



*Dr. Bhasa Science*

Sponsored by  
**The Science Foundation College**  
**Uganda East Africa**  
Senior one to senior six

+256 778 633682 0753 143413

**Based on, Best for Science**

[digitalteachers.co.ug](http://digitalteachers.co.ug)



Nuture your dreams



## SENIOR FIVE TERM 2

### TOPIC 1/1: Production and Market Structures

**Competency:** The learner participates in evaluating local producers by analysing data from surveys to understand the dynamics of production and market settings, and applies this knowledge to efficiently operate firms that support community development.

#### Wealth

**Wealth** is the total value of all assets owned by an individual, firm, or nation, **minus any debts or liabilities**.

#### Characteristics of wealth

- (i) **Utility:** The good or asset must have the power to satisfy a human want. For example, furniture or a refrigerator has utility because it can be used for a purpose.
- (ii) **Scarcity:** The good must be limited in supply relative to its demand. Abundant and free items like air or sunshine are not considered wealth because they are not scarce.
- (iii) **Transferability:** The good or asset must be capable of being transferred from one person to another or from one place to another. A personal skill or a degree, while useful, cannot be transferred and therefore isn't considered wealth in the economic sense.
- (iv) **Externality:** Wealth must be something external to the human body. It is something that can be owned or possessed, such as a building, a vehicle, or the goodwill of a company.
- (v) **Value-in-exchange:** Wealth must have a market value and be capable of being bought or sold. Only economic goods with a price are considered wealth.

#### Real-World Example (Uganda)

A Ugandan farmer's land is wealth because:

- It has utility (used for farming).
- It is scarce (limited fertile land).
- It is transferable (can be sold or inherited).
- It has value-in-exchange (market price in shillings).

## Production

Production can be defined as the organized activity of transforming tangible and intangible inputs (such as raw materials, labor, and capital) into finished goods or services.

## Types of Production

### Based on method

- (i) **Direct Production:** Production for a household's own use, not for exchange.

Example: A family growing its own food or making furniture for its home.

- (ii) **Indirect Production:** Production for exchange in the market, involving specialization.

Example: A baker making bread to sell to customers.

### Based on production process

- (i) **Job Production:** Producing one-off, customized products.

Example: A custom-built house or a unique piece of art.

- (ii) **Batch Production:** Producing goods in groups or "batches".

Example: A bakery producing a batch of a specific type of bread or a clothing manufacturer producing a set number of a particular style.

- (iii) **Mass Production:** Producing large quantities of standardized products using assembly lines and specialized labor.

Example: Manufacturing cars or electronics on a large scale.

- (iv) **Continuous Production:** Production runs 24/7 without interruption, often for high-demand, standardized products.

Example: Oil refining or sugar manufacturing.

## Levels of Production in Economics

- (i) **Primary Production:** Involves extraction and harvesting of natural resources.. Provides raw materials for other industries.

Examples: farming, fishing, mining, forestry

- (ii) **Secondary Production:** Involves manufacturing and processing raw materials into finished goods. It adds value to raw materials through industrial activity.

Examples: textile mills, food processing, construction, car assembly.

- (iii) **Tertiary Production:** Involves services that support distribution and consumption of goods. Facilitates the functioning of primary and secondary sectors.

Examples: transport, banking, insurance, education, healthcare, retail.

### Real-World Example (Uganda)

- **Primary:** Coffee farming in rural Uganda.
- **Secondary:** Coffee processing plants that roast and package beans.
- **Tertiary:** Export companies, banks, and retail shops selling Ugandan coffee globally.

### Specialization and division of labour

**Specialization** is a method of production whereby an entity focuses on the production of a limited scope of goods to gain a greater degree of efficiency and leaves out other activities to be done by other people or country or region.

#### Forms of specialization

- (i) **Individual:** An individual's focus on a specific skill or occupation, such as a doctor, lawyer, or engineer.
- (ii) **Occupational:** Division of labor where different individuals perform different jobs based on their interests and abilities.
- (iii) **Regional/Geographical:** Different regions specialize in producing certain goods or services. For example, Silicon Valley specializes in technology, and countries like Saudi Arabia specialize in oil.
- (iv) **National:** Countries specialize in producing goods and services where they have a comparative advantage, and then trade for others, as seen with China in electronics and Uganda in coffee.
- (v) **Firm/Business:** A company focusing on a specific product, service, or process, like a fast-food chain or a company specializing in a certain part of the production process.
- (vi) **Departmental:** A division of work within a company into specific departments, such as sales, marketing, or human resources.
- (vii) **Professional/Academic:** A field of study or work that becomes highly specialized. Examples include:
  - **Engineering:** Focusing on structural, environmental, or software engineering.
  - **Marketing:** Focusing on areas like brand management, product management, or content marketing.
  - **Mechatronics:** Merging mechanical, electrical, and software engineering.

**Division of labour** is the separation of work into distinct tasks, each performed by different workers.

## Advantages (merits) of specialization and division of labour

- (i) **Higher Productivity:** Workers become skilled at specific tasks, increasing speed and output. Example: In a car factory, one worker assembling doors repeatedly becomes faster and more efficient.
- (ii) **Improved Quality:** Specialization allows workers to master their craft, leading to better-quality goods and services. Example: A surgeon specializing in heart surgery performs with greater precision.
- (iii) **Time Saving:** Workers don't waste time switching between tasks or tools. Example: In a bakery, one person mixing dough while another bakes saves time compared to one person doing both.
- (iv) **Innovation and Technological Progress:** Focused industries often develop new techniques and machinery to improve efficiency. Example: The textile industry developed spinning machines during the Industrial Revolution.
- (v) **Economies of Scale:** Large-scale production reduces average costs per unit. Example: Mass production of smartphones lowers their price for consumers.
- (vi) **Employment Opportunities:** Division of labour creates a variety of specialized roles, opening up more jobs. Example: In agriculture, specialization leads to roles like planting, harvesting, processing, and marketing.
- (vii) **Simplified training:** Training workers for a single, simple task is easier and cheaper than training them for a variety of roles, which lowers training costs.
- (viii) **Trade and Exchange Benefits:** Nations can specialize in goods they produce efficiently and trade for others. Example: Uganda specializes in coffee exports and trades for manufactured goods.
- (ix) **It enables workers to exploit their natural talents by concentrating on particular tasks** which they can do better:
- (x) **International specialization promotes international trade.** This is because different countries utilize their resources to produce a commodity in which they can do best and exchange it with other countries.
- (xi) **Specialization increases economic interdependence between countries.** This is because different countries can be able to get what they do not have from other countries through the process of exchange.

## Demerits (Disadvantages) of Specialization and Division of labour

- (i) **Monotony and Boredom:** Workers repeat the same task daily, which can reduce job satisfaction and motivation.
- (ii) **Loss of Craftsmanship:** Since workers focus on narrow tasks, they may lose broader skills and creativity.
- (iii) **Overdependence:** If one stage of production fails, the entire process can be disrupted.
- (iv) **Unemployment Risk:** Specialized workers may struggle to find new jobs if their specific skill becomes obsolete or replaced by machines.
- (v) **Reduced Flexibility:** Workers trained in one task cannot easily adapt to other roles, limiting workforce mobility.

- (vi) **Economic Vulnerability:** Nations specializing in one product (e.g., coffee in Uganda) risk instability if global demand or prices fall.
- (vii) **Exploitation Risk:** Employers may exploit specialized workers by paying low wages since tasks require less training.
- (viii) **Health Issues:** Repetitive tasks can cause physical strain or mental fatigue.
- (ix) **It leads to over production especially when markets are limited.** This leads to wastage of resources due to excess output which is not sold.
- (x) **It leads to loss of responsibility among workers** which undermines team work. This is because each worker is concerned about his/her own tasks.
- (xi) **Interdependence:** A single disruption, like a missing worker or a broken machine, can stop the entire production line, as each part of the process relies on the others.
- (xii) **Potential for quality issues:** Due to a lack of ownership and pride in the work, quality may suffer.
- (xiii) **Resource depletion:** Specializing in the use of a specific resource can lead to its faster depletion.

### Factors (agents) of production

**Factors of production are resources** (inputs) required in the production of goods and services.

They include

#### (i) Land

**Definition:** All natural resources used in production, such as physical space, minerals, and water.

**Examples:** Timber, oil, and the physical location for a factory.

**Reward:** Rent

#### (ii) Labor

**Definition:** The human effort, both physical and mental, used to produce goods and services.

**Examples:** A factory worker's effort, a software engineer's programming, or a farmer's work.

**Reward:** Wages

#### (iii) Capital

**Definition:** Man-made resources used to produce other goods and services, including both physical and financial capital.

**Examples:** Machinery, tools, buildings, and money used to purchase resources.

**Reward:** Interest

#### (iv) Entrepreneurship

**Definition:** The ability to combine the other factors of production (land, labor, and capital) to create new goods or services. It involves innovation, risk-taking, and the motivation to start and run a business.

**Examples:** The person who designs a new product, starts a company, and makes strategic decisions to ensure profitability.

**Reward:** Profit

**Factor price** refers to the monetary reward (payment) given to the factor of production for its contribution to the production process. Examples of factor prices include; Rent, Wages, Interest and Profits

### **Mobility of factors of production**

**Factor mobility** is the ease with which a factor of production can be moved from one geographical area to another or from one occupation to another.

#### **Types of mobility of factors of production**

- **Geographical mobility of a factor of production;** is the ease with which a factor of production can be moved from one geographical area to another for example a doctor moving from Nairobi to Kampala, an Entrepreneur moving from Mable to Gulu.
- **Occupational mobility of a factor of production.** This refers to the ease with which a factor of production can be transferred from one occupation to another, for example office practice teacher becoming a secretary, an accounts teacher becoming an accountant etc.

### **Land**

**Land** refers to all natural resources used in the production process. It includes soil, minerals, forests, water bodies, air etc. The reward for land is rent.

#### **Characteristics of land**

- (i) Its supply is fixed.
- (ii) Land is a gift of nature.
- (iii) It is geographically immobile that is, it cannot be transferred from one place to another.
- (iv) It is occupationally mobile that is, it can be used for various purposes.
- (v) Land is not homogenous for example some land is fertile and another is infertile.

#### **Importance of land**

- (i) **Source of raw materials:** Land is the origin of all natural resources, including agricultural products, minerals, and energy sources like oil and coal. These are the basic inputs for manufacturing and other industries.
- (ii) **Physical space:** It provides the physical area for production, from farms to factories and offices. The size and quality of this space directly influence a business's capacity and profitability.

- (iii) **Infrastructure and services:** Land is needed to construct roads, bridges, and other infrastructure that facilitates the movement of goods, labor, and customers.
- (iv) **Location:** The location of land is critical for businesses as it affects transportation costs and access to markets.
- (v) **Natural resources:** Land contains vital resources such as water, which is necessary for agriculture and industrial processes, and minerals used in manufacturing.
- (vi) **Economic driver:** In many economies, particularly in agriculture, land is the primary source of livelihoods and a key asset for economic activity and growth.
- (vii) It is a source of government revenue since it can be taxed.
- (viii) Land also provides beautiful scenery for tourism which is a source of foreign exchange.

### Capital

**Capital** refers to any man made resource which is used in the production process for example machinery, buildings, money, clothes etc. Capital is used to produce other goods. In the factor market, capital is rewarded by interest.

#### Types of capital

- (i) **Real capital** is the physical assets used in the production of goods and services for example machines, buildings, roads etc. It is also called fixed capital.
- (ii) **Liquid (money/financial) capital** is capital which is in cash form. It is used as a means of payment for capital goods.
- (iii) **Floating (circulating/operating/working) capital** is capital used in the day to day running of the business activities for example buying raw materials.
- (iv) **Human capital** is the productive qualities found in human beings for example skills and knowledge. Such qualities are attained through training and education.
- (v) **Overhead capital** is the social and economic infrastructure or assets which facilitate in the production process for example roads, banks, insurance etc.
- (vi) **Public (social) capital** is capital owned by the government on behalf of its citizens for example government hospitals, schools, roads etc.
- (vii) **Private capital** is the type of capital owned by private individuals. It includes private cars, schools, businesses etc.
- (viii) **Financial Capital:** Money and other financial resources used to invest in production. Example: loans, savings, shares, bonds. Provides funding for acquiring physical and human capital.

### Productivity of capital and marginal efficiency of capital

**Capital productivity** is the measure of how well physical capital is used in providing goods and services in a given time

**The marginal productivity of capital (MPK)** is the **additional output produced by a firm when it adds one more unit of capital**, holding all other inputs, such as labor and technology, constant.

The marginal efficiency of capital (MEC)

MEC is the expected rate of return on an additional unit of capital investment.

It reflects how profitable new investment will be, based on future earnings compared to the cost of capital.

### Determinants of Marginal efficiency of capital (MEC)

- (i) **Expected Future Profits:** Higher anticipated profits from investment raise MEC. Example: If demand for coffee exports is expected to rise, firms invest more in processing plants.
- (ii) **Cost of Capital Assets:** If machinery or equipment is expensive, MEC falls because returns relative to cost are lower.
- (iii) **Technological Progress:** Innovations increase productivity, making capital more efficient and raising MEC. Example: Modern irrigation systems in agriculture.
- (iv) **Business Expectations:** Optimism about future demand boosts MEC; pessimism reduces it. Example: A recession lowers MEC as firms expect reduced sales.
- (v) **Government Policies:** Tax incentives, subsidies, or low interest rates encourage investment, raising MEC. Conversely, heavy taxation or restrictive policies lower MEC.
- (vi) **Level of Demand in the Economy:** Strong consumer demand increases profitability of capital investment. Weak demand discourages investment, lowering MEC.
- (vii) **Availability of Credit:** Easy access to loans and finance raises MEC by making investment feasible. Tight credit conditions reduce MEC.
- (viii) **Competition:** Intense competition may reduce expected profits, lowering MEC. Monopolistic or less competitive markets may raise MEC.
- (ix) **Quantity and quality of other co-operate factors;** the availability and high quality of corporate factors increases the MEC but lack and poor quality of such factors decreases the MEC.
- (x) **Available excess capacity;** availability of excess capacity increases the MEG but existence of full capacity reduces the MEC
- (xi) **Rate of interest on capital;** the higher the rate of interest, the lower the MEC and the lower the interest rate, the higher the MEC.
- (xii) **The rate of depreciation of capital;** the higher the rate of depreciation, the lower the MEC and the lower the rate of depreciation the higher the MEC.
- (xiii) **The general price levels (inflation);** the high level of inflation in the economy reduces the MEC but low level of inflation in the economy increases the MEC

### Capital Accumulation (Capital Formation)

Capital accumulation (or capital formation) refers to the growth of a country's stock of capital assets—such as machinery, factories, infrastructure, and technology—through investment. It is the process of increasing the quantity of physical and human capital available for production.

#### Determinants of (factors influencing) capital accumulation

- (i) **Level of Savings:** Higher savings provide funds for investment.

Example: Households saving income in banks increases the pool of investable capital.

- (ii) **Availability of Credit:** Easy access to loans and financial markets encourages investment. Example: Microfinance institutions in Uganda help farmers invest in better tools.
- (iii) **Rate of Investment:** The proportion of income reinvested into productive assets directly affects capital formation.

Example: Profits reinvested into new machinery expand production capacity.

- (iv) **Government Policies:** Tax incentives, subsidies, and infrastructure development promote capital accumulation.

Example: Reduced corporate tax rates encourage firms to invest more.

- (v) **Foreign Investment:** Inflows of foreign capital (FDI) boost domestic capital stock.

Example: Foreign companies investing in Uganda's oil and gas sector.

- (vi) **Technological Progress:** Innovation increases efficiency and makes investment more attractive.

Example: Adoption of modern irrigation systems in agriculture.

- (vii) **Political and Economic Stability:** Secure environments attract investors, while instability discourages capital formation.

Example: Stable governance encourages long-term infrastructure projects.

- (viii) **Natural Resources:** Availability of raw materials encourages investment in industries that use them.

Example: Uganda's fertile land supports agricultural investments.

- (ix) **Human Capital Development:** Skilled and healthy workers make capital more productive.

Example: Education and training programs improve labour efficiency.

- (x) **Availability of market:** availability of both foreign and domestic markets encourages production and investments hence capital accumulation, But presence of inadequate markets limits the scale of production hence low capital accumulation. "
- (xi) **Level of interest rate;** high interest rate charged on loans discourage potential borrowers or investors hence low capital accumulation and low interest rate charged on loans encourage investors hence increased capital accumulation.
- (xii) **Level of population growth rate;** high population growth rates increase the dependence burden which reduces the level of savings. This limits the level of investment hence low capital accumulation. But a low population growth rate reduces the dependence burden hence high level of capital accumulation.
- (xiii) **Degree of availability of entrepreneurs;** the presence of individuals who have the capacity to generate new investments and who are innovative leads to capital accumulation and absence of entrepreneurs leads to low capital accumulation.

- (xiv) **Labor productivity and profit-wage relation:** The relationship between wages, profits, and labor productivity is another key driver of capital accumulation.

### Importance (role) of capital accumulation in economic environment

- (i) **Increases Production Capacity:** More capital (machines, factories, infrastructure) allows economies to produce more goods and services.
- (ii) **Promotes Industrialization:** Investment in industries shifts economies from agriculture to manufacturing and services, diversifying growth.
- (iii) **Generates Employment:** New factories, farms, and businesses create jobs, reducing unemployment.
- (iv) **Improves Technology and Innovation:** Capital accumulation funds research and modern machinery, boosting efficiency and competitiveness.
- (v) **Raises Living Standards:** More production leads to higher incomes, better services, and improved quality of life.
- (vi) **Supports Infrastructure Development:** Investment in roads, electricity, and communication strengthens the foundation for economic activity.
- (vii) **Encourages Foreign Trade:** With more capital, countries can produce surplus goods for export, earning foreign exchange.
- (viii) **Stabilizes the Economy:** Strong capital stock cushions economies against shocks, ensuring resilience in crises.
- (ix) **It facilitates resource exploitation.** This increases production and investments in the industrial, agricultural and service sectors hence economic growth and development.
- (x) It brings about market expansion through establishment of social and economic infrastructure. This facilitates trade and economic development.
- (xi) **It increases the national income of the country.** This is as a result of increased production and economic activities resulting from capital accumulation.
- (xii) It helps to relieve the country from the burden of the foreign debt. This is because capital accumulation increases resource exploitation and mobilization which increases the country's capacity to be self-sufficient and reliant.

### Labour

**Labour** refers to all human effort both mental and physical which is used in the production process.

### The types of labor

The types of labor in economics are **skilled, unskilled, semi-skilled, and professional**. Together, these four types of labor make up the active labor force.

**Marginal product of labour** refers to the additional output resulting from employing an extra unit of labour.

**Average product of labour** refers to output per unit of labour employed

### Mobility of Labour

**Mobility of Labour** refers to the ease with which labour can be moved from one place

of work to another or from one occupation to another.

### Types of labour mobility

**Geographical mobility of labour** is the ease with which labour can be moved from one place of work to another, for example a worker transferring from Kampala to work in Mukono.

**Occupational mobility of labour** is the ease with which labour can be moved from one occupation to another, for example, a medical doctor becoming a biology teacher.

### Immobility of Labour

**Labour immobility** is the inability (or difficulty) of labour to move from one place to another or from one occupation to another.

### Types of labour immobility

**Geographical immobility of labour** refers to the inability of labour to move from one place of work to another.

**Occupational immobility of labour** refers to the inability (difficulty) of labour to move from one occupation to another.

### Types of occupational mobility of labour

**Horizontal mobility of labour** refers to the change of occupation where no change occurs in the status of the worker. For example a biology teacher becoming a chemistry teacher, a minister of finance becoming a minister for internal affairs.

**Vertical mobility of labour** refers to the change of occupation which results into a change in the status of the worker, for example when a classroom teacher becomes a headmaster, a nurse becoming a doctor.

### Factors affecting/Determinants of labour mobility

- (i) **Skills and Education:** Highly skilled and educated workers are more adaptable and can move across jobs or regions easily.
- (ii) **Training Opportunities:** Availability of retraining programs helps workers shift into new industries.
- (iii) **Wage Levels and Income:** Differences Higher wages in certain regions or industries attract workers, increasing mobility.
- (iv) **Cost of Living:** Workers may hesitate to move to areas with high living costs, reducing mobility.
- (v) **Transport and Infrastructure:** Good roads, public transport, and communication systems make geographical mobility easier.
- (vi) **Housing Availability:** Affordable housing in destination areas encourages workers to relocate.
- (vii) **Family and Social Ties:** Strong family or cultural ties may limit willingness to move.

- (viii) **Government Policies:** Immigration laws, work permits, and labour regulations affect international mobility.
- (ix) **Language and Cultural Barriers:** Workers may struggle to move across regions or countries with different languages or cultures.
- (x) **Trade Unions and Professional Bodies:** Licensing requirements or union restrictions can limit occupational mobility.
- (xi) **Economic Conditions:** High unemployment or recession reduces opportunities for mobility, while growth encourages it.
- (xii) **The degree of job security.** The more the security on the job in terms of permanent employment the lower the mobility of labour. But temporary employment in form of contracts increases labour mobility.
- (xiii) **The level of advertisement of the job.** In cases where the degree of knowledge about the existence of jobs by workers is high, mobility of labour increases. But in cases where labour lacks information about the prevailing jobs, mobility of labour reduces.
- (xiv) **The degree of specialization.** The higher the level of specialization, the lower the mobility of labour and the lower the degree of specialization, the higher the mobility of labour.
- (xv) **Age of the worker.** Old people tend to be immobile because they have more family responsibilities and cultural attachments but young individuals tend to be mobile because of less family and cultural attachments.
- (xvi) **Degree of political instability.** In areas which are politically stable, labour tends to be mobile as compared to areas which are politically unstable. This is because labour tends to fear to go and work in insecure places for fear of loss of life.

## The Entrepreneurship

**An entrepreneur** is a person or group of persons who under take the task of organizing the other factors of production in order to make production process possible. He or she is a co-coordinator, risk-taker, innovator and decision maker of the business enterprise. In the factor market, an entrepreneur rewarded with profits.

### Functions of the entrepreneur

- (i) **Risk-taking:** Assuming the financial and other risks associated with starting and running a new business.
- (ii) **Innovation:** Creating new products, services, or methods, or finding better ways to operate, this is central to entrepreneurship.
- (iii) **Organizing resources:** Bringing together all the necessary factors of production, such as capital, labor, machinery, and land, to start and operate the venture.
- (iv) **Management:** Planning, administering, coordinating, and controlling the entire organization, from setting goals to supervising operations.
- (v) **Decision Making:** Chooses what to produce, how to produce, and for whom to produce.
- (vi) **Resource Allocation:** Ensures resources are used in the most productive way.
- (vii) **Marketing and Distribution:** Finds markets for products, sets prices, and ensures goods reach consumers.
- (viii) **Employment Creation:** Provides jobs by setting up businesses and expanding industries.
- (ix) **Economic Development:** Contribution Drives growth by investing in industries, infrastructure, and innovation.

## Factors that influence the supply of Entrepreneurs

- (i) **Education and Skills:** Higher levels of education, training, and exposure to business knowledge increase entrepreneurial capacity.
- (ii) **Access to Capital:** Availability of loans, credit, and investment funds encourages more people to start businesses.
- (iii) **Government Policies:** Supportive policies such as tax incentives, subsidies, and reduced bureaucracy promote entrepreneurship. Restrictive regulations discourage it.
- (iv) **Cultural and Social Attitudes:** Societies that value risk-taking, innovation, and independence tend to produce more entrepreneurs.
- (v) **Economic Conditions:** Strong demand, growing markets, and stable economies encourage entrepreneurship, while recessions discourage it.
- (vi) **Technological Development:** Access to modern technology and digital platforms lowers barriers to entry and sparks innovation.
- (vii) **Availability of Infrastructure:** Good transport, electricity, internet, and communication systems make entrepreneurship easier.
- (viii) **Risk and Reward Perception:** If potential entrepreneurs believe risks are manageable and rewards are high, supply increases.
- (ix) **Family Background and Networks:** People from business-oriented families or with strong networks are more likely to become entrepreneurs.
- (x) **Political Stability:** Stable governance and security encourage investment and entrepreneurship, while instability discourages it.
- (xi) **The market size of commodities.** The bigger the market size, the higher the supply of entrepreneurs and the smaller the market size, the lower the supply of entrepreneurs.

In **Uganda**, the supply of entrepreneurs is influenced by:

- **Access to microfinance** (capital availability).
- **Government programs** like *Youth Livelihood Fund*.
- **Cultural attitudes** that value self-employment due to limited formal jobs.
- **Infrastructure challenges** (poor roads and electricity) that sometimes limit entrepreneurial growth.

## Forms of business organizations

The main forms of business organizations are **sole proprietorship, partnership, joint stock Company, cooperative society, and limited liability company (LLC)**

A **business organization** is the control of economic resources aimed at producing and distributing commodities to the final consumers.

### Sole proprietorship

This is where the business is owned and managed by one person. The owner may be assisted by family members. The major source of capital is personal savings and borrowing.

### Merits (advantages) of a sole proprietor

- (i) **Easy to Form:** Requires little legal formalities and paperwork, making it quick and inexpensive to start.

- (ii) **Full Control:** The owner makes all decisions without interference, ensuring flexibility and independence.
- (iii) **Direct Profits:** All profits belong to the owner, motivating them to work harder.
- (iv) **Close Customer:** Relations Personal contact with customers builds trust and loyalty.
- (v) **Quick Decision:** Making No need to consult partners or shareholders, allowing fast responses to market changes.
- (vi) **Confidentiality:** Business secrets are kept private since the owner doesn't need to disclose accounts publicly.
- (vii) **Flexibility:** The owner can easily change the nature or scale of the business.
- (viii) **Low Costs:** Minimal administrative expenses compared to larger organizations.
- (ix) **Personal Satisfaction:** The owner enjoys independence and pride in running their own business.

### Real-World Example (Uganda)

Many small shops, kiosks, and boda-boda (motorcycle taxi) businesses operate as sole proprietorships because they are easy to start, require little capital, and allow owners to directly enjoy profits.

### *Demerits (disadvantages) of a sole proprietor*

- (i) **Unlimited Liability:** The owner is personally responsible for all debts and losses. Personal assets can be used to settle business obligations.
- (ii) **Limited Capital:** Since only one person provides funds, the business often struggles to expand or compete with larger firms.
- (iii) **Limited Skills and Expertise:** The owner may lack diverse knowledge in areas like marketing, finance, and management.
- (iv) **Continuity Problems:** The business may collapse if the owner dies, retires, or becomes incapacitated.
- (v) **Limited Growth Potential:** Expansion is difficult due to financial and managerial constraints.
- (vi) **Heavy Workload:** The owner bears all responsibilities, leading to stress and inefficiency.
- (vii) **Difficulty in Attracting Talent:** Skilled employees may prefer larger organizations with better career prospects.
- (viii) **Low Public Confidence:** Since accounts are not audited or published, customers and investors may hesitate to trust the business.
- (ix) **It is difficult to undertake research by the sole proprietor.** This is due to limited capital contributed by the sole proprietor.
- (x) **It is difficult to access credit facilities like loans from financial institutions.** This is due to lack of collateral security and lack of trust in one man's business by financial institutions.

### Real-World Example (Uganda)

Many small shops and kiosks operate as sole proprietorships. While they are easy to start, owners often face challenges like **limited capital**, **high personal risk**, and **difficulty expanding beyond local markets**.

## Partnerships

A **partnership** is a business owned and managed by **two or more people** who agree to share profits, losses, and responsibilities.

It is governed by a **partnership agreement** (formal or informal) that outlines roles, profit-sharing, and liability.

The minimum number of members in partnership is two (2) and the maximum number is twenty (20). Each member in partnership is called *a partner*:

The sharing of capital and profits and general running of the business is spelt out in a document called a **partnership deed**. It is presented to the registrar of companies before business commences.

### Types of partners

1. **Active partner.** This is one who contributes capital and takes part in the active management of the business. He also shares profits and losses jointly with other members of the partnership.
2. **Dormant partner.** This is one who does not take part in the active management of the business but contributes the capital and shares losses and profits of the business.
3. **Quasi partner.** This is a partner who offers his name to be used as the name of the partnership. He does not contribute capital to the business and does not take part in the active management of the business. He is not responsible for any debts and losses incurred by the business.

### Merits (advantages) of partnerships

- (i) **Ease of Formation:** Partnerships are relatively simple to establish compared to companies, with fewer legal formalities.
- (ii) **More Capital Availability:** Since multiple partners contribute funds, partnerships usually have more capital than sole proprietorships.
- (iii) **Shared Skills and Expertise:** Partners bring diverse knowledge, talents, and experiences, improving decision-making and efficiency.
- (iv) **Risk Sharing:** Losses and risks are distributed among partners, reducing the burden on any single individual.
- (v) **Flexibility in Operations:** Partnerships can adapt quickly to changes in the market without complex procedures.
- (vi) **Better Decision Making:** Consultation among partners often leads to more balanced and informed decisions.
- (vii) **Closer Relationships with Clients:** Smaller size compared to corporations allows for personal contact and trust-building with customers.
- (viii) **Confidentiality:** Unlike companies, partnerships are not legally required to publish accounts, keeping business secrets private.
- (ix) **There is continuity in business in case of death or sickness of one partner** unlike under sole proprietorship.
- (x) **It is possible to enjoy economies of large scale**, this is because it is easy to raise capital and expand on the operations of the business.

## Demerits (disadvantages) of partnerships

- (i) **Unlimited Liability:** In general partnerships, partners are personally responsible for debts. Their personal assets can be used to settle obligations.
- (ii) **Risk of Disagreements:** Conflicts among partners over decisions, profit-sharing, or management can disrupt business operations.
- (iii) **Limited Capital Compared to Companies:** Although more than sole proprietorships, partnerships still struggle to raise large amounts of capital compared to joint stock companies.
- (iv) **Uncertain Continuity:** The partnership may dissolve if a partner dies, retires, or withdraws, making long-term stability uncertain.
- (v) **Difficulty in Transferring Ownership:** A partner cannot easily transfer their share without the consent of others, limiting flexibility.
- (vi) **Shared Profits:** Profits must be divided among partners, which may reduce individual rewards compared to sole proprietorships.
- (vii) **Decision-Making Delays:** Consultation among partners can slow down urgent decisions, especially if opinions differ.
- (viii) **Possibility of Mismanagement:** If one partner is less competent, it can negatively affect the entire business.

## Real-World Example (Uganda)

Small trading partnerships in Kampala often face **conflicts among partners** and **limited access to large capital**, which restricts their ability to expand compared to bigger companies

## Joint-Stock Companies (Limited Liability Companies)

These are business organizations with several members (shareholders) who come together and contribute capital to start business with the aim of making profits.

### Types of joint - stock companies

#### Public limited companies

These consist of not less than seven (7) members and there is no maximum number. The shares are freely transferable to the public. That is, members who wish to sell their shares the public are free to do so.

#### Private limited companies

These consist of a minimum of twenty (20) members and a maximum of fifty (50) members. The shares are not freely transferable to the public. That is, a member who wishes to sell his shares has to first consult all the other members within the company before he floats them to the public.

## Formation of joint stock companies

The formation of joint-stock companies involves legal documents and these include:

1. **Memorandum of association (MOA).** This clearly lays down the name of the company with the word limited at the end, the location of the business, amount of capital to be contributed by each shareholder, purpose of the business and the signatures of all the shareholders.
2. **Articles of association (AOA).** This is the document which lays down the rules and regulations governing company. It spells out the rights and powers of each shareholder, the procedures of calling and conducting general meetings, powers of the executive and rules regarding the election of the executive members.

3. **Certificate of incorporation (COI).** This is issued by the registrar of companies after paying the registration fee by the promoters of the company. It gives the company a legal entity and authorizes it to begin floating the shares to the public so as to raise capital.
4. **Prospectus.** This document invites the general public to come and buy shares from the company. This is done after registration of the company to raise the required capital start business.
5. **Certificate of trading (COT).** This is the document which empowers the company to start business operations. It is issued by the registrar of companies after the company has raised the minimum share capital required.

## A share and a stock

**A shareholder** is an individual who owns and contributes capital to the company with the aim of making profits.

**A share** is a unit of capital contributed by each shareholder when starting the company with the aim of making profits.

**A stock** is a combination of shares contributed by shareholders to the company.

### Difference Between Share and Stock

Term	Meaning	Key Point	Example
Share	A single unit of ownership in a company.	Represents a fraction of ownership in a company's capital.	If a company issues 1,000 shares and you own 100, you own 10% of the company.
Stock	A general term for ownership in one or more companies.	Refers to the collection of shares held by an investor.	If you own shares in MTN Uganda and Stanbic Bank, together they form your stock holdings.

### Key Distinctions

- **Shares are specific:** They represent ownership in a particular company.
- **Stock is general:** It refers to the overall equity investment, which may include shares from multiple companies.
- **Usage:**
  - In British English, "share" is more common.
  - In American English, "stock" is often used to mean the same thing.

### Real-World Example (Uganda)

- If you buy **100 shares of MTN Uganda**, you are a shareholder in that company.
- If you also buy **200 shares of Stanbic Bank**, then collectively, these holdings are referred to as your **stock portfolio**.

### Types of shares

- (i) **Ordinary shares;** are shares which do not carry a fixed rate of return (dividend). These shares receive only dividends after all preference shares have paid
- (ii) **Cumulative preference shares;** are shares which are entitled to dividends irrespective of whether the company has made profits or incurred losses in a given period
- (iii) **Preference shares;** are shares that carry a fixed rate of return (dividend). However, if no profits are made in the given period, no dividends are paid

## Subcategories of Preference Shares

- (i) **Cumulative Preference Shares** – Unpaid dividends accumulate and must be paid before equity shareholders receive dividends.
- (ii) **Non-Cumulative Preference Shares** – Dividends do not accumulate; if not declared in a year, they are lost.
- (iii) **Participating Preference Shares** – Allow holders to share additional profits after equity shareholders are paid.
- (iv) **Convertible Preference Shares** – Can be converted into equity shares after a certain period.
- (v) **Redeemable Preference Shares** – Can be bought back by the company after a fixed time.
- (vi) **Irredeemable Preference Shares** – Cannot be bought back; exist until liquidation.

## Dividends, Retained profits and Debentures

- (i) A **dividend** is a profit earned on the shares by the shareholders of the company.
- (ii) **Retained profits** are profits made by the company which are not shared among the shareholders but they are left to expand on the business.
- (iii) A **debenture** is a document that gives evidence that an individual or company has borrowed a certain sum of money from the person or institution named on it.

## Types of debentures

- (i) **Naked debentures;** this is a debenture where no collateral security is required in order to access the loan by the borrower from the lender. In case of failure to pay the loan, the lender (debentures holder) has no powers to take over or sell the borrowers property to recover his/her Money.
- (ii) **Mortgage debenture.** This is a debenture where the collateral security is required by the lender before the borrower is given a loan. In case of failure to pay the loan by the borrower, the debenture holder has the powers and rights to sell the borrower's property and recover his/her money.
- (iii) **Collateral security** refers to the physical/tangible asset presented by the borrower before accessing the loan from the lender, For example land title, tangible house hold properties, motor vehicle registration card etc.

## Advantages of joint - stock companies

- (i) **Limited Liability:** Shareholders are only liable up to the value of their shares. Their personal assets are protected.
- (ii) **Large Capital Base:** By issuing shares and debentures, joint-stock companies can raise huge amounts of capital from many investors.
- (iii) **Perpetual Succession:** The company continues to exist even if shareholders or directors change, retire, or die.
- (iv) **Transferability of Shares:** Shares can be easily bought and sold in the stock market, giving investors liquidity.
- (v) **Professional Management:** Managed by a board of directors and skilled professionals, ensuring efficiency and expertise.
- (vi) **Economies of Scale:** Large-scale operations reduce costs per unit, making products more competitive.
- (vii) **Public Confidence:** Legal requirements for audits and disclosures build trust among investors and customers.

- (viii) **Growth and Expansion Opportunities:** Access to large funds enables diversification, innovation, and entry into new markets.
- (ix) **Joint stock companies are capable of employing necessary expatriates in various fields.** This increases efficiency in business operations.
- (x) **Joint stock companies are capable of offering employment opportunities to many individuals.** This is due to their large scale operation. This improves on the standards of living of individuals.
- (xi) **Joint stock companies generate a lot of tax revenue to the government** in form of corporate and profit taxes. Such tax revenue can be used to construct both social and economic infrastructure.

### Disadvantages of joint-stock companies

- (i) **Complex Formation** Requires lengthy legal procedures, registration, and compliance with regulations, making it costly and time-consuming to establish.
- (ii) **Separation of Ownership and Control** Shareholders (owners) are often different from managers (directors), which can lead to conflicts of interest or mismanagement.
- (iii) **Lack of Secrecy** Companies must publish financial statements and undergo audits, reducing confidentiality compared to sole proprietorships or partnerships.
- (iv) **Possibility of Fraud and Manipulation** With many shareholders and complex structures, dishonest managers may misuse funds or manipulate accounts.
- (v) **Decision-Making Delays** Large organizations require board meetings and shareholder approvals, slowing down urgent decisions.
- (vi) **Excessive Government Regulation** Subject to strict laws, taxes, and compliance requirements, which can limit flexibility.
- (vii) **Risk of Monopoly Power** Large joint-stock companies may dominate markets, exploit consumers, or suppress competition.
- (viii) **High Administrative Costs** Running a company requires professional staff, legal advisors, and auditors, increasing expenses.
- (ix) **Possibility of Shareholder Conflicts** Different interests among shareholders can lead to disputes, especially between majority and minority shareholders.
- (x) **High taxes are paid by shareholders.** This is because taxes are paid on both company profits and dividends.
- (xi) **Rivals of the public company can easily buy off the majority shares there by crippling the activities of the company.**
- (xii) **There is little personal contact between the shareholders of the company and the customers.** This undermines customer care services.
- (xiii) **There is lack of flexibility in business operations.** This is because the company can only engage in activities which are stipulated in the constitution.
- (xiv) **There is a risk of suffering from diseconomies of scale.** This is as a result of large scale operation joint stock companies for example lack of sufficient markets, raw materials etc.

### Sources of business finance

#### A. Internal Sources of Finance

Internal funding comes from the business itself and its owners.

- (i) **Personal Savings/Owner's Capital:** The entrepreneur's own money or assets used to start or expand the business.

- (ii) **Retained Earnings:** Profits generated by the business that are reinvested into operations rather than paid out as dividends to shareholders. This is a low-cost, flexible source of capital.
- (iii) **Sale of Assets:** Funds raised by selling off idle or obsolete assets (e.g., old machinery, unused property).

## B. External Sources of Finance

External funding involves obtaining money from third parties, usually in the form of debt or equity.

### Debt Financing

Debt financing involves borrowing funds that must be repaid with interest over a specific period, without giving up ownership.

- (i) **Bank Loans & Overdrafts:**
  - **Commercial Loans:** Term loans from banks for specific expenditures, repaid over a set period, which can be secured or unsecured.
  - **Bank Overdrafts/Lines of Credit:** Short-term, flexible facilities to manage day-to-day cash flow problems, where the business can overdraw its current account up to an agreed limit.
- (ii) **Friends and Relatives:** Private loans from the owner's personal network, often with more flexible repayment terms than commercial lenders.
- (iii) **Bonds/Debentures:** Formal long-term debt instruments issued by a company to the public, promising fixed interest payments and repayment of principal at maturity.
- (iv) **Commercial Finance Companies:** Lenders who may tolerate more risk than banks but usually require substantial collateral and charge higher interest rates.
- (v) **Government Programs & Grants:** Financial assistance, often in the form of guaranteed loans (e.g., through the Small Business Administration in the US) or grants, to promote specific economic activities or support small businesses.

### Equity Financing

Equity financing involves selling an ownership stake in the business in exchange for capital. Investors become part owners and share in the company's profits.

- (i) **New Share Issues:** Selling stock to investors, either privately or through public markets (e.g., an Initial Public Offering or IPO for established companies).
- (ii) **Venture Capital:** Funding from specialized firms or individuals who invest in young, high-growth potential companies in exchange for equity, expecting a high return on investment.

- (iii) **Angel Investors:** Wealthy individuals who invest their own money and expertise in start-ups in exchange for an ownership interest, often bridging the gap between personal savings and formal venture capital.
- (iv) **Crowdfunding:** Raising small amounts of capital from a large number of people, typically via online platforms, which can be equity-based (investors get a share) or reward-based.

### Asset-Based Financing and Alternatives

These methods provide access to necessary assets without immediately purchasing them outright.

- (i) **Leasing:** A contractual agreement to use an asset (like equipment or vehicles) in return for periodic payments, without taking ownership.
- (ii) **Hire Purchase:** Similar to leasing, but ownership of the asset is transferred to the customer after the final installment payment is made.
- (iii) **Trade Credit/Vendor Financing:** Suppliers offering delayed payment terms for goods and services purchased, effectively providing a short-term, interest-free loan.

### Money market

The **money market** deals with **short-term debt instruments** such as treasury bills, commercial paper, certificates of deposit, and call money. It is distinct from the **capital market**, which handles long-term investments.

#### Features of the Money Market

- (i) **Short-Term Finance:** Instruments mature in less than one year.
- (ii) **High Liquidity:** Provides quick access to cash for borrowers and lenders.
- (iii) **Low Risk:** Safer than long-term investments, though returns are lower.
- (iv) **Wholesale Market:** Transactions are usually large and involve institutions rather than individuals.
- (v) **Central Bank Role:** The central bank regulates and stabilizes the money market.

#### Features of money markets in developing countries

- (i) **Urban Concentration:** Money market activities are mostly confined to major cities, leaving rural areas underserved.
- (ii) **Small Scale Operations:** Transactions are limited in size compared to developed countries, restricting liquidity.
- (iii) **Few Participants:** Only a handful of commercial banks and financial institutions dominate, with little involvement from individuals.
- (iv) **Limited Variety of Instruments:** Instruments like treasury bills and call money exist, but advanced tools (commercial paper, repos) are rare.
- (v) **High Interest Rates:** Borrowing costs are often higher due to scarcity of funds and weak competition.
- (vi) **Short-Term:** Focus Deals mainly in short-term financial assets (less than one year maturity).

- (vii) **Poor Integration:** Money markets are not well connected with international financial systems, limiting foreign investment.
- (viii) **Weak Institutional:** Framework Regulatory bodies and financial infrastructure are underdeveloped, leading to inefficiency.
- (ix) **Dependence on Central:** Bank Central banks play a dominant role in stabilizing liquidity, often compensating for weak private sector participation.

### Functions of the Money Market

- (i) **Facilitates Liquidity** Provides short-term funds to businesses, banks, and governments to meet immediate financial needs.
- (ii) **Efficient Allocation of Funds** Transfers surplus funds from lenders (like households and institutions) to borrowers (like businesses and governments).
- (iii) **Supports Monetary Policy** Helps central banks (e.g., Bank of Uganda) regulate interest rates, inflation, and money supply through instruments like treasury bills and repos.
- (iv) **Provides Safe Investment** Offers low-risk, short-term investment options (treasury bills, certificates of deposit) for investors with surplus cash.
- (v) **Maintains Financial Stability** Ensures smooth functioning of the economy by balancing demand and supply of short-term funds.
- (vi) **Promotes Savings Mobilization** Encourages individuals and institutions to invest idle funds in short-term instruments instead of keeping them idle.
- (vii) **Helps in Price Discovery** Determines short-term interest rates, which influence borrowing costs and investment decisions across the economy.

### Instruments of the Money Market

**Money market instruments** are short-term financial tools (maturing within one year) used by governments, banks, and businesses to manage liquidity, raise funds, and invest surplus cash. They are highly liquid, low-risk, and essential for smooth functioning of the financial system. They include:

- (i) **Treasury Bills (T-Bills):** Short-term government securities issued at a discount and redeemed at face value. Safe and highly liquid.
- (ii) **Commercial Paper:** Unsecured, short-term promissory notes issued by large corporations to meet working capital needs.
- (iii) **Certificates of Deposit (CDs):** Time deposits issued by banks with fixed maturity and interest rates.
- (iv) **Repurchase Agreements (Repos):** Short-term borrowing where securities are sold with an agreement to repurchase them later at a higher price.
- (v) **Call Money / Notice Money:** Very short-term loans between banks, often overnight (call money) or up to 14 days (notice money).
- (vi) **Banker's Acceptances:** Short-term credit instruments guaranteed by a bank, often used in international trade.
- (vii) **Inter-Bank Lending:** Loans between commercial banks to manage liquidity and reserve requirements.
- (viii) **Money Market Mutual Funds:** Investment funds that pool money to invest in short-term instruments, offering safety and liquidity to investors.

## Capital markets.

**Capital markets.** This is a market where medium and long term financial assets are traded for example bonds, shares etc.

**Stock exchange market** is an organized market for the sale and purchase of securities such as shares, stocks, and bonds.

## Securities

In economics and finance, **securities** are tradable financial instruments that represent ownership, debt, or rights to ownership. They are used by firms, governments, and investors to raise capital, transfer risk, and invest in markets.

### Types of Securities

- (i) Equity Securities
  - Represent ownership in a company (e.g., shares/stocks).
  - Shareholders may receive dividends and voting rights.
- (ii) Debt Securities
  - Represent borrowed money that must be repaid with interest (e.g., bonds, debentures).
  - Investors earn fixed interest income.
- (iii) Derivative Securities
  - Financial contracts whose value is derived from an underlying asset (e.g., options, futures, swaps).
  - Used for hedging or speculation.
- (iv) Hybrid Securities
  - Combine features of debt and equity (e.g., convertible bonds, preference shares).
  - Offer both fixed returns and potential ownership rights.

### Functions of Securities

- (i) **Capital raising:** Firms issue securities to finance expansion.
- (ii) **Investment opportunities:** Investors use securities to grow wealth.
- (iii) **Risk management:** Derivatives help hedge against price fluctuations.
- (iv) **Liquidity:** Securities can be bought and sold easily in financial markets.
- (v) **Wealth distribution:** Securities allow broad participation in ownership and lending.

### Examples in Uganda

- (i) **Uganda Securities Exchange (USE):** The official stock exchange where companies like Stanbic Bank Uganda and MTN Uganda list their shares.
- (ii) **Government Treasury Bills and Bonds:** Debt securities issued by the Bank of Uganda to raise funds and manage monetary policy.
- (iii) **Corporate Bonds:** Issued by firms to finance operations.

## Why It Matters

Securities are the backbone of modern financial systems. They enable firms to access capital, governments to fund projects, and investors to diversify portfolios.

## Subsistence production versus market production

### Subsistence (direct) production

**Subsistence /direct) production** is the production of goods and services by and individual for use

### Features (characteristics) of subsistence production

- (i) **Production for Own Use:** Goods and services are produced mainly to meet the needs of the household or community, not for commercial purposes.
- (ii) **Low Level of Technology:** Relies on simple tools, traditional methods, and manual labor rather than advanced machinery.
- (iii) **Small Scale Production:** Activities are carried out on a small scale, often by families or small groups.
- (iv) **Labor Intensive:** Depends heavily on human effort and sometimes animal power, with little mechanization.
- (v) **Low Productivity:** Output is generally low because of limited use of modern technology and inputs.
- (vi) **Little or No Surplus:** Production is just enough for consumption, with little left for trade or sale.
- (vii) **Use of Local Resources:** Relies on locally available land, seeds, tools, and raw materials.
- (viii) **Traditional Knowledge:** Skills and techniques are passed down through generations rather than acquired through formal training.
- (ix) **Self-Sufficiency:** Families or communities aim to be independent, producing food, clothing, and shelter for themselves.
- (x) **Limited Specialization:** Producers engage in multiple activities (farming, fishing, weaving) rather than specializing in one.
- (xi) There is absence of profit motive. Individuals simply produce for basic survival.

### Real-World Example (Uganda)

- In rural Uganda, many households practice **subsistence farming**, growing crops like maize, beans, and cassava mainly for family consumption.
- Surplus, if any, is sold in local markets, but the primary goal is **self-sufficiency**.

### Problems (disadvantages/demerits) of subsistence production

- (i) **Low Productivity** Reliance on simple tools and traditional methods leads to low output compared to modern farming or production.
- (ii) **No Surplus for Trade** Production is mainly for family consumption, leaving little or no surplus to sell in markets.
- (iii) **Limited Use of Technology** Minimal mechanization and poor access to modern inputs reduce efficiency and innovation.

- (iv) **Poor Standards of Living** Families only produce enough for survival, often lacking access to better housing, healthcare, and education.
- (v) **Vulnerability to Natural Disasters** Droughts, floods, or pests can wipe out crops, leaving households without food or income.
- (vi) **Lack of Specialization** Producers engage in multiple activities (farming, fishing, weaving) without mastering any, reducing efficiency.
- (vii) **No Capital Formation** Since there is little surplus, savings and investments are minimal, hindering economic growth.
- (viii) **Isolation from Markets** Communities remain disconnected from wider trade networks, limiting opportunities for expansion.
- (ix) **Slow Economic Development** Subsistence production does not generate enough surplus to support industrialization or national growth.
- (x) Poor infrastructure in form of poor roads, hospitals, communication services etc.
- (xi) Narrow tax base because of limited production activities

### Real-World Example (Uganda)

- (i) Many rural households in Uganda practice **subsistence farming** (maize, beans, cassava).
- (ii) Problems include **low yields, lack of surplus for sale, and vulnerability to droughts**, which keep families trapped in poverty.

### Market (money/indirect/commercial) production

This refers to the production of goods and services for exchange in the market.

### Features (characteristics) of market production

- (i) **Production for Exchange** – Goods are produced to be sold in the market, not just consumed by the producer.
- (ii) **Profit Motive** – The main goal is to earn income or profit.
- (iii) **Use of Money** – Transactions are carried out using money as a medium of exchange.
- (iv) **Specialization** – Producers often specialize in particular goods or services to maximize efficiency.
- (v) **Large Scale Production** – Often involves producing more than what is needed locally, sometimes for national or international markets.
- (vi) **Use of Modern Technology** – Relies on machinery, improved tools, and advanced techniques to increase output.
- (vii) **Surplus Production** – Produces more than immediate needs, ensuring goods are available for trade.
- (viii) **Integration with Markets** – Closely linked to local, national, and global markets.

### Advantages (merits) of market production

- (i) **Surplus Production:** Producers generate more than their immediate needs, ensuring goods are available for trade and wider consumption.
- (ii) **Profit Motive:** Encourages efficiency, innovation, and productivity since producers aim to maximize income.

- (iii) **Specialization:** Producers focus on specific goods or services, improving quality and efficiency through division of labor.
- (iv) **Use of Modern Technology:** Market production often involves mechanization and advanced techniques, leading to higher output.
- (v) **Employment Creation:** Large-scale production requires more workers, creating jobs in farming, industry, and services.
- (vi) **Economic Growth:** Surplus and trade contribute to national income, industrialization, and overall development.
- (vii) **Integration with Markets:** Connects producers to local, national, and international markets, expanding opportunities.
- (viii) **Improved Standards of Living:** Access to diverse goods and services enhances consumer choice and quality of life.
- (ix) **Capital Formation:** Profits and savings from market production can be reinvested, fueling further growth.
- (x) It increases the supply of industrial raw materials for agro based industries. This promotes the creation of forward and backward linkages between the agricultural and industrial sectors.

### Real-World Example (Uganda)

- (i) **Coffee farming** in Uganda is a classic case: farmers grow coffee for sale in international markets, earning foreign exchange.
- (ii) **Manufacturing industries** in Kampala (like textiles and beverages) create jobs, generate profits, and contribute to economic growth.

### Input-output relationships (planning periods) of market production

A **production function** is a mathematical relationship that shows how inputs (like labor, land, capital, and entrepreneurship) are combined to produce output. It explains the maximum output a firm can achieve with given resources and technology

### Planning periods in economics

Economists divide production planning into different **time horizons** based on how flexible inputs are:

- (i) **Short-Run Planning Period (up to 1 year)**
  - At least one factor of production is fixed (e.g., land, factory size).
  - Firms adjust only variable inputs like labor and raw materials.
  - Focus: maximizing output with limited flexibility.
- (ii) **Long-Run Planning Period (3 – 10 years)**
  - All factors of production are variable.
  - Firms can expand plant size, adopt new technology, or enter/exit industries.
  - Focus: achieving optimal scale of production.
- (iii) **Very Long-Run Planning Period (10- 30 years)**
  - Technology, knowledge, and even consumer preferences may change.
  - Firms innovate, research, and develop new products.
  - Focus: adapting to structural changes in the economy.

## Real-World Example (Uganda)

A **maize farmer** in Uganda:

- **Short-run:** Can hire more labor during harvest but cannot expand land immediately.
- **Long-run:** May buy more land, invest in irrigation, or adopt hybrid seeds.
- **Very long-run:** Could shift to modern mechanized farming or even switch crops based on market demand.

### Types of business costs

- (i) **Fixed Costs:** Costs that do not change with the level of output, such as rent or salaries.
- (ii) **Variable Costs:** Costs that fluctuate with the quantity of goods or services produced, including raw materials and direct labor.
- (iii) **Total Cost:** The sum of all fixed and variable costs at a certain level of production.
- (iv) **Marginal Cost:** The change in total cost from producing one additional unit of output.

### Production function

A **production function** is a mathematical and economic relationship that shows how inputs (like labor, capital, land, and technology) are combined to produce output (goods or services)

#### Purpose of Production Function

- (i) Helps firms determine the **most efficient combination of inputs**.
- (ii) Explains concepts like **marginal productivity** and **returns to scale**.
- (iii) Guides decisions on **cost minimization** and **profit maximization**

### Different ways of expressing production function

#### (i) Expression production function in Mathematical/Functional Form

Expressed as an equation:  $Q=f(L,K)$   $Q = f(L, K)$ ,

where output (Q) depends on labor (L) and capital (K).

Example: Cobb-Douglas production function  $Q=AL^\alpha K^\beta$ .

#### (ii) Expression production function in Algebraic/Equation Form

Uses algebraic expressions to show input-output relationships.

Example: Linear production function  $Q=aL+bK$ .

### (iii) Expression production function in Tabular Form

Inputs and corresponding outputs are shown in a table.

Example: A table showing different units of labor and varying levels of output.

Input (labour)	Output (units)
10	100
20	200
30	300
50	250

### (iv) Expression production function in Schedule Form

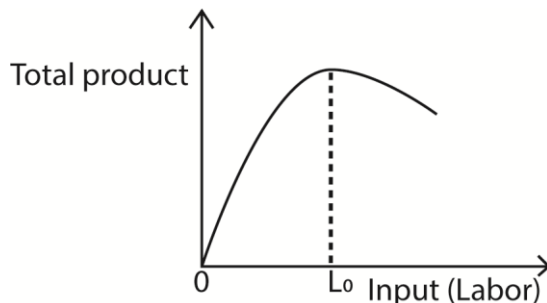
A list showing how output changes as inputs vary, similar to tabular but more descriptive.

### (v) Expression production function in Graphical Form

Production function represented by curves (isoquants, total product curves).

Helps visualize how output changes with varying inputs.

**Example:** A graph below illustrates variation of total output with labour while keeping other factors constant (fixed).



**Observations:** Output increases with increase in labor up to a certain point beyond which output decreases as labour increases.

### Determinants of the production function

- (i) **Quantity of Inputs:** More inputs (labor, raw materials, capital) generally increase output, though not always proportionally.
- (ii) **Quality of Inputs:** Skilled labor, fertile land, and high-quality raw materials improve productivity.
- (iii) **Technology:** Advanced machinery, automation, and innovation shift the production function upward, allowing more output with the same inputs.

- (iv) **Organization and Management:** Efficient coordination of resources, good leadership, and effective decision-making enhance output.
- (v) **Scale of Production:** Larger-scale operations may benefit from economies of scale, reducing costs and increasing efficiency.
- (vi) **Time Period (Short-run vs Long-run):** In the short run, some inputs are fixed (like land, machinery). In the long run, all inputs can vary, allowing firms to adjust fully.
- (vii) **Government Policies and Institutions:** Regulations, subsidies, and infrastructure support can influence productivity.
- (viii) **Natural Factors:** Climate, weather, and availability of natural resources affect agricultural and industrial production.
- (ix) **Entrepreneurship:** The vision, risk-taking, and innovation of entrepreneurs determine how effectively inputs are combined.

### The production function in the short run

The production function in the short run assumes the following;

- (i) At least one variable factor of production.
- (ii) It assumes constant technology.
- (iii) It assumes that all factors of production are perfectly divisible that is, they can be combined in all proportions.

### Variation of output in the Short run

Using the input-output relationship in the short run where we have one variable input (labour) and the fixed factor (land), a change in output can be expressed in the following ways;

#### (i) Total product.

This refers to the total amount of output produced using both variable and fixed factors of production in a given time.

#### (ii) Average product.

This refers to output per unit of the variable input.

$$\text{Average product} = \frac{\text{Total product (output)}}{\text{Units of a variable input (factor)}}$$

Note: If the variable input is labour then,

$$\text{Average product of labour (AP}_L\text{)} = \frac{\text{Total product (output)}}{\text{Units of labour}}$$

#### (iii) Marginal product.

It refers to the additional output resulting from the use or employment of an extra unit of variable factor input

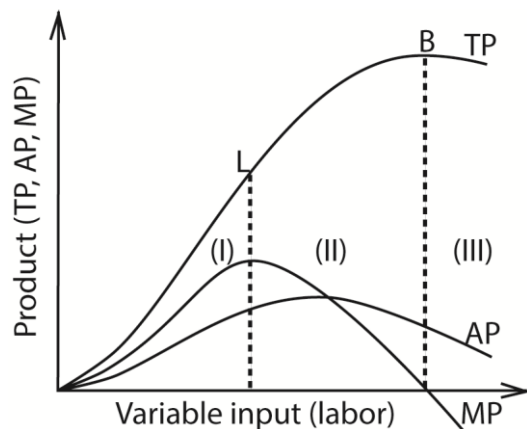
$$\text{Marginal product} = \frac{\text{Change in total product } (\Delta TP)}{\text{Change in units of a variable input (factor)}}$$

$$\text{Marginal product of labour (MP}_L\text{)} = \frac{\text{Change in total product } (\Delta TP)}{\text{Change in units of labour}}$$

A hypothetical example to show the mathematical relationship between T.P, A.P and M.P

Fixed factor (Land) in acres	Variable factor (labour)	T.P(Q)	A.P	M.P
5	1	5	-	-
5	2	15	7.5	10
5	3	45	15	30
5	4	73	18.5	28
5	5	86	17.2	13
5	6	91	15.2	5
5	7	91	13	0
5	8	88	11	-3

A graph of the changes of Total product, Average product and Marginal product versus labor



### Features of the graph

- (i) T.P begins by increasing, reaches maximum point B and then falls
- (ii) Marginal product (M.P) begins by increasing reaches a maximum and then decreases up to the negatives.
- (iii) Average product (A.P) begins by increasing, reaches a maximum and then falls.
- (iv) When total product (TP) is increasing at an increasing rate (up to point L), Marginal product (M.P) is also increasing. When TP is at maximum M.P is zero, when T.P is falling M.P is negative. Therefore M.P is the measure of the rate of change of total product.
- (v) When average product (A.P) is increasing; M.P is higher than AP and when average product (A.P) is falling M.P is lower than A.P and A.P is at maximum when  $MP = AP$ .
- (vi) L is called a point of inflexion. It refers to the point below which M.P is increasing and beyond which M.P is declining. OR. It is a point below which total product is increasing at a decreasing rate or beyond which total product is increasing at a declining rate.

From the graph the short run input-output relationship can be explained in three stages of production:-

### Stage I: The stage of increasing returns.

This is the initial stage of production in the short run where adding more units of a variable factor

(like labor) to fixed factors (like land or machinery) causes **output to increase at an increasing rate**. Any rational producer (farm) cannot operate in this stage because an increase in the labour inputs (variable factor) can still lead to increase in output.

### Stage II: The stage of diminishing returns.

This is the stage where adding more units of a variable factor (like labor) to fixed factors (like land or machinery) still increases total output, but at a **decreasing rate**.

This is the stage where a firm must operate because

- (i) **Output is still increasing:** Even though returns are diminishing, total production continues to rise as more inputs are added.
- (ii) **Optimal use of resources:** Fixed resources (like land or machinery) are fully utilized, and variable inputs (like labor) are balanced to avoid underuse or overcrowding.
- (iii) **Maximum efficiency:** Average product (AP) is falling but still positive, and marginal product (MP) is positive. This means each additional input still contributes to output, though less than before.
- (iv) **Profitability:** Firms can maximize profits here because costs are manageable and output is high enough to cover expenses and generate surplus.
- (v) **Avoiding inefficiency:** Stage I (increasing returns) underutilizes resources, while Stage III (negative returns) reduces total output. Stage II strikes the balance.
- (vi) **Basis for supply curve:** The law of supply in economics is derived from this stage, since firms supply goods when marginal costs rise but output are still increasing.

### Stage III: The Stage of negative returns.

This is the final stage of short-run production where adding more units of a variable factor (like labor) to fixed factors (like land or machinery) causes **total output to decline**.

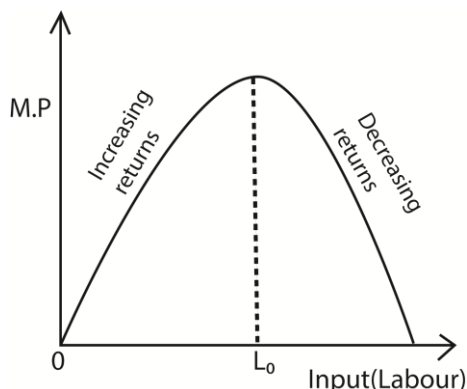
This is due to over utilization of the fixed factor by the variable factor.

It is irrational to operate in this stage since the employment of an extra unit of variable factor leads to less output generated.

### The law of diminishing returns (The law of variable factor proportions)

The law states that as more and more units of a variable factor (labour) are added to fixed factor (land), marginal product first increases reaches the maximum beyond which it diminishes.

#### Illustration



From the graph marginal product increases up to the maximum point beyond which it begins to diminish

## Assumptions of the law of diminishing returns

- (i) **Short-run applicability:** The law applies only in the short run, where some factors (like land or machinery) are fixed and cannot be changed immediately.
- (ii) **Constant technology:** No improvements or innovations occur during the period of analysis. If technology changes, productivity could increase instead of diminishing.
- (iii) **Homogeneous units of variable factor:** Each unit of the variable input (e.g., labor) is assumed to be identical in quality and efficiency.
- (iv) **Measurement in physical units:** Output is measured in tangible terms (e.g., kilograms, tons, liters), not in monetary value.
- (v) **Rational behavior of producers:** Producers are assumed to use resources efficiently, aiming to maximize output.
- (vi) **Natural factors remain constant:** External conditions like climate, soil fertility, or weather are assumed not to change during the analysis.
- (vii) **Applicability across sectors:** Though first observed in agriculture, the law applies to industry and other sectors where fixed resources limit output.

## Applications (importance) of the law of Diminishing returns

- (i) **Agriculture:** Explains why increasing labor or fertilizer on fixed land eventually reduces efficiency. Farmers use it to decide the optimal level of input use.
- (ii) **Industry and Manufacturing:** Helps firms understand how adding more workers or raw materials to fixed machinery affects output. Guides decisions on plant expansion
- (iii) **Profit maximization:** By understanding the point where added costs outweigh the marginal benefits, firms can determine the optimal level of input to maximize profits.
- (iv) **Efficient resource allocation:** The law helps determine the point where adding more of one resource (like labor) will no longer increase output proportionally, prompting a company to shift its focus, or resources to another area.
- (v) **Understanding costs:** It explains why a firm's short-run cost function is upward sloping, as more variable inputs are needed to produce each additional unit of output once diminishing returns set in.
- (vi) **Balancing priorities:** In a business, developers can use this concept to balance activities like adding new features versus fixing technical debt, knowing when to stop refining a task and move to another.
- (vii) **Pricing and Supply Decisions** Influences supply curves in economics, since diminishing returns explain why higher output requires higher costs and prices.
- (viii) **In personal and social contexts:** The principle applies to many areas of life, such as how the enjoyment from eating a food or spending time on a hobby decreases after a certain point.
- (ix) **Monetary and Fiscal Policy** Governments use the principle to understand limits of spending or taxation—beyond a point, extra input yields less benefit.
- (x) **Business Expansion Planning** Guides firms in deciding when to expand capacity or shift to long-run production where all inputs can vary.
- (xi) **Education and Training** Explains why adding more study hours or training beyond a certain point yields smaller improvements in performance.
- (xii) **In software development:** It can guide decisions on refactoring and performance tuning to ensure that the time and effort spent continue to yield meaningful benefits, and to help recognize when to stop an activity.

## Real-World Example (Uganda)

- (i) A **maize farmer** in Uganda:
  - Adding more workers initially boosts harvest.
  - After a point, extra workers overcrowd the land, reducing efficiency.
  - This guides farmers to balance labor and land use.
- (ii) In **Uganda's coffee industry**, the law helps determine the optimal use of fertilizer and labor to maximize yields without waste.

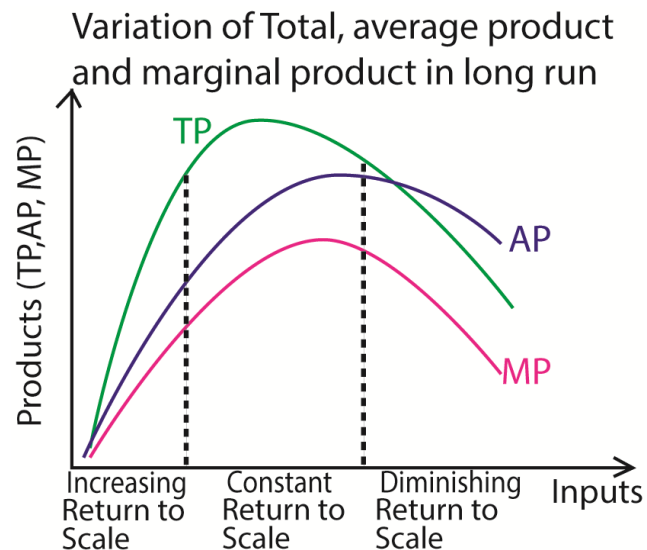
## Variation of output in the long run

In the **long run**, all factors of production are **variable**. Firms can adjust plant size, technology, and scale of operations. This flexibility changes how output responds to changes in inputs.

### Graphical Representation of variation of output in long run

In the **long run**, all factors of production are variable, so we don't usually consider **Total Product (TP)**, **Average Product (AP)**, and **Marginal Product (MP)** the same way as in the short run. Instead, economists focus on **returns to scale** (increasing, constant, and decreasing returns).

However, if we extend the idea of TP, AP, and MP to the long run, the curves below show how output changes when all inputs vary together.



**Returns to scale** refer to the change in output when all factor inputs are changed in a given proportion. It shows the relationship between the proportionate change in the factor inputs and corresponding changes in the quantity of output produced in the long runs

### Stages of Output Variation (Returns to Scale)

- (i) **Increasing Returns to Scale**

When all inputs are increased proportionally, output increases by a **greater proportion**.

Example: Doubling labor and capital leads to more than double the output.

Reason: Specialization, better use of technology, and economies of scale.

(ii) **Constant Returns to Scale**

Output increases in the **same proportion** as inputs.

Example: Doubling inputs results in exactly double the output.

Reason: Balanced use of resources without significant efficiency gains or losses.

(iii) **Decreasing Returns to Scale**

Output increases by a **smaller proportion** than inputs.

Example: Doubling inputs results in less than double the output.

Reason: Managerial inefficiencies, coordination problems, or over-expansion.

### Real-World Example (Uganda)

In Uganda's coffee industry for example:

- **Increasing returns:** Expanding farms and using modern irrigation increases yields more than proportionally.
- **Constant returns:** Further expansion yields proportional increases in output.
- **Decreasing returns:** Over-expansion without proper management reduces efficiency, so output grows less than inputs.

### Economies and diseconomies of scale

**Economies of scale (E.O.S)** are cost advantages gained by companies when production becomes efficient.

Companies can achieve economies of scale by increasing production and lowering costs

Note:

- **Real economies of scale;** are advantages(benefits/gains) enjoyed by the firm as a result of using reduced physical quantities of inputs used in the production of a given level of output. For example the number of units of inputs may change from 100kgsto 70 kg to produce the same level of output.
- **Pecuniary (Financial) economies of scale;** are advantages (benefits or gains) enjoyed by the firm in form of paying lower prices for factor inputs used in the production process. This normally occurs when the firm buys factor inputs in large quantities.

**Note:** Economies of scale can be internal or external.

- **Internal economies of scale;** are advantages (benefits) enjoyed by the firm inform of reduced average costs resulting from the firm's own expansion.
- **External economies of scale;** are advantages (benefits) enjoyed by the firm in form of reduced average costs due to the expansion of the industry as a whole.

### Examples of internal Economies of scale

- (i) **Purchasing economies:** A large company can buy raw materials in bulk, which often leads to significant discounts from suppliers, lowering the cost of inputs.
- (ii) **Technical economies:** A large-scale manufacturer can afford to invest in more advanced, efficient machinery and technology that may be too expensive for a smaller business.
- (iii) **Managerial economies:** As a firm grows, it can hire specialized managers for different functions like marketing, finance, and production, leading to greater efficiency and expertise in each department.
- (iv) **Financial economies:** Large, established companies are often perceived as less risky and can therefore secure loans with lower interest rates from banks than smaller firms.
- (v) **Marketing economies:** The cost of a national advertising campaign can be spread out over a much larger customer base, making the average advertising cost per unit lower.
- (vi) **Specialization:** Firms can divide complex production processes into smaller, specialized tasks, allowing workers to become more proficient and efficient at their specific job.
- (vii) **Transport internal E.O.S.** These result from a large firm transporting raw materials or commodities in bulk (large quantities) which reduces the cost per unit of transportation. For example the unit cost of transporting 600 tones per trip is different from the unit cost of transporting 100 tones per the same trip.
- (viii) **Storage internal E.O.S.** A large firm enjoys by storing raw materials or commodities in bulk as compared to small firms, That is, large firms incur lower: costs per unit as a result of storing in large quantities.
- (ix) **Social (welfare) internal E.O.S.** Large firms can afford to provide their workers with facilities like medical, transport, accommodation, higher wages, etc. all of which motivate their workers and make them feel contented. This increases efficiency hence reduced average costs.

### Examples of external economies of scale

- (iv) **Industry Clustering:** When firms in the same industry locate near each other (e.g., Silicon Valley for tech), they benefit from shared suppliers, labor pools, and knowledge spillovers.
- (v) **Specialized Supplier:** Networks As an industry grows, more suppliers emerge to serve it, reducing input costs and improving quality for all firms.
- (vi) **Skilled Labor:** Availability Educational institutions and training centers develop in response to industry demand, providing a steady stream of skilled workers.
- (vii) **Infrastructure Development:** Governments may invest in roads, ports, and communication systems that benefit all firms in a region.
- (viii) **Shared Research and Innovation:** Universities, labs, and industry associations contribute to technological advancements that all firms can adopt.
- (ix) **Government Incentives:** Tax breaks, subsidies, and policy support for specific sectors (e.g., agriculture or renewable energy) reduce costs across the board.
- (x) **Marketing and Export Facilities:** Joint marketing campaigns or export hubs help firms reach wider markets more efficiently.

- (xi) **Transport external E.O.S.** Firms in one industry can share transport facilities and other social infrastructure which results into reduced average costs of transportation to each firm.
- (xii) **Financial external economies of scale.** Firms in one area can attract financial institutions like banks, building societies advertising agencies, insurance companies, etc. This makes it possible for individual firms to acquire loans at lower interest rates and to carry out other activities at reduced charges hence reduced average costs to each firm.
- (xiii) **Marketing external economies of scale.** Firms under one industry can sell commodities and buy raw materials collectively in order to reduce on the costs and even enjoy huge discounts when buying. In addition firms may form marketing co-operatives which can assist in the selling of their products as an industry.

### **Diseconomies of scale**

These are disadvantages accruing to the firm of in form of increased average costs resulting from over expansion of the scale of production of the firm or industry.

- **Internal diseconomies of scale.** These are disadvantages accruing to the firm in form of increased average costs resulting from over expansion of the scale of production of the firm.
- **External diseconomies of scale.** These are disadvantages accruing to the firm in form of increased average costs resulting from over expansion of the industry.

### **Examples of Internal Diseconomies of scale**

- (i) **Poor coordination:** As firms grow, coordinating across departments, locations, and teams becomes harder, leading to delays and errors.
- (ii) **Managerial inefficiency:** Larger firms may suffer from bureaucratic layers and slow decision-making, reducing responsiveness and innovation.
- (iii) **Communication breakdowns:** With more employees and divisions, messages can be misinterpreted or lost, causing confusion and mistakes.
- (iv) **Loss of employee motivation:** In large organizations, workers may feel less valued or disconnected, reducing productivity and increasing turnover.
- (v) **Over-specialization:** Excessive division of labor can lead to monotony, reduced flexibility, and lack of cross-functional skills.
- (vi) **Increased administrative costs:** More staff, systems, and oversight mean higher overheads without proportional output gains.
- (vii) **Duplication of effort:** Multiple departments may unknowingly perform similar tasks, wasting resources and time
- (viii) **Financial internal D.O.S.** Due to over expansion of the firm, it becomes very difficult to get enough money to finance all the production activities. This may force the firm to borrow at very high interest rates hence increasing the average costs of production.
- (ix) **Transport internal D. O.S.** As the firm expands the transport facilities may be over utilized due to transporting heavy and bulky products. This results into break down of infrastructure and vehicles, forcing the firm to incur higher costs of repair.

## Examples of external Diseconomies of scale

- (i) **Congestion:** Increased traffic on roads and public transport, leading to longer commute times for employees and delays for product deliveries.
- (ii) **Overcrowding** on local infrastructure that businesses rely on, like transportation networks, increasing costs and decreasing efficiency for everyone.
- (iii) **Resource Scarcity.** A rapid increase in the number of companies in an area leads to higher competition for a limited supply of raw materials, driving up their cost. Similarly, competition for skilled labor can increase wage rates across the industry.
- (iv) **Rising input costs:** As an industry grows in a specific location, the demand for office or industrial space increases, leading to higher rental costs for all businesses in that area.
- (v) **Environmental degradation:** A large concentration of companies can lead to increased pollution, which may harm employee health and lead to higher social costs and potential regulations.

## Revision exercise 1

### Section A questions

- 1 (a) Define the term "production"  
(b) Mention any three agents of production in your country.
- 2 (a) What is meant by factor price  
(b) Mention any three factor prices in an economy
- 3 Give any four determinants of demand for factors of production.
- 4 (a) What is meant by factor specificity?  
(b) Explain the relationship between specificity and mobility of a factor of production
- 5 (a) Distinguish between horizontal and vertical factor mobility  
(b) Give two examples of vertical mobility of labour.
- 6 (a) Distinguish between specialization and division of labour  
(b) Give two advantages of specialization in an economy.
- 7 (a) What is meant by factor mobility?  
(b) State three causes of factor immobility in your country
- 8 Mention four factors which limit occupational mobility of labour in your country
- 9 (a) Define Marginal efficiency of capital  
(b) Give any three determinants of Marginal efficiency of capital.
- 10 Make a difference between private Limited companies and public Limited companies.
- 11 Distinguish between the following terms  
(a) Unlimited liability and limited liability  
(b) A share and a stock  
(c) A money market and a capital market
- 12 Mention four features stock exchange markets in developing countries
- 13 (a) State the law of diminishing returns  
(b) Mention any three usefulness of the law of diminishing returns
- 14 (a) State the law of variable factor proportions.

- (b) Mention any three assumptions underlying the law above.
- 15 (a) Define marginal efficiency of a factor of production  
 (b) Mention three determinants of marginal efficiency of a factor
- 16 Outline four sources of business finance in your country.
- 17 (a) Differentiate between interest and profit  
 (b) Calculate the compound interest earned on the principle sum of 100.000/= lent for a period of three years at an interest rate of 10% per annum.
- 18 (a) What is meant by subsistence production  
 (b) Mention three features of subsistence (direct) production.
- 19 (a) What is meant by market (indirect) production  
 (b) Give three merits of market production.
- 20 (a) Distinguish between Pecuniary and real economies of scale  
 (b) Give two examples of pecuniary economies of scale

### Section B questions

1. (a) With examples, distinguish between Horizontal and Vertical mobility of labour.  
 (b) Explain the determinants of labour mobility in your country.
2. (a) Explain the role of capital accumulation in economic development  
 (b) Discuss the factors that influence capital accumulation in your country
- 3 (a) What is meant by the term capital accumulation and capital depreciation  
 (b) Suggest measures that should be taken to increase the rate of capital accumulation in your country.
- 4 (a) Explain the barriers to occupational labour mobility.  
 (b) Suggest policies that can be adopted to improve labour mobility in your country.
- 5 (a) Distinguish between economies of scale and diseconomies of scale.  
 (b) Discuss the various economies of scale enjoyed by firms in your country
- 6 (a) Distinguish between external economies of scale and internal economies of scale  
 (b) Account for the survival of small firms despite the presence of economies of large scale production.

## Concept of the firm

- **A firm** is a production unit under one management which organizes resources to produce goods and services.
- **An industry** is a collection of firms dealing in related products for example foot wear industry plastic industry, textile industry etc.

## Types of industries

1. **Rooted Industries.** These are industries located near the source of raw materials e.g. Cement industries located near lime stone rocks, sugar industries located near, sugar cane plantations
2. **Footloose Industries.** There are industries which can be located anywhere without considering the source of raw materials or market.
3. **Tied Industries.** These are industries located near the market for their finished products e.g. furniture industries, bakeries, carpentry workshops soda industry, etc.

## Objectives of the firm

- (i) **Profit Maximization:** Traditionally considered the primary goal. Firms aim to maximize the difference between revenue and costs to reward shareholders and reinvest in growth.
- (ii) **Sales Maximization:** Some firms focus on increasing sales volume rather than immediate profits, often to gain market dominance or achieve economies of scale.
- (iii) **Growth Maximization:** Firms may prioritize expansion in size, assets, or market presence to strengthen long-term competitiveness.
- (iv) **Market Share Expansion:** Increasing market share helps firms gain bargaining power, brand recognition, and stability in competitive industries.
- (v) **Survival:** Especially important for new or struggling firms. Ensuring continuity in the face of competition or economic downturns is a fundamental objective.
- (vi) **Social and Environmental Responsibility:** Modern firms often aim to meet sustainability goals, reduce environmental impact, and contribute positively to society.
- (vii) **Profit Satisficing:** Instead of maximizing profit, some firms aim for “satisfactory” profits while balancing other objectives like employee welfare or customer satisfaction.
- (viii) **Customer Satisfaction:** Delivering quality products and services to retain customers and build loyalty.
- (ix) **Blockage of Entry I.** Some firms are interested in preventing other firms from entering the industry. This is achieved by setting lower prices that make entry of new firms in the industry unattractive. This is referred to as **limiting pricing policy**.
- (x) **Employee welfare maximization.** Some firms aim at maximizing the welfare of their workers increasing the wage and non-wage benefits,

## Reasons Small-Scale Firms Survive Alongside Large Firms

- (i) **Flexibility and adaptability:** Small firms can quickly adjust to changes in consumer preferences, technology, or market conditions.
- (ii) **Personalized services:** They often provide customized products and closer customer relationships, which large firms struggle to replicate.

- (iii) **Niche markets:** Small firms specialize in unique products or local needs that are too small for large firms to profitably serve. For example sale of pieces of sweet banana.
- (iv) **Lower overhead costs:** Operating on a smaller scale means fewer administrative layers and lower fixed costs.
- (v) **Innovation and creativity:** Small firms are often more innovative, experimenting with new ideas without the bureaucracy of large corporations.
- (vi) **Local knowledge:** They understand community needs and cultural preferences better, giving them an edge in local markets.
- (vii) **Government support:** Policies such as tax incentives, credit facilities, and training programs help small firms remain competitive.
- (viii) **Complementary role:** Small firms often act as suppliers, distributors, or service providers to large firms, creating interdependence.
- (ix) **Using bi-products from large firms.** Small scale firms may survive when they are using raw materials supplied by large firms. This makes them to remain in a small state despite the benefits of large production.

### Real-World Example (Uganda)

- (i) In **Uganda's retail sector**, small shops and kiosks survive alongside supermarkets by offering:
  - Credit to loyal customers.
  - Flexible hours.
  - Personalized service.
- (ii) In **Uganda's coffee industry**, smallholder farmers coexist with large exporters because they serve niche specialty markets and benefit from cooperatives.

### Advantages of small scale firm

- (i) **Flexibility and adaptability:** Small firms can quickly adjust to changes in consumer preferences, technology, or market conditions without bureaucratic delays.
- (ii) **Personalized customer service:** They build close relationships with customers, offering tailored services and fostering loyalty.
- (iii) **Niche market specialization:** Small firms often focus on niche markets (e.g., handmade goods, local foods) where competition is lower and demand is more inelastic.
- (iv) **Lower overhead costs:** Operating on a smaller scale reduces administrative and fixed costs, making them more efficient in certain markets.
- (v) **Innovation and creativity:** Small firms are often more innovative, experimenting with new ideas and products without the constraints of large corporate structures.
- (vi) **Local knowledge and community ties:** They understand local culture and needs better, giving them an edge in serving specific communities.
- (vii) **Employee motivation:** Workers in small firms often feel more valued and connected, which can boost productivity compared to large, impersonal corporations.

### Merging (Integration) of firms

This is where two or more firms join together to form one business unit with the aim of enjoying economies of large scale.

## Reasons (Aims/Objectives) for merging/integration

- (i) **Economies of scale:** Larger firms can reduce average costs by spreading fixed costs over more units, bulk purchasing, and using resources more efficiently.
- (ii) **Market power:** Mergers increase market share, reduce competition, and give firms more control over pricing and supply.
- (iii) **Diversification:** Firms merge to spread risks by entering new markets or producing different products.
- (iv) **Access to resources:** Integration provides access to better technology, skilled labor, raw materials, or distribution networks.
- (v) **Financial strength:** Larger firms have more capital, making it easier to invest in research, expansion, and withstand market shocks.
- (vi) **Synergy:** The combined firm may perform better than the sum of its parts due to complementary strengths.
- (vii) **Survival and competitiveness:** Smaller firms may merge to survive against larger competitors or adapt to changing market conditions.
- (viii) **Tax advantages:** Some mergers are motivated by opportunities to reduce tax burdens through restructuring.
- (ix) **Global expansion:** Integration helps firms enter international markets more easily by combining resources and networks.

## Real-World Example (Uganda)

- (i) In **Uganda's banking sector**, mergers like the integration of smaller banks into larger ones aim to:
  - Achieve economies of scale.
  - Strengthen financial stability.
  - Expand customer reach.
- (ii) In **Uganda's coffee industry**, cooperatives act as a form of integration, helping small farmers pool resources to compete globally.

## Types of Mergers

### (a) Horizontal Mergers.

A **horizontal merger** occurs when two companies operating in the same industry and at the same stage of production combine. The main aim is to increase market share, reduce competition, and achieve economies of scale

#### Examples

- (i) **Biyinzika Poultry Industry Consolidation:** The private equity firm 8 Miles sold its stake in Biyinzika Poultry, part of broader consolidation in Uganda's poultry and agribusiness sector. This horizontal merger reflects firms combining within the same industry to expand scale and efficiency.
- (ii) **Regulatory Agencies Merger:** Agencies such as the Insurance Regulatory Authority, Uganda Retirement Benefits Regulatory Authority, and Uganda Microfinance Regulatory Authority were merged into specialized directorates under the Bank of Uganda. While technically public-sector integration, it reflects horizontal consolidation of institutions with overlapping mandates.

- (iii) **Banking:** The merger between **NC Bank** and **Commercial Bank of Africa (CBA)** is a key example in the financial sector, combining two entities offering similar services in the Ugandan market.
- (iv) **Insurance: Prudential plc** acquired the life assurance business of **Goldstar Insurance** in Uganda to consolidate and grow its market position in the life insurance sector. Another instance involved a continental insurer's acquisition of a 62% stake in a local insurance company.
- (v) **Dairy Industry: Kenya's Brookside Dairy** acquired **Sameer Agriculture and Livestock**, a major player in the Ugandan milk industry at the time.
- (vi) **Retail: Nakumatt** finalized the takeover of **Shoprite's** outlets in Uganda as part of a strategy to become the dominant supermarket franchise in the region.
- (vii) **Cement Manufacturing: Sarrai Group**, a Ugandan company, acquired **Hima Cement** from the Swiss Holcim Group, bringing together two companies in the same industry.
- (viii) **Manufacturing:** In the early 2000s, **Britania Products** and **Britania Foods**, which both had manufacturing operations, merged to form **Britania Allied Industries Ltd.**

**(b) Vertical mergers.**

A **vertical merger** occurs when two companies at **different stages of the same supply chain** combine. The goal is to improve efficiency, reduce costs, and gain greater control over production and distribution

**Examples**

- (i) **House of Dawda Group acquiring Charms Uganda:** This is a forward vertical integration where the parent company integrated its distributor, gaining control over its beverage and consumer goods distribution.
- (ii) **American Towers Corporation acquiring MTN Uganda's tower business:** This acquisition represents a backward vertical merger, where a company acquired a supplier of a critical input (telecom towers) for its operations.
- (iii) **ABSA acquiring Barclays Bank Uganda:** This is an example of a vertical merger within the banking sector, where the parent company merged its subsidiary with another to streamline operations and gain market share in Uganda.
- (iv) **Seacom acquiring Africell Uganda assets:** While this involved acquiring assets from a defunct competitor, Seacom's acquisition of the telecommunications infrastructure assets is an example of backward vertical integration, as it brought the infrastructure supply chain under its control.

**There are two types of vertical mergers;**

- (i) **Forward Vertical Mergers.** This is the form of vertical integration where a firm at a lower stage of production merges with the firm at higher stage of production like a secondary school merging with a university, sugarcane firm initiating the process of merging with a sugar firm etc.
- (ii) **Backward Vertical Mergers.** This is the form of vertical integration where a firm at higher stage of production absorbs a firm at a lower stage of production. For example the sugar firm absorbs a sugar cane plantation, a steel manufacturing industry absorbing an iron supplying company etc.

**Note**

(a) **Backward linkages.**

Backward linkages is a connection that occurs when a producing industry derives inputs from its supplier industries..

**Backward linkage:** Measures the demand an industry places on its suppliers (upstream)

**Examples**

- (i) **Agriculture → Fertilizer & Machinery:** Growth in farming increases demand for fertilizers, seeds, tractors, and irrigation equipment.
- (ii) **Construction → Cement & Steel:** Expansion in construction boosts demand for cement, steel, and other building materials.
- (iii) **Textile Industry → Cotton Farming:** Textile mills stimulate cotton production and ginning factories.

(b) **Forward linkages.**

**Forward linkages** occur when the output of one industry becomes the input for another downstream industry.

**Examples**

- (i) **Coffee Farming → Coffee Processing & Export** Coffee beans harvested in Uganda create forward linkages with roasting, packaging, and export businesses.
- (ii) **Sugarcane → Sugar Factories & Confectionery** Sugarcane farming supports sugar processing plants, which then supply confectionery and beverage industries.
- (iii) **Cotton → Textile Industry** Cotton farming creates forward linkages with ginning factories, textile mills, and garment production.

**Forward linkage:** Measures the demand for an industry's product from other industries that use it as an input (downstream).

(c) **Lateral integration/merger**

A **lateral integration (or lateral merger)** occurs when two firms from **related but not identical industries** combine. Unlike horizontal mergers (same industry, same stage) or vertical mergers (different stages of the same supply chain), lateral mergers link companies that operate in **different but complementary markets**.

### Examples

- (i) A **telecom firm partnering with a mobile banking service** (e.g., MTN Uganda integrating with fintech services).
- (ii) A **brewery merging with a packaging company** → related industries that complement each other.
- (iii) A **transport company merging with a tourism operator** → both serve travel-related markets but in different ways.
- (iv) A **car manufacturer merging with a car insurance company** → both serve the automobile market but at different points.
- (v) A **soft drink company merging with a snack producer** → related consumer goods industries, but not identical.
- (vi) A **telecom company merging with a media streaming service** → both operate in communications/entertainment but not the same industry.

### (d) Conglomerate (Diversifying) mergers. T

A **conglomerate merger** (also called a **diversifying merger**) occurs when two companies from **completely unrelated industries** combine. Unlike horizontal (same industry) or vertical (same supply chain) mergers, conglomerate mergers are about diversification, risk reduction, and expanding into new markets.

### Examples

- (i) **Telecom + Banking/Fintech:** MTN Uganda expanding into mobile money services (telecom + financial services).
- (ii) **Agribusiness + Transport:** A farming cooperative merging with a logistics company to control both production and distribution.
- (iii) **Manufacturing + Media:** A beverage company partnering with advertising/media firms to diversify operations.

## Factors That Make Mergers Difficult

- (i) **Regulatory and Legal Barriers:**
  - Competition authorities may block mergers that reduce market competition.
  - Could be due to a complex approval processes from government agencies.
- (ii) **Financial Constraints:**
  - High costs of acquisition and integration.
  - Disagreements over valuation of firms.
  - Burden of debt financing.
- (iii) **Cultural Differences**
  - Conflicts in organizational culture, management style, or employee expectations.
  - Resistance from staff fearing job losses or changes.
- (iv) **Operational Challenges**
  - Difficulty in integrating systems, processes, and supply chains.
  - Disruption to ongoing business activities during transition.
- (v) **Strategic Misalignment**
  - Different visions, goals, or priorities between merging firms.
  - Lack of synergy in products or markets.

- (vi) Shareholder Opposition
  - Minority shareholders may resist mergers if they feel undervalued.
  - Fear of reduced dividends or diluted ownership.
- (vii) Political and Economic Environment
  - Unstable economic conditions discourage mergers.
  - Political interference or uncertainty in policy frameworks.
- (viii) Fear of paying high taxes by one single big firm

### Example in Uganda

- **Banking sector mergers** often face regulatory hurdles from the **Bank of Uganda**.
- **Agribusiness mergers** may struggle with valuation disagreements due to fluctuating commodity prices.
- **Telecom mergers** face cultural and operational challenges, especially when integrating large customer bases and technology systems.

### Advantages of merging of firms

- (i) **Economies of Scale:** Larger firms can reduce average costs by buying in bulk, sharing resources, and streamlining operations.
- (ii) **Increased Market Share:** Mergers reduce the number of competitors, giving the new entity stronger bargaining power and customer reach.
- (iii) **Diversification of Risk:** By merging with firms in different industries or markets, companies spread risks and reduce dependence on one sector.
- (iv) **Access to New Markets:** Firms gain entry into new geographic regions or customer segments, boosting growth opportunities.
- (v) **Improved Efficiency:** Combining operations eliminates duplication, integrates supply chains, and enhances productivity.
- (vi) **Financial Strength:** Merged firms have stronger cash flows, better access to credit, and more resources for investment.
- (vii) **Innovation and Synergies:** Shared expertise, technology, and talent foster innovation and create synergies that improve competitiveness.
- (viii) **Tax Benefits:** In some cases, mergers allow firms to optimize tax liabilities and benefit from favorable structures.
- (ix) It ensures reliable supply of raw materials.
- (x) It reduces the cost of advertising for individual firms.

### Disadvantages of merging of firms

- (i) **Cultural Conflicts:** Differences in organizational culture, management style, and employee expectations can lead to inefficiency and low morale.
- (ii) **Job Losses:** Duplication of roles often results in layoffs, creating social and political backlash.
- (iii) **Reduced Competition:** Mergers may lead to monopolistic tendencies, reducing consumer choice and potentially increasing prices.
- (iv) **Integration Challenges:** Combining systems, supply chains, and operations can be complex and disruptive.

- (v) High Costs Mergers require significant financial resources for acquisition, restructuring, and harmonization.
- (vi) Regulatory Barriers Governments and competition authorities may block or delay mergers to protect market fairness.
- (vii) Loss of Identity Smaller firms may lose their brand identity or autonomy after merging with larger companies.
- (viii) Risk of Failure If synergies are not realized, the merger may fail, wasting resources and damaging reputation.
- (ix) It leads to over exploitation of resources.

### Location of firms (Industries)

This refers to the setting up of a firm in a particular area.

### Factors affecting the location of firms

- (i) **Availability of Raw Materials:** Firms producing goods (e.g., sugar, cement, textiles) often locate near sources of raw materials to reduce transport costs.
- (ii) **Market Proximity:** Being close to customers reduces distribution costs and ensures faster delivery.
- (iii) **Transport and Infrastructure:** Good roads, railways, airports, and communication networks make it easier to move goods and access services.
- (iv) **Labor Supply:** Firms prefer areas with skilled, affordable, and abundant labor.
- (v) **Government Policies:** Tax incentives, subsidies, and favorable regulations attract firms to certain regions.
- (vi) **Power and Energy:** Supply Reliable electricity and fuel sources are essential for industrial operations.
- (vii) **Cost of Land and Rent:** Affordable land and premises reduce overhead costs.
- (viii) **Social and Environmental Factors:** Availability of schools, hospitals, and a clean environment influences firm location, especially for attracting skilled workers.
- (ix) **Security and Political Stability:** Firms avoid areas with conflict or instability to protect investments.
- (x) **Agglomeration Economies:** Firms may cluster together (industrial zones, business parks) to benefit from shared services and networks.
- (xi) **Political climate.** The location of a firm is determined by political stability (security) of the area. This is because a politically stable area provides a conducive investment climate which attracts firms to be located in a certain area.
- (xii) **Availability of suitable climate.** Firms are located in areas where the climate is generally favorable for their activities. For example it is not advisable to locate a paper industry in a swampy area.

### Examples in Uganda

- **Sugar factories** locate near sugarcane farms (raw materials).
- **Telecom companies** set up in urban centers like Kampala (market proximity).
- **Fish processing plants** near Lake Victoria (resource-based location).
- **Industrial parks** in Namanve and Mbale (government incentives and infrastructure).

## Localization of firms

The **localization of firms** refers to the tendency of industries or businesses to cluster in specific regions.

### Factors which influence the localization of firms

- (i) **Availability of Raw Materials:** Industries often cluster near sources of raw materials to reduce transport costs (e.g., sugar factories near cane farms).
- (ii) **Market Proximity:** Firms localize near large consumer markets to ensure easy access to buyers.
- (iii) **Transport and Infrastructure:** Good roads, railways, ports, and communication networks encourage firms to cluster in accessible areas.
- (iv) **Labor Supply:** Areas with abundant skilled or cheap labor attract firms, leading to industrial clusters.
- (v) **Power and Energy:** Availability of reliable electricity and fuel sources are essential for industries, influencing their concentration.
- (vi) **Government Policies:** Tax incentives, subsidies, and establishment of industrial parks encourage firms to localize in specific regions.
- (vii) **Agglomeration Economies:** Firms benefit from being close to each other through shared services, suppliers, and knowledge spillovers.
- (viii) **Security and Political:** Stable regions attract firm localization, while conflict-prone areas discourage it.
- (ix) **Social Amenities:** Availability of housing, schools, hospitals, and recreational facilities makes it easier to attract and retain workers.
- (x) **Availability of enough land.** When land is available and cheap, many firms concentrate in that area because of the existence of room for expansion.

### Examples in Uganda

- (i) **Namanve Industrial Park (near Kampala):** Firms localize here due to government incentives, infrastructure, and proximity to markets.
- (ii) **Jinja (Eastern Uganda):** Historically localized industries due to hydroelectric power from River Nile.
- (iii) **Sugar belt (Busoga region):** Sugar factories cluster near cane farms for raw material access.
- (iv) **Fish processing plants (around Lake Victoria):** Localized near fishing grounds to minimize transport and preserve freshness.

## The revenue concept of the firm

Revenue is the receipts (returns) derived from the sale of a given level of output at a given price in a given time.

### Terms used under revenue

**Total Revenue (T.R);** this is the total amount of money the firm receives from the sale of its output.  $TR = P \times Q$  Where  $P$  = Price of each unit of output and  $Q$  = total output

**Average Revenue (A.R);** refers to total revenue per unit of output sold

$$AR = \frac{TR}{Q}$$

Note: Average revenue is the same as price under perfect competition

$$AR = \frac{TR}{Q} = \frac{P \times Q}{Q} = P$$

**Marginal Revenue (MR.)** refers to the additional revenue resulting from the sale of an extra unit of output

$$MR = \frac{\text{Change in total revenue}}{\text{Change in output}} = \frac{\Delta TR}{\Delta Q}$$

Example

Output	TR	AR	MR
1	500	500	-
2	800	400	300
3	1000	333	200
4	1300	325	300
5	1600	320	350

### The theory of costs

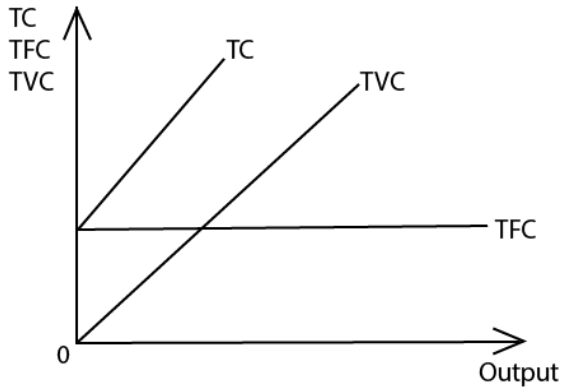
A **cost in economics** refers to amount of money paid (incurred) by the firm to produce a given level of output in a given time.

Therefore costs are expenses of the firm in the production process. A firm's cost of production also includes all the opportunity costs of producing its output of goods and services.

### Types of costs of a firm

- (i) **Explicit Costs:** Direct payments to outsiders for inputs (e.g., wages, rent, raw materials).
- (ii) **Implicit Costs:** Non-monetary costs, such as the value of the owner's time or foregone income from using own resources.
- (iii) **Economic Cost:** The sum of explicit and implicit costs, reflecting the true cost of production.
- (iv) **Fixed Costs:** Do not change with output (e.g., rent, insurance).
- (v) **Total fixed costs (TFC):** is the sum of fixed costs
- (vi) **Variable (prime) Costs:** Vary with output (e.g., raw materials, wages).
- (vii) **Total variable costs (TVC):** is the sum of all variable cost incurred at a given level of production
- (viii) **Total Costs (TC) =** Sum of Implicit and Explicit costs.  
= Total Fixed costs (TFC) + Total Variable costs (TVC) + Implicit costs  
Assuming that implicit costs = 0  
TC = TFC + TVC.
- (ix) **Marginal Costs:** Extra cost of producing one more unit.

### A graph of costs versus output



#### Features of the graph

- (i) At  $t=0$ ,  $TVC = 0$   
Hence  $TC = TFC$  (total fixed costs)
- (ii) When output increases,  $TVC$  and  $TC$  increase by the same amount. This is because  $TFC$  are constant at all levels of output and an increase in  $TC$  results from the increase in  $TVC$ .

### Variation of costs in the short run

In the short run, there are both variable costs and fixed costs of production. This is because some factors of production are variable and others are fixed.

**Average Fixed Costs (AFC).** These are total fixed costs incurred in producing an extra unit of output in a given time. Or these are fixed costs per unit output produced by the firm in a given time

$$AFC = \frac{\text{Total fixed costs}}{\text{Output}} = \frac{TFC}{Q}$$

#### Example 1

Given  $TFC = 8000/=$  and output = 20kg, find AFC

$$AFC = \frac{\text{Total fixed costs}}{\text{Output}} = \frac{TFC}{Q} = \frac{8000}{20} = 400 \text{ shillings per kg}$$

**Average variable costs (AVC)** are total variable costs per unit of output produced in a given time. Or average variable costs are total variable costs incurred in producing one unit of output in a given time.

$$AVC = \frac{\text{Total variable costs}}{\text{Output}} = \frac{TVC}{Q}$$

#### Example 2

Given  $TVC = 10000/=$  and output is 200kg, find AVC

$$AVC = \frac{\text{Total variable costs}}{\text{Output}} = \frac{TVC}{Q} = \frac{10000}{200} = 50 \text{ shilling per kg}$$

**Marginal cost** refers to additional costs resulting from the production of an extra unit of output in a given time

$$MC = \frac{\text{Change in total costs}}{\text{Change in output}} = \frac{\Delta TC}{\Delta Q}$$

### Example 3

Given that output increased from 50kg to 75kg and total costs increased from 20,000/= to 25,000/=. Calculate MC.

$$MC = \frac{\Delta TC}{\Delta Q} = \frac{25000-20000}{75-50} = \frac{5000}{25} = \text{sh. 200 per kg}$$

Average total cost (ATC/AC) is the total costs of production per unit of output produced by the firm in a given time. Or average total costs are total costs incurred in producing one unit of output in a given time.

$$ATC = AC = \frac{TC}{Q}$$

### Example 4

Given that TC = 400/= and output is 20 units, calculate ATC (AC)

$$ATC = AC = \frac{TC}{Q} = \frac{400}{20} = \text{sh. 20 per unit}$$

Not that

$$TC = TFC + TVC;$$

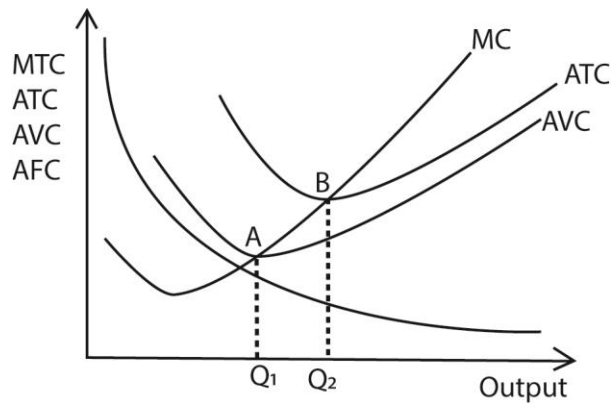
Divide through by Q

$$\frac{TC}{Q} = \frac{TFC}{Q} + \frac{TVC}{Q}$$

$$\Rightarrow ATC = AFC + AVC$$

Numerical example to illustrate the short run variation of costs of a firm

Output Q	TFC	TVC	TC	MC	ATC	AFC	AVC
0	100	0	100	-	-	-	-
1	100	400	500	400	500	100	400
2	100	700	800	300	400	50	350
3	100	900	1000	200	333	33	300
4	100	1200	1300	300	325	25	300
5	100	1550	1650	350	330	20	310
6	100	2000	2100	450	350	17	333



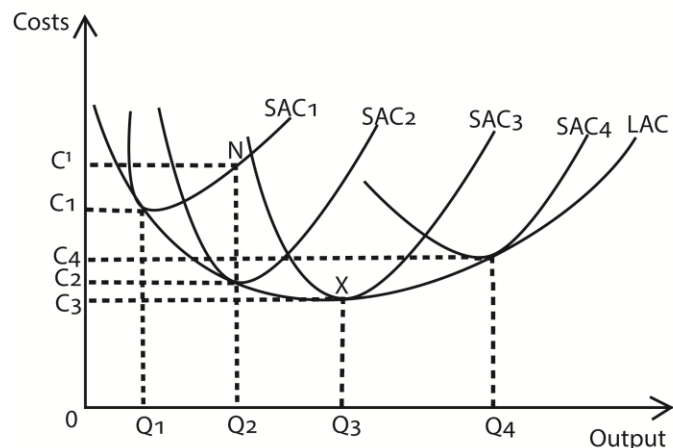
### Features of the graph

- (i) MC, ATC and AVC curves are U-shaped because of law of diminishing returns
- (ii) AVC curve lies below ATC curve because AVC is part of ATC.
- (iii) As output increases the AVC curve comes closer to the ATC curve because of the continuous fall of AFC.
- (iv) The MC curve lies below the ATC and AVC curves when they are declining and it lies above them when they are rising.
- (v) The MC curve cuts the AVC and ATC curves at their lowest (minimum) points (points A and B respectively).
- (vi) The minimum point of the AVC curve (point A) is on the left hand side of the minimum point of the ATC curve (point B).
- (vii) The ATC curve first decreases as output increases because of the fall in AVC and AFC. After point A, the AVC curve begins to rise but the ATC curve continues to fall because of the continuous fall in AFC which outweighs the rate at which AVC is increasing.
- (viii) After point B the ATC Curve begins to rise because of the increase in AVC outweighs the rate at which AFC is falling.

### Variation of costs in the Long run

In the long run, there are no fixed costs and therefore, all costs of production are variable. The firm is able to adjust its plant size by varying all the costs of production and at the same time producing at the minimum point of the long run average cost curve.

Relationship between long run and short run average costs

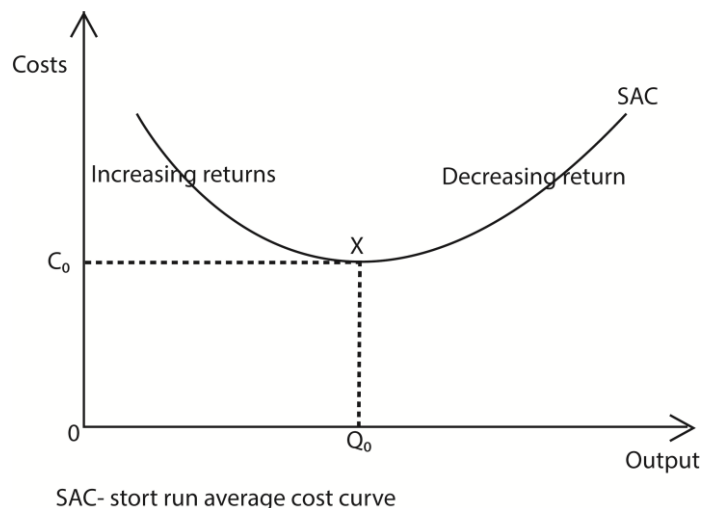


LAC - long run average cost curve; SAC - short run average cost curve

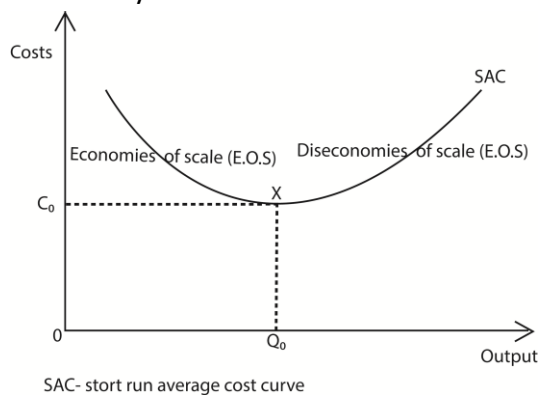
## Features of the graph

- (i) The relationship between LAC and SAC curves is that the LAC curve is a locus of the series of the tangents of the minimum points of the SAC curves as shown from the graph.
- (ii) The LAC curve is U-shaped but flatter as compared to SAC curve because of the gradual decline in the Average costs and the gradual increase in the average costs after the optimum point X which is due to economies and diseconomies of large scale respectively.
- (iii) The LAC curve is called the envelope curve or planning curve because it encloses all the short run average cost curves. The envelope curve is locus of the tangents of the minimum points of the short run average cost curves. Therefore a firm to produce more output in the long run, it must adjust its plant size which allows it to produce at the minimum level of the average cost curve.
- (iv) From the graph, to produce output  $OQ_2$ , the firm can either use plant size of  $SAC_1$  or  $SAC_2$ . However the firm chooses the scale of operation of plant size  $SAC_2$  to produce  $OQ_2$  because costs  $CC_2$  is lower than  $OC_1$  indicated at point N on  $SAC_1$ .
- (v) Therefore it is rational for the firm to use the plant size which produces output at the minimum possible average cost. For example output  $OQ_1$  is produced at costs  $OC_1$ , on using plant size  $SAC_1$ ,  $OQ_2$  is produced at costs  $OC_2$  using plant size  $SAC_2$ ,  $OQ_3$  is produced at costs  $OC_3$  using plant size  $SAC_3$  and so on.
- (vi) The process of changing the plant size of the firm according to the short run average cost curves continues as output increases until the optimum size of the firm is reached at point X. Beyond point X the average costs begin to increase as output increases.

**Note:** The average cost curve is U-shaped in the short run because of the law of diminishing returns which states that as more units of variable factor are added to fixed factor marginal product first increases up to a certain point beyond which it declines



- (vii) From the graph the curve begins by sloping down wards as output increases because of the increasing returns. This is mainly due to increased utilization of the fixed factor by the variable factor leading to a decline in costs per unit output. At point X, the firm incurs the minimum possible costs ( $C_0$ ) and producing the maximum possible output ( $Q_0$ ). Beyond point X the average costs begin to rise because of the diminishing returns. This is mainly due to over utilization of the fixed factor by the variable factor hence the U-shape of the Average cost curve.
- (viii) The average cost curve is U-shaped in the long run because of the economies and diseconomies of scale. Economies of scale refer to the advantages or benefits enjoyed by the firm in form of reduced average costs due to the expansion of the industry or the firm itself. Diseconomies of scale refer to disadvantages accruing to the firm in form increasing average costs due to over expansion of the industry or the firm itself.



### Note

Before point X the firm operates at excess capacity. Excess capacity is a situation where the firm produces output which is less than optimum output. OR. It refers to the state of underutilization of the available resources by the firm or economy such that the output produced is less than the optimum output.

### Causes of excess capacity

- (i) **Imperfect Competition:** Firms in monopolistic competition produce less than optimal output to maintain higher prices, leading to unused capacity.
- (ii) **Product Differentiation:** Companies spend resources on branding and variety, which reduces efficiency and leaves some capacity idle.
- (iii) **Business Cycles:** During recessions, demand falls, and firms cannot fully utilize their production facilities.
- (iv) **Overinvestment in Capital:** Firms may build more factories or buy more equipment than demand justifies, leaving capacity unused.
- (v) **Regulatory and Policy Constraints:** Government restrictions, licensing, or quotas can prevent firms from operating at full capacity.
- (vi) **Poor Infrastructure:** In developing economies, unreliable electricity, transport, or water supply can limit production despite available capacity.

- (vii) **High Production Costs:** Rising costs of inputs (raw materials, energy, labor) may force firms to scale back output.
- (viii) **Market Saturation:** When demand for a product is fully met, firms cannot expand sales, leaving extra capacity idle.
- (ix) **Managerial Inefficiency:** Weak management or poor coordination can prevent firms from reaching optimal production levels.
- (x) Political instabilities
- (xi) Inadequate entrepreneurs
- (xii) Unfavorable government policies like high taxation.

### Example in Uganda

- (i) **Sugar industry:** Factories sometimes run below capacity due to shortages of sugarcane or weak demand.
- (ii) **Electricity generation:** Uganda has invested in dams like Karuma, but distribution challenges mean not all capacity is utilized.
- (iii) **Manufacturing:** Textile and agro-processing plants often face excess capacity due to limited export markets and competition from imports.

### Firm's equilibrium

The **equilibrium point of a firm** is the level of output where the firm maximizes profit (or minimizes loss). It occurs when the firm's **marginal cost (MC)** equals its **marginal revenue (MR)**, provided the MC curve cuts the MR curve from below.

### Optimum firm

This is a firm which produces the maximum possible output at the minimum possible costs. OR. It is a firm which operates at the minimum point of the average cost curve.

### Characteristics of an Optimum Firm

- **Lowest Average Cost:** The firm produces at the output level where average cost (AC) is minimized.
- **Efficient Use of Resources:** No wastage of inputs; resources are fully utilized.
- **Balanced Size:** Large enough to enjoy economies of scale but not so large that diseconomies set in.
- **Profit Maximization:** The firm earns normal or supernormal profits at this point.
- **Stable Output:** Production is consistent and sustainable over time.

### Equilibrium of a Firm

The **equilibrium of a firm** is the point where the firm has no incentive to either expand or contract its level of output. At this point, the firm maximizes profit (or minimizes loss). Or when its marginal revenue (MR) is equal to marginal cost (MC) at higher levels of output.

## Equilibrium of an industry

An industry is said to be in equilibrium when there is no tendency for firms to leave or enter the industry. This means that each firm in *the* industry is in equilibrium. When the firm is in equilibrium, there is no tendency for its output to increase or reduce.

## Theory of revenue

In economics, the **theory of revenue** explains how firms earn income from selling goods and services, and how different market structures affect the relationship between price, output, and revenue.

### Key Concepts in Revenue

(i) **Total Revenue (TR):** The total income a firm receives from selling its output.

$$TR = P \times Q$$

where P = price per unit, Q = quantity sold.

(ii) **Average Revenue (AR):** Revenue earned per unit of output.

$$AR = \frac{TR}{Q}$$

In most cases, AR = Price.

(iii) **Marginal Revenue (MR):** The additional revenue earned by selling one more unit of output.

$$MR = \frac{\Delta TR}{\Delta Q}$$

(iv) **Profit** is the financial gain a firm earns when its **total revenue (TR)** exceeds its **total cost (TC)**. It is the reward for entrepreneurship and risk-taking.

**Formula:** Profit = TR - TC

### Types of Profits

- (i) **Gross Profit:** Difference between sales revenue and the cost of goods sold (COGS).
- (ii) **Net Profit:** Profit after deducting all expenses, including wages, rent, interest, and taxes.
- (iii) **Normal Profit:** Minimum profit needed to keep a firm in business. Occurs when TR = TC (including opportunity costs).
- (iv) **Supernormal (Economic) Profit:** Profit above normal profit, earned when TR > TC. Indicates efficiency or market power.
- (v) **Accounting Profit:** TR minus explicit costs only (recorded in financial accounts).
- (vi) **Economic Profit:** TR minus both explicit and implicit costs (includes opportunity costs).

- (v) **Loss:** a loss occurs when a firm's **total cost (TC)** exceeds its **total revenue (TR)**. This means the business is unable to cover the expenses of production, leading to negative financial performance.

### Types of Losses

- (i) **Operating Loss** When day-to-day business expenses (wages, rent, raw materials) exceed sales revenue.
- (ii) **Net Loss** When total expenses, including taxes and interest, are greater than total income.
- (iii) **Economic Loss** When a firm's revenue fails to cover both explicit costs (actual payments) and implicit costs (opportunity costs).
- (iv) **Short-Run Loss** Firms may continue operating if revenue covers variable costs, even if fixed costs are not fully recovered.
- (v) **Long-Run Loss** If losses persist, firms may shut down or exit the industry.

### Causes of Losses

- (i) **Falling demand** for products.
- (ii) **High production costs** (raw materials, energy, labor).
- (iii) **Poor management** or inefficiency.
- (iv) **Strong competition** reducing market share.
- (v) **Economic downturns** or recessions.
- (vi) **Government policies** such as taxes or regulations.

### (vi) Demand in a firm

**Demand in a firm** refers to the quantity of goods or services that consumers are willing and able to purchase from that firm at different prices, within a given period of time. It is the foundation of revenue and production decisions.

## Market structures

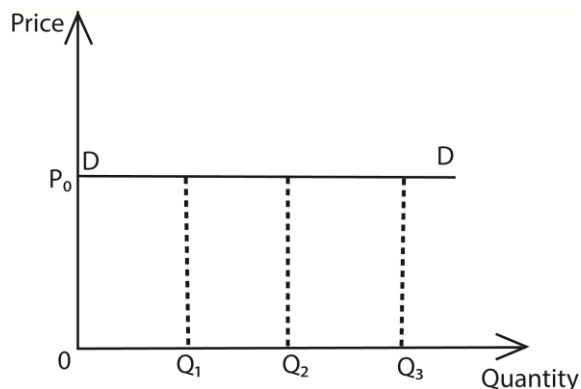
A **market is a place**, area or medium, through which buyers and sellers exchange commodities,

A **market structure** refers to the way industries are organized based on the number of firms, level of competition, and control over prices. The four main types are **perfect competition, monopolistic competition, oligopoly, and monopoly**

### Characteristic of perfect Competition Market structure

- (i) **Large Number of Buyers and Sellers:** No single buyer or seller can influence the market price; everyone is a price taker.
- (ii) **Homogeneous Products:** Goods offered are identical, with no differentiation. Consumers see no difference between products from different firms.
- (iii) **Free Entry and Exit:** Firms can freely enter or leave the market depending on profit opportunities, ensuring long-run normal profits.

- (iv) **Perfect Knowledge:** Buyers and sellers have complete information about prices, products, and market conditions.
- (v) **Price Takers:** Firms accept the prevailing market price; they cannot set their own prices.
- (vi) **Perfect Mobility of Factors:** Labor and capital can move freely between firms and industries without restrictions.
- (vii) **No Government Intervention:** Prices and output are determined purely by market forces of demand and supply.
- (viii) **Normal Profits in the Long Run:** Due to free entry and exit, firms earn only normal profits in the long run.
- (ix) **There is no advertisement.** This is because under perfect competition all firms sell homogenous products and they charge a uniform price. Therefore, there is no need to advertise.
- (x) **There is perfect divisibility and mobility of factors of production.** That is, there is a possibility of dividing factors of production into smaller units during the production process and factors of production are geographically and occupationally mobile.
- (xi) **Perfectly elastic demand curve.** The demand curve of the firm under perfect competition is perfectly elastic. This is because all firms charge a uniform price and therefore no single firm has the ability to fix its own price.



**Note: Pure competition.** This is a market structure which satisfies all the features of perfect competition apart from perfect knowledge, mobility and divisibility of factors of production.

### Short run equilibrium position of a firm under Perfect competition

In the **short run**, a firm in perfect competition can earn **supernormal profits, normal profits, or losses** depending on the relationship between price and cost.

### Conditions for Short-Run Equilibrium

- (i) **Marginal Cost (MC) = Marginal Revenue (MR)** The firm produces at the output level where MC equals MR.
- (ii) **MC curve cuts MR from below** Ensures profit maximization.

## Possible Outcomes in the Short Run

### (i) Supernormal Profits

- Occur when Price ( $P$ ) > Average Cost ( $AC$ ).
- Firm earns more than normal returns.

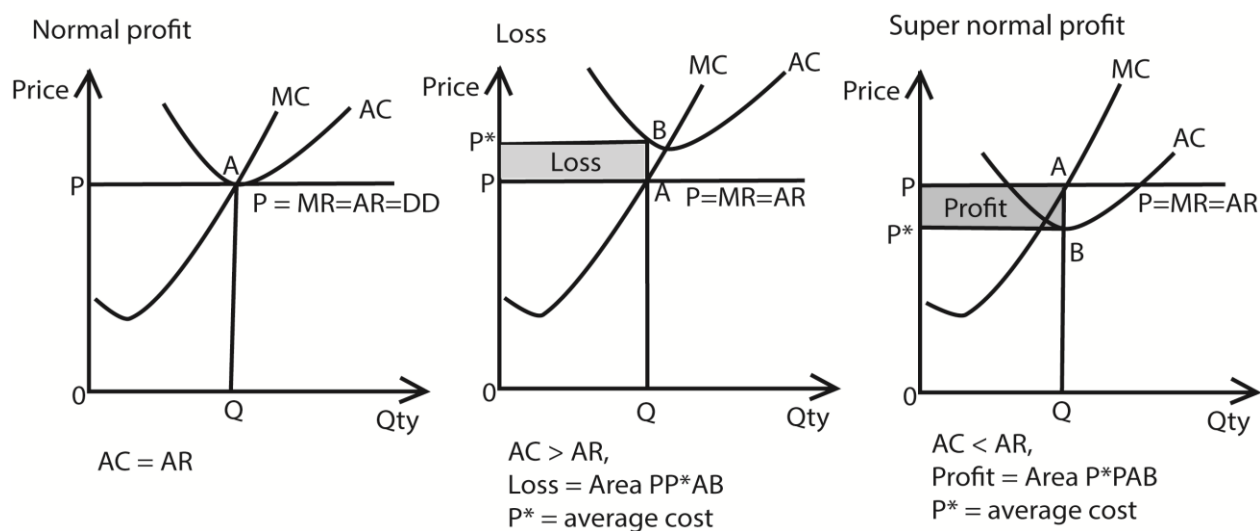
### (ii) Normal Profits

- Occur when Price ( $P$ ) =  $AC$ .
- Firm covers all costs, including opportunity costs.

### (iii) Losses

- Occur when Price ( $P$ ) <  $AC$ .
- Firm may continue if Price  $\geq$  Average Variable Cost ( $AVC$ ), covering variable costs.
- If Price <  $AVC$ , firm shuts down in the short run.

## Graphical representation of Outcomes in the Short Run



From the graphs, equilibrium is attained at point A where  $MC = MR$

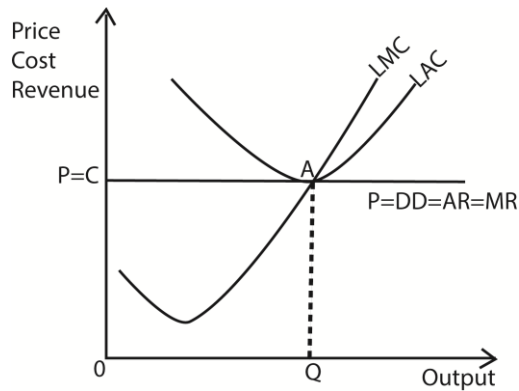
Normal profit (zero profit) are obtained when  $AC = AR$

Loss is obtained when  $AC > AR$ , and loss is represented by the area  $PP^*AB$

Super normal profits are obtained when  $AC < AR$  and profit is represented by the shaded area  $P^*PAB$

## Long run equilibrium position of a firm under perfect competition

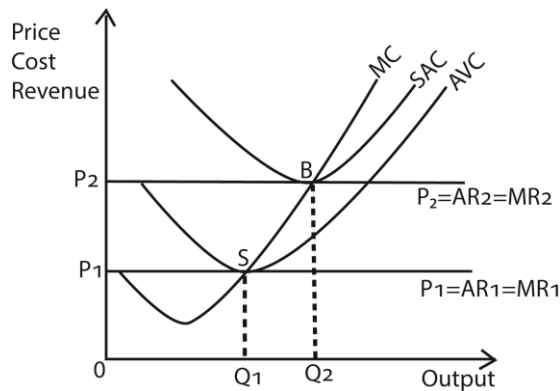
The firm under perfect competition in the long run earns normal (zero) profits. This is because of free entry and exit where the abnormal profits in the short run attract new firms in the industry while losses expel some firms from the industry



From the graph the long run equilibrium position is attained at point A, where  $LMC = MR$

At point A, output  $OQ$  produced at cost price  $OP$ , is also the sold at the same price. Since the selling price is equal to cost price, total revenue is equal to total cost, the firm earns normal or zero profit.

### Break even and shutdown points of a firm under perfect competition



### Break-even point (BEP)

The **break-even point (BEP)** is the level of output or sales at which a firm's **total revenue (TR)** equals its **total cost (TC)**. At this point, the firm makes **no profit and no loss**—it simply covers all its costs.

### Features of Break-even Point

- (i) **No Profit, No Loss:** Revenue = Cost.
- (ii) **Starting Point of Profitability:** Any output beyond BEP generates profit.
- (iii) **Risk Indicator:** Shows the minimum sales needed to avoid losses.
- (iv) **Decision Tool:** Helps firms plan pricing, production, and investment.

### Formula for breakeven point

$$\text{Break-even Point (units)} = \frac{\text{Fixed Costs}}{\text{Selling Price per Unit} - \text{Variable Cost per Unit}}$$

### Example 5

A **maize miller** with fixed costs of UGX 5 million and variable cost of UGX 1,000 per kg and Selling price per kg = UGX 2,000.

$$\text{Break-even output} = \frac{5,000,000}{2,000-1,000}$$

The miller must sell at least 5,000 kg to avoid losses.

### Shut down point

The **shutdown point (S)** is the lowest price at which a firm can continue operating in the **short run**. It occurs when the firm's **price (P)** equals its **Average Variable Cost (AVC)**.

**Why may a firm continue to operate even if it is making losses In the Short run?**

**OR. Why may a firm continue to operate between the break even and shut down points?**

**OR Why may a firm keep an operating even if it is not covering the total costs of production?**

In the **short run**, a firm may still operate despite making losses because shutting down immediately could lead to even greater losses.

- (i) **Covering Variable Costs:** As long as the firm's revenue covers **variable costs** (like wages, raw materials), it makes sense to keep producing. Losses may only be due to fixed costs (like rent, machinery), which must be paid whether the firm produces or not.
- (ii) **Minimizing Losses:** If the firm shuts down, it loses the entire fixed cost. By continuing operations, it at least reduces losses by covering part of fixed costs. For instance, When the entrepreneur has invested a lot of assets in business, he may be reluctant to sell them off.
- (iii) **Expectation of Future Improvement:** Firms may anticipate that demand or prices will rise in the near future. Staying open allows them to be ready to benefit when conditions improve.
- (iv) **Maintaining Market Presence:** Continuing production helps the firm retain customers and market share. Shutting down could mean losing loyal buyers permanently.
- (v) **Contracts and Obligations:** Firms may have supply contracts or obligations that require them to keep producing even at a temporary loss.
- (vi) The firm may keep on *operating if it has the hope of getting a loan* (financial assistance) from financial institutions so as to improve on its production activities and earn profits in the long run.
- (vii) If the firm is government owned and it is providing essential commodities to the society. For example the firm supplying water or electricity, it keeps on operating at a loss due to the nature of the services it provides to the society.
- (viii) The firm may continue to operate due to the fear of losing its cheap source of raw materials.
- (ix) The entrepreneur may want to maintain his reputation and good image to the public and this forces him to continue operating even if he is making losses.
- (x) If the firm is a subsidiary of another profit making firm, it may keep on operating when it is covered by the main firm.

- (xi) The losses made may be seasonal when the firm expects to make super normal profits in other seasons.
- (xii) The owner of the firm may *want to prevent his vital skilled manpower* from shifting to other firms. This is because if it shifts, it becomes extremely difficult and expensive to mobilize it back.

### Advantages (Benefits/Arguments) for Perfect competition Market structure

- (i) **Efficient Allocation of Resources:** Firms produce at the point where price equals marginal cost ( $P = MC$ ), ensuring resources are not wasted.
- (ii) **Lowest Possible Prices:** Since firms are price takers, consumers pay competitive prices that reflect true production costs.
- (iii) **Consumer Welfare:** Buyers benefit from homogeneous products and transparent pricing, with no exploitation by sellers.
- (iv) **No Abnormal Profits in the Long Run:** Free entry and exit of firms ensure only normal profits, preventing monopolistic exploitation.
- (v) **Perfect Knowledge:** Both buyers and sellers have full information about prices and products, leading to rational decisions.
- (vi) **Freedom of Entry and Exit:** Firms can easily enter when profits exist and exit when losses occur, keeping the market dynamic.
- (vii) **Productive Efficiency:** Firms operate at the lowest point of their average cost curve in the long run.
- (viii) **No Advertising Costs:** Since products are identical, firms don't waste resources on marketing, reducing costs.
- (ix) **Creation of employment opportunities.** Because of competition among so many firms, investments are promoted in the economy which increases employment opportunities.

### Example in Uganda

- (i) **Maize farmers:** Many small-scale farmers produce identical maize, sold at market-determined prices.
- (ii) **Fresh produce markets (e.g., Owino Market in Kampala):** Sellers offer homogeneous goods like tomatoes or bananas, with prices set by supply and demand.

### Demerits (Disadvantages/Negative implications) of perfect competition

- (i) **Lack of Innovation:** Firms earn only normal profits in the long run, leaving little incentive to invest in research, innovation, or product development.
- (ii) **No Product Variety/limited choice to customers:** Goods are homogeneous, meaning consumers cannot enjoy differentiated products, branding, or unique features.
- (iii) **Unrealistic Assumptions:** Perfect knowledge, free entry/exit, and perfect mobility of resources rarely exist in real markets.
- (iv) **No Economies of Scale:** Firms are typically small, preventing them from benefiting from large-scale production efficiencies.
- (v) **Vulnerability to Market:** Shocks Since firms are price takers, sudden changes in demand or supply can cause instability and losses.

- (vi) **Low Profit Margins:** Firms earn only normal profits in the long run, which may discourage entrepreneurship and long-term investment.
- (vii) **No Advertising or Branding:** Since products are identical, firms cannot build brand loyalty or differentiate themselves, limiting consumer choice.
- (viii) **Failure to provide Public goods and social facilities.** This is because such ventures are not profit making and they are very expensive to set up yet firms under perfect competition aim at maximizing profits.
- (ix) **Exhaustion of resources (raw materials).** Because of free entry, many firms compete for the available scarce resources which lead to an increase in the prices of raw materials and costs of production in general.
- (x) **Price discrimination is not possible.** Prices tend to be constant and demand is perfectly elastic. This limits sellers to carry out price discrimination which is important in the economy with people having different income levels.

### Example in Uganda

- (i) **Maize farmers:** They face identical products and competitive pricing, which limits profits and discourages investment in better farming techniques.
- (ii) **Fresh produce sellers in Kampala markets:** With homogeneous goods like tomatoes or bananas, sellers cannot charge higher prices or differentiate their products, leading to low margins.

### Monopoly Market structure

This is a market structure where there is a single producer or seller of a commodity which has no close substitutes or no substitutes at all, and entry of new firms in this market structure is blocked.

**Monopolist.** A monopolist is a single producer or seller of a commodity which has no close substitutes or no substitutes at all.

**Monopsony.** This is where there is a single buyer of a commodity or raw material in a given locality e.g. it may be a big firm being the sole buyer of raw materials in a given locality.

### Features (characteristics) of monopoly market structure

- (i) **Single Seller:** One firm dominates the entire market, producing and selling the product.
- (ii) **No Close Substitutes:** The product offered is unique, with no alternatives available to consumers.
- (iii) **Price Maker:** The monopolist sets the price since it controls supply, unlike firms in perfect competition.
- (iv) **Barriers to Entry:** High entry barriers (legal restrictions, patents, large capital requirements) prevent new firms from entering.
- (v) **Control Over Supply:** The monopolist decides the quantity of output supplied to the market.
- (vi) **Downward Sloping Demand Curve:** The monopolist faces the entire market demand curve, meaning to sell more, it must lower the price.
- (vii) **Possibility of Price Discrimination:** The monopolist may charge different prices to different consumers for the same product.

- (viii) **Supernormal Profits:** In both the short run and long run, monopolists can earn above-normal profits due to lack of competition.
- (ix) The monopolist carries out informative advertisement just to inform his customers about the availability of his product on the market. This is because the monopolist has no competitors.

### Example in Uganda

- (i) **Uganda Electricity Transmission Company (UETCL):** Controls electricity transmission, acting as a monopoly in that sector.
- (ii) **National Water and Sewerage Corporation (NWSC):** Provides piped water in many regions, with no close substitutes.

### Types of monopoly

- (i) **Natural Monopoly:** Occurs when a single firm can supply the entire market at lower cost than multiple firms.

Common in industries with high fixed costs and infrastructure needs.

Example: electricity transmission, water supply.

- (ii) **Legal Monopoly:** Created by laws, patents, or government regulations that grant exclusive rights to a firm.

Example: pharmaceutical companies with patents, or government-owned corporations.

- (iii) **Technological Monopoly:** Arises when a firm controls a unique technology or production method.

Example: firms holding exclusive rights to advanced software or machinery.

- (iv) **Pure Monopoly:** A single seller with no competition and no close substitutes.

Example: a government-owned utility company.

- (v) **Private Monopoly:** Owned and operated by private individuals or companies for profit.

Example: a private firm controlling a rare resource.

- (vi) **Public Monopoly:** Owned and operated by the government to provide essential services.

Example: National Water and Sewerage Corporation (NWSC) in Uganda.

- (vii) **Simple Monopoly:** Firm charges the same price to all consumers for the same product.

- (viii) **Discriminating Monopoly:** Firm charges different prices to different consumers for the same product (price discrimination).

## Basis (Origin/Sources) of monopoly power

A **monopoly** arises when a single firm gains exclusive control over the supply of a product or service. The sources of monopoly power explain how such dominance is established and maintained.

- (i) **Legal Barriers:** Governments may grant exclusive rights through patents, copyrights, or licenses.

Example: pharmaceutical firms with patents on new drugs.

- (ii) **Control of Essential Resources:** A firm may own or control scarce raw materials or inputs.

Example: a company controlling a rare mineral deposit.

- (iii) **Economies of Scale:** Large firms can produce at lower average costs, making it difficult for small firms to compete.

Example: electricity transmission companies.

- (iv) **Technological Superiority:** A firm may have advanced technology or production methods that competitors cannot replicate.

- (v) **Government Regulation:** Sometimes governments deliberately create monopolies in sectors like water, electricity, or transport to ensure public service provision.

- (vi) **Mergers and Takeovers:** Firms may merge or acquire rivals, reducing competition and consolidating market power.

- (vii) **Brand Loyalty and Advertising:** Strong branding and consumer loyalty can give a firm monopoly-like power, even without legal barriers.

- (viii) **Nationalization by the government.** In this case, the government can take over private individual firms and therefore it becomes the monopolist.

- (ix) Long period of training, Monopoly power can be created by restricting entry of new individuals by extending the training period required to join a given profession (industry).

## Examples in Uganda

- (i) **National Water and Sewerage Corporation (NWSC):** Government regulation grants monopoly in piped water supply.

- (ii) **Uganda Electricity Transmission Company (UETCL):** Natural monopoly due to economies of scale in electricity transmission.

- (iii) **Pharmaceutical firms:** Legal monopoly through patents on medicines.

## Costs and Revenue curves under Monopoly

- The shape and nature of the cost curves ( $AC$  and  $MC$ ) of a monopolist are the same as those of a firm under perfect competition.
- The average revenue (demand) curve is downward sloping from left to right implying that at a higher price a monopolist sells less output and more output is sold at a lower price. The demand curve is also downward sloping because the product sold by a monopolist has no close substitutes and the monopolist is a price maker.
- The marginal revenue ( $MR$ ) curve is also downward sloping but below the average

revenue curve. This is due to the principle that the margin is always below the average

### Equilibrium position (Profit maximization) of a firm under Monopoly

Short-run refers to that period in which a monopolist cannot change the fixed factors. However, the monopolist is free in determining price due to lack of competition

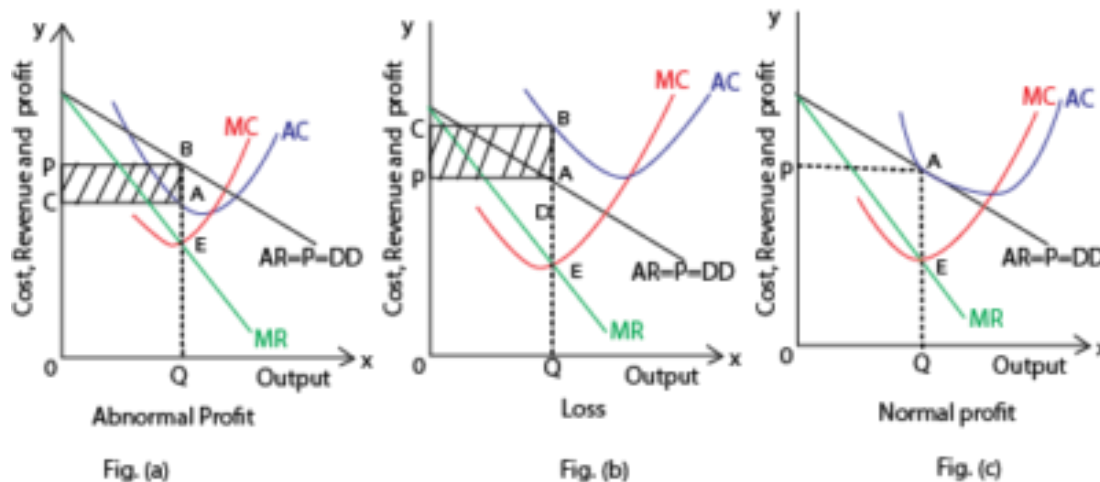
In short run equilibrium whether the firm makes an abnormal profit, normal profit or loss, it depends on the level of AC and AR which can be shown as follows:-

- If  $AR=AC$ , the firm receives a normal profit.
- If  $AR>AC$ , the firm receives abnormal profit.
- If  $AR<AC$ , the firm bears the loss.

The following conditions must be fulfilled in order to attain equilibrium under monopoly:-

- MR must be equal to MC
- MC must intersect MR from below.

The equilibrium position of a monopoly firm can be graphically presented as follows:-



#### Abnormal profit

In the first Fig. (a), the equilibrium point is 'E' when MC cuts MR from below. The equilibrium level of output is determined at OQ. The level of revenue earned is OP and the cost incurred is OC. Since Revenue is greater than cost, the firm earns abnormal profit equal to the shaded area (ABPC).

#### Loss

In the second fig. (b), point E is the equilibrium point where MC intersects MR from below. The equilibrium level of output is OQ. The cost incurred is OC and the revenue earned is OP. Since cost is higher than revenue, the firm bears loss equal to the shaded area (ABCP).

## Normal profit

In the third fig. (c), the equilibrium point is at 'E' where the conditions for equilibrium are fulfilled, i.e.  $MC = MR$ . The equilibrium level of output is OQ. The revenue and cost are at the same level (OP). The firm earns just a normal profit to sustain its business.

## Reasons Why Monopoly Power Is Limited

(Why a Monopolist Cannot Always Charge Whatever Price They Wish)

- (i) **Demand Curve Constraint:** The monopolist faces the entire market demand curve, which is downward sloping. If they raise prices too high, quantity demanded falls sharply, reducing revenue.
- (ii) **Consumer Purchasing Power:** Consumers have limited incomes. Even without substitutes, they cannot buy unlimited quantities at high prices.
- (iii) **Potential Substitutes:** While there may be no *close* substitutes, distant substitutes (e.g., tea vs. coffee) can limit pricing freedom.
- (iv) **Government Regulation:** In many countries, monopolies in utilities (electricity, water) are regulated to prevent exploitation.
- (v) **Fear of New Entrants:** High prices may attract potential competitors if entry barriers are not absolute.
- (vi) **Public Pressure and Ethics:** Excessive pricing can lead to consumer backlash, political intervention, or loss of goodwill.
- (vii) **Profit Maximization Principle:** A monopolist aims to maximize profit, not just charge the highest possible price. The equilibrium occurs where **Marginal Cost (MC) = Marginal Revenue (MR)**, not at arbitrary pricing.

## Example in Uganda

- (i) **National Water and Sewerage Corporation (NWSC):** Though it is a monopoly in piped water, government regulation prevents it from charging excessively high prices.
- (ii) **Uganda Electricity Transmission Company (UETCL):** Prices are regulated to balance affordability and sustainability, limiting monopoly freedom.

## Advantages (Merits/Positive implications) of Monopoly

Although monopolies are often criticized for limiting competition, they also have **positive implications** under certain conditions.

- (i) **Economies of Scale:** A monopolist can produce on a large scale, reducing average costs and offering goods at lower prices than many small firms could. E.g. Electricity generation and distribution Company.
- (ii) **Stable Prices:** With only one supplier, price fluctuations are minimized compared to competitive markets.
- (iii) **Research and Innovation:** Supernormal profits give monopolists resources to invest in research, development, and technological advancement.
- (iv) **Avoidance of Wasteful Competition:** Since there is no rivalry, resources are not wasted on advertising or duplicating infrastructure.
- (v) **Long-Term Planning:** Monopoly firms can plan production and investment more efficiently without fear of sudden competitive pressures.

- (vi) **Higher Quality in Some Cases:** With strong financial capacity, monopolists may maintain better standards, especially in industries requiring heavy investment.
- (vii) **Public Utility Provision:** In sectors like electricity, water, or railways, monopolies (often government-owned) ensure universal access to essential services.
- (viii) **There is a possibility of price discrimination** where by similar units of a commodity are sold at different prices to different consumers. This enables the low income earners to consume high quality products at lower prices.
- (ix) **Improvement in the welfare of the employees.** This is because a monopolist is in position to earn abnormal profits which it can use to improve on the welfare of its workers.
- (x) **Growth of infant industries.** The infant industries can be able to grow when they are protected by the government from external foreign competition. In this case, the infant industries monopolize the local market and therefore they are in position to get more profits for development purposes.
- (xi) **Source of government revenue.** Abnormal profits made by the monopolist can be taxed by the Government and tax revenue is used to provide social infrastructure like roads, hospitals etc.

### Examples in Uganda

- **National Water and Sewerage Corporation (NWSC):** As a public monopoly, it ensures piped water supply across regions.
- **Uganda Electricity Transmission Company (UETCL):** A natural monopoly that benefits from economies of scale in electricity transmission.

### Disadvantages (Limitations/Weaknesses/Negative implications) of Monopoly

While monopolies can bring benefits like economies of scale, they often create **serious drawbacks** for consumers, markets, and society.

- (i) **Higher Prices:** With no competition, monopolists can restrict output and charge higher prices, reducing consumer welfare.
- (ii) **Consumer Exploitation:** Lack of alternatives forces consumers to accept whatever price and quality the monopolist offers.
- (iii) **Inefficiency:** Monopolists may not produce at the lowest possible cost, leading to allocative and productive inefficiency.
- (iv) **Lack of Innovation:** Without competitive pressure, monopolists may have little incentive to improve products or adopt new technologies.
- (v) **Poor Quality of Goods/Services:** Since consumers have no choice, monopolists may reduce quality to cut costs.
- (vi) **Barriers to Entry:** High entry barriers prevent new firms from entering, stifling entrepreneurship and competition.
- (vii) **Misallocation of Resources:** By restricting output to maximize profit, monopolists may cause underproduction relative to society's needs.
- (viii) **Income Inequality:** Supernormal profits concentrate wealth in the hands of monopolists, widening economic inequality.
- (ix) **Rich monopolies tend to exert pressure on government.** They end up influencing decision making in their favor. This is because such monopolies are the major controllers of the economy.

## Examples in Uganda

- (i) **Electricity transmission (UETCL):** Prices are regulated, but monopoly power can still limit efficiency and innovation.
- (ii) **Water supply (NWSC):** Consumers have no alternative providers, so service quality depends entirely on the monopoly's performance.

## Measures to control Monopoly

- (i) **Price Controls:** Governments may fix maximum prices for goods and services provided by monopolists to prevent exploitation.
- (ii) **Taxation:** Imposing heavy taxes on monopolists reduces abnormal profits and discourages excessive pricing.
- (iii) **Nationalization:** The government may take over monopolistic firms (especially in utilities) to provide services at fair prices.
- (iv) **Anti-Monopoly Legislation:** Laws such as anti-trust acts prevent monopolists from abusing power, forming cartels, or restricting competition.
- (v) **Encouraging Competition:** Supporting small firms, reducing entry barriers, and promoting innovation can weaken monopoly dominance.
- (vi) **Regulation of Mergers:** Governments may block or regulate mergers that would create or strengthen monopolies.
- (vii) **Price Capping:** Regulators can set limits on how much monopolists can increase prices, especially in essential services.
- (viii) **Public Pressure and Consumer Protection:** Consumer associations and watchdogs can demand fair practices and expose exploitative behavior.
- (ix) **Privatization.** The Privatization policy involves the transfer of ownership of state owned enterprises to private individuals. This helps to reduce monopoly power possessed by the government parastatal.
- (x) **Liberalization.** This policy helps to remove restrictions in trade activities. It allows other firms to freely join and participate in the economic activities which have been monopolized by a few firms hence reducing on the monopoly power

## Examples in Uganda

- (i) **National Water and Sewerage Corporation (NWSC):** Government regulates prices to ensure affordability.
- (ii) **Uganda Electricity Transmission Company (UETCL):** Monopoly power is controlled through government oversight and pricing rules.

## Monopolistic (Imperfect) Competition market structure

**Monopolistic competition** is a market structure that combines elements of both **perfect competition** and **monopoly**. It is one of the most common forms of market organization in the real world, especially in retail and service industries.

## Features (Characteristics) of Monopolistic Competition

- (i) **Large Number of Sellers:** Many firms compete in the market, each with a relatively small share. No single firm dominates.
- (ii) **Product Differentiation:** Products are similar but not identical. Firms differentiate through branding, quality, packaging, or services.
- (iii) **Freedom of Entry and Exit:** Firms can enter when profits exist and exit when losses occur, though not as freely as in perfect competition.
- (iv) **Some Price Control:** Each firm has limited control over price because of product differentiation, but competition restricts excessive pricing.
- (v) **Non-Price Competition:** Firms rely heavily on advertising, promotions, and customer service to attract buyers.
- (vi) **Downward Sloping Demand Curve:** Each firm faces a demand curve that is more elastic than a monopoly's, since substitutes exist.
- (vii) **Normal Profits in the Long Run:** Free entry and exit ensure that firms earn only normal profits in the long run, though they may enjoy supernormal profits in the short run.
- (viii) **Independent Decision-Making:** Each firm sets its own price-output policy without direct reaction from rivals.
- (ix) **Persuasive advertisement.** Firms under this market structure use persuasive advertisement in order to convince the customers to buy their products and therefore to expand their market share.
- (x) **Government intervention.** The government can intervene by implementing certain policies like taxation, fixing prices of commodities in case firms over exploiting consumers etc.
- (xi) **Profit maximization is the major goal of producers.** That is, all producers in this market structure aim at maximizing profits and minimizing costs.
- (xii)

### Examples in Uganda

- (i) **Retail shops in Kampala:** Many shops sell similar goods (clothes, electronics) but differentiate through branding and customer service.
- (ii) **Restaurants and cafes:** Each offers food, but with unique menus, ambiance, and service styles.
- (iii) **Mobile money services:** Providers like MTN and Airtel offer similar services but differentiate through promotions and customer experience.

### Methods of Product differentiation

- (i) **Quality Differences:** Firms improve durability, performance, or reliability to stand out from competitors.
- (ii) **Branding:** Creating a strong brand identity through names, logos, and reputation builds consumer trust and loyalty.
- (iii) **Packaging and Design:** Attractive, convenient, or eco-friendly packaging makes products more appealing.
- (iv) **Customer Service:** Offering after-sales support, warranties, or personalized services differentiates a firm's product.
- (v) **Advertising and Promotion:** Marketing campaigns, discounts, and sponsorships create awareness and influence consumer perception.

- (vi) **Location and Accessibility:** Firms differentiate by being conveniently located or offering easy delivery options.
- (vii) **Technological Features:** Adding unique features or innovations (e.g., mobile apps, smart functions) makes products stand out.
- (viii) **Price Differentiation:** Charging different prices for slightly varied versions of the product (premium vs. budget options).

### Examples in Uganda

- (i) **Mobile money services (MTN vs Airtel):** Differentiated through promotions, transaction speed, and customer service.
- (ii) **Restaurants in Kampala:** Differentiated by menu variety, ambiance, and service quality.
- (iii) **Retail shops:** Differentiated by branding, packaging, and loyalty programs.

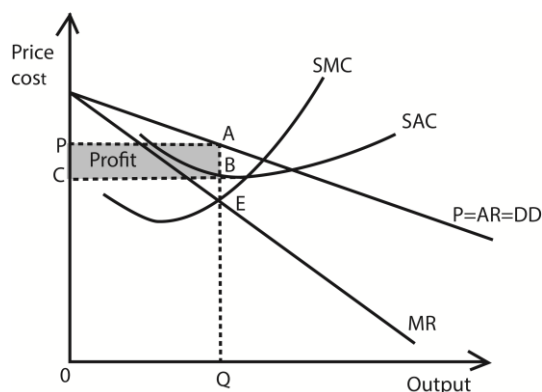
### The nature of the Demand curve, Revenue curves and Cost curves for monopolistic competition

The cost curves (MC and AC) are the same as those of other market structures. The demand curve and the revenue curves are downward sloping like those of monopoly. This is because firms under imperfect competition are price makers. However, the demand curve is more elastic than that of monopoly due to the presence of close substitutes (differentiated products) and many competitors. The Marginal Revenue Curve is below the demand curve (Average Revenue Curve).

### Short run equilibrium position of a firm under monopolistic competition

The monopolistically competitive firm earns super normal profits (abnormal profits) in the short run. Equilibrium is attained (profits are maximized) at a point where marginal cost (MC) is equal to marginal revenue (MR) and marginal cost curve should cut marginal revenue curve from below.

#### Illustration



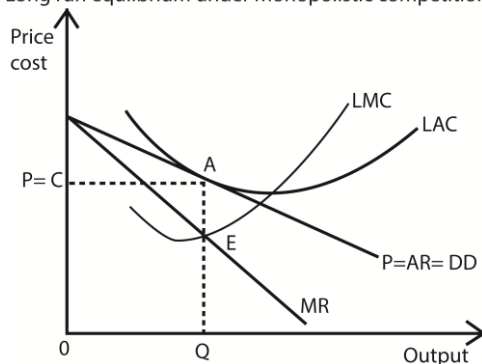
From the figure above, SMC, is equal to MR at point E. Thus E is the equilibrium point. Corresponding to this equilibrium point, the firm produces OQ output and sells it at a price OP. Thus, the firm earns pure profit to the extent of PABC since total revenue (OPAQ) exceeds total cost of production (OCBQ).

A firm, in the short run, may earn only normal profit if  $MC = MR < AR = AC$  occurs. A loss may result in the short run if  $MC = MR < AR < AC$  happens

### Long run equilibrium position of a firm under monopolistic competition

- (i) In the long run, monopolistic competition comes closer to perfect competition because the freedom of entry and exit allows firms to enjoy only normal profit. Because, of free entry and exit, the abnormal profits made by the few firms in the short run attracts new firms into the industry, This increases the production and supply of goods and services which are close substitutes hence a fall in price and revenue. In addition, the market share of each firm and the number of consumers reduces hence a reduction in profits,
- (ii) Also as new firms enter into the industry, the demand for raw materials increases which results into an increase in the factor prices hence increased costs of production. This forces the average cost curve to shift upwards until it is tangent to the marginal revenue curve.
- (iii) Equilibrium is attained (profits are maximized) at a point where marginal cost(MC) is equal to marginal revenue(MR) and marginal cost curve should cut marginal revenue curve from below

Long run equilibrium under monopolistic competition



From the graph, equilibrium is attained at point E where the marginal cost (LMC) curve is equal to the marginal revenue (MR) curve. At point E, the equilibrium output OQ, is produced and sold at price OP determined at point A. Therefore, the selling price is equal to the cost price. This implies that total cost is equal to total revenue and therefore the firm earns normal profits.

### Advantages (Merits) of Monopolistic competition

- (i) **Product Variety:** Consumers enjoy a wide range of differentiated products (brands, styles, packaging, quality). This safeguards scarcity.
- (ii) **Consumer Choice:** Buyers can select products that best suit their tastes, preferences, and budgets.
- (iii) **Innovation and Improvement:** Firms compete through product differentiation, encouraging innovation, better designs, and improved quality.
- (iv) **Non-Price Competition:** Advertising, promotions, and customer service enhance consumer satisfaction beyond just pricing.
- (v) **Freedom of Entry and Exit:** Firms can enter when profits exist and exit when losses occur, keeping the market dynamic.
- (vi) **Normal Profits in the Long Run:** Free entry and exit ensure firms earn only normal profits in the long run, preventing exploitation.

- (vii) **Elastic Demand Curve:** Since substitutes exist, consumers are protected from extreme price hikes.
- (viii) **Closer to Real-World Markets:** Unlike perfect competition, monopolistic competition reflects actual markets like retail, restaurants, and services.
- (ix) **Creation of more employment opportunities.** This is because there are many firms involved in production which increases the utilization of resources and thereby creating more employed opportunities.

### Examples in Uganda

- (i) **Restaurants in Kampala:** Each offers unique menus, ambiance, and service styles, giving consumers variety.
- (ii) **Mobile money services (MTN vs Airtel):** Differentiated through promotions, transaction speed, and customer service.
- (iii) **Retail shops:** Differentiated by branding, packaging, and loyalty programs.

### Disadvantages (Demerits) of Monopolistic competition

- (i) **Higher Prices than Perfect Competition:** Firms have some control over prices due to product differentiation, so consumers often pay more than they would under perfect competition.
- (ii) **Excessive Advertising Costs:** Heavy spending on marketing and promotions increases costs, which are passed on to consumers.
- (iii) **Inefficiency in Production:** Firms do not produce at the lowest point of their average cost curve, leading to productive inefficiency.
- (iv) **Allocative Inefficiency:** Price is set above marginal cost ( $P > MC$ ), meaning resources are not allocated optimally.
- (v) **Short-Run Supernormal Profits:** Only Free entry ensures only normal profits in the long run, discouraging sustained investment.
- (vi) **Wasteful Duplication:** Many firms produce similar products, leading to duplication of resources and inefficiency.
- (vii) **Consumer Confusion:** Too much product variety and advertising can overwhelm consumers, making rational choices difficult.
- (viii) **Small Firm Size:** Firms are usually small and cannot exploit economies of scale, resulting in higher average costs.

### Examples in Uganda

- (i) **Restaurants in Kampala:** Many offer similar menus but spend heavily on advertising, raising prices for consumers.
- (ii) **Retail shops:** Excessive duplication of similar goods leads to inefficiency and higher costs.
- (iii) **Mobile money services (MTN vs Airtel):** Promotions and advertising increase costs, which may be reflected in transaction fees.

### Oligopoly Market structure

An **oligopoly market structure** is one where a small number of large firms dominate the industry. These firms are interdependent, may produce either homogeneous or differentiated products, and often rely on strategic decision-making such as collusion or price wars

## Examples of oligopoly

1. Companies dealing in petroleum products. For example Shell, Petrocity, Total etc.
2. Telecommunication industry. For example MTN, UTL, Airtel etc.
3. Newspaper industry. For example Newvision, Monitor, Red pepper etc.
4. Cement industry. For example Hirna, Tororo, Bamburi etc.

## Features (Characteristics) of Firms under oligopoly

- (i) **Few Large Sellers:** A handful of firms control most of the market share, creating high concentration.
- (ii) **Interdependence:** Each firm's pricing and output decisions affect rivals, leading to strategic behavior.
- (iii) **Barriers to Entry:** High capital requirements, patents, and economies of scale make entry difficult.
- (iv) **Product Nature:** Products may be homogeneous (e.g., steel, cement) or differentiated (e.g., cars, airlines).
- (v) **Price Rigidity:** Prices tend to remain stable because firms fear losing customers in price wars.
- (vi) **Non-Price Competition:** Advertising, branding, and promotions are common strategies to attract consumers.
- (vii) **Possibility of Collusion:** Firms may cooperate (form cartels) to fix prices or output, maximizing joint profits.
- (viii) **Kinked Demand Curve:** The demand curve is elastic above the kink and is inelastic below the kink. Explains why prices are sticky—firms hesitate to raise prices (risk losing customers) or cut prices (risk retaliation).
- (ix) **The major aim of the firms is profit maximization,** Firms produce in such a way to maximize profits and minimize costs.

## Non-price competition

This is where rival firms compete using other means other than changing (adjusting) the price of the commodity.

## Methods of Non-Price Competition

- (i) **Product Differentiation:** Improving quality, design, packaging, or features to make products stand out.
- (ii) **Advertising and Promotion:** Creating awareness and influencing consumer preferences through media campaigns, discounts, and sponsorships.
- (iii) **Brand Loyalty:** Building strong brand identity so customers stick to a product even if prices rise.
- (iv) **Customer Service:** Offering warranties, after-sales support, and personalized services to attract and retain buyers.
- (v) **Location and Accessibility:** Convenient store locations, delivery services, or online platforms make products easier to access.
- (vi) **Packaging and Design:** Attractive, eco-friendly, or innovative packaging enhances consumer appeal.

- (vii) **Technological Innovation:** Adding new features or adopting advanced technology to improve product performance.
- (viii) **Carrying out promotional offers:** For example selling the product at a lower price to customers through sales promotions, giving free training services to customers etc.
- (ix) Offering gifts and prizes. For example petrol stations giving soap and other detergents to their customers.
- (x) Supporting charity organizations by giving them household items like food, clothing, soap etc. For example child care centers, orphanage homes etc.
- (xi) Using one stop shopping centers where the customer can conveniently find all what he requires in one place. This is common in big shopping malls like Shoprite, Garden city, Mazima mall etc.
- (xii) Offering credit facilities to customers, for example allowing customers to acquire products on hire purchase, giving airtime on credit to their customers by telecommunication companies etc.

### Examples in Uganda

- (i) **Telecom companies (MTN vs Airtel):** Compete through promotions, network coverage, and customer service rather than price alone.
- (ii) **Restaurants in Kampala:** Differentiate through ambiance, menu variety, and service quality.
- (iii) **Retail shops:** Use branding, packaging, and loyalty programs to attract customers.

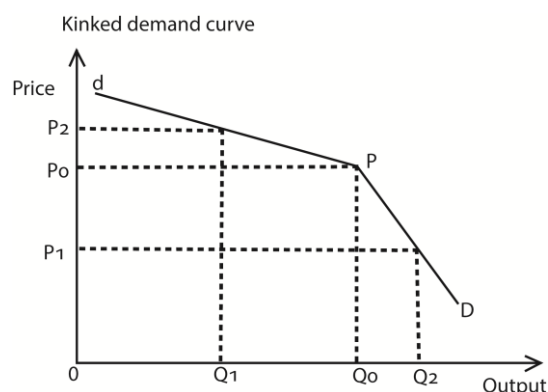
### Revenue, Demand and Cost curves under Oligopoly

- The MC and AC curves are similar to those of other market structures. The AR curve is the same as the demand curve. The demand curve is characterized by a "kink" (corner/bend)
- The marginal revenue curve is characterized by a discontinuous gap. This is due to the kink in the demand curve. Because of the kink in the demand curve, we have two demand curves where, the upper part is elastic and the lower part is inelastic

### Kinked demand Curve.

In an oligopolistic market, firms cannot have a fixed demand curve since it keeps changing as competitors change the prices/quantity of output. Their generalized demand curve is a kinked demand curve with two segments having different elasticity.

The upper segment is elastic at higher prices and the lower segment is inelastic at lower prices. The kink on the demand curve of an oligopolistic firm is that point of price rigidity (administered price) whereby none of the firms is ready to increase or reduce the price. This point is achieved in the long run after the negative effects of price wars.



From the figure, we know that

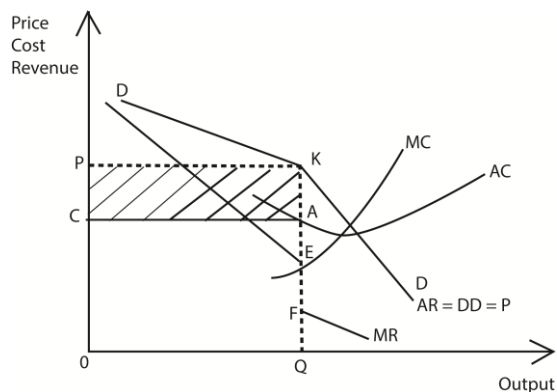
- The prevailing price level = P. The firm produces and sells output =  $OQ_0$
- The upper segment (dP) of the demand curve (dD) is elastic. A small increase in price above P to  $P_2$  leads a big fall in quantity sold from  $Q_0$  to  $Q_1$ .
- The lower segment (PD) of the demand curve (dD) is relatively inelastic. A big decrease in price from  $P_0$  to  $P_1$  leads to a small increase in quantity from  $Q_0$  to  $Q_2$ .
- Hence, no firm in an oligopolistic market will try to increase the price or decrease the price below price P since this leads to insignificant benefit.

### Price rigidity (Administered Price)

This refers to a situation where prices in the oligopolistic market tend to remain stable over a given time despite the changes in the cost of production.

### Equilibrium position of a firm under oligopoly

The firm under oligopoly earns abnormal profits both in the short and long run. Equilibrium is attained at a point where marginal cost (MC) curve is equal to the marginal revenue (MR) curve and MC curve should cut the MR curve from below.



- From the graph, DKD is a kinked demand curve and K is the kink. Because of the kink, the MR curve is separated by the discontinuous gap, EF into two MR curves. The marginal revenue curve above the gap is inelastic and the one below the gap is elastic.
- The discontinuity in the marginal revenue curve implies constant revenue as price and output remain fixed at the kink.
- Equilibrium is attained at the kink where MC is equal to MR in the discontinuous portion, At equilibrium, output  $OQ$  is produced at the cost price  $OC$  and sold at an administered price,  $OP$  determined at the kink.
- The shaded area  $AKPC$  represents the super normal profits.

### Advantages (Merits) of Oligopoly

- Economies of Scale:** Large firms can produce at lower average costs, making goods more affordable compared to many small producers.
- Product Variety:** Firms often differentiate products through branding, design, and features, giving consumers more choice.

- (iii) **Innovation and Research:** Supernormal profits and competitive pressure encourage firms to invest in new technologies and product improvements.
- (iv) **Stable Prices:** Price rigidity (explained by the kinked demand curve) protects consumers from frequent fluctuations.
- (v) **Non-Price Competition:** Firms compete through advertising, promotions, and customer service, improving consumer satisfaction.
- (vi) **High Quality Standards:** Large firms often have resources to maintain better quality and reliability in production.
- (vii) **Long-Term Planning:** With fewer competitors, firms can plan investments and production more efficiently.
- (viii) **Global Competitiveness:** Strong oligopolistic firms can compete internationally, boosting national economic growth.
- (ix) **They provide employment opportunities to the people.** This helps to improve on their incomes and standard of living.
- (x) **There is efficiency in production.** This is because firms are involved in competition and therefore there is no wastage of resources.

### Examples in Uganda

- (i) **Telecommunications (MTN, Airtel, Lycamobile):** Competition leads to innovation in mobile money services and promotions.
- (ii) **Cement industry (Hima Cement, Tororo Cement):** Large-scale production lowers costs and ensures steady supply.
- (iii) **Banking sector:** Few dominant banks provide stability and invest in digital innovations.

### Disadvantages (Demerits) of oligopoly

- (i) **Collusion and Cartels:** Firms may secretly agree to fix prices or limit output, exploiting consumers.
- (ii) **Higher Prices:** Lack of strong competition allows firms to charge prices above competitive levels.
- (iii) **Restricted Output:** Firms may deliberately limit production to maintain high prices, leading to underutilization of resources.
- (iv) **Barriers to Entry:** High capital requirements, patents, and economies of scale make it difficult for new firms to enter.
- (v) **Price Rigidity:** Prices often remain sticky due to fear of retaliation, preventing consumers from benefiting from lower costs.
- (vi) **Excessive Advertising:** Heavy spending on marketing and promotions increases costs, which are passed on to consumers.
- (vii) **Inefficiency:** Firms may not produce at the lowest possible cost, leading to allocative and productive inefficiency.
- (viii) **Consumer Exploitation:** Limited choices and high prices reduce consumer welfare compared to competitive markets.
- (ix) **It distorts the choice of consumers.** This is due to persuasive advertisement.
- (x) **It leads to unemployment.** This is due to collapse of the small firms as a result of being out competed by the large scale firms.
- (xi) **It leads to income inequalities.** This is because the incomes are concentrated in the hands of the few rich individuals who own large firms.

(xii) **There is duplication of goods and services.** This leads to resource wastage in the economy.

### Examples in Uganda

- (i) **Telecommunications (MTN, Airtel):** Limited players dominate, leading to high service charges and restricted consumer choice.
- (ii) **Cement industry (Hima Cement, Tororo Cement):** Prices remain high due to limited competition and barriers to entry.
- (iii) **Banking sector:** A few large banks dominate, restricting competition and innovation.

### Price discrimination

Price discrimination is a pricing strategy where a seller charges different price for the same product or service to different customers, based on their willingness or ability to pay for reasons not associated with costs. For example prices of entertainment tickets at different costs for public and students or children and adults.

### Conditions necessary for price is discrimination succeed

- (i) **Market power:** The firm must have some control over prices (not in perfect competition). Without market power, it cannot set different prices. Or **The commodity should not have close substitute.**
- (ii) **Ability to segment markets:** The seller must be able to distinguish between different groups of buyers (e.g., students, seniors, business travelers).
- (iii) **Different elasticities of demand:** Price discrimination works only if consumer groups respond differently to price changes. For example, business travelers (inelastic demand) pay more for flights than leisure travelers (elastic demand).
- (iv) **No resale or arbitrage:** Consumers who buy at a lower price must not be able to resell to those facing higher prices. Otherwise, the discrimination collapses.
- (v) **Information availability:** The seller must know or estimate consumers' willingness to pay to set differentiated prices.
- (vi) **Legal and institutional allowance:** Price discrimination must not be prohibited by law or regulation in the given market.
- (vii) **Personal services** that can be resold or transferred e.g. medical Doctor, teacher, entertainment etc.
- (viii) **Product differentiation;** artificial differences made on similar products by a way of branding, trademarks.

### Advantages of price discrimination

- (i) **Higher Revenue and Profits:** Firms can capture more consumer surplus by charging different prices, maximizing profitability.
- (ii) **Economies of Scale:** Increased sales volume allows firms to spread fixed costs over more units, lowering average costs.
- (iii) **Access for Low-Income Consumers:** By charging lower prices to price-sensitive groups, firms make products affordable to wider segments of society. *Example: student discounts in theatres, senior citizen fares.*
- (iv) **Encourages Market:** Expansion Firms can serve multiple market segments that would otherwise be excluded.

- (v) **Better Utilization of Capacity:** Price discrimination helps firms sell excess capacity during off-peak times. *Example: cheaper airline tickets for off-season travel.*
- (vi) **Funding for Innovation:** Higher profits from wealthier consumers can finance research, development, and product improvements.
- (vii) **Consumer Benefits:** Some consumers pay less than they would under uniform pricing, increasing affordability and access.

### Examples in Uganda

- (i) **Telecom companies (MTN, Airtel):** Different bundles and promotions for students, rural users, and urban professionals.
- (ii) **Transport sector:** Taxi fares vary by distance, time of day, and passenger type (e.g., children vs adults).
- (iii) **Education:** Private schools may charge different fees depending on facilities or programs chosen.

### Why price discrimination matters

Price discrimination can be **win-win**: firms increase profits while consumers in certain groups gain access to goods and services they might otherwise be unable to afford. It is especially useful in industries with **high fixed costs** like transport, telecom, and utilities.

### Disadvantages of price discrimination

- (i) **Consumer Exploitation:** Some consumers are charged higher prices simply because they are willing or able to pay more.
- (ii) **Inequality:** Wealthier consumers may subsidize lower-income groups, but this can widen economic inequality in access to premium goods.
- (iii) **Reduced Consumer Surplus:** Much of the benefit shifts from consumers to producers, leaving buyers worse off overall.
- (iv) **Unfairness:** Customers paying different prices for the same product may feel cheated or discriminated against.
- (v) **Encourages Monopoly Power:** Firms with monopoly or oligopoly power can exploit price discrimination more easily, reducing competition.
- (vi) **Administrative Costs:** Identifying different consumer groups and enforcing varied pricing requires complex systems, raising costs.
- (vii) **Market Distortion:** Resources may be misallocated if firms focus on extracting maximum profit rather than efficiency.
- (viii) **Potential for Consumer Backlash:** If consumers discover they are paying more than others, trust and loyalty may decline.

### Examples in Uganda

- (i) **Telecom bundles (MTN, Airtel):** Some customers pay more for similar services depending on location or promotions.
- (ii) **Transport sector:** Taxi fares vary by passenger type or time, which can feel unfair to regular commuters.
- (iii) **Education:** Different tuition fees for the same courses may create perceptions of inequality.

## Revision exercise 2

### Section A questions

- (a) Distinguish between Marginal revenue and marginal cost  
(b) Explain why the Marginal revenue curve under perfect competition is constant.
- State four reasons why firms invest.
- Explain why the average total cost curve (ATC) is u-shaped in the;  
(a) Short run  
(b) Long run
- (a) Distinguish between fixed costs and variable costs  
(b) Differentiate between prime costs and supplementary costs.  
(c) Give two examples of supplementary costs in an economy
- Study the table below and answer the questions that follow. Show the working

Output	0	10	20	30	40	50	60
Total costs (in 000'shs.	100	120	220	300	360	400	420

- Find the total fixed cost when output is 50kg.
  - Calculate the average total cost when output is 30kg.
  - Calculate the average fixed cost when output is 20kg.
  - Calculate average variable cost when output is 50kg.
- 6 Given the table below
- |                          |     |      |      |      |      |      |      |      |      |
|--------------------------|-----|------|------|------|------|------|------|------|------|
| Output                   | 0   | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| Total costs (in 000'shs. | 600 | 1650 | 1860 | 2100 | 2400 | 2800 | 3400 | 4300 | 5800 |
- Compute the schedule for TFC, TVC, MC, ATC, AFC and AVC
  - What is the average fixed cost when output is 10?
  - What is the total variable cost for the first 3 units of output?
  - Which level of output represents the optimum level of the firm?
  - Which level of the output represents the break-even point of the firm?
  - Which level of output represents the shutdown point of the firm?
- (g) If marginal revenue is constant at 600/= per unit of output, what is the equilibrium output level of the firm.
- Mention four ways through which a small scale firm can expand in size
  - (a) Differentiate between Industrial inertia and Localization of industries  
(b) Give two disadvantages of Localization of industries.
  - (a) Distinguish between excess capacity and over production  
(b) Give two causes of excess capacity in your country (2mks)  
(c) Mention three ways of reducing, excess capacity in your country
  - (a) Distinguish between a firm and an industry  
(b) State two conditions for profit maximizing equilibrium.
  - Mention four reasons as to why firms continue to operate on a small scale despite the benefits of large scale production.
  - (a) Define the term merger as used in economics  
(b) Mention three factors which hinder merging of firms in your country
  - (a) Distinguish between horizontal and vertical merging of firms  
(b) State any two reasons for merging of firms in an economy

- 14 (a) Distinguish between "forward vertical" and "backward vertical" merging of firms.  
(b) Give two conditions necessary for merging of firms in an economy
- 15 (a) Distinguish between forward linkages and backward linkages  
(b) Give two examples of backward linkages in your country.
- 16 (a) Distinguish between a marginal firm and an optimum firm  
(b) Give two reasons as to why the government may influence the location of industries,
- 17 (a) Why is the firm under perfect competition regarded as an efficient firm?  
(b) State any two reasons why a firm may continue to operate below the Break-even point.
- 18 (a) What is meant by product differentiation  
(b) Give any three methods of differentiating products in an economy
- 19 (a) What is meant by price discrimination  
(b) State three conditions necessary for price discrimination to succeed
- 20 (a) What is meant by non-price competition?  
(b) Give any three forms of non-price competition in your country.
- 21 (a) What is meant by discriminatory monopoly?  
(b) Under what conditions is discriminatory monopoly profitable?

### Section B questions

1. (a) Distinguish between location of firms and localization of firms  
(b) Explain the advantages and disadvantages of localization of firms
- 2 (a) Explain the features of a perfectly competitive market  
(b) Show and explain the equilibrium conditions of a perfectly competitive firm in the;  
(i) Short run  
(ii) Long run .
- 3 (a) Distinguish between break - even point and shut down point of the firm.  
(b) Explain why a firm may continue to produce even when it is not breaking-even?
- 4 (a) What factors may prevent new firms from entering an industry  
(b) What are the merits and demerits of monopoly in your country?
- 5 (a) Explain the salient features of monopolistic competition in your country?  
(b) Explain how the firm under monopolistic competition determines output, price and profits in the short run and in the long run
- 6 (a) Account for the rise of monopoly in your country  
(b) Discuss the methods of controlling monopoly in an economy
- 7 (a) What are the features of an oligopoly market structure  
(b) Describe the forms of non-price competition used by oligopoly firms in your country
- 8 (a) Explain the features of the mobile phone industry in your country  
(b) Explain how profits are maximized under the above mentioned market structure.
- 9 (a) Explain how a firm under monopoly maximizes profits  
(b) Assess the implications (impact) of the existence of monopoly in an economy?
- 10 Explain the;  
(a) Features of an oligopolistic market structure.  
(b) Advantages of an oligopolistic market to consumers.  
(c) Explain how an oligopolistic firm maximizes profits in the short run

**Thank you**  
**Dr. Bbosa Science**