

Chapter 3

Causes of inflation

NCEA Level 2 Economics material covered in this chapter helps students meet the requirements for Achievement Standard 90794 (Economics 2.1) 'Describe inflation and its causes and effects using economic models', through providing an understanding of:

- the use of the quantity theory of money to illustrate the relationship between the money supply and the rate of inflation
- the use of the basic AS/AD model to illustrate cost-push and demand-pull inflation (an understanding of the shapes of the curves is not required).

The quantity theory of money

Inflation occurs when the purchasing power of money is eroded. More money is needed to purchase the same number of goods and services.

A group of economists known as *the monetarists* use a simple theory of money to explain the relationship between the **money supply** and the price level. The following equation is sometimes called 'Fisher's Equation', after the economist who first published it.

$$M \times V = P \times Q$$

M = the volume of money in the economy

V = the velocity of circulation – how many times notes and coins will change hands in the economy or how fast people can make the money go around

P = the general level of prices in the economy, ie inflation

Q = the number of transactions, the number of times money is used to buy goods and services, ie GDP

Fisher also noted that **Q** (representing GDP) was constant, and that **V** (the velocity of circulation) was constant. If this was true, then any increase in the money supply would lead directly to an increase in the price level (eg, if the amount of money in the economy was doubled, then it would result in the price level also doubling).

If an increase in money leads to increased prices – then the money supply must be controlled.

Activity 3A: The simple quantity theory of money

1. Why do households need more money in times of inflation?
2. In Fisher's Equation $MV = PQ$, what do each of the letters M, V, P and Q represent?
3. Using Fisher's Equation, what is the effect on the price level of doubling the amount of money in the economy?

Causes of inflation

Causes can be categorised as **demand-pull inflation**, where the demand for goods and services outstrips the ability of the economy to make them, or **cost-push inflation**, where the costs of inputs drives prices higher as producers try to recoup their increased costs.

Demand-pull causes

- **A budget deficit.** If a government runs a budget deficit, it must borrow the money it needs to pay for the extra spending that it is not financing through taxation. If it borrows internally (ie from New Zealanders), there will be no appreciable change in either aggregate demand or aggregate supply, but if it borrows overseas this may provide an injection to the circular flow, which increases inflation. Aggregate demand will rise.
- **Approaching economic capacity.** As the economy approaches full employment, there can be labour and capital shortages. Labour shortages can be resolved by 'headhunting' from other organisations with offers of better working conditions and increased wages. The resulting vacancy is then filled by attracting labour from another organisation by the same method, as there is no pool of unemployed to call on. There is a shortage of labour, because not everyone can do all jobs.

Example A

If 300 jobs are advertised in Saturday's paper, and there are 350 unemployed, it does not mean by Monday there will be only 50 unemployed – many of those unemployed will not have the skills required to get those jobs advertised.

Producers of capital goods may not be able to cope with demand and find they can increase prices, especially for buyers demanding quick delivery.

- **Inflationary expectations.** People will act on 'what they believe will happen in the future'. If people believe prices will rise in the future, they will buy now, even if it means buying on credit, since they expect the interest rate to be offset by inflation. Because of such action, Aggregate Demand rises, and so does the general level of prices. Expectations tend to become self-fulfilling prophecies.

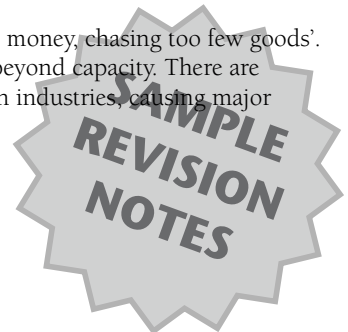
Cost-push causes

- **An increase in factor costs.** If wages or some other significant factor income rises, this can cause the Aggregate Supply Curve to move upwards and inwards.
- **Overseas prices.** This is also called 'imported inflation'. If there is a significant increase in import prices, this can either raise Aggregate Demand or Aggregate Supply or both, also contributing to demand-pull inflation on occasions.

Demand-pull inflation

The classic description of this type of inflation is 'too much money, chasing too few goods'. Typically, it occurs when the economy is trying to operate beyond capacity. There are shortages of labour and materials, and 'bottlenecks' occur in industries, causing major delays.

Demand keeps increasing – see Figures 3.1 and 3.2.



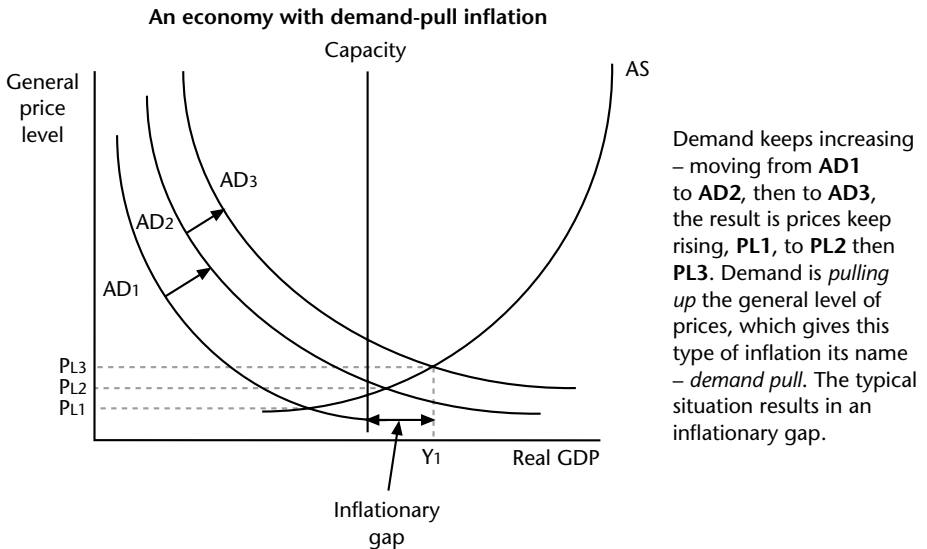


Fig. 3.1: An economy with demand-pull inflation.

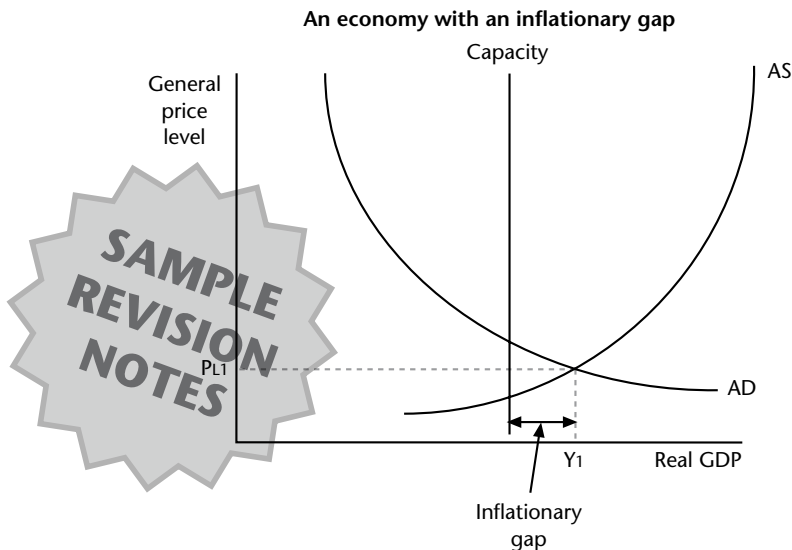


Fig. 3.2: An economy with an inflationary gap.

Once an inflationary gap occurs, the actual level of GDP, which cannot go past economic capacity (ie an economy cannot operate beyond its PPF), cannot reach equilibrium, **Y1**. Something has to happen to either **AD** or **AS** before these inflationary pressures will go away.

Activity 3B: Causes of demand inflation

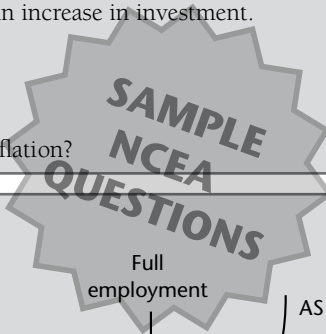
1. Complete the following:

$$AD = \dots\dots\dots + I + \dots\dots\dots + X - \dots\dots\dots$$

2. Explain the effect on inflation of each of the following:

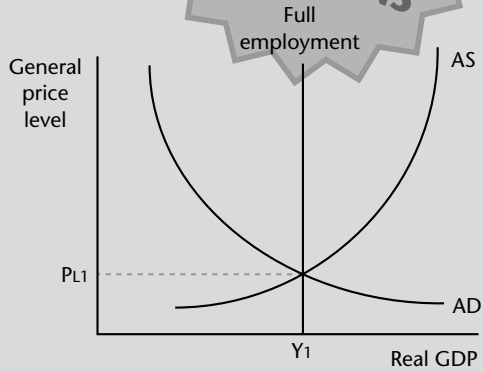
- a. Government increases expenditure without increasing taxation.
- b. A period of stable prices is forecast, and there is an increase in investment.
- c. The cost of consumer credit rises.
- d. There is a boom in export prices.
- e. Export prices rise, but import prices rise more.

3. Why is demand inflation often called demand-pull inflation?



Activity 3C: The problems of demand inflation

The diagram illustrates an economy with no inflationary gap and full employment. There has recently been a change in government, and the economy is now waiting to see if the new government will deliver on its election promises.



1. Assess the effects on the economy in terms of inflation, national income and employment, of each of the following:
 - a. A 10% increase in welfare benefits.
 - b. An adjustment of the exchange rate to benefit exporters.
 - c. Subsidies to importers to allow them to offer cheaper imported goods to consumers.
 - d. A government-owned bank which will offer much lower interest rates to businesses who undertake to replace their old capital goods with domestically produced alternatives.
 - e. In addition to all the above promises in (a)–(d), the new government also promises zero inflation to assist long-term economic planning.
2. Why might the government have difficulty implementing all of its promises?

Chapter 3: Causes of inflation

Activity 3A: The simple quantity theory of money (p. 29)

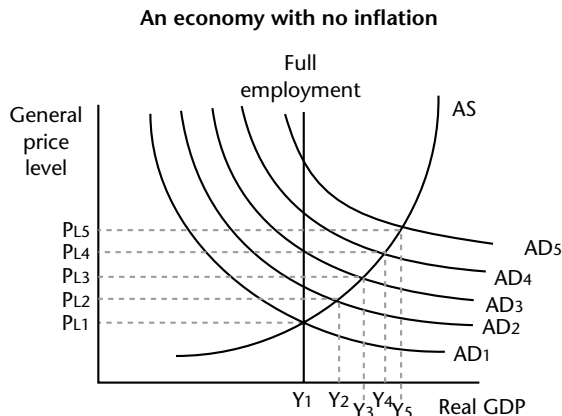
- If prices have risen, households need more money to pay for the price rises. (A)
- M = The money supply; V = The velocity of circulation of money; P = The price level; Q = Real GDP, the number of goods and services made in the economy. (A)
- The price level will double. (A)

Activity 3B: Causes of demand inflation (p. 32)

- $AD = C + I + G + (X - M)$ (A)
- Increased inflation (G rises without a corresponding fall in C).
 - Inflation might rise as I is increased, but if it comes from increased savings and C falls, there will be no impact on inflation.
 - Inflation will fall. (Buying goods on credit is now more expensive.)
 - Inflation will rise. (X has been increased.)
 - Inflation will fall. (M is greater than X .) (A – four of a–e correct needed)
- If any component of Aggregate Demand, except imports, rises, AD will rise, and this will pull the general price level up. (A)

Activity 3C: The problems of demand inflation (p. 32)

- The effects required to be shown are indicated on the diagram below.



The results of each move for a–d are given – refer to the diagram.

- AD_2 , PL_2 , Y_2 . (A)
 - AD_3 , PL_3 , Y_3 . (A) c. AD_4 , PL_4 , Y_4 . (A) d. AD_5 , PL_5 , Y_5 . (A)
 - The only way the government can maintain this promise is to move the Full Employment line (the Production Possibility Frontier) and to move AS to the right so it intersects with AD_5 at price level PL_1 . This is a big ask! (M)
- Promises a to d in Question 1 will all increase AD , which will lead to demand pull inflation. It could do this, but it could not simultaneously achieve zero inflation. It can deliver zero inflation, or the changes, but not both. (M)