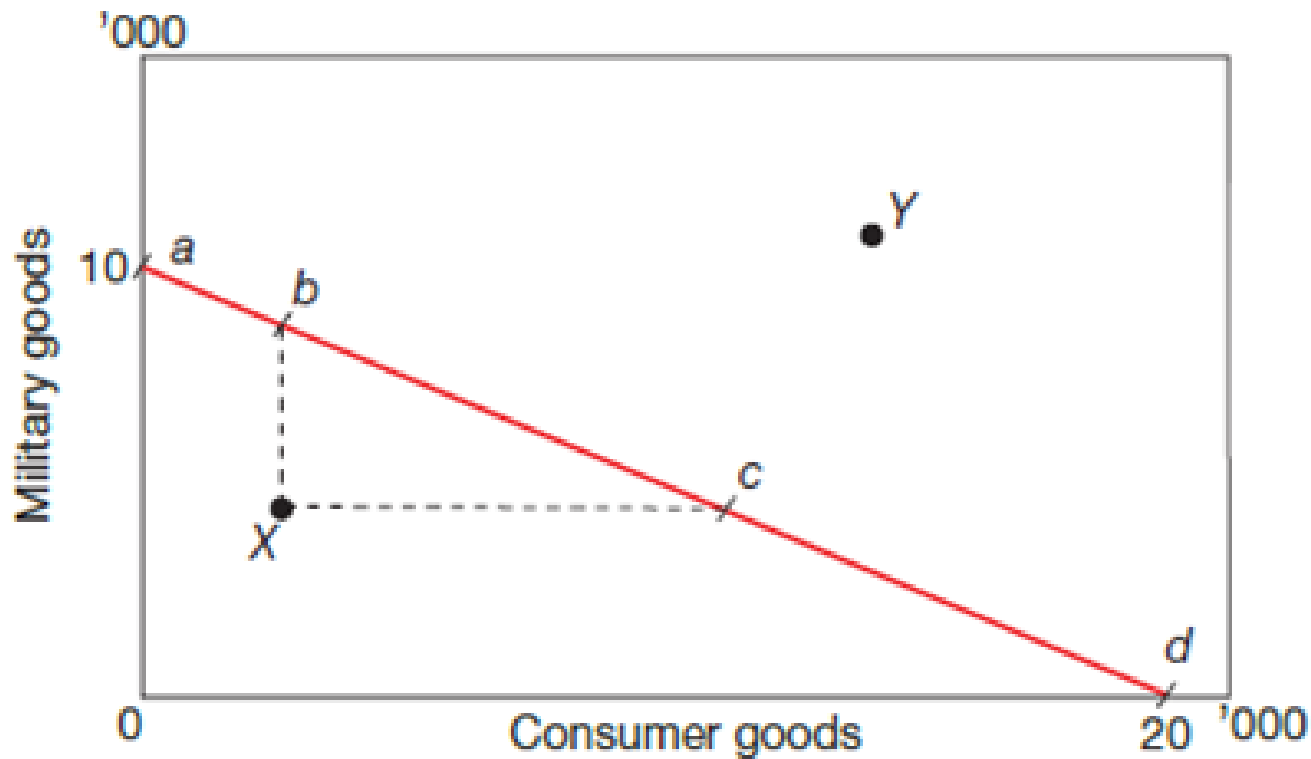


Production Possibility Curves

- ★ How many goods and services an economy is capable of producing is determined by the quantity and quality of resources available to it, together with the state of technical knowledge. These factors determine an economy's so-called production possibilities.

Military goods	Consumer goods
10,000	0
8,000	4,000
6,000	8,000
4,000	12,000
2,000	16,000
0	20,000



- At point A, only military goods are produced
- At point D, only consumer goods are produced
- Between these two extremes lie all the other possibilities
- It can also be used to show what the economy is not able to achieve

★ Sometimes the curve is called a 'production frontier' because it draws the boundary between what can and cannot be achieved.

- ★ An alternative name for the production possibility curve is the '**product transformation curve**'.

We should also note that for this to happen we need to switch our resources from one use to another. Resources have to be switched from producing military goods to producing consumer goods and vice versa. This is known as the **reallocation of resources** and in the real world, as we decide to change the composition of our output, we need to consider the costs of reallocating resources between uses. The extent to which resources can be reallocated from one line of production to another is known as **factor mobility** and, if we want resources to be swiftly allocated to the new use, we have to ensure that factors are as mobile as possible.

A production possibility curve with increasing opportunity costs

Agricultural products	Manufactured products
700	0
660	100
600	200
500	300
300	400
0	500

Table 1.3 Production possibility schedule 2

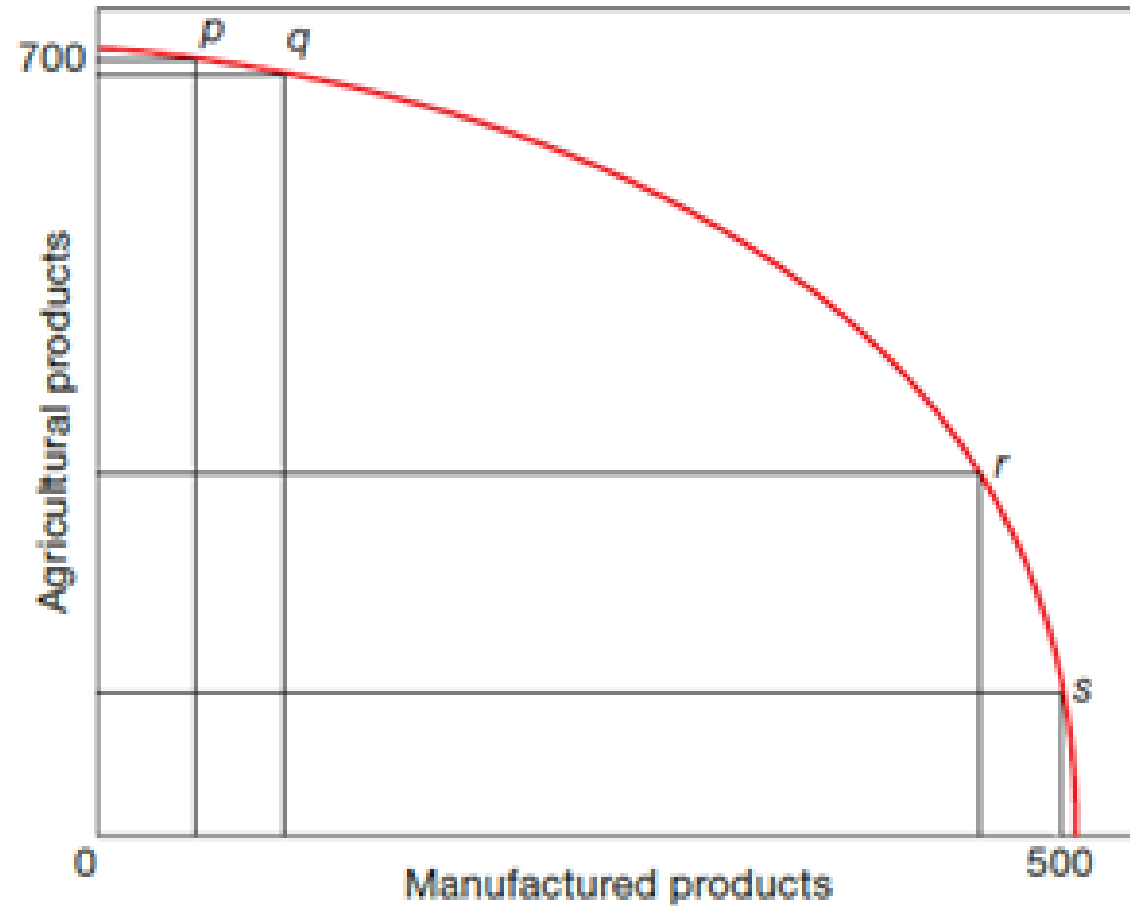


Figure 1.7 A production possibility curve with increasing opportunity costs

Assume that initially the economy is producing at point p with 660 agricultural products and 100 manufactured products (see Figure 1.7). Then assume that it is decided to move to point q to gain an extra 100 units of manufactured products. Clearly, resources need to be reallocated from agricultural use to manufacturing. At first the least fertile land will be reallocated and only 60 units of agricultural produce will be sacrificed. This means that each extra manufactured good has cost 0.6 of an agricultural good. Now compare this with a movement from r to s: to gain an extra 100 manufactured goods we have to sacrifice 200 agricultural goods. This means that one extra manufactured good has cost two agricultural goods. The opportunity cost has increased as we have reallocated our resources. This is because at this stage we are switching the more fertile land into manufactured good production so that agricultural output is going to be affected to a much greater extent.

A further case is where opportunity cost is constant. The production possibility curve in this case is a straight line

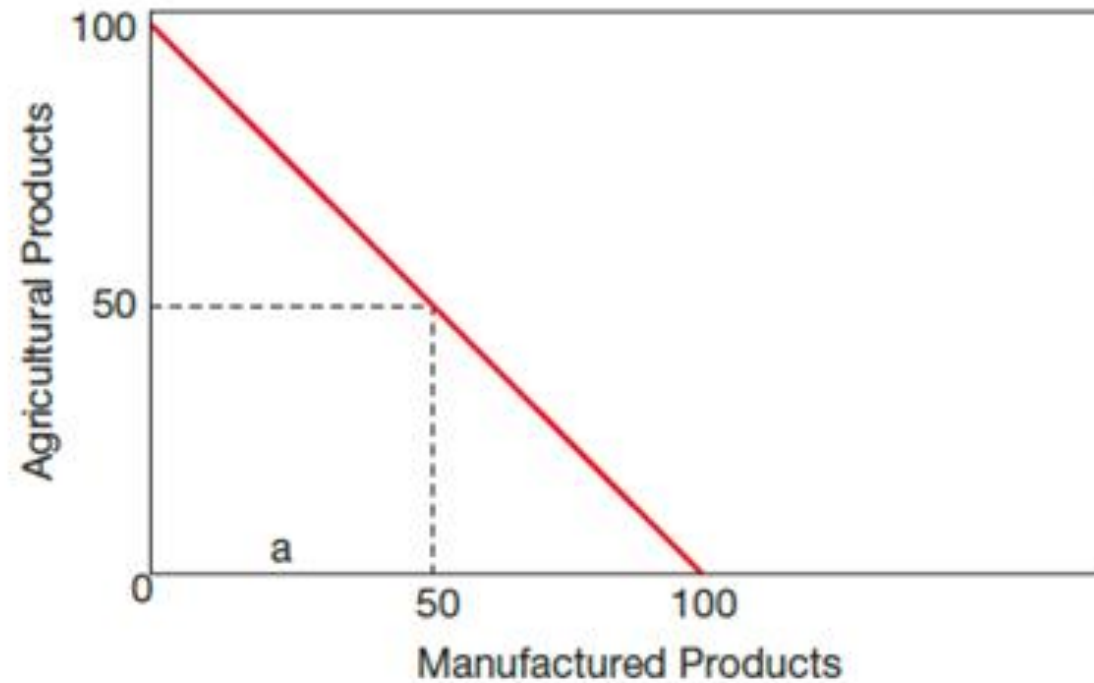


Figure 1.8 A production possibility curve with constant opportunity costs

Shifts in production possibility curves

A production possibility curve is drawn on the assumption that the quantity and quality of resources and the state of technology are fixed. Such changes will shift the production possibility curve to a new position. Figure 1.9 shows the outcomes of changes in the quantity and quality of resources and changes in technology.

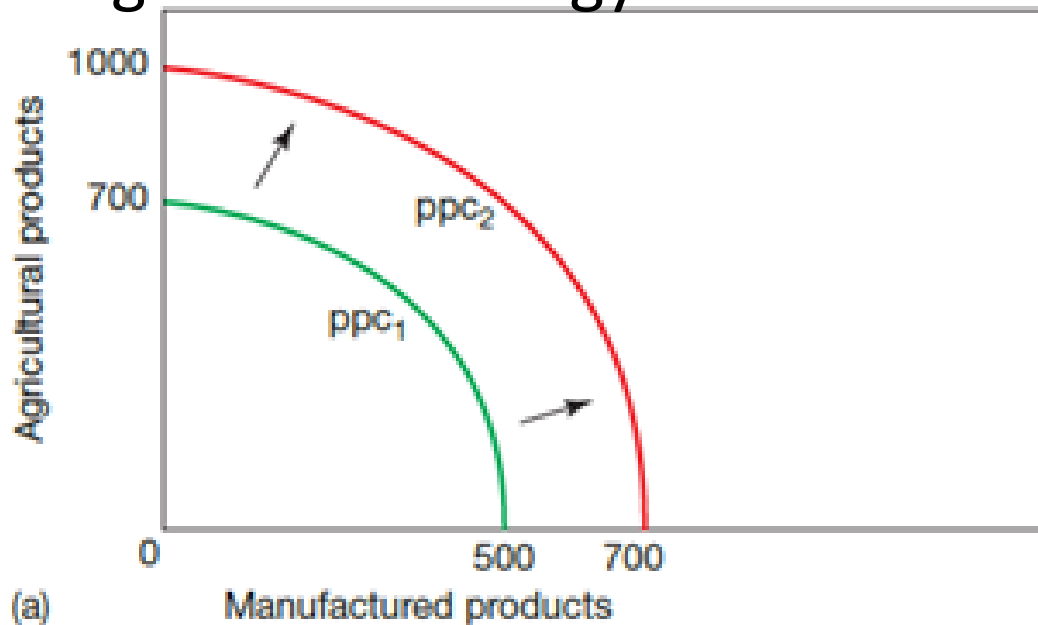
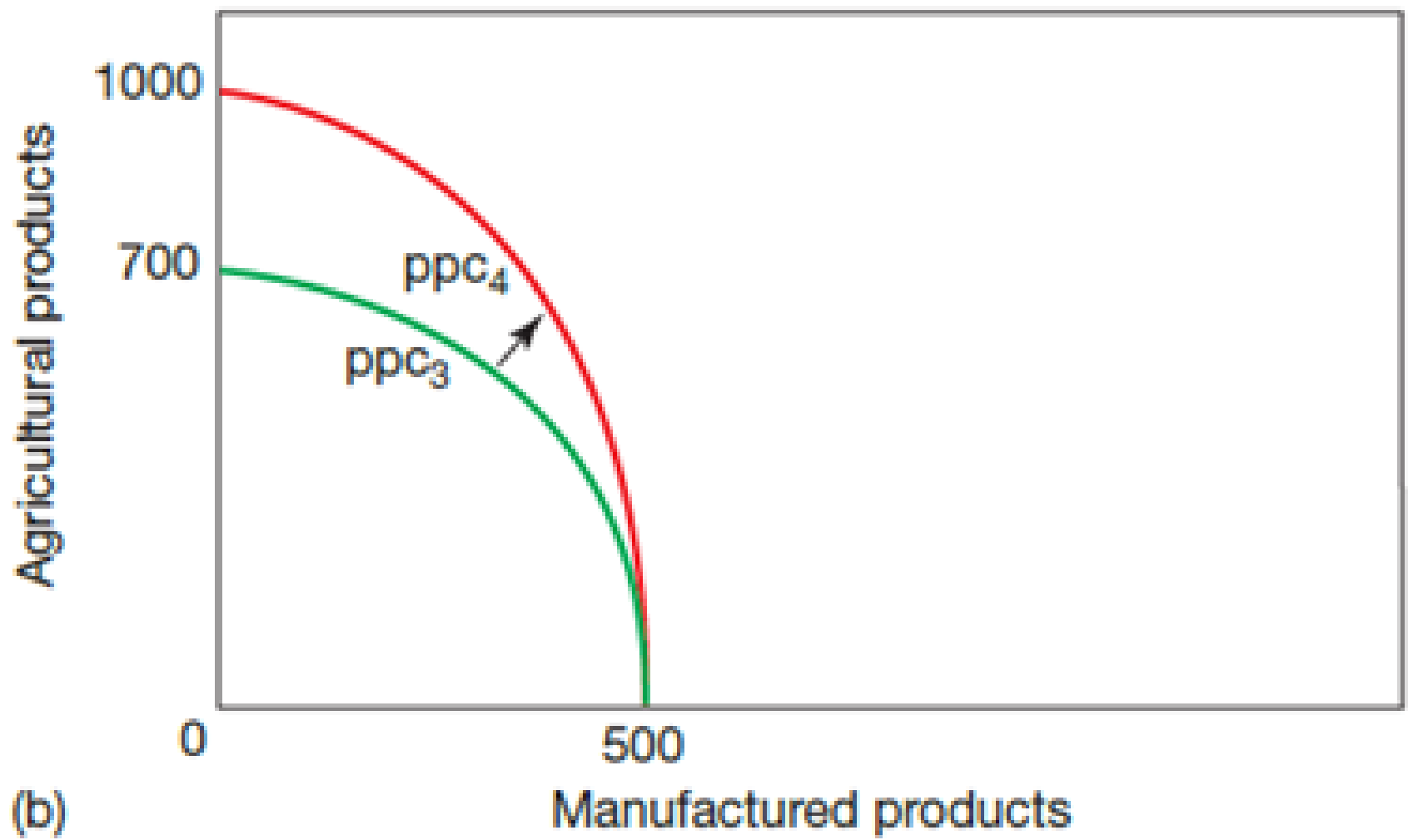


Figure 1.9a shows a situation in which the production possibilities available to an economy have expanded. This is known as economic growth.

Figure 1.9 Shifts in production possibility curves



(b)

Current consumption or future economic growth?

As stated previously, the production possibilities open to an economy are determined by the quantity and quality of resources available. In the process of production, resources are used up and they need to be replaced if production possibilities are to be maintained. The terms **capital consumption** or depreciation describe the using up of capital goods during the process of production. Some resources need to be devoted to the production of capital goods if production possibilities are to be maintained. The creation of capital goods in the process of production is known as **investment**.

Production possibility curve: a simple representation of the maximum level of output that an economy can achieve when using its existing resources in full.

Reallocation of resources: where resources are deliberately moved from one product to another.

Factor mobility: the ease by which factors of production can be moved around.

Economic growth: represented by a shift outwards of the production possibility curve.