

Syllabus ref: 2.3 HL Syllabus Item 97 Calculation of Inflation

What is inflation and how to calculate it using the simple price index and the composite price index + some problems with measurement?

HL 3

1. Construct a weighted price index, using a set of data provided
2. Calculate the inflation rate from a set of data source: syllabus 97

Price Level: how is inflation measured?

- ⊙ CPI / RPI
- ⊙ Simple vs composite price index (weighted index)
- ⊙ To express any number as an index or a % of the base year do the following:
 - 1) $\frac{\text{new price}}{\text{base price}} \times 100$
 - 2) $\frac{\text{base price}}{\text{new price}} \times 100$

Problems measuring inflation:

1. basket measures 'average household'
2. 'errors' in data collection e.g. use of samples (cannot measure all products on the market)
3. 'quality' changes may not be taken into account
4. 'volatility' in some sectors eg oil – prices change twice daily + spikes
5. cpi is one view of inflation but there are other indices e.g. ppi see Blink pp 213-214

What is inflation?

Inflation is a consistent rise in the average price level (basket in Germany = 700 goods and services) and the increases in prices are sustained over time. It measures average changes in price level:

Visit www.destatis.de to learn about how the Bundesamp for Statistics

Table 1: Simple price index for 4 goods for country names HY BRASIL

	wheat	honey	mead	sun oil	Simple
1968	50	20	40	10	100
1969	54	16	40	5	84.5
1970	56	19	40	5	89.25
1971	62	21	50	5	101
1972	64	22	50	5	103.25

Table 2: Composite price index for 4 goods for country names HY BRASIL

	wheat	honey	mead	sun oil
1968	100	50	50	50
1969	109	40	50	25
1970	112	47.5	50	25
1971	124	52.5	62.5	25
1972	128	55	62.5	25

How to calculate a simple price index?

1. choose a base period
2. find the price of each good and make a simple price index for each good
3. Income is spent equally on each of the 4 goods

Steps to make a composite price index:

1. follow steps 1+2 for a simple price index
2. discover the fraction of income spent on each good: see Key opposite
3. multiply each simple index by the relevant fraction and add the result to form the composite index

Key:

Fractions for HY BRASIL:
Wheat 25%, honey 20%, mead 50% and Sun tan oil 5%