

AQA Economics A-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 different 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:

$$(P_n/P_0) \times 100$$

Where P_0 is the price level in the base year and P_n is the price in the year being compared.

Weights are assigned using the following method:

$$\frac{\sum \left(\left(\frac{P_n}{P_0} \times 100 \right) \times P_0 Q_0 \right)}{\sum P_0 Q_0}$$

Where Q_0 is the quantity of the unit being compared and P_0 is the original price of the unit. The total amount spent in the base year is $P_0 \times Q_0$.

The amount spent on each unit in a later year is $\frac{P_n}{P_0} \times 100$