



STUDY GUIDE:

B U S I N E S S

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IB Academy Business & Management Study Guide

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INTRODUCTION

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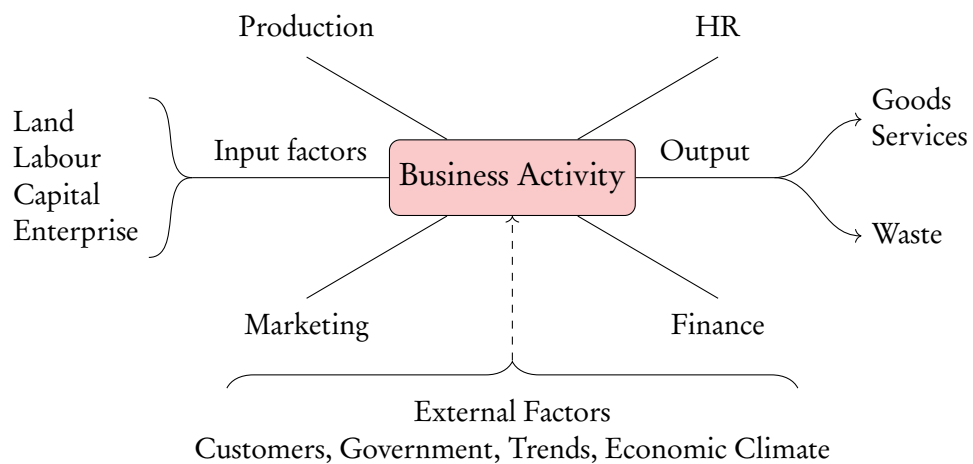
BUSINESS ORGANISATION AND ENVIRONMENT

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1.1 Nature of Business Activity

The **role of business** is to combine human, physical and financial resources to create goods and services.

Figure 1.1: Sources of finance



Business activity produces an output a good or a service, which can be consumed by customers. In order to create the final output, businesses must combine different input factors or **resources of business / factors of production**:

Land: the place where business is located.

Labour: the physical and mental human effort used in the production process.

Capital: it can be financial (money used to set up the business) or physical (machinery and tools used in production).

Enterprise: the entrepreneur develops a business idea, and then organises other resources to carry out the business activity.

To add value to the input, a business carries out the following **business functions**:

Production or operations management: changing natural resources into a product or the supply of the service.

Marketing: identifying and satisfying consumer needs.

Human resources management: managing the people (workforce) in the organisation.

Finance and accounting: responsible for the control of money flow in a business.

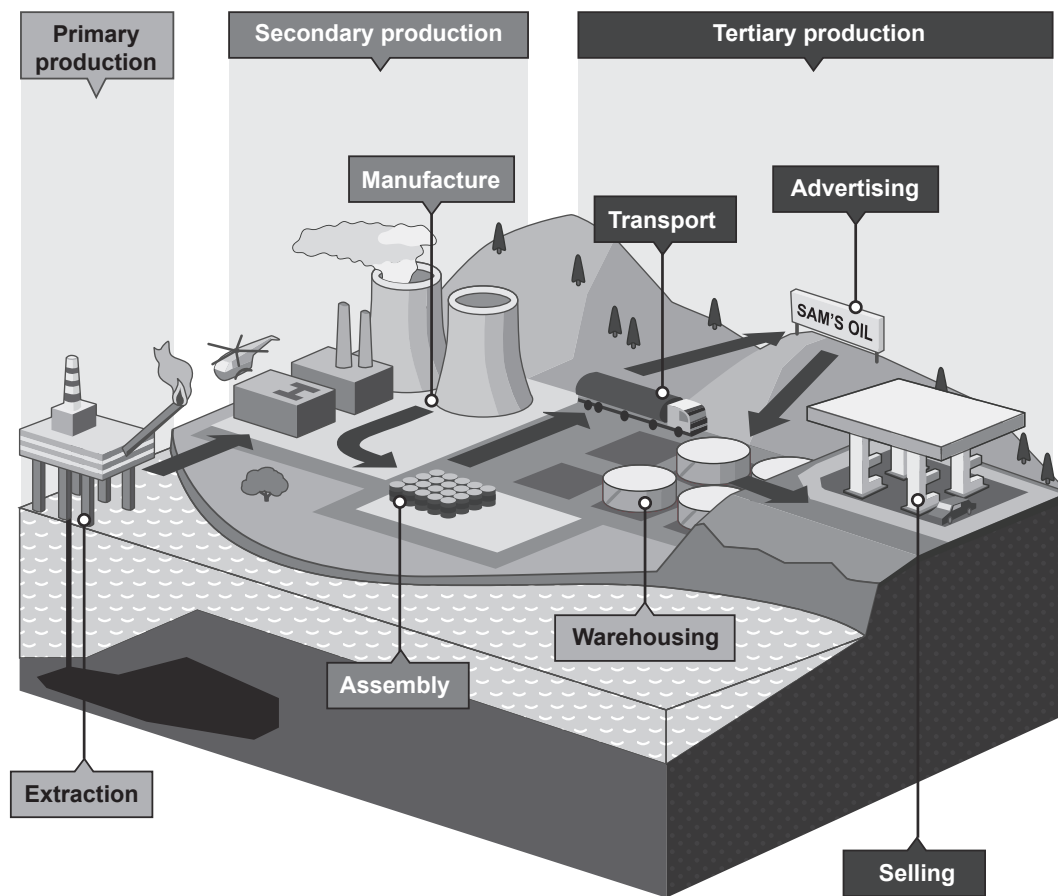
Business activity can be classified according to the type of production that takes place:

Primary production/sector: the cultivation and extraction of natural resources from the earth (e.g. farming or mining).

Secondary production/sector: the manufacturing, processing and construction of products by transforming the raw materials produced in the primary sector (e.g. car production).

Tertiary production/sector: the provision of services (e.g. banking).

Figure 1.2: Visualisation of the types of production



1.2 Types of Organisations

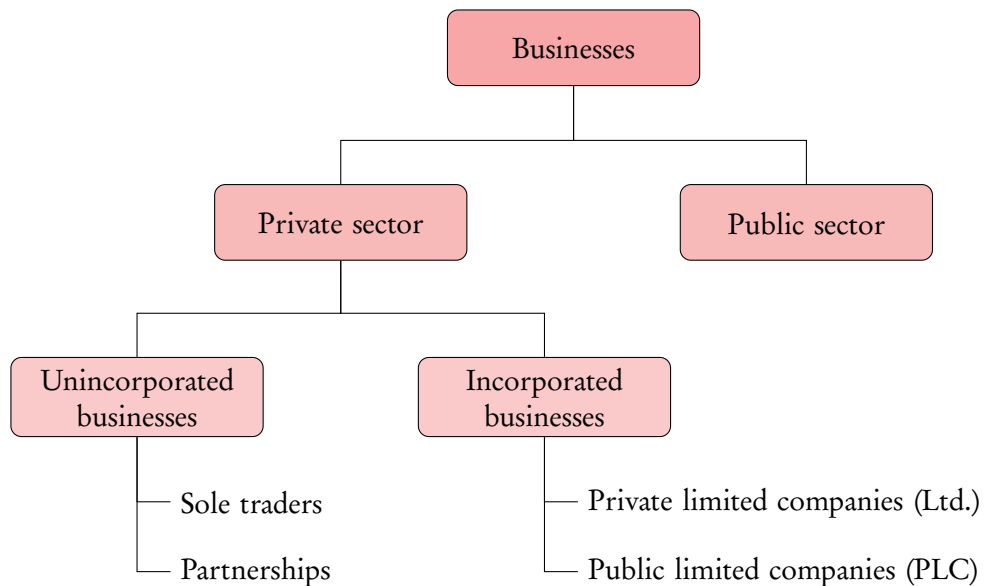
Businesses at the **public sector** are ran and owned by the state (e.g. electricity production, common in planned economies). Businesses of the **private sector** are set up by individuals or group of individuals (e.g. Converse).

Under private sector, there are 2 main groups of businesses:



Unincorporated businesses businesses where there is no legal distinction between the owner of the business and the business itself—everything is carried out in the name of the owners (e.g. sole traders and partnerships)

Incorporated businesses businesses that have a separate legal entity from their owners (e.g. private limited companies and public limited companies)



1.2.1 For-profit (commercial) organisations



Sole traders most common type of organisations, where business is owned by only one person. Sole traders are simply entrepreneurs with a business idea that they want to implement on their own (e.g. barber shops or food stands)

Advantages

- The setting up process is not expensive or time-consuming.
- All the profit is kept by one owner.
- The owner has a complete control.
- Can offer more personal services to their customers.

Disadvantages

- Unlimited liability: if the business has debts, the owner is personally liable.
- Difficult to obtain business bank loans.
- Difficult to raise additional funds.
- If the business is unsuccessful, sole traders can end up working for nothing.



Partnerships similar to sole traders, but there is more than one owner. Partners share responsibilities for running business and the profits. When starting a joint ownership, partners are obliged to draw up a *deed of partnership*, a legal document which states each partner's rights in the event of a dispute

Advantages

- The setting up process is not expensive or time-consuming.
- No need to publicly publish their accounts.
- Each partner can specialize.
- Easier to raise additional funds.

Disadvantages

- Unlimited liability.
- Profits have to be shared among more owners.
- Every decision has to be agreed upon by all partners, no one has a complete control.
- The maximum number of partners is 20, which limits the amounts of capital.



Private Limited Company (Ltd.) separate legal entities from their owners.

Therefore if the business has debts, the owner will not be personally liable - the property of company will be sold in order to meet these debts. Shares of private limited companies can only be transferred privately and cannot be sold on stock exchange, which means that all owners of the business need to agree upon the transfer. The owners of a private limited company are usually a family or a group of friends, all involved in the daily running of the business.

Advantages

- Limited liability.
- No limit on the number of owners.
- Shares can only be sold privately.
- Better decision making.
- Easier to raise additional funds.

Disadvantages

- Profits have to be shared among much larger number of members.
- Setting up business takes time and it's costly.
- Company's financial accounts are public.
- No member has full control of the company.
- Firms are not allowed to sell their shares to the public.



Public Limited Company (PLC) often big, multinational companies boasting large numbers of employees.

Unlike other business organisations, they normally contribute greatly to the national input of countries. Shares of these companies can be bought and sold publicly on the stock exchange. When going public, these companies need to publish a **prospectus**: a document that advertises the company to potential investors and invites them to buy shares, before **flotation**: going public.

Advantages

- Shares can be sold to the public.
- Limited liability.
- Easier to raise loans from banks.
- Because of their size, they can dominate the market.

Disadvantages

- Setting up business takes time and it's costly.
- Company's financial accounts are public.
- Less able to offer personal services to their customers.
- Risk that an outsider take control of the company.

1.2.2 Non-profit (social) enterprises

Non-profit organisations run according to business principles but do not aim at making profit. Their surpluses from trading may be shared with employees and customers, passed on to a third party, used to buy resources, raise finance, employ staff etc.



Charities non-profit organisations with the aim to raise money for 'good' causes, and draw attention to the needs of disadvantaged groups of society (e.g. Red Cross)

Pressure groups circles of people that attempt to influence decision makers in politics, business and society (e.g. Greenpeace, which aims at exposing global environmental issues)

Public-private cooperation (PPC) occurs when the government creates a commercial partnership with the private sector to provide certain goods or services (e.g. government school project that is managed by a private consortium)

1.3 Organisational Objectives



Business aims define the firm's purpose and long-term goals, often expressed in the mission statement

For example:

- Profit maximisation
- Increasing market share
- Benefiting the local community and/ or the environment



Business objectives clearly defined and measurable targets on how to achieve the business' aims. These are often expressed as **SMART** objectives

SMART objectives have to be specific, measurable, agreed upon, realistic and time constrained

Specific: target a specific area for improvement

Measurable: quantify an indicator of progress to judge if / when the objective has been achieved

Agreed upon: specify who will do it

Realistic: given available resources and market conditions, can the results realistically be achieved

Time-constrained: specify the time period the objective is to be achieved

For example:

- Improve net profit to 20% of all sales in 2017
- Increase sales in Europe to 10 million in 2017
- Increase delivery efficiency by 20% to meet the new EU regulations

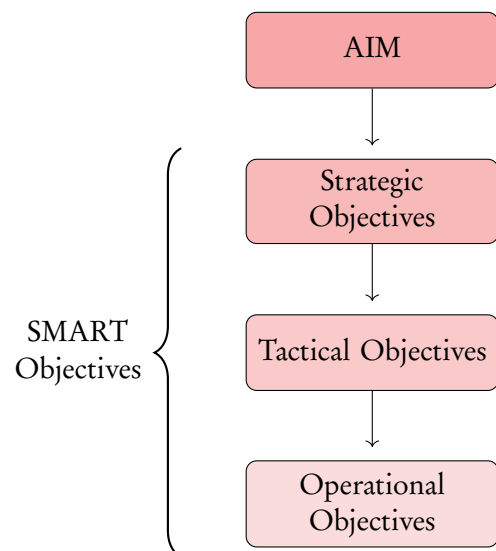
Three levels of objectives can be distinguished:

Strategic objectives: the senior leadership sets the long-term goals, determines the actions necessary to achieve the goals and mobilises resources to execute the actions. (affects: whole company) How will the goals/aims be achieved by the resources?

Tactical objectives: middle management develops medium-term action plans to achieve the strategic objectives of an organisation. (affects: department)

Operational objectives: lower management develops short-term, day-to-day action plans to achieve the tactical objectives of the organisation as efficiently as possible. (affects: teams)

Figure 1.3: The relationship between the objectives and aims





Mission statement specifies the aims and objectives of the business in the present. It describes the core activities of a business and it may include statements about moral or ethical issues, objectives about sales, profits or market share, or attitudes and values towards stakeholders like customers and workers. Mission statements are often very vague and unclear

Vision statement specifies the long term aspirations of a business; where it ultimately wants to be. It often describes how the organisation wants to be perceived. Even vaguer than mission statements, vision statements are often used for marketing purposes appearing on billboards, advertisements or radio commercials. They aim to influence the consumers' perception of the business

Corporate social responsibility and business ethics



Corporate social responsibility (CSR) the consideration of ethical and environmental issues relating the business activity, towards all stakeholders and not just to owners or shareholders (e.g. the treatment of employees or how local communities would react to new projects)

CSR aims to:

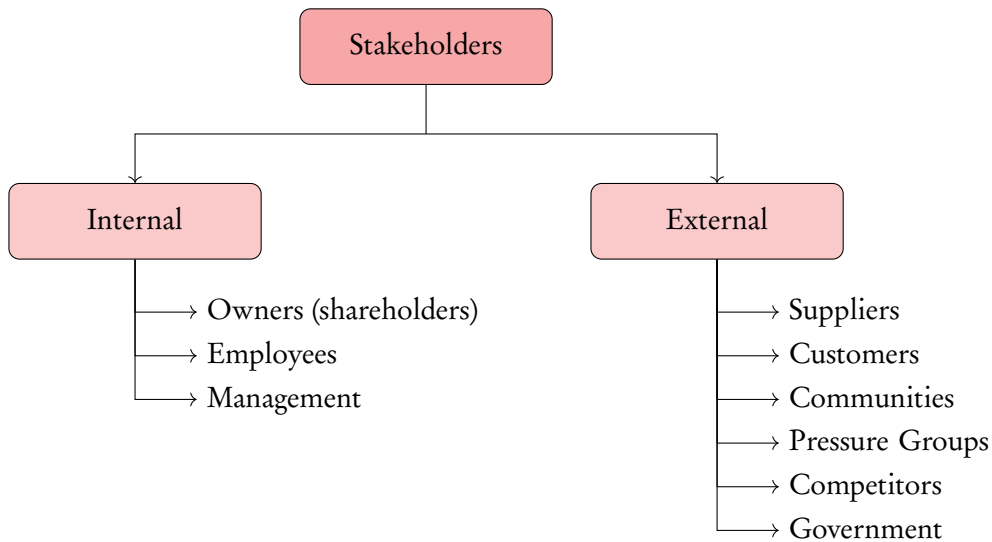
- treat customers and suppliers fair and equally;
- compete fairly (i.e. not engaging in predatory pricing);
- treat the workforce with dignity and listening carefully to their needs.

1.3.1 Stakeholders



Stakeholders individuals or groups that may hold interest in the business or may be affected by its decisions

We distinguish between two groups of stakeholders: **internal stakeholders**: who are directly involved in the running of the business (e.g. the employees, shareholders, managers and directors), and **external stakeholders**: who are indirectly involved in the running of the business or are simply affected/interested in its activity (e.g. customers, suppliers, financiers, and the government).



The interests of internal stakeholders

Owners or shareholders put up the capital which runs the business. The reward is the gain they make from owning the business. If there was no reward, no one would bother to invest.

Directors and senior management in small businesses, the owners are quite likely to be involved in the daily running of the business. This is not in case in bigger companies, where a board of directors may be involved and monitor the business' activities. The performance of the business has a direct impact on them - if the business performs poorly, they might be made redundant. If the business performs well, they might be promoted or receive bonuses.

Employees are involved in daily activities and bring projects to life. If the business underperforms, employees are often the first to fall victim and get dismissed. If the business performs well, they might be promoted or receive bonuses.

The interests of external stakeholders

Suppliers Businesses depend on suppliers for resources otherwise production may be reduced.

Customers One of the most important external stakeholders. Businesses need customers to sell goods and services in order to remain operational. Additionally, many customers depend on the goods and services provided by businesses.

Communities Businesses could play important roles in a community’s development by supporting charities, collaborating with schools or expanding projects to create jobs.

Pressure groups They are interested in the business as they attempt to influence its decision making processes (e.g. forcing the local council to act against industrial pollution).

Competitor Other firms operating in the same market want to observe their competitors in order to predict future activities and to react accordingly.

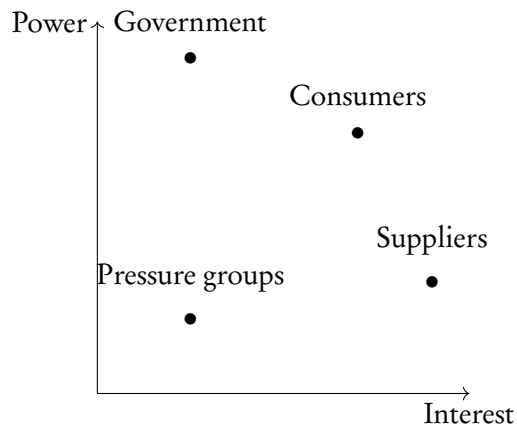
Government Legal institutions are interested in a company’s lawful conduct. For example, they could inspect a business’ licenses or tax records.

Mutual benefit and conflict between stakeholders’ interests

Conflicts may arise when there are many stakeholders, each with different objectives. For example, there might be a conflict between customers and shareholders as customers want the highest quality products for more affordable prices. Spending more on research and development to create new products might lower the amount payable in dividends to shareholders. Improving quality might also lead to higher costs and lower profits, directly affecting shareholders.

As it is impossible to satisfy all stakeholders simultaneously, businesses need to focus on the ones that are important to them. In order to determine which stakeholders need to be satisfied, businesses compile a **stakeholder analysis**: visualising which stakeholders have the most interest in the company’s activities, and which have the most influence over the company.

Figure 1.4: Example of a stakeholders analysis showing the interest and power of four stakeholders: government, pressure groups, consumers and suppliers



1.3.2 External environment



External factors outside influences that can impact a business such as laws, market trends or political changes.

A civil war for example could significantly harm businesses selling luxury goods as the demand will drop severely.

In order to monitor all these changes in the external environment, businesses conduct a combined SWOT and PEST analysis. These analyses take external factors into consideration that may affect economic activities, so that businesses are able to set SMART objectives.



SWOT analysis aims to identify the key *internal* strengths & weaknesses and *external* opportunities & threats, seen as important to achieving an objective.

The analysis of the *internal* strengths & weaknesses helps business owners determine their current market position, which is crucial to know before planning and implementing SMART objectives.

Examples of strengths

- Products X is market leader in terms of sales.
- Customers are loyal to the brand.

Examples of weaknesses

- Workers are striking demanding higher wages.
- Machinery is obsolete, lowering production output.

The analysis of the *external* opportunities & threats provides businesses with the information needed to respond to external factors that can impact the ability of the business to achieve its strategic goals and objectives.



PEST analysis evaluates opportunities & threats on Political, Economic, Social and Technological factors

Examples of opportunities

Political Political situation in the country is very stable

Economic The economy is booming and people have growing income

Social Increasing average living conditions means more people can afford luxury items

Technological Faster 4G mobile internet network allows development of more complex apps like voice recognition

Examples of threats

Political Stricter employment laws increases business risk

Economic High competition in particular market segment

Social Healthier lifestyle of consumers reduces sale of soft drinks

Technological The invention of a better medicine obsoletes the current



STEEPLE the same analysis as is done in PEST, but also includes Legal, Environmental and Ethical

Note: If the exam asks you to design a SWOT analysis, this automatically means you will need to do a PEST analysis as well in order to be able to properly analyze the external environment. Application is key – you have to look carefully through the case study in order to be able to create a SWOT analysis *explicitly applicable* to the company in the case study, *and* justify your answers at all times! You have to explain *why* something is a strength, weakness, opportunity or a threat. Without arguments your answer will not be considered complete.

1.4 Growth and evolution

Economies and diseconomies of scale

Growth and evolution refers to the expansion of sales and the increased scale of production. Growth is an important factor for businesses to consider due to the costs involved – these can increase or decrease.



Economies of scale as the production output of an enterprise increases, the cost per unit output decreases as fixed costs are spread out over more units of output

Diseconomies of scale as the business expands and the scale of its operations is beyond the minimum efficient scale, the average costs per unit output rises

Diseconomies of scale may occur when:

- Communication becomes more complicated and coordination more difficult because a large firm is divided into departments.
- The control and coordination of large businesses is very demanding; more supervision leads to more costs.

Type of economies of scale

Technical Increasing the size of the units of production decreases costs.

Example: It is more cost effective to have a double-decker bus than a solo bus – with the same payment for fuel and wages of drivers, more people can be transported – the costs per unit (wages, fuel) will not double as the output doubles (more people transported), which means average costs fall.

Managerial Managers can specialize in doing one particular job rather than attempting to do several different tasks at the same time – every manager can do better by focusing on an aspect of the business they know the most about/are the most interested in.

Example: If a company has a manager of every department (marketing, HR, finance, operations) they may become more efficient at doing their work due to specialization.

Financial Larger firms have an advantage over small firms when it comes to raising finance.

Example: Sole traders cannot consider selling shares as a way to raise finance. A PLC however, could do this. Large firms also find it ‘easier’ to raise finance (such as loans) – they have more valuable and larger assets to offer as security.

Marketing Larger firms can have bigger and effective marketing campaigns. They are able to spread their advertising budget over higher output.

Example: Only big businesses like Coca Cola that market their goods to a mass market can advertise in big events such as the World Cup in football.

Purchasing Larger businesses can get discounts when purchasing their inputs through bulk buying as they have a higher bargaining power.

Example: Albert Heijn can purchase meat from farmers at a lower price. Farmers offer discounts because AH buys large quantities and is a regular customer.

Small vs. big businesses

Small business

- Closer to its customers: ability to offer more personal services.
- Less competition: small businesses can create a monopoly in a niche market.
- Greater focus: they do not offer products to mass markets.

Big business

- Economies of scale: larger production output = decreased cost per unit.
- Market leader status: big firms tend to be more influential.
- Survival: greater capacity is used to spread the risk.

Internal vs. external growth



Internal/organic growth a business grows using its own resources to increase the scale of its operations and sales revenue

External growth a business grows by collaborating with, buying up or merging with another firm

Organic growth can be achieved by selling new products, increasing production and sales through marketing or finding new markets. For most businesses internal growth is slow, but it does so at less risk than external growth and can be financed through internal funds. External growth is a much quicker alternative to organic growth. External growth can be a quick way to reduce competition in a market, gain economies of scale, gain entry into foreign markets or achieve synergy.

External growth methods

The terms **mergers** and **takeovers** both describe the situation when firms join together and operate as one organisation, albeit with one important difference. The term **mergers** is used to describe two businesses that join to create a third new company, whereas the term **takeover** refers to the purchase of one business by another.

There are few different types of mergers:

Horizontal integration: firms are in exactly the same line of business and at the same stage of production.

Backward vertical integration: firms are at different stages of production. The merger occurs with a business which is in the previous stage of production.

Forward vertical integration: firms are at different stages of production. The merger occurs with a business which is in the next stage of production.

Lateral integration: merging of firms with related goods which do not compete directly with each other.

Diversifying merger (conglomerate): merging of firms in completely different lines of business.



Joint venture a type of external growth strategy that combines the contributions and responsibilities of two firms to a shared project by forming a separate legal enterprise

The reason why firms form a joint venture is to enjoy the advantages of mergers, such as economies of scale and reduced competition, without losing their identity. Most joint ventures are friendly, allowing businesses to share their areas of expertise.



Strategic alliance an agreement between parties to pursue shared objectives while remaining independent organisations, and without forming a legal partnership entity. These are often formed to share costs and risks, information and expertise (e.g. sharing R&D costs, manufacturing capabilities, distribution channels etc.)

Franchising an arrangement where the franchisor sells the rights to sell their products or use the company name or brand to the franchisees

1.5 Organisational planning tools

1.5.1 Decision Tree

Everyday business decisions in any department involve risks. This can be because the business has limited information on which to base the decisions or the outcome of a certain decision is uncertain. In such situations, the business will make a decision that minimises risk with the greatest possible return. **Decision trees** are used to quantify the alternative outcomes of any decision, combining the likelihood of an outcome and the loss/gain.

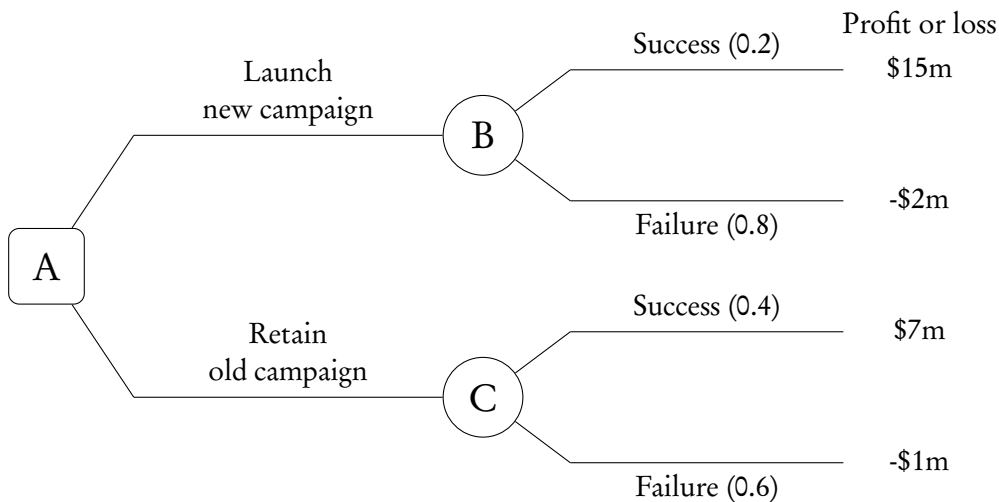
Every decision tree consists of:

Decision points (represented by squares): decision makers need to choose between certain courses of action.

Chance nodes (represented by circles): decisions have different possible outcomes.

Probability or chance: the decimal value below every outcome branch of the tree, explaining how likely each outcome is. The sum of all the possible outcomes of one decision should be 1.

Expected values: the financial outcome of each decision.



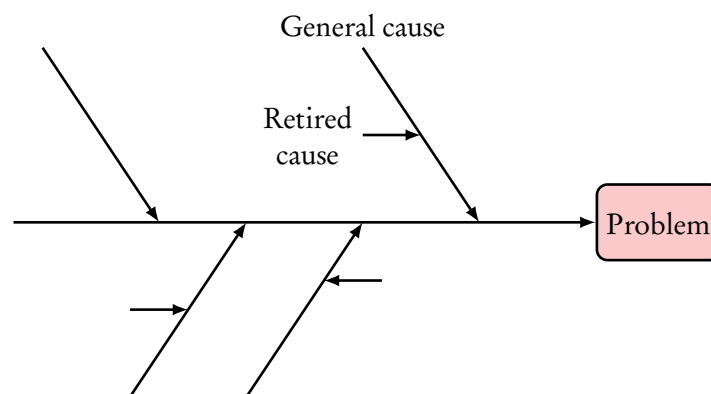
Note: in the exam you will be given a number of decisions, each with a number of possible outcomes. You will also be given the probabilities of these outcomes and predicted profit or loss associated with each. Based on that information, you will need to draw the decision tree that looks like the one above. Therefore, whenever the word ‘decision’ or ‘decide’ is used, you will represent that with a square and different decisions stemming out of that decision point. When we are talking about outcomes, you will represent that with a circle with all the possible outcomes of a decision stemming from that circle.

1.5.2 Fishbone diagrams



Fishbone diagram a visual tool that identifies successive layers of causes that could potentially contribute to an effect or problem

Figure 1.5: Example fishbone diagram



As presented, the main problem is identified. Once the main problem has been identified, its causes can be defined. Each cause is represented as an arrow that feeds into the *main problem*. As you can see, the refined causes are fed into the general causes. To use this method, first the main issue needs to be identified and then, its general and refined causes. This way you will be able to visualise the sources of the main problem. There are *general sets of causes* that decision makers can use:

Manufacturing: The 6Ms – machine, method, materials, measurement, man, mother nature.

Marketing: The 8Ps – price, promotion, people, process, place/plant, policies, procedures, product.

Service: The 4Ss – surroundings, suppliers, systems, skills.

1.5.3 Force-field analysis



Force-field analysis a framework for looking at the factors (forces) that influence a movement toward a goal. Forces that promote movement toward a goal are called *driving or helping forces*, those blocking movement toward a goal are called *restraining or hindering forces*

For example, a business might decide to change the brand name. In this case a driving force could be better differentiation from the competition. A restraining force could be lower recognition than before due to the change of the brand name. Subsequently, the decision makers can rank them numerically (from 1 to 5) based on which they believe have the most significance. Those forces that severely affect the change will be given a higher numerical value (+5 for a driving and -5 for a restraining force). In order to see whether or not this would be a good decision using the force field analysis, the numbers are summed up to get the total score for restraining and driving forces.

1.5.4 Gantt chart



Gantt chart a bar-chart showing how tasks in a project or production process can be sequenced over time

In order to construct a Gantt chart all the tasks or steps of the process have to be known, including when each will be completed. Once the Gantt chart is constructed, it can be used to figure out the most efficient ways to use resources. Here is an example of a Gantt chart showing all the necessary steps in the production of a T-shirt:

Figure 1.6: Example Gantt chart

Task	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Choosing materials							
Drawing the design							
Cutting							
Putting together							
Packing							

Advantages and disadvantages

Decision trees

Advantages

- The visual nature of constructing a decision tree diagram may show possible courses of action not previously considered. For example, the management of ABC Ltd. could have thought of another course of action (e.g. modifying the current advertising campaign), which could have been examined as well.
- It is a numerical model – it involves placing numerical values on decisions, which improves results, as only the most profitable course of action will be taken. In our example, ABC ltd. chose to retain the current advertising campaign because it is the most profitable choice.

Disadvantages

- All figures are estimated which means that businesses might make a decision that is not as profitable in reality.
- Do not take into account the dynamic nature of business. For example, a sudden change in the economic climate might render a decision based on a decision tree obsolete. For example, due to the economic crisis, the profit and loss figures have to be re-estimated to take into account the decrease in demand, which means the whole new decision tree needs to be made.

Fishbone diagrams

Advantages

- Very visual and simple to use in order to pinpoint the key causes of a particular problem a firm is facing.
- Could represent a good way to bring several different stakeholders together – e.g. workforce. This could make them feel part of the decision-making process which can prove to be motivating.

Disadvantages

- Although they are very good when identifying causes of a particular problem, they are not as good when trying to think of solutions for this problem. It is true that they identify key areas a business can focus on in order to correct the issue, but they do not show how this can be done.
- While they can be motivating, they can also cause problems as different stakeholders may view different causes as the most important ones, which causes disputes.

Force field analysis

Advantages

- Helps identify key factors affecting a particular decision according to their importance.
- Could represent a good way to bring several different stakeholders together – e.g. workforce. This could make them feel part of the decision-making process which can prove to be motivating.

Disadvantages

- The numbers assigned to different forces are very arbitrary – they only reflect how a certain force is important in the eyes of the decision maker, which can be different from the situation in reality.
- Different decision makers might include different forces – the forces that will be identified highly depend on the interpretations of the issue different decision.

Gantt chart

Advantages

- Very visual allowing the management to clearly set out the timeline of a particular project. This could help set deadlines or even look at which processes can be done faster.
- Useful to look at in order to allocate resources efficiently (as explained earlier).

Disadvantages

- Based on estimates – some actions may take longer to complete and the management did not predict that.
- Becomes very difficult to present when a project consists of many steps.

HUMAN RESOURCE MANAGEMENT

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2.1 Functions and evolution

2.1.1 Human resource planning



Human resources (HR) all the people working in a business

Workforce/HR planning a process that identifies current and future HR needs to ensure that staffing is sufficient, qualified, and competent enough to achieve the organization's objectives (employees are assigned to jobs that they are trained and best suited for)

There are four key parts of HR planning (which will be further examined later):

Recruitment hiring the right person for the right job

Training ensuring an employee receives proper professional development (i.e. acquires the necessary set of skills needed to complete the tasks efficiently)

Appraisal evaluating an employee's job performance

Termination or dismissal managing the situation of employee's voluntary or involuntary leave



Labour turnover a measure used in HR planning of how many people leave a business over a given period of time, usually expressed as a percentage of the total labour force

$$\text{Labor turnover} = \frac{\text{number of staff leaving over a year}}{\text{average number of staff employed in a year}} \times 100$$

Intuitively, high labour turnover suggests labour problems. This means that there is a reason why staff do not stay in the firm for a long period of time. Perhaps there is an aspect of the business that demotivates the workforce and lowers their productivity (resulting in extra costs for the business as it constantly needs to be on a lookout for new staff). A very low labour turnover means that the business is stable but also lacks progress; 'fresh blood' in the business is important to stimulate innovations and new ideas.



External factors impact the size and availability of the pool of potential employees for the business

These can include:

Technological change: e.g. better technology can lead to more working from home.

Demographic change: e.g. an aging population, reduced birth rate or migration etc.
These factors affect the size of the labour pool and the skills they have to offer.

The state of the economy: e.g. in a recession, the unemployment rate is higher which allows business to 'pick and choose' people with right skills and experience (also they are willing to accept lower wages).



Internal factors changes from within the business itself

These can include:

Changes in business organisation: businesses change the way they are organised in order to better meet their strategic objectives.

Changes in labour relations: labour unionisation causes businesses to give in to some of their requirements in order to keep the business running and the workforce motivated.

Changes in business finance: financial difficulties cause businesses lay off some workers to minimise the costs

Recruitment

Due to changes in internal circumstances (e.g. higher demand, introduction of a new job etc.), a business may need to start the process of recruitment. Recruitment can be divided into 3 steps:

1. **Identification:** recruitment starts with defining the **job description**: details the basic roles and responsibilities of a job, and a **person specification**: to communicate what skills, qualifications and experience candidates need for the job. The business also needs to decide whether it is best to **recruit internally**: find a current employee that could carry out the new job or **recruit externally**: find a completely new person from outside the business.
2. **Application:** to find the best applicants, businesses make a **job advert**: communicating the job description and person specification to inform potential candidates. The job advert should be placed so that it reaches its target audience. The business can decide to **process the applications externally**: hire a recruitment agency to handle the application process for them.
3. **Selection:** after some time the applicants may be shortlisted based on how well they fit the job, interviews may be scheduled in order to select the best applicant for the job.

Training process

The second stage of an HR plan is focused on the employee's professional development. It is crucial for the business since it leads to greater productivity, motivation of workers and reduction of labour turnover. We distinguish 4 types of training:

- On the job training:** done while the employee is doing their normal job, e.g. a senior employee helps the junior employee comprehend all the tasks and acquire new skills needed to carry out the job efficiently. **Induction** help a new employee settle quickly and efficiently into their job. It may include introductions to key personnel, tours around the workplace and information about company systems.
- Off the job training:** happens outside working hours, where the employees are being trained away from the job. This could involve workshops, conferences etc.
- Cognitive training:** focuses on helping employees develop their thinking and processing skills. This type of training is of crucial importance for businesses that require their employees to make quick, wise and effective decisions, link investment banking, marketing departments of companies etc.
- Behavioural training:** focuses on helping employees develop certain interpersonal skills such as stress management, communication, dealing with emotions etc.

Appraisal

Staff appraisal is the process of reviewing the performance of employees against pre-set objectives.

There are four different appraisal strategies:

Formative appraisal: an ongoing process that focuses on giving the employees recognition for what they have done well and indicating possible mistakes so that they can learn from them.

Summative appraisal: measures an employee's performance based on standards set by the business, making it easy for the business to sum up how a particular employee performed against the standards. Usually done at the end of a particular project.

360 degree appraisal: feedback on the employee's performance is not only received from the manager, but also from co-workers (appraisal from multiple perspectives). This type of appraisal is usually combined with one of the previous two to give another perspective on the performance.

Self-appraisal: employees reflect on their own performance by rating themselves on various performance indicators. This type of appraisal is usually combined with those explained earlier.

Dismissal, termination and redundancy

Business can deal with voluntary or involuntary leave of employees in several ways:

Termination: happens when employees leave the business at the end of their contract because they want to work on their professional development, change career, retire etc. These employees expect to receive a reference from their ex-employer.

Dismissal: happens when an employee has broken some of the terms of their contract, which could be due to missing work, poor discipline, dishonesty etc. These employees do not receive a reference from their ex-employer.

Redundancy: happens when a job is no longer required, making the employee redundant through no fault of her own. Causes can be e.g. a drop in production, a merger or takeover, automation etc.

New work practices

New technologies and new social trends have influenced work practices in many countries. Some examples are:

Teleworking: employees work a set amount of hours at the office and the remainder from home

Flexitime: employee has to work a set amount of hours per week, the allocation of time spent completely depends on employee's preferences.

Migration for work: due to better infrastructure and better connectivity of the whole world, people can easily migrate daily, sometimes even great distances, for work.

2.2 Organisational structure



- Levels of hierarchy** the level of responsibility in the business. Each level means that there is a senior and a junior
- Chain of command** the formal route that a decision in an organisation must follow. Traditionally, this means that decisions travel from the top (CEO) to the bottom (workers) of the hierarchy
- Span of control** the number of subordinates directly under the authority of a manager and whom managers are responsible for
- Delegation** giving one's subordinate the authority to make a particular decision or carry out a particular task while still keeping the responsibility for the outcome of that task or decision. This usually happens when the span of control is wide
- Centralisation** indicates that all major decisions in the business are made by a small group of employees (usually managers) that work closely with the head of the business (CEO)
- Decentralisation** the opposite of centralisation. The core strategic decisions made by senior managers, while middle managers have other decision-making responsibility
- Bureaucracy** the relative importance of rules and procedures. If a business is relatively bureaucratic, there are many rules, regulations and set ways of doing things; this means that personal initiative or delegation is not expected
- De-layering** removing a layer in the hierarchy of the business. It means the removal of a layer of management. It is intended to make the business less bureaucratic, which increases the decision-making capability of middle managers. Also, it reduces costs as not so many managers need to be employed

Types of organisational structures



Tall organisational structure common in well-established businesses; it is characterised by many levels of hierarchy, narrow spans of control, long chains of command, centralised decision-making and limited delegation

Flat organisational structure the opposite of the tall structure; it is characterised by few levels of hierarchy, wider spans of control, shorter chains of command, decentralised decision-making and increased delegation

Organisational structure by hierarchy a traditional way of representing structure of a business. It shows the chain of command in a particular business (e.g. senior managers > middle managers > junior managers > workers)

Organisational structure by function an organisational structure where employees are grouped by departments they belong to (marketing, finance, HR). After that has been determined, employees are then organised by seniority

Organisational structure by product an organisational structure based on what a particular business produces. This involves dividing workforce based on what a company produces

Organisational structure by region present in businesses that carry out certain aspects of the business activity in different parts of the world (e.g. they have departments in Europe, America, Australia etc.)

Note: When asked to analyse any of these organisational structures on the exam (i.e. advantages and disadvantages), you will need to (1) use the specific terminology outlined in the syllabus point but also (2) refer to leadership in the organisation and motivation of the workforce - how does a particular organisational structure affect motivation of the workforce compared to another.

2.2.1 Changes in organisational structures

Along with the basic organisational structures, some businesses have attempted to adapt their structure in accordance with the changes in the business environment. Two different ways to deal with changes in business environment are **project-based organisation** and **shamrock organisation**.



Project-based organisation a market structure in which employees are organised around different projects that a firm carries out.

Project-based organisation is supposed to be more flexible and responsive to market demand (therefore more typical of market-oriented businesses). There are project managers that delegate and are responsible for a particular project. After the project is done, the team is split up and reassembled to begin another project. Each team “borrows” members of different departments to complete the projects such as accountants, operations managers etc.

Advantages

- Higher level of delegation: the project manager delegates tasks to different team members, which tends to be motivating for those workers as they feel empowered.
- Each team member will do their part of the job efficiently since they are specialists in their field.

Disadvantages

- Increased training costs.
- Not all members of the workforce will be able to fit into this organisation structure.



Shamrock organisation a market structure in which a business trims its workforce to retain only multi-skilled core, which is concerned with the creation of a product. All other supporting, non-central functions are outsourced to the periphery.

This model suggests that businesses can reduce costs and gain competitive advantage by trimming their workforce.

Thus, on the shamrock, we have 3 leaves:

1. **Core managers:** employees that are essential for the business
2. **Contractual fringe:** activities that are outsourced to specialist businesses
3. **Flexible workforce:** made up of part-time, temporary or seasonal workers that are employed when necessary

Advantages

- Allows for complete specialisation of the core: they will concentrate on innovations and gathering new ideas.
- The flexible workforce will be easier to hire and fire.

Disadvantages

- The insourced workers will suffer from lack of job security which might lead to decreased motivation and lower productivity.
- Not all members of the workforce will be able to fit into this organisation structure.

2.3 Leadership and Management

The key functions of management

There are 5 major functions of management:

Planning: Managers need to set strategic, tactical and operational objectives that affect different parts of the organisation.

Organising: Managers need to make sure the business has sufficient resources to achieve objectives, which requires good organisation.

Commanding: Managers need to make sure all individuals know which duties they are to perform and to provide instructions if needed.

Coordinating: Managers must bring together the various resources to achieve objectives. Since many different tasks happen at the same time, managers need to make sure that all these are done at the specific time and place they are supposed to be done.

Controlling: Managers have power to control for quality of different processes and change them if necessary. They also have the power to increase or decrease the scale of operations depending on the circumstances in the market.

2.3.1 Management vs. Leadership

Managers carry out functions presented above. Therefore it can be said that they are task oriented, meaning that they are focused on getting tasks accomplished in a timely manner, rather than leading people.

Leadership has an emotional note to it. Leaders need to have the ability to inspire people to follow their lead. Leaders are therefore focused on building relationships. They need to be able to motivate with their personal qualities, rely on their instincts and have a vision of what they want their organisation to look like in the future.

Leadership styles

Autocratic

- Leader holds as much power and decision-making authority as possible
- Consults minimally with the senior management
- Typical for companies that have a lot of unskilled and untrusted workers
- Close supervision and detailed instructions
- Usually associated with the **tall organisational structure**

Advantages: Authority is clear; decisions are made quickly.

Disadvantages: Employees do not develop decision-making skills and cannot operate independently.

Paternalistic

- Leader aims to assume the role of a ‘father’ figure, where the employees are his or her family
- Has great concerns for the employees and provides them with a sense of safety
- Extreme loyalty and trust with employees and their full commitment

Advantages: Employees take great pride in the organisation, and do whatever is necessary so they don’t let the leader down.

Disadvantages: Leaders might not have an objective eye when assessing the performance of workers.

Democratic

- Employees are usually involved in the decision-making process, but the leader still has the final say
- One of the most popular leadership styles since it is motivating for employees and they feel empowered and part of a team
- Usually associated with the **flat organisational structure** and with **project-based** and **shamrock** organisation

Advantages: Workforce is motivated since they are consulted in the decision-making process.

Disadvantages: Since the workers are involved, decision-making process is longer; not efficient when it comes to making quick decisions.

Laissez-faire

- In French: “to leave alone”
- A lot of freedom is given to the employees
- Extremely democratic form of leadership
- Tends to work when the workforce is extremely motivated, skilled, educated and open-minded
- Usually associated with the flexible forms of organisational structures

Advantages: Employees enjoy the freedom this leadership style provides; they are more innovative and creative.

Disadvantages: Interests of individuals might differ from the interest of the organisation; reduced productivity if the workforce is not in the same ‘mental state’ as the leader.

Situational

- No leadership style is deemed the best
- The type of leadership that will be pursued will depend on the situation

Advantages: In emergency situations, businesses might switch the leadership style to the most convenient one.

Disadvantages: Changing leadership style too often might result in confusion of the workforce.

2.4 Motivation



Motivation the willingness to exert high levels of effort to reach organisational goals, conditioned by the effort’s ability to satisfy some individual needs

Different motivation theories include Taylor, Maslow and Herzberg.

Taylor

Taylor set out his theory called **scientific management**. According to Taylor, managers and workers should try to find the ‘best way’ to produce. This involves setting out organisational laws that both managers and workers are expected to follow. As a result, the way a job is to be done becomes ‘science’ that can no longer be disproved unless the management and the workers figure out a new, better and more efficient way to produce.

Taylor believed that the only thing that motivates people is money. Therefore, if a worker does not produce ‘enough’ output, he will face a lower pay. Similarly, exceeding the target output will result in a bonus.

Maslow

Maslow’s theory is based on the **hierarchy of needs**, where every level of that pyramid has a certain class of needs. There are:

Psychological needs: receiving a wage high enough to meet weekly bills, food, shelter

Safety needs: having job security, safe working conditions

Love and belonging: working with colleagues that support you at work, teamwork, communication

Esteem needs: being given recognition for doing a job well

Self-actualisation: being promoted and given more responsibility, introducing new ideas, taking on challenging new job assignments

Needs at the bottom of the pyramid are the basic ones as they are concerned with survival. Once these are satisfied, the worker moves to the next level, and once a level is ‘passed’, the needs on that level become less important. In practice, very few manage to reach the top of the pyramid, because in order to do so, all other needs must be fully satisfied.

Herzberg

In Herzberg’s motivation theory, there are *two sets of factors* affecting people’s motivation:

Hygiene factors: these are factors that need to be in place in order to remove workers’ dissatisfaction with their job. These represent pay, working conditions, company policies, relationship with higher levels of the hierarchy, treatment at work etc. Improving these factors should remove dissatisfaction, but it will not motivate the workforce. If these are not met however, there will be a fall in productivity.

Motivators: these are factors that give workers job satisfaction. They represent a sense of achievement, chance of promotion, recognition of effort, responsibility etc. Improving these will make the workers more motivated and will lead to increased productivity.

Notice that there is a similarity between the theories of Maslow and Herzberg - both suggest that there are needs that must be satisfied in order to motivate workers. However, Herzberg argues that only higher levels of Maslow's needs hierarchy will motivate workers.

Advantages

Taylor

- Sets clear goals for the workforce and the consequences of their work are transparent.
- Gives workers a sense of target.

Disadvantages

- Does not take into account individual differences.
- Views workers as machines with only financial needs.

Maslow

- Based on the level an employee is on, business can see what rewards are suitable for him.
- Workers feel like they are being taken care of, which increases productivity and motivation.
- Difficult for business to decide on a specific reward.
- Difficult to determine when a particular level of needs has been satisfied.

Herzberg

- Job enrichment.
- Makes clear for the business what needs to be done in order to remove dissatisfaction and improve motivation.
- Job enrichment may be expensive and difficult to organise.
- Workers may get used to improved pay/conditions and take these things for granted.

Adams

Adam's theory suggests that people will be happiest and more motivated in relationships where 'give and take' are about equal. If a person is getting too little from the relationship, then not only is s/he going to be unhappy with this, but also the person getting the bigger share will feel guilty about this imbalance. In business, this means that in return for an input (skills, effort, experience), employees receive an outcome (pay, status, fringe benefits). This creates a ratio of input to outcome and equity is achieved when the ratios are the same for everyone in the organisation. Awareness of lack of fairness is demotivating for the employees.

Pink

Pink's motivation theory relies on what psychologists call the 'third drive'. This suggests that businesses need to stimulate the intrinsic motivation which occurs when someone gets satisfaction from an activity itself, without threats or rewards from the outside. He identified three factors of the **self-determination theory** that motivate people:

Autonomy: Workers need to be autonomous in order to be more motivated, which means that businesses need to provide an environment that permits employees to shape their own professional lives. This is done through flexibility of businesses; flexibility on when, how, who and what their employees do.

Mastery: Businesses need to provide learning opportunities for their employees, where they will be able to be innovative. Employees will gain mastery when they are given tasks that matter to them and are neither too easy nor too difficult.

Purpose: People are motivated when they are able to see benefits of their work. In order to achieve this, businesses need to emphasise their purpose, and show the workers that they contribute to this purpose, which will in turn increase their motivation.

Types of financial rewards

Salary: Regular fixed lump-sum payment to staff.

Advantage(s)

- Provides job security
- Workers know that they will receive a regular income

Disadvantage(s)

- Employees might not always be maximally motivated and productive
- They know that if they do more or less the same amount of work every month, they will receive their fixed salary; this can reduce productivity

Wages: Staff is paid per hour of work (daily or weekly).

Advantage(s)

- In case workers need to stay over hours, they will receive extra payment
- workers feel their work is being valued

Disadvantage(s)

- The pay workers receive is not linked to the amount of output they receive; therefore, they might 'go slow' in order to make sure they work over hours to receive more income

Wages: Staff is paid per unit/batch of output.

Advantage(s)

- Workers know that if they are more productive, they will be rewarded for that
- They see that their work has a monetary value

Disadvantage(s)

- Workers might concentrate more on quantity produced and less on quality
- This might increase costs for the business as quality check/assurance systems would need to be put in place

Commission: Staff is paid with respect to their sales results – an employee gets a percentage for each unit sold.

Advantage(s)

- The very nature of the financial reward is the advantage
- Workers will try to achieve the best sales results possible, which would result in a higher financial reward, while the business benefits from higher sales

Disadvantage(s)

- External factors affecting sales (recession, inflation) affect the income of the workers, which is demotivating; there's nothing they can do in case they can't sell more goods because of recession or inflation
- Financially oriented, staff might make arrangements with customers that put the organization in a disadvantageous position. (a banker might give out a short-term loan to a business without previously checking whether the business can pay for it, which is disadvantageous for the bank)

PPP (profit-related pay): The income of the employee depends on the profitability of the company.

Advantage(s)

- It can be motivating for the workforce
- If the business shares the profit of the whole organization with the staff, this gives them a sense of ownership over the business and belonging. The success of the company = their success.

Disadvantage(s)

- External factors affecting sales (and thus profitability) of the business automatically affect employees, which can prove to be demotivating as they have no power over the factor causing decreased sales.

Types of non-financial reward

Empowerment: Usually takes the form of managers giving their employees more responsibility and involving them in (or giving them) decision-making (powers).

Advantage(s)

– Employees see empowerment as motivating – Giving them more responsibility and involving them in the decision-making process usually makes them feel motivated, as they are glad to see that their contribution is valuable to the business. They also see the opportunity for promotion in the future as a result of empowerment.

Disadvantage(s)

– There is a danger of the employee making decisions that can put the business in a disadvantageous position.

Teamwork: Involves putting employees in groups where employees are encouraged to work collaboratively with each other in order to fulfill a task..

Advantage(s)

– Workers might feel stimulated by others in the group, which increases their productivity – Working in a group also initiates feeling of belonging and common effort which can also be motivating (refer to Maslow's theory)

Disadvantage(s)

– When teams fails, the whole organization suffers – Disputes between employees in a team can reflect on the whole of the organization. Not every organization can use this non-financial reward (consider different corporate structures).

Job enrichment (type of job enlargement): This is an attempt to give employees greater responsibility and recognition by expanding their role in the production process; involves giving an employee more work to do of a similar nature..

Advantage(s)

– Having more recognition for their work motivates the workers (check different motivation theories)

Disadvantage(s)

– This non-financial reward cannot be used in all contexts – Not all employees feel motivated by this. In some organizations, low-skilled workers that do repetitive jobs would not usually be interested in this type of reward.

Job rotation (type of job enlargement): This involves an employee changing jobs and tasks they do from time to time, in order to give them a greater sense of the whole production process..

Advantage(s)

– This can be very motivating for the workforce, as they are able to see how the tasks they work on everyday are important for the whole of the business.

Disadvantage(s)

– Job rotation might be costly for the business – In order to allow workers to work in different departments, they will need training.

2.5 Organisational Culture



Organisational culture the values, attitudes, beliefs, meanings and norms that are shaped by people and groups within the organisation

Levels of corporate culture

According to Schein, there are three main levels of corporate culture in a business:

Surface manifests: These are examples of organisational culture that can easily be seen by a wide range of stakeholders. For example: artefacts, furniture, tools, ceremonies (e.g. singing the company song), business slogans etc.

Organisational values: These are located below the surface manifestations of organisational culture. They are consciously thought out and written down in words, for example in the **mission** and **vision statements**.

Basic assumptions: These are the actual culture of the organisation. They represent the totality of individuals' beliefs and how they then behave. It is the atmosphere of the business that is only well-known to the employees that actively participate in creating this culture.

Types of organisational culture

Power culture: There is a central source of power which is responsible for decision-making. There are rules and procedures within the business and these are overridden by the individuals who hold power when it suits them. This culture is characteristic of small to medium sized businesses where a single owner founded the firm and is still very much in control.

Role culture: In this culture, decisions are made through well-established rules and procedures. It is usually associated with bureaucratic businesses. Power is associated with a role an employee has. In contrast with power culture, power lies with the roles that individuals play rather than with the individuals themselves.

Task culture: In this culture, power is given to those who can accomplish tasks. Power lies with employees with expertise (rather than with a specific role). Teamwork is common, and teams are composed and dissolved as the work changes. Typical of project-based organisational structure and democratic to laissez-faire leadership style.

Person culture: There are a number of individuals in the business who have expertise but who don't necessarily work together particularly closely. The purpose of this culture is to support those individuals. (e.g. lawyers, accountants, doctors and so on)

Culture clashes

A culture clash happens when there are **culture gaps**: the differences between the current culture and the culture that is desired by certain stakeholders. It is a common occurrence when new employees enter the organisation or when companies merge together. Clashes can also occur due to differences in degrees of formality, languages, leadership styles, organisational structures etc.

Some of the consequences of culture clashes may include:

Sense of division: employees focus on the differences between the employees from merging companies rather than on their common purpose and many similarities

Higher labour turnover: dissatisfied with the new organisation and fearful that they may not have place in it, many employees begin to seek new jobs

Decreased profitability/bankruptcy: due to bad communication, unhealthy climate in the business, productivity and motivation fall

Having a corporate culture can therefore have certain advantages and disadvantages:

Advantages

- It provides a sense of identity for employees, which increases motivation and productivity.
- Workers identify with other employees, which is beneficial when it comes to teamwork.
- Employees are more committed.
- It allows employees to understand what is going on around them, which can prevent misunderstanding in instructions.

Disadvantages

- Employees may not accept it: no matter how much certain values such as hard work and responsibility are touted, if employees show contrary behaviour to the corporate culture, it hurts the company.
- It is tough to change: if the shareholders of a business decide to make changes, it threatens employees' identity. Some may see opportunity in these changes but other might fear a loss of status.

2.6 Industrial/employee relations

Collective bargaining

The term **collective bargaining** is used to describe the negotiation process between the employer and employee representatives on the terms and conditions of employment in a particular business.

Possible reasons for dispute may be:

Different interests: Workers have their own personal interests such as higher wages, more flexible hours etc. On the other hand, managers are more concerned with the interests of the business; how to produce more efficiently, how to improve cash flow etc.

Change: Any sort of change (e.g. new technology, new leadership style etc.) may not be welcomed by the workforce and can cause stress and resistance.

Poor communication: Messages passed along the communication channels can cause misunderstandings.

Different values: Workers and managers may see the world and their business in it differently.

What happens when negotiation fails?

On the one hand, there are certain measures **employees** can take in order to express their dissatisfaction:

Work to rule: This occurs when workers do not carry out any duties that are not in their employment contract. In other words, the staff only carries out tasks explicitly stated in their contract, which results in the tasks not being carried out efficiently.

Go slow: This approach involves workers deliberately slowing down production while still working within the terms of their contract.

Overtime ban: This ban limits workers' hours to the agreed contract of employment for normal hours. It is usually used by employee representatives to demonstrate to management that the workforce is determined to take further collective action, such as strikes, if their demands are not met.

Strike action: This is the ultimate sanction used by the workforce, involving a stoppage in the production process, which can prove disastrous for a business.

On the other hand, there are also certain actions **employers** can take against their employees:

Changing work standards and piecework rates: This can have the effect of making the employees' tasks more difficult or reducing their earnings unless they work a lot harder.

Lock-outs: This involves employers closing the factory for a period of time. Employees' wages may not be paid during this period. This action might adversely affect the public image of the company.

Dismissal: In some cases, employers might threaten employees with dismissal. Each country usually has laws that set out the criteria under which it is unfair to dismiss employees for taking industrial action.

Approaches to conflict resolution

Arbitration: Inviting an independent third party, the arbiter, to come in to conciliate the dispute. Both sides outline their positions and provide evidence, which will be assessed and the arbiter will make a judgement. Both sides then need to respect the decision.

Industrial democracy: Running an organisation with the participation of the workforce. For example, sharing ownership of the means of production or having trade union representatives in company boards and governing bodies.

No-strike agreement: This happens when a trade union agrees not to undertake industrial action unless procedural steps have first been undertaken. This usually happens when the management team has agreed to certain conditions of the employee representatives.

Single-union agreement: Recognising one union as the only representative of employees. This saves managers the difficulties of negotiating with several unions.

Resistance to change

What causes resistance to change?

Fear: Employees are afraid of changes because they do not know how they will be affected personally.

Lack of skills: Employees might not have the skills necessary to perform in the changed environment. They might feel like they are not going to be given proper training that would prepare them for the new challenges.

Poor communication: The sense of fear is increased if the management communicates its ideas and desires poorly to the employees.

Insufficient reward: Employees often perceive that implementing changes requires them to do more work for no increase in compensation.

ACCOUNTS AND FINANCE

3

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3.1 Sources of finance

Note: Never use vague terms such as “money” in your exam! “Money” can refer to many different concepts like investment, profit, cash etc. The examiner assumes that you studied for the exam - when they read “money” instead of “profit” it could really lower your grade by showing that you are not familiar with the terminology.

Businesses have different types of expenditures:

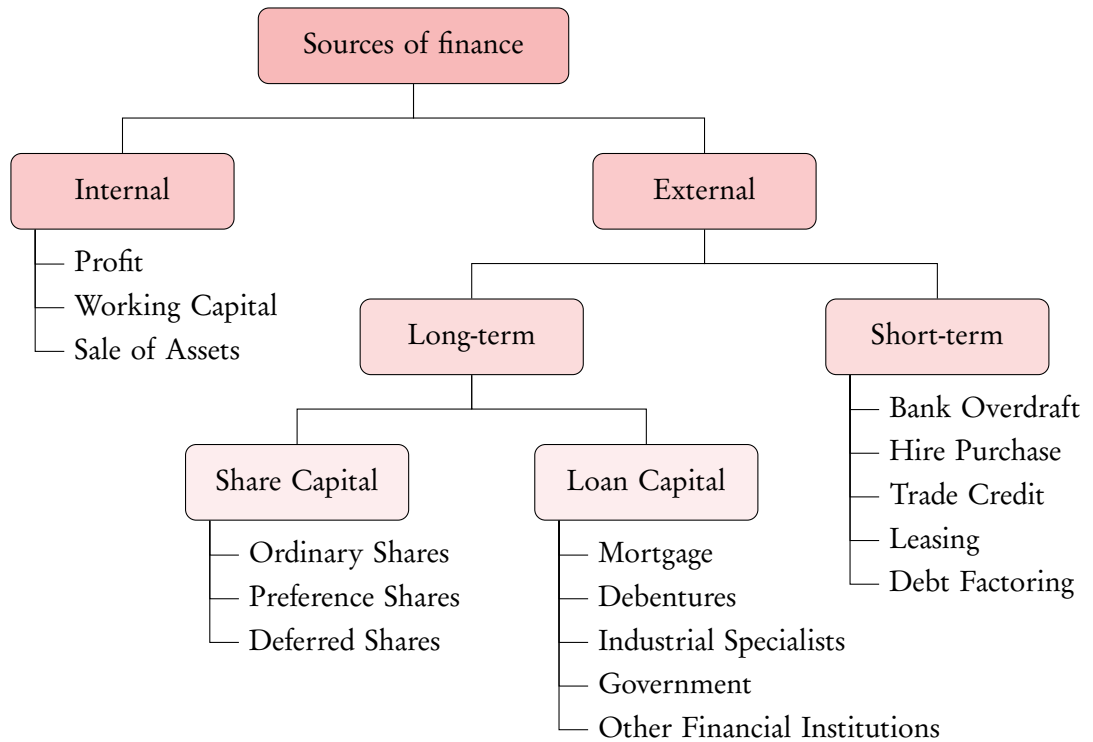


Capital expenditure firms’ investments in new equipment (e.g. machinery, vehicles, office buildings etc.) firms need to carry out their business activities

Revenue expenditure payments for goods and services which have already been consumed or will be in the near future (e.g. wages, raw materials, fuels etc.)

Here is an overview of all possible sources of finance for any firm:

Figure 3.1: Sources of finance



Internal sources of finance

Internal financing can only be used when a business is established; it needs to earn revenue through trading activities. If a firm has no revenue, it has no internal sources of finance. An advantage of internal sources of finance is that they are cheap - unlike with other sources, the business does not need to pay interest as it uses its own funds to finance activities.

Internal sources of finance are:

Profit: Retained profit is profit after tax that has not been returned to the owner. This is the most crucial source of finance for any business - around 65% of all funding comes from **retained profits**.

Working capital: a measurement of short-term financial health of a firm. It is defined as **current assets** (such as products in stock, customers' delayed payments for goods a firm sold which we call credit) minus **current liabilities** (such as firms' delayed payments for supplies they bought from suppliers).

Sale of assets: Some established businesses might be able to sell some unwanted assets to raise finance (like machinery, land or buildings it no longer requires). A good option in that case could be sale and leaseback.

External long-term sources of finance

Share capital

For a limited company, share capital is likely to be the most important source of finance, since this source of finance raises very large amounts of financial capital. Once shares have been sold by a company, the buyers of those shares are entitled to a share in the profits of the company (i.e. dividends). The shares of PLC's are sold in a special share market called the stock market, whereas shares of ltd.'s are sold privately. Generally, one vote is allowed for each share owned. The voting happens annually and shareholders vote on either re-electing the existing board of directors or replacing them. There are three types of shares that a business could issue:

Ordinary shares: The most common type of share issued. The size of the dividend depends on how much profit is made and how much the directors decide to retain in the business. When a share is first sold, it has a nominal value shown - its original value. However, share prices change as they are bought and sold again and again.

Preference shares: The owner of these shares receives a fixed rate of return when a dividend is declared, and usually they are held by the share owners of the business. They can be redeemable if there is a possibility of the business buying them back from their owner.

Deferred shares: These are not often used. The founders of the company usually hold these. These shareholders only receive a dividend after the ordinary shareholders have been paid a minimum amount.

Loan capital

Debentures: The holder of a debenture is a creditor of the company, not an owner. This means that holders are entitled to an agreed fixed rate of return, but have no voting rights and the amount borrowed must be repaid by the expiry date.

Mortgages: Only limited companies can raise funds from the sale of shares and debentures. Smaller firms need long-term finances to purchase the premises, a purpose which mortgages are designed for. It is usually a long-term loan from a financial institution (like a bank) and the lender must use land or property as security on the loan. (*Note:* Mortgages are specialised long-term loans **only** for the purchase of premises, not machinery for example)

Industrial loan specialist: These are specialised organisations that provide funds for businesses. Some of them are venture capitalists that often invest their own funds in businesses that have a potential, but are still considered too risky by banks for example. In return, they ask for an equity stake.

Government assistance: There might be business start-up schemes developed by local or central governments of countries in order to provide small start-up businesses with a small amount of income for a limited period of time. These might include lower taxes for start-ups. (*Note:* This type of funding cannot be a major source of finance for a firm!)

Other financial institutions: This could include a long term loan, which will be repaid over a number of years. Businesses might be asked to present a business plan to secure the loan.

External short-term sources of finance

Bank overdraft

Bank overdraft is probably the most important source of finance for most businesses. The amount by which a business goes overdrawn depends on its needs and the time. For example, a business might have sold a lot of its products to customers, but needs to wait for them to pay, and at the same time has to pay suppliers, so it overdraws. Interest is paid only when business overdraws.

Hire purchase

This method is often used by smaller businesses to purchase plants and machinery. The buyer (a business) places an order for a machine it needs to the supplier (another business). Then, an agreement with a financial house is made- the financial house will pay in the full price of the machine to the supplier, and the buyer will pay back in instalments to the financial house over a pre-set period of time (including interest). The machine is not legally owned by the business until the very last instalment is paid to the financial house- so, if the buyer fails to repay, the financial house can repossess the item.

Trade credit

Businesses usually buy raw materials, components and fuel and pay for them at a later date, usually within 30-90 days.

Leasing

A lease is a contract in which a business acquires the use of resources such as property, machinery or other equipment in return for regular payments. In this type of finance, the ownership never passes to the business that is using the resource. The item is leased for a predetermined amount of time and at the end of that period, the business is given the option of then buying the resource.

Advantages

Hire purchase

- Quick and easy to acquire equipment

Disadvantages

- Interest rates are higher
- The good can be taken away from the buyer if their payment is late

Trade credit

- An interest free source of finance
- The cost of goods can be higher if paid for at a later date
- Delaying the payment can result in a poor relationship between the firm and its suppliers

Leasing

- No large sums of money need to be allocated for the purchase of the equipment
- Useful when equipment is used occasionally
- Maintenance is not the responsibility of the user
- In the long term, it is more expensive than the outright purchase
- Interest rates are higher
- Not able to secure any loans with another institution on assets that are leased

Factoring

When a firm sells its products, it issues an invoice stating the amount due. Debt factoring involves a specialist company (called a factor) providing finance against these unpaid invoices. So, when a debtor fails to pay its bill in time, the company turns to the factor and asks for the return of these funds, which the factor does immediately. However, when a customer pays the bill in full, the factor would usually keep 20% of the value of the invoice.

3.2 Investment appraisal



Investment the purchase of capital goods used in production of other goods (e.g. machinery, vehicles). It is an expenditure by the business that is likely to yield a return in the future

Why do businesses invest?

The simple answer is because they have to. Most businesses use plant, machinery, equipment, vehicles and other capital goods because without them businesses could not operate. Even when a business is established, investment will continue because capital goods wear out and need to be replaced. This type of investment is called **autonomous** investment. Most businesses carry out new investments (**induced** investment), because they would like to increase their market share, or to satisfy the increase in demands for example.



Investment appraisal describes how a business might objectively evaluate an investment project to determine whether or not it is likely to be profitable. It also allows business to compare different investment projects

There are two (three if you are a HL student) main quantitative methods a business might use when evaluating projects. These can be based on:

- **Capital cost:** the amount of money spent on the new investment
- **Net cash flow:** the amount of money the business expects to receive each year over the life of the investment project minus the estimated running cost

Payback period

Payback period indicates the amount of time it takes for a project to recover or pay back the initial outlay.

How do I calculate and present it in the exam?

Table 3.1: Payback Period for Project A (\$)

Year	Payback	Net Cash flow
0	(1 000 000)	(1 000 000)
1	(900 000)	100 000
2	(750 000)	150 000
3	(500 000)	250 000
4	(200 000)	300 000
5	50 000	250 000
6	250 000	200 000
7	450 000	200 000

$$\text{Payback Period} = \frac{\text{Payback in last negative year}}{\text{Net cash flow in first positive year}} \times 12 = \frac{200000}{250000} \times 12 = 9.6 \text{ months}$$

Thus, Payback in exactly 4 years and 9.6 months.

What do all these numbers mean?

Net cash flow column will be given to you in the case study. It is the cash flow the business over the years. Payback column is what you use to calculate in what time the project will be repaid. You start with 0 (year in which business purchased project A) and the number is negative as that represents expenditure. In this case, it cost \$500.000. We use brackets to indicate that it is a negative number. In year 1, it is expected that the business will have a cash influx of \$100.000 – so, what we do is simply add that to the initial expenditure. We repeat this over and over again until we reach a year under the ‘payback’ column that’s positive or zero. This means that in that year, with the expected cash influx given, we have repaid investment in full (in our example, that is year 4). Now we know that we expect to repay project A in year 4, but we do not know in exactly how many months. So, we divide the ‘payback’ amount for that year by the expected cash flow for that year (in this case these are numbers 0 and 150). We then multiply all this by 12. In our case, the payback period is exactly 4 years and 9.6 months.

If we used this method to appraise different investment projects, we would choose the investment that pays back the fastest.

This is the official layout the IB wants you to follow. So, whenever you have to present payback period, present it like this!

Average rate of return (ARR)

ARR measures the net return each year as a percentage of the capital cost of the investment.

How do I calculate and present it in the exam?

Table 3.2: Average rate of return for Project A (\$000)

Year	Net Cash flow
0	(50)
1	10
2	10
3	15
4	15
5	20
Net profit	$70 - 50 = 20$
Net profit per annum	$\frac{20}{5} = 4$
ARR	$\frac{4}{50} \times 100 = 8\%$

Again, this is what the examiner expects from you when it comes to presenting ARR, so present it this way.

What do all these numbers mean?

Net cash flow column will be given to you in the case study. It is the cash flow businesses expected over the years. Again, you start with 0 and since the number is negative it represents expenditure (in our case \$50000). In the net profit section, all we did was add up all the expected cash influx in each year and then subtract the value of the investment. Then we calculated the net profit per annum - what the profit of the firm will be in those five years after subtracting the value of the investment (in our case $\$20000/5$ years= $\$4000$). Then we calculate the ARR using the formula:

$$\text{ARR} = \frac{\text{Net return profit per annum}}{\text{Cost of the investment}} \times 100$$

We got that the ARR is 8%.

If we used this method to appraise different investment projects, we would choose the investment that has the highest average rate of return.

Don't worry about memorizing this formula - it will be in your formula booklet in the exam.

Net present value (NPV)

The NPV method is very realistic, as it makes use of discount tables which show us how much the future earnings are worth in today’s terms. So, this method makes use of the discounted cash flow, instead of the net cash flow we used in the previous 2 methods. Thus, it shows the effect of time on the rate of return of an investment project.

How do I calculate and present it in the exam?

Table 3.3: NPV for project A at 20% discount rate (\$000)

Year	Net Cash flow	Present value
0	(20)	(20)
1	5	$5 \times 0.83 = 4.15$
2	8	$8 \times 0.69 = 5.52$
3	10	$10 \times 0.58 = 5.8$
4	12	$12 \times 0.48 = 5.76$
Present Values	$4.15 + 5.52 + 5.8 + 5.76 = 21.23$	
Net present value(NPV)	$21.23 - 20 = 1.23$	

What do all these numbers mean?

The case study will tell you what discount rate to use (all the discount values will be provided in your formula booklet). So, what you need to do is multiply every year’s net cash flow with the number from the discount table. After doing that, we sum up all the values and we get the present value of the predicted net cash flow for every year. Finally, to find the NVP, subtract the value of the investment from the present value cash flow.

If we used this method to appraise different investment projects, we would choose the investment with the highest NPV.

Advantages

Payback period

- Simple, cheap, not time consuming
- Indicates when the investment will be paid off

Disadvantages

- Ignores the profitability of a project
- Does not take into account figures for net cash flow

ARR

- Clearly shows the profitability of the project
- More realistic

- All the figures for net cash flow are predicted
- Ignores the time dimension
- Does not take the effect of time on the value of money into account

NPV

- Very realistic
- All the figures for net cash flow are predicted
- Ignores the time dimension
- Calculating is the most complex

Qualitative factors influencing investment decision

Human resources: Some investment projects might affect the staff greatly. For example, if a business invests in plant automation, it might mean mass redundancies or the workforce may become scared for their jobs, dropping their motivation.

Availability of funding: Finding the appropriate source of finance is essential.

Government legislation: For example, a business may have to install anti-pollution equipment to bring down its emission levels, to conform to government laws.

Business confidence: Entrepreneurs, managers and businesses tend to have different attitudes and cultures from each other. For example, cautious, non-confident entrepreneur may delay or abandon possible investment projects.

Ethical considerations: Making unethical investments might affect business' brand image and profits.

3.3 Working capital



Working capital the amount of money needed to pay for the day-to-day trading of a business. It consists of liquid assets that can quickly be turned into cash minus the money owed by a business, which need to be paid in the short term.

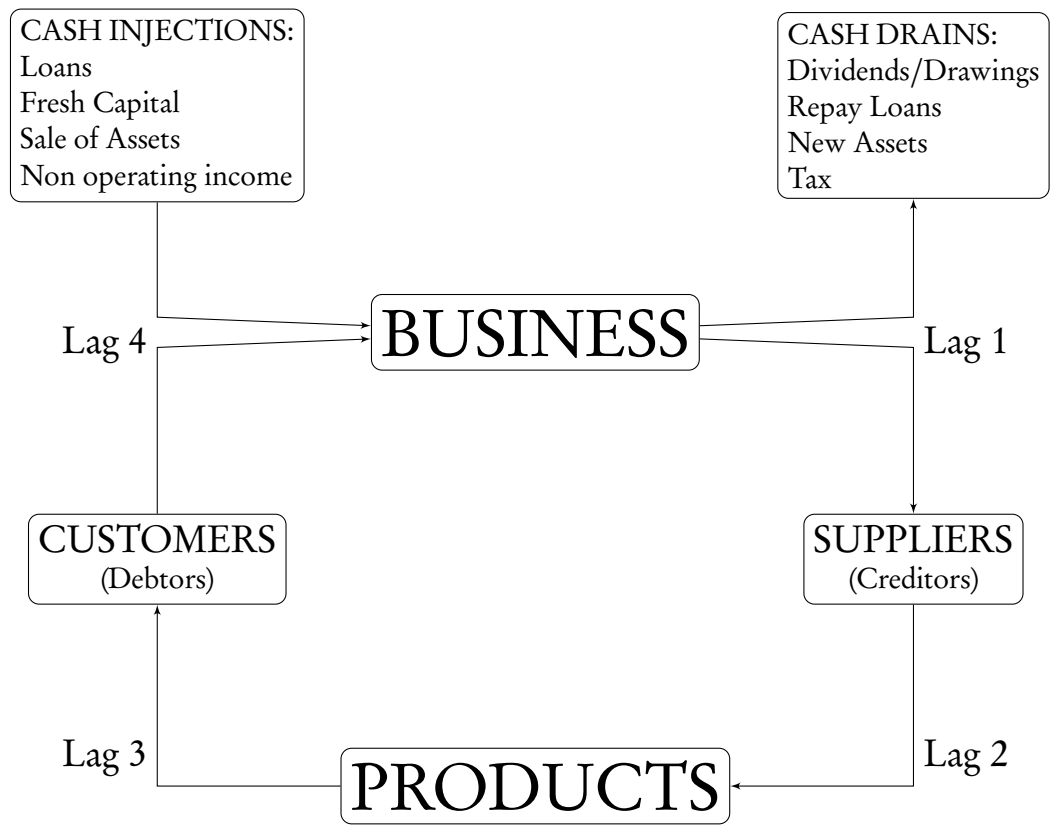
$$\text{Working capital} = \text{current assets} - \text{current liabilities}$$

The working capital cycle

The **working capital cycle** shows the cash flows into and out of the business. As you can see, there are lags between the receipt of the cash and payments made by a business.

Lag 1: Businesses purchase raw materials, components, fuel etc. from suppliers on credit. The length of the lag depends on the creditor - it is up to 90 days before the payment must be made.

Lag 2: Businesses use resources to produce different goods. Some goods take longer to produce than other ones, depending on the nature of the activity.



Lag 3: Finished goods are first stored by a business before they are sold to customers, which increases warehouse costs. On the other hand, storage of finished goods helps businesses to respond quickly to increases in demand.

Lag 4: After the goods are sold to customers, there is another lag - customers could ask for a credit, making their payment delayed by 30-90 days.

Problems with working capital

Poor control of debtors: This is either due to businesses failing to collect debts on time or due to them giving credit to firms that fail, leaving the debt unpaid. This could be corrected by running a credit control system or hiring a credit rating agency.

Overstocking and understocking: Keeping too much stock means the business is being run inefficiently - the managers failed to see that less stock could be held. This will increase costs and prolong lag 3, mentioned above.

Overtrading: This refers to business having an insufficient working capital for its level of turnover. For example, a business might accept orders from customers, but be limited by trade credit limits set by its suppliers. Therefore it cannot order enough stock to complete the orders. Overdraft might be a solution, but bankers might refuse because of the risk of failure of the business.

Overborrowing: Businesses can borrow too much in the short term and trade too much credit from suppliers. If the business fails to pay on time, it can lose the business

discounts for paying on time or even refusal by suppliers to supply in the future. Overdraft might be a solution but bankers might refuse for the same reason as above.

Downturns in demand: When the economy goes into recession, orders and sales of businesses fall, because businesses do not react quickly enough. This can cause overstocking which can also lead to cash flow problems.

Cash flow



Cash flow a continuous movement of cash in and out of the business

Cash flow forecast the prediction of all expected receipts (inflows) and expenses (outflows) of a business over a future time period, which shows the expected cash balance at the end of each month

Be careful: cash is not just cash (i.e. physical banknotes and coins) but also everything that can be expressed in form of cash, such as sales, bank loans, over heads, tax, insurance etc.

Note: cash flow and profit is not the same thing! Profit is calculated as total revenue minus total costs. Cash flow represents all the cash going in and out of the business.

This is how a cash flow forecast should be presented in the exam:

Table 3.4: Cash forecast for ABC Ltd.

Inflows	Jan	Feb	March
Sales	1000	1200	1000
Bank Loan	1500	-	-
Am Capital	500	-	-
Total	3000	1200	1000
Outflows			
Advertising	200	200	200
VAT	30	50	30
Insurance	70	70	70
Overheads	100	100	100
Packaging	200	400	200
Total	600	820	600
Net Cash flow	2400	380	400
Opening balance	0	2400	2780
Closing balance	2400	2780	3180

As you can see, it is done for every month. In the exam, they will specify how many months you will have to include. In our example, we have months January, February and March. Firstly, we need to present inflows- in this case we have cash from sales, bank loan and own capital introduced by the owner. We deal with outflows similarly- in our case we have advertising, VAT tax, insurance, overheads and packaging. The next step is to subtract outflows from inflows, which gives us net cash flow for that month. Next thing on the statement is opening balance - this is the closing balance of the previous month. Since in January we assumed there is no closing balance (or that it was 0), we say that opening balance is 0. Summing up net cash flow and the opening balance, we get the closing balance for a particular month.

Why is not having enough cash problem for a business? This is because businesses need cash to operate on day-to-day basis.

What can cause cash flow problems?

Overtrading: It occurs when business does not have enough cash and other liquid resources to finance its production and sales.

Investing too much in fixed assets: It can lead to insufficient cash funds, which paralyses the business as it is no longer able to produce. Therefore, it is better to lease some of the necessary fixed assets and have enough liquid assets to support production and sales.

Stockpiling: Cash tied up in stocks is unproductive. Therefore, stock control is an important feature of managing liquid assets.

Allowing too much credit: This means that the business is waiting for liquid assets to be able to support future production. Therefore, better control of debtors is necessary for healthy cash flow.

Taking too much credit: It might result in difficulties in obtaining future supplies from suppliers.

How can cash flow be improved? This can be done in a few ways such as using overdraft facilities, selling off/ reducing stocks, using a factoring company, selling off non-vital fixed assets, introducing some fresh capital etc.

3.4 Budgeting



Budget an economic plan a business makes in order to target revenue or costs it must aim to reach over a given period of time

The bigger the business, the more difficult it is to control its finances. Therefore, it is important to plan expected future revenues and costs. Setting objectives and targets helps control a business, as it helps coordinating many activities in the company, forces businesses to think ahead and also motivates employees.

Variations

We said that the budgets are important control and monitoring tools. But, how do we actually see whether these have been achieved? Through **variance analysis**. A **variance** is the difference between the figure that the business has budgeted for and the actual figure.

Variations can be **favourable** or **adverse**. Favourable variations occur when the actual figures are better than the budgeted ones. For example, if costs were planned to be \$20000, but turned out to be \$18000, there is a favourable variance of \$2000, as actual costs were lower than planned.

Only basic calculations, like one above, can be asked in the exam.

The final step in variance analysis is thinking about how these results can be used in decision-making. It is important to identify the reasons why variations have occurred, so that they can be taken into account in future strategic planning.

3.5 Final accounts

Profit and loss account (a.k.a. Income statement)

A **profit and loss account** is a financial document showing a company's revenue/income and costs/expenditure over a particular period of time, usually a year.

How do I present it in the exam?

	\$000
Sales revenue	***
Cost of goods sold	***
	<hr/>
Gross profit	***
Expenses	***
	<hr/>
Net profit before interest and tax	***
Interest	***
Tax	***
	<hr/>
Net profits after interest and tax	***
Dividends	***
Retained profit	***

What does each of these categories mean?

- **Sales revenue:** This is the income from selling goods and services. We calculate it by multiplying the number of goods sold by their price.
- **Cost of goods sold:** This figure includes direct costs such as raw materials and wages of labour used to produce those products. It also includes the indirect costs such as rent the company pays for the factory.
- **Gross profit:** This is the profit a company made by selling goods/services it produces, and we calculate it by subtracting cost of goods sold from sales revenue.
- **Expenses:** These are overheads that are not involved in the production of goods and services, but still represent costs the firm needs to account for.
- **Net Profit before Interest and Tax (NPBIT):** We get this number by subtracting expenses from the gross profit. NPBIT is the profit made by a company as a result of its ordinary trading activities and is often regarded as key indicator of trading performance.
- **Interest and tax:** Interest refers to interest the business is paying for loans it took from financial institutions. Tax is obviously what business needs to pay to the government.
- **Net profit after interest and tax:** We calculate this number by subtracting interest and tax from NPBIT.

- **Dividends:** This is the share in profit shareholders of the company get based on the size of their share in the company.
- **Retained profit:** This is the final figure of the profit and loss account. If it's positive the firm made a profit and if it's negative the firm made a loss.

Balance sheet

A **balance sheet** is like a photograph of the financial position of a business at a particular point of time. It contains information about the:

Assets: the resources a business owns and uses. They are usually divided into **fixed** and **current** assets. Fixed assets have a lifespan of more than one year and are used by the business in the production process. Current assets are assets that are likely to be changed into cash within a year.

Liabilities: the debts of a business; basically what the business owes to other businesses (suppliers), individuals or institutions. Liabilities are a source of funds for the business. They can be **short term** or **long term**.

Capital: the financial means introduced by the owners of the business. It is another source of funds and can be used to purchase assets.

So, the value of business' assets needs to be equal to business' liabilities and capital. Why? Because any increase in total assets needs to be funded by an equal increase in capital or liabilities.

How do I present it in the exam?

ABC limited:

Balance sheet as of May 31, 20**,

- Fixed Assets
- Current Assets
 - Stock
 - Debtors
 - Cash
- Current Liabilities
 - Creditors
 - Short-term borrowing
 - Tax

- Dividends
- Net current Assets = $CA - CL$
- Total Assets less current liabilities = $FA + CA - CL$
- Long-term liabilities
 - Loan, Mortgage
- Net Assets = $FA + CA - CL - LL$
- Shareholders Equity
 - Retained profit
 - Share capital

For Balance, Net Assets = Shareholders Equity.

What each of these categories mean?

Fixed assets: assets which are not expected to be sold within 12 months. These include property, plants and equipment, which are **tangible** assets. These can also include **intangible** assets, such as goodwill, copyrights, trademarks etc.

Current assets: assets that are likely to be changed into cash within one year. These include stocks, debtors and cash.

Current liabilities: debts of the business that need to be paid within one year. These include creditors, short-term borrowing, tax and dividends.

Net current assets (a.k.a working capital): calculated by subtracting current liabilities from current assets.

Total assets less current liabilities calculated by subtracting current liabilities from the sum of current assets and fixed assets.

Long-term liabilities: such as mortgages to acquire new buildings or long-term loans.

Net assets (total assets less current liabilities): long-term liabilities

Share capital: as explained, capital is the financial means the owners of the business introduce. In this case, when owners buy shares, this becomes a source of funding a business can use to buy assets.

Retained profits: the amount of profit that the business has made in previous years.

You can tell that everything is balanced when all assets equal all liabilities, so when net assets equal capital. Note: We sometimes refer to long-term liabilities, share capital and retained profits as **capital employed**.

Calculating depreciation

Depreciation indicates how much of fixed asset's value has been used up. Machinery the business bought a year ago will not have the same value now. This is because the asset is used in production. Two methods of calculating depreciation:

1. **Straight line method.** This method assumes that a fixed asset depreciates by the same value every year.

$$\text{Depreciation allowance} = \frac{\text{Original cost} - \text{residual value}}{\text{Expected life (years)}}$$

Thus, if a piece of machinery for ABC Ltd originally costs €28 000 and the residual value is estimated at €4 000 and expected life at 4 years, depreciation allowance would be:

$$\text{Depreciation allowance} = \frac{€28000 - €4000}{4} = €6000$$

So, how do we see what the value of a fixed asset will be in those 4 years? We make a table, where following the idea of the straight line method, we subtract the same depreciation allowance each year. This is how you should present it in your exam:

Year	Depreciation Allowance (euro)	Net book value (euro)
0	–	28000
1	6000	22000
2	6000	16000
3	6000	10000
4	6000	4000

2. **Reducing balance method.** This method assumes that the depreciation charge in the early years of an asset's life should be higher than in later years, which is more realistic. To do this, the asset must be written off by the same percentage rate each year.

Year	Depreciation Allowance (euro)	Net book value (euro)
0	–	28000
1	= 28000 × 40% = 11200	16800
2	= 16800 × 40% = 6720	10080
3	= 10080 × 40% = 4032	6048
4	= 6048 × 40% = 2419	3629

3.6 Ratio analysis

Ratio analysis is a form of interpretation of the financial data that was previously presented in form of final accounts. Financial data is used by a range of stakeholders to assess the performance of a business. Since different stakeholders are interested in different aspects of the financial accounts, ratio analysis is used to extract that specific piece of information and assess it.

3.6.1 Profitability ratios

Profitability ratios help show how well a business is doing and they are focused on profit, capital employed and total revenue. The profit figure alone is not a useful performance indicator because it is necessary to look at the value of profit in relation to the value of turnover or the amount of money that has been invested in the business.

- **Gross profit margin:** shows the gross profit made on sales turnover.

$$\text{Gross profit margin} = \frac{\text{gross profit}}{\text{sales revenue}} \times 100$$

Higher gross margins are preferable to lower ones. It is possible to rise the gross profit margin by raising turnover relative to cost of sales, for example, by increasing price. Note: Businesses that have high stock turnover tend to have lower gross profit margin compared to those businesses whose stock turnover is lower.

- **Net profit margin:** measures how well a business controls its overheads and cost of sales. If the difference between gross margin and net margin is small, this suggests that overheads are low. This is because net profit equals gross profits less overheads.

$$\text{Net profit margin} = \frac{\text{net profit before interest and tax}}{\text{sales revenue}} \times 100$$

Again, higher margin is better than lower.

3.6.2 Liquidity ratios

Liquidity ratios illustrate the solvency of a business. In order to determine whether or not it is in a position to repay its day-to-day debts, the short-term assets and liabilities need to be focused on. The point of these ratios is to show whether the business always has enough current assets to cover any immediate bills that arise (current liabilities).

- **Current ratio:**

$$\text{Current ratio} = \frac{\text{Current assets}}{\text{current liabilities}}$$

If the current ratio is equal to 1, it means that the business has the exact amount of current assets to cover the current liabilities. However, this is not a favourable state because if a sudden increase in current liabilities occurs, the business will not be able to afford it and might run into bankruptcy. Having too high of a ratio is also not good. For example, if the current ratio is 2, that means that the business has twice as many current assets to cover current liabilities, which means that the business is not using the resources efficiently. Managers should aim at a current ratio of 1.5.

- **Acid test ratio:** This is a more severe test of liquidity as it excludes stock from current assets.

$$\text{Acid test ratio} = \frac{\text{Current assets-stock}}{\text{Current liabilities}}$$

If the ratio is less than 1, this means that the business' current assets less stock cannot cover the current liabilities of the business. Checking this ratio is important because stock are not guaranteed to be sold and they may become obsolete or deteriorate, which means that business will no longer be able to rely on stocks to improve their working capital. Therefore, firms should aim to have an acid test ratio at around 1.

3.6.3 Efficiency ratios

Efficiency ratios are used to measure how effectively a business employs its resources.

- **Stock turnover:** measures how quickly a business uses or sells its stock. It is generally considered desirable to sell stock as quickly as possible and we assess it by calculating how many days it takes the business to sell the stock.

$$\text{Stock turnover} = \frac{\text{Average stock}}{\text{Cost of goods sold}} \times 365$$

The number we get will be in days. Higher stock turnover means that profit on the sale of stock is earned more quickly, which allows these businesses to operate on lower profit margins. Lower stock turnover might be due to piling up of stock, slow moving stock, a lack of control over purchasing etc.

- **Return on capital employed (ROCE):** compares the profit made by the business with the amount of money invested. If the return is high, this means that the business is profitable, which would yield high dividends that current shareholders and potential investors are on the lookout for.

$$\text{ROCE} = \frac{\text{NPBIT}}{\text{Capital employed}} \times 100$$

The higher the ROCE, the bigger the return.

- **Creditor days:** This ratio measures how quickly a business pays its debts to its suppliers and other short term creditors.

$$\text{Creditor days} = \frac{\text{Creditors}}{\text{Total credit purchases}} \times 365$$

Higher creditor days means that it takes the business longer to pay for its debts, which can be a benefit, but the business needs to be careful not to damage its relations with the supplier (he might not allow credits in the future). In general, creditor days should be higher than debtor days; this will improve cash flow.

- **Debtor days:** measures the efficiency of a business' credit control system. It gives the average number of days it takes to collect debts from customers.

$$\text{Debtor days} = \frac{\text{Debtors}}{\text{Sales revenue}} \times 365$$

The debtor days ratio should be as low as possible, as this would mean that it takes the business a very short period of time to collect its debts.

3.6.4 Gearing ratio

The **gearing ratio** shows the relationship between the loan capital and share capital of the business. In other words, how much the company relies on internal and external sources of business when it comes to choosing the source of finance to invest in the business.

$$\text{Gearing ratio} = \frac{\text{Loan capital}}{\text{Total capital employed}} \times 100$$

If this ratio is high, we say that the company is **high geared**, which means that the business relies much more on loan capital than share capital when it comes to investing. When the number is low, we say that the company is **low geared** and it relies on share capital much more.

Advantages

- The burden of loan repayments is reduced (the business does not need to pay interest, because it is using share capital more).
- Volatile interest rates are not a problem anymore (if the interest rates increase, there is no issue as the business does not rely on loans that much).
- Ownership not diluted.
- Once loans have been repaid, the company's debt is much reduced (this is because dividends are signed off whenever there is profit).

Disadvantages

- Dividend payments have to be met indefinitely (which might not be such a big disadvantage, as the shareholders can agree on lower dividends in order to increase retained profits and thus offer more investment in the business if it proves to be quite profitable).
- Ownership of the company can be diluted (selling shares puts the company at risk of being bought by an external party).
- Interest payments need to be met.
- Changing (volatile) interest rates can cause the repayments to increase, worsening the financial situation of the company, causing insolvency).

MARKETING

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4.1 Role of marketing



A market any set of arrangements that allows buyers and sellers to exchange goods and services.

e.g. There is the smartphone market, the car market, the airline market and so on.

Marketing the management process involved in identifying, anticipating and satisfying customers' needs profitably.

Market size the total sales of all producers within one market, measured either by volume (i.e. the number of units sold) or by value (TR of all the companies).

If we wanted to examine the size of the smartphone market, we would add up the output sold by all companies that sell smartphones and get the market size.

Market share the percentage of all the sales within a market that are held by one company, it can be measured by volume or by value.

Apple sold the most smartphones in the smartphone market in 2015 – that means that Apple has the largest market share and is the most influential company in that market. The larger the market share, the more influential the company is in a market.

Market worth the percentage of sales growth within the market as a whole, from one year to the next.

Simply put, has the number of mobile phones sold increased or decreased from 2015 to 2016.

The **role of marketing** is to identify, anticipate and satisfy customers' needs profitably. Companies that were able to anticipate the needs of their customers, managed to increase their market share and become more influential in the market. If the marketing departments of companies in a particular market do their job well, they will experience growth of the market and their shares in the market will increase accordingly. Therefore, marketing is one of the vital business functions for any company.

In order to satisfy, anticipate and identify customers' needs, companies adopt different orientations:

Product orientation: Business is focused on the production process and the product itself. They believe that a high quality product will satisfy customers and therefore will sell well.

Market orientation Business is focused on continually identifying, reviewing and analysing customers' needs. They believe that once they identify the needs of the customers, they will be able to accordingly produce a product that will satisfy their needs.

Asset-led marketing: Business bases its marketing strategy on its strengths instead of purely on what the customers want.

4.2 Marketing planning

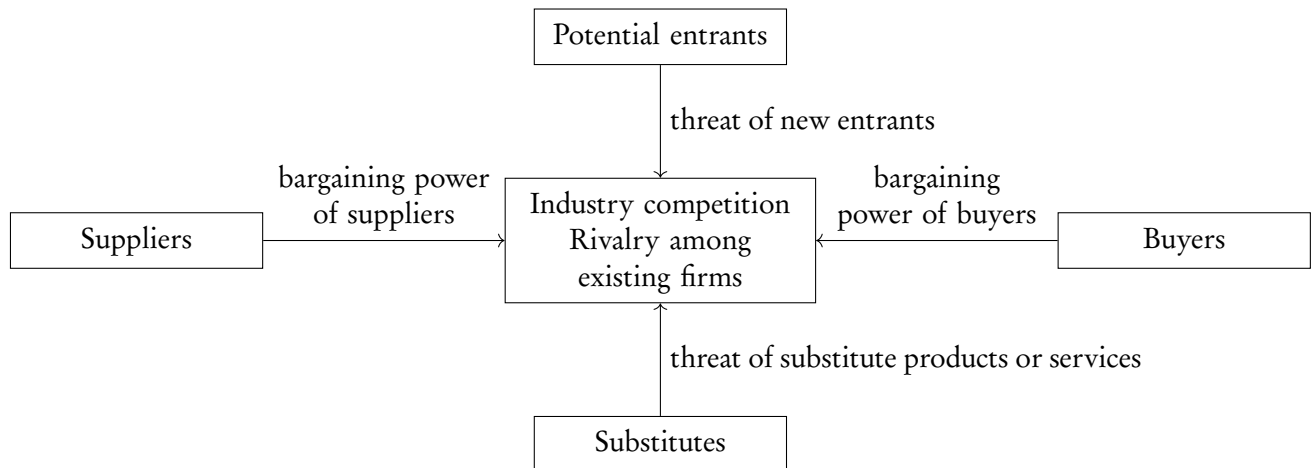
4.2.1 Marketing mix

Marketing mix of **7P's** refers to the elements of the marketing strategy of a firm that are designed to meet the needs of its customers. These elements are:

1. **Product:** Businesses need to make sure that their product meets the needs of their customers. This means businesses need to pay attention to a range of features of the product such as size, shape, design, colour etc.
2. **Price:** The pricing policy usually depends on the market at which the business is aiming. Some businesses may decide to set their price high because they believe that their customers perceive that product as exclusive, rather than because the production costs are high.
3. **Promotion:** There are many promotion methods that businesses can use to communicate with their customers.
4. **Place:** Be careful with this one! Place obviously does refer to the physical location of the business and how that affects people's purchasing habits, but it also refers to the means of distribution of a product to the customers since they must get to the right place at the right time.
5. **People:** This element refers more to services, meaning the customers will judge the people (i.e. employees) that are providing the service.
6. **Process:** Again, it refers more to services and it involves mechanisms, activities and procedures involved in delivering the service.
7. **Physical Evidence:** It refers more to services, and it involves the appearance of the environment in which the service is provided.

4.2.2 Porter's 5 forces analysis

Michael Porter developed a model called **Porter's 5 forces** used to analyse the competitive environment in which businesses operate. This is how it looks like:



The bargaining power of suppliers: Like any other business, suppliers want to maximise their profits, too. The more power the supplier has, the higher the price it can charge its customers. For the business, it is better to have low bargaining power of suppliers, as this will increase the competitive position of the business.

The bargaining power of buyers: Customers want to buy the product at a low price. They want a good relationship between the price and the quality of the product they're buying. If the customers have high bargaining power, that means they can force down the prices, which conflicts with businesses' profit maximisation objective. Therefore businesses aim for their low bargaining power.

The threat of new entrants: If any business can enter a market easily and leave it again when the profits are low, it becomes more difficult for existing businesses in the industry to charge high prices and make high profits. The businesses want the threat of new entrants to be low, thus, they aim to create barriers to entry.

Substitutes: The more substitutes there are for a particular product, the fiercer the competitive pressure on the business making the product. If the number of substitutes is low, businesses will be able to charge higher prices for their products and make higher profits.

Rivalry among existing firms: The degree of rivalry among existing firms in an industry will also determine prices and profits of any single firm. Therefore, it is better for the rivalry to be low in order to assure higher profits for themselves.

4.2.3 Market research

Secondary market research

Secondary market research means that simple collection of data needs to be carried out. The data collected can be both **internal** (from within the business, e.g. previous market research reports, sales figures, stock movements etc.) and **external** (from outside the business, e.g. information about competitors, data from customer services on received complaints etc.)

Primary market research

Primary market research involves collecting primary data. This data needs to be collected by the researcher since it was non-existing before the primary research was conducted. Some companies don't have the capacity to carry out primary research, so they hire market research agencies, which are experts in conducting such studies. There are many different methods of collecting primary data, such as using questionnaires, organising interviews or focus groups in order to obtain the information they need.

Advantages

Primary research

- Relevant data can be collected
- The business that collects the data is the only one with the access to it

Disadvantages

- Expensive and time-consuming
- The sample taken might not represent the views of the market
- If the research method is flawed, the findings will be flawed as well

Secondary research

- Easy, quick and cheap
- Several sources may be used
- Historical data may be used
- Data is not always in a convenient form
- Data may be out of date and not relevant
- Researchers must be aware of bias

Sampling

The **target population** of our primary research might be very big, therefore businesses decide to sample their target population. Samples should be **representative**: they should have the same characteristics as the target population. This means that we want the customers in our sample to have similar opinions on our product as all the customers that buy that product. There are different types of sampling businesses can use:

Random sampling: Gives each member of the target population equal chances of being chosen.

Stratified sampling: Also a random sampling method. However, before the samples are drawn, the sample population is divided into groups (called strata) based on the previous knowledge about the target population. Once those groups are set, researchers choose customers at random that fit in those strata.

Quota sampling: Researchers divide the population into groups that share similar characteristics (e.g. age, gender) and then have pre-set number of people in each group they have to interview.

Cluster sampling: Involves separating the target population into 'clusters' usually in different geographic areas. A random sample is then taken from each cluster.

Snowball sampling: Used in special occasions, when firms are looking for specialists in a particular field they want to employ. This is based on pre-existing network of these specialists that the firm approaches and asks to work for them.

Advantages

Random

- Representative

Stratified

- Representative
- Each subgroup provide quality results

Quota

- Cheap and not time-consuming

Cluster

- Useful when results are needed quickly
- Useful for results about how the opinions vary geographically

Snowball

- Firms will get the results they are looking for

Disadvantages

- Time-consuming and costly
- Assumes that all the members of the target population are homogeneous

- Time-consuming and costly

- Not representative

- Representativeness of the sample is assumed
- Assumes that all the members of the target population are homogeneous

- Not representative

Market segmentation and targeting



Market segmentation a process of breaking down a market into sub-groups with similar characteristics

Why would a business want to segment its market?

By identifying different market segments, businesses should be able to understand its customers better. It can prevent products being promoted to wrong people and customers may feel their needs are being better targeted which could result in higher customer loyalty, among other reasons.

How do businesses segment their market?

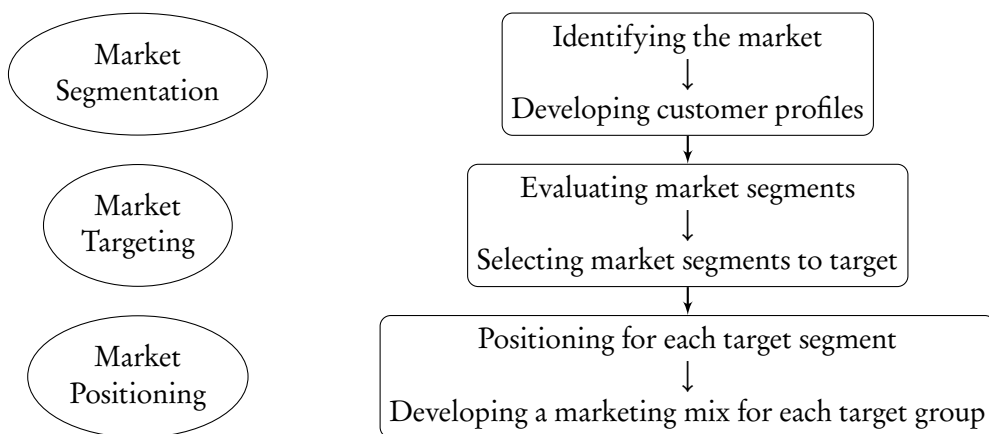
Geographically: by where customers live. Very useful for businesses that operate in multicultural markets and see where buying patterns are influenced by region.

Demographically: by their gender, social class, age, income, ethnicity, religion.

Psychologically: by their lifestyle and personality.

Behaviourally: by knowing how they act - do they make repeat purchases, buy on impulse or want high quality products?

Planning marketing strategy

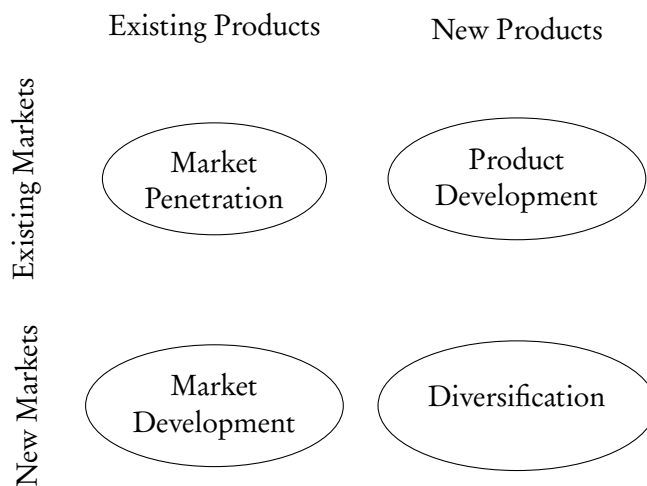


Planning marketing strategy starts with **segmenting the market**. The business will try to **identify** how it might segment its markets and choose the segmentation method in accordance to their product. The next step is **developing customer profiles**, where the business will find out exactly who its customers are in each market segment. This is done through customer profiling, which is the analysis of the characteristics of customers in

the market or market segment. After gathering this information, the business enters the **market targeting process**. As part of this, businesses first need to **evaluate the market** and decide which market segments are worthwhile pursuing. This again depends on the type of product the company produces. **Selecting market segments** is the next step—once the business has evaluated market segments that were of interest at first, business will choose which market segments will be targeted. The last step is **market positioning**, which means that the business will need to **position its product within the market** (usually in terms of quality and price). As part of this process, businesses will need to **form a marketing mix for each segment and market they targeted**. This means, alter their product, pricing strategy and place element of the marketing mix in order to profitably satisfy customers’ needs.

Ansoff Matrix

Businesses want to grow, increase sales, find new markets and gain competitive advantage in their industry. Ansoff Matrix tells us that there are 4 possible strategies a firm could choose in order to do so:



4.3 Product

4.3.1 Product life cycle

The **Product life cycle (PLC)** shows the different strategies in the life of a product and the sales that can be expected at each stage. There are a few stages in this cycle:

Development: The product is being researched and designed. Prototypes and models are made and these undergo a series of tests so that the business can see how it will behave once it is in the hands of a customer. A large number of products at this stage will fail. At this point, costs are very high and no revenue is generated as the product is still not available at the market.

Introduction: The product is launched. Sales are slow-growing and promotional and distributional costs rise. Prices might be set high in order to cover for these costs, or they might be set low in order to break the market.

Growth: Sales begin to grow as the product is established and the customers are fully aware of the product, and the costs are likely to decrease. At this stage, the product becomes profitable, and it is likely the competitors will try to launch substitutes, thus business needs good promotion and pricing strategy.

Maturity and saturation: The growth in sales gradually levels off. The market slowly becomes saturated as new competitors enter the market. This will force some companies to exit the market or extend the life of their product.

Decline: For the majority of products, sales eventually decline, usually due to the change of customers' tastes, new technology or introduction of new products. The product at this point can still be profitable, if little is spent on promotion and production, and a relatively high price can be charged.

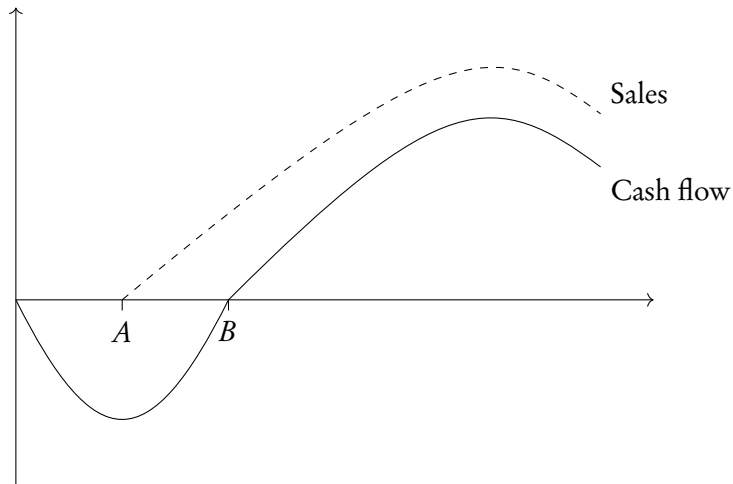
4.3.2 Expansion strategies

Expansion strategies are used by businesses to extend the life cycle of their products. This is because the product is most profitable during the mature period. In order for them to keep the product in that stage as long as possible, businesses launch an expansion strategy as soon the product enters the saturation stage and the sales start declining.

Expansion strategies can involve:

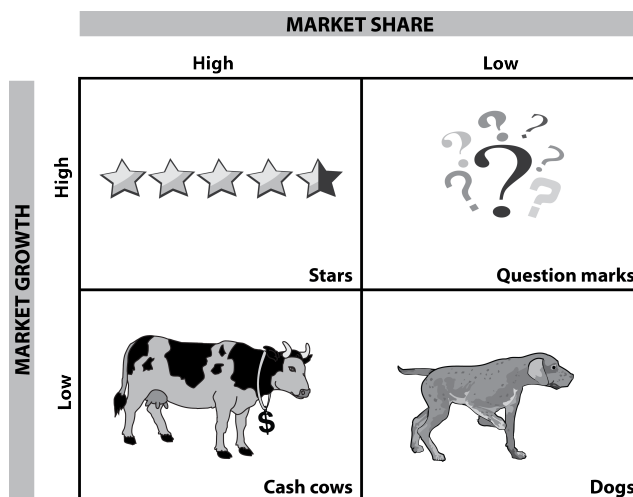
- Finding new markets for existing products
- Developing a wider product range
- Gearing the product towards specific target markets
- Changing the appearance/packaging/format/design of a product

4.3.3 The relationship between PLC and cash flow



Before product launch, a business will spend to develop the product while no money is coming into the business from sales, therefore making cash flow negative. At launch, at point A, a product begins to sell. Cash flowing into the business is likely to be smaller than the cash flowing out since the business might be spending a lot on promotion and distribution. In the growth period, as the product becomes more established, the revenue will be greater than the spending of the business, which is the point B. The sales rapidly increase, making the gap between the revenue and spending bigger and therefore making cash flow positive. Cash flow will be at its highest during the mature period, as the revenue the product earns will be the highest. During the decline period of PLC, the sales decrease and so does the cash flow.

4.3.4 BCG Matrix



Boston Consulting Group Matrix (BCG Matrix) is used in order for businesses to analyse their product portfolio better. The model takes two things into consideration when analysing how well managed the product life cycle is:

1. **Market growth:** How fast is the market for the product growing?
2. **Market share of the product:** How strong is the product within its market?

Using these criteria, the products of a business can be positioned into one of these four categories:

Stars: This is a product with high market share in a growing market, therefore it is profitable. However, the business will need to invest further in the product as it needs to cope with the growing market and growing competition, which will increase promotion costs. Due to all these costs, the cash flow might be nearly zero with a tendency of increasing in the positive direction. Connecting this model to the PLC, we could expect to see this product in the growth period.

Cash cows: This is a product with high market share in a slow growing market, thus it is well positioned in the market. The customers are aware of the product, it is highly profitable and cash flow is positive, as there is no need for oppressive promotion strategies anymore, and therefore costs decrease. However, due to the slow growing market, business needs to employ an extension strategy. The business wants to milk the cash cow, as this is when most of the profits are made. Connecting this model to the PLC, we could expect to see this product in the mature period.

Question marks: These products have low market share in a fast growing market. This product is not the market leader but rather a market follower. Therefore, the business has to decide whether or not such a product is worthwhile investing in and if it should be withdrawn from the market. At this point, the product is not profitable due to its low market share and the cash flow is likely to be negative. We would expect this product to be in the introduction period of the PLC.

Dogs: These products have a low market share in a slow growing market. This means that it is not likely that there will be an increase in sale of the product. The cash flow at this point is positive as not a lot is invested in a product. These products are in the decline period of the PLC.

4.3.5 The importance of branding



A brand a name, term, sign, symbol, design or any other feature that allows consumers to identify the goods and services of a business and to differentiate them from those of competitors

When developing a brand, it is important to find a **Unique Selling Point (USP)**. The USP is a feature of a product that makes different from other products in the market and what makes people want to buy the product.

There are several types of brand:

Manufacturer brands: Brands created by the producer of goods and services. (e.g. Gillette razors or Samsung laptops)

Own-label brands: These are products which are manufactured for wholesalers or retailers by other businesses, but the wholesalers and retailers sell the product under their name. (e.g. Albert Heijn does not produce AH pasta or AH beans, but sells them)

Product (individual) branding: Businesses can brand individual products and give them individual brand names (e.g. a large number of washing powder brands sold by the same producer Henkel: Ariel, Tide, Persil etc.)

Family branding: Family branding is when a business has a brand name which includes a number of different products. (e.g. Mars chocolate bar has its own energy drink as well)

Company (corporate) branding: This is when a business' name is used as brand name. This is similar to the own-label brands, but in this case the business that sells and produce the products names the brand after the name of the company.

Branding is used in order to:

- Create brand loyalty
- Differentiate the product
- Gain flexibility when pricing
- Help recognition

4.4 Price

4.4.1 Different pricing strategies

The main factors affecting pricing strategies are **costs**, **the market** and **competition**.



Cost-based pricing deciding on the price primarily based on the costs of production.

Cost-plus pricing: Involves calculating the average cost of production of a product and adding a MARK-UP for profit.



Market-oriented pricing deciding on the price based upon an analysis of the conditions in the market at which a product is aimed. These pricing strategies are suited for market-oriented businesses.

Penetration pricing: This is used by businesses trying to gain a foothold in a market, either with new or established products. The idea is to lower the price and thus encourage retailers and customers to purchase the goods in larger quantities. This is done as consumers become more encouraged to develop the habit of buying the product so that when prices eventually rise, they will continue purchasing the product. Because of its high costs, this strategy is used by well established businesses or by new businesses who are willing to make losses in short run.

Market skimming: Involves charging high price for a new product for a limited period. The aim is to gain as much profit as possible for a new product while it remains unique in the market. It means usually targeting the most profitable segment of the market first, and then selling it to the wider market at a lower price. There are two reasons for market skimming: maximisation of revenues before competitors come up with substitutes and generating revenue in short periods so that investments in the product can be made later.

Loss leader: These are products priced at very low levels in order to attract customers (lower than the average costs of production). The company thus makes a loss on every product that is a loss leader. However, business expect that the loss made on loss leaders will be more than compensated by the additional profit from selling other products.

Price discrimination: This pricing occurs when a firm offers the same product at different prices when consumers can be kept separate. It can be time based (e.g. the price of train ticket may depend on time of the day) or market based (e.g. different prices for different market segments, like when students can get a discount on laptops).

Psychological pricing: A common example is charging just a little lower than a round figure (\$9.99 instead of \$10), believing that this will influence the customer's decision to buy the product.

Promotion pricing: Involves a reduction in the standard price for particular group of consumers. This strategy usually supports already existing pricing strategies of businesses (e.g. seasonal sales).



Competition-based pricing when prices charged by competitors are the major influence on the price a business will charge for its product. It is used mostly by businesses that face fierce competition.

Going rate pricing and price leadership: Occurs in markets where businesses are reluctant to set off a price war by lowering the prices and are concerned about a falloff in revenue if prices are raised. They examine competitor's prices and choose a price broadly in line with them. It also occurs that one business dominates the market and acts like a price leader, with other firms follow the pricing policy of that company. Companies following going rate will often be very frustrated that they cannot influence the prices of their product. Therefore, the strategy is fierce branding to differentiate the product create brand loyalty among consumers. Consequently they will have larger flexibility when determining prices.

Destroyer (predatory) pricing: The aim is to eliminate opposition, by cutting prices for a period of time long enough for the rivals to go out of business (in many countries it is forbidden by law).

4.5 Promotion



Promotion the attempt to draw attention to a product or business in order to gain new customers or to retain existing ones.

There are two different types of promotion:

1. **Above-the-line promotion:** promotion through independent media such as TV and newspapers. These allow a business to reach a wide audience easily. It is also called **advertising**, which is a form of communicating between a business and its consumers where the business uses images or sounds in the media to encourage the purchase of the products.

Types of advertising media:

Television: appropriate for big businesses that sell consumer goods to mass markets.

Newspaper: appropriate for mass markets and for targeting a particular audience or market segment.

Radio: can be used for both, targeting a wide audience or a local audience (through a local radio station).

Posters and billboards: appear on variety of locations and carry small messages. The billboard grabs attention better if it is large and uses vivid imagery.

Internet: the cheapest form of advertising that helps target very large groups of people due to increased number of internet users nowadays.

2. **Below-the-line promotion:** any promotion that is not advertising. It is carried out by methods over which the business has direct control, which allows the business to aim the message at consumers who are either known to them or who have been chosen in advance.

Types of below-the-line promotion:

PR (Public relations): an attempt by a business to communicate with groups that form its public, such as government, shareholders, employees and customers. The aim is to increase sales by improving the image of the business and its products (through e.g. press conferences, press releases, donations, sponsorships etc.)

Merchandising: an attempt to influence consumers at the point of sale. The aim is to encourage sales of a product and speed up the rate of stock turnover.

Sales promotion: the incentives offered to consumers to encourage them to buy goods and services. They are intended to give short-term boost to the sales of a product (through e.g. coupons and loyalty cards, product endorsements, product placing, free offers etc.)

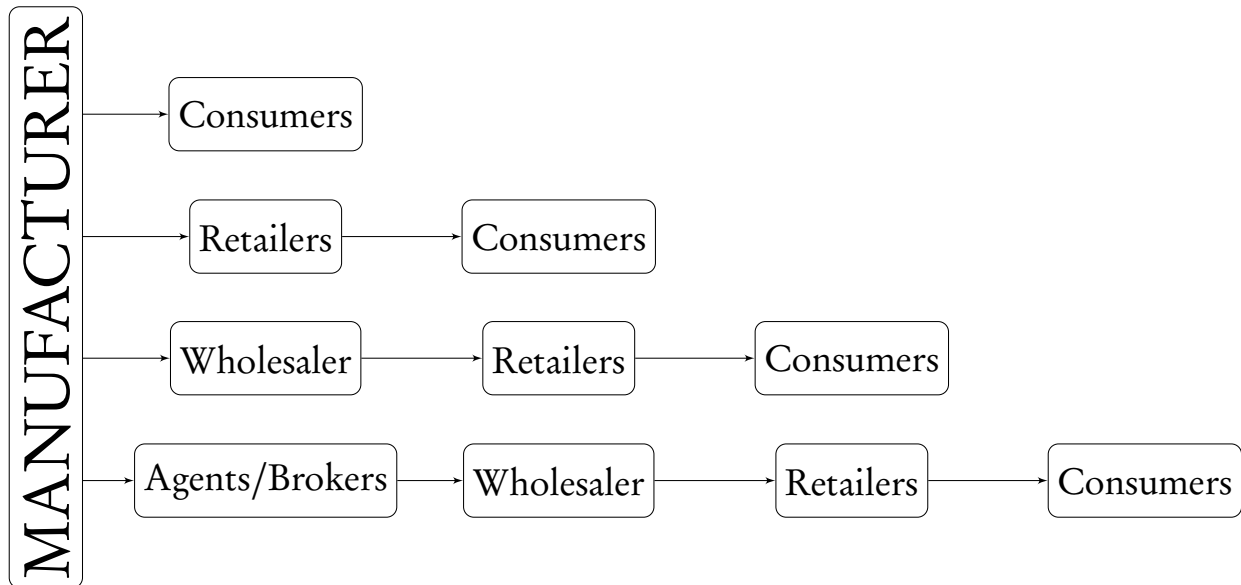
Direct selling: also called personal selling, occurs when a company's sales team promotes a product through personal contact (e.g. over the telephone, meetings etc.)

Direct mailing: Sending information about a product or product range through the post

Exhibitions and trades

4.6 Place

Place involves both physical location (i.e. where the product could be bought) and how it gets there (i.e. distribution channels). The **distribution channel** of a product in a consumer market is the route it takes from the manufacturer to the consumer. The diagram below shows all possible routes a product can take during this journey.



As you can see from the diagram, these routes differ by the number and type of marketing intermediaries involved. These are businesses or individuals which acts as a link between the producer and consumer:

1. **Manufacturers to consumers**
2. **Manufacturer to consumer via retailer**
3. **Manufacturer to consumers via wholesalers and retailers**
4. **Manufacturer to consumer via agents and/or wholesalers and retailers**

How do businesses choose a particular distribution channel and what determines their advantages/disadvantages?

Costs: The longer the supply chain, the greater may the cost to the final consumer be.

Control: Some manufacturers want to control the distribution channels they use carefully.

Legal factors: The law may affect how a product is distributed.

4.7 International marketing

Refer back to the SWOT analysis (Topic 1).

4.8 E-commerce



E-commerce (Electronic commerce) is concerned with the buying and selling of products using electronic systems (e.g. over the internet).

There are two main types of e-commerce: **B2B (business to business)** and **B2C (business to consumers)**.

What are the costs and benefits of e-commerce to firms and consumers?

Benefits

Costs

Firms

- | | |
|--|--|
| <ul style="list-style-type: none"> • Enables the business to reach a global market. • Businesses do not need to be physically close to their customers. • They can benefit from 'longer opening hours' which may increase sales. • A great reduction in costs. | <ul style="list-style-type: none"> • The competition is more fierce. • The speed of delivery becomes more important. |
|--|--|

Consumers

- | | |
|--|---|
| <ul style="list-style-type: none"> • They can easily access goods and services. | <ul style="list-style-type: none"> • Choosing from the huge number of rival businesses can be very time-consuming and frustrating. • Consumers need to have a credit/debit card to make payments. • Some consumers find it frustrating to wait for delivery. |
|--|---|

How does e-commerce affect the marketing mix?

Price: Businesses must be sure that their product is priced competitively in relation to its e-commerce rivals.

Promotion: Focused on using the internet, which is easier and cheaper for businesses

Product: It is important that businesses establish a clear USP.

Place: E-commerce businesses often have greater freedom of choice over where they locate their businesses.

OPERATIONS MANAGEMENT

5

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5.1 Production methods

5.1.1 Job production

Characteristics

- Production of a single product at a time
- Used for small orders (“One-offs”)
- Small number of units produced
- Highly skilled workforce
- Appropriate for start-ups
- Labour intensive

Advantages

- The organisation of this production method is simple
- The workforce is motivated
- Firms produce original and unique products according to the wishes of the customer

Disadvantages

- High labour costs
- Lead times can be lengthy
- May become costly once the demand for the good rises

5.1.2 Batch production

Characteristics

- Used when demand is higher and more regular
- Production consists of a number of operations
- Products are produced in “batches”
- Appropriate for manufacturing businesses

Advantages

- Flexibility: each batch can be altered to meet customers’ wishes
- Skilled workers are not needed, which decreases costs
- Machinery is more standardised, also decreases costs
- Firms can respond quickly to changes in demand

Disadvantages

- Machinery could be more complex to compensate for the lower skill levels required from the workers
- The workforce is less motivated
- Money will be tied up in work-in-progress, since an order cannot be dispatched until the whole batch has been finished

5.1.3 Flow production

Characteristics

- Production is organised in a continuous sequence
- Able to produce large quantities
- Usually the product is simplified and standardised
- Capital intensive

Advantages

- Unit costs are reduced as firms gain economies of scale
- The process is highly automated, which reduces the need for labour
- No need to stock large quantities of goods

Disadvantages

- Very high set-up costs
- No possibility of producing a wide product range and meet different customers' needs
- The workforce is not motivated
- Breakdowns are costly

5.2 Costs and revenues

There are several types of costs:

Fixed costs: costs that remain the same at all levels of output, no matter whether the business produces output or not (e.g. rent). They are also called indirect/overheads.

Variable costs: costs that increase directly as output increases (e.g. raw materials) and they are also called direct costs.

Semi-variable costs: costs that are not entirely fixed or variable (e.g. labour).

Total costs: the sum of fixed and variable costs.

$$\text{Total costs (TC)} = \text{fixed costs (FC)} + \text{variable costs (VC)}$$

Revenue: how much the business makes from sales of its products.

$$\text{Total revenue (TR)} = \text{quantity sold (Q)} \times \text{price (P)}$$

Profit: the amount of money the business is left with when all the costs are paid for.

$$\text{Profit} = \text{total revenue (TR)} - \text{total costs (TC)}$$

Note that total revenue and profit are *not* the same thing.

Contribution: the amount of money left over after variable costs have been subtracted from revenue. The money contributes towards fixed costs and profit. We can calculate either contribution per unit:

$$\text{Contribution per unit} = \text{selling price} - \text{variable costs per unit}$$

Or total contribution:

$$\text{Total contribution} = \text{total revenue} - \text{total variable costs}$$

This calculation is important as it allows us to calculate profit in a different way:

$$\text{Profit} = \text{total contribution} - \text{fixed costs}$$

Cost centres: the departments or units of business that incur (fixed) costs but do not contribute to profit directly (e.g. marketing or HR departments). They must be aware of their costs to help managers operate within the allocated budget, and they must keep their costs below the predicted value.

5.3 Break Even Analysis



Break-even analysis used to determine what quantity of a particular good a business needs to produce in order to cover all the costs of production (to “break-even”)

How do we calculate it?

1. Using revenue and costs

We first calculate total costs by adding up fixed and variable costs. Since we are interested in computing the break-even output, we will leave the variable costs as variable cost per unit time Q , representing break-even quantity, and add it up to the fixed costs. Secondly, we need to calculate total revenue, which is simply the price we are selling the good at time Q , which again stands for break-even quantity. Then, we need to equate TC to TR and solve for Q . This will be our break-even output. Once we have a break-even output, we need to multiply that by the price of the good in order to get the break-even point in the graph.

2. Using contribution

To calculate break-even output using contribution per unit we first calculate total costs by adding up fixed and variable costs. Remember that variable costs increase with the

amount of goods produced ($VC = \text{variable cost per unit} \times \text{quantity produced}$). Since we are interested in computing the break-even output, we will leave the variable costs as variable cost per unit times Q , representing break-even quantity, and add it up to the fixed costs.

Secondly, we need to calculate total revenue, which is simply price we are selling the good at time Q , which again stands for break-even quantity.

Next we equate TC to TR and solve for Q . This will be our break-even output. Once we have the break-even output, we need to multiply that by the price of the good in order to get the break even point in the graph (don't worry, the explanation of how to draw this will follow).

Here is a numerical example:

$$FC = \$60000$$

$$VC = \$40 \text{ per unit}$$

$$\text{Price} = \$100$$

$$TC = FC + VC = \$60000 + \$40Q$$

$$TR = \text{Price} \times \text{Quantity} = \$100Q$$

$$TC = TR$$

$$\$60000 + \$40Q = \$100Q$$

$$\$60000 = \$100Q - \$40Q$$

$$\$60000 = \$60Q$$

$$Q = \$60000 / \$60 = 1000$$

Break-even: $\text{Quantity} \times \text{Price} = 1000 \times \$100 = \$100000$.

Note: The IB likes tricking students. Sometimes, instead of giving you VC per unit, the IB will give you contribution per unit and ask you to calculate break-even output.

To calculate break-even output using contribution per unit, we use the formula:

$$\text{Break-even output (Q)} = \frac{\text{Fixed costs}}{\text{Contribution per unit}}$$

Using the numerical example above:

$$Q = \$60000 / (\$100 - \$40) = 1000$$

$$\text{Break-even Quantity} \times \text{Price} = 1000 \times \$100 = \$100000$$

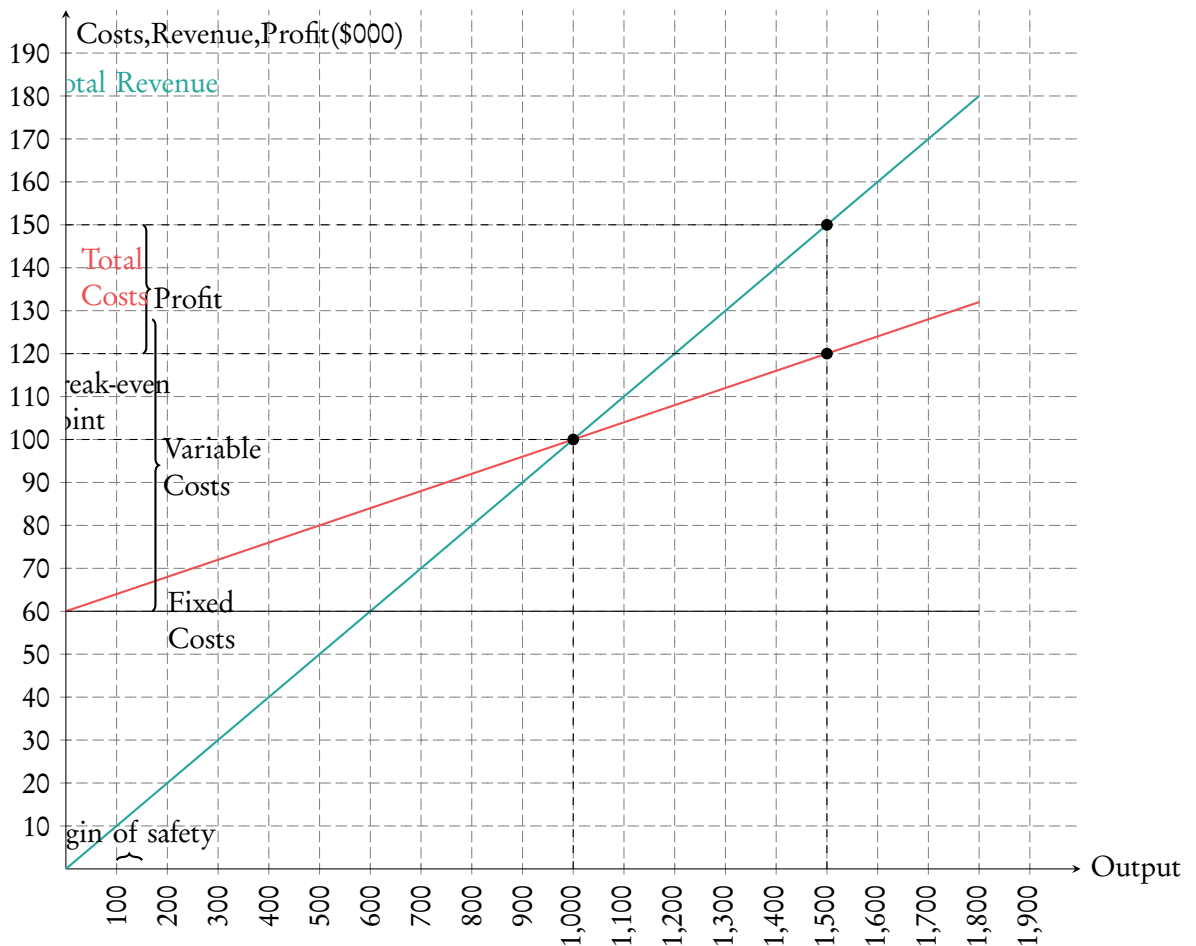
As you can see, you'll arrive at the same answer, no matter which method you use.

Margin of safety

The **margin of safety** is the range of output between the break-even output and the current level of output (assuming this level of output is above the break-even point), over which profit is made. Business would want to calculate their margin of safety in order to know by how much sales could fall before a loss is made. Naturally, the larger the margin of safety the better. We calculate it by subtracting the break-even output from the current level of output.

$$\text{Margin of safety} = \text{Current level of output} - \text{Break-even output}$$

Drawing the break-even chart



1. **Label the axes:** On the Y-axis, we have Cost, Revenue, Profit. On the X-axis we have output. Make sure to label them properly because otherwise you will not get the full points for the question, even if you have drawn all the other curves correctly.

2. **Draw the line FC:** This is always a straight, horizontal line.

3. Draw the TC line: Since TC is a sum of FC and VC, you will need to demonstrate your calculations of the points through which this line will pass. You know that one of the points this line will pass through is the break-even point (because at that point $TC=TR$). The TC line will always start at the same point as the FC and pass to demonstrate your calculations for both points!

4. Draw the TR line: Again, you know that this line will need to pass through the break-even point (because $TC=TR$ there), but where will the line start? The TR line will always start at the origin and pass through the break-even point. Again, you will need to demonstrate your calculations for both points!

5. You've found your break-even point! This is the point of intersection of the TC and TR line. Always check if your drawing (i.e. intersection point on the graph) corresponds to your calculations of the break-even output. If yes, you have done it correctly.

Other uses of break-even charts include:

Target profit: how many units of output need to be produced to generate a certain level of profit?

$$Q = \frac{\text{Fixed Costs} + \text{Target Profit}}{\text{Contribution per unit}}$$

Break-even price: how much do we need to charge for our product in order to break-even?

$$\text{Break-even price} = \frac{\text{Total Cost}}{\text{Output}}$$

Price needed to reach a target profit: what price does a business need to charge in order to reach a target rate of profit?

$$\text{Price} = \frac{\text{Profit Target} + \text{Total Cost}}{\text{Output}}$$

5.4 Quality assurance

In B&M, we define **quality** as all the features of a product or a service that allow it to satisfy customers' wants. There are multiple approaches to quality assurance:

Quality control

Traditionally, production departments have been responsible for **quality control**. They need to make sure that the product:

- Satisfies customers' needs
- Operates in the way it should
- Could be produced cost-effectively
- Could be repaired easily
- Conforms the safety standards

This is done by quality controllers or inspectors who check other people's work and the product itself **after** the product has been produced.

Total Quality Management (TQM)

TQM is an approach that focuses on quality and aims to improve the effectiveness, flexibility and competitiveness of a business. It is a method designed to prevent errors in production. The features of TQM:

Quality chains: In any business, there is a series of suppliers and customers. The chain is intact if the supplier satisfies the customer. It is broken if a person/item/equipment doesn't satisfy the customer.

Accountability and empowerment: TQM stresses the role of the individuals and aims to make everyone accountable for their performance. Empowering workers to be their own "quality inspectors" leads to increase in their motivation.

Monitoring the process: Constantly finding possible improvements

Teamwork: It is believed that, when working in a team, a greater range of skills, knowledge and experience can be used to solve the problem.

Customer views: TQM involves being committed to customers. This means that production process and product itself need to be highly responsive to changes in people's needs and expectations.

Zero defects: This policy aims to ensure every product manufactured is free from defects, which leads to increase in reputation.

Benchmarking

Benchmarking is a technique used to uncover “best” possible methods of production available and implement them. It is a part of the continuous improvement and long-term quality strategy development of the TQM approach. Some typical goals of benchmarking are for example:

- Getting to know your customers better
- Implementing new production techniques available to improve quality

5.5 Location

This syllabus point requires you to comment on the importance of location for production in a globalised world. This has already been discussed under the syllabus point E-commerce.

5.6 Innovation



Research an investigation involving process of enquiry and discovery used to generate new business ideas

Development the transformation of new ideas into commercial propositions (e.g. products, materials, systems etc.)

Why are R&D important for the business?

- Developing new products
- Reducing costs
- Improving quality
- Reducing environmental damage

5.7 Production planning



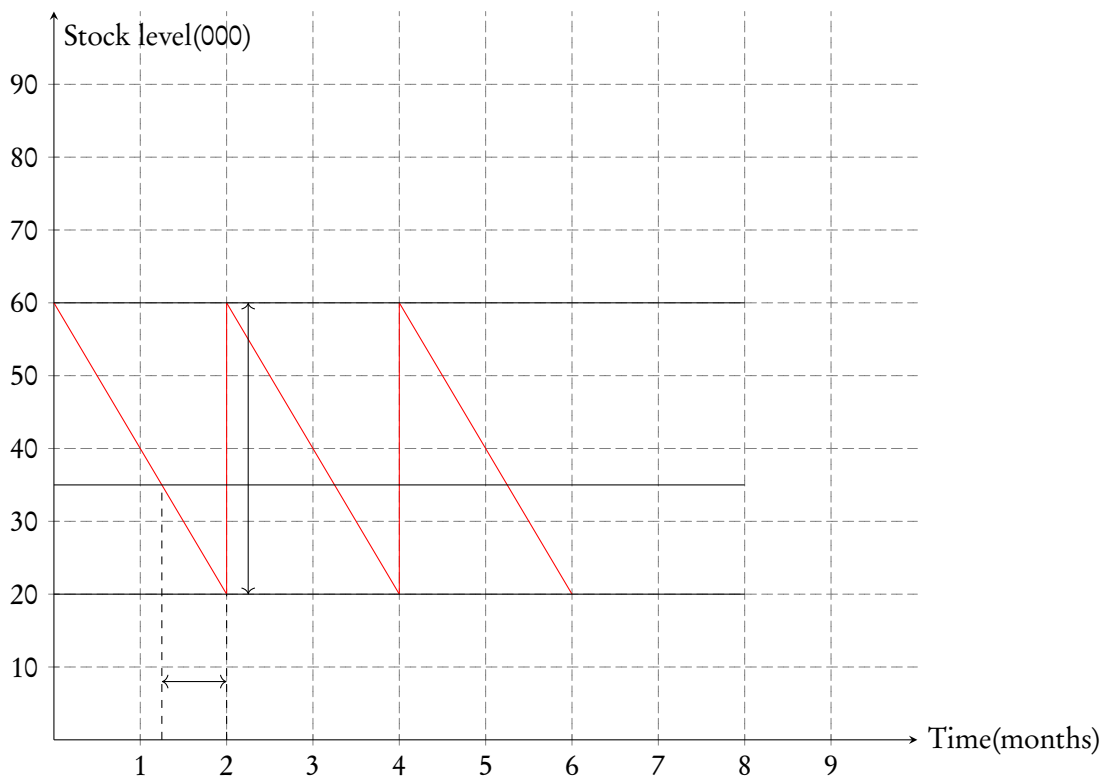
Just-in-time (JIT) a production technique highly responsive to customer orders, which uses very little stock holding.

Based on the orders of customers, the stock needed to produce the good for a particular number of customers will arrive “just in time” for the production. This means that no stock is held by the business, thus no money is tied-up in stock holding. This is the complete opposite of the “just-in-case” stock management.



Just-in-case (JIC) a production technique whereby more stock is stored just in case there is a sudden increase in demand

Controlling stock is important in order to ensure the business holds the right amount. Managers determine the maximum and the minimum stock level the business can hold, including the level at which is necessary to reorder stock. Below is an example of stock control.



5.7.1 Capacity utilisation



Capacity utilisation the use that a business makes from its resources. If a business is not able to increase output, it is said to be running at full capacity (100%).

$$\text{Capacity utilisation} = \frac{\text{Current output}}{\text{Maximum possible output}} \times 100$$

5.7.2 Outsourcing



Outsourcing hiring or contracting another business to do work that was previously done by the business itself

When asked to analyse whether a business should subcontract part of its production, your answer needs to have both a quantitative and a qualitative dimension:

Quantitative: Is it cheaper for my company to ‘make’ or ‘buy’? You can calculate this by adding up all the costs of production and dividing it by the number of units that need to be produced in order to get cost per unit. If the other business offers a lower price, the business should subcontract. If it is cheaper to make, does the capacity utilisation allow it?

Qualitative: Does the subcontracted business have bad reputation? Is it a specialist in his field? Are the cost benefits achieved?

5.7.3 Crisis management and contingency planning



Crisis management the systematic steps and efforts of an organisation to limit the damage from a sudden crisis (e.g. an accident on the premise, failure of machinery, power cuts etc.)

Since crises are unpredictable, the managers must take quick action to limit (or even prevent) damage for their stakeholders. How well this will be done depends on four factors:

Transparency: Stakeholders will want to be kept informed of what is happening. They will want to know that safety is the priority.

Communication: Senior managers will need to communicate in an objective way, despite the temptation to give biased reports to different stakeholders because they are concerned with the image and reputation of the business.

Speed: Senior managers will need to act promptly. This can be a challenge because rushed and not well-thought-out decisions will not always be the best ones.

Control: The situation should be put under control as soon as possible. This is directly concerned with limiting the damage for different stakeholders.



Contingency planning an organisation's attempt to put in place procedures to deal with a crisis, anticipating it through scenario planning

There are 4 major factors affecting contingency planning:

- Cost
- Time
- Risk
- Safety