

Measuring The General Level of Prices and Inflation

News

How Economists Measure the General Level of Prices

What is Inflation?

Why is Inflation Costly?

Midterm Exam Statistics

What Have We Learned?

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Inflation in the News

The New York Times

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October 16, 2009

Consumer Prices Edged Up Last Month

By **JACK HEALY**

Consumer prices edged higher last month after a summertime spike in gasoline and energy prices leveled off, the government reported on Thursday.

The report demonstrated that inflation was still a remote concern for the American economy, even as the dollar tumbles against other global currencies and jittery investors clamor to buy oil and gold. The figures backed up the Federal Reserve's view that inflation will remain low as the economy grapples with high unemployment and low consumer demand.

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Recitation Assignment for Week 12

Journal Assignment

Find an article that concerns a macroeconomics or monetary policy issue.

Write 100-200 words explaining what the issue is and why it is important.

Macro Data Assignment

Download written assignment and the excel spreadsheet from the webpage to your laptop.

Bring both to recitation to begin working on the assignment.

Finish the assignment on your own.

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How Economists Measure the General Level of Prices

Babe Ruth earned \$80,000 in 1930

Barry Bonds earned \$15.5 million in 2007

Who was better off?

How can we answer the question?

Let's put the questions aside for a moment and come back to it.

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How Economists Measure the General Level of Prices

A price index is an average of prices of different goods and services.

We will focus on two (of many) price indices:

The GDP Deflator

The Consumer Price Index

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The GDP Deflator

The GDP Deflator is implicit in the values of nominal and real GDP.

NGDP = Nominal (current dollar) GDP

RGDP = Real (base year dollar) GDP

$NGDP = P \times RGDP$

So...

The GDP Deflator is $P = NGDP/RGDP$

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GDP Deflator in Simple Land

Year	Bread		Wine		Daycare		Nominal GDP	Real GDP
	Loaves	Price	Jugs	Price	Hours	Price		
2005	100	\$2.00	50	\$10	250	\$3.00	\$1450	\$1450
2006	125	\$2.10	40	\$12	250	\$3.25	\$1555	\$1400
2007	115	\$2.40	60	\$8	250	\$3.40	\$1606	\$1580

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GDP Deflator in Simple Land

Year	NGDP	RGDP	Year	GDP Deflator
2005	\$1450	\$1450	2005	$1450/1450 = 1$
2006	\$1555	\$1400	2006	$1555/1400 = 1.11$
2007	\$1606	\$1580	2007	$1606/1580 = 1.02$

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Price Changes in Simple Land

Year	Bread	Wine	Daycare	Average Price Growth	GDP Deflator
2005	\$2.00	\$10.00	\$3.00		
2006	\$2.10 (1.05)	\$12.00 (1.20)	\$3.25 (1.083)	11%	1.11
2007	\$2.40 (1.143)	\$8.00 (0.667)	\$3.40 (1.046)	-4.8%	1.02

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Use Your Clickers to Answer
The Following
Graded Question.

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Suppose the GDP Deflator of Simple Land is 1.00 in 2005, 1.07 in 2006, and 1.05 in 2007. Then...

- A. Simple Land experienced inflation in 2006 and deflation in 2007.
- B. Prices in Simple Land rose by about 12 percent between 2005 and 2007.
- C. Simple Land experienced a large rate of inflation in 2006 and a small rate of inflation in 2007.
- D. Prices in Simple Land rose by 2 percent between 2005 and 2007.

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The Bottom Line is that...

The GDP Deflator is a weighted average of prices in the economy with weights given by the relative importance of each component of GDP.

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The Consumer Price Index The CPI Measures ...

The cost of a standard basket of goods and services

Relative to

The cost of the same basket of goods and services in a fixed year, called the base year.

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The screenshot shows the BLS website with the following content:

- Header: U.S. Department of Labor, Bureau of Labor Statistics, Consumer Price Indexes, www.bls.gov
- Navigation: BLS Home | Programs & Surveys | Get Detailed Statistics | Glossary | What's New | Find It! In DOL
- Main Content:
 - Introductory text: "The Consumer Price Indexes (CPI) program produces monthly data on changes in the prices paid by urban consumers for a representative basket of goods and services."
 - Upcoming release: "September 2006 CPI data are scheduled to be released on October 18, 2006 at 8:30 am Eastern Time."
 - Navigation menu: General Overview, Economic News Releases, Get Detailed CPI Statistics, Tables Created by BLS, Special Notices, Publications and Other Documentation, Frequently Asked Questions, Contact Us.
 - Links: Data Available, Coverage, Reference Period, Source of Data, Forms of Publication, Uses of the Data, Major Research in Progress, Measurement Issues.
 - Economic News Releases section with a "Back to Top" link.
- Right Sidebar: "Latest Numbers" section listing CPI-U, US City Average, All Items with (NSA) and (SA) changes for August 2006.

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The Consumer Price Index

The CPI basket is based on consumption of the typical urban household.

The items in the basket change slowly so that changes in the CPI are estimates of changes in the "cost of living."

Studies show that changes in the CPI somewhat overstate changes in the cost of living because of the availability of substitutes.

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Dale Ward's Contribution to the Consumer Price Index

The screenshot shows the Quinlan & Fabish website with the following content:

- Header: Quinlan & Fabish, Use our SOUSA-phonel 800-63-SOUSA
- Navigation: HOME, ABOUT, RENTAL INFO, ONLINE STORE, FOR PARENTS, FOR DIRECTORS
- Main Content:
 - Tagline: "A TRUSTED PARTNER IN MUSIC EDUCATION SINCE 1959"
 - Click below for information, maps, & directions: SW Suburban Location, NW Suburban Location, Fox Valley Location.
 - Recent News and Events: Back to School Reading Session, ChicagoLand Outstanding Music Educator Awards.
 - Quick Links: Not sure what to get? Q&F Gift Cards are here!, View our WebSpecial Instrument Inventory!, Make a rental payment.

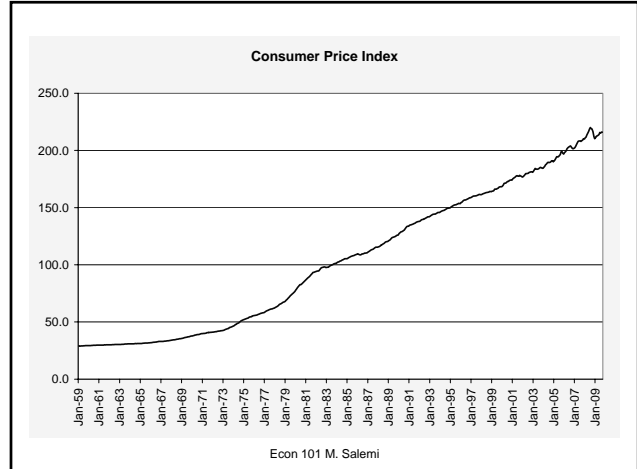
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Dale Ward's Contribution to the Consumer Price Index



BLS asks Dale the current prices of:
 Yamaha Student-Quality Trombone
 Pearl Snare Drum Kit
 These two instruments are part of the CPI basket.

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What is Inflation?

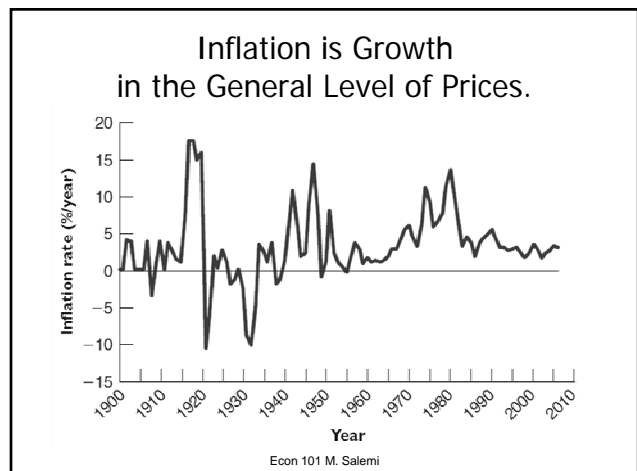
The inflation rate is the growth rate in some price index over some period usually converted to annual terms.

There are lots of ways to compute an inflation rate. Here is one.

$$\text{Inflation} = (\text{CPI}_t - \text{CPI}_{t-12}) / \text{CPI}_{t-12}$$

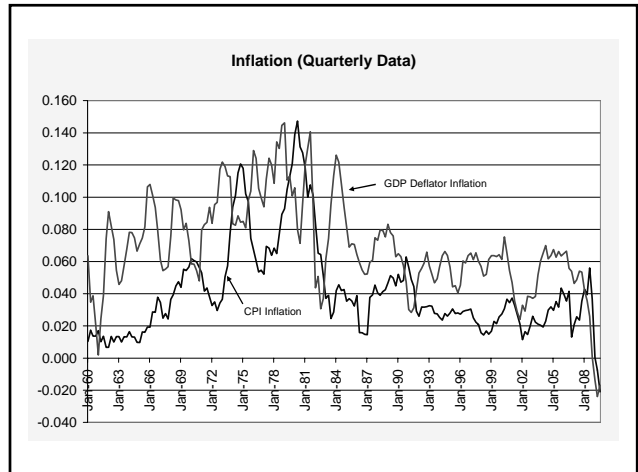
In words, the inflation rate is the percentage change in prices over a one year since CPI is a monthly index.

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Zero in on
the most recent part
of the period.
What themes do you see?

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Back to Babe and Barry.
Use Your Clickers
To Answer the Following
Graded Question.

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If Babe Ruth earned \$80,000 in 1930 and Barry Bonds earned \$15.5 million in 2007 and if the CPI in 1930 was 16.8 and the CPI in 2007 was 208.3, then...

- A. Babe Ruth had a higher standard of living than Barry Bonds.
- B. Barry Bonds had a higher standard of living than Babe Ruth.
- C. Babe Ruth experienced more inflation than Barry Bonds.
- D. Barry Bonds experienced more inflation than Babe Ruth.

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Who Lived Larger... Babe or Barry?

Player	Year	Earnings	CPI	Earnings in 2007 Dollars
Babe	1930	\$80,000.	16.8	\$991,905.
Barry	2007	\$15,533,970.	208.3	\$15,533,970.

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Preparing for Thanksgiving Table Talk

At each family gathering, your grandfather is fond of pointing out that when he was a boy a loaf of bread only cost \$0.10.

He decries the fact that the price of bread today is \$2.50 and concludes that somehow "times are bad."

Now that you are used to thinking like an economist, how do you respond?

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Use Your Clickers to Answer
The Following
Non-Graded Question.

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Which of the following correctly explains to your grandfather why his conclusion about the quality of life is wrong?

- A. The higher price of bread today is due to the higher quality of bread today.
- B. Today, the US consumes a larger fraction of GDP than it did when grandfather was a boy.
- C. Inflation makes it impossible to compare today's bread price with the price 50 years ago.
- D. Today, the ratio of the price of bread to the hourly wage is smaller than it was 50 years ago.

Why is Inflation Costly?

Inflation obscures the information transmitted by prices and reduces the efficiency of the market system.

Inflation creates an incentive for agents to use less cash and bear more "shoe leather" costs.

Inflation causes changes in real tax burdens when tax rates are not indexed.

Inflation makes it difficult to make accurate long run plans.

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Why is Inflation Costly?

Fischer, Sahay, and Vegh examined 133 market economies for the years 1960-96.

They found 45 episodes of high inflation (100% per year or more) in 25 countries.

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Fischer *et al*/ Found that in High Inflation Countries...

Real GDP per person fell by an average of 1.6% per year.

Real consumption per person fell by an average of 1.3% per year.

Real investment per person fell by an average of 3.3%

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Why is Inflation Costly?

If inflation comes as a surprise, then it...

Benefits employers at the expense of workers

Benefits debtors at the expense of creditors

The largest debtor in the U.S. is the U. S. government.

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Review Midterm Examination

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Midterm Two

Statistics		Grade Thresholds				
Mean	SD	A-	B-	C	D	F
22.9		27	22	18	16	<16
23	3.9	20%	46%	25%	7%	3%

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What Have We Learned?

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The General Level of Prices and Inflation

Currently, inflation appears to be a remote concern for the US economy.

Economists measure the general level of prices as a weighted average of prices with different weights for the GDP deflator and the CPI.

Inflation is growth in the general level of prices.

Inflation is costly primarily because it makes it hard for people to plan their future.

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