

# **Business Studies**

## **Key Terms**

### **Operations Department**

## Location Considerations: State Dis/incentives

- To encourage businesses to set up or expand - grants, subsidies, tax breaks
- To discourage firms from locating in overcrowded areas/areas of natural beauty or environmental interest - building restrictions, greenbelts, high tax rates.

## Break-even Point (Output)

(<https://www.youtube.com/watch?v=DSJZjISQrLA>)

### Break-even - formula

- Break-even output =  $\frac{\text{Fixed cost}}{\text{Contribution per unit}}$

A company manufacturing coats has annual fixed costs of £100,000. It sells 3,200 coats for £50 and the variable cost of making each coat is £20

- Contribution per unit = selling price - variable cost per unit

- Break-even output =  $\frac{\text{Fixed cost}}{(\text{Selling price} - \text{Variable cost per unit})}$

Break-even output =  $\frac{100,000}{(50-20)} = 2,500 \text{ coats}$

## Productivity

**A measure of operational efficiency . Output measured against inputs used to create it, e.g. labour.**

Labour productivity =  $\frac{\text{Output per time period}}{\text{number of employees}}$

Increasing productivity through, improved factory/office organisation, labour skills and efficient machinery, makes a business more competitive.

Inventory	<p>Materials, work in progress or completed goods held by a business which are or will be ready for sale.</p> <p>The <b>buffer inventory level</b> is inventory held to deal with unexpected changes. It gives:</p> <ul style="list-style-type: none"> <li>• consumers choice and good availability</li> <li>• keeps production supplied with resources</li> <li>• provides cover for supplier hold up.</li> </ul>	Batch production	<p>Products made in groups - A quantity (batch) of one product is made, followed by another and then another (e.g. bread).</p> <ul style="list-style-type: none"> <li>• Output higher than job production</li> <li>• some product flexibility</li> <li>• High inventories of work in progress</li> <li>• Machine reset after each product</li> <li>• If quality is poor, a whole batch must be written off.</li> </ul>
Lean production	<p>Cutting out waste and inefficiency in the production process.</p> <p>Reduces waste by cutting:</p> <ul style="list-style-type: none"> <li>• overproduction</li> <li>• waiting</li> <li>• unnecessary transport</li> <li>• excess inventories</li> <li>• defects</li> <li>• over processing</li> <li>• movement of goods</li> </ul>	Flow production	<p>Large quantities of a product are produced in a continuous process.</p> <ul style="list-style-type: none"> <li>• High output of standard product</li> <li>• Unit costs low</li> <li>• Capital intensive and specialised labour</li> <li>• Can be inflexible and risk of boredom</li> <li>• Fewer quality issues than job or batch, but when it does go wrong, it can be very expensive</li> <li>• If a machine goes wrong, all production is stopped, costing a lot in obsolescence</li> </ul>
Kaizen	Continuous improvement through the elimination of waste.	Operations management	<p>Responsible for:</p> <ul style="list-style-type: none"> <li>• Production</li> <li>• Quality</li> <li>• Purchasing inventory</li> <li>• Distributing goods</li> <li>• Stock control</li> <li>• Research and development</li> </ul>
Just-in-time	<p><b>Reducing or eliminating the need to hold inventories of materials and finished goods.</b></p> <ul style="list-style-type: none"> <li>• Zero or low inventories held</li> <li>• Suppliers arrive when needed</li> <li>• Goods made to order or sold immediately</li> <li>• Cuts costs/storage space</li> <li>• Risk if suppliers fail to deliver.</li> </ul>	Production process	<p><b>Converts inputs into outputs</b></p> <p><b>Inputs:</b> factors of production (land, labour, capital and enterprise)</p> <p><b>Outputs:</b> goods and services.</p> <p><b>Factors influencing method of production:</b></p> <ul style="list-style-type: none"> <li>• nature of product</li> <li>• size of market</li> <li>• demand for standard or unique product</li> <li>• size of the business.</li> </ul>
Job production	<p><b>A single product is made at a time.</b></p> <ul style="list-style-type: none"> <li>• One-off products and personal service</li> <li>• Flexible designs meet customer needs</li> <li>• High skilled varied work</li> <li>• Costs high and time consuming</li> </ul>	Technology in production: Impact of tech	<ul style="list-style-type: none"> <li>• Higher productivity and quality</li> <li>• New products</li> <li>• High skill level</li> <li>• Jobs lost</li> <li>• Higher training costs</li> <li>• Loss of capital</li> </ul>

Technology in production	<ul style="list-style-type: none"><li>Automation</li><li>Computer aided design - CAD</li><li>Computer aided manufacture - CAM</li><li>Computer-integrated manufacturing - CIM</li><li>Electric point of sale - EPOS</li><li>Electronic funds transfer at point of sale - EFTPOS</li></ul>	Economies of scale	<p><b>Factors that lead to a reduction in average costs as a business increases in size.</b></p> <ul style="list-style-type: none"><li>Purchasing</li><li>Marketing</li><li>Financial</li><li>Managerial</li><li>Technical</li></ul>
Fixed costs	<p><b>Costs that do not vary with the number of items produced (in the short-term).</b></p> <ul style="list-style-type: none"><li>Rent</li><li>Interest on loans</li><li>Insurance</li><li>Management salaries.</li></ul>	Diseconomies of scale	<p><b>Factors that lead to an increase in average costs as a business increases in size.</b></p> <ul style="list-style-type: none"><li>Poor communication</li><li>Low morale leading to low efficiency</li><li>Slow decision making</li></ul>
Variable costs	<p><b>Costs that vary directly with the number of items sold or produced.</b></p> <ul style="list-style-type: none"><li>Raw materials</li><li>Electricity used in production</li><li>Some labour costs, e.g. piece rate pay and wages of temporary workers</li></ul>	Break-even output	<p><b>The quantity that must be sold for total costs to equal total revenue.</b></p> <p><math display="block">\frac{\text{Fixed costs}}{\text{Contribution per unit}}</math></p> <p>Uses:</p> <ul style="list-style-type: none"><li>can determine output</li><li>may influence bank decisions for loans to new business</li><li>make break-even comparisons, e.g. location</li></ul>
Total costs	<p>These can be compared with revenue (in the same period) to calculate profit/loss</p> <p><b>Fixed costs +variable costs</b></p> <p>Cost info helps:</p> <ul style="list-style-type: none"><li>when making pricing decisions</li><li>to calculate profit and loss</li><li>to compare different options, e.g. location, which machinery, cease production on a product.</li></ul>	Break-even chart	<p>Graph showing:</p> <ul style="list-style-type: none"><li>how costs and revenue of a product change at different output levels</li><li>break-even point.</li><li>margin of safety</li><li>impact on break-even if costs/prices change.</li></ul> <p><b>Show:</b> fixed costs (FC), total costs (TC), sales rev (SR), break-even where TC=SR</p> <p><b>But:</b> costs and prices may change frequently, it assumes all products are sold, and cost and revenue might not be straight lines.</p>
Average costs/ Cost per unit	<p>AKA: cost per unit (unit costs), and form the basis of 'cost plus pricing'.</p> <p><math display="block">\frac{\text{Total costs}}{\text{number of units sold/produced}}</math></p>	Contribution	<p><b>Selling price minus variable cost per unit.</b></p>

## Quality

**A good or service is produced which meets customer expectations.**

- Establishes a brand image
- Builds brand loyalty
- Maintains a good reputation
- Increases sales
- Attracts new customers

## External economies of scale

**Cost benefits to a business resulting from locating in a region with other businesses or organisations operating in the same industry.**

## Quality control

**Checking at the end of the production process to see if the good or service is of the correct quality before a customer receives it.**

- Attempts to eliminate faults before customer receives the product/service
- Less workforce training required compared with quality assurance and TQM
- Expensive - need to pay for quality checkers.
- IDs faults, but not why problem occurs, problem not removed
- Increase costs to scrap product or repeat service

## Location Considerations: for a manufacturing business

- Production methods
- Location of the market
- Raw materials/components
- External economies of scale
- Availability of labour
- Government influence
- Transport/communications
- Site costs
- Power/water supply

## Quality assurance

**Checking the standard of the good or service throughout the production process to ensure there are no errors or defects.**

- Attempts to eliminate faults before customer receives the product/service
- Fewer customer complaints
- Reduced costs if product not scrapped pr service repeated
- Expensive to train employees
- Relies on employees following instructions of standards set.

## Location Considerations: for service sector business

- Customers' location
- Personal preference of owners
- Technology
- Availability of labour
- Near to other businesses
- Rent/taxes

## Total quality management (TQM)

**The continuous improvement of goods and services and processes by focusing on quality at each stage of production.**

- Quality built into every part of production
- Eliminates all faults and errors
- No customer complaints
- Waste removed and efficiency improved
- Expensive to train employees
- Relies on employees following TQM ideology

## Location Considerations: for a retailing business

- Shoppers
- Nearby shops
- Customers parking available
- Suitable premises available
- Rent/taxes
- Delivery vehicles access
- Security

## Infrastructure

**The basic physical systems of a business or nation, e.g. transportation, communication, sewerage, water and electric systems**

## Location Considerations: to a different country

- New markets overseas
- Cheaper or new sources of material
- Labour force requirements
- Rents/taxes
- Government grants
- Trade and tariff barriers