tools

Kitchen Cleanup

Kitchen Faucets

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Lawn Fertilizer
Lawn Products
Log Splitters
Mowers
Outdoor Cooking
Outdoor Cooking Accessories
Pesticides
Power Tools
Power Tools Accessories
Pressure Washer
Replacement Batteries
Smart Doorbells
Smart Locks
Smart Cameras
Smart Thermostats
Snow Throwers
Weed Killer

Personal Care Group

Bath Products
Contraceptives
Cosmetics-Eye
Cosmetics-Facial
Cosmetics-Nail
Deodorants
Diabetic Products
Digestive - Hemorrhoidal Treatment
Digestive - Lower GI
Digestive - Upper GI
Ear Care Products
Eye Care Products

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Feminine Needs – Sanitary Napkins/Tampons

Feminine Needs – Women's Care

First Aid – Accessories

First Aid – Treatments

Foot Care Products

Fragrance–Mens

Fragrance–Womens

Hair Care – Coloring

Hair Care – Growth Products

Hair Care – Shampoo/Conditioner

Hair Care – Styling

Hair Dryers

Home Health Care

Lip Preparations

Oral Care – Breath Fresheners

Oral Care – Dental Accessories

Oral Care – Denture Products

Oral Care – Mouthwash

Oral Care – Oral Hygiene

Oral Care – Toothpaste

Pain – Analgesic (External)

Pain – Analgesic (Internal)

Sexual Wellness

Shave – Blades (Non-Razor)

Shave – Creams

Shave – Razors

Skin Care – Acne

Skin Care – Facial

Skin Care – Hand & Body

Sleeping Remedies

Soap

Sun Care

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Upper Respiratory – Cold/Allergy/Sinus Liquids
Upper Respiratory – Cold/Allergy/Sinus Tablets
Upper Respiratory – Cough Drops/Lozenges
Upper Respiratory – External
Upper Respiratory – Nasal Products
Vitamins
Vitamins, Minerals & Supplements
Wt Ctl/Nutrition – Candy Tablets
Wt Ctl/Nutrition – Liq/Powder Wipes/Towelettes

Recreation Group

Bluetooth Speakers
Bluray
Digital Camcorders
Digital Cameras
Headphones
Media Players
Photo Paper
Sewing Machines
Sound Bars
Speaker Systems
TVs
VAW Speakers