Measurement of Inflation

Definition of Inflation

Inflation refers to the continual increase in prices. The *value* or *purchasing power* of money refers to the amount of goods or services one pound can buy. Inflation means the value of money is falling because prices keep rising.

Calculating the Retail Price Index

The *retail price index* (RPI) is a monthly survey carried out by the government which measures price changes. The following procedure is used:

- A *basket of goods* and services consumed by the average family is listed. For example, food, clothing and transport are included in the basket.
- The price of items in the basket in the *base* (first) year is noted.
- Each item in the basket is given a number value (*weighted*) to reflect its importance to the average family. For example, food has a higher weighting than transport.
- The price of goods in the basket is recorded every month compared with base year as a percentage (*price relative*) using the equation:

  Price relative = Current price/Base price x 100

- The price relative of each item is then multiplied by its weighting.
- The new RPI is found using the equation:

  RPI = Total weightings x Price relative/Total weightings

  The value of the RPI in the base year is always 100. After twelve months the price of good items in the basket may have risen by 25 per cent and that of housing by 20 per cent while the cost of transport is unchanged. Table 16.1 shows how the RPI for year two might then be calculated.

  The RPI = Total weightings x Price relative/Total weightings = 12 100/100 = 121

Table 16.1 Calculation of the retail price index

Basket	*Weighting*	*Price relative*	*Weightings x price relative*
Food	60	125	7500
Housing	30	120	3600
Transport	10	100	1000
Total	100		12100

The *rate of inflation* is the percentage change in the RPI over the last twelve months and is calculated using the equation:

Rate of inflation = (Current RPI - Last RPI)/Last RPI x 100

At the beginning of year two the rate of inflation is:

(121 - 100)/100 x 100 = 21 per cent

See the economics section of Biz/ed for a worksheet on calculating and interpreting index numbers.

Problems in Using the Retail Price Index

- Which items should be included in or excluded from the basket of goods?
- Different families have different tastes hence different weightings. How is an average family found?
- Not all regions in the country experience identical price changes.
- For a while new products (eg mobile phones) may not be included in the index.

Effects of Inflation

Advantages of Inflation

Not everyone suffers from inflation. Some parts of society actually benefit:

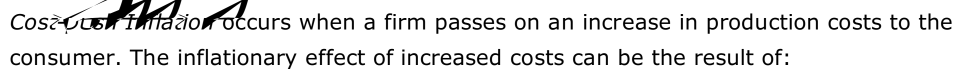
- The government finds that people earn more and so pay more income tax.
- Firms are able to increase prices and profits before they pay out higher wages.
- Debtors (borrowers) gain because they have use of money now, when its purchasing power is greater.

Disadvantages of Inflation

- People on fixed incomes are unable to buy so many goods.
- Creditors (savers) lose because the loan will have reduced purchasing power when it is repaid.
- UK goods may become more expensive than foreign-made products so the balance of payments suffers.
- Industrial disputes may occur if workers are unable to secure wage increases to restore their standard of living.

Causes of Inflation

Cost-push Inflation



Cost-push inflation occurs when a firm passes on an increase in production costs to the consumer. The inflationary effect of increased costs can be the result of:

- Increased wages, leading to

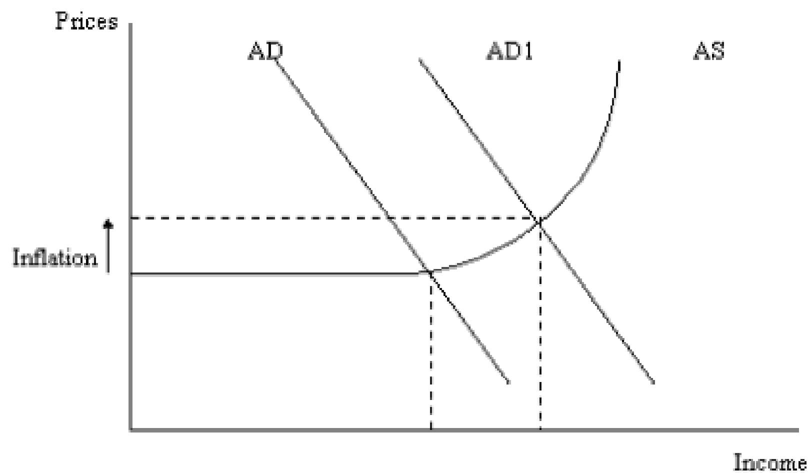
1. a *wage-price spiral*, which occurs when price increases spark off a series of wage demands which lead to further price increases and so on;
2. a *wage-wage spiral*, which occurs when one group of workers receive a wage increase which sparks off a series of wage demands from other workers.

- Increased import prices which can be the result of:
  1. a rise in world prices for imported raw materials;
  2. a depreciation of sterling
- Increased indirect taxation

Demand-pull Inflation

Demand-pull inflation occurs when there is 'too much money chasing too few goods' because the demand for current output exceeds supply.

The figure below shows increased demand and increased prices as consumers compete to buy up goods still available.



A major source of inflationary pressure is the government which can print money to buy goods. The *monetarist* view of inflation can be stated in the equation:

MV = PT

where M = the money supply,

V = the number of times each pound changes hands (the *velocity of circulation*),

P - the average price of goods, and

T = the number of goods bought (*transactions*).

Monetarists believe that the values of V and T are fixed so that any increase in M, the money supply, must raise P, the level of prices, ie be inflationary.

Remedies of Inflation

Cost-push Remedies

- Introduce a prices and incomes policy to free price and wage increases.
- Encourage an appreciation of sterling.
- Reduce indirect taxation.

Demand-pull Remedies

- Reduce government spending.
- Increase income tax to reduce consumer spending.
- Reduce peoples's ability to borrow money by increasing interest rates and tightening credit regulations.
- Control the supply of money.