AS Business
Production

Adding Value

- **Definition:** Added value is found in the difference between the cost of purchasing raw materials and the price at which the finished foods are sold.

- **Formula:** Selling price – Bought-in goods and services

How might added value be increased?

- **Purchasing cheaper raw materials** – however, care must be taken that quality is not compromised when doing this. As a business grows, it may be able to take advantage of purchasing economies of scale and achieve greater added value as a result.
- **Improving the efficiency of the production process** – for example, this may be achieved by purchasing up-to-date machinery or by training the workforce.
- **Raising the price of the product** – price elasticity of demand is a key issue here. If the business raises the price of a product, the demand for which is price sensitive, it will result in a fall in overall revenue, which is clearly something it would not want to do.
- **Achieving brand status** for a product can create added value. Chanel perfume sells for a great deal more than the majority of its competitors, but the processes involved in production will be virtually identical.
- **Offering additional services** with a product can result in added value. A telephone helpline to help with technical questions, or the willingness to install new equipment and ethically dispose of old equipment are examples of this.
- **Improving customer access** or convenience is a well-proven method of adding value. Drive-through fast-food outlets and home-delivery pizza are typical examples.

Job Production

Definition: A unique product that is often made by a skilled craftsman specific to a person's requirement.

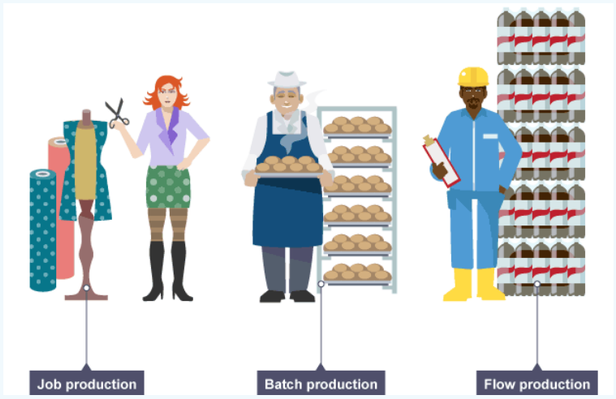
Examples: Wedding dress, tailor made suits, buildings, bridges and ships.

Advantages:

☑ **Unique** product.
☑ Likely to be of a **high quality** as it is likely to have been handmade and a lot of time and detail will have gone into making the item.
☑ Businesses can **charge higher prices** for the item due to its uniqueness.
☑ **Specialised employees** are likely to enjoy their job more as they are utilising their skills.

Disadvantages:

☒ It can be very **expensive** for the customer to purchase their specially made item.
☒ **Time-consuming** – it can take a long time to produce the item as it is being made to specific customer requirements.
☒ **Higher wage bill** – skilled employees will command higher payments for their time and expertise.
☒ Often only targeting a **smaller market**.



Batch Production

Definition: The manufacture of a limited number of identical products. Within each stage of the production process, work will be completed for the whole batch before the next stage is begun.

Examples: Clothes, paint and production of loaves of bread.

Advantages:

☑ **Reduction in unit cost** as can benefit from economies of scale.
☑ Products can be produced in very large or very small quantities depending on the level of demand.
☑ Suitable when production is divided into a number of operations.
☑ **Allows for a variation** in the product being produced, e.g. different sizes.
☑ **Quicker than job production** as it combines elements of job and mass production.
☑ **Use specialist machinery** – does not need skilled employees, which reduce the cost of production.

Disadvantages:

☒ If there is a **faulty product** in the batch, then the whole batch has to be written off.
☒ **Time lost** switching between batches, e.g. cleaning and reloaded the machines.
☒ Machinery does most of the jobs – this can lead to the **employees becoming bored and demotivated** with their jobs.
☒ **Initial cost** of the machinery.
☒ **Lost production time** lost due to breakdown of machinery.
☒ **Cross contamination** of ingredients – e.g. nut allergy "produced in a factory that uses nuts" – may lose sales.

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Flow Production

Definition: Production is organised so that different operations can be carried out one after the other, in a continuous sequence as production moves continuously from one stage of the process to the next.

Examples: Crème Eggs, golf balls and car manufacturing.

Advantages:
- ☑ **Large quantities can be produced** for simplified or standardized products.
- ☑ **Unit costs can be reduced** as a result of economies of scale.
- ☑ Use can be made of compute-controlled machinery and consistency of quality and **uniformity can be attained.**
- ☑ Production can continue virtually non-stop for long periods of time.
- ☑ **Less labour is required –** only machines supervisors are needed. Lower labour costs.
- ☑ **Faster production method** than job or batch.
- ☑ **Reduction in wage bill** – there is no need to employee specialist workers as machinery does most of the work.

Disadvantages:
- ☒ **Set up costs can be very high.** Investment must be justified by high volume of sales.
- ☒ **Products will tend to be standardised,** although modern machinery is becoming more flexible to overcome this drawback.
- ☒ **Breakdowns can be very costly** – interdependent nature of the process can mean that if one section breaks down the whole line may have to stop.
- ☒ Jobs for those working in such production environments tend to be **repetitive and boring.** Motivation issues may arise.

Which Type of Production Method?

The type of production used will depend on a number of factors:
- the product being produced
- the cost of labour
- the cost of capital
- the availability of money for investment
- technology
- the skills of labour
- the size of the market
- customer requirements.

Productivity

Definition: Productivity is a measurement of the efficiency with which a business turns production inputs into output. Both labour and capital productivity can be measured.

$$\text{Labour Productivity} = \frac{\text{Output (per period)}}{\text{No. of employees (per period)}}$$

$$\text{Capital Productivity} = \frac{\text{Output}}{\text{Capital Employed}}$$

Advantages of high productivity:
- ☑ increased economies of scale
- ☑ increased competitiveness
- ☑ spreading the fixed costs over higher output
- ☑ lower unit costs
- ☑ performance bonuses to employees – motivation.

How to Improve Productivity

- Making technological improvements - replacing labour with machinery, robots.
- Replacing labour with machinery.
- Developing a multi-skilled workforce through training – use quality circles.
- Improve the motivation of the workforce – both financial and non-financial rewards.
- Reducing absenteeism.
- Redesigning production processes – changing the layout of the factory or office.
- Job enrichment, job rotation, etc.
- Adapt management styles – appoint better management.
- Adopting a 'Kaizen' approach. TQM/lean production methods to enhance productivity.
- Employ management consultants to suggest ways of improving the running of the business.
- Delayering and empowerment.
- Benchmarking (must be develop to productivity).

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Capacity Utilisation

- The use that a business makes of its resources.
- Measured by comparing actual output with potential output at full capacity.

Calculation:

$$\frac{\text{Actual level of output}}{\text{Maximum possible output}} \times 100$$

Enghraifft:

Maximum possible output (100% capacity)	400000 units
Actual output	240000 units
Variable Costs (per unit)	£6
Fixed Costs	£360000
Selling Price (per unit)	£14

CU = current output/maximum output x 100
= 240000/400000 x 100
= 60%

Advantages of operating at full capacity:

☑ Average costs minimised – fixed cost spread – helps raise profits.
☑ Employees may feel more secure in their jobs – motivation raised.
☑ Improves company image – busy business may encourage customers to place orders.

Disadvantages of operating at full capacity:

☒ **Possible fall in quality** – strain on resources if over-worked.
☒ **Pressure on** staff – too much overtime for employees may lead to stress, tiredness – absences and accidents may result.
☒ **Machinery may be overworked and break down** if insufficient time put aside for maintenance.
☒ **Lack of flexibility** – orders may be lost if no capacity available to accommodate new customers.

Spare Capacity

To measure spare capacity, we look at output as a percentage of total capacity. If the level of spare capacity is significant (i.e. large enough to be of concern), then this underutilisation of factors of production can have major effects on businesses.

Problems of spare capacity:

☒ **Demotivation of staff.** Overtime is probably not available, bonuses will be limited and there may be a threat of redundancy.
☒ **Increased costs to the business.** Businesses may be forced to make workers redundant and redundancy payments will have to be made. Also, management time will need to be spent on reorganisation.
☒ **Reduced profits.** This will limit capital for investment and research and development, causing a reduction in long-term competitiveness.
☒ **Lack of return on investment capital.** Producer goods will continue to depreciate, even though they are not being used to full capacity. Technology will move on, putting pressure on businesses to replace fixed assets that otherwise have plenty of productive potential.

Resolving the problems of capacity underutilisation – spare capacity:

- subcontracting
- rationalisation
- increasing the use of assets.

Because of the short-term expense of solving problems of spare capacity, businesses often try to ride out this type of situation in the expectation that the market in which they operate will recover and demand will increase.

Subcontracting

Definition: Getting someone else to produce the goods for you. By using subcontractors there is a reduction in risk to the business.

Advantages:

☑ **Reduction in capital investment required.** If the business is not making the goods, it does not have to buy the machines to make the goods, lease the factory space or employ and train the workers.

Disadvantages:

☒ **Lack of control** – especially with regard to quality.
☒ If there are a **limited number of potential** subcontractors, then prices of the goods can become prohibitively high – reducing profitability.
☒ There can be **delays in delivery,** leading to customer dissatisfaction.

Rationalisation

Definition: Concentrating on core products or services and disposing of those products or services when they are not seen as profitable or necessary to the business' long-term success.

Advantages:

☑ Allows management to **concentrate and focus upon the business strengths.**

Disadvantages:

☒ **Lost customers –** risk that customers will be lost. Some customers, especially business customers, who bought into the business's whole package of products, may be less loyal when 'one-stop shopping' is not now available.
☒ Writing down **(reducing) the book value of assets.**
☒ Rationalisation also **implies redundancy costs.**