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ELI5: What exactly is the consumer price index?

Economics

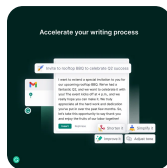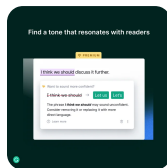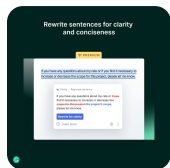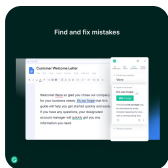Archived post. New comments cannot be posted and votes cannot be cast.

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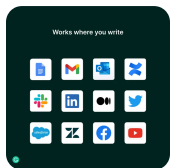
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tiredstars • 10 mo. ago • Edited 10 mo. ago

The consumer price index (CPI) is a way of measuring changes in the overall price of things for consumers in an economy.

If the CPI goes up and your income doesn't then generally you won't be able to buy as much stuff. Your "real income" has gone down.

The basic way the CPI is calculated is to pick a "basket" of goods representing what a typical household buys: different food items, energy, clothes, electronic, housing (at least in the CPI-H), etc.. Researchers find out typical prices for all these things. Statisticians weight them according to how much people will buy (you'll buy bread more often than a new TV). That's your baseline index .

After a period of time – typically a quarter – they measure the prices again index.

The difference between the two sets of prices is the change in the CPI. Usually this is described as an annual change - "the consumer prices index in Q4 2022 was up 10% compared to Q4 2021."

There are plenty of complications, of course - the basket has to be periodically changed as people change their spending habits, it's challenging to factor in changes in the *quality* of goods, and so-on.

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The US Bureau of Labor Statistics publishes updated CPI measurements monthly. Most people probably prefer to look at longer time scales like quarterly or yearly. The next update is expected on Feb 10

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nednobbins • 10 mo. ago

When people want to talk about something like the "cost of living", it can be really confusing because it's not clear what kind of "living" we're talking about.

Does it include housing? If so, where? What kind of food does it include? How about transportation?

The CPI attempts to answer all these questions by creating a detailed and concrete list of specific amounts of specific goods and services. Then it's just a matter of checking the prices of those goods and services and adding them up.

It turns out there are actually several CPIs that are focused on different demographics and areas. For example https://www.bls.gov/opub/ted/2012/ted_20120302.htm is the breakdown for "the elderly".

It lets you have measures of the cost of living that tries to be as consistent and objective as possible.

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Moskau50 • 10 mo. ago

Take a bunch of commonly purchased consumer goods: foodstuffs, clothing, etc. Track the prices of those goods over time and take a weighted average of them. Now you can estimate how much an average person is spending to get by in any year compared to any other year that you have data. This is helpful for tracking inflation, as these staple goods are the most widely and regularly consumed, so inflation will show up here very clearly.

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Mammoth-Mud-9609 • 10 mo. ago

A "basket" of goods that people buy as part of their regular lives and the retail price that the consumer pays for these items, so it is a measure of inflation that people will notice when they shop, leaving out many of the big value items that are purchased a few times in people's lives.

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blipsman • 10 mo. ago

It's a way the government tracks inflation, by calculating the costs of a range of everyday items and services that average consumers buy. It includes about 80,000 items, including foods, apparel, transportation, housing, recreation, personal care, and more. They create the CPI basket of good through consumer polling to determine what they buy, and it does adjust over time as buying habits change.

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you a decent idea. There are equivalent statistics like the PPI, Producer Price Index, that are geared toward businesses.

Essentially, it takes goods and services that you would expect the average person to regularly consume and does a weighted average of the increase/decrease of the price. It's weighted since you would expect things like food to take up a larger portion of a household's spending than maybe fuel or public transit. Increase is inflation, decrease is deflation. The CPI is highly unlikely to reflect the impact of inflation for your specific lifestyle because it's an average across 300 million people (in the US at least) of all income levels and states of life. You would expect a retiree to spend much more on healthcare than someone in their 20's for example.

In the US the BLS is responsible for gathering and reporting the data. They're very transparent about how they gather the data and calculate the CPI, down to the weights. I strongly recommend you take a look at their website for the most accurate information. They have great FAQs and such there: https://www.bls.gov/cpi/

Reddit more often than not has a lot of people who have no idea what they're talking about poking holes in the CPI, saying it's not a valid calculation. As I said before, it's not a perfect calculation because it's averaging a large population and it never was meant to be the perfect indicator of inflation, only to give you a general idea. But there's a lot of misinformation that is easily disproved by looking at the BLS website (like saying it doesn't include housing/rent... it does) since they're extremely transparent about what goes into the CPI calculation. Or that they keep changing the methodology to hide inflation. They keep changing the methodology because people don't buy whale oil for lighting anymore like they did in the early 1900's. Or people today need to pay for internet, something most didn't do 30 years ago. The BLS is very transparent about these changes and why they do them.

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