Two Inflation Measurements

CONSUMER PRICE INDEX

1. Choose a base year and compute the index

$$CPI = \frac{\text{Price of basket of goods or services in Year 1}}{\text{base year}} \times 100$$

2. Choose a comparison year and compute index

$$CPI = \frac{\text{Price of basket of goods or services in Year 2}}{\text{base year}} \times 100$$

3. Compute the inflation rate

$$Inflation = \frac{\text{CPI in year 2} - \text{CPI in year 1}}{\text{CPI in year 1}} \times 100$$

GDP DEFLATOR

1. Choose a base year and compute deflator

$$\text{GDP deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

For Year 1 (Base Year) Nominal and Real GDP are the same.   Deflator $= 100$

2. Choose a comparison year and compute deflator

$$\text{GDP deflator} = \frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$$

For Year 2 Nominal GDP is calculated using current year pricing, and Real GDP is calculated using base year pricing.

3. Compute the inflation rate

$$\text{inflation rate} = \frac{Deflator_2 - Deflator_1}{Deflator_1} \times 100\%$$