

122: Inflation

inflation rate - % increase in the level of prices over a certain period of time

consumer price index (CPI) - stat that measures the level of prices; inflation rate is calculated from changes in this

Calculation Methods

- 1) US government surveys people to find out what products they buy on a regular basis
- 2) gov. creates a "market basket" of about 400 products to represent what a typical household purchases
- 3) the "market basket" is weighted according to how much people spend on these products

Example

- each product is NOT .25% of the market basket
- gasoline makes up 5%

4) each month, gov. workers research the prices of all the products in the market basket and compare them to 1982-1984... those prices were set at 100 base level

5) the inflation rate is then calculated from changes in the CPI

Example of CPI

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>
Milk	2.50	2.40	2.60
Bread	1.00	1.35	1.53
O.J.	<u>2.00</u>	<u>2.30</u>	<u>2.20</u>
Market Basket	<u>5.50</u>	<u>6.05</u>	<u>6.33</u>
CPI _{Base Year 1}	<u>100</u>	<u>110</u>	<u>115</u>

Base Year
= Year 1

Step 1: Calculate CPI for each year:

$$\text{CPI} = \frac{\text{Price of Market Basket}}{\text{Price of Market Basket in Base Year}} \times 100$$

$$\text{CPI}_{\text{Year 2}} = \frac{6.05}{5.50} \times 100$$

$$1.1 \times 100$$

110

$$\text{CPI}_{\text{Year 3}} = \frac{6.33}{5.50} \times 100$$

$$1.15 \times 100$$

115

Price levels are 110 and 115 percent what they were in base year! even though you don't label it as a % ... also note they didn't grow by that % ... it's not a rate of a change

Step 2: Calculate the inflation rate for each year

$$\text{inflation rate} = \frac{\Delta \text{CPI}}{\text{Original CPI}} \times 100$$

$$\text{inflation rate}_{\text{Year 2}} = \frac{110 - 100}{100} \times 100$$

$$\frac{10}{100} \times 100$$

$$.10 \times 100$$

10%

→ CPI grew by this during Year 2 compared to Year 1

$$\text{inflation rate}_{\text{Year 3}} = \frac{115 - 110}{110} \times 100$$

$$\frac{5}{110} \times 100$$

$$.045 \times 100$$

4.5%

→ CPI grew by this during Year 3 compared to Year 2