Beckfoot

Subject: Economics	Topic: Productive efficiency	Year Group: 12

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What is productivity?

Productivity measures the efficiency with which inputs are converted into outputs.

Labour productivity for example measures the output per worker per hour (or per day, per month, etc)

Capital productivity would measure the output per machine per period of time

How is productivity calculated?

Productivity = total output / total input

Let's say your company generated £80,000 worth of goods or services (output) utilizing 1,500 labour hours (input). To calculate your company's labour productivity, you would divide 80,000 by 1,500, which equals 53.

What is capacity utilisation?

Capacity utilisation is a measure of the extent to which the productive capacity of a business is being used.

Capacity utilisation can be calculated by : Actual output / maximum output x 100

Why is productivity important?

Lower unit costs: These cost savings might be passed onto consumers in lower prices, encouraging higher demand, more output and an increase in employment.

Improved competitiveness and trade performance: Productivity growth and lower unit costs are key determinants of the competitiveness of firms in global markets.

Higher profits: Efficiency gains are a source of larger profits for companies which might be re-invested to support the long term growth of the business.

Higher wages: Businesses can afford higher wages when their workers are more efficient.

Economic growth: If an economy can raise the rate of growth of productivity then the trend growth of national output can pick up.

Productivity improvements mean that labour can be released from one industry and be made available for another – for example, rising efficiency in farming will increase production yields and provide more food either to export or to supply a growing urban population.

If the size of the economy is bigger, higher wages will boost consumption, generate more tax revenue to pay for public goods and perhaps give freedom for tax cuts on people and businesses.

Ways to increase capacity utilisation

Increase workforce hours – Staff could be encourage to work overtime or temporary staff could be employed thus increasing the businesses current output.

Outsource some of production – by outsourcing some of the production process it allows the business to increase its current output.

Reduce machine maintenance – This will reduce the time at which machines are not producing goods. Therefore, although it may be unsustainable, in the short run output will increase.

Consequences of working at full capacity	
1	Production is rushed
2	Less time for quality control
3	Added workloads & stress
4	De-motivating if sustained for too long
5	Less able to meet sudden or unexpected increases in demand
6	Production equipment may require repair

Consequences of working under capacity	
1	Inefficiency – By not producing at maximum capacity it may mean that the business is unable to full exploit economies of scale. As a result of this, the business is likely to experience an increase in their average costs.
2	Flexibility – By not producing at full capacity it allows the business some slack. This means that if new or unexpected orders were to be demanded the business would be able to increase their current output and match the increase in demand.
3	Loss of market share – If the business is operating at less than full capacity then it is likely to result in a reduction in the sales of the business. As a result of this, their percentage market share is likely to decrease.

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Ways of improving capacity utilisation:

Competitors exiting the market – This is likely to result in an increase in demand for the current business's goods/ services. This is because customers of competitors that have exited the market will switch over to businesses that are still in the market. This will allow the business to increase its current output in order to match the increase in demand. As a result of this it is likely to improve their percentage of capacity utilisation,

Balancing seasonal demand – Businesses could balance their seasonal demand by reducing their inputs e.g. staff in periods of low demand then increasing them again when demand increases. This will cause potential output to fall as current output does (low demand) and potential output to increase as current output does (high demand). This will allow the business to work at a higher percentage of capacity utilisation throughout the year.

Improved marketing – By increasing marketing when in periods of low demand, it is likely to result in an increase in demand. This will help to increase current output thus increasing the percentage of capacity that is being utilised.

Lean production strategies

1	**Quality control** refers to the traditional method of checking that products are of a good enough standard. Inspection of products takes place during and at the end of the operations process.
2	**Quality assurance** (QA) implies a commitment to collaboration between the people responsible for design, production and marketing. They will work together towards increased quality and reliability. Everyone in the business has to become more aware of the need for quality.
3	**Total Quality Management (TQM)** is a philosophy that tries to generate both an individual and a collective responsibility for quality at every level. Each department or team is seen as having responsibility for quality in both products and services.
4	**Kaizen** is a Japanese word meaning 'continuous improvement' and it emphasises getting things right first time.
6	**Just in time (JIT)** is simply an application of lean production to stock control. The JIT process focuses on frequent reordering of relatively small quantities of stock thus reducing the costs of holding stock and relies on a strong working relationship between a firm and its suppliers.

Lean production

1Lean production is about minimising waste at every stage of production or service delivery to minimise costs. Various strategies are used in lean production, most of which are now commonly used in manufacturing.

Competitive advantage from lean production

A reduction in costs, which may allow firms to spend more on product development or marketing or can allow the firm to reduce prices which, depending on PED for the product, could increase market share and sales revenue for the firm.

- Improved quality and therefore greater customer satisfaction.
- Labour becomes more involved, therefore more motivation and less staff turnover.

Impact on costs and sales revenue

Any steps a firm takes to increase productivity can serve to reduce average unit costs. This can result in higher profits which may be re-invested to further improve efficiency or in product development.

Firm may develop a growing reputation for quality and hence see an increase in sales revenue

Reduced lead times (the time delay between making a decision and implementing the decision) may make a firm more market orientated.

Labour intensive vs capital intensive

A labour-intensive business is one in which the business utilises a lot of labour in its production process

A capital-intensive business is one in which the business employs a greater proportion of capital relative to other inputs in the production process

Capacity utilisation

Capacity utilisation is a measure of the extent to which the productive capacity of a business is being used.

Capacity utilisation can be calculated by : Actual output / maximum output x 100