AQA Economics AS-level

Macroeconomics

Topic 1: Measurement of Macroeconomic Performance

1.3 Uses of index numbers

Notes

How index numbers are calculated and interpreted:

Index numbers are used to make comparisons between years, and to measure the magnitude of change over time. A **base year** is used and is then compared to other years. For example, if the year 2015 is the base year, the value given to it is 100. If inflation has risen by 5% between 2015 and 2018, the index number for 2018 will be 105.

How index numbers measure changes in the price level and changes in other economic variables:

In the calculation of CPI, different items in the basket of goods have difference weights. Food will have a much larger weighting than clothing, since consumers spend more of their income on food. The index number measures the change in price over time.

The calculation used is:

(Pn/P0) x 100

Where P0 is the price level in the base year and Pn is the price in the year being compared.

Weights are assigned using the following method:

$$\frac{\sum\left(\left(\frac{Pn}{P0} \text{ X } 100\right) \text{ x } P0\,Q0\right)}{\sum P0\,Q0}$$

Where Q0 is the quantity of the unit being compared and P0 is the original price of the unit. The total amount spent in the base year is P0 x Q0.

The amount spent on each unit in a later year is $\frac{Pn}{P0}$ X 100