CAPACITY UTILISATION (4.4)

(Chapter 25 - A Level 4.4)

Capacity utilisation measures one aspect of business efficiency. It measures what percentage of a business's potential output is actually being achieved.

$$\text{Capacity Utilization Rate Formula} = \frac{\text{Actual output}}{\text{Maximum possible output}} \times 100$$

Basically, it measures if a company is achieving its full production potential. Capacity (the amount a firm can make) depends **upon the resources** - such as **buildings**, **machinery** and **labour** it has available.

> For example : Company A currently produces 10,000 pencils at a cost of $0.50 per unit. It then determines that it can produce up to 15,000 pencils without costs rising above the $0.50 per unit. So, the company is running at a capacity utilisation rate of 67% **[(10,000÷15,000) x 100]**

Full capacity is when a business is able to produce its maximum output. So when the capacity utilisation percentage is near or over 100%.

Advantages of operating at full capacity (high utilisation) :
✔ Average costs are down
✔ It's a sign of success - example, a hotel being full to the point of hanging up no vacancy signs
✔ Employees have a sense of security/pride as the business is popular/successful

Disadvantages of operating at full capacity (high utilisation) :
✖ Staff may be under a lot of pressure, this can lead to errors
✖ Not flexible enough to take in new orders - already working as much as possible
✖ Machines are so busy producing that there may not be enough time to have them be put under maintenance, which can lead to malfunctions that could have been prevented

What do you do when capacity utilisation is too high? (***capacity shortage***)
Operating above maximum capacity happens when demand exceeds your ability to supply the products. **Your costs rise and the product quality decreases.** Solutions to this are:

- **Acquire more resources** - can be expensive, takes time and what if demand falls?
- **Outsource** - hire a third party to help, is quick but the business will lose some control
- **Keep working at full capacity** - the easiest and cheapest option, but is impractical

<u>What do you do when capacity utilisation is too low?</u> ***(Excess capacity)***

Excess capacity refers to a situation where a firm is producing at a lower scale of output than it has been designed for. So, it's producing below its maximum capacity, usually due to lower demand.
As a result, **production costs tend to increase**, and more workers do not operate machines. (hence why they're often made redundant - let go through no fault of their own.)

Reasons for excess capacity could be due to **short term reasons**, like the product is seasonal and therefore only popular during certain times (ice cream during winter time) or it could be because of **long term reasons**, like an economic recession decreasing demand as people aren't spending as much.

<u>Solutions to short term excess capacity problems :</u>

If a business has spare capacity for only a short amount of time, like an ice cream company during the colder seasons, the things they can do to reduce costs are :

- **Maintain their usual high output levels, but stock the extra products -** this however can be expensive and risky if sales do not recover and the extra products aren't bought
- **Introduce flexibility** - through part-time contracts to save costs on paying salaries
- **Marketing solution**s - marketing the product in a better way may lead to the demand increasing so the output can increase as well, however this may not work and you just end up wasting more money

<u>Solutions to long term excess capacity problems :</u>

The demand change could be a result of a long term issue, such as a recession or competitors advancing their products with better technology. In this case, to save costs a business could :

- **Rationalise** - usually happens during a recession, rationalisation is the closing down of factories/offices which will make many employees redundant. This can however backfire if demand unexpectedly increases and you no longer have the labour to meet it. It will also bring about bad publicity.
- **Create new products -** not the best idea to do during a recession, but if a business finds its products falling behind competitors it can undertake research and development into creating new, better products to replace their existing ones that are no longer in demand. Expensive and time consuming, doesn't always work out.
- **Marketing solutions -** market the product to make it more appealing to help compete with competitors. Although it's still the same product that people don't want, so this could be a waste of time and resources

Outsourcing

Is the act of using another business (a 'third party') to undertake a part of the production process instead of doing it within the business using the firm's own employees.

A business may choose to outsource when it finds itself in a **capacity shortage** - when the demand for its products exceed the amount they are able to produce, as it's quicker and less expensive than changing their process of production to produce more.

It's also safer, imagine spending lots of money to add machinery, get a larger space and employ more workers just to have demand for the product fall.

Other reasons for outsourcing include :

- **Reduce the costs of operations -** i.e instead of employing expensive specialists full time a business can instead only buy in specialist services when they are needed
- **Focus on the core activities of the business -** like a small hotel focusing on how to improve customer service may outsource the accounting tasks to a 3rd party
- **Access to quality resources or services that aren't available within the business -** a small start up may lack the knowledge and the funds to employ a specialist

Advantages of outsourcing :

✔ Reduction in costs

✔ Able to focus on what business finds most important

✔ Access to skilled resources and knowledge that the business may not have within

✔ Cheaper to hire specialists when you need them to perform specific tasks rather than employ them full time where they won't always be needed

Disadvantages of outsourcing :

✖ Potential quality issues, as the firm outsourcing work may be unable to check if the work the third party business is doing is up to standards

✖ Loss of jobs within the business as workers are made redundant, this can lead to bad publicity and low worker morale for those that remain

✖ Business loses some control over production

✖ Customers may not like the change

Additional info :

> **Business process outsourcing** : a form of outsourcing that uses a third party to take on responsibility for certain business functions such as HR and finance